

FM 4-0

SUSTAINMENT OPERATIONS



JULY 2019

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HEADQUARTERS, DEPARTMENT OF THE ARMY

Foreword

*“Logistics sets the campaign's operational limits.” – Joint Pub 1, Joint Warfare of the
U.S. Armed Forces, November 1991*

Today's operational environment presents threats to the Army and joint force that are more dangerous in terms of capability and magnitude than those we faced in Iraq and Afghanistan. Major regional powers — Russia, China, Iran, and North Korea seek to gain strategic positional advantage. These nations, and other competitors, are fielding capabilities to deny U.S. freedom of action in the air, land, maritime, space, and cyberspace domains and reduce U.S. influence in critical areas of the world. In some domains, they already have parity or overmatch, a challenge the joint force has not faced in twenty-five years.

The proliferation of advanced technologies; competitor emphasis on training, modernization, and professionalization; combined with extremist ideologies; and the increasing speed of human interaction makes large-scale combat more lethal. As the Army and the joint force focused on counter-insurgency and counter-terrorism at the expense of other capabilities, our competitors watched, learned, adapted, modernized, and devised strategies that placed us at a position of relative disadvantage.

Combat power may win battles, but sustainment wins wars. In light of current threats, simply acquiring more resources is not enough to succeed. Sustainment doctrine is critical to more than just the sustainment community; it lays the foundation for all Army leaders to plan and execute unified land operations. The Army and joint force must adapt and prepare for large-scale combat operations in highly contested, lethal environments where the enemy employs long-range fires and other capabilities that rival or surpass our own. The key to all successful military campaigns throughout history is the ability to sustain itself. Sustainment units must be able to operate effectively and survive in expeditionary environments across all contested domains. The ability to sustain ourselves ensures that the Army, with its joint and multi-national partners, has the operational reach, freedom of action, and the endurance to execute campaigns.

FM 4-0, *Sustainment Operations*, provides a doctrinal approach for our armies, corps, divisions, and brigades to address the challenges of sustaining operations across all four Army strategic roles – Shape Operational Environments, Prevent Conflict, Prevail in Large-Scale Ground Combat and Consolidate Gains. It is the cornerstone of all sustainment doctrine, detailing how the Army will provide logistics, financial management, personnel services and health service support to the force during unified land operations. FM 4-0 is applicable across the range of military operations during competition and conflict. Its logic and format aligns with FM 3-0 to illustrate how sustainment is central to all military operations, tasks, and activities. FM 4-0 also includes critical planning considerations and examples that illustrate the volume and scope of materiel required to maintain an expeditionary army.

"Hope is an expensive commodity. It makes better sense to be prepared."

—Thucydides

Doctrine is only one factor informing how we fight. Of equal if not greater importance is how we organize, train, equip, and develop leaders – the best doctrine in the world is worthless without the people who make it work. Sustainment success on the battlefield begins at home-station, integrating our maneuver and sustainment units through tactical training into daily support missions. FM 4-0 outlines training considerations to help build leaders and units able to prevail during large-scale combat operations on a multi-domain battlefield.



RODNEY D. FOGG
MAJOR GENERAL, UNITED STATES ARMY
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Sustainment Operations

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Preface

FM 4-0, *Sustainment Operations*, augments the Army's principal doctrine on providing sustainment support as found in ADP 4-0. It describes how Army sustainment forces, as part of a joint team, provide support to Army and other forces with particular emphasis on support to large-scale combat operations. This manual is a companion manual to FM 3-0 on Army operations and, together with ADP 4-0, provides the foundation for how Army sustainment forces support prompt and sustained large-scale combat operations.

The principal audiences for FM 4-0 are all Army Soldiers and civilians who provide sustainment support as well as those members of the Army profession who depend on and receive that support. Sustainment commanders and staffs of Army headquarters should also refer to applicable joint or multinational doctrine concerning support to joint or multinational forces. Trainers and educators throughout the Army will also use this publication as the foundation for training and education.

To comprehend the doctrine contained in FM 4-0, readers must first understand the fundamentals of unified land operations described in ADP 3-0 and ADP 4-0. They must understand the language of tactics and the fundamentals of Army operations described in FM 3-0, and the offense and defense described in ADP 3-90. Users of FM 4-0 should also understand the fundamentals of stability described in ADP 3-07.

Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable United States, international, and in some cases host nation laws and regulations. Commanders at all levels ensure their Soldiers operate in accordance with the law of war and the rules of engagement. (See FM 6-27.)

FM 4-0 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which FM 4-0 is the proponent publication (the authority) are italicized in the text and are marked with an asterisk (*) in the glossary. Terms and definitions for which FM 4-0 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

FM 4-0 applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise stated.

The proponent of FM 4-0 is the United States Army Combined Arms Support Command. The preparing agency is the G-3/5/7 Doctrine Division, United States Army Combined Arms Support Command. Send comments and recommendations on a DA Form 2028 *Recommended Changes to Publications and Blank Forms* to Commander, United States Army Combined Arms Support Command, ATTN: ATCL-TDID (FM 4-0), 2221 Adams Avenue, Building 5020, Fort Lee, VA, 23801-1809; or submit an electronic DA Form 2028 by e-mail to: usarmy.lee.tradoc.mbx.lee-cascom-doctrine@mail.mil.

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Introduction

The publication of FM 3-0, *Operations*, in October 2017 signaled the readiness focus of the United States (U.S.) Army in preparation for large-scale combat against a peer threat. FM 4-0 lays the foundation for the sustainment (logistics, financial management, personnel services, and health service support) tactics required to support Army's four strategic roles during operations described in FM 3-0. It is the Army's doctrine for sustainment operations at the strategic, operational, and tactical levels of warfare. This publication emphasizes sustainment fundamentals, and tactics to provide all commanders, staffs, and Soldiers an understanding of sustainment operations. The contents of FM 4-0 are consistent with the principal sustainment doctrine contained in ADP 4-0 and serves as the doctrinal foundation for all Army sustainment operations.

The doctrine discussed in this manual is nested with the 3-0 series doctrine. Sustainment is crucial to the success of operations. The endurance of Army forces is primarily a function of their sustainment (ADP 3-0). Sustainment determines the depth and duration of Army operations. It is essential to seizing, retaining and exploiting the initiative. Sustainment provides the joint force commander (JFC) freedom of action, operational reach, and prolonged endurance. Sustainment must be planned, integrated and synchronized with operations at every level of warfare. Sustainment is dependent upon joint and strategic integration and should be meticulously coordinated to ensure resources are delivered to the point of employment. Therefore, sustainment is inherently joint. The Army's sustainment capabilities assist in providing crucial operational area opening functions enabling joint forces to achieve strategic and operational reach. Army sustainment capabilities provide the bulk of Army support to other Services, common-user logistics (CUL), and other common sustainment resources in support of the combatant commander (CCDR).

The logic chart in the introductory figure-1 on page xiii is better understood if read from top to bottom. The chart depicts an anticipated operational environment (OE) that includes considerations for conducting large-scale combat operations against a peer threat. The logic chart reflects the Army's strategic roles in support of the joint force conducting unified action and defines the Army's operational concept of unified land operations. The logic chart displays the significant role of the sustainment warfighting function and depicts how sustainment capabilities are task organized to support operational forces at echelon across all domains. The chart concludes by portraying how sustainment of large-scale combat operations requires integration into the operations process to enable freedom of action, extend operational reach, and provide the prolonged endurance necessary to accomplish missions, consolidate gains and win our nation's wars.

FM 4-0 contains eight chapters and seven appendices:

Chapter 1 provides an overview of Army sustainment, principles of sustainment, and sustainment support to unified land operations.

Chapter 2 describes strategic level support organizations and sustainment units' roles and capabilities at echelon. It also discusses the importance of command and support relationships and the importance of training for large-scale combat operations.

Chapter 3 provides an overview of sustaining operations to shape. It describes set the theater and sustainment planning considerations to support operations to shape, and organizational roles and responsibilities at echelon in sustaining operations to shape.

Chapter 4 begins with an overview of sustaining operations to prevent. It describes refinement of plans informed by sustainment preparation of the operational environment, sustainment planning considerations and sustainment of operations to prevent.

Chapter 5 provides an overview of large-scale combat operations, sustainment fundamentals, and planning considerations to support large-scale combat operations. It concludes with a discussion of reconstitution.

Chapter 6 describes an overview of sustainment of large-scale defensive operations, fundamental principles of sustainment during the defense, additional planning considerations during the defense, and sustainment support of defensive tasks.

Chapter 7 describes sustainment of large-scale offensive operations, fundamental principles of sustainment during the offense, additional planning considerations during offensive operations, and sustainment support of offensive tasks.

Chapter 8 describes sustaining operations to consolidate gains. It describes the planning considerations and sustainment of operations to consolidation of gains.

Appendix A discusses the principles of sustainment and elements of the sustainment warfighting function.

Appendix B discusses the Army sustainment information systems and the importance of linking them to command and control systems.

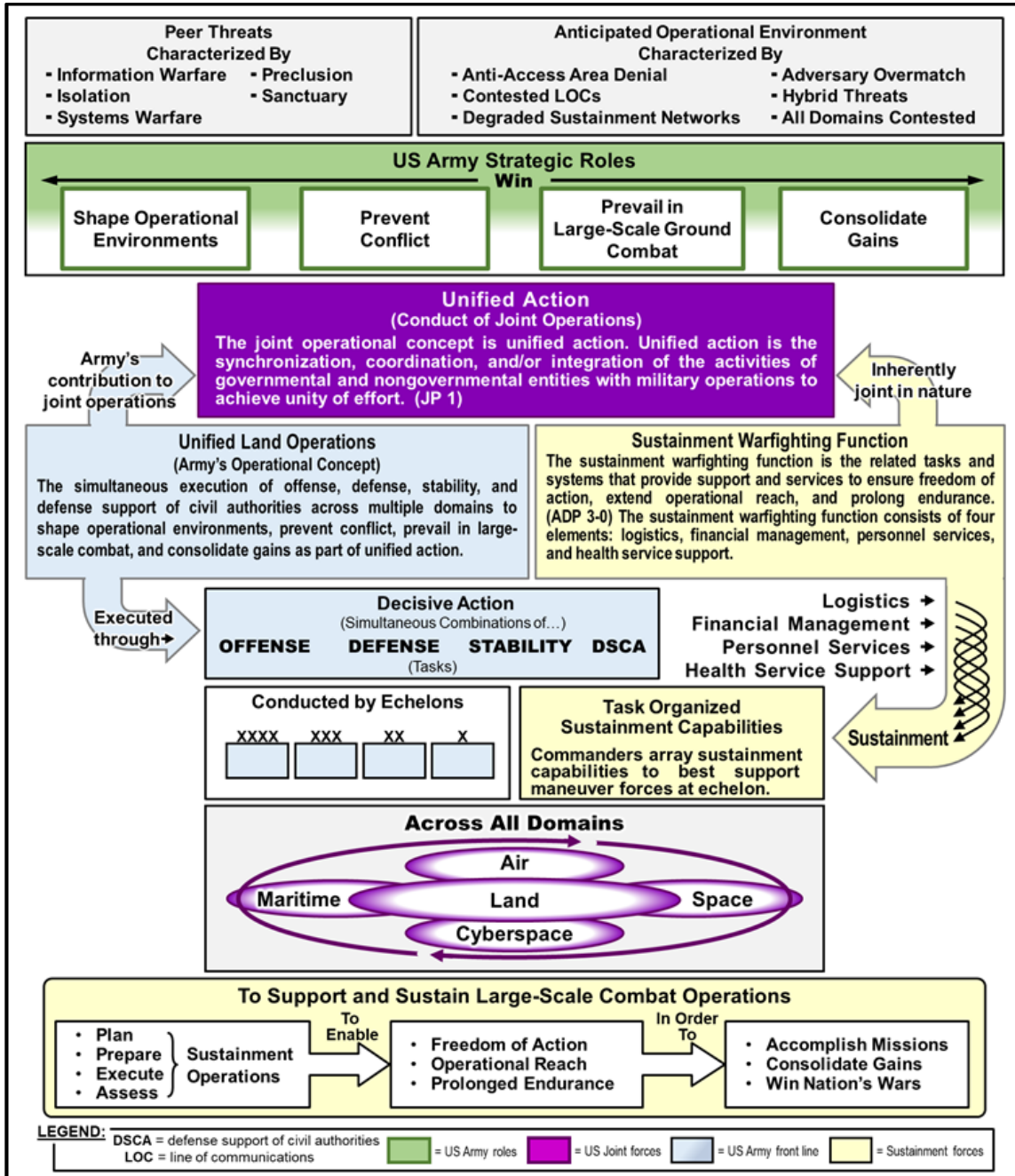
Appendix C discusses reconstitution operations that are extraordinary actions commanders plan and implement to restore degraded units' combat effectiveness commensurate with the mission requirements and available resources.

Appendix D discusses mobility ratings and planning considerations for units operating within the corps and division areas.

Appendix E provides logistics status report and personnel status report.

Appendix F describes the sustainment symbols within FM 4-0.

Appendix G discusses the rules of allocation for select Army units in the corps and divisions areas during the conduct of offensive and defensive operations.



Introductory figure-1. Sustainment operations logic chart

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Chapter 1

Army Sustainment

Chapter 1 provides an overview of Army sustainment and introduces the four elements of the sustainment warfighting function. Chapter 1 also provides an overview of Army operations and addresses the freedom of action, operational reach, and prolonged endurance sustainment provides to unified land operations. The chapter concludes with a discussion of the Army sustainment responsibilities.

SECTION I – OVERVIEW OF ARMY SUSTAINMENT

1-1. For the Army, *sustainment* is the provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion (ADP 4-0). This is accomplished through the synchronization and integration of national and global resources and ensures Army forces are physically available and properly equipped, at the right place and time, to support the CCDR. The sustainment warfighting function leverages joint, interagency, multinational and other available capabilities to provide sustainment support to the force.

1-2. Sustainment improves force readiness. Sustainment maintains Army forces by manning it with trained Soldiers and leaders; funding it with required resources; equipping it with the materiel (individual and unit); maintaining Soldier and Family readiness; and enabling Army forces for decisive action. This is enabled by an integrated network of information systems linking sustainment to operations. As a result, commanders at all levels see the OE, anticipate requirements in time and space, understand what is needed, track and deliver what is requested, and make crucial decisions ensuring responsive sustainment.

1-3. Army sustainment is based on an integrated process (people, systems, materiel, health service support, and other support) inextricably linking sustainment to operations. The concept focuses on building an operational ready Army, delivering it to the CCDR as part of the joint force, and sustaining its combat power across the depth of the operational area with unrelenting endurance.

SUSTAINMENT WARFIGHTING FUNCTION

1-4. The *sustainment warfighting function* is the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance (ADP 3-0). Systems consist of personnel, networks, information systems, processes and procedures, and facilities and equipment that enable sustainment commanders to support operations. The sustainment warfighting function consists of four elements: logistics, financial management, personnel services, and health service support, each of which must be integrated and synchronized across all warfighting functions to ensure the appropriate level of support.

Sustainment Warfighting Function

- Logistics
- Financial Management
- Personnel Services
- Health Service Support

LOGISTICS

1-5. The elements of logistics include maintenance, transportation, supply, field services, distribution, operational contract support (OCS), and general engineering. For additional details, see appendix A and FM 4-95.

FINANCIAL MANAGEMENT

1-6. Financial management leverages fiscal policy and economic power across the range of military operations. Financial management encompasses finance operations and resource management. For additional details, see appendix A and FM 1-06.

PERSONNEL SERVICES

1-7. *Personnel services* are sustainment functions that man the force, maintain Soldier and Family readiness, promote the moral and ethical values of the nation, and enable the fighting qualities of the Army (ADP 4-0). Personnel services include planning, coordination, and sustaining personnel efforts at the operational and tactical levels. Personnel services include human resources (HR) support, legal support, religious support, and band support. For additional details, see appendix A, FM 1-0, FM 1-04, FM 1-05, and ATP 1-19.

HEALTH SERVICE SUPPORT

1-8. Health service support encompasses all support and services performed, provided, and arranged by the Army Health System (AHS) to promote, improve, conserve, or restore the behavioral and physical well-being of Army personnel and, as directed, unified action partners. Health service support includes the following—

- Casualty care, which encompasses a number of medical functions, including:
 - Medical treatment (organic and area medical support).
 - Hospitalization.
 - Dental care (treatment aspects).
 - Behavioral health/neuropsychiatric treatment.
 - Clinical laboratory services.
 - Treatment of chemical, biological, radiological, and nuclear (CBRN) contaminated patients.
- Medical evacuation (including medical regulating).
- Medical logistics (including blood management).

1-9. AHS support includes both health service support and force health protection, which are critical capabilities embedded within formations across all warfighting functions. The force health protection mission falls under the protection warfighting function and will not be covered in detail in this publication. For additional information on force health protection, see ADP 3-37. See appendix A for additional information on health service support and FM 4-02 for a complete description of AHS support and the 10 medical functions.

PRINCIPLES OF SUSTAINMENT

1-10. A *principle* is a comprehensive and fundamental rule or an assumption of central importance that guides how an organization or function approaches and thinks about the conduct of operations (ADP 1-01). Army sustainment operations are guided by eight principles as shown in figure 1-1. These principles are interdependent and must be synchronized in time, space and purpose. For example, in order for integration and continuity of support to occur, commanders and staffs must anticipate operational requirements, be responsive in requisitioning and distributing resources, and be prepared to improvise tactics and techniques for execution that ensures responsiveness even in unexpected situations. Integration is combining all of the sustainment elements within operations assuring unity of command and effort. It requires deliberate coordination and synchronization of sustainment with operations across all levels of war. Army forces integrate sustainment with joint, interagency, and multinational operations to maximize the complementary and reinforcing effects of each Service component's and national resources.

1-11. All sustainment operations are guided by fundamental principles that apply in large-scale combat operations as well as any other operation along the conflict continuum. The principles of sustainment are essential to enabling freedom of action, creating strategic and operational reach and providing the joint force with prolonged endurance. The principles are integration, anticipation, responsiveness, simplicity, economy,

survivability, continuity, and improvisation. For detailed information on the principles of sustainment and each element of the sustainment warfighting function, see appendix A.

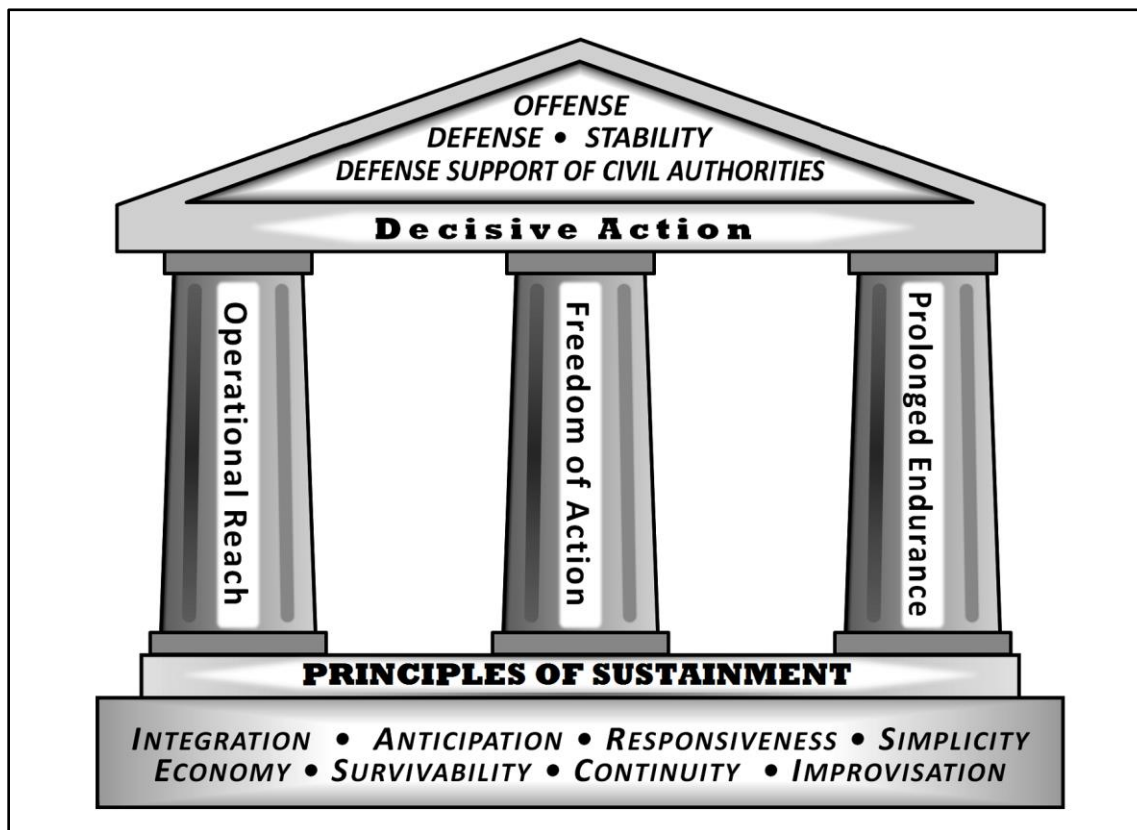


Figure 1-1. Principles of sustainment

SECTION II – OVERVIEW OF ARMY OPERATIONS

1-12. Threats to U.S. interests throughout the world are countered by the ability of U.S. forces to respond to a wide variety of challenges along a conflict continuum that spans from peace to war as shown in figure 1-2. U.S. forces conduct a range of military operations to respond to these challenges. The conflict continuum does not proceed smoothly from stable peace to general war and back. For example, unstable peace may erupt into an insurgency that quickly sparks additional violence throughout a region, leading to a general war. JP 3-0 contains a full discussion of the specific types of joint operations conducted across the conflict continuum.

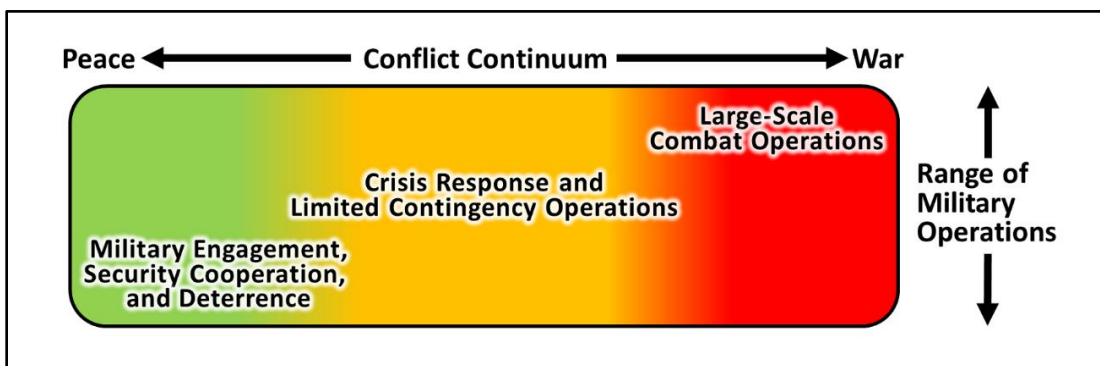


Figure 1-2. The conflict continuum and the range of military operations

1-13. The range of military operations is a fundamental construct that helps relate military activities and operations in scope and purpose within a backdrop of the conflict continuum. All operations along this range share a common fundamental purpose-to achieve or contribute to national objectives. Sustainment forces play key roles in the military engagement, security cooperation, and deterrence activities that build networks and relationships with partners, shape regions, keep day-to-day tensions between nations or groups below the threshold of armed conflict, and maintain U.S. global influence. Typically, crisis response and limited contingency operations are focused in scale and purpose and conducted to achieve a specific strategic or operational-level objective in an operational area. Large-scale combat operations occur in the form of major operations and campaigns aimed at defeating an enemy's armed forces and military capabilities in support of U.S. national objectives. *Large-scale combat operations* are extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives (JP 3-31).

1-14. Large-scale combat operations are at the far right of the conflict continuum and associated with war. Historically, battlefields in large-scale combat operations have been more chaotic, intense, and highly destructive than those the Army experienced in the past several decades and places significant strain on sustainment operations. For example, during the intense battles of World War II, American Soldiers were wounded or killed at the rate of several hundred per day. Given the current advances in technology and increased lethality of weaponry possessed by peer threats, the Army could potentially experience losses of this magnitude or greater in any future large-scale combat operations.

1-15. Multiple operational variables make support to large-scale combat operations the greatest challenge for Army sustainment forces. Large-scale combat operations are intense, lethal, and high tempo. Their conditions include complexity, chaos, fear, violence, fatigue, and uncertainty which necessitates integration of all warfighting functions across all domains to win on the multi-domain battlefield. For additional information on large-scale combat operations, see FM 3-0.

THE OPERATIONAL ENVIRONMENT

1-16. Large-scale combat operations occur within a complex OE. An OE is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). Commanders at all levels have their own OEs for their particular operations. An OE for any specific operation comprises more than the interacting variables that exist within a specific physical area. It also involves interconnected influences from the global or regional perspective (for example, politics and economics) that impact conditions and operations. Thus, each commander's OE is part of a higher commander's OE.

1-17. Understanding the specific OE in each situation is essential to the successful execution of deployment and sustainment operations conducted in support of the geographic combatant commander (GCC) objectives. Analysis of a particular OE is framed in the context of political, military, economic, social, information, infrastructure, physical environment, and time relationships across the air, land, maritime, space, and cyberspace domains. This political, military, economic, social, information, infrastructure, physical environment, and time analysis provides relevant information essential to understanding any given OE. Sustainers mitigate risks identified during the OE analysis by conducting a sustainment preparation of the OE. For more information on political, military, economic, social, information, infrastructure, physical environment, and time considerations, see ADP 5-0. Sustainment preparation of the OE is described in chapter 3, and in ADP 4-0.

1-18. Units sustaining large-scale combat operations are affected by a range of factors in the OE. Sustainers must be prepared to support operations in a variety of vastly different OEs. Listed below are examples of how sustainment operations are impacted by specific OE factors:

- Contiguous and non-contiguous areas of operations where ill-defined or fluid boundaries impact task organizations, identification of supported units, command and support relationships, and distribution plans and execution.
- Simultaneous, geographically dispersed operations that may result in long lines of communication (LOC) and stress sustainment headquarters' communications, command and support relationships, distribution plans and execution.

- Joint, single Service, and multinational force interactions with intergovernmental organizations, non-governmental organizations, and contractors requires more liaisons to and from sustainment headquarters and units, and longer planning time to ensure all organizations understand the plan. For more information on multinational, intergovernmental organization and non-governmental organization support, see ADP 4-0, and FM 4-95.
- Limited availability of or high competition for host-nation support (HNS), infrastructure, commercial services, commodities and facilities to support setting the theater, rapid deployment and onward movement of combat forces, and sustainment of the joint security area during military operations.

MULTI-DOMAIN EXTENDED BATTLEFIELD

1-19. The interrelationship of air, land, maritime, space, and cyberspace requires a cross-domain understanding of an OE. Sustainment commanders and staffs must understand friendly and enemy capabilities that reside in each domain and the potential impacts to sustainment operations. Space and cyberspace operations that degrade sustainment information system capabilities as well as the peer threat employment of conventional, special operations, guerilla, and insurgent forces to interdict friendly air, land, and maritime operations, can all degrade sustainment operations. Since many friendly capabilities are not organic to sustainment formations, commanders and staffs plan, coordinate for, and integrate joint and other unified action partner capabilities in a multi-domain approach to operations.

1-20. During large-scale combat against peer threats, all friendly forces, including those conducting sustainment tasks, are in contact and under observation in the space and cyberspace domains, as well as the information environment. In light of potential adversaries' capabilities, Soldiers must be prepared to operate in denied, degraded, and disrupted communication environments. FM 6-99 includes standardized report and message formats. The formats in the field manual are for manual and voice use. The report and message formats help users prepare and manually transmit written and voice reports and messages. Each format provides an organized template to record, pass, and store information. Operations on the multi-domain battlefield will require Soldiers maintain the ability to operate in a contested cyber or space environment, without the use of enterprise systems. Sustainment organizations should maintain manual reporting skills and should also be prepared to use alternate methods of reporting such as, telephone, radio transmission, messenger, or hard copy.

SECTION III – SUSTAINMENT SUPPORT TO UNIFIED LAND OPERATIONS

1-21. Sustainment is inherently joint. Joint interdependence is the purposeful reliance of all the services upon each other's capabilities to maximize the complementary and reinforcing effects of both. The United States Air Force provides airlift capabilities to move Army forces quickly across strategic LOCs. The United States Navy provides strategic sealift into deep draft ports and land capabilities to supplement Army theater opening forces entering areas where ports are austere, damaged, or non-existent. The joint force enables Army sustainment and provides the services and capabilities needed to sustain unified land operations. For additional information regarding joint logistics, see JP 4-0.

1-22. Army sustainment enables unified land operations by providing the support required to keep the Army and its unified action partners engaged in operations across the OE. Lack of sufficient sustainment support slows operational tempo, contributes to early culmination, and could lead to the defeat of friendly forces on the ground. Since most Army sustainment capabilities reside within the Reserve Component, contracted support, high readiness reserve units and Army prepositioned stocks play critical roles during initial stages of a crisis response. It is essential that sustainment and operational planners be inseparable in the planning, preparation, execution, and assessment of operations.

FREEDOM OF ACTION, OPERATIONAL REACH, AND PROLONGED ENDURANCE

1-23. The sustainment warfighting function is essential for conducting operations and generating combat power as the Army performs its strategic roles. Sustainment provides the operational commander freedom of

action, operational reach, and prolonged endurance necessary to shape operational environments, prevent conflict, prevail in large-scale ground combat operations, and consolidate gains.

FREEDOM OF ACTION

1-24. Freedom of action enables commanders to achieve operational initiative and maintain operational tempo. Successful sustainment commanders facilitate freedom of action by planning and executing sustainment activities able to support the greatest possible number of courses of action for the supported commander in a particular situation. Effective sustainment execution provides continuous and responsive sustainment that allows supported commanders to operate freely.

1-25. Sustainers enable freedom of action by conducting sustainment preparation of the OE, synchronizing the sustainment plan with the scheme of maneuver, and maintaining flexibility and disciplined initiative while supporting maneuver commanders. The proper application of the mission command philosophy to sustainment operations encourages the greatest possible freedom of action from subordinates. Appropriate sustainment unit command and support relationships equips subordinate commanders with the authority and flexibility to act boldly and achieve desired support effects in the absence of continuous direction from higher headquarters (HQ).

OPERATIONAL REACH

1-26. *Operational reach* is the distance and duration across which a force can successfully employ military capabilities (JP 3-0). *Depth* is the extension of operations in time, space, or purpose to achieve definitive results (ADP 3-0). Army forces require significant sustainment to strike enemy forces and disrupt or destroy throughout their depth, preventing the effective employment of reserves, command and control nodes, sustainment, and other capabilities not in direct contact with friendly forces. Operations in depth disrupt the enemy's decision cycle and contribute to protecting the force by destroying enemy capabilities before the enemy can use them. Commanders balance their forces' tempo and momentum to produce simultaneous results throughout their operational areas. To achieve simultaneity, commanders establish a higher tempo of operations to target enemy capabilities located at the limit of a force's operational reach. Generally, the higher the tempo of operations, particularly during large-scale combat, the greater the demand for sustainment.

1-27. Sustainment operations are critical to enabling operational reach. The Army's sustainment capability assists in providing crucial theater and port-opening functions that further enable the strategic and operational reach of the joint force. Effective operational reach requires gaining and maintaining operational access in the face of enemy anti-access and area denial capabilities and actions. (JP 3-0). Army sustainment capabilities continue to provide the bulk of Army support to other Services, CUL, and other common sustainment resources to prevent friendly forces from culminating.

PROLONGED ENDURANCE

1-28. Endurance refers to the ability to employ combat power anywhere for protracted periods. It stems from the ability to organize, protect, and sustain a force, regardless of the distance from its base and the austerity of the environment. Endurance involves anticipating requirements and making the most effective, efficient use of available resources. Endurance gives Army forces their campaign quality. It makes permanent the transitory effects of other capabilities.

1-29. Sustainment provides the support necessary to ensure operations continue until mission accomplishment. Sustainment also provides the capabilities necessary for maintaining the personnel and materiel replacements essential to maintaining combat power. Sustainment support that enables prolonged endurance requires the synchronization of the elements of sustainment.

AUTHORITIES AND RESPONSIBILITIES

1-30. The remainder of this chapter discusses the command authority of CCDR, Army Title 10 sustainment requirements, and Army assigned executive agent (EA) responsibilities. Army command and support relationships are discussed in detail in chapter 2.

COMMAND AUTHORITY OF COMBATANT COMMANDERS

Title 10, United States Code Sec 162, (*Combatant commands: assigned forces; chain of command*), specifies the force structure prescribed for each combatant command as follows: (a) *Assignment of Forces*.—(1) *As directed by the Secretary of Defense, the Secretaries of the military departments shall assign specified forces under their jurisdiction to unified and specified combatant commands or to the United States element of the North American Aerospace Defense Command to perform missions assigned to those commands. The Secretary of Defense shall ensure that such assignments are consistent with the force structure prescribed by the President for each combatant command.* (2) *A force not assigned to a combatant command or to the United States element of the North American Aerospace Defense Command under paragraph (1) shall remain assigned to the military department concerned for carrying out the responsibilities of the Secretary of the military department concerned as specified in section 7013, 8013, or 9013 of this title, as applicable.* (3) *A force assigned to a combatant command or to the United States element of the North American Aerospace Defense Command under this section may be transferred from the command to which it is assigned only—*(A) *by authority of the Secretary of Defense; and* (B) *under procedures prescribed by the Secretary and approved by the President.* (4) *Except as otherwise directed by the Secretary of Defense, all forces assigned to a unified combatant command shall be under the command of the commander of that command. The preceding sentence applies to forces assigned to a specified combatant command only as prescribed by the Secretary of Defense.* (b) *Chain of Command*.—*Unless otherwise directed by the President, the chain of command to a unified or specified combatant command runs—*(1) *from the President to the Secretary of Defense; and* (2) *from the Secretary of Defense to the commander of the combatant command.*

1-31. Title 10, United States Code Sec 164, (*Command Authority of Combatant Commanders*), specifies the CCDR's responsibility for authoritative direction for logistics, (doctrinally referred to as directive authority for logistics [DAFL]). Paragraph C1 states: *Unless otherwise directed by the President or the Secretary of Defense, the authority, direction, and control of the commander of a combatant command with respect to the commands and forces assigned to that command include the command functions of* -(A) *giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command, including authoritative direction over all aspects of military operations, joint training, and logistics; (B) prescribing the chain of command to the commands and forces within the command; (C) organizing commands and forces within that command as he considers necessary to carry out missions assigned to the command; (D) employing forces within that command as he considers necessary to carry out missions assigned to the command; (E) assigning command functions to subordinate commanders; (F) coordinating and approving those aspects of administration and support (including control of resources and equipment, internal organization, and training) and discipline necessary to carry out missions assigned to the command; and (G) exercising the authority with respect to selecting subordinate commanders, selecting combatant command staff, suspending subordinates, and convening courts-martial, as provided in subsections (e), (f), and (g) of this section and section 822(a) of this title, respectively.*

1-32. Combatant command (command authority) over assigned forces is vested only in the commanders of CCDR by Title 10, United States Code, and cannot be delegated or transferred. This authority over assigned forces includes DAFL, which gives the CCDR the authority to organize logistics resources within theater according to the operational needs. The President or Secretary of Defense may extend this authority to attached forces when transferring forces for a specific mission, and should specify this authority in the establishing directive or order.

Directive Authority for Logistics

1-33. The CCDR uses DAFL to assign responsibility for execution of EA, lead Service responsibilities and to make other special arrangements such as assigning common user support or common user logistics to a Service or agency. DAFL is the CCDR authority to issue directives to assigned forces. It includes peacetime measures to ensure the effective execution of approved operations plans, effectiveness and economy of operation, prevention or elimination of unnecessary duplication of facilities, and overlapping of functions among the Service component commands (JP 1).

1-34. DAFL, like other combatant command (CCMD) authorities, cannot be delegated or transferred. However, the CCDR may assign the responsibility for the planning, execution and/or management of as many common support capabilities to a subordinate JFC or Service component commander as required to

accomplish the subordinate JFC's or Service component commander's mission. For some commodities, support or services common to two or more Services, the Secretary of Defense or the Deputy Secretary of Defense may designate one provider as the EA.

1-35. The CCDR must formally delineate assigned responsibilities by function and scope to the subordinate JFC or Service component commander. When exercising this option, the CCDR must specify the control and tasking authorities being bestowed upon the subordinate joint command for logistics, as well as the command relationships it will have with the Service components.

Coordinating Authority

1-36. Coordinating authority is a commander or individual who has the authority to require consultation between the specific functions or activities involving forces of two or more Services, joint force components, or forces of the same Service or agencies, but does not have the authority to compel agreement. In the event that essential agreement cannot be obtained, the matter shall be referred to the appointing authority. Coordinating authority is a consultation relationship, not an authority through which command may be exercised. Coordinating authority is more applicable to planning and similar activities than to operations. For example, a joint security commander exercises coordinating authority over area security operations within the joint security area. Commanders or leaders at any echelon at or below CCMD may be delegated coordinating authority. These individuals may be assigned responsibilities established through a memorandum of agreement between military and nonmilitary organizations. For additional information, see JP 1-0.

Direct Liaison Authorized

1-37. Direct liaison authorized is that authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command (JP 1). Direct liaison authorized is more applicable to planning than operations and always carries with it the requirement of keeping the commander granting direct liaison authorized informed. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised.

Lead Service

1-38. The CCDR may choose to assign specific CUL functions, to include planning and execution to a lead Service. A lead Service or agency for CUL is a Service component or Department of Defense (DOD) agency that is responsible for execution of common-user item or service support in a specific CCMD or multinational operation as defined in the combatant or subordinate JFC's operation plan, operation order, and/or directives (JP 4-0).

1-39. Lead Service assignments can be for single or multiple common user functions and may also be based on phases and/or locations within the area of responsibility (AOR). The CCDR may augment the lead Service's logistics organization with capabilities from another component's logistics organizations as appropriate. The lead Service must issue procedures and sustainment funding for all items issued to other Services as well as a method for collecting items from other Services.

Common User Logistics

1-40. CUL is materiel or service support shared with or provided by two or more Services, DOD agencies, or multinational partners to another Service, DOD agency, non-DOD agency, and/or multinational partner in an operation (JP 4-0). It is usually restricted to a particular type of supply and/or service and may be further restricted to specific unit(s) or types of units, specific times, missions, and/or geographic areas.

1-41. While normal Service channels may be an effective means of supporting a joint operation, the Services will often be precluded from deploying the capabilities necessary to provide 100 percent dedicated Service support. More often than not, the operational situation will require CUL support in order to provide effective and efficient support of one or more major services or supplies. In fact, CUL support occurs in almost all joint operations, especially in the form of standing inter-Service support relationships. For example, the Army provides inland petroleum distribution to the joint force.

1-42. When properly executed, CUL can produce significant efficiencies by eliminating duplication among Service components, DOD agencies, multinational partners, and/or contractors in theater. By utilizing common-item and common-service support, the CCDR may be able to produce significant savings in equipment, personnel, and supplies deployed to a particular joint operations area (JOA). These savings may further reduce the requirement for strategic lift, the logistics footprint within a JOA, and possibly the overall cost of an operation. Figure 1-3 displays the CCDR’s authorities and sample processes used to execute those authorities.

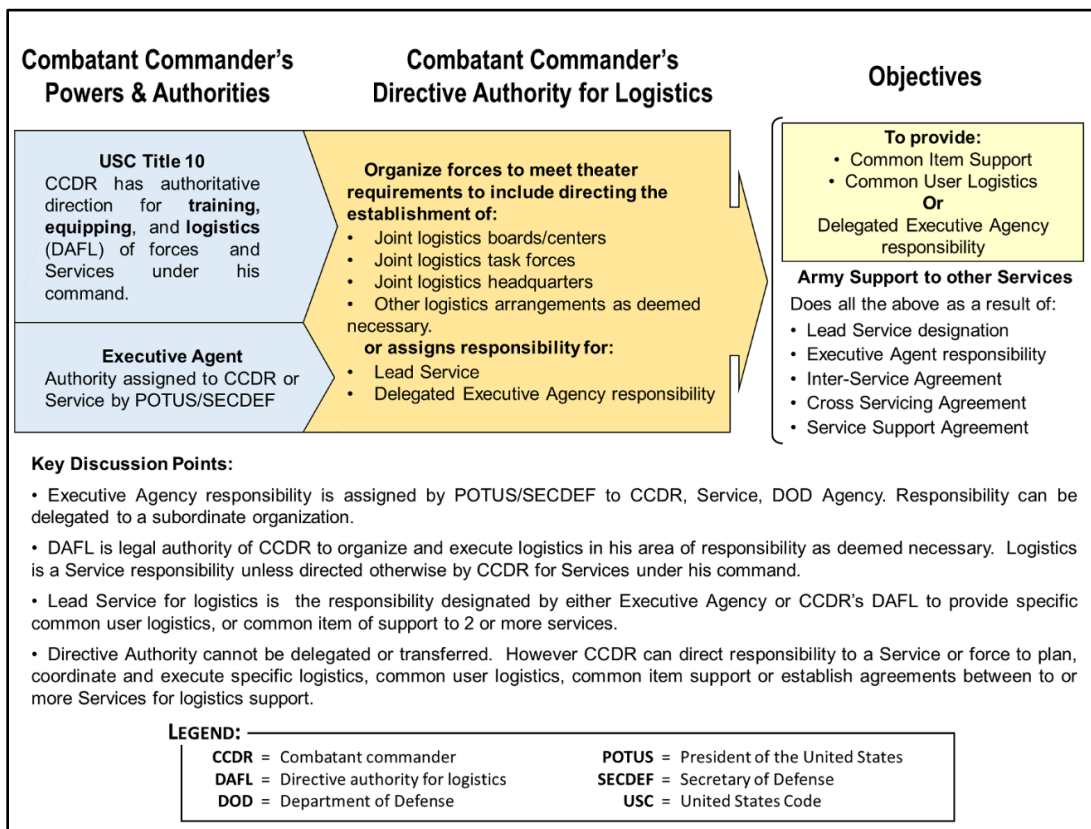


Figure 1-3. Combatant commander’s authorities

JOINT COMMAND FOR LOGISTICS

1-43. The CCDR, through exercising DAFL, may assign joint logistics responsibilities to a Service component to establish a joint command for logistics (JP 4-0). The assignment as a joint command for logistics is clearly designated by orders and establishes the organization as a joint command. This command authority is not to be confused with EA, CUL, or any other type of Army support to other services. Generally, the CCDR will designate the Service with the preponderance of forces or the most capable logistics structure to fill the joint command for logistics requirement. The designated joint command for logistics requires staff augmentation from other Services to meet joint force requirements. See JP 1-0, JP 3-31, and JP 3-33 for more information on establishing a joint command. In the event the Army Service component command (ASCC) is assigned responsibility for establishing a joint command for logistics, the theater sustainment command (TSC) or expeditionary sustainment command (ESC) with staff augmentation from other Service components is designed to fulfill that mission.

ARMY TITLE 10 SUSTAINMENT REQUIREMENTS

1-44. Title 10, United States Code and Department of Defense Directive (DODD) 5100.1 describe the organization, roles, and responsibilities for the elements of the DOD to include the statutory requirements for

each military department. In accordance with Title 10, each Service retains responsibility for the sustainment support of forces it allocates to a joint force. The Secretary of the Army exercises this responsibility through the Chief of Staff, U.S. Army and the ASCC assigned to each CCMD. For conventional forces not assigned to CCMDs, the Secretary of the Army established Commanding General United States Army Forces Command as the Army's Service Force Provider. The ASCC is responsible for the preparation and administrative support of Army forces assigned or attached to the CCMD. Theater ASCCs also support Army special operations forces (ARSOF). United States Army Special Operations Command (USASOC) provides ARSOF to GCCs to perform theater special operations missions.

1-45. Support to other Services while executing assigned EA or lead Service responsibilities is commonly referred to as Army support to other Services. In both instances, the ASCC supports sustainment requirements through its designated TSC, ESC, and medical command (deployment support) (MEDCOM [DS]).

1-46. There are twelve Army Title 10 responsibilities and of those twelve, nine (bold lettering) are sustainment related.

- Recruiting.
- Organizing.
- **Supplying.**
- **Equipping (including research and development).**
- Training.
- **Servicing.**
- **Mobilizing.**
- **Demobilizing.**
- **Administering (including the morale and welfare of personnel).**
- **Maintaining.**
- **Construction, outfitting, and repair of military equipment.**
- **Construction, maintenance, repairs of building and structures, utilities, acquisition of real property and interests in real property necessary to carry out the responsibilities.**

1-47. The purposeful combination of complementary Service capabilities to create joint interdependent forces is often the most effective and efficient means by which to sustain a joint force. Therefore, additional authorities to Title 10 have been developed to provide for interservice and interagency mutual support.

ARMY EXECUTIVE AGENT RESPONSIBILITIES

1-48. *Executive agent* is a term used to indicate a delegation of authority by the Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense (JP 1). EA refers to Secretary of Defense directives and instructions to the head of a DOD component (such as Chief of a Service, CCDR, or director of a Combat Support Agency) to provide specific categories of support to other agencies or Service component. The Secretary of Defense designates, and funds, the Army as the EA for numerous DOD common support requirements. Examples of the Army's sustainment related responsibilities and support to other services as provided in DODD and joint publications (JP) are shown in table 1-1. These DOD-level EA requirements relate to lead Service responsibilities. EA reduces redundancy of common support requirements across the DOD. However, in many cases, lead Service requirements will be closely related to the DOD EA requirements. The CCDR has the authority to assign a Service lead Service responsibilities for support not EA related.

Table 1-1. Examples of Army sustainment related responsibilities

<i>Army Executive Agent</i>	
<i>Source</i>	<i>Support Responsibility</i>
Deputy Secretary of Defense Memorandum	Coordination of Contracting Activities in the U.S. Central Command Area of Responsibility
Deputy Secretary of Defense Memorandum	Financial Disclosure Management- Ethics Reporting System
DODD 3235.2	DOD Combat Feeding Research and Engineering Program
DODD 4705.1	Management of Land-Based Water Resources in Support of Joint Contingency Operations
DODD 5101.11E	DOD Executive Agent for Military Postal Service
DODI 6490.11	Medical Research for Prevention, Mitigation, and Treatment of Blast Injuries
<i>Army Support to Other Services</i>	
<i>Source</i>	<i>Support Responsibility</i>
JP 3-34	Airfield Repair
JP 4-01.2	Sealift Support to Joint Operations
JP 4-01.5	Joint Terminal Operations
JP 4-01.6	Joint Logistics Over-the-Shore
JP 4-03	Petroleum, Storage, Distribution, and Protection
JP 4-0	Provide Logistics Support to Enemy Prisoners of War
DODD 1300.22C1	Mortuary Affairs
LEGEND: DOD = Department of Defense DODD = Department of Defense Directive DODI = Department of Defense Instruction JP = Joint Publication	

1-49. The Secretary of Defense or the Deputy Secretary of Defense may designate an EA for specific responsibilities, functions, and authorities to provide defined levels of support for operational missions, administrative, or other designated activities that involve two or more DOD components. By definition, the designation as an EA makes that organization responsible for a joint capability.

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Chapter 2

Army Sustainment Echelons

Chapter 2 provides an overview of sustainment echelons, roles, and capabilities. It also provides a general discussion of sustainment organizations and roles at the strategic level and each Army echelon. This chapter discusses the Army command and support relationships and the importance of command and control. The chapter concludes with a discussion of how Army sustainment forces train and develop leaders for large-scale combat operations.

SECTION I – OVERVIEW OF STRATEGIC LEVEL SUPPORT

2-1. U.S. leaders employ the Armed Forces of the U.S.—the military instrument of national power—in coordination with diplomatic, informational, and economic instruments to advance and defend U.S. values and interests, achieve objectives consistent with national strategy, and conclude operations on terms favorable to the U.S. The Armed Forces of the U.S. achieve these objectives through unified action. *Unified action* is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort (JP 1).

2-2. The Army's operational concept and contribution to unified action is unified land operations. *Unified land operations* are the simultaneous execution of offense, defense, stability, and defense support of civil authorities across multiple domains to shape operational environments, prevent conflict, prevail in large-scale ground combat, and consolidate gains as part of unified action (ADP 3-0). The sustainment of unified land operations requires a continuous link between the strategic and operational levels.

2-3. For sustainment leaders to effectively support large-scale combat operations, leaders must understand strategic level sustainment forces and the capabilities each provides. Joint and Army forces receive support from the strategic support area. The support provided includes strategic lift, materiel integration, financial management support, HR support, and medical services. The strategic support area describes the area extending from a theater to a continental United States (CONUS) base or another combatant's AOR. The strategic support area includes the air and seaports supporting the flow of forces and sustainment into the theater. The strategic base in the strategic support area includes a vast array of DOD, government, and private sector agencies that participate in the sustainment enterprise. This section includes only select organizations that operate with Army echelons.

U.S. TRANSPORTATION COMMAND

2-4. United States Transportation Command (USTRANSCOM) is the functional CCMD responsible for providing and managing strategic common-user airlift, sealift, and terminal services worldwide. USTRANSCOM is responsible for integrating and synchronizing strategic and theater deployment execution and inter-theater distribution operations into each CCDR's AOR. It ensures that military deployment and redeployment, as well as DOD global patient movement requirements are met through the use of both military and commercial transportation assets based on supported commander business rules and best business practices. USTRANSCOM determines when commercial channels can meet requirements and relieve stress on limited military assets. USTRANSCOM's major subordinate commands include Air Mobility Command as the Air Force component command, Military Sealift Command as the Navy component command, and the Military Surface Deployment and Distribution Command (SDDC) as the Army Service component command. See FM 4-95 for additional information.

2-5. USTRANSCOM provides medical regulating and aeromedical evacuation scheduling through the Global Patient Movement Requirements Center for CONUS and inter-theater operations under the oversight

of the USTRANSCOM Surgeon. The Global Patient Movement Requirements Center provides support to theater patient movement requirements centers, coordinates with supporting resource providers to identify available assets, and communicates transport to bed plans to the appropriate transportation agency for execution. See JP 4-02 for additional information.

AIR MOBILITY COMMAND

2-6. Air Mobility Command is the U.S. Air Force airlift component of USTRANSCOM and serves as the single port manager for air mobility. Air Mobility Command aircraft provide the capability to deploy the Army's forces worldwide and help sustain them across a range of military operations. USTRANSCOM, through Air Mobility Command, executes its single port manager role for aerial port of embarkation (APOE) and aerial port of debarkation (APOD) performing functions necessary to support the strategic flow of the deploying forces' equipment and supplies from the APOE to the theater.

2-7. APOEs and APODs are usually designated joint aerial complexes and managed by Air Mobility Command. Where designated, Air Mobility Command is also the operator of common-use APOEs and/or APODs. The operation of a joint aerial complex can be divided into two parts: air terminal operations and air terminal support operations. Air terminal operations are run by Air Mobility Command. The ASCC has responsibility for air terminal support operations and employs the TSC to facilitate reception, staging, onward movement, integration (RSOI) of deploying forces and materiel to designated tactical assembly areas.

2-8. Air terminal operations include supervising cargo documentation, cargo loading and unloading, providing clearance, movement operations, and security. Air Mobility Command and the TSC work together to provide a seamless strategic/theater interface to provide for the efficient RSOI of forces and supplies to and from the theater.

2-9. Air terminal support operations include port clearance, operation of holding and marshalling areas, postal operations, personnel processing, movement control, onward movement, security, and life support. The TSC may perform some of these functions at locations other than the joint aerial complex.

2-10. A host nation may limit the APOE and/or APOD to military use that will limit specific cargo types or the military may share the facility with commercial activities. In the latter case, commercial carriers, governmental and non-governmental agencies, and the military often compete for the use of limited resources. For additional information, see ATP 3-35.

MILITARY SEALIFT COMMAND

2-11. Military Sealift Command is the Navy's sea transportation component of USTRANSCOM. The mission of the Military Sealift Command is to provide common-user and exclusive use sealift transportation services to include ocean transportation of equipment, fuel, supplies, Army prepositioned stocks and ammunition to sustain U.S. forces worldwide during peacetime and in war for as long as operational requirements dictate.

2-12. Military Sealift Command provides sealift with a fleet of government-owned and chartered U.S. flagged ships. Sealift ships principally move unit equipment from the U.S. to theaters of operation all over the world. In addition to sealift ships, Military Sealift Command operates a fleet of prepositioned ships strategically placed around the world and loaded with equipment and supplies to sustain Army, Navy, Marine Corps, Air Force, and Defense Logistics Agency (DLA) operations. These ships remain in an operational status at sea or pier side; ready to deploy on short notice, which significantly reduces the response time for the delivery of urgently needed equipment and supplies to an operational area. See FM 4-95 for additional information.

MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND

2-13. SDDC is an operational level Army force designated by the Secretary of the Army as the ASCC of the USTRANSCOM and a major subordinate command of United States Army Materiel Command (USAMC). SDDC exercises administrative control (ADCON) authority and responsibility on behalf of the Commander, USAMC and exercises operational control (OPCON) over Army forces, as delegated by the Commander, USTRANSCOM.

2-14. SDDC is the global ocean and inland waterway port manager and surface transportation service provider as part of USTRANSCOM's Joint Deployment and Distribution Enterprise. The Joint Deployment and Distribution Enterprise is a collaborative network of partner organizations, to include DOD components, sharing common deployment and distribution-related goals, interests, missions, and business processes, which comprise end-to-end deployment and distribution in support of CCDRs (figure 2-1). SDDC serves as a coordination and synchronization element on behalf of USTRANSCOM to plan, apportion, allocate, route, schedule, validate priorities, track movements, and redirect forces and materiel per the supported commander's intent. See FM 4-95 for additional information.

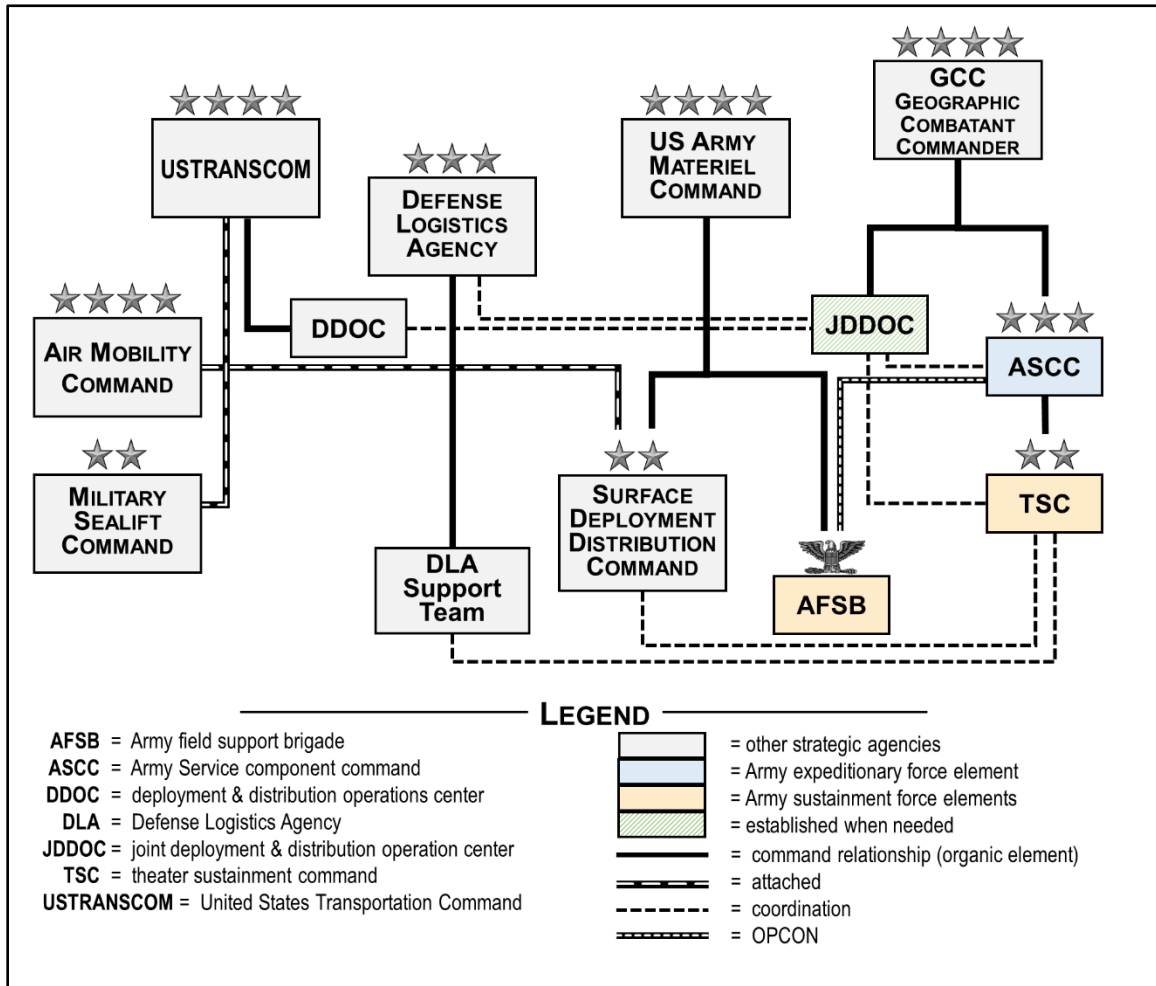


Figure 2-1. Joint Deployment and Distribution Enterprise

SDDC FUNCTIONS AND STAFF RELATIONSHIPS

2-15. SDDC performs single-port management functions necessary to support the strategic flow of the deploying forces' equipment and sustainment supply in the seaport of embarkation (SPOE) and hand-off to the GCC in the seaport of debarkation (SPOD). SDDC has port management responsibility through all phases of the theater port operations continuum, from a bare beach (joint logistics over-the-shore as an example) deployment to a commercial contract fixed-port support deployment. When necessary, in areas where SDDC does not maintain a manned presence, a deployment and distribution management team will be established to direct water terminal operations, including supervising movement operations, contracts, cargo documentation, CONUS security operations, arranging for support, and the overall flow of information.

2-16. As the seaport single-port management, SDDC provides strategic deployment status information to the GCCs and manages the workload of the SPOD port operator based on the GCC's priorities and guidance. SDDC transportation brigades and other SDDC units operate ports that use contracted labor. If U.S. stevedores are used, transportation brigades assigned to the GCC operate the port. As an ASCC, SDDC executes the following functions:

- Plans, coordinates, and synchronizes bringing Army capabilities to bear to move, deploy and sustain DOD forces and build warfighting readiness and lethality.
- Provides surface and multimodal transportation services to DOD, and designated multinational and interagency entities.
- Plans and executes oversight of command acquisitions for transportation services to support CCMD requirements for enduring and contingency operations and infrastructure.
- Books freight on commercial vessels in accordance with (IAW) contractual agreements and provides appropriate support to movements occurring on government ships in coordination with the Military Sealift Command.
- Performs water terminal clearance authority functions as required.

2-17. SDDC executes assigned Title 10 responsibilities on behalf of USAMC which has ADCON of SDDC. SDDC is OPCON to USTRANSCOM for operational and joint training, and other matters for which USTRANSCOM is responsible.

SDDC COMMAND ASSIGNED AND OPERATIONAL CONTROL ORGANIZATIONS

2-18. SDDC has various capabilities that conduct surface strategic movements including: organic transportation brigades, terminal battalions and the Deployment Support Command as shown in figure 2-2. These organizations are described in the following paragraphs.

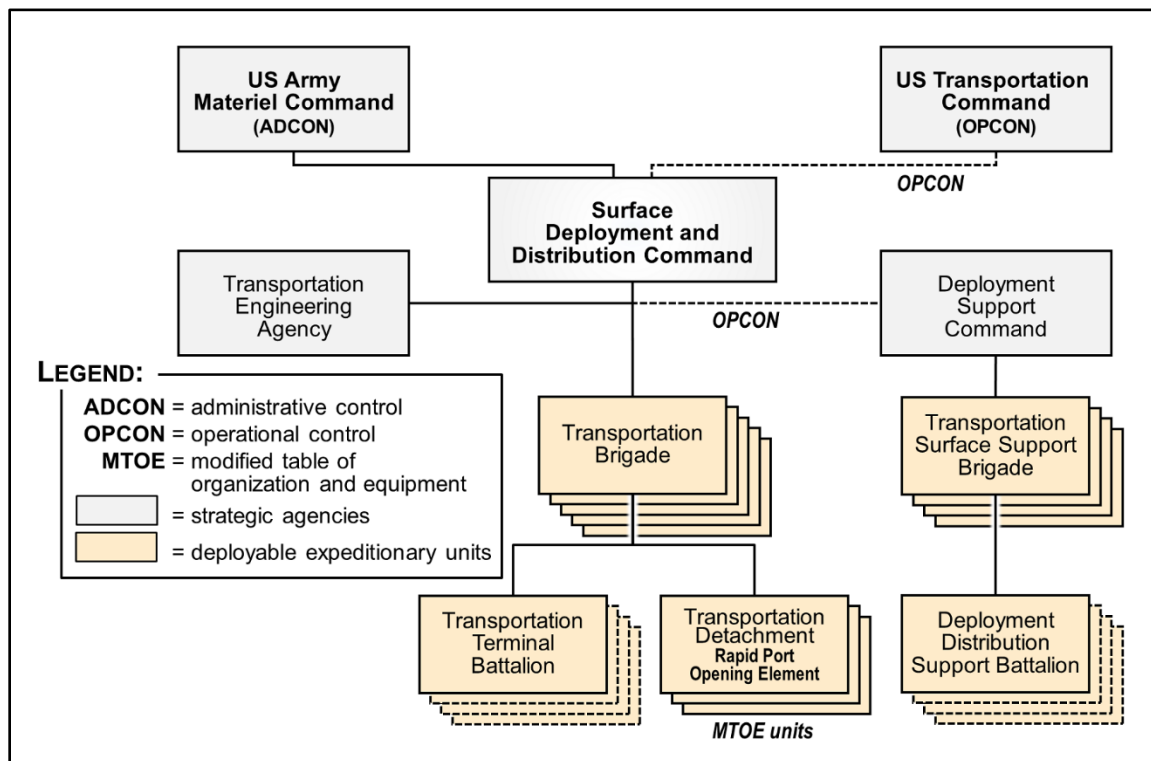


Figure 2-2. Surface Deployment and Distribution Command

Deployment Support Command

2-19. Deployment Support Command is the Army Reserve command responsible for providing SDDC the capability and operational depth to conduct global port terminal operations to support the movement of equipment and supplies from points of origin through SPOE and SPOD to final destination. Deployment Support Command forces are OPCON to SDDC. The Deployment Support Command provides technical training and readiness oversight of all assigned units.

2-20. Deployment Support Command is comprised of transportation surface brigades that provide command and control of assigned and attached SDDC units within specified geographic regions and serve as the single port manager at SPOEs and SPODs. Transportation surface brigades provides in-transit visibility of surface cargo for units, commanders, and USTRANSCOM.

2-21. Deployment Support Command has various capabilities assigned to its transportation surface brigades to augment SDDC in coordinating surface strategic movements during wartime and contingency operations including: deployment and distribution battalions, expeditionary rail center, expeditionary terminal operating elements, and automated cargo detachments. See ATP 4-13 for additional information.

Transportation Engineering Agency

2-22. The Transportation Engineering Agency enables the global deployability and sustainment of U.S. forces by providing transportation engineering, policy guidance, research, and analytical expertise. It evaluates the transportability characteristics of military materiel to ensure equipment moves safely and efficiently. The Transportation Engineering Agency achieves its end state through detailed analyses of multi-modal nodes and distribution networks by using deployment, and transportation modeling and simulation tools.

Transportation Brigade

2-23. Transportation brigade is an Army asset assigned to SDDC to provide surface deployment and sustainment distribution services in support of USTRANSCOM’s global DOD and non-DOD logistics customers. SDDC transportation brigades serve as single port manager in providing common-user terminal services, in-transit visibility, quality assurance and asset accountability through the Defense Transportation System. Figure 2-3 displays the structure of the transportation brigade. See ATP 4-13 for additional information.

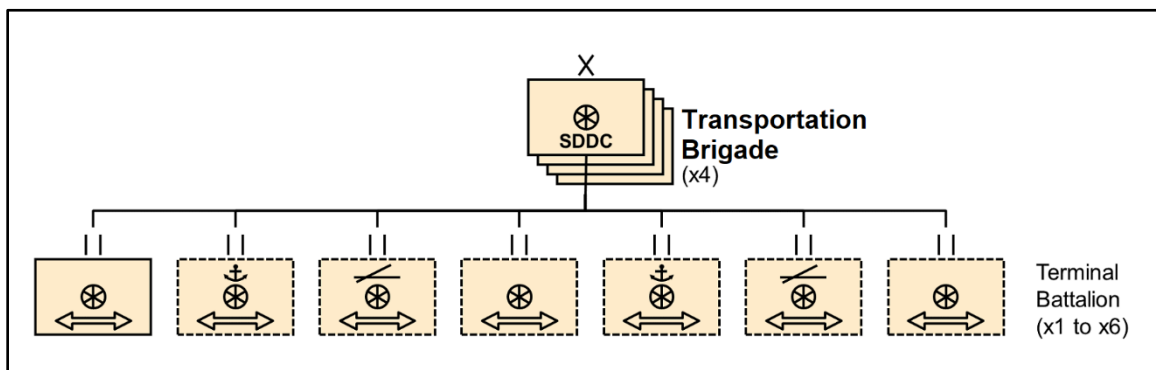


Figure 2-3. Transportation brigade

Terminal Battalion

2-24. Terminal battalion is an Army asset assigned to SDDC to provide surface deployment sustainment distribution services within assigned region in support of USTRANSCOM’s DOD and non-DOD logistics customers. SDDC terminal battalion’s conduct terminal operations while providing necessary documentation and data to enable in-transit visibility, quality assurance, and asset accountability through the Defense

Transportation System. Figure 2-4 displays the structure of the terminal battalion. See ATP 4-13 for additional information.

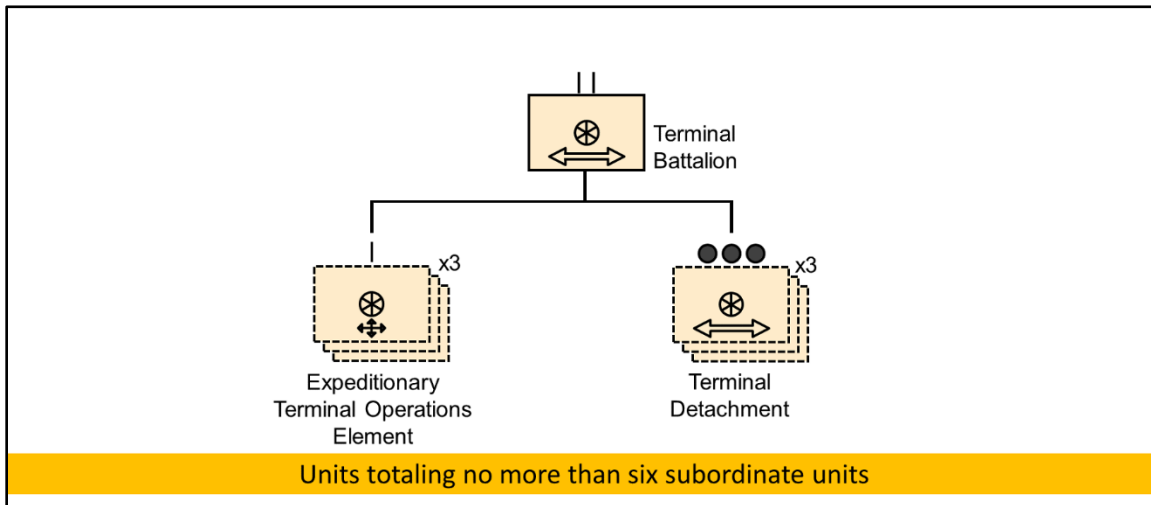


Figure 2-4. Terminal battalion

Transportation Surface Brigade

2-25. The transportation surface brigade is an Army Reserve asset that provides SDDC additional capability to provide surface deployment and sustainment distribution services in support of USTRANSCOM’s global DOD and non-DOD logistics customers. Transportation surface brigades provide command and control over SDDC assets in order for SDDC to expand the number and capability of seaports. Transportation surface brigades conduct ocean terminal operations at established ports where existing manpower, equipment, and infrastructure are available. Transportation surface brigades may be deployed outside the continental United States (OCONUS) to expand the number and capability of ports for sustainment or redeployment purposes. Figure 2-5 displays the transportation surface brigade. See ATP 4-13 for additional information.

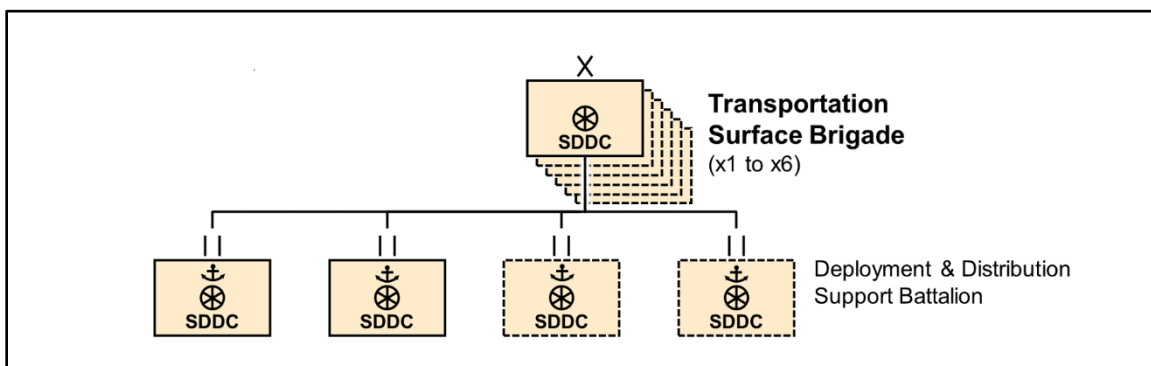


Figure 2-5. Transportation surface brigade

Deployment and Distribution Support Battalion

2-26. Deployment and distribution support battalions assigned to the transportation surface brigades provide command and control of assigned and attached units engaged in terminal operations, terminal management, and deployment and distribution support operations. The deployment and distribution support battalion provides in-transit visibility of surface cargo for units, commanders, and USTRANSCOM. Deployment and distribution support battalions also facilitate efficient movement of deploying force equipment and supplies

by advising and assisting unit movement personnel at the point of origin. Figure 2-6 displays the deployment and distribution support battalion. See ATP 4-13 for additional information.

Terminal Management Team and Deployment and Distribution Support Team

2-27. Deployment and distribution support battalions have two embedded capabilities- terminal management teams and deployment and distribution support teams. A terminal management team can manage terminal operations performed by stevedoring and related terminal services, manage receipt, staging, loading and offloading of Military Sealift Command or commercial vessels and stow planning at a port. Deployment and distribution support teams operating in support of an installation provide technical expertise to Installation Transportation Offices/Traffic Management Offices, unit movement officers, and deploying units responsible for verifying movement documentation, hazardous material documentation, dimensional data, shipping labels, and radio frequency identification marking before submission and arrival at a port of embarkation. Deployment and distribution support battalions are attached to an SDDC transportation brigade or Deployment support command transportation surface brigade when activated. Figure 2-6 depicts the deployment and distribution support battalion with the terminal management team and deployment and distribution support team. See ATP 4-13 for additional information.

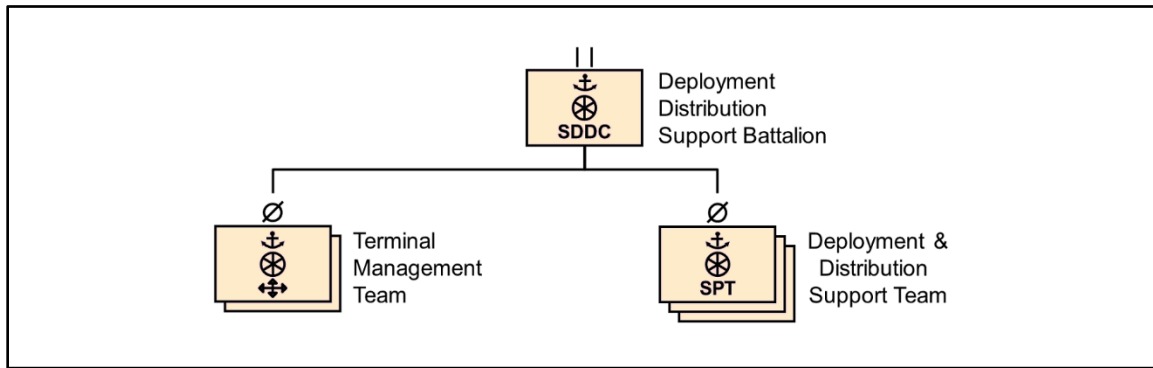


Figure 2-6. Deployment and distribution support battalion

Expeditionary Terminal Operations Element

2-28. Expeditionary terminal operations element is an Army Reserve asset, similar to the deployment and distribution support battalion that provides SDDC additional capability to provide expeditionary deployment and sustainment distribution services in support of USTRANSCOM globally. An expeditionary terminal operations element consists of two terminal management teams that each can manage terminal operations performed by stevedoring and related terminal services, manage receipt, staging, loading and offloading of Military Sealift Command or commercial vessels and stow planning at a port. The expeditionary terminal operations element is attached to terminal battalion or deployment and distribution support battalion when activated. Figure 2-7 on page 2-8 depicts the expeditionary terminal operations element. See ATP 4-13 for additional information.

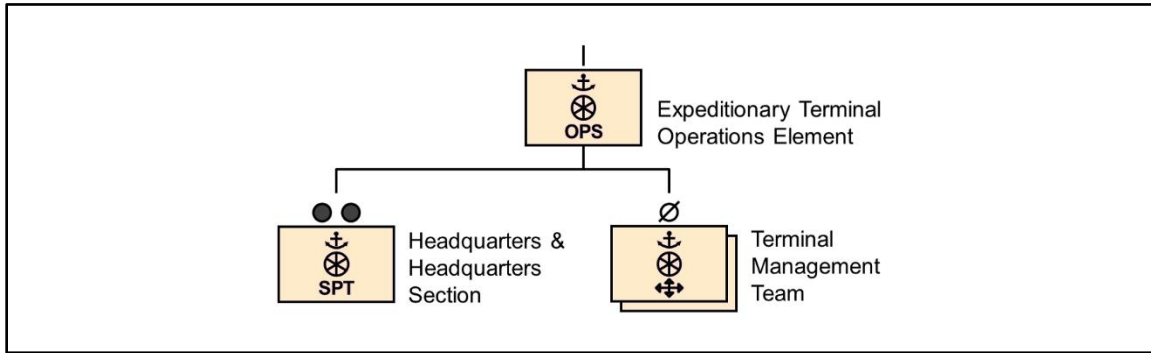


Figure 2-7. Expeditionary terminal operations element

Automated Cargo Detachment

2-29. Automated cargo detachments are an Army Reserve asset that provide automated documentation in support of cargo discharged from a vessel. Automated cargo detachment functions include documenting receipt of cargo, cargo reconciliation with a vessels manifest, preparation of transportation control movement documentation for first destination transportation, and preparation of discrepancy reports for the cargo accounting section of a terminal battalion. Automated cargo detachments are attached to a terminal battalion or deployment and distribution support battalion when activated. Figure 2-8 depicts the automated cargo detachment. See ATP 4-13 for additional information.

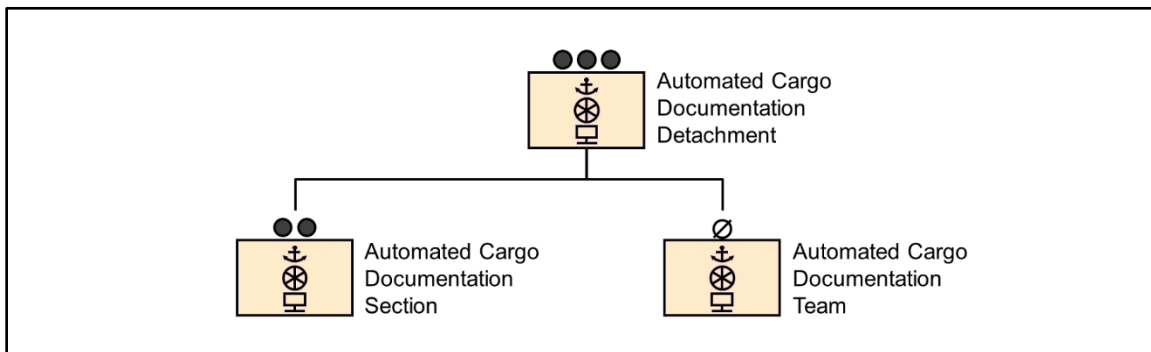


Figure 2-8. Automated cargo detachment

Expeditionary Railway Center

2-30. The Expeditionary Rail Center, an Army Reserve asset that provides rail network capabilities and infrastructure assessments, performs rail mode feasibility studies and advises on employment of rail capabilities. The Expeditionary Rail Center coordinates rail and bridge safety assessments, performs and assists with rail planning, and coordinates use of host nation or contracted rail assets. Figure 2-9 depicts the expeditionary railway center. For additional information, see ATP 4-13.

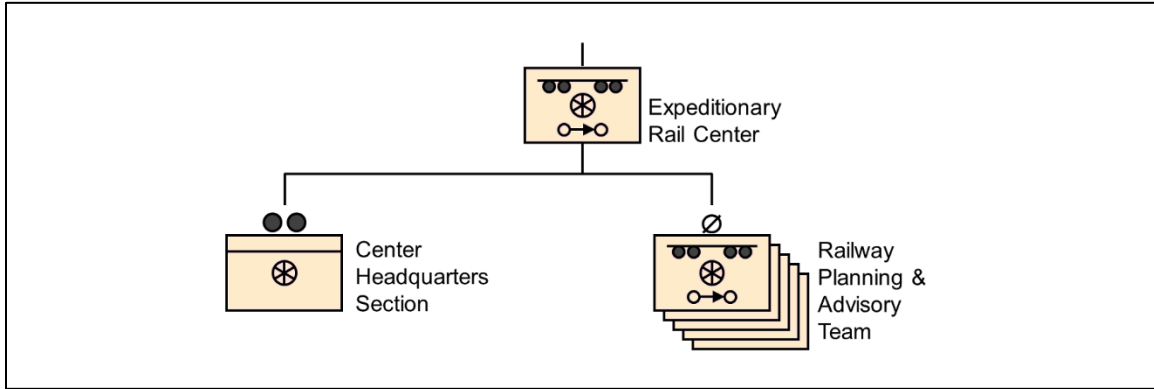


Figure 2-9. Expeditionary railway center

Rapid Port Opening Element

2-31. Rapid port opening element is assigned to USTRANSCOM, and OPCON to SDDC. Rapid port opening element provides specific surface deployment and distribution support and operational capabilities to APOD and SPOD. The rapid port opening element provides similar capabilities as a movement control team. For additional information, see ATP 4-16.

DEFENSE LOGISTICS AGENCY

2-32. The DLA is the Nation’s combat logistics support agency, providing nearly 100 percent of the military’s consumable items, and is the DOD EA for subsistence, bulk petroleum, construction/barrier material, medical material, and Defense Logistics Management Standards. It also provides distribution and disposal support as appropriate, including the disposal of hazardous waste. DLA supports U.S. Indo-Pacific Command, U.S. Central Command/U.S. Special Operations Command and U.S. European Command/U.S. Africa Command through an established regional command as its focal point. U.S. Northern Command, U.S. Southern Command, U.S. Strategic Command, and U.S. Transportation Command have dedicated liaison officers. DLA participates fully in adaptive planning and execution across the spectrum of military operations and when requested through a Global Force Management Request for Forces or Secretary of Defense approved standing executive order, DLA establishes and deploys expeditionary capabilities to support CCMD mission execution. DLA’s deployable capabilities can include personnel to provide logistics planning and operations support, commodity and logistics services support (Rapid Deployment Teams that deploy to form a DLA Support Team and Liaison Teams), material disposition and retrograde (DLA Disposition Services Expeditionary Operations), Joint Contingency Acquisition Support Office operational contract support enabling capability (Mission Support Teams), expeditionary contracting Expeditionary Contracting Officers, Fuel Support Elements, and deployable depots with warehousing and shipping consolidation functions via DLA Distribution Expeditionary. See DODD 5105.22, for additional information.

2-33. In accordance with DODI 5101.15, the Director, DLA, in coordination with the CCDRs, Chairman of the Joint Chiefs of Staff, and the Secretaries of the Military Departments, also recommends the designation of a theater lead agent for medical materiel as necessary to ensure effective and efficient medical supply chain support to the GCC. Once designated, the unit serving as the theater lead agent for medical materiel remains within the chain of command of their parent organization (such as the parent CCMD), DOD component, or other HQ element) and is responsible for providing medical materiel supply chain support to all Service members assigned or attached to the CCMD and to multinational or other non-U.S. customers as specified by the command. For additional information, see ATP 4-02.1 and JP 4-02.

2-34. During large-scale combat operations, DLA closely coordinates with the CCMD and Services to provide critical commodity and services support in the AOR. DLA deploys critical enablers such as a rapid deployment team to form the DLA Support Team and additional liaison officers to coordinate requirements. Additional deployable capabilities, such as a Joint Contingency Acquisition Support Office Mission Support Team, DLA Distribution Expeditionary, Expeditionary Contracting Officers, Fuel Support Elements, and

DLA Disposition Services Expeditionary Operations are available for support. DLA will activate reserve forces and the Global Logistics Support contract to provide enduring support as required. DLA will push sustainment stocks into theater and adjust priorities based on the operational environment and requirements. The priorities will adjust based on the nature of the conflict (offensive vs defensive) and threat. DLA will adjust existing contracts and enact new ones as required to provide continuous support to the CCMD.

DEFENSE HEALTH AGENCY

2-35. The Defense Health Agency is a joint, integrated combat support agency that enables the U.S. Army, Navy, and Air Force to provide a medically ready force and ready medical forces to the CCMDs. The Defense Health Agency activities include managing medical logistics and hospital facilities, and conducting activities in support of medical treatment facilities (MTFs).

DEFENSE CONTRACT MANAGEMENT AGENCY

2-36. Defense Contract Management Agency is the combat support agency responsible for providing contract administration services to the DOD acquisition enterprise and its partners to ensure delivery of quality products and services to the operating force. Defense Contract Management Agency, along with the services may also serve as an OCS force provider in major contingency and expeditionary operations when requested by the supported GCC and as directed by Under Secretary of Defense (Acquisition and Sustainment).

DEFENSE FINANCE AND ACCOUNTING SERVICE

2-37. The Defense Finance and Accounting Service is the principal advisor to Secretary of Defense for budgetary and fiscal matters, and as such, is responsible for coordinating and collaborating with all DOD agency directors, Service chiefs, and the GCC that provides warfighting capabilities. The Defense Finance and Accounting Service plays a critical role in support of joint operations as the DOD lead for finance and accounting, responsible for policies, procedures, standards, systems, and operations in support of the GCC and sister services. The Defense Finance and Accounting Service may provide liaison personnel to the assistant chief of staff, financial management (G-8) and J-8 and other financial management elements in theater when establishing theater accounting requirements. See JP 3-80 and FM 1-06 for additional information.

UNITED STATES ARMY FINANCIAL MANAGEMENT COMMAND

2-38. United States Army Financial Management Command coordinates, integrates, and synchronizes financial management between strategic partners and the operational and tactical Army levels. This direct reporting unit is responsible for the delivery of Army wide financial operations policy and functions; this includes systems support, audit and compliance support, finance operations support, pre-deployment training, ecommerce support, and Army enterprise resource planning systems business process standardization support. United States Army Financial Management Command also provides financial management technical coordination at the theater level and operational oversight for finance operations. See JP 3-80 and FM 1-06 for additional information.

THE ARMY G-1

2-39. At the strategic level, the Army assistant chief of staff (ACOS), personnel (G-1); Chief, Army Reserve; and Director, Army National Guard manages HR support for their respective component. The Assistant Secretary of the Army (Manpower and Reserve Affairs) is responsible for the supervision of the manpower, personnel, and Reserve Component Affairs for the Department of the Army. The Civilian Human Resources Agency, a field operating agency of the Army G-1, is responsible for civilian personnel operations. The Army G-1 develops Army policy for all HR systems and functions, while the United States Army Human Resources Command (HRC) applies and implements these policies for military personnel. The installation management command (IMCOM) and the military postal service agency provide strategic support to the force for morale, welfare, and recreation services and postal operations.

2-40. The HRC is the U.S. Army's manning enterprise that sets conditions for the Army by distributing personnel IAW Army priorities and readiness objectives to build and preserve the highest levels of unit and service-level readiness. This direct reporting unit is the functional proponent of the G-1 for military personnel management (except for the judge advocate general and the chaplain branches). The HRC also supports the Director, Army National Guard and the Chief, Army Reserve, in their management of the Selected Reserve. The HRC's mission is to execute career management of personnel in order to optimize Army personnel readiness, enable leader development, and strengthen an agile and versatile Army that can shape operational environments, prevent conflict, and prevail in large-scale combat operations. HRC builds personnel requisitions at the corps and division levels based on strength, inventory, and Army manning guidance. HRC fills positions as codified in an official authorization document. HRC coordinates personnel replacements with the theater J-1 and ASCC G-1. See JP 1-0 and FM 1-0 for additional information.

2-41. The Casualty and Mortuary Affairs Operations Division is the DOD lead component for the Defense Casualty Information Processing System. Casualty and Mortuary Affairs Operations Division provides policy and operational oversight of Army Casualty and Mortuary Affairs; oversees recovery, identification and repatriation of all Soldiers from present and past wars; and serves as the Army point of contact for those Soldiers and DOD civilians in a captured or missing status. For additional information, see appendix A and AR 638-2.

MILITARY POSTAL SERVICE

2-42. The military postal service operates as an extension of the United States Postal Service consistent with public law and federal regulations beyond the boundaries of U.S. sovereignty and provides postal services for all DOD personnel where there is no United States Postal Service available during normal and contingency operations.

2-43. The Military Postal Service Agency provides worldwide postal services to DOD personnel and their families. It is the DOD EA for military postal service for all services. The Joint Military Postal Activity is the single point of contact with the United States Postal Service at the postal gateways. It coordinates transportation of mail in the host nation with commercial carriers and the military Air Mobility Command. It is responsible for coordinating mail routing scheme changes with postal gateways and maintaining the military zip code database for the automated dispatch of mail. See JP 1-0 and FM 1-0 for additional information.

U.S. ARMY MATERIEL COMMAND

2-44. The USAMC is the Army's materiel integrator providing national-level sustainment, acquisition integration support, contracting support, and selected logistics support to Army forces. It also provides related common support to other Services, multinational, and interagency partners. The capabilities of USAMC are diverse and are accomplished through its various major subordinate commands and other subordinate organizations. See ATP 4-91 for additional information.

2-45. USAMC plans and coordinates expeditionary force contracting support operations providing contracting support for deployed units and installation-level services, supplies, minor military construction, the Army organic industrial base, and common-use information technology hardware and software. It also handles contracting support for deployed units and installation-level services, supplies, minor military construction, the Army organic industrial base, and common-use information technology hardware and software. For additional information, see ATP 4-92.

2-46. USAMC major commands are IMCOM, Army Sustainment Command (ASC), Army Contracting Command (ACC), U.S. Army Security Assistance Command, and the USAMC Lifecycle Management Commands (LCMCs). Discussion of the major USAMC commands and their subordinate commands follows.

INSTALLATION MANAGEMENT COMMAND

2-47. IMCOM integrates and delivers base support to enable readiness for a globally-responsive Army. IMCOM manages 75 Installations and over 122 Sub-Installations in 12 Countries.

2-48. IMCOM's broad range of responsibilities enable installation readiness by providing: infrastructure management, sustainment, installation protection, and training support services. These responsibilities also provide resilient Soldier and Family Programs. All tools facilitate pre-deployment, deployment and redeployment activities in support of large-scale combat operations.

2-49. IMCOM-managed Power Projection Platforms (PPP) are Army installations capable of deploying one or more Army brigades or larger formations in accordance with CCMDs requirements. Installations designated as PPPs are prioritized and resourced to perform power projection functions together with designated strategic sea and aerial ports in support of national strategy. IMCOM provides capabilities to operate and manage bases in support of Army and JFCs while providing the capabilities to support unit deployment, redeployment and reintegration. The minimum installation capabilities for PPP designation include adequate infrastructure, services, equipment, utilities support and planned installation surge capability to support mission requirements.

2-50. IMCOM-managed mobilization force generation installations are Army installations designated to provide mobilization support for both current and contingency operations. Mobilization force generation installations provide pre- and post-mobilization readiness support, and deployment preparation in support of CCMD requirements. Primary mobilization force generation installations are capable of providing continuous pre and post mobilization training, combat preparation, and sustainment. Contingency mobilization force generation installations are utilized when mobilization force generating requirements exceed primary mobilization force generation installation operational capacity.

2-51. The Army Environmental Command is a major subordinate command within IMCOM. The Army Environmental Command provides technical expertise to ensure sustainable Army bases worldwide and advises commanders in support of operations in environmentally constrained conditions.

ARMY SUSTAINMENT COMMAND

2-52. The ASC integrates and synchronizes the delivery of USAMC and materiel enterprise capabilities at echelon from the strategic to the tactical level. ASC delivers materiel readiness, force generation, power projection, and sets the conditions for future readiness at home station. ASC forward stationed capabilities provide command and control to all USAMC assets in theater and shape the logistics environment and help set the theater to accelerate force reception into theater. Deployable logistics support elements provide expeditionary corps and divisions the ability to rapidly integrate into the theater delivery of USAMC capabilities at echelon for responsive support to warfighter priorities. ASC serves as the Army's lead materiel integrator, identifying excess and obsolete major end items, then providing disposition instructions to units. It is responsible for integrating logistics support with strategic partners and links the national sustainment base with the expeditionary Army. Major mission areas include logistics synchronization in support of Army Sustainment Readiness Model, Army pre-positioned stocks (APS), materiel management, and the Logistics Civil Augmentation Program (LOGCAP). Mission execution is through a global network of organizations to include the ASC staff, Army field support brigades (AFSBs), Army field support battalions (AFSBns), logistics readiness centers (LRCs), and logistics support elements embedded in units from brigade to corps. For additional information on the ASC, See FM 4-95 and for AFSB, its subordinate units, and operations see ATP 4-91 for additional information.

Logistics Civil Augmentation Program

2-53. LOGCAP is a performance-based program that provides broad, contracted sustainment support to GCC joint operations, coalition partners, and other federal agencies to address ASCC regional and country planning requirements, where a military capability is not readily available, in support of setting the theater and theater sustainment. Pre-awarded task orders are regionally aligned for rapid response to emerging events. Planning elements are embedded within the AFSB to coordinate annex W development, integrate and synchronize LOGCAP capabilities into operation plans (OPLANs) and concept plans, with focus on OCS-related analysis of the OE, APS, Army PPP, mobilization force generation installations, theater opening, sustainment, theater distribution, stability operations, noncombatant evacuation operations, and defense support of civil authorities. LOGCAP is designed to support operations to shape and sustainment preparation of the OE. LOGCAP is designated as a preferred source for logistics support, and must be considered by

requiring activities as part of OCS market research before establishing a new contract. See ATP 4-10.1 and AR 700-137 for additional information.

Army Field Support Brigades

2-54. AFSBs integrate and synchronize delivery of USAMC strategic capabilities and enablers to the operational and tactical points of need in support of ASCCs and corps during large-scale combat operations. The AFSB also synchronizes acquisition, logistics and technology systems contracted support with sustainment maintenance support for the theater Army. Senior command representatives from each USAMC LCMC are OPCON to each AFSB and enable integrated delivery of USAMC capabilities. The representatives provide a built in forward technical presence in the tactical environment and anticipate requirements for logistics assistance representatives throughout each Army strategic role. Forward stationed AFSBs are OPCON to the ASCC, and U.S. stationed AFSBs deploy a corps logistics support element (CLSE) that is OPCON to their supported corps during large-scale combat operations. AFSBs are augmented with additional staff or capabilities to meet expanded and/or unique operational requirements, particularly where redistribution property assistance teams may be used to facilitate the turn-in of equipment for redistribution or retrograde. Key functions of the AFSB include—

- Maintaining accountability of specified Army contractors authorized to accompany the force and other theater designated contractor personnel, through OCS contractor management.
- Coordinating support from the national sustainment base to include expert advice and call forward assistance regarding readiness and sustainment.
- Coordinating Army science and technology functions as well as all materiel fielding organizations providing new equipment training.
- Integrating and synchronizing LOGCAP set the theater planning with GCC and ASCC planning staffs, developing requirements to fill identified capability gaps, assisting with operational phase transitions to manage cost, schedule, and performance tradeoffs and mitigate risk.
- Integrating and synchronizing LOGCAP and Enhanced Army Global Logistics Enterprise support at the strategic, operational, and tactical level.
- Managing APS to include off-loading and property accountability.
- Managing logistics assistance program through attached Army field support battalion, logistics support elements, and other USAMC logistics organizations called forward.
- Commanding sustainment maintenance organizations deployed to the theater. These organizations include forward repair activities, component repair companies, combat vehicle evaluation teams, and equipment support activities.
- Identifying, storing, and coordinating the distribution/redistribution of designated theater provided equipment, and excess non-theater provided class VII equipment in accordance with theater policies and procedures.
- Integrating (in coordination with the contracting support brigade [CSB] and TSC commander) the ASCC developed annex W (operational contract support) plan into the overall AFSB support plan. The annex W's three appendices of 1-Contracting Capabilities and Capacities Support Estimate; 2-Contractor Management Plan, and 3-Summary of Contractor Support Estimate are key in plans to ensure OCS from requirements to contracting support to contractor management.
- Maintain the theater provided equipment property book, operating the redistribution property assistance team site in the AOR, and operating the theater retrograde consolidation site and perform agricultural cleaning in preparation to ship equipment out of theater, and supporting Foreign Military Sale operations by providing a consolidation site and performing transportation preparations as a reimbursable mission.
- Provide contractor supplemental maintenance capability for tactical units' equipment in the AOR with maintenance support teams in forward areas. Normally this is in an AOR with uniformed boots on the ground limitations.
- Provide ASCC, joint and combined services with reimbursable contracted maintenance support.

2-55. Forward-stationed AFSBs are allocated to an ASCC and assist in setting the theater through the employment of USAMC capabilities. Forward-stationed AFSBs command and control all USAMC assets in

theater, to include AFSBns (Army Pre-positioned Stocks) and Readiness AFSBns. AFSBns (Army Pre-positioned Stocks) are organizations responsible for the receipt, storage, maintenance and issue of APS. Readiness AFSBns assist and enable the TSC to conduct theater opening, theater distribution, theater sustainment, and theater closing by synchronizing Logistics Assistance Representative support, sustainment level maintenance capabilities at forward stationed LRCs, and synchronization of LOGCAP planning and implementation. As required, AFSBs deploy an early entry module which can be co-located and in direct support of the TSC, ESC, or when established, a field army.

2-56. CONUS-based AFSBs are aligned to corps HQ and responsible for the materiel readiness of all units and tenants within their assigned area. CONUS-based AFSBs provide support to Army PPPs and mobilization force generation installations. Like forward-stationed AFSBs, CONUS-based AFSBs provide mission synchronization of the USAMC Logistics Assistance Program provided by logistics assistance representatives, to assist in materiel readiness. CONUS-based AFSBs command and control division-aligned Readiness AFSBns responsible for the materiel readiness of their supported division, units and tenants on the installation, Reserve and Army National Guard units within their AOR. As required, CONUS-based AFSBs can deploy a CLSE OPCON to their supported corps HQs to provide planning, integration, and reach back support of USAMC strategic level capabilities through the forward-stationed AFSB. The composition of the CLSE depends on mission, enemy, terrain, troops, time available and civil factors (METT-TC), but generally includes AFSB senior leadership and the embedded LCMC Senior Command Representatives. The remaining portion of the U.S.-based AFSB continues to deliver materiel readiness, force generation, power projection, and mobilization force generation installation.

2-57. The AFSB is responsible for coordinating acquisition, logistics and technology support within the theater. The U.S. Army Medical Research and Materiel Command provides Army acquisition, logistics, and technology support for medical materiel. See ATP 4-91 for additional information.

Army Field Support Battalion

2-58. AFSBn mission sets vary from supporting strategic to tactical elements. Stationed at CONUS and OCONUS locations, the AFSBn (APS) is responsible for the physical management of APS, both on-shore and afloat, operational project stocks, and Army War Reserves. The AFSBn (APS) conducts receipt, storage, maintenance, and issue of the essential equipment sets required for expeditionary operations.

2-59. Direct-Support and General-Support Readiness AFSBns enable materiel and deployment readiness of divisions, brigades, and special operations forces (SOF) through LRCs, LCMC logistics assistance representatives, and equipment Program Executive Officers. Direct-Support Readiness AFSBns are allocated to divisions, and General-Support Readiness AFSBns support units on an area basis. Readiness AFSBn can be found in both CONUS and OCONUS locations. Readiness AFSBns are organic to the ASC which assigns the AFSBn to a parent AFSB in garrison. The AFSBn deploys a division logistics support element OPCON to the division to which it is allocated, and coordinates support with the forward-stationed AFSB. The composition of the division logistics support element depends on operational variables, but generally includes AFSBn senior leadership and the LCMC senior service technical representatives. The remaining portion of the CONUS based AFSB continues to deliver materiel readiness, force generation, power projection, and mobilization force generation installation. The division commander may OPCON the division logistics support element to the division sustainment brigade (DSB).

2-60. On installations where a Readiness AFSBn is located, that Readiness AFSBn commands the LRC. The AFSBn has a direct support relationship with the installation senior commander and responsible to logistically support garrison operations. As required, deployable elements of the AFSBn and AFSB will be attached to their supported units for movement. The AFSBn also provides commanders a central organization for all USAMC capabilities on the installation. See ATP 4-91 for additional information.

Logistics Readiness Center

2-61. Located on installations worldwide, LRC directly enable readiness, sustainment and power projection to individual Soldiers and units operating within the LRC's AOR. LRCs of varying size and capabilities are located on almost all Army installations and exercises authority over and develops plans and policies for all installation level logistics activities, supply, services, logistics automated systems, maintenance and

transportation. On installations where a Readiness AFSBn is located the AFSBn commands the LRC. The AFSBn assumes responsibility for installation wide readiness, sustainment, and power projection, providing commanders a central organization for all USAMC capabilities on the installation. Otherwise, the AFSB assumes command and control of LRCs located on non-divisional installations within the AFSB's area of responsibility. Key functions and responsibilities of the LRC include—

- Installation Supply Support Activity.
- Installation Transportation Office.
- Transportation Motor Pool.
- Supply and Service.
- Installation Property Book.
- Ammunition Supply Point (U.S. LRCs only).
- Central Issue Facility.
- Mobilization Force Generation Installations and Power Projection Platforms.
- Supplemental maintenance/Reset support (U.S. LRCs only).
- Personal Property Office/Household Goods.
- Freight operations.
- Unit movement support.
- Dining facility and food service management and operations.
- Installation laundry services.

ARMY CONTRACTING COMMAND

2-62. ACC is a major subordinate command within the USAMC. The ACC provides expeditionary contracting and contract administration to deployed Army forces through its subordinate CSBs, and systems contracting support to Army program executive officers and program managers, including the LOGCAP executive director. It also provides contracting support supplies, services, and minor construction to garrison operations through its subordinate command: the Mission and Installation Contracting Command CONUS and the ACC, Deputy Commanding General for OCONUS Operations for forward CSBs. In addition, the ACC provides OCONUS reach back contracting support from its CONUS based contracting centers. ACC CSBs, contracting battalions (CBNs), and contracting teams also perform the contingency contract administration services mission during expeditionary force operations. See ATP 4-92 for additional information.

Contracting Support Brigade

2-63. CSBs serve as the Army's primary theater support and contingency contract administration services contracting headquarters. The brigade executes theater support contracting actions and contract administration of external support contracts, for example LOGCAP in support of Army forces. The CSB commander also serves as the primary contracting support advisor to the ASCC. Allocation of CSBs is one OPCON to an ASCC and one OPCON to a corps. CSBs provide command and control over a number of CBN and contracting teams as determined during the mission planning process. See ATP 4-92 for additional information.

Contracting Battalions

2-64. The CBN provides command and control over subordinate contracting teams which write, award, and administer contracts to include Contingency Contract Administration Services of external support contracts. CBNs are normally placed under the direct command of the deploying CSB or, in small scale operations, may deploy separately from the CSB HQs. In major sustained operations, the CBN may be combined with contracting teams and/or contracting elements from other Services to form a regional contracting center. See ATP 4-92 for additional information.

Contracting Teams

2-65. Contracting teams normally deploy under the command and control of a CBN and provide theater support contracting, on a direct support or general support (GS) basis; and Contingency Contract Administration Services of external support contracts. In long-term operations, contracting teams may be combined with other contracting teams to form regional contracting centers and regional contracting offices as required. See ATP 4-92 for additional information.

U.S. ARMY SECURITY ASSISTANCE COMMAND

2-66. The U.S. Army Security Assistance Command leads the USAMC Security Assistance Enterprise. It enables security cooperation, military engagement and other activities conducted to build partner capacity, support and strengthen U.S. global partnerships. The command acts as the primary entry point for Army materiel, service-related, and non-institutional foreign military sales and security assistance requirements as requested by partner nations to enable CCMD strategic priorities for the region.

USAMC LIFECYCLE MANAGEMENT COMMANDS

2-67. The USAMC provides logistics, technology, acquisition support, and selected logistics support to Army forces as well as USAMC related common support to other Services, multinational and interagency partners. This is accomplished principally through national-level maintenance and supply programs managed and executed by the LCMCs who are OPCON to AFSBs when deployed. LCMCs are the AMC organizations that have the responsibility to mobilize and deploy sustainment level maintenance forward repair activities from CONUS LCMC depots and arsenals. LCMCs conduct Theater Level contingency planning with USAMC, ASC, and TSCs during set the theater deliberate planning. These USAMC LCMCs include USAMC staff as well as related Assistant Secretary of the Army, Acquisition, Logistics and Technology program executive office and program management offices. Together, these LCMC USAMC and Assistant Secretary of the Army, Acquisition, Logistics and Technology elements work to ensure support for fielded weapon systems and equipment for their entire life cycle. Program executive office and program management staffs often work in the same office or on the ground in the field along with USAMC LCMC item managers and other technical support personnel. The LCMCs are—

- U.S. Army Communications-Electronics Command: The Communications–Electronics LCMC develops, acquires, fields and sustains Army communications systems. It provides significant technical support capabilities to deploying and deployed Army forces.
- U.S. Army Tank-Automotive Command: This command develops, acquires, fields, and sustains Soldier and ground systems for the operational Army through the integration of effective and timely acquisition, logistics, and cutting-edge technology.
- U.S. Aviation and Missile Command: This command develops, acquires, fields, and sustains aviation, missile and unmanned vehicle systems, ensuring system readiness with seamless transition to operations. The LCMC transitions science and technology into aviation, missile and unmanned vehicle systems.
- The Joint Munitions and Lethality LCMC: This command develops, acquires, fields and sustains ammunition for the joint force. Core competencies include: research, development, and engineering; acquisition and program management; logistics management; industrial operations; contracting; serving as the Single Manager for Conventional Ammunition Executor and Field Operating Activity; performing demilitarization and disposal of unserviceable stocks; conducting industrial base management and executing transformation; providing real time munitions readiness reporting; maintaining worldwide asset visibility; centrally managing ammunition; and providing integrated lethality solutions.
- U.S. Army Medical Logistics Command: This command is the USAMC LCMC for medical logistics. The Army Medical Logistics Command delivers/fields medical solutions (on behalf of the Army Medical Program Executive Office) and manages and sustains medical programs for operational forces in the Total Army. The command manages medical materiel and logistics services required to generate and deploy ready medical forces and sustain Army and Joint health services. Core competencies include management of medical supply (class VIII), medical equipment and repair parts, medical logistics operations that include theater-level medical logistics

support operations, medical equipment maintenance and recapitalization, optical fabrication, and the Army's globally employed centralized medical materiel readiness programs.

U.S. ARMY FORCES COMMAND

2-68. Most Army conventional operating forces are designated as *Service Retained* forces in the Global Force Management Implementation Guidance assignment tables, and are primarily based in CONUS. United States Army Forces Command (FORSCOM) commands Active Component conventional forces (Regular Army, mobilized Army National Guard, and mobilized Army Reserve), executes training and readiness oversight of Army National Guard forces under state command, and does the same for non- mobilized Army Reserve units. FORSCOM is the responsible commander for mobilization and demobilization. Based upon the landpower requirements developed by the CCMDs and validated by the Joint Staff, the Department of the Army and FORSCOM develop task-organized force packages to facilitate strategic deployment and support the gaining JFC's operational requirements.

U.S. ARMY SPECIAL OPERATIONS COMMAND

2-69. USASOC is the ASCC of U.S. Special Operations Command (USSOCOM) and a force provider of ARSOF to the GCCs. USASOC's mission is to man, train, equip, educate, organize, sustain and support forces to conduct special operations across the full range of military operations and spectrum of conflict in support of JFCs and interagency partners, to meet theater and national objectives. USASOC major subordinate operational commands and units include: 1st Special Forces Command (Airborne), Special Forces groups, 75th Ranger Regiment, Army Special Operations Aviation Command, 160th Special Operations Aviation Regiment, 4th and 8th Psychological Operations Groups and 95th Civil Affairs Brigade (Airborne).

2-70. ARSOF sustainment organizations include the 528th Sustainment Brigade Special Operations Airborne, special forces Group Support Battalions (GSB) and Ranger Support Companies. Each Special Forces Group has a support battalion and each Ranger battalion has an organic support company. The remaining USASOC major subordinate operational commands do not possess organic direct support assets. ARSOF units rely on other Army organizations for sustainment support that exceeds the organic capabilities of the supported ARSOF unit. The JFC may assign a command relationship between the conventional supporting force and the ARSOF supported unit or the JFC may determine a support relationship (GS or direct support) is more appropriate.

2-71. The 528th Sustainment Brigade Special Operations Airborne through its Army special forces liaison elements and ARSOF Support Operations teams assist the theater ASCC, TSC and ESC in planning and coordinating ARSOF sustainment requirements generated in support of GCCs. The Special Forces Group and Ranger Regiment units have organic direct support capability. The GSB, within the SFG, provides direct support to the Special Forces Group or to the Special Operations Task Force elements. The Ranger Support Company provides direct support to a Ranger battalion. The United States Army Special Operations Aviation Command, Civil Affairs Brigade, and the two psychological operations groups do not possess any organic direct support assets. Support may be provided on an area basis by an Army sustainment brigade's combat sustainment support battalion (CSSB) or a division sustainment support battalion (DSSB). Figure 2-10 on page 2-18 depicts an example of the ARSOF logistics structure. See FM 3-18 for additional information.

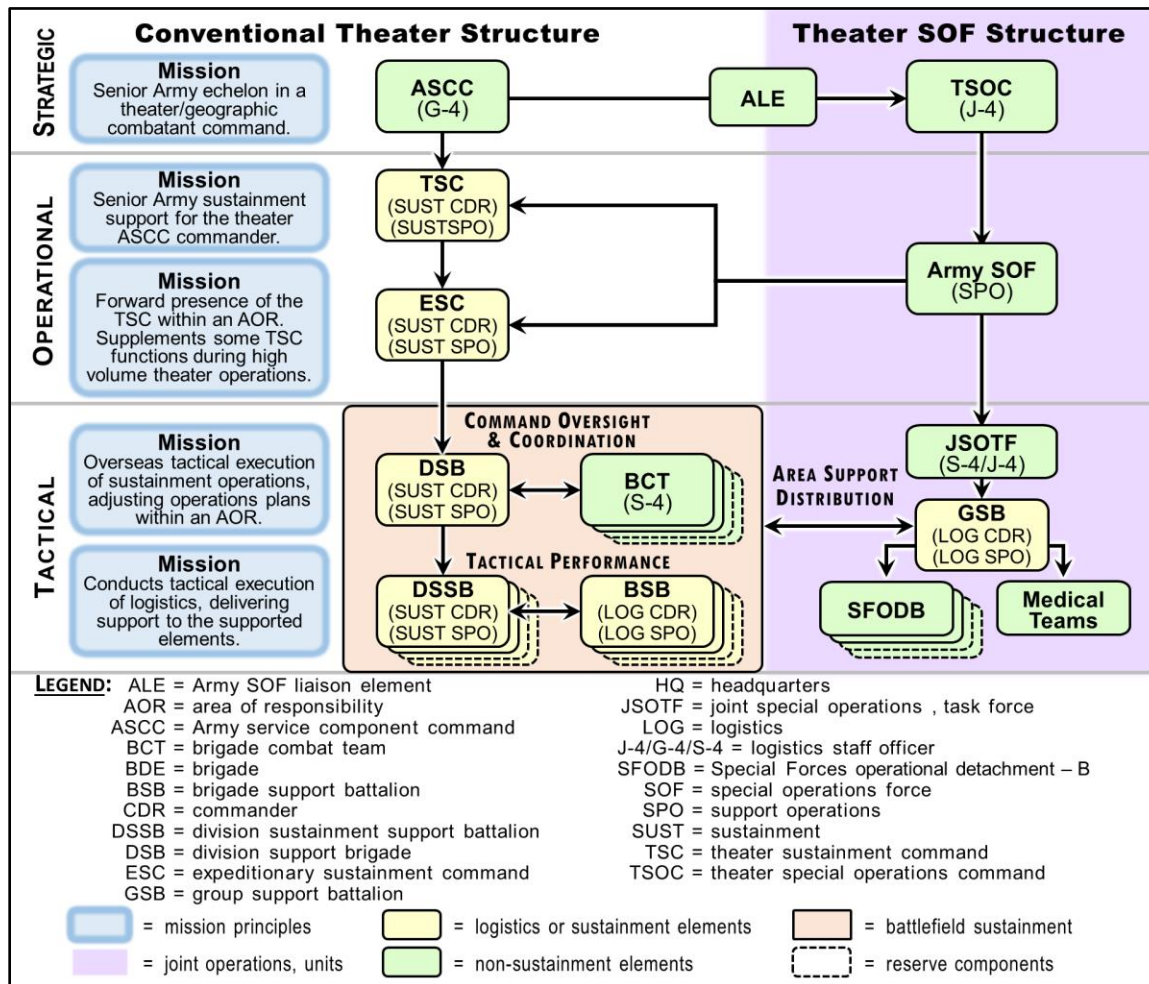


Figure 2-10. Army special operations forces logistics structure

2-72. As stated, ARSOF sustainment structures are not designed to provide enduring support and therefore ARSOF requires external sustainment support. Support is coordinated through the theater special operations command or special operations joint task force (JTF) if established. The Army special forces liaison elements and Army special operations forces support operations officer depicted in the graphic displays the coordination between conventional and SOF.

2-73. ARSOF does not have organic Role 3 surgical support. All ARSOF battalions and below provide Role 1 medical care. The GSB provides Role 1 medical support. ARSOF relies on ASCC medical assets to provide Role 2 and Role 3 medical care on an area basis to include ground medical evacuation. ARSOF also relies on the ASCC to provide intra-theater medical evacuation and casualty evacuation in the absence of aircraft and coordination for inter-theater evacuation. The 528th Sustainment Brigade has a special operations medical detachment with three special operations resuscitation teams that provides Role 1 medical care through the special forces operational detachment level. For additional information, see ATP 3-05.40.

SECTION II – ARMY ORGANIZATIONS AND CAPABILITIES AT ECHELON

2-74. Army echelons and sustainment units operate across the strategic, operational, and tactical levels; many are affiliated with either supported or supporting commands and operate under a variety of command relationships. Knowing the roles, responsibilities, and authorities of unified action partners is essential to planning, preparing, executing, and assessing sustainment operations.

2-75. A critical element within the headquarters at each echelon is the sustainment cell (at echelons above brigade (EAB) and the sustainment staff (brigade and below) that works in conjunction with the supporting sustainment headquarters to plan and synchronize support of large-scale combat operations.

THEATER ARMY

2-76. The theater Army is the senior Army headquarters in an AOR, it consists of the commander, staff, and all Army forces assigned to a CCMD. Each theater Army (U.S. Army Africa, U.S. Army Central, U.S. Army Europe, U.S. Army North, U.S. Army Indo-Pacific Command, and U.S. Army South) has operational and administrative responsibilities. Its operational responsibilities include command of forces, direction of operations, and control of assigned operational areas. Its administrative responsibilities encompass the Service-specific Title 10 requirements for equipping, sustaining, and training forces; unit readiness, discipline, and personnel matters.

2-77. The theater Army serves as the ASCC of the GCC. It is organized, manned, and equipped to perform that role. The ASCC is the command responsible for recommendations to the JFC on the allocation and employment of Army forces within a CCDR's AOR. See FM 3-94 for additional information.

2-78. Theater Army tasks and functions include—

- Executing the CCDR's daily operational requirements.
- Opening the operational area (for example- JOA, area of operations, and theater of operations).
- Serving as a JTF or joint force land component for crisis response and limited contingency operations.
- Serving as the primary interface between the Department of the Army, Army commands, and other ASCCs.
- Exercising OPCON of deployed Army forces not subordinated to a JFC.
- Exercising ADCON of all Army forces operating within the AOR.
- Exercising OPCON of all joint forces attached to it as either a joint force land component headquarters or JTF headquarters, as required by the CCDR.

2-79. The theater Army main command post (CP) monitors current operations and conducts contingency planning and crisis action planning. The main CP conducts current operations as well and maintains a capability to employ an operational-level CP. As an ASCC, the theater Army prepares support estimates and outlines the responsibilities and requirements for maintaining access to and setting the theater where U.S. military presence is forward stationed or deployed. The theater Army executes many of these responsibilities through the TSC. The TSC is the Army's command for the integration and synchronization of sustainment in the AOR. The MEDCOM (DS) is also assigned to the ASCC. It is the theater medical command responsible for command and control, integration, synchronization, and execution of AHS support within the AOR. The MEDCOM (DS) commander coordinates with the ASCC surgeon (as the staff proponent with execution through the assistant chief of staff, operations (G-3) channels under the authority of the ASCC commander) to provide AHS support within the AOR. Key tasks and functions associated with the theater Army's role in sustainment include—

- Developing Army plans to support the theater campaign plan.
- Tailoring Army forces for employment in an AOR.
- Prioritizing personnel replacement fill for the theater.
- Setting the theater for the execution of strategic plans.
- Controlling RSOI for Army forces in an AOR.
- Providing Army support to other Services (transportation, fuel distribution, intra-theater aeromedical evacuation, explosive ordnance disposal (EOD), and logistics management).
- Providing support as directed by the CCDR to other unified action partners.
- Identifying sustainment capability gaps and determining how to fill those gaps, identifying funding sources, and acquiring, and distributing funds.
- Assigning the role of deputy commanding general (support) for the ASCC to the TSC when required.

- Managing theater ammunition.

2-80. The ASCC commander has the authority to assign command and support relationships to deployed theater enabling commands. The authority includes integrating and synchronizing capabilities (such as transportation, engineers, EOD, medical, and logistics) until later enabling commands arrive in theater.

ASSISTANT CHIEF OF STAFF, G-1/ADJUTANT GENERAL-PERSONNEL

2-81. The theater Army G-1 is the principal staff officer for all matters concerning human resources support (military and civilian). The ASCC G-1's primary function is to plan and prioritize human resources support in conjunction with the human resources sustainment center (HRSC) to maximize the readiness and operational capabilities of forces within the theater. Specific responsibilities of the G-1 center around the human resources support core competencies of manning the force to build and sustain combat power through replacement operations, providing human resources services focused on essential personnel services, casualty and postal operations, coordinating personnel support such as morale, welfare and recreation and band support, and coordinating human resources planning and operations.

2-82. The G-1 also serves as the senior adjutant general (AG) officer in the command. The G-1 is ultimately responsible for planning the personnel readiness of the command. As a member of the staff the G-1 participates in the theater Army commander's operations process and develops the personnel support portion of Annex F (Sustainment) to the operation order or operation plan in coordination with the HRSC.

2-83. The theater Army G-1 responsibilities for personnel plans and operations are shown below. These are not in priority order and are not all-inclusive. These apply to G-1s and battalion or brigade human resource staff officers (S-1s) at all echelons.

- Analyzing personnel strength data to determine current combat capabilities, projecting future requirements, and assessing conditions of individual readiness.
- Maintaining by-name personnel accountability management of the location and duty status of every person assigned or attached to the command. It includes tracking the movement of personnel arriving to, and departing from, a unit. This includes maintaining visibility of individuals entering, transiting, and departing theater for reasons that range from normal rest and recuperation to treatment at a medical treatment facility.
- Monitoring personnel strength, prioritizing replacements, monitoring deployable/non-deployable personnel and executing strength distribution.
- Collecting, processing, storing, displaying, reconciling, and disseminating relevant HR information about units and personnel.
- Planning postal operations and postal finance services within the deployed area of operations (AO).
- Managing casualty operations that includes collecting, recording, reporting, verifying and processing of casualty information from unit-level to Headquarters Department of the Army (HQDA).
- Planning morale, welfare, and recreation operations include unit recreation, sports programs, and rest and recuperation areas for military and deployed DOD Civilian personnel.
- Coordinating and tailoring Army band support to deployed forces throughout military operations.
- Enabling HR command and control nodes by establishing, operating, and maintaining connectivity to HR data and voice communications nodes required for HR operations.
- Corps and division G-1s assist subordinate G-1s and S-1s in shaping the force to meet mission requirements.
- If operating as part of a JTF, the ASCC G-1/AG coordinates closely with the JTF manpower and personnel directorate of a joint staff (J-1), coalition forces land component commander (if not part of the ASCC), or joint force land component commander to ensure Army HR policies do not conflict with joint HR policies, procedures, and reporting requirements.

THEATER ARMY G-1 AND TSC COOPERATION

2-84. The theater Army G-1 and the TSC HRSC have clearly different roles. Both are focused on ensuring the theater Army has adequate HR sustainment support and some actions by both may be similar or complementary.

2-85. The HRSC is a TSC staff element that provides theater-level HR casualty, personnel accountability, and postal support to Army forces within theater IAW the policies, procedures, and priorities established by the ASCC. As a staff element of the TSC, the HRSC is the primary participant in the planning, integration, and execution of theater-wide HR support.

2-86. The role of the ASCC G-1 is to direct Army force HR policy IAW CCMD and Army policy. Other key functions of the ASCC G-1 are listed below –

- Monitor and manage inter-service agreements.
- Coordinate with the GCC J-1 and Service personnel and policy managers.
- Integrate HR related personnel services support within theater.
- Direct military HR systems and systems to support deployed Civilians.
- Monitor and integrate HR systems.
- Coordinate HR command programs.
- Establish an essential personnel services policy and procedures for theater.
- Monitor theater personnel readiness.
- Collect and analyze personnel status (PERSTAT) and joint personnel status report data.
- Monitor accountability of all theater personnel (military and deployed Civilians).
- Monitor execution of casualty notification and assistance program.
- Monitor the deployed personnel database.
- Coordinate HR support requirements with the TSC.
- Develop and coordinate current and long-term operational HR policy.
- Establish and monitor policy execution of all theater-level HR support.
- Monitor postal support for theater.
- Plan for the integration of Reserve Component assets.
- Plan and coordinate morale, welfare and recreation support for theater.

ASSISTANT CHIEF OF STAFF, G-4/LOGISTICS

2-87. The assistant chief of staff, logistics, (G-4) is the principal staff officer for sustainment plans and operations, supply, maintenance, transportation, services, and OCS. The G-4 helps the supported unit commander maintain logistics visibility with the commander and the rest of the staff. The G-4, in coordination with the TSC and/or ESC support operations (SPO) officer, prepares annex F (Sustainment), annex P (Host-Nation Support) and annex W support (Operational Contract Support which must include appendices 1, 2, and 3 to ensure contracting support unit requirements to deploy are identified, contractor personnel, and contractor management are planned and sustained in the expeditionary force AO) to the operation order or operation plan. G-4 staff will identify needed interagency and intra-agency support and facilitate development of memoranda of agreement/understanding (as applicable) in order to unify and integrate theater sustainment. An example of a G-4 staff action is coordinating the selection of main supply routes and logistics support areas (with the engineer officer) and recommending them to the G-3.

Theater Army G-4 and TSC Cooperation

2-88. The theater Army G-4 and the TSC have clearly different roles. Both are focused on ensuring the theater Army has adequate sustainment support and some actions by both may be similar or complementary. However, their actions are distinctly separate and confusing or shifting responsibilities from the G-4 to the TSC or vice versa can negatively affect the sustainment provided to the command.

Role of the G-4

2-89. The G-4 is the principal staff officer within a command headquarters for sustainment plans and operations. The G-4 sets the sustainment priorities and is ultimately responsible for planning sustainment support for operations. As a member of the staff the G-4 participates in the theater Army commander's operations process and develops the sustainment support concept based on the G-3 operations concept. This support concept is included in the theater Army operation order (OPORD) as annex F and is communicated to the TSC through the order dissemination process.

2-90. Within corps and division headquarters the G-4 has coordinating staff responsibility for the G-1, G-8, transportation officer, and the surgeon. Theater Army G-4, brigade and battalion logistics staff officer (S-4)s do not have this responsibility. The G-4 plans and coordinates with the ESC and sustainment brigade staff, provides input to necessary orders, develops and implements the sustainment support plan. The G-4 works closely with the Chief of Staff and G-3 to ensure mutual understanding of all aspects of planning, preparation, execution and assessment of sustainment support for operations.

2-91. The theater Army G-4 responsibilities for sustainment plans and operations are shown below. (These are not in priority order and are not all-inclusive. These apply to G-4s and S-4s at all echelons.)

- Coordinate with the G-3, and the brigade and battalion operations officer (S-3) to have full understanding of the maneuver concept of operations.
- Participate in the commander's operations process.
- Develop a logistics support concept and support annexes to ensure the command has adequate sustainment support to accomplish the mission.
- Identify sustainment down trace units with required capability to support the mission.
- Recommend command and support relationships for all subordinate sustainment units. Ensure these relations are fully described in the OPORD.
- Communicate critical sustainment requirements in priority order to the higher headquarters and strategic providers.
- Establish logistics status report (LOGSTAT) reporting requirements and times for the command. This includes identifying critical commodities to report.
- Monitor the supply, equipment-on-hand, and equipment readiness posture of all units assigned and attached to the command.
- Develop sustainment estimates to determine adequacy of the current support concept and making recommended changes to the concept as required.
- Identify critical sustainment capability shortfalls to the commander.
- Coordinate with the assigned sustainment headquarters commander on the current and future support capability of that unit.
- Coordinate the selection of main supply routes and logistics support areas and recommending them to the G-3 (S-3).
- Perform logistics preparation of the battlefield. This is done in cooperation with the assigned sustainment headquarters.
- Coordinate transportation support required for supply distribution, unit mobility, personnel replacement, and casualty evacuation.
- Recommend sustainment priorities and controlled supply rates to the commander.
- Identifies Army support to other Services requirements and communicates the requirements to the TSC commander and staff.

Role of the TSC and ESC Commander

2-92. The TSC commander uses command and control to execute the theater Army support concept as directed by the OPORD issued by the theater Army commander. The TSC commander accomplishes this through his internal operations process and by issuing his internal OPORD to subordinate units. The concept of operations section of the OPORD describes tasks to subordinate units to accomplish the support mission. The ESC commander uses similar processes to execute the theater Army concept when attached to the TSC.

2-93. The TSC commander, in the role as the ASCC deputy commanding general (support), is responsible for overseeing the development of the theater Army concept of support that specifies how capabilities will be delivered over time, who is responsible for delivering the capabilities, and defines the critical sustainment tasks necessary to achieve objectives. The TSC staff may assist the theater Army G-4 with information required to complete the theater Army OPORD. The TSC commander may also coordinate with strategic providers for support as directed by the theater Army commander.

2-94. The TSC and ESC commander and staff responsibilities for sustainment plans and operations are shown below. These are not in priority order and are not all-inclusive.

- Coordinate with the theater commander and staff to fully understand the theater Army mission.
- Develop and disseminate an OPORD to subordinate units. This OPORD must contain a concept of operations that specifies tasks for subordinate units and clearly delineate command and support relationships as specified in the theater Army OPORD.
- Execute command and control over all assigned and attached down trace sustainment units.
- Assume tactical control (TACON) for movement of arriving units from the port to the tactical assembly area.
- Develop sustainment estimates to determine adequacy of the current operations concept and make changes to the concept as required.
- Communicate critical sustainment requirements in priority order to the higher headquarters.
- Identify and communicate critical capability shortfalls to the theater Army commander and staff.
- Provide recommendations for sustainment unit placement to the theater Army staff.
- Provide recommendations for main and alternate supply routes to the theater Army staff.
- Provide LOGSTAT reports to the theater Army staff IAW the theater Army reporting standard operating procedures.
- As directed by the theater Army commander, coordinates support from strategic providers IAW the theater Army support priorities.
- Provides Army support to other Services as directed by the theater Army.
- Assume the role of deputy commanding general (support) for the ASCC.

ASSISTANT CHIEF OF STAFF, G-8/FINANCIAL MANAGEMENT

2-95. The ASCC financial management (G-8) is the principal staff officer responsible for all resource management support to the theater of operation. The Financial Management Support Center (FMSC) advises the G-8 on finance operations throughout theater. The G-8 manages the planning, programming, budgeting, and execution process and determines sources of funding to support resource requirements. The G-8 provides oversight for the Manager's Internal Control Program, cost management, and accounting functions. The G-8's mission is governed by regulatory guidance mandated by public law. The ASCC G-8 receives guidance from the Assistant Secretary of the Army (Financial Management & Comptroller) and Defense Finance and Accounting Service on the proper use, safeguarding, and disbursement of public funds.

2-96. The ACOS, G-8 is the principal staff officer singularly responsible to plan for all financial management (resource management and finance operations). As the principal financial management advisor to the commander, this officer directs, prioritizes, and supervises the operations and functions of the G-8 staff within the command. In coordination with the FMSC and through the theater sustainment command, the G-8 establishes and implements command finance operations policy. As a member of the staff, the G-8 participates in the theater Army commander's operations process and develops the financial management portion of Annex F (Sustainment) to the operation order or operation plan.

2-97. The theater Army G-8 responsibilities for personnel plans and operations are shown below. These are not in priority order and are not all-inclusive. These apply to G-8s and S-8s at all echelons.

- Analyze resource requirements, ensure commanders are aware of existing resource implications in order for them to make resource informed decisions, and obtain the necessary funding that allows them to accomplish their mission.
- Matches legal and appropriate sources of funds with thoroughly vetted and valid unit requirements.

- Plans banking support to include financial management activities ranging from currency support (local or U.S.) of U.S. military operations to liaising with host nation banking officials to strengthen local financial institutions. Other financial management activities within banking support are establishing e-commerce and coordinating with local banking infrastructure.
- Facilitate fiscal communication, accuracy of documentation, and timely payment of goods and services. Disbursing of public funds to entities to which the U.S. Government is indebted; the collection and deposit of monies; the safeguarding of public funds; and the documenting, recording, and reporting of such transactions.
- Provides for full U.S. pay (including civilian pay where not supported by DFAS); travel support; local and partial payments; check-cashing and currency exchange to Soldiers, civilians and U.S. contractors; and non-U.S. pay support (such as enemy prisoner of war, host nation employees, day laborers, civilian internee).
- Executes accurate and complete recording of financial transactions within the Army FM support information systems.
- Maintains an accurate measurement and thorough understanding of the full cost of the command's processes, products and services to support leader's decision-making and fiscal stewardship, thereby maximizing the effectiveness and efficiency of the organization's operations.
- Ensures audit readiness by maintaining and producing timely, accurate, and relevant information that is consistently auditable.
- Coordinates with the servicing legal representative for advice regarding laws and financial management regulations governing obligations, expenditures, and limitations on the use of public funds.

ENGINEER SECTION

2-98. Senior staff engineer in the theater Army command responsible for the coordination and synchronization of engineer operations across the AOR. Responsibilities include coordination of efforts within the civil affairs brigades, nongovernmental, intergovernmental organizations, U. S. Army Corps of Engineers, other Services, the HN, and other interested parties. Plans for real estate actions, environmental actions, facilities construction, demining operations, mobility and counter-mobility operations, firefighting responsibilities, support to the construction of above ground inland petroleum distribution pipeline, and general construction throughout the AOR in support of force requirements. Also responsible for establishing overall engineer policy within the AOR. Engineer proponentcy at the joint, ASCC, and field army may reside in the G-4 and/or the logistics directorate of a joint staff, logistics staff section (J-4) staffs. This supports the strategic and operational integrated planning required for operational activities that include setting the theater, terrain management, and base camp planning.

THEATER ARMY SURGEON'S SECTION

2-99. The ASCC surgeon is the theater Army staff proponent responsible for (in coordination with the MEDCOM [DS] commander) the provision of AHS support within the AOR. The ASCC surgeon has staff responsibility for medical planning, coordination, and policy development for AHS support to deployed forces. This officer advises the ASCC commander concerning the health of the command, recommends changes to the theater evacuation policy, and provides input to and personnel in support of the theater patient movement requirements center, as required. Organizations from battalion through Army Service component command level are authorized a surgeon. The Army Medical Department (AMEDD) leverages the surgeon's cells (staff channels) at each echelon and medical command channels (through the MEDCOM [DS], medical brigade [support], and medical battalion [multifunctional]) to provide AHS support to the deployed force. Integration of these two chains and other elements of sustainment occur at command headquarters at echelon and not just between sustainment organizations.

2-100. The ASCC surgeon and the surgeon cells at each echelon identify, assess, counter and/or mitigate health threats across the range of military operations. ASCC surgeon and the surgeon cells also advise commanders on medical capabilities and capacities necessary to support plans, and interface with logistical, financial management, and personnel elements to coordinate AHS support across the warfighting functions. The ASCC surgeon and the surgeon cells at each echelon (including the TSC, ESC, and sustainment brigade

surgeon cells) work with their staff to conduct planning, coordination, synchronization, and integration of AHS support to plans to ensure that all 10 medical functions are considered and included in running estimates, operations plans (OPLANS), OPORD in coordination with the MEDCOM (DS). The surgeon also prepares a portion of annex E (Protection) and annex F (Sustainment) to the operation order or operation plan. For additional information, see FM 4-02.

THEATER SUSTAINMENT COMMAND

2-101. The TSC is the Army's command for the integration and synchronization of sustainment in the AOR. The MEDCOM (DS) is also assigned to the ASCC. It is the theater medical command responsible for command and control, integration, synchronization, and execution of AHS support within the AOR. The TSC connects strategic enablers to the tactical formations. It is a theater-committed asset to each ASCC and focuses on Title 10 support of Army forces for theater security cooperation and the CCDR's daily operational requirements. The TSC commands assigned HRSCs and FMSCs. The TSC commander also commands and task organizes attached ESCs, sustainment brigades, and additional sustainment units. The TSC executes the sustainment concept of support for planning and executing sustainment-related support to the AOR for all the Army strategic roles (shape OEs, prevent conflict, prevail in large-scale ground combat, and consolidate gains).

- Theater Sustainment Command
- Synchronizes, coordinates, and integrates intra-theater sustainment support.
- Plans and synchronizes intra-theater sustainment operations at the operational level of war.
- Assigned to an ASCC.
- General support to Army forces.
- Executes missions throughout the AOR.

2-102. TSCs execute sustainment operations through their assigned and attached units. The TSC integrates and synchronizes sustainment operations across an AOR from a home station command and control center or through a deployed CP. The TSC has four operational responsibilities to forces in theater: theater opening, theater distribution, sustainment and theater closing.

2-103. The task-organized TSC is tailored to provide operational-level sustainment support within an assigned AOR. It integrates and synchronizes sustainment operations for an ASCC including all Army forces forward-stationed, transiting, or operating within the AOR. The TSC coordinates Title 10, Army support to other Services, DOD EA, and lead service responsibilities across the entire theater.

2-104. The TSC organizes forces, establishes command relationships and allocates resources as necessary to support mission requirements, and exercises command and control over attached sustainment forces. The TSC supports the ASCC sustainment cells with planning and coordinating theater-wide sustainment. The execution of sustainment is decentralized, performed by the HRSCs, FMSCs, ESCs, sustainment brigades, and other sustainment organizations. The medical logistics management center (MLMC) forward team collocates with the distribution management center (DMC) of the TSC or ESC to serve as the liaison to the MEDCOM (DS). MEDCOM (DS) is responsible for integrating and executing medical operations. Figure 2-11 on page 2-26 depicts a representative TSC staff, and figure 2-12 on page 2-26 depicts the TSC DMC. The DMC is the principal staff section for coordinating sustainment across an operational area. It is headed by the support operations officer and is a coordinating staff section unique to TSCs and ESCs. The DMC is responsible for sustaining the force in accordance with the theater Army priorities. The staff focuses on detailed planning for operational area opening, distribution, sustainment, and operational area closing operations. See ATP 4-94 for additional information.

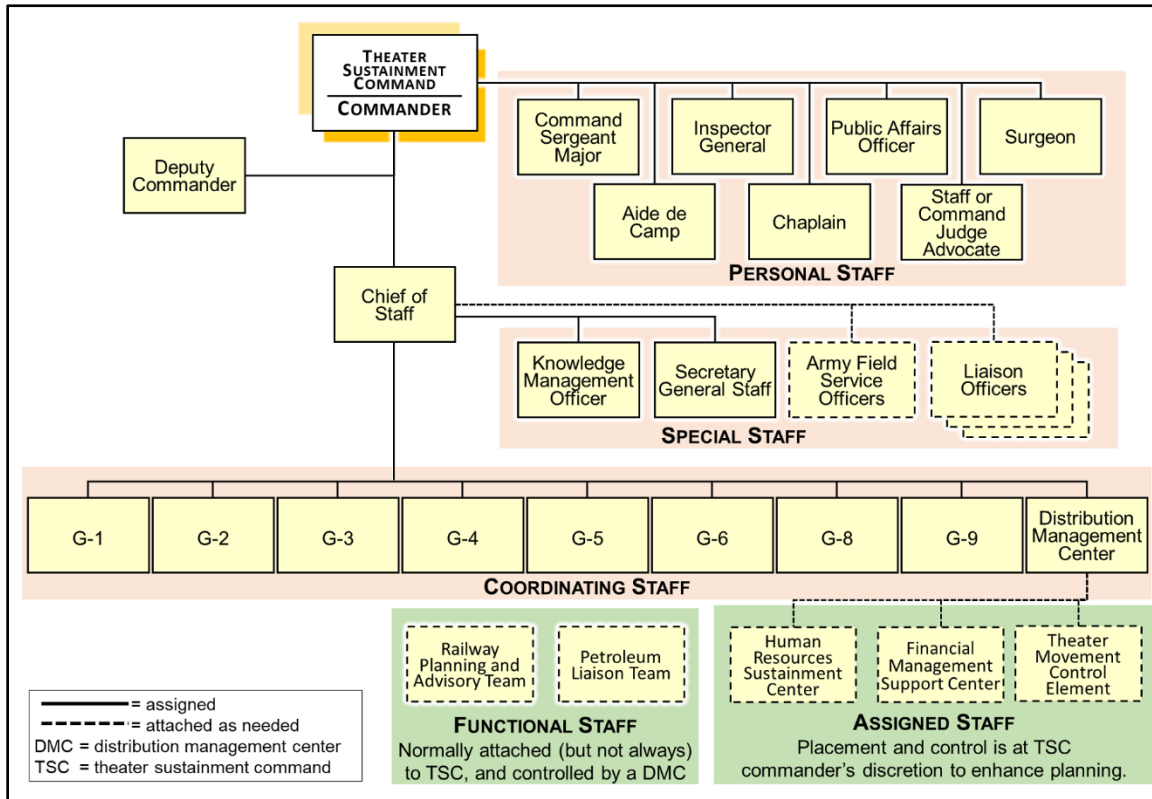


Figure 2-11. Theater sustainment command staff with additional staff capabilities

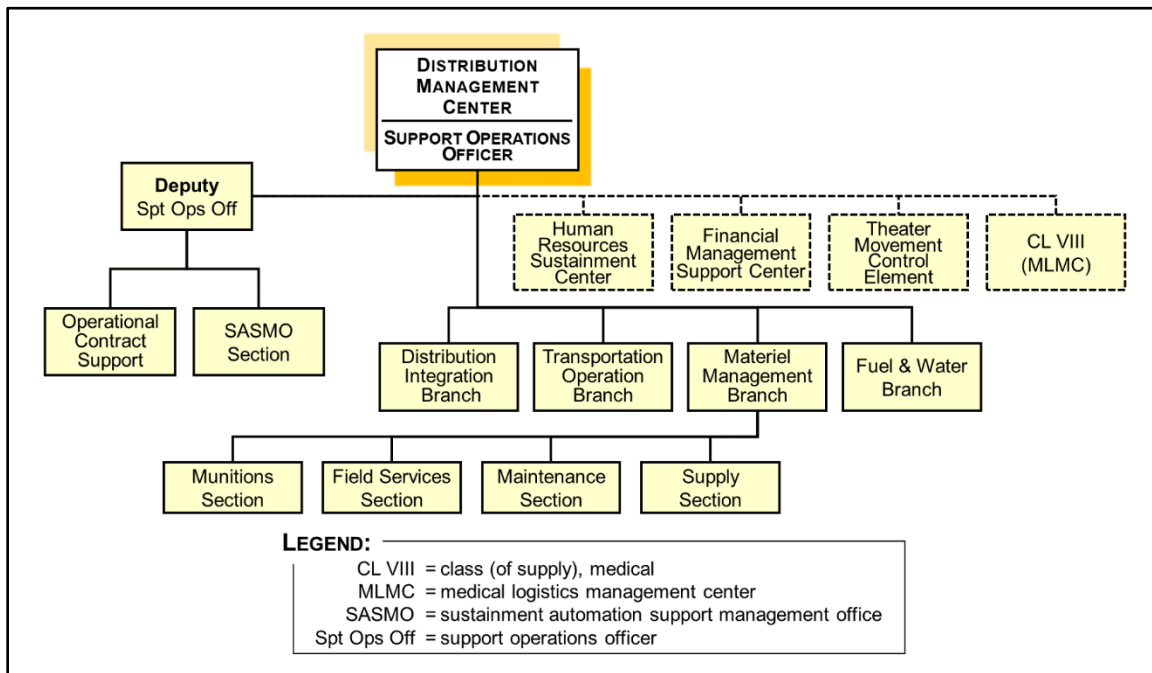


Figure 2-12. Theater sustainment command distribution management center

EXPEDITIONARY SUSTAINMENT COMMAND

2-105. At the theater echelon, one or more ESC's are attached to a TSC. The ESC attached to a TSC commands and controls all assigned and attached units in an operational area as directed by the TSC commander. A task-organized ESC attached to a TSC normally includes one or more sustainment brigades, a transportation brigade expeditionary, and a movement control battalion to support theater opening, theater distribution, and theater closing operations. The ESC plans for near term operations and synchronizes operational-level sustainment operations to meet requirements for current operations. It may perform as a forward CP for the TSC if directed. The ESC attached to a TSC is dependent on the TSC staff for long-range planning capability and enabling capabilities like signal support. For more information on the ESC see ATP 4-94.

2-106. The ESC plans for near term operations and synchronizes operational-level sustainment operations to meet the current and future operational requirements of the TSC. The ESC supports deployed forces in the JOA and/or AO while the TSC maintains a theater-wide focus of the entire AOR. The ESC is task organized with many of the sustainment units discussed under the theater Army echelon. The ESC, usually through an attached sustainment brigade, provides GS to forces in the JOA and/or AO. Figures 2-13 depicts a notional AOR command and control structure of sustainment forces and figure 2-14 on page 2-28 depicts a notional task organized TSC respectively. The ESC and its subordinate units must be able to move and displace at the pace of large-scale combat operations. See ATP 4-94 for additional information on the ESC and ATP 4-93 for more information on the sustainment brigade.

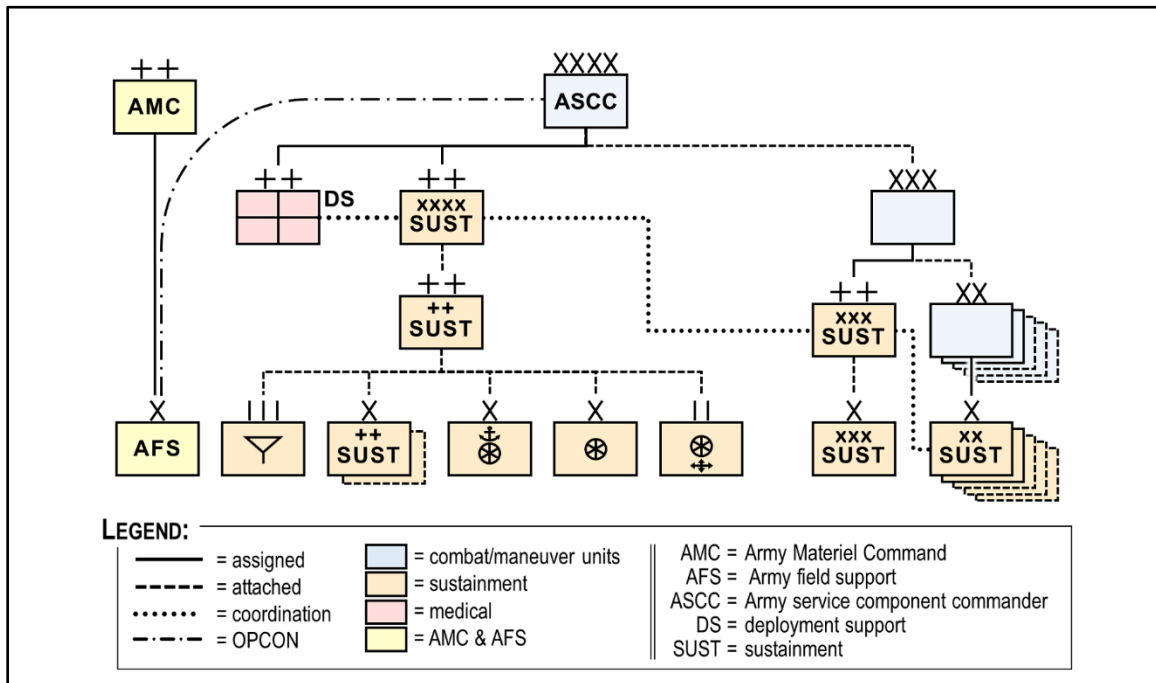


Figure 2-13. Notional area of responsibility command and control of sustainment forces

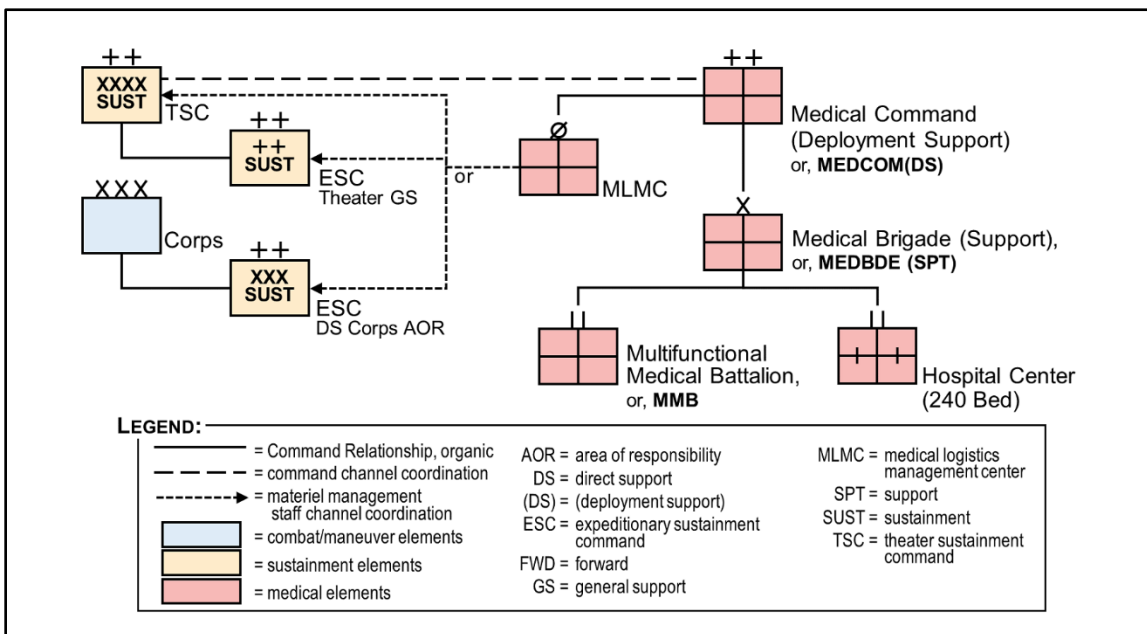


Figure 2-14. Notional task organized theater sustainment command

HUMAN RESOURCES SUSTAINMENT CENTER

2-107. The HRSC (figure 2-15) is a multi-functional, modular HR organization (staff element), and theater-level center assigned to a TSC that coordinates and integrates personnel accountability, casualty, and postal functions throughout the theater and as defined by the policies and priorities established by the ASCC G-1/AG. The HRSC provides support to the ASCC G-1/AG in the accomplishment of their personnel readiness management and personnel information management missions. HRSC also provides planning and operations technical support to the TSC DMC. The HRSC has responsibility for providing technical oversight to units conducting personnel accountability, casualty, and postal missions. This technical guidance is provided by the various divisions of the HRSC and is passed to the ESC and sustainment brigade SPO officer human resource operations branch, who then pass the information to the HR organizations assigned to sustainment units. The HRSC also provides technical guidance and support to the military mail terminal and theater gateway personnel accountability team (PAT).

2-108. HR companies and platoons receive both technical and operational guidance from the supporting human resource operations branch. The HRSC receives HR policy guidance from the ASCC G-1/AG, Army Mobilization and Deployment Reference, and in some areas HRC and other national-level HR organizations (Reserve Component). The HRSC receives employment and operational guidance from the TSC or the ESC commander. The HRSC receives life support from the TSC. Figure 2-16 displays a notional operational framework of human resources units. See appendix A and FM 1-0 for additional information.

operations. Key FMSC functions include central funding, banking, economic analysis, finance operations planning, and providing finance operations policy.

2-110. The FMSC leverages command support through the TSC and/or ESC to plan, synchronize, and integrate finance operations capabilities throughout the assigned AO. The FMSC develops the finance operations plan for the TSC and/or ESC commanders and provides technical guidance and oversight to theater financial management support units (FMSU).

2-111. The FMSC works closely with U.S. Army Financial Management Command, the ASCC G-8, TSC, and/or ESC staff to ensure theater finance operations comply with applicable regulations and statutes. Other missions include, but are not limited to, negotiations with host nation banking facilities, and advising unit commanders on the use of local currency. The theater FMSC is responsible for plans and operations below. These are not in priority order and are not all inclusive:

- Conducting theater cash management operations.
- Providing early entry capability to plan and execute disbursing operations.
- Planning finance operations policy for theater that addresses full U.S. pay (including civilian pay where not supported by the defense finance and accounting service [DFAS]); travel support; local and partial payments; check-cashing and currency exchange to Soldiers, civilians, and U.S. contractors; and non-U.S. pay support (such as enemy prisoner of war, host nation employees, day laborers, civilian internee).
- Planning banking support activities ranging from currency support (local or U.S.) of U.S. military operations to liaison with host nation banking officials to strengthen local financial institutions. Other finance operations activities within banking support include establishing e-commerce, coordination with local banking infrastructure.
- Identifying FM force structure requirements and recommending FM force flows, allocation and placement of FM units in theater.
- Advising sustainment commanders on all aspects of finance operations.

2-112. Based on operational variables, the FMSC can deploy an element as an early entry module to provide initial theater banking, currency (foreign or domestic), accounting, contractual payment, policy development, and other finance operations capabilities tailored to the mission. This financial management enterprise supports the host nation's ability to regain the authority to govern and administer banking systems and e-commerce where possible. Figure 2-18 displays a notional operational framework of financial management units. See appendix A and FM 1-06 for additional information.

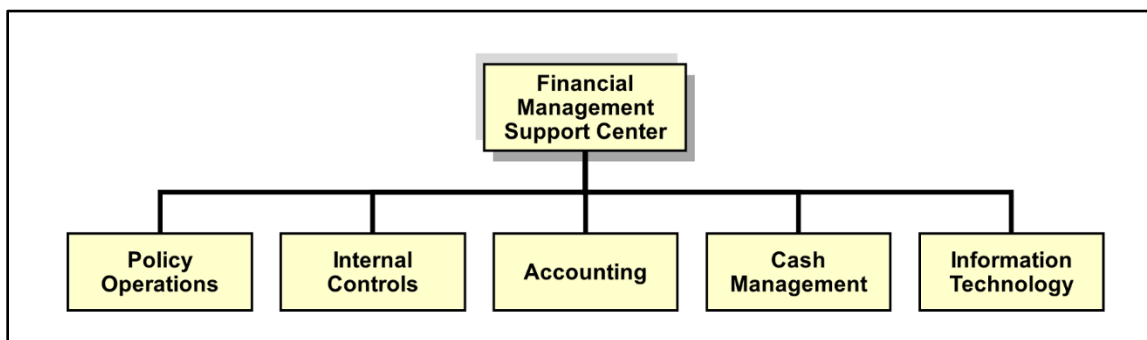


Figure 2-17. Financial management support center

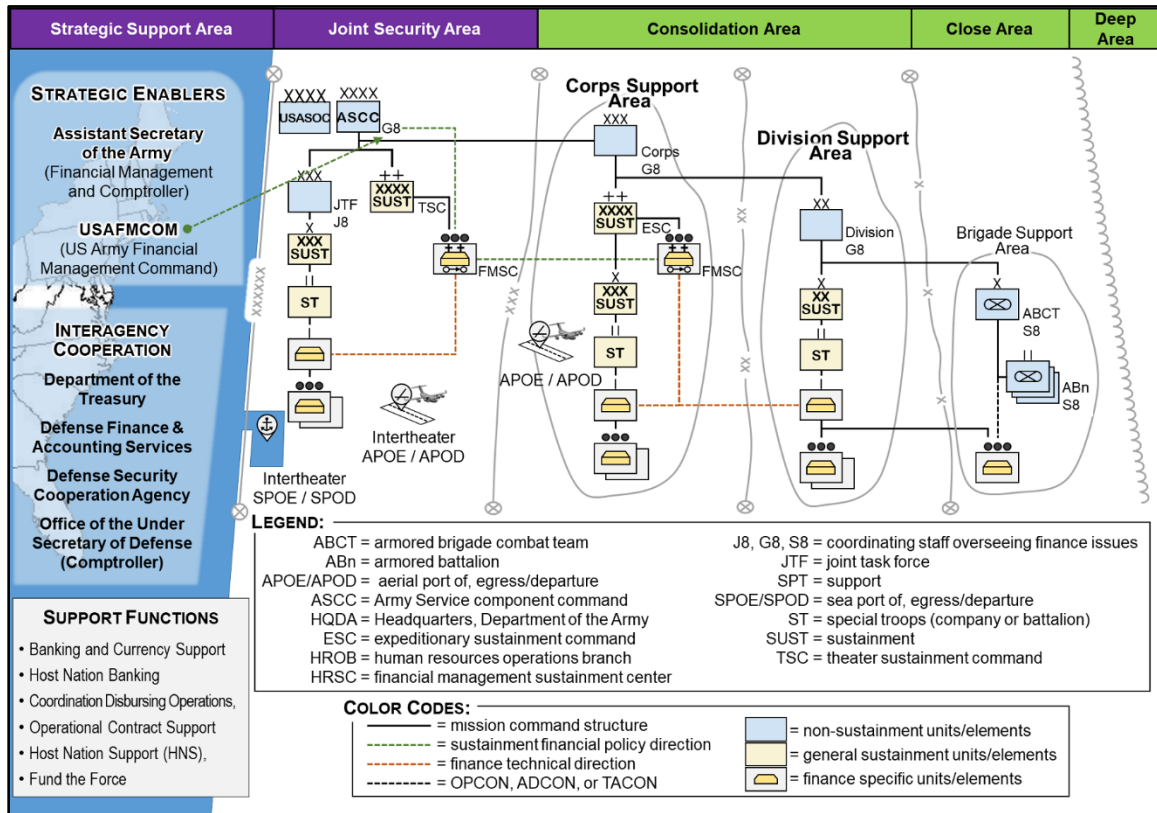


Figure 2-18. Notional financial management operational framework

THEATER MOVEMENT CONTROL ELEMENT

2-113. The theater movement control element (TMCE) is a multifunctional theater level center assigned to a TSC or ESC to manage movement by use of movement control processes, intra-theater operations, inter-theater operations, and theater container management. It can also plan support for contingency operations, and conduct exceptional movement requirements in support of the GCC's plans and priorities.

2-114. The TMCE supports operations to shape by acting as a liaison between strategic transportation partners and the TSC/ESC. The TMCE coordinates with strategic partners to locate and identify strategic ports of entry into a CCDR's AOR. Identifying these strategic locations assists the CCDR in establishing agreements for their use as part of certain OPLANs during strategic shaping. By doing this, the TMCE facilitates the coordination of strategic transportation between the CCDR and strategic partners such as USTRANSCOM, DLA and USAMC.

2-115. The TMCE also supports operations to prevent. The TMCE accomplishes this by leading or serving on various movement boards. See ATP 4-16 for additional information on movement boards. The TMCE also acts as a liaison between the CCDR's joint deployment and distribution operations center (JDDOC) and the TSC and/or ESC. The TMCE plans, monitors and coordinates the inter-theater movement program to facilitate military forces moving during operations to prevent.

2-116. The TMCE serves as a critical enabler during large-scale combat operations and operations to consolidate gains. The TMCE supports large-scale combat operations by committing air and ground transportation assets in the support of reception, staging and onward movement of forces entering into a theater. It also plans, monitors and implements the intra-theater movement program in accordance with the CCDR's priorities. See ATP 4-16 for additional information on the TMCE.

TRANSPORTATION BRIGADE EXPEDITIONARY

2-117. The transportation brigade expeditionary (TBX) is a FORSCOM asset that is normally attached to a TSC or ESC. It provides command and control of Army watercraft and water terminal capabilities and organizations. It deploys to an operational area to provide command and control for port opening and for operations at inland waterway, bare beach, degraded, and improved sea terminals.

2-118. Water terminal and watercraft units assigned to the TBX conduct deployment, distribution support, and redeployment IAW ASCC operational requirements. The TBX commander and staff serve as the TSC or ESC commander's primary experts on port operations and management. Watercraft assigned to the TBX can also be used to support the movement and sustainment of maneuver forces and their equipment when required. Figure 2-19 shows a notional task organized TBX. The TBX also serves as the ARFOR component of any JTF for joint logistics over-the-shore. As the primary Army headquarters element with assigned terminal and watercraft units, it provides the Army's organic capability to conduct specific functions of the Army in support of amphibious operations, riverine operations, wet-gap operations, joint over-the-shore operations, and intra-theater transport of time-sensitive, mission-critical personnel and materiel.

2-119. The TBX and its subordinate battalions establish and maintain close coordination with the TSC or ESC and the sustainment brigades responsible for executing the theater distribution mission. The TBX establishes the same close mission coordination with the SDDC single port manager and port commanders. See FM 4-95 and ATP 4-13 for additional information.

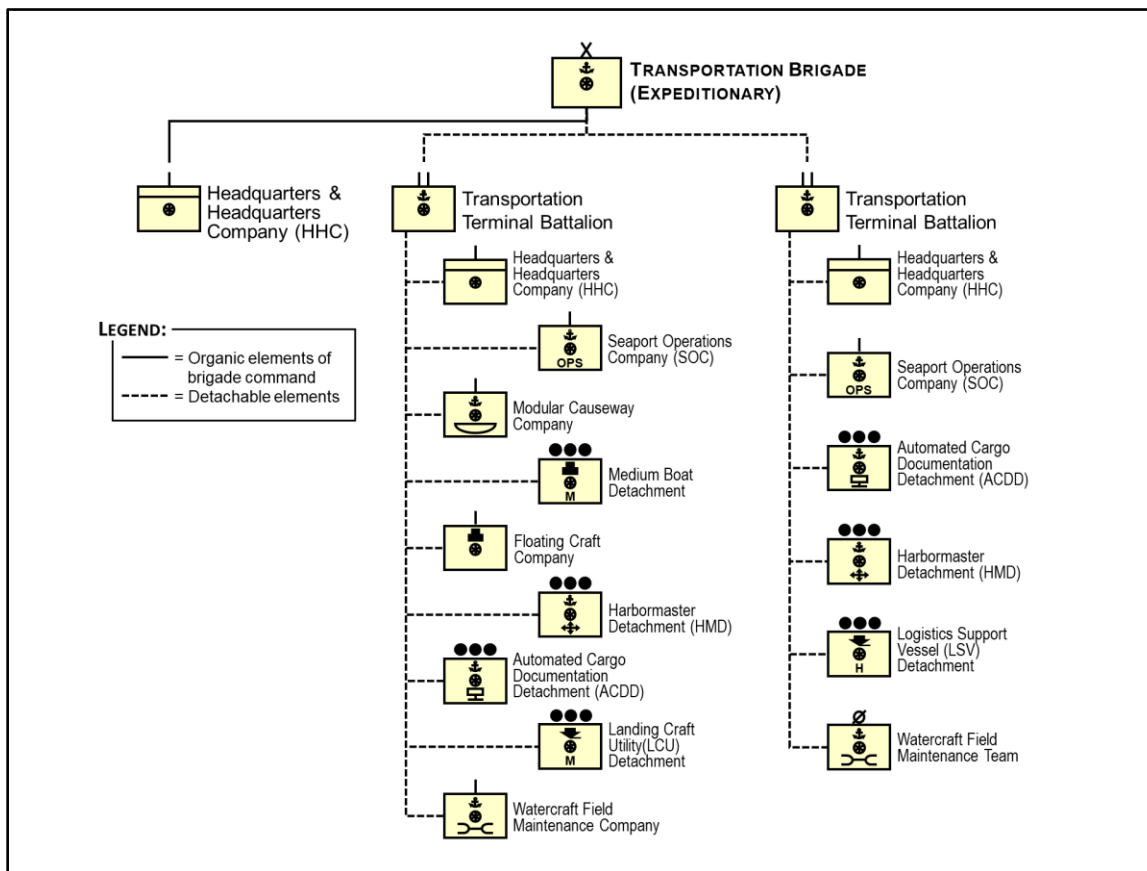


Figure 2-19. Notional task organized transportation brigade expeditionary

EXPLOSIVE ORDNANCE DISPOSAL GROUP

2-120. The EOD group conducts EOD force protection operations for military and civilian authorities to defeat or mitigate conventional and unconventional (nuclear, biological, chemical, and improvised) explosive

devices in its assigned AOR. It detects, identifies, conducts on-site evaluation, renders safe, exploits, and achieves final disposition of all explosive ordnance, including improvised explosive devices and weapons of mass destruction. The group provides support to joint, interagency, intergovernmental, and multinational operations as required. Figure 2-20 depicts a notional task organization for the EOD group. See ADP 3-37, ATP 3-11.32, ATP 3-11.47, ATP 3-34.20, ATP 3-37.11, ATP 3-90.37, ATP 4-32, ATP 4-32.1, ATP 4-32.2, ATP 4-32.3, and FM 4-30 for additional information.

2-121. When deployed, the EOD group conducts staff planning, staff control, and technical control of all EOD assets in an operational area, and it provides EOD staff liaison to the ASCC. The EOD group is capable of conducting EOD command and control and staff planning for two to six EOD battalions. The group is attached to or under the OPCON of a theater Army, corps, or JTF in support of a specific operation, OPORD, or OPLAN. The group can also form the core of a specialized combined JTF with command and control of a variety of protection and exploitation enablers. See ATP 4-32.1 for additional information.

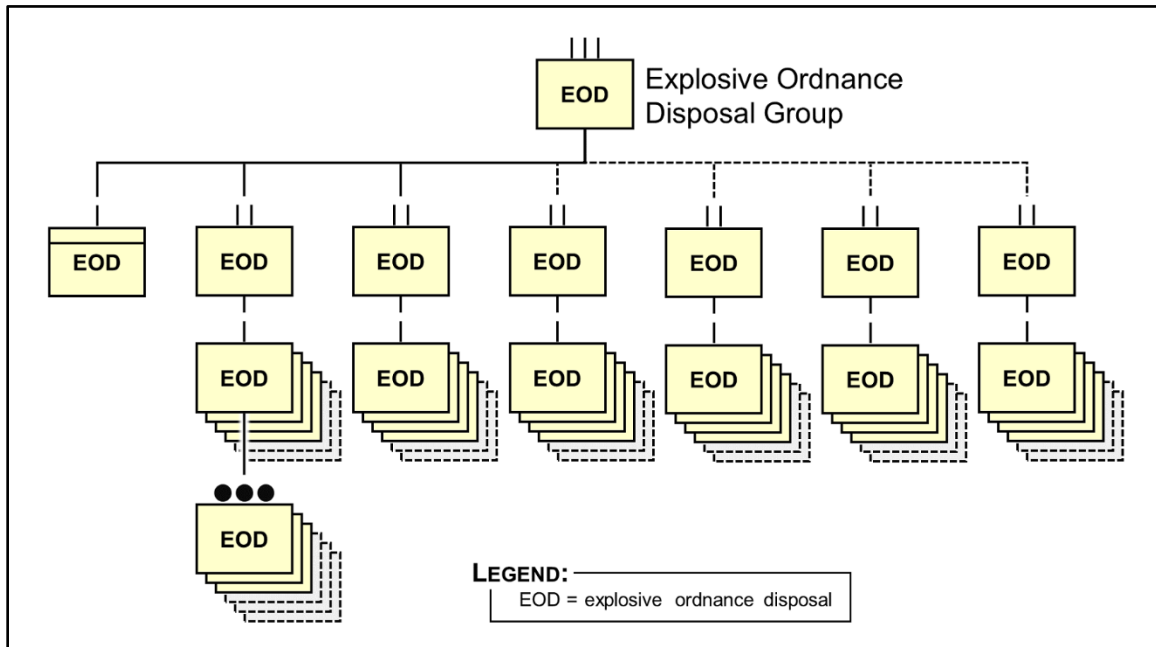


Figure 2-20. Notional task organized explosive ordnance disposal group

THEATER AVIATION SUSTAINMENT MAINTENANCE GROUP

2-122. The theater aviation sustainment maintenance group is resourced to provide aviation sustainment maintenance and limited depot sustainment support at the theater level. It consists of a headquarters and headquarters detachment, an aviation support company, and a group support company. The theater aviation sustainment maintenance group performs repairs and returns components/end-items to their supported units, or to the supply system through the National Maintenance Program.

2-123. When deployed, the theater aviation sustainment maintenance group is attached to the joint force sustainment HQ or expeditionary support command and sets up at a secure location within an AO. It establishes and provides 24-hour, fixed-base aviation field and sustainment maintenance, logistics, and other essential aviation sustainment support to aviation units. The theater aviation sustainment maintenance group performs field maintenance, depot-level crash and battle damage repair, and sustainment/depot-level repair of major end items. It also performs sustainment-level maintenance for aircraft and aviation ground support equipment at fixed-land or sea-based locations. The theater aviation sustainment maintenance group assists deploying aviation operational units in port operations. See ATP 3-04.7 for additional information.

THEATER PETROLEUM CENTER

2-124. The theater petroleum center serves as the operational Army link to strategic petroleum partners providing liaison between DLA Energy, host/partner nations, the ASCC, Army Petroleum Center, CCMD, and TSC as needed. It serves as the senior theater Army petroleum advisor to the CCMD through operational planning support to the TSC petroleum & water branch or ASCC petroleum and water branch staffs. The quartermaster petroleum liaison team operates as a sub-unit of the theater petroleum center and provides the same capabilities of theater petroleum center on a smaller scale. Both the theater petroleum center and the quartermaster petroleum liaison team are normally attached to an ASCC, TSC, or ESC as mission dictates. See ATP 4-43 for additional information.

QUARTERMASTER (PETROLEUM, OIL, LUBRICANTS, AND WATER) GROUP

2-125. The quartermaster (petroleum, oils, and lubricants [POL] and water) group (figure 2-21) operates within a theater area of operations for distribution of petroleum and water in the theater. The organization provides centralized management of bulk petroleum and water. This unit also provides command and control, planning, liaison, and supervision of the supply, distribution, quality surveillance, and storage of bulk petroleum for a theater of operations. It also conducts operational planning for the development, rehabilitation, and extension of host nation petroleum systems and storage facilities based on the OPLAN of the theater commander. The group is normally attached to a TSC or ESC. There are two quartermaster petroleum groups in the Army Reserve Component. These units are dependent upon external support for-area signal support, construction, rehabilitation, and maintenance of petroleum facilities. See ATP 4-43 and ATP 4-44 for additional information.

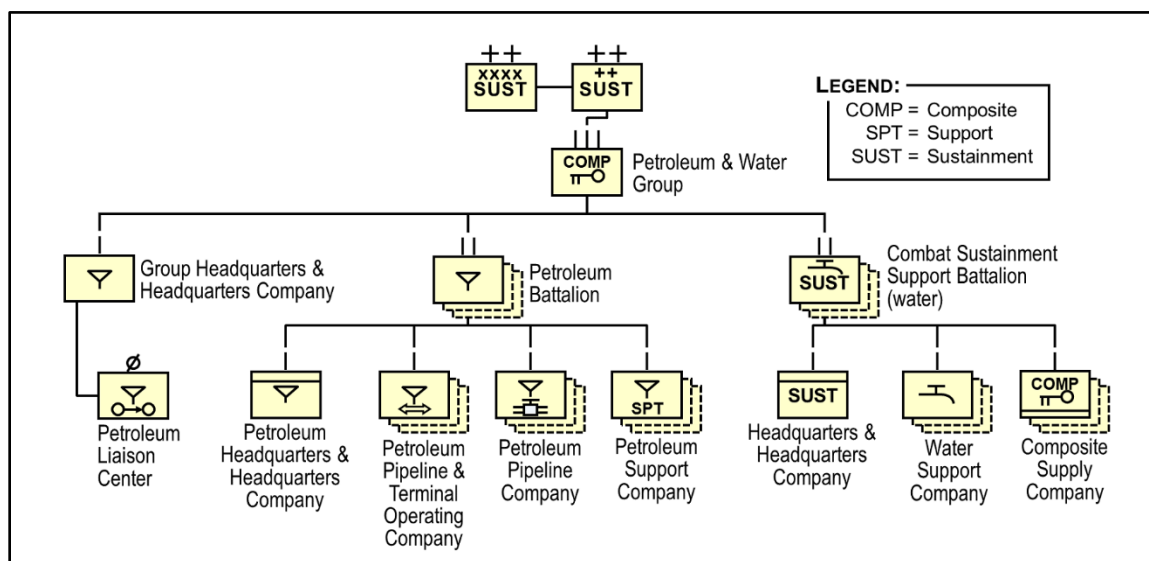


Figure 2-21. Notional task organized quartermaster (petroleum and water) group

MEDICAL COMMAND (DEPLOYMENT SUPPORT)

2-126. The MEDCOM (DS) is the senior medical command in support of the ASCC based upon operational and mission variables. The MEDCOM (DS) commander is responsible for maintaining a regional focus in support of the GCC and ASCC theater engagement plan, while providing effective and timely direct HSS and force health protection to tactical commanders and GS (on an area basis) to theater forces at EAB. The enduring regional focus of the ASCC drives organizational specialization in the supporting MEDCOM (DS) to address unique health threats, specific needs of the local populace, availability of other Service medical capabilities, and geographic factors that are distinctly related to a particular region.

2-127. The MEDCOM (DS) integrates and synchronizes all AHS operations and provides command and control of medical brigades (support), medical battalions (multifunctional), and other AHS units providing

force health protection and health service support to tactical commanders. The MEDCOM (DS) employs an operational CP and a main CP that can deploy autonomously into an operational area and is employed based on the size and complexity of operations or the support required. Key tasks of a MEDCOM (DS) include—

- Providing command and control of medical brigade support (MEDBDE [SPT]) and subordinate medical units assigned and attached.
- Task-organizing medical elements based on specific medical requirements.
- Monitoring health threats within each operational area and ensuring the availability of required medical capabilities to mitigate those threats.
- Maintaining situational understanding of medical infrastructure, treatment, and evacuation capabilities.
- Accomplishing Title 10, United States Code responsibilities and Army support to other Services for the operational area.
- Partnering and training with host nation and multinational health system units.
- Establishing a command relationship with the theater Army and the CCDR, linking the TSC to the MLMC for coordination and planning.
- Conducting EA for medical research for prevention, migration, and treatment of blast injuries.

2-128. The MEDCOM (DS) may have a direct support or GS relationship with the corps or the division. The MEDCOM (DS) may have a GS relationship with the TSC or ESC. A high level of coordination between the medical command and staff channels develops the situational understanding necessary to recommend priorities and courses of action to echelon commanders. The medical staff channels (surgeon cells) conduct planning, coordination, synchronization, and integration of AHS support to plans. The chain of medical commanders execute the AHS support to OPLANs, and maintain the medical technical channel throughout echelons.

2-129. The MEDCOM (DS) is supported by EAB units for sustainment and personnel services. When deployed, the MLMC that provides centralized, theater-level commodity management of class VIII materiel co-locates with either the DMC of the TSC or ESC, or the JDDOC to serve as a liaison to the MEDCOM (DS) liaison. Figure 2-22 on page 2-37 depicts the MEDCOM (DS). See ATP 4-02.1 and FM 4-02 for additional information.

MEDICAL LOGISTICS MANAGEMENT CENTER

2-130. The MLMC provides centralized, strategic-level management of class VIII materiel, patient movement items, optical fabrication, contracting, and medical equipment maintenance support. When deployed, the MLMC forward support team is assigned to the MEDCOM (DS) and collocates with the DMC of the theater sustainment command/expeditionary sustainment command, as well as the JDDOC, if established. The forward support team serves as a link between national-level support and theater-level distribution and is dependent upon appropriate elements of the ASCC for AHS support, food service support, transportation, laundry and bath, financial management, personnel and administrative services, religious, legal, communications, and unit-level maintenance support.

MEDICAL BRIGADE (SUPPORT)

2-131. The medical brigade (support) (MEDBDE [SPT]) is a subordinate command and control organization of the MEDCOM (DS). It provides the command and control and planning capabilities necessary to deliver responsive and effective AHS support across the range of military operations. Like the MEDCOM (DS), the focus of the MEDBDE (SPT) is mission variables driven to ensure the right mix of medical forces and expertise (operational, technical, and clinical) to synchronize AHS support to unified land operations.

2-132. The MEDBDE (SPT) consists of an early entry module, expansion module, and campaign module. The design and flexibility of the MEDBDE (SPT) facilitates the AHS's ability to tailor the unit to meet expeditionary health system support and force health protection requirements in support of early entry operations and transition to provide greater capability and capacity based on the size, composition, and

location of supported forces. The MEDBDE (SPT) is assigned to the MEDCOM (DS) See ATP 4-02.1 for additional information.

MEDICAL BATTALION (MULTIFUNCTIONAL)

2-133. The medical battalion (multifunctional) is an EAB headquarters. The unit provides command and control, administrative assistance, logistical support, and technical supervision for assigned and attached medical functional organizations (companies, detachments, and teams) task-organized for support to deployed forces operating within the AO. The medical battalion (multifunctional) can be deployed to provide command and control of medical forces during early entry operations and facilitate the RSOI of theater medical forces. All EAB medical companies, detachments, and teams in theater may be assigned, attached, or placed under the OPCON of a medical battalion (multifunctional). It is under the command and control of the MEDBDE (SPT) and/or MEDCOM (DS). See FM 4-02 for additional information.

HOSPITAL CENTER

2-134. The hospital center is a modular Role 3 medical treatment facility tailored to provide hospitalization support to unified land operations and serves as the replacement for the current combat support hospital. The hospital center provides essential care within the theater evacuation policy to either return patients to duty or stabilization for further evacuation to a role 4 medical treatment facility in CONUS or other safe haven. This Role 3 medical treatment facility consists of five modular elements capable of providing mission-specific medical and surgical support. The hospital center may be augmented by one or more medical detachments, hospital augmentation teams, or medical teams designed to enhance its capabilities to provide AHS support to unified land operations.

2-135. The headquarters and headquarters detachment, hospital center, and field hospital are the core and lowest denominator of the hospital organization and are designed as the first increment to be deployed in support of an expeditionary force. The headquarters and headquarters detachment, hospital center, and field hospital (32 bed) can be expanded incrementally to a maximum 240 bed capacity. The augmentation detachments or teams would normally be assigned or assigned to the field hospital (32 bed) and absorbed into sections with like functions. In many respects, the augmentation units will essentially lose their identity as a separate unit when deployed and employed with the hospital center. The hospital center 240 bed is the largest variation of this Role 3 medical treatment facility, however, not all hospital centers are equipped for maximum bed capacity. The field hospital (32 bed) represents the smallest unit within the hospital center that can provide the complete clinical capabilities of a Role 3 medical treatment facility. The hospital center is assigned to the MEDBDE (SPT) or MEDCOM (DS) See ATP 4-02.1 for additional information.

ARMY MEDICAL CAPABILITIES

2-136. The MEDCOM (DS) serves as the theater medical command responsible for identifying and evaluating health care requirements throughout the AO. Within the MEDCOM (DS) AO, medical resources may be dispersed over extended distances and may include areas with increased patient densities, transient troop populations, varying levels of hostility, and significantly different health care requirements. To successfully execute medical operations, the MEDCOM (DS) commander must have the ability to rapidly task-organize and reallocate medical assets across command and geographical boundaries. This ability is crucial to ensure that the medical force package is effectively tailored to optimize the use of scarce medical resources.

2-137. Examples of the organizational alignment of the MEDCOM (DS), MEDBDE (SPT) and subordinate medical units are provided in figure 2-22 and figure 2-23 on page 2-39. While the medical units depicted are provided to represent current AHS force structure, it is important to note the MEDCOM (DS), MEDBDE (SPT) and subordinate medical units are task-organized based on the size, complexity, and duration of the operation and the population supported. Army medical units provide capabilities in support of the ten medical functions. Both HSS and force health protection assets are described below to show all of the elements of AHS support, but the force health protection mission is aligned under the protection warfighting function. A description of the medical capabilities resident within the 10 medical functions are listed below. For additional information, see FM 4-02.

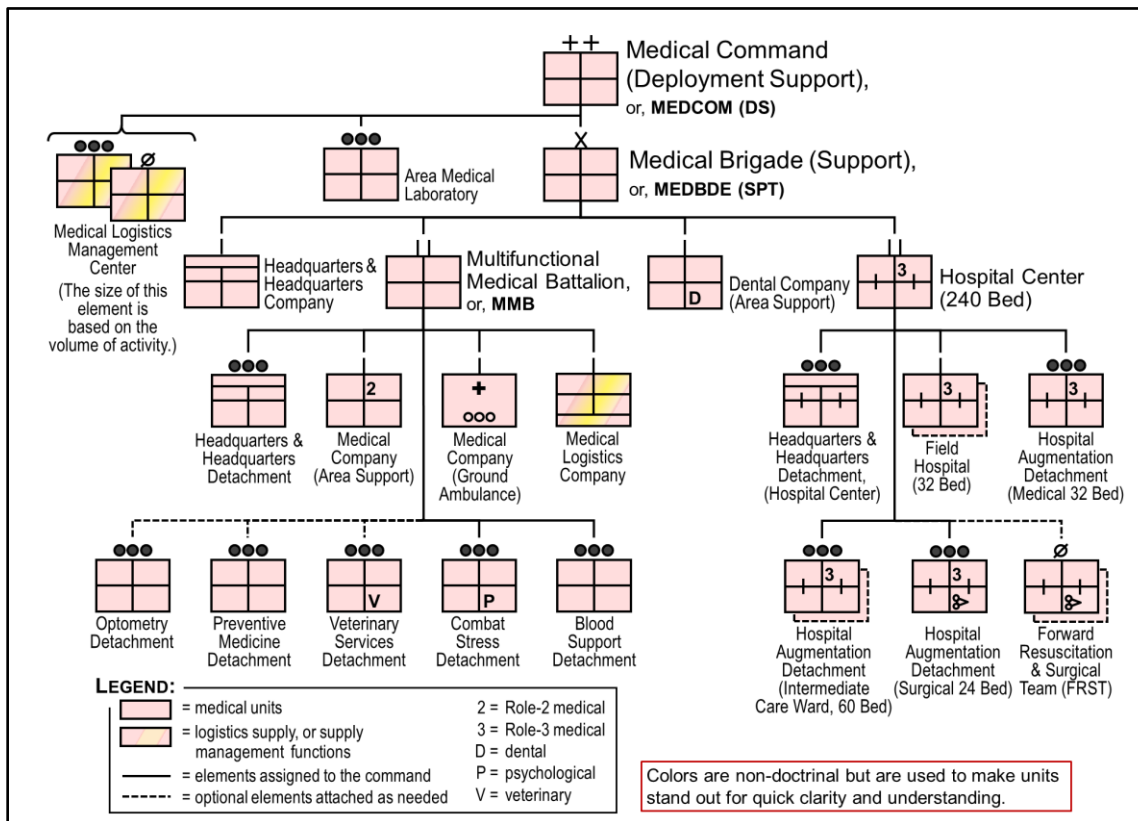


Figure 2-22. Medical command (deployment support)

2-138. Medical treatment (organic and area support) is provided by the combat medic or by the physician, the physician assistant, or combat medic specialist in the battalion aid station/Role 1 medical treatment facility. In ARSOF, Role 1 treatment is provided by special operations combat medics, Special Forces medical sergeants, or physicians and physicians assistants at forward operating bases, Special Forces operating bases, or in joint special operations task forces. Role 2 medical support is provided by the—

- Medical company (brigade support battalion [BSB]) assigned to the brigade combat team (BCTs).
- Medical company (area support), which is an EAB asset that provides Role 2 medical care for units in the supported area that do not have organic medical treatment assets. Refer to FM 4-02 and ATP 4-02.3 for additional information.

2-139. Forward resuscitative surgery is also a primary task of medical treatment, which provides damage control surgery capability close to the point of injury or wounding. This care is provided by the forward resuscitative and surgical team or forward surgical team when collocated with a Role 2 medical treatment facility. Forward resuscitative and surgical teams are assigned to the MEDCOM (DS) or MEDBD (SPT) and attached to a hospital center or combat support hospital when not deployed forward to support a Role 2 medical treatment facility. When not deployed forward, the teams can also augment surgical capability of the Role 3 hospital center or combat support hospital.

2-140. Medical evacuation employs standardized air and ground medical evacuation units/resources and provides en route medical care to patients being evacuated. Evacuation from Roles 1 and 2 is a Service responsibility; however when designated by the GCC, the Army may provide medical evacuation support to other Services operating in the AO. Further, the Army doctrinally provides Army support to other Services such as U.S. Marine Corps personnel for evacuation from shore-to-ship/ship-to-shore mission. Army medical evacuation is provided by the—

- Medical company (ground ambulance).
- Medical company (air ambulance). Refer to ATP 4-02.2 for additional information.

2-141. Hospitalization consists of essential care to all patients who are evacuated out of theater and definitive care to those Soldiers capable of returning to duty within the theater evacuation policy. Hospitalization support is provided by the Role 3 hospital center or combat support hospital. See FM 4-02 for additional information.

2-142. Preventive medicine services prevent casualties from disease and nonbattle injury through medical surveillance, occupational and environmental surveillance, health assessments, preventive medicine measures, and personal protective measures. The medical detachments (preventive medicine) and preventive medicine teams provide preventive medicine support and consultation on an area basis. EAB staff support consists of preventive medicine staff officers organic to the MEDCOM (DS), MEDBDE (SPT) and multifunctional medical battalion (MMB). These staff officers serve as the commander's principal preventive medicine consultants and environmental science advisors.

2-143. Dental services are provided to promote dental health; prevent and treat oral and dental disease; provide far forward dental treatment; provide early treatment of severe oral and maxillofacial injuries; and augment medical personnel (as necessary) during mass casualty operations. The dental company (area support) provides operational dental care and has dental assets that can deploy when and where necessary to provide augmentation and/or reinforcement to the area support squads. See FM 4-02 for additional information.

2-144. Veterinary services are provided to enhance the health of the command through three broad-based functions—food inspection services, animal medical care, and veterinary preventive medicine (to include the prevention of zoonotic diseases transmissible to man). As the DOD sole provider, Army veterinary services personnel provide veterinary public and animal health services in support of all of the military Services (except for the food inspection mission on U.S. Air Force installations), U.S. Navy, U.S. Marine Corps, and Army forces, as well as other federal agencies, host nation, and multinational forces, when directed. Operational veterinary support is provided by the medical detachment (veterinary services support). Refer to FM 4-02 for additional information.

2-145. Combat and operational stress control is provided to enhance unit and Soldier effectiveness through increased stress tolerance and positive coping behaviors. In the BCTs combat and operational stress control support is provided by mental health sections assigned to the brigade support medical company (BSMC) and medical company (area support). The medical detachment (Combat and Operational Stress Control) is an EAB medical capability that provides support on an area basis. If required, resources from the medical detachment (Combat and Operational Stress Control) can deploy resources forward to augment the medical company (area support) and BSMC. Refer to FM 4-02 and ATP 6-22.5 for additional information.

2-146. Medical laboratory services are provided to assess disease processes (to aid in diagnosis); monitor the efficacy of medical treatment; and identify and confirm the use of suspect biological warfare and chemical warfare agents by enemy forces. Clinical laboratory services are performed by the Role 2 medical company (area support) and BSMC, the Role 3 hospital center and combat support hospital, and the medical detachment (blood support) for storage and distribution of blood and blood products. The area medical laboratory performs surveillance, analytical laboratory testing and health hazard assessments of environmental, occupational, endemic, and CBRN threats in support of Soldier protection and weapons of mass destruction missions. See FM 4-02 and ATP 4-02.1 for additional information.

2-147. Medical logistics (including blood management) encompasses management of the following functions—medical materiel procurement and distribution, medical equipment maintenance and repair, optical fabrication and repair, storage and distribution of blood and blood products, patient movement items, medical contracting, regulated medical waste, medical gases, and health facilities planning and management. The Army class VIII management and distribution process is described in greater detail in subsequent paragraphs. Operational Medical logistics support is provided by the—

- Medical logistics company.
- Medical detachment (blood support).
- Medical detachment (optometry).
- MLMC.
- U.S. Army Medical Materiel Agency medical logistics support team. See FM 4-02 and ATP 4-02.1 for additional information.

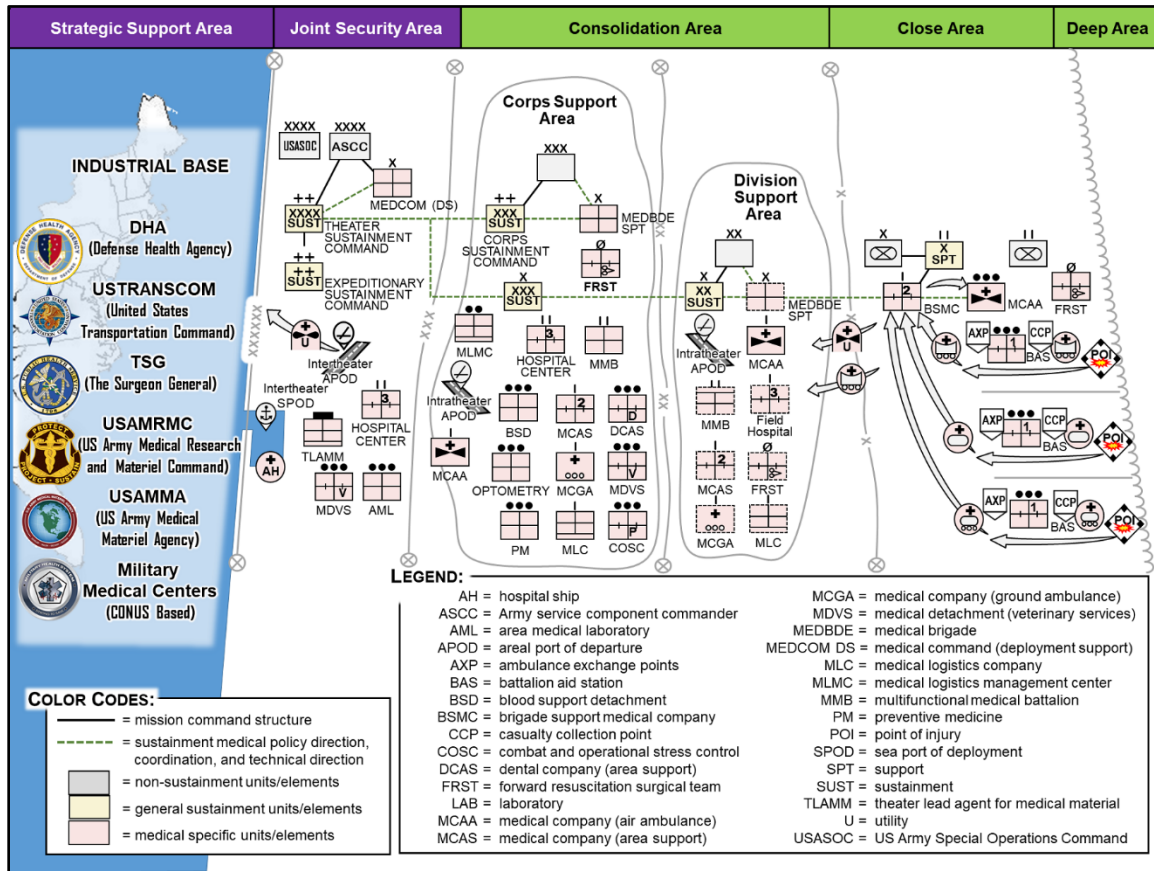


Figure 2-23. Notional health service support operational framework

CLASS VIII MANAGEMENT AND DISTRIBUTION PROCESS IN THEATER

2-148. The MEDCOM (DS) controls and supervises medical logistics support within the theater. A MLMC forward team is assigned to the MEDCOM (DS) and collocates with the DMC of the TSC or ESC to coordinate through the distribution network and liaisons with the JDDOC, if present. The MEDCOM (DS) maintains a command link with the MEDBDE (SPT) and coordination link with the TSC through the MLMC forward team. Army medical materiel centers (for example, United States Army Medical Materiel Center-Europe or United States Army Medical Materiel Center-Korea) execute the Theater Lead Agent for Medical Materiel mission in accordance with DODI 5101.15 and provide theater-level medical materiel management, medical equipment maintenance and repair, optical fabrication, medical set assembly and reconstitution. The U.S. Army Medical Materiel Agency Medical Logistics Support Team, a subordinate of the U.S. Army Medical Logistics Command, serves as a liaison with U.S. ASC logistics support element and issues medical APS unit sets for integration with APS class II and VII materiel for supported medical units.

2-149. GCCs often assign the ASCC (or Army component of a JTF) as the single integrated medical logistics manager with responsibility to plan and execute medical logistics support to all Services and multinational partners operating in the theater. The MEDCOM (DS) or senior medical commander executes the single integrated medical logistics manager responsibility. The MLMC forward team provides information management and distribution coordination support for the single integrated medical logistics manager mission.

2-150. The MEDBDE (SPT) plans, coordinates, and supervises class VIII supply and resupply within the unit's AO and can serve as the single integrated medical logistics manager, when designated by the GCC. The MEDBDE (SPT) also coordinates with the sustainment brigade support operations section for class VIII distribution at corps and below.

2-151. The medical battalion (multifunctional) plans and supervises class VIII supply and resupply within the unit's AO. This battalion can also serve as the single integrated medical logistics manager when designated by the GCC. The medical logistics company provides direct support for medical materiel, medical equipment maintenance, and single and multi-vision optical lens fabrication and repair to supported units at brigade and below and EAB medical units. The medical logistics company may support other Services when its medical command and control is assigned single integrated medical logistics manager responsibility by the GCC. The brigade medical supply office in the BSMC provides organic class VIII and medical maintenance support to medical elements of the BCT. For additional information, see ATP 4-02.1.

ARMY SPECIAL OPERATIONS FORCES SUSTAINMENT ORGANIZATIONS

2-152. ARSOF operating and logistics structures differ vastly from Army conventional forces. The GSB within the special forces group provides direct support to the special forces group or to the joint special operations task force elements when directed by the theater special operations command. The Ranger regiment and special operations aviation regiment possess organic support assets at the battalion level. Civil Affairs, and psychological operations units do not possess organic direct support assets. Special operations aviation regiment, is typically task-organized under a joint special operations air component, and will be provided direct support by the joint special operations air component's direct support elements and the CUL-designated provider. The Civil Affairs brigade psychological operations groups will be supported through their task organization's direct support elements supported units.

2-153. USASOC serves as the ASCC for ARSOF but functions similarly to the Army's generating force and serves as a global resourcing command in support of U.S. Special Operations Command. ASCCs provide sustainment support to ARSOF elements within a CCDR's AOR through TSCs, ESCs, and sustainment brigades.

528TH SUSTAINMENT BRIGADE (SPECIAL OPERATIONS) (AIRBORNE)

2-154. The 528th sustainment brigade (special operations) (airborne), as depicted in figure 2-24, sets operational support conditions in order to enable ARSOF operations. Key tasks include providing tailored logistics management, limited aerial delivery, unique ARSOF surgical capability, signal, military intelligence and command and control of assigned, adjacent, and mission aligned elements.

2-155. The 528th sustainment brigade (special operations) (airborne) is organic to the operational employment of the 1st Special Forces Command (two-star operational HQ) and is considered part of the deployed force structure when an ARSOF led special operations JTF is employed. Serve as the lead component for support for 1st Special Forces Command with respect to conducting ARSOF logistics, medical, communications and military intelligence operations. The 528th sustainment brigade (special operations) (airborne) primary purpose of fulfilling global operational requirements of emerging requirements.

2-156. The 528th sustainment brigade (special operations) (airborne) provides ARSOF Liaison Elements (ALE) for each Theater that serves as the ARSOF liaison to the ASCC, TSC, and TSOC staff to coordinate and synchronize logistics plans and Army common Combat Support, Sustainment and medical support to ARSOF operations within their AOR.

2-157. The 528th sustainment brigade (special operations) (airborne) is capable of deploying ARSOF Support Operations (ASPO) teams to extend the 528th SB command and control capability over geographical dispersed locations supporting ARSOF led command and control nodes. ASPO teams provide commodity management and operational level sustainment synchronization.

2-158. The 528th sustainment brigade (special operations) (airborne) has three Special Operations Resuscitation Teams (SORT) capable of providing damage control resuscitation and prolonged field care for 2-4 patients for 48 hours. Capable of integrating with joint surgical assets (Army Forward Surgical Team, Air Force Special Operations Surgical Team, Navy Forward Resuscitative Surgical System, Air Force Mobile Field Surgical Team). Each team can conduct split-based operations for a limited period to support forces operating in multiple locations. See FM 3-05 for additional information.

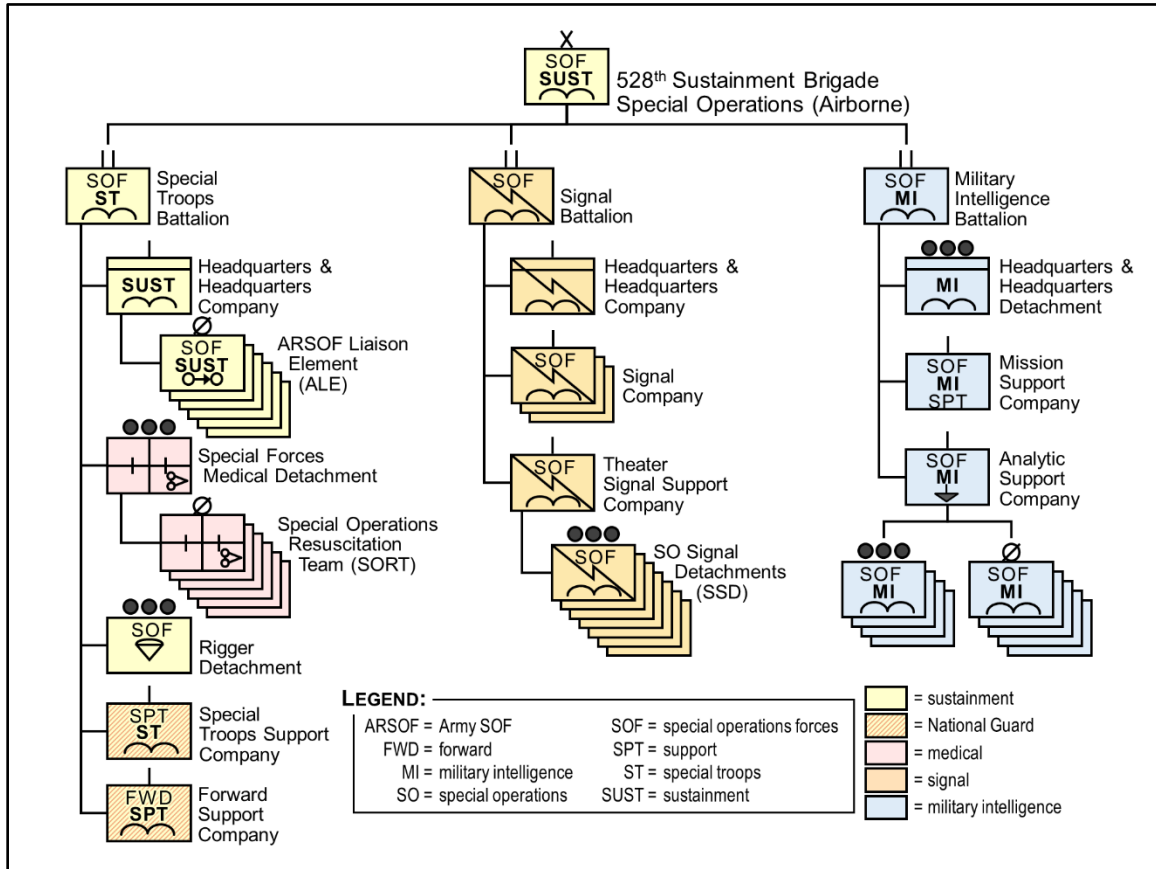


Figure 2-24. 528th Sustainment Brigade (Special Operations) (Airborne)

SPECIAL FORCES – GROUP SUPPORT BATTALION

2-159. The GSB (figure 2-25 on page 2-42) is the primary sustainment provider in a special forces group. Its mission is to plan, coordinate, synchronize, and execute sustainment operations such as the supply support activity, weapons and electronic maintenance, strategic mobility, and consolidated aerial delivery and rigging operations in support of a special forces group and when it is acting as the joint special operations task force. Due to the unique employment characteristics of ARSOF units, the GSB habitually does not deploy in entirety as there is only one GSB in each special forces group. The GSB must simultaneously support the operations of each battalion. The GSB receives support from conventional forces as required.

2-160. When ASCC logistics support is unavailable or not established in an operational area, the GSB will be the primary CUL provider. The GSB is a joint and multinational-capable organization in that it can accept, integrate, and employ augmentation of assets from other Services and nations. However, no single support battalion can cover the geographical dispersion without conventional force logistics support. The GSB coordinates with conventional force sustainment brigades, DSB, the ESC, and the TSC to enable an area support concept for each special operations task force, advanced operations base, and special forces operational detachment alpha. Area support enables SOF elements in the vicinity of conventional force bases to receive general sustainment support. See FM 3-05 for additional information.

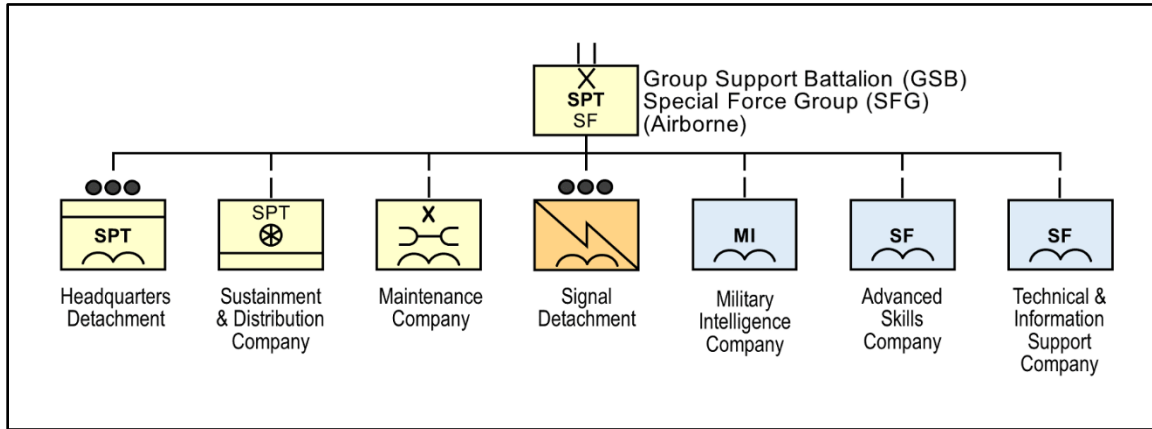


Figure 2-25. Group support battalion

RANGER SUPPORT COMPANY

2-161. The ranger support companies are reliant on the Ranger Regiment S-4 section and ranger support operations detachment for planning and coordination support. The ranger support company is multifunctional and organic to each battalion within the ranger regiment. Ranger support companies provide field maintenance; class I, II, III (P) (B), IV, V, VII, VIII, and IX supply; water production (with limited distribution); transportation; aerial delivery; property management; limited chemical, biological, CBRN decontamination and reconnaissance; and food service. Figure 2-26 depicts a ranger support company. See FM 3-05 for additional information.

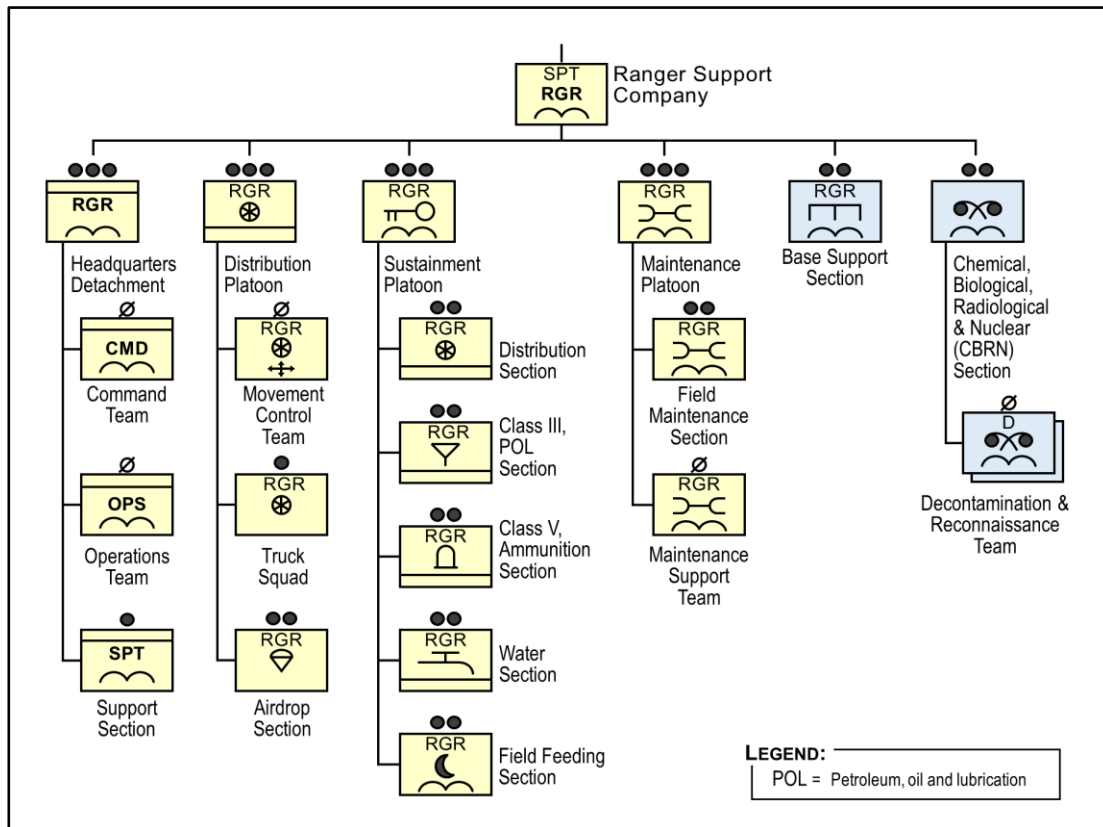


Figure 2-26. Ranger support company

SECTION III – OVERVIEW OF OPERATIONAL AND TACTICAL LEVEL SUPPORT

2-162. The effectiveness of the sustainment warfighting function is dependent upon actions of units and staffs at the operational and tactical levels. Understanding unit and staff roles and functions is essential to conducting sustainment operations.

FIELD ARMY

2-163. The Army constitutes a field army in theaters where large-scale combat is possible. Its primary purpose is to prevent and if necessary, prevail in large-scale ground combat against peer or near-peer adversaries. It also enables effective competition against such threats below the threshold of armed conflict. Field armies are organized, manned, trained, and equipped to command and control multiple corps-sized formations including U.S. Army and multinational corps, or a Marine expeditionary force operating within an area. The field army is best suited to serve as the JFLCC for large-scale ground conflict, but requires augmentation from the joint and multinational force to perform the JFLCC role successfully. It may also assume the ARFOR role depending on the JFC's command arrangements, and the situation. For more information, see FM 3-94.

2-164. The field army focuses on the threat to successfully compete, deter, and if necessary, prepare for and transition to combat operations as a land component command. The field army is tailored in its capability and capacity as determined by mission and operational variables. To enable continuous shaping and the ability to transition quickly to prevention of conflict, a subordinate field army enables the theater Army to focus on its broad Title 10, Army support to other Services, and DOD EA responsibilities across the entire theater. The ASCC conducts administrative and select operational activities (theater opening, RSOI, Army support to other Services and CUL for tasks that include transportation, fuel distribution, intra-theater aeromedical evacuation, EOD, and logistics management) to allow the field army to focus on tactical operations.

2-165. A field army specifically tailored to mission requirements may be assigned to a JFC with an enduring operational requirement. Typically, a sub-unified command is established instead of a JTF when the military operation is anticipated to be enduring or protracted. In such cases, a field army would be appropriate as the Army component or ARFOR to the sub-unified command. The theater Army exercises ADCON over the field army and its subordinate Army forces, and it provides the field army and its joint force command with all Army Service functions. See FM 3-94 for additional information. Fundamentally the field army headquarters is staffed and equipped to perform three roles:

- Army component and ARFOR for a subordinate unified commander.
- Joint force land component headquarters (with augmentation) for large-scale combat operations.
- JTF headquarters (with augmentation) for crisis response and limited contingency operations.

2-166. An ESC may be attached to the field army. The ESC is the controlling headquarters for the integration and synchronization of sustainment operations at echelon. The ESC staff supports the field army staff planning while conducting its own parallel planning for support requirements. The ESC advises the field army staff on issues regarding task organization, sustainment capabilities, and risk. In coordination with the field army G-4, it maintains the sustainment running estimate and take actions to mitigate shortfalls. The field army surgeon and the surgeon cells at each echelon work with their staffs to conduct planning, coordination, synchronization, and execution of AHS support in coordination with the MEDCOM (DS) as the theater medical command. The ESC and its subordinate task organized sustainment units normally have a GS relationship with units in their geographic area. For more information on the ESC, see ATP 4-94.

CORPS

2-167. A corps is normally the senior Army headquarters deployed to a JOA. It is optimized to serve as a tactical command during large-scale combat. However, it may perform other roles under different conditions. The corps forms the nucleus for a JTF or joint force land component command to respond to situations exceeding a division's capability or one which requires joint force augmentation. The corps may serve as the

ARFOR when it is the only U.S. Army corps assigned to an area. The ARFOR is the Army component and senior Army headquarters of all Army forces assigned or attached to a CCMD, subordinate joint force command, joint functional command, or multinational command (FM 3-94). Regardless of its role, the corps executes both operational and administrative responsibilities.

2-168. The corps commands Army and multinational forces in campaigns and major operations. Its headquarters is organized, trained, and equipped to control the operations of two to five divisions, together with supporting theater-level organizations. In the event conflict escalates, large-scale combat operations may require the corps headquarters to operate under the command of a multinational force land component or subordinate to a field army equivalent established as part of a coalition. For additional information, see FM 3-94.

2-169. The corps also has administrative responsibilities when it is designated an ARFOR. When it serves as the ARFOR, the corps is responsible through the theater Army commander for the Service specific support of all Army forces in the JOA, as well as for providing any Army support to other Services with forces deployed in the JOA. The theater Army commander specifies the ADCON responsibilities of the ARFOR. CONUS corps have an AFSB in direct support to integrate and synchronize the delivery of all USAMC support. The AFSB provides a CLSE OPCON to the corps when it deploys for large-scale combat operations. This delivers USAMC capabilities at echelon in support of multi-domain operations to provide responsive support to the corps. Figure 2-27 provides a notional task organization of a corps.

2-170. The corps G-4 is responsible for developing the corps sustainment support concept that ensures Army forces are sustained throughout all phases of an operation. The G4 integrates the corps' sustainment staff estimates and annexes of the G-1, G-8, and Surgeon sections in the operations process. The G-4 is responsible for integrating the subordinate personnel services, logistics, financial management, and AHS capabilities. Examples of the corps sustainment cell coordination tasks are:

- Coordinates with the G-9 for HNS.
- Coordinates with the assistant chief of staff, intelligence (G-2), G-3, and engineer officer to requisition cataloged topographic foundation data and existing mission-specific data sets from the DLA.
- Synchronizes and integrates AHS support operations within the corps.
- Coordinates with the G-1 that develops and implements human resources policies and procedures.

2-171. An ESC is assigned to the corps. The ESC is the corps' command for the integration and synchronization of sustainment in an operational area. The corps' ESC and its subordinate task-organized functional and multifunctional sustainment units provide GS for all units in corps area of operations as directed by the corps commander. The ESC commander may perform the duties of deputy commanding general (support) if directed by the corps commander. The ESC assists the corps sustainment cell with planning and coordinating sustainment.

2-172. The corps' ESC commands and controls all assigned and attached units in an operational area as directed by the corps commander. A task-organized ESC assigned to a corps normally includes enablers that include a corps logistics support element, petroleum group, movement control battalion, and a sustainment brigade task organized with CSSBs to support sustainment operations. The corps' EAB sustainment is dependent on the corps units for medical support, signal support, intelligence, surveillance and reconnaissance, fires, protection (engineer support & route security), and strategic partner planning capability for field maintenance support. The ESC plans for near term operations and synchronizes operational-level sustainment operations to meet the current operations. The corps' ESC is dependent on the corps staff for long-range planning capability.

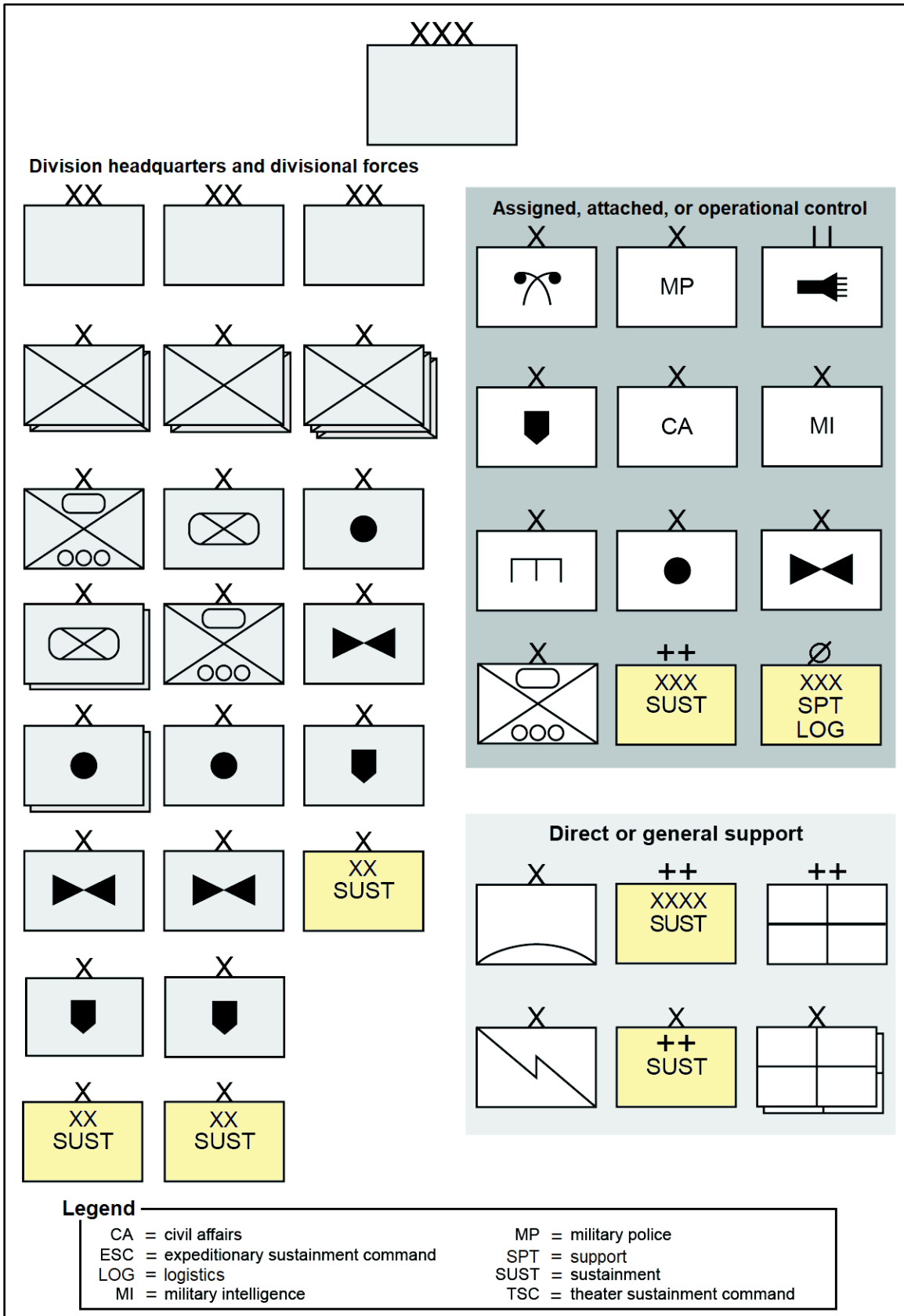


Figure 2-27. Notional task-organized corps

SUSTAINMENT BRIGADE

2-173. Sustainment brigades can be attached to a corps ESC. The sustainment brigade attached to a corps ESC commands and controls all assigned and attached units in an operational area as directed by the corps commander providing GS logistics, financial management, and personnel services to forces operating in the corps AO. The corps commander determines the task organization for the sustainment brigade attached to a corps ESC. A task-organized sustainment brigade attached to a corps ESC normally includes attached CSSBs, a petroleum battalion and motor transportation battalion to support tactical-level sustainment operations. The sustainment brigade coordinates and synchronizes tactical-level sustainment operations to meet the current and future operations. See ATP 4-93 for more information on the sustainment brigade.

SPECIAL TROOPS BATTALION

2-174. The special troops battalion is organic to the sustainment brigade. The special troops battalion's role is to exercise command and control for all units assigned, attached, and OPCON to the sustainment brigade headquarters. The special troops battalion plans, prepares, executes, and assesses the internal support requirements for the sustainment brigade headquarters. Its core competencies are to establish a battalion CP, execute the operations process, and synchronize internal support operations in support of mission requirements.

2-175. The battalion consists of a command group, unit ministry team, and coordinating staff. It is a battalion headquarters organized to provide administrative support, life support, and communications for the sustainment brigade headquarters. Capable of operating at the tactical level throughout an operational area, it can command up to seven organizations.

2-176. Organic to the special troops battalion is a headquarters company which includes a maintenance section, medical treatment team, and medical evacuation team. Assigned to the special troops battalion are a signal company, human resources company and a FMSU. These units all support the special troops battalion, sustainment brigade headquarters, and all the organic, assigned and attached units.

COMBAT SUSTAINMENT SUPPORT BATTALION

2-177. The CSSB can be attached to sustainment brigades supporting a corps. The CSSB attached to sustainment brigades supporting the corps commands and controls all assigned and attached units in an operational area as directed by the sustainment brigade commander and conducts maintenance, transportation, supply, field services, and distribution. The corps commander determines the task organization for the CSSBs attached to sustainment brigades supporting the corps. Task-organized CSSBs attached to sustainment brigades supporting the corps normally include a composite supply company, support maintenance company, modular ammunition company, palletized load system truck company and inland cargo transfer company and a field feeding company. The CSSB synchronizes and executes logistics support to functional brigades and multifunctional support brigades attached to the corps. See ATP 4-93.1 for more information on the CSSB.

DIVISION

2-178. The division is a formation that employs organic and assigned units for operations. It is optimized to serve as a tactical unit of execution for a corps during large-scale combat. It is organized, manned, trained, and equipped for decisive action. Figure 2-28 depicts a notional task-organized division.

2-179. During competition, the division may fulfill the ARFOR role for a JFC or theater Army commander. It can also form the nucleus for a very small-scale JTF or joint force land component command, although it would require joint force augmentation to fulfill either role successfully. The division primarily focuses on operational responsibilities. Unless the division is serving as the ARFOR, a higher echelon normally retains ADCON for all but the division's organic, assigned, and attached units. However, a higher echelon commander serving as the ARFOR may designate a division commander as the deputy ARFOR with prescribed responsibilities when the situation warrants.

2-180. A division conducting large-scale combat operations combines offensive, defensive, and stability tasks in an AO assigned by its higher headquarters. The division task organizes its subordinate forces to

accomplish its mission. The division and its subordinate units must be able to move and displace at the pace of large-scale combat operations. A division will conduct operations with their assigned DSB, and the organic DSSB of the DSB. The DSB provides materiel management capability to the division. Divisions may have additional CSSBs attached to meet operational requirements. For additional information, see ATP 4-93, ATP 4-93.1, and FM 3-94.

2-181. Each division has a Direct-Support Readiness AFSBn to integrate and synchronize the delivery of all USAMC support. The AFSBn provides a division logistics support element OPCON to the division when it deploys. This delivers USAMC capabilities at echelon in support of large-scale combat operations to provide responsive support to the division.

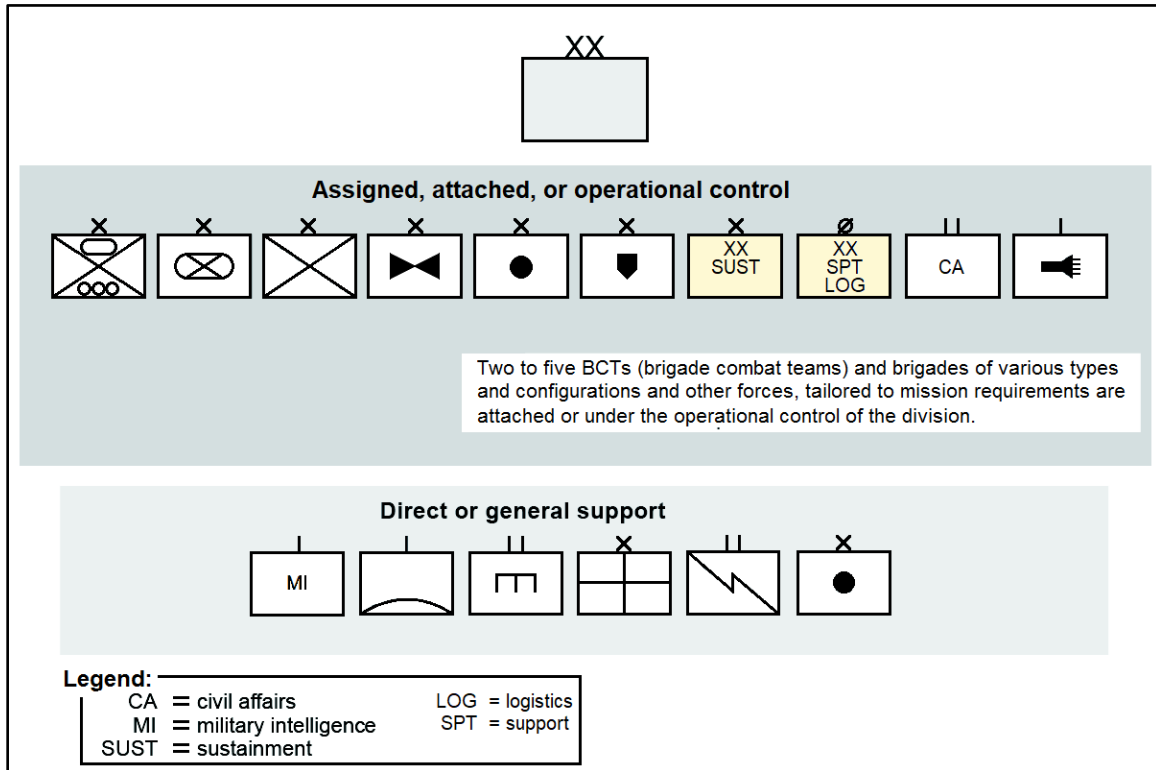


Figure 2-28. Notional task-organized division

2-182. A division receives capabilities and units from its corps to conduct operations. The corps commander determines the number and types of BCTs necessary for the divisions to accomplish their respective missions. A division headquarters is organized, trained, and equipped to command the operations of up to five BCTs. Divisions are typically task organized with a combination of armored, infantry, and Stryker BCTs. In addition to the BCTs, a division controls several different types of multifunctional and functional brigades, including the DSB. The division’s assigned, task-organized DSB provides GS for all units in or passing through their geographic area.

2-183. The human resources operations center is assigned to the corps and division G-1. The human resources operations center provides strength management capability, HR technical expertise, analysis, assessment, training, and assistance in support of the execution and management of operational and tactical HR support, for organizations assigned or attached within the corps and division AO. The human resources operations center uses HR planning considerations to develop performance indicators to measure the accomplishment of HR support. The human resources operations center assesses and analyzes HR systems, processes and procedures, and executes HR training in support of organizations assigned or attached within the corps and division AO. The human resources operations center provides the G-1 and supported units, visibility of the employment and integration of Army HR information and systems. Refer to ATP 1-0.1 for specific duties and responsibilities of the human resources operations center.

DIVISION SUSTAINMENT BRIGADE

2-184. The DSB is assigned to a division. The DSB is a renamed sustainment brigade. The DSB commander is the primary senior advisor to the division commander and the deputy commanding general (support) for the sustainment warfighting function. The commander is responsible for the integration, synchronization, and execution of sustainment operations at echelon. The DSB employs sustainment capabilities to create desired effects in support of the division commander's objectives.

2-185. Depending upon operational and mission variables, the DSB can command up to seven battalions. Figure 2-29 and figure 2-30 depict notional task-organized DSBs in support of an armored division and an infantry division respectively. The DSB and its subordinate units assigned to a division provides direct support to all assigned and attached units in an operational area as directed by the division commander. The DSB provides GS logistics, personnel services, and financial management to non-divisional forces operating in the division AO. A task-organized DSB assigned to a division includes an organic division sustainment troops battalion (DSTB) and an organic DSSB to support tactical-level sustainment operations. The DSB coordinates and synchronizes tactical-level sustainment operations to meet current and future operations. The DSB is dependent on the division staff for long-range planning capability. The DSB and its subordinate units must be able to move and displace at the pace of large-scale combat operations. Additional modular CSSBs and companies may be attached to the DSB to sustain large-scale combat operations.

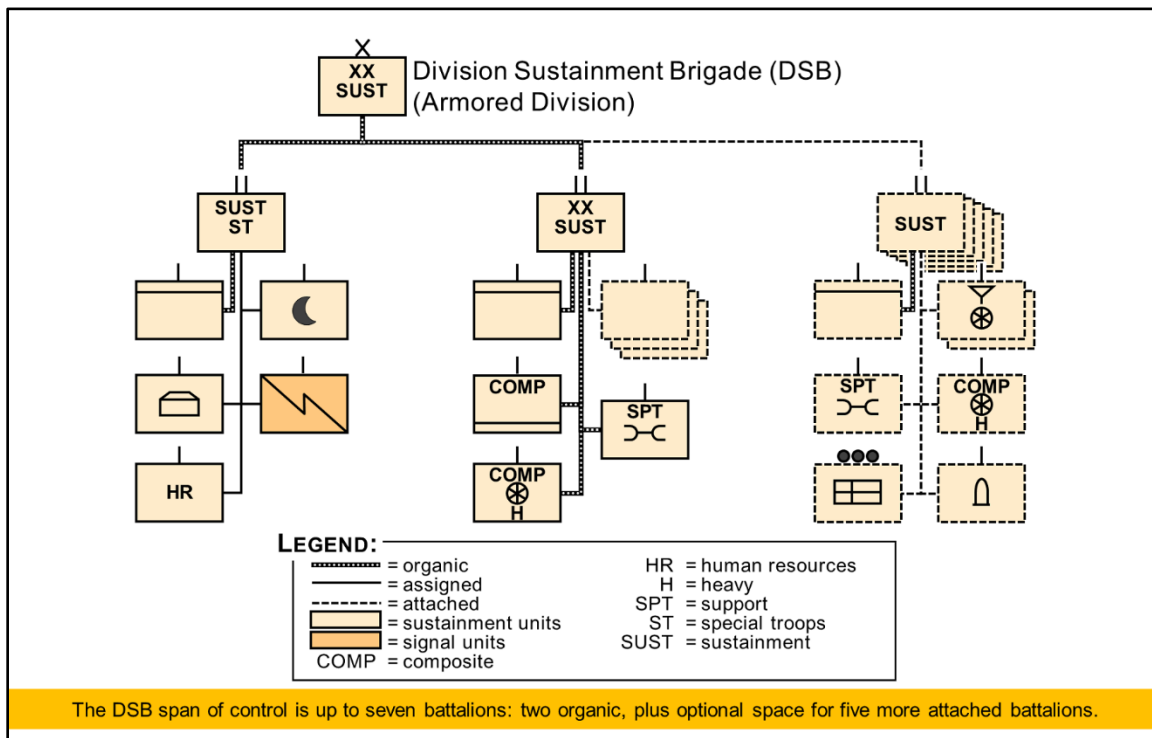


Figure 2-29. Notional task organized division sustainment brigade for an armored division

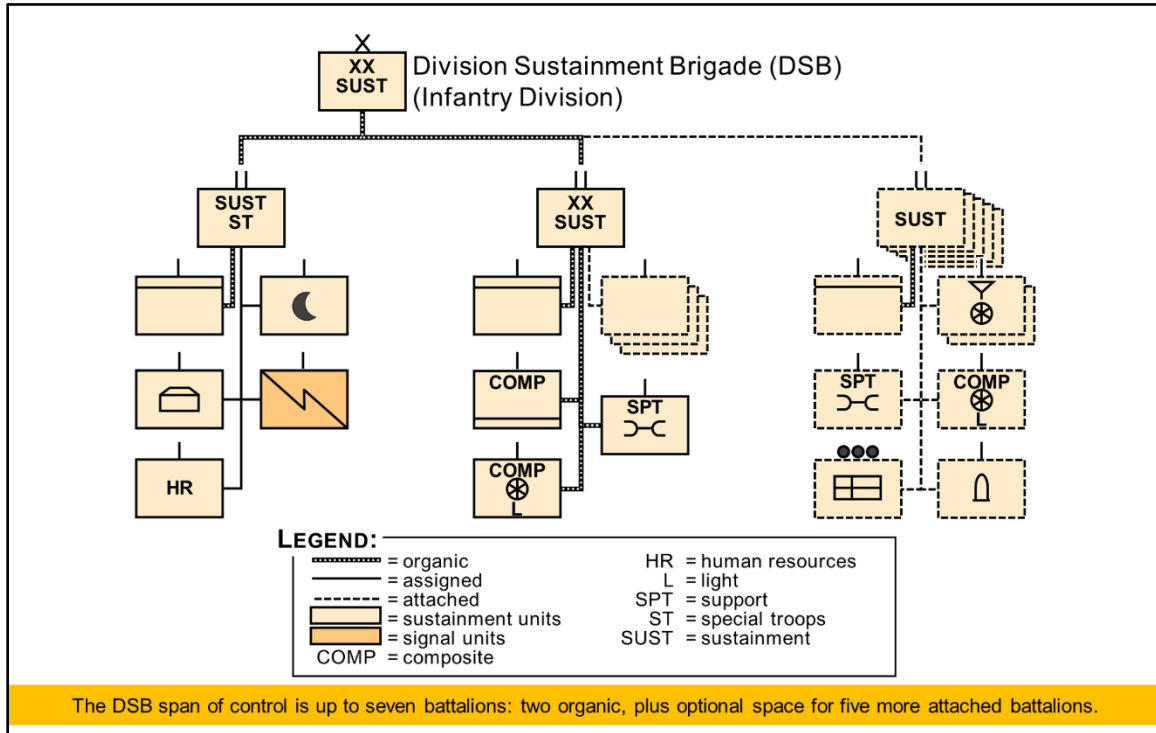


Figure 2-30. Notional task organized division sustainment brigade for an infantry division

Division Sustainment Troops Battalion

2-186. The DSTB is organic to DSBs. The battalion’s role is to exercise command and control for all units assigned, attached, and OPCON to the DSB headquarters as shown in Figures 2-29 and 2-30 above. The battalion plans, prepares, executes, and assesses the internal support requirements for the DSB headquarters. Its core competencies are to establish a battalion CP, execute the operations process, and synchronize internal support operations in support of mission requirements.

2-187. The DSTB consists of a command group, unit ministry team, and coordinating staff. It is a battalion headquarters organized to provide administrative support, life support, and communications for the DSB headquarters. Capable of operating at the tactical level throughout an operational area, it can command up to seven organizations.

2-188. Organic to the DSTB is a headquarters company which includes a maintenance section, medical treatment team, and medical evacuation team. Assigned to the DSTB are a signal company, human resources company, field feeding company, and a FMSU. These units all support the DSTB, DSB headquarters, and all the organic, assigned and attached units.

Division Sustainment Support Battalion

2-189. The DSSB is employed using various task-organizations as shown in Figure 2-31 on page 2-50. The DSSB is a renamed CSSB. The DSSB is organic to DSBs assigned to divisions. The DSSB and its subordinate units must be able to move and displace at the pace of large-scale combat operations. The DSSB commands and controls all organic, assigned, and attached units. As directed by the DSB commander, the DSSB conducts maintenance, transportation, supply, and distribution. DSSBs organic to DSBs supporting divisions have an organic composite supply company, composite truck company, and support maintenance company. Other capabilities are task organized by the division commander in accordance with requirements. The DSSB synchronizes and executes logistics support to BCTs and multifunctional support brigades attached to the division and non-divisional units operating in the division AO.

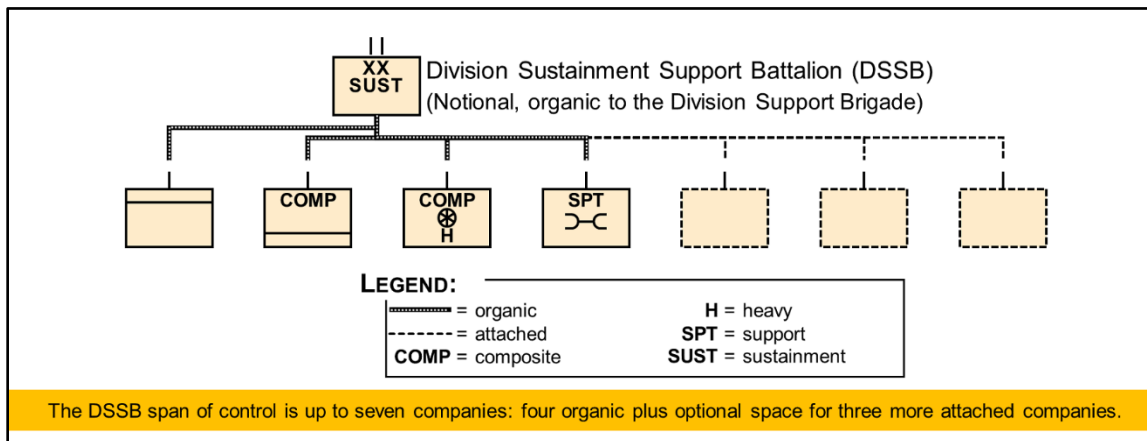


Figure 2-31. Notional division sustainment support battalion

2-190. The human resources operations branch (HROB) is an important planning and coordinating element on the battlefield for the delivery of personnel accountability, casualty operations, and postal support. HROBs are assigned to the ESC DMC and DSB support operations section with the mission to plan current and future personnel accountability, postal, and casualty operations, and coordinate, synchronize, integrate, and assess the emplacement and operations of HR companies, platoons, and teams executing those functions. As replacements flow into theater, the HROB passes inbound replacement information to the supported G-1. The G-1 provides the unit of assignment for inbounds to the HROB so the SPO officer can coordinate delivery to the unit or pickup by the unit. For more details, see appendix A and FM 1-0.

ECHELONS ABOVE BRIGADE BATTALIONS

2-191. The battalions below provide logistics support to division and corps formations as well as enabling units operating throughout the AOR. DSSBs, CSSBs, and functional logistics battalions provide critical logistics capabilities in an operational area. The commanders, staffs, and subordinate units have unique technical skills and specialized training that enables them to provide critical capabilities.

Motor Transport Battalion

2-192. The motor transport battalion commander and staff commands and directs assigned or attached units. The battalion synchronizes motor transport operations. The battalion is task organized with subordinate truck companies and is attached to a sustainment brigade. See ATP 4-13 for additional information.

Petroleum Support Battalion

2-193. The petroleum support battalion provides command and control for theater bulk petroleum storage and distribution, port terminal operations, and petroleum pipeline operations. The battalion commander and staff directs the operation of both petroleum port terminal and storage facilities, supervises a program for quality surveillance of petroleum products, and operates a mobile petroleum products laboratory. The battalion operates a central dispatching and scheduling agency to ensure direct flow of bulk petroleum through the multiproduct military pipeline. The battalion normally attached to a sustainment brigade or the quartermaster petroleum group, also operates bulk and retail supply point distribution, and executes over-the-shore POL storage requirements. See ATP 4-43 for additional information.

Movement Control Battalion

2-194. The movement control battalion coordinates and synchronizes the execution of movements and transportation operation to ensure effective and efficient movements to support military operations. A functional transportation battalion executes movement control in its assigned geographic area. The span of control for the movement control battalion is up to ten movement control teams. The movement control

battalion oversees committed Army theater common user transportation and is responsible for regulating Army movement on theater controlled main and alternate supply routes. The movement control battalion is attached to an ESC or a sustainment brigade and assists with the planning and execution of deployment, redeployment, and distribution operations. See ATP 4-16 for additional information.

Explosive Ordnance Disposal Battalion

2-195. The EOD battalion and its subordinate companies perform three essential tasks when not engaged in combat operations: provide EOD support to military and civilian authorities, provide EOD support to the United States Secret Service, and train for wartime missions. Examples of critical tasks accomplished by the battalion include: developing, coordinating, establishing, and disseminating EOD tactics, techniques, and procedures to address existing or emerging tactical requirements. The EOD battalion is task organized with EOD companies and detachments. See ATP 4-32.1 for additional information.

Terminal Battalion

2-196. The terminal battalion synchronizes terminal and watercraft operations to include fixed port or joint logistics over-the-shore operations. Task organized terminal battalions operate at a seaport and may also support amphibious and riverine operations. Terminal battalions provide control of watercraft supporting terminal and sea basing operations. Terminal battalions are task organized with subordinate watercraft companies, seaport operations companies, or causeway companies. The battalion may be attached to a transportation brigade expeditionary, a sustainment brigade, or a SDDC transportation brigade. See ATP 4-13 for additional information.

ECHELONS ABOVE BRIGADE COMPANIES

2-197. DSSBs, CSSBs and functional battalions are task organized with composite and functional sustainment companies, teams, and detachments. The following paragraphs are a summary of sustainment capabilities that may be task organized to a logistics battalion. Many of these units have specific capabilities and execute complex operations. See the references provided for more details about the unit's capabilities.

Modular Ordnance Company (Ammunition)

2-198. The modular ammunition company role is to receive, store, and issue munitions. The organization of the modular ordnance company permits assignment of modular platoons tailored for specific functions to support forces or other munitions units as required. Modular ammunition companies operate ammunition supply areas at theater, corps, and other levels as required by the tactical situation.

2-199. Modular ammunition companies are normally attached to a DSSB or CSSB. The modular ammunition company executes support based on priorities and support relationships established in the order issued by the higher headquarters' commander. Ammunition companies normally operate in the division or corps areas, but platoons and/or sections may operate as far forward as the brigade support areas (BSA). At the tactical level there are a number of different formations that require unique munitions support and capabilities. The field artillery executing deep fires, air and missile defense units, combat engineers, and the combat aviation brigade (CAB) all have specific munitions requirements. These units may have a support relationship designated in an OPORD or may receive support based on established general or area support tasks. The modular ammunition company also provides ammunition resupply support to the BCT distribution company. See ATP 4-35 and ATP 4-35.1 for additional information.

2-200. USAMC is responsible for fielding quality assurance specialist (ammunition surveillance) personnel to augment DOD activities and inspect the activities of the modular ammunition companies. These teams provide quality assurance support to organizations at every level that receive, store, maintain, issue, use, and dispose of munitions in accordance with AR 702-12, *Quality Assurance Specialist (Ammunition Surveillance) Program*.

Support Maintenance Company

2-201. The support maintenance company is organic to a DSSB and attached to a CSSB. Its role is to provide field maintenance support. It provides automotive, armament, electronic, ground support equipment maintenance support, and test, measurement, and diagnostic equipment maintenance and quality control. The support maintenance company is organic to a DSSB. The support maintenance company will normally be attached to a CSSB, but may be attached to any logistics battalion. The support maintenance company may require surge capabilities during large-scale combat operations. Support maintenance companies operate at any echelon above the BCT level and may be located at any point in the theater from port to division support area. See ATP 4-33 for additional information.

Composite/Functional Transportation Companies

2-202. The transportation truck company is organic to a DSSB and attached to a CSSB. Its role is to provide transportation support. It provides distribution for general supplies, ammunition, fuel, water, unit equipment, and personnel. The 5K medium truck company (POL) is a critical enabler in providing class III (bulk and package) distribution in theater.

2-203. Additional transportation capability includes movement control, terminal, hub, node, and transportation support units. These units may be attached to a logistics battalion supporting a BCT, theater of operations opening, theater closing, or theater distribution missions. See ATP 4-11, ATP 4-12, ATP 4-13, ATP 4-14, ATP 4-15, and ATP 4-16 for additional information.

Watercraft Companies and Detachments

2-204. Watercraft companies and detachments provide transportation support required in the maritime domain, including intra-theater ocean, coastal, littoral, and river transit. Its primary role is to provide lift and discharge for very heavy and outsized equipment in waterborne operations. Some vessels move equipment only, while others can also transport personnel. Additional vessels provide support to terminal operations in the form of tugs, cranes and causeways. Watercraft companies and detachments units are typically assigned to a transportation brigade (expeditionary) for theater opening, closing or distribution. See ATP 4-15 for additional information.

Composite/Functional Supply Companies

2-205. The supply company is organic to a DSSB and attached to a CSSB. Its role is to provide supply support. It provides, class I perishable and semi-perishable supply, petroleum supply, water purification and supply support, and shower and laundry services.

2-206. There are additional quartermaster functional companies, and the role of each in supporting operations depends on the type of service the company is designed to perform. Quartermaster functional capabilities are aerial delivery, field feeding, shower and laundry, mortuary affairs, water treatment, petroleum, and classification and inspection. Quartermaster functional companies are attached to any logistics battalion. The companies execute field service operations based on priorities and support relationships established in the order issued by the commander. See ATP 4-41, ATP 4-42, ATP 4-43, ATP 4-44, ATP 4-46, and ATP 4-48 for additional information.

Quartermaster Mortuary Affairs Company

2-207. The quartermaster mortuary affairs company's role is to provide the full range of mortuary affairs operations across the range of military operations. The company can perform any one of the following tasks: mortuary affairs collection point operations, mortuary affairs contaminated remains mitigation site operations, theater mortuary evacuation point operations, and personal effects depot. The company performs these tasks by assigning platoons to the specific task or mission; however, the company's platoons do not perform these tasks concurrently.

2-208. The mortuary affairs company is generally attached to a DSSB or CSSB. One mortuary affairs company is allocated per corps. Mortuary affairs teams can be further attached to BSBs for allocation to the BCTs across a division. The mortuary affairs company is designed to process up to 400 human remains per

day from up to 20 mortuary affairs collection point locations. The mortuary affairs company may establish a main collection point at corps or division support areas when required, evacuates human remains to the theater mortuary evacuation point, and operates the theater mortuary evacuation point with the ability to process up to 250 human remains daily. For additional information, see appendix A and ATP 4-46.

Field Feeding Company

2-209. The field feeding company is responsible for providing the Army Field Feeding System to all Soldiers in EAB units not supported by internal field feeding assets. The Army Field Feeding System provides flexibility by presenting various feeding methods. The field feeding company performs sustained tactical feeding to meet the commander's needs as determined by mission variables and logistical support available on the battlefield and afloat. For more information, see ATP 4-41.

Signal Network Support Company

2-210. The signal network support company is assigned to a sustainment brigade special troops battalion and a DSB sustainment troops battalion. The company consists of a headquarters and network support platoon, and two network extension platoons. The signal network support company headquarters section provides command and control, logistics, and administrative support for the unit. The network operations section establishes the network operations and security cell, conducts network management, and computer defense. The two network extension platoons provide connectivity to assigned CPs. Each network extension platoon consists of a joint network node team, a data support team, and a retransmission team.

FINANCIAL MANAGEMENT SUPPORT UNIT

2-211. The FMSU is assigned to a sustainment brigade special troops battalion and a DSB sustainment troops battalion. Its role is to provide financial management. The FMSU provides command and control for up to seven financial management support detachments. The FMSU analyzes the supported commander's tasks and priorities to identify the financial management resourcing requirements that will enable the commander in meeting the desired end-state. The FMSU commander is the primary account holder to the Treasury and the limited depository account, and determining currency requirements and replenishment needs. See appendix A and FM 1-06 for more details.

HUMAN RESOURCES COMPANY

2-212. The HR company is assigned to a sustainment brigade special troops. It provides command and control for HR and postal platoons providing casualty, personnel accountability, and postal operations support. The human resources company must maintain support relationships with the sustainment brigade in order to continue area support within theater. The HR company will receive guidance from the special troops battalion to employ the HR platoons where needed to best support casualty tracking and reporting, and personnel accountability. The HR company operates in the APOD, when augmenting a military mail terminal, or a theater gateway PAT, and on an area support basis to the division, corps, or theater, as directed by the division, corps, and theater G-1's. Refer to FM 1-0 for additional information.

Theater Gateway Personnel Accountability Team

2-213. The theater gateway PAT is attached to a DSTB of a DSB or sustainment brigade. It may also be attached to a DSSB or CSSB. It provides personnel accountability support to the AOR by coordinating and providing personnel accountability operations using the deployed theater accountability system as personnel enter, transit, and depart the theater at the inter-theater APOD. The theater gateway PAT deploys as part of the theater early entry element and is initially augmented by an HR company HQ with two human resources platoons at the primary inter-theater APOD. More than one theater gateway PAT may be required if multiple inter-theater APODs and/or SPODs become active. Units entering/departing theater with unit integrity will leverage self-accounting capabilities resident in their battalion or brigade manpower and battalion or brigade human resource staff officer (S-1) staff sections. If no theater gateway PAT is present outside of the primary port of debarkation (POD) PATs may also be allocated to multiple theater entry points in place of a theater gateway PAT to support personnel accountability of units.

2-214. The theater gateway PAT receives technical guidance from the personnel accountability operations division of the HRSC. The HRSC's personnel accountability division monitors and recommends distribution and emplacement of PATs. The HROB monitors the establishment and operations of PATs at forward locations. The HR company HQs provides command and control as well as administrative and operational support to the theater gateway PAT and forward operating PATs.

2-215. The theater gateway PAT requires a capability to communicate digitally through web and voice, both secure and non-secure, to PAT elements, G-1 sections, logistical support elements, and other branches of Service. Operational guidance and directives are initiated by the TSC (HRSC) and should be issued in OPLAN or OPORD format. theater gateway PATs are global force pool units of operational forces. In support of the readiness model, theater gateway PATs are typically categorized as theater available structure, deployed under CCMD authority and established for the primary purpose of fulfilling global operational requirements of both an enduring and rotational nature. Theater gateway personnel also coordinate with other services and other supporting units for operating space at the terminal, flight schedules with movement control teams, and inform the DSB or sustainment brigade and its DSSB or CSSB of follow-on transportation requirements to assist in synchronizing all logistical support.

2-216. The theater gateway PAT also provides data integration support for all personnel transiting the theater gateway PAT or at intra-theater processing point where a PAT is located. To support unit S-1s during RSOI and redeployment operations, the theater gateway PAT has the capability to perform limited essential personnel services for example, common access cards and identification tags, DD Form 93, *Record of Emergency Data* processing, and Service members' Group Life Insurance Election enrollment. The mission of the theater gateway PAT is to conduct the personnel accountability portion of the RSOI process, load and unload personnel data from the deployed theater accountability system, and conduct limited essential personnel services for transient personnel. See appendix A and ATP 1-0.2 for additional information.

Military Mail Terminal

2-217. The military mail terminal is attached to a sustainment brigade special troops battalion. It provides postal support by establishing a military mail terminal team which coordinates, receives, and processes pro-grade mail, and dispatches retro-grade mail to destinations worldwide. It is augmented with an HR company HQs with four postal platoons. It establishes and provides the Army component of a joint military mail terminal team at the inter-theater APOD. See appendix A and ATP 1-0.2 for additional information.

BRIGADE

2-218. Brigades include both BCTs, multifunctional, and functional brigades. BCTs, as notionally depicted in figure 2-32, are the Army's primary combined arms, close-operations force, and principal ground maneuver units of the division. BCTs have organic capabilities, including battalion-sized maneuver, field artillery, reconnaissance, and sustainment units. Each BCT has organic medical support for Roles 1 and 2 medical operations. The three types of BCTs are armored, infantry, and Stryker. BCTs normally operate as part of a division.

2-219. There is a wide range of multifunctional support brigades. These brigades provide a variety of functions in support of operations. Normally attached to a corps or division, these brigades may be under the command of a joint or multinational headquarters. Multifunctional support brigades include the CAB, expeditionary CAB, TBX, and maneuver enhancement brigade (MEB). A DIVARTY, CAB, and DSB are assigned to the division.

2-220. Functional brigades or groups provide a single function or capability. These brigades can provide support for a theater, corps, or division, depending on how each is tailored. Functional brigades include the air and missile defense brigade, civil affairs brigade, engineer brigade, expeditionary military intelligence brigade, signal brigade, military police brigade, and theater tactical signal brigade.

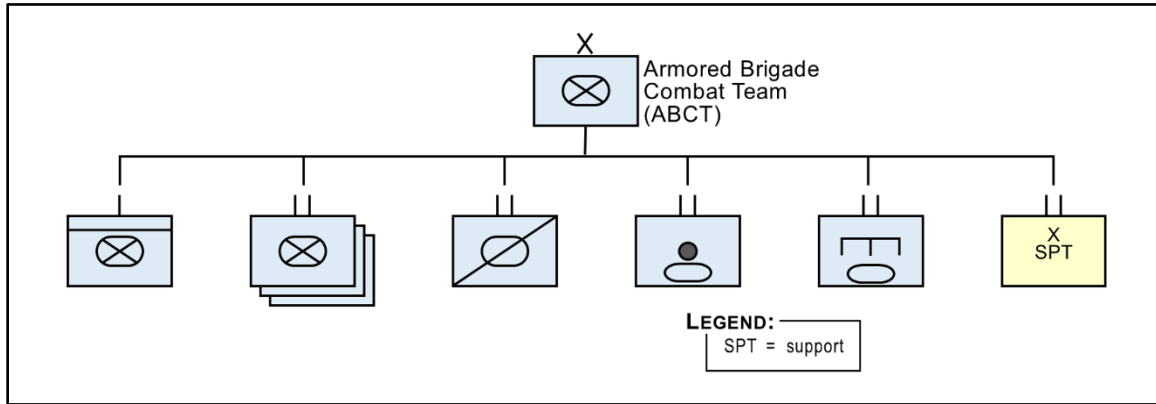


Figure 2-32. Notional brigade combat team

BRIGADE SUPPORT BATTALION

2-221. Sustainment at this echelon is centered on the brigade BSB. The BSB is an organic component of a BCT, and the corps field artillery brigade. It provides supply, maintenance, motor transport, and Role 2 medical support to the supported BCT or brigade (figure 2-33). It is tailored to support the brigade to which it is assigned. For example, the BSB of an armored BCT has more fuel distribution and maintenance capabilities than an infantry BCT BSB. A summary of the BSB’s companies are below. See ATP 4-90 for additional information.

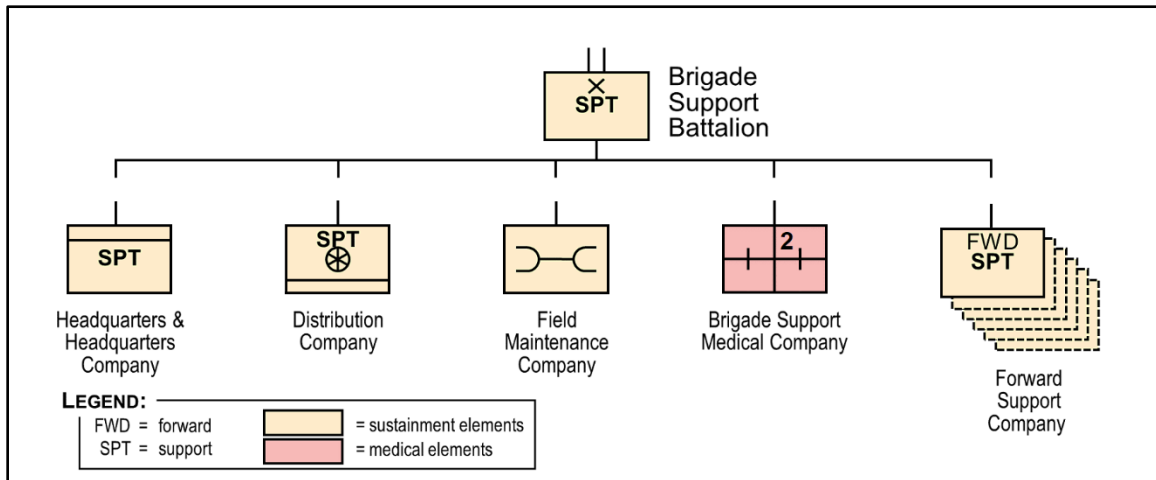


Figure 2-33. Brigade support battalion

2-222. The BSB’s distribution company role is to provide supply and transportation support to a brigade. The company provides distribution capability for all classes of supply.

2-223. The BSB’s field maintenance company role is to provide field-level maintenance support to the BSB and BCT. The field maintenance company provides repair capability for automotive, ground support, communications, and electronics and armament. The company also provides limited field-level maintenance support to the forward support companies (FSCs) for low density commodities such as communications, electronics, and armament equipment.

2-224. The BSMC provides AHS support to a BCT. The BSMC provides Role 1 and Role 2 in support of a BCT and AHS support on an area basis to all BCT units that do not have organic medical assets. Brigade support medical companies are organic to the infantry brigade combat team (IBCT), armored brigade combat team (ABCT), and Stryker brigade combat team (SBCT). The BSMC consists of a company headquarters,

preventive medicine section, behavioral health section, medical treatment platoon, medical evacuation platoon, physical therapy team, dental team, lab team, x-ray team and a brigade medical supply office.

2-225. The FSC provides logistics in direct support to its specific supported battalion with dedicated logistics assets organized specifically to meet the battalion's requirements. A FSC provides field feeding, bulk fuel, general supply, ammunition, and field-level maintenance to its maneuver battalion. Forward support companies are organic to BSB in BCTs and may be attached to or under the OPCON of their respective supported battalion for a limited duration.

AVIATION SUPPORT BATTALION

2-226. The aviation support battalion (ASB) (figure 2-34) is organic to a CAB, an expeditionary CAB, and a theater aviation brigade. There are three primary differences between a BSB and an ASB:

- The brigade medical support company becomes a medical company, air ambulance in the GS aviation battalion in the same brigade. The company has significantly less medical capability than a typical brigade medical support company.
- The forward support companies are distributed to helicopter battalions in the brigade.
- A signal company is added, similar to a MEB.

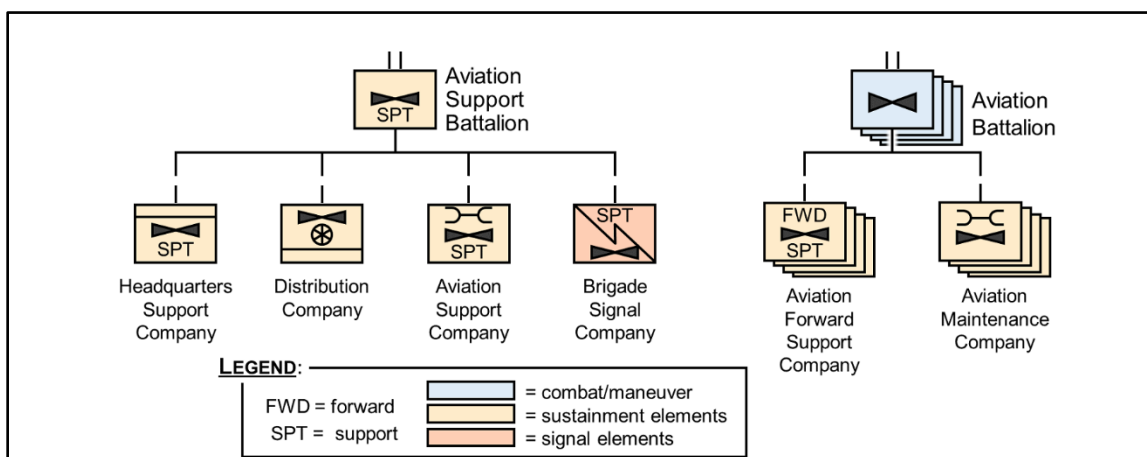


Figure 2-34. Aviation support battalion

2-227. The ASB performs the following tasks:

- Ground vehicle and aviation maintenance and recovery operations.
- Signal and network security to the CAB for command and control.
- Aviation and ground sustainment operations for the aviation brigade.
- Distribution management operations within the aviation brigade.
- Role 1 Army health service support for the aviation brigade.

2-228. Additional sustainment to aviation battalions and squadrons is provided by an organic aviation maintenance company and FSC. For more information on aviation sustainment, see FM 3-04.

SECTION IV – COMMAND AND SUPPORT RELATIONSHIPS

2-229. Determining the optimal command and support relationships between maneuver commanders and sustainment units is critical for both sustainment leaders and those supported. Command and support relationships directly influence the ability to meet the maneuver commander requirements. Understanding the practical effects of a particular command or support relationship in the context of a specific operations is critically important. Striking the most effective balance between centralized and decentralized control of sustainment units requires a clear understanding of the supported commander's intent and the tactical situation, as well as the ability to anticipate the various possible outcomes of the combat operations being

supported. Knowing the inherent responsibilities of each command and support relationship allows commanders to organize their forces effectively and helps supporting commanders understand their unit's role in the organizational structure.

2-230. The flexibility to adjust command and control structure and employ different command and support relationships in an AO gives both maneuver and sustainment commanders the ability to effectively balance sustainment capabilities across the AOR. Sustainment staff estimates should account for available sustainment forces, assigned missions, commander priorities, and the validity of previous assumptions. As operations continue and theater sustainment matures, leaders should continually re-assess and make recommendations to their supported HQ regarding task organization changes necessary to keep pace with operational requirements. Doing so effectively requires continuous dialogue between sustainment and maneuver commanders.

ARMY COMMAND AND SUPPORT RELATIONSHIPS

2-231. Command and control of Army sustainment units can pose unique challenges for both sustainment leaders and those supported. It is important that leaders understand all aspects of command and support relationships and the effects of them on the ability to meet the requirements of the warfighter. For example, attaching sustainment units to their supported formations allows them to better anticipate and integrate with their supported command, but with an adverse effect on economy. This may result in idle assets that cannot be redirected easily to support elsewhere. Conversely, pooling resources at higher levels can allow planners to maximize the use of scarce assets such as fuel tankers and heavy equipment transporter systems, but responsiveness may suffer as a result.

2-232. Sustainment leaders must strive to strike the right balance, taking into account the supported commander's intent, and the possible outcomes of combat operations. If a commander expects an attack to turn into a pursuit of enemy forces, it may be prudent to assign additional class III and V assets to a unit in order to extend their operational reach and give the commanders the freedom of action to maintain momentum. On the other hand, if resources are scarce, such a course of action may negatively impact the rest of the formation. The operational risks to both the operation and the sustainment assets must be weighed carefully and reassessed as the situation develops.

2-233. Command and support relationships provide the basis for unity of command and unity of effort in operations. Within planning, commanders are responsible for task organizing the force and prioritizing efforts as part of the operations process. Task organizing is the act of configuring an operating force, support staff, or sustainment package to meet a unique task or mission. This allows commanders to allocate resources to weight the decisive operation or main effort.

2-234. Commanders recognize that effectiveness is built on mutual trust and confidence between superior, subordinate, supporting and supported organizations. This trust and confidence is developed through relationships. Generally the longer a relationship lasts, a greater degree of trust and confidence results. Between organizations that have had a long-term habitual relationships, authorities and responsibilities are typically well known. However, the nature of the sustainment structure at EAB forces commanders to place organizations in unfamiliar situations. In this instance, where trust and confidence between organizations is limited, command and support relationships establish baseline doctrinal authorities and responsibilities upon which unfamiliar organizations can operate.

2-235. Command and support relationships vary between different units and echelons. The types of command and support relationships established are dependent on the mission and the degree of authority a commander wishes to establish between subordinate units.

COMMAND RELATIONSHIPS

2-236. The five Army command and support relationships are organic, assigned, attached, OPCON, and TACON. Each relationship has specific authorities and responsibilities. Army command relationships identify the degree of control of the gaining Army commander. Command relationships unify effort and enable maximum flexibility for commanders to use subordinate forces. The expected duration of a command relationship normally dictates the type of command relationship between the headquarters involved and identifies the degree of support the gaining and losing Army commanders provide.

2-237. Commanding officers designate command relationships to subordinate units in OPORDs. The designation must indicate the headquarters under which a subordinate unit is placed, the specific command relationship designated, and the duration of the relationship. The duration may be based on time, duration of a phase, or based on achieving an objective. This information is included in the ‘Task Organization’ paragraph of the OPORD. If the task organization is long or complicated, commanders may place it in annex A of the order. Table 2-1 displays the Army command inherent responsibilities. JP 3-0 discusses command relationships for the joint force.

Table 2-1. Army command relationships

If relationship is:	Then inherent responsibilities:							
	Have command relationship with:	May be task organized by ¹ :	Unless modified, ADCON responsibility goes through:	Are assigned position or AO by:	Provide liaison to:	Establish/maintain communications with:	Have priorities established by:	Can impose on gaining unit further command or support relationship of:
Organic	All organic forces organized with the HQ	Organic HQ	Army HQ specified in organizing document	Organic HQ	N/A	N/A	Organic HQ	Attached; OPCON; TACON; GS; GSR; R; DS
Assigned	Gaining unit	Gaining HQ	Gaining Army HQ	OPCON chain of command	As required by OPCON	As required by OPCON	ASCC or Service-assigned HQ	As required by OPCON HQ
Attached	Gaining unit	Gaining unit	Gaining Army HQ	Gaining unit	As required by gaining unit	Unit to which attached	Gaining unit	Attached; OPCON; TACON; GS; GSR; R; DS
OPCON	Gaining unit	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ ¹	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON; TACON; GS; GSR; R; DS
TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	TACON;GS GSR; R; DS

Note 1: In NATO, the gaining unit may not task organize a multinational force. (See TACON.)

Legend:

ADCON	administrative control	HQ	headquarters
AO	area of operations	N/A	not applicable
ASCC	Army Service component command	NATO	North Atlantic Treaty Organization
DS	direct support	OPCON	operational control
GS	general support	R	reinforcing
GSR	general support–reinforcing	TACON	tactical control

ORGANIC

2-238. Organic forces are those assigned to and forming an essential part of a military organization. Organic parts of a unit are those listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the administrative organizations of the operating forces for the Navy. Joint command relationships do not include the term organic because a JFC is not responsible for the organizational structure of units. The organic command relationship is unique in that the relationship is inherent in unit force structure; units that have an organic command relationship with a parent unit are an integral part of the parent unit table of organization and equipment. As a result, the organic command relationship cannot be further delegated. Commanders with organic subordinate units may designate any of the other four command relationships to the subordinate unit. Commanders with organic subordinate units have ADCON authority and responsibility for the subordinate units.

2-239. The Army establishes organic command relationships through organizational documents such as tables of organization and equipment and tables of distribution and allowances. If temporarily task organized to another headquarters, organic units return to the control of their organic headquarters after completing the mission. To illustrate, within a BCT, the BSB and all other units within the brigade are organic to the headquarters. In contrast, within most support brigades, there is a base of organic battalions and companies (or sometimes just a headquarters) and a variable mix of assigned and attached battalions and companies.

ASSIGNED AND ATTACHED

2-240. Commanders establish the assigned and attached command relationships by placing a subordinate unit under the command of another organization for a specified period of time. An assigned command relationship is relatively permanent. The gaining organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel. An attached command relationship is relatively temporary. The attachment may be for a specific mission or phase of an operation. The commander establishes these command relationships in an operation order issued to the subordinate commander and specifies the duration of the relationship in the order. Unless specifically stated in the operation order, these command relationships includes ADCON authority and responsibility for the gaining command.

OPCON AND TACON

2-241. Commanders establish the OPCON and TACON command relationships by placing a subordinate unit under the command of another organization for a specified period of time. OPCON is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. TACON is a command authority over units made available for tasking that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. The commander establishes these command relationships in an OPORD issued to the subordinate commander and specifies the duration of the relationship in the order. Unless specifically stated in the OPORD, these command relationships do not include ADCON authority and responsibility for the gaining command. Once the duration of the relationship has lapsed, the unit returns to its parent unit.

COMMAND RELATIONSHIP AUTHORITIES AND RESPONSIBILITIES

2-242. Inherent authorities and responsibilities associated with each command relationship are shown below. Commanders use these responsibilities to identify and establish the appropriate command relationship based on the mission requirements.

2-243. Task organization authority:

- Units with an organic command relationship may only be task organized by the organic headquarters.
- Units with assigned, attached, or OPCON command relationships may be task organized by the gaining unit.
- Units with a TACON command relationship may only be task organized by the parent unit.

2-244. ADCON authority: Organic, assigned, and attached command relationships incur ADCON authority on the organic or gaining unit.

2-245. Position/AO assignment: Units with an organic command relationship are assigned a position or AO by the organic headquarters. In all other command relationships, the gaining unit assigns positions/AO.

2-246. Provide liaison: This is not applicable to units with organic command relationships. For all other command relationships, a liaison is provided as required by the gaining unit.

2-247. Establish/maintain communications: This is not applicable to units with organic command relationships. For assigned and attached command relationships, communication is established and maintained as required by the gaining unit. For OPCON and TACON command relationships, communication is established and maintained as required by the parent and gaining unit.

2-248. Priority establishment: Units with an organic command relationship have priorities established by the organic headquarters. In all other command relationships, the gaining unit establishes priorities.

2-249. Designation of command or support relationships:

- Units with an organic, assigned, and attached command relationships may be further attached, OPCON or TACON to another organization by the parent/gaining unit. The parent/gaining unit may also impose any support relationship on the unit.
- Units with an OPCON command relationships may be further OPCON or TACON to another organization by the gaining unit. The gaining unit may also impose any support relationship on the unit.
- Units with a TACON command relationships may be further TACON to another organization by the gaining unit. The gaining unit may also impose any support relationship on the unit.

ARMY SUPPORT RELATIONSHIPS

2-250. Army support relationships are direct support, GS, reinforcing, and GS-reinforcing. Army support relationships are not command authorities and are more specific than joint support relationships.

Area Support

Area support is not a support relationship. It is a task given to sustainment units that directs them to support units transiting or operating within a specified geographic boundary and for which a support relationship has not been established. This is normally for units that are in immediate need of support and are not near their organic or designated supporting unit.

Area support is not synonymous with general support. It is a viable and necessary support consideration given the limitations of existing sustainment force structure. Commanders must anticipate the need to provide area support and must also anticipate the increased demand for commodities. However, utilizing the area support task does not absolve commanders of the responsibility to do mission analysis, task organize, and designate support relationships for subordinate units. Commanders cannot simply direct subordinate units to provide area support to any and all units in an area of operations. If this occurs, supporting units are unable to forecast requirements and are constantly in a reaction mode. This, in turn, leads to ineffective sustainment support.

In order for unit commanders to be able to plan and develop viable support concepts, commanders must know the type and quantity of units supported and for how long. The commander's higher headquarters provides this information by task organizing subordinate units and designating clear support relationships between each subordinate unit and supported units. This information is communicated via an OPOD.

2-251. Direct support is a support relationship requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance (joint doctrine considers direct support as a mission rather than a support relationship). A unit assigned a direct support relationship retains its command relationship with its parent unit but is positioned by and has priorities of support established by the supported unit.

2-252. Reinforcing support is a support relationship requiring a force to support another supporting unit. Only like units can be given a reinforcing mission. A unit assigned a reinforcing support relationship retains its command relationship with its parent unit, but is positioned by the reinforced unit. A unit that is reinforcing has priorities of support established by the reinforced unit first, and then by the parent unit.

2-253. GS reinforcing is a support relationship assigned to a unit to support the force as a whole and to reinforce another similar-type unit. A unit assigned a GS-reinforcing support relationship is positioned and has priorities established by its parent unit and secondly by the reinforced unit.

2-254. GS is that support which is given to the supported force as a whole and not to any particular subdivision thereof. Units assigned a GS relationship are positioned and have priorities established by their parent unit.

2-255. Commanders establish support relationships when subordination of one unit to another is inappropriate. Assigning support relationships is one aspect of command and control. Commanders assign a support relationship when—

- The echelon of the supporting unit is the same as or higher than that of the supported unit. For example, the supporting unit may be a brigade, and the supported unit may be a battalion. It would be inappropriate for the brigade to be subordinated to the battalion; hence, the echelon uses an Army support relationship.
- The supporting unit supports several units simultaneously. The requirement to set support priorities to allocate resources to supported units exists.

2-256. Units that have a command relationship with a unit are not designated a support relationship with the same unit. Since a command relationship is established, it provides adequate authority for the gaining unit to direct support efforts. Support relationships do not alter ADCON.

2-257. Army support relationships allow supporting commanders to employ their units' capabilities to achieve results required by supported commanders. Supporting commanding officers clearly designate support relationships to subordinate units in OPORDs. The designation must identify the supported unit, the specific support relationship designated, and the duration of the relationship. The duration may be based on time, duration of a phase, or based on achieving an objective. This information is included in the 'Task Organization' paragraph of the OPORD. Supported commanders must also identify supporting units to subordinates in the same paragraph. Commanders may place this information in annex A of the order. The support is more effective if a commander with the requisite technical and tactical expertise controls the supporting unit rather than the supported commander.

2-258. Support relationships can be an exclusive relationship between two units, (direct support), or a broad level of support extended to all units under the control of the higher headquarters (general support). While reinforcing and GS reinforcing relationships are not commonly used by sustainment units these relationships are valid for sustainment units and may be designated based on support requirements.

2-259. Although all support relationships are applicable to sustainment units, direct and GS are the most commonly used. Direct support requires a unit to support another specific unit and authorizes it to answer directly to the supported unit's request for assistance. A unit assigned a direct support relationship retains its command relationship with its parent unit but is positioned by and has priorities of support established by the supported unit. The parent unit may end or redirect the direct support relationship at any time if directed to do so by its higher headquarters.

2-260. GS requires a unit to support multiple units simultaneously and not to any specific subdivision of the unit. A unit assigned a GS relationship retains its command relationship with its parent unit and is positioned and has priorities established by the parent unit. The parent unit may end or redirect the GS relationship at any time if directed to do so by its higher headquarters. Table 2-2 lists Army support relationships.

Table 2-2. Army support relationships

If relationship is:	Then inherent responsibilities:							
	Have command relationship with:	May be task organized by:	Receives sustainment from:	Are assigned position or an area of operations by:	Provide liaison to:	Establish/maintain communications with:	Have priorities established by:	Can impose on gaining unit further command or support relationship by:
Direct support ¹	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit; supported unit	Supported unit	See note ¹
Reinforcing	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Parent unit; reinforced unit	Reinforced unit; then parent unit	Not applicable
General support-reinforcing	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit; then reinforced unit	Not applicable
General support	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not applicable

Note: ¹ Commanders of units in direct support may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.

COMMAND AND SUPPORT RELATIONSHIPS BY ECHELON

2-261. The command and support relationships most commonly used vary by echelon. The relationships described below are typical examples. However, relationships may vary based on mission and operational variables.

JOINT SECURITY AREA

2-262. Discussion of each type of Army headquarters assumes employment in the joint security area. All units may or may not be employed. Within the joint security area command relationships will normally be the following:

- The TSC is assigned to the theater Army.
- The MEDCOM (DS) is assigned or attached to the theater Army.
- Task-organized medical formations in the joint security area from the MEDBDE (SPT) are attached to the MEDCOM (DS). The MLMC forward team is assigned to the MEDCOM (DS) and coordinates class VIII distribution with the DMC of the TSC and ESC.
- The ESC is attached to the TSC.
- Sustainment brigades are attached to the ESC. The sustainment brigades will have the same relationship with the TSC if an ESC is not employed in the joint security area.
- CSSBs are attached to the sustainment brigade.
- Functional logistics and HR companies are attached to the CSSB or special troops battalion.

CORPS AREA

2-263. The task organization of sustainment units in the corps area may be complex. Multiple sustainment headquarters may be operating in the area. Some of the sustainment headquarters are assigned or attached to the corps headquarters while others are not.

2-264. An ESC is assigned to the corps. The MEDCOM (DS) provides direct or GS to the corps through the MEDBDE (SPT). The theater Army will also attach a sustainment brigade, or multiple sustainment brigades, to the ESC. Furthermore, CSSBs, functional logistics battalions, and functional companies will be attached to the sustainment brigades as required to support the corps mission. All command relationships will be designated in an OPOD issued by the theater Army. The units attached to the corps receive mission orders from the corps headquarters, normally in support of specific corps operations.

2-265. Other ESCs operating in the corps area will remain attached to the TSC and will also have sustainment brigades, CSSBs, functional logistics battalions, and functional logistics companies attached. MEDBDEs (SPT) will have hospital centers and medical battalions (multifunctional) attached. Sustainment units not attached to the corps receive mission orders from the TSC to support broader theater operations.

2-266. The normal support relationship for all sustainment units in the corps area is GS. However, other support relationships may be designated based on mission requirements.

DIVISION AREA

2-267. The task organization of sustainment units in the division area is subject to the same complexities as the corps area. Multiple echelons above division sustainment units and elements of the MEDBDE (SPT) may be operating in the area alongside the DSB with its organic DSSB. Medical elements of the MEDBDE (SPT) are normally OPCON to the division commander and their parent medical organization retains ADCON.

2-268. Other sustainment brigades operating in the division area will remain attached to an ESC in the corps area. Sustainment brigades attached to the ESC will have CSSBs, functional logistics battalions, and functional logistics companies attached. The CSSBs attached to the sustainment brigade will have functional companies attached. Sustainment units not assigned to the division receive mission orders from the ESC to support broader theater operations.

2-269. The DSB and its organic DSSB are assigned to the division. The division's task-organized DSB provides direct support to the division and GS for all units in or passing through their geographic area. The DSB commander remains responsible for integration and synchronization of sustainment in the division area.

BRIGADE COMBAT TEAM AREA

2-270. The BSB is organic to the BCT headquarters; it is an integral part of the BCT table of organization and equipment. The distribution, field maintenance, brigade medical support, and forward support companies are organic to the BSB. The distribution, field maintenance, and brigade medical support companies have a GS relationship with the BCT units to include the forward support companies. The forward support companies have a direct support relationship with the supported maneuver battalion. The forward support companies may be attached to the supported maneuver battalion for limited periods of time based on mission requirements. This attachment is normally limited to the duration of a specific mission or phase of an operation.

SUSTAINMENT AND OPERATIONAL ART

2-271. Army commanders, both maneuver and sustainment, must use operational art to develop a vision of how to establish conditions that accomplish their assigned missions and objectives. Commanders and staffs use operational art to develop strategies and operations to organize and employ tactical forces. Using their collective skill, knowledge, experience, creativity, and judgement commanders and staffs integrate ends, ways, and means, to achieve objectives. Army commanders use operational art to pursue strategic objectives through the arrangement of tactical action in time, space, and purpose all while accepting and accounting for risk. Operational art is what allows commanders to translate their operational approach into a clear and concise concept of operations that is disseminated in an operation order.

2-272. The Army design methodology can be used to shape an operational approach. Through this methodology, commanders and staffs gain an understanding of the current state of the OE to include current conditions. It allows them to envision a desired end state that must be achieved, identify problems that will prevent achieving the end state and then develop a broad, general plan to solve the problems. From this point, commanders use the military decision making process to develop a detailed plan which includes a concept of operations.

2-273. Maneuver and sustainment commanders use the elements of operational art to understand the OE and to develop a concept of operations. These elements can be used selectively in any operation as required and not all apply at all levels of warfare. The elements are:

- End state and conditions.
- Center of gravity.
- Decisive points.
- Lines of operation and lines of effort.
- Tempo.
- Phasing and transitions.
- Culmination.
- Operational reach.
- Basing.
- Risk.

2-274. Commanders, both maneuver and sustainment, must consider these elements in planning. With proper consideration each element can be used to develop a concept of operations that synchronizes and integrates sustainment with the other warfighting functions. Example of how this can be done are shown below:

- Determine what sustainment capability is required and where it must be located in order to achieve the desired end state. Establish desired conditions such as required quantities of supplies or operational readiness rate.

- Determine if sustainment should be considered a center of gravity for the operation. Identify the components of the sustainment support structure such as supply storage and distribution that are critical and could cause failure if destroyed. Apportion protection to the sustainment assets as required.
- Analyze the effects of sustainment in allowing a commander to reach decisive points. An example might consist of analyzing the CL III(B) and CL V status or maintenance status and determining if the status is adequate to reach the point.
- Determine how sustainment affects both lines of operation and lines of effort. Ask if sustainment will impact the ability to reach and control a geographic objective. The same should be done for lines of effort. Commanders should analyze how sustainment affects fires, protection, and movement and maneuver. Furthermore, commanders should determine if sustainment support is a line of effort required to establish the desired end state.
- Commanders should analyze how sustainment will affect the desired tempo of the operation and if sustainment will allow maneuver forces to maintain a higher tempo than the enemy. Understanding the status of CL III(B) is critical to controlling the tempo since fuel directly impacts movement and maneuver. Commanders must also ensure the maneuver tempo does not outpace the sustainment support.
- Analyze the effect sustainment has on completing the current phase of an operation and transitioning to the next phase. The commander and his staff should use sustainment estimates to determine if the support concept is achieving the desired results in terms of the operational objectives. Identify the changes to the plan and the specific support required to complete the phase.
- Commanders must always know the point at which the operation will culminate due to sustainment limitations or inadequate sustainment support. Lack of personnel replacement, as an example, might cause the operation to culminate sooner than planned and be unable to complete the assigned mission. Sustainment commanders and staffs should be able to determine the culmination point and communicate it to the maneuver commander for consideration. This information can be used to plan a deliberate transition from offense to defense.
- Operational reach is closely tied to culmination since the culmination point is normally the limit of a unit's operational reach. Supply, maintenance, personnel replacements, and medical support all directly affect endurance and the ability to employ combat power for extended periods.
- Commanders should consider what types of basing, such as an intermediate staging base or temporary base camps, are required to execute sustainment support. This includes proper positioning, dispersion, protection, and command and control required to control the bases.
- Determine the amount of risk to accept when committing sustainment forces. Commanders must balance the risk with the potential favorable outcome. As an example, a commander might commit an entire fleet of tactical fuel vehicles to reach a decisive point in the operation but must accept the fact that in doing so jeopardizes future operations if the fuel assets are destroyed by enemy action.

COMMAND AND CONTROL, TEMPORAL AND PHYSICAL PLANNING CONSIDERATIONS FOR SUSTAINMENT

2-275. Temporal and physical planning for sustainment are essential for sustainment to keep tempo with maneuver forces. Sustainment is inherently a simultaneous requirement in terms of execution to support a scheme of maneuver and a sequential requirement in terms of positioning and moving capabilities/commodities in time and space. There is no escaping the linear nature of time and its impact on the effectiveness of sustainment. However, effective use of the mission command philosophy, the orders process, and correct task organization can mitigate potential impacts on sustainment.

2-276. Sustainment commanders utilize the operations process to develop an effective task organization. The task organization identifies the units with the necessary capabilities required to support the mission. This ensures that:

- The correct number of the right types of units are available.
- Correct command relationships are established to determine authorities.

- Correct support relationships are established as required.

2-277. Once command and control relationships are established, sustainment commanders and their planners select locations for units to best support the operation. The placement of units must be coordinated with the unit assigned the area of operation within which the sustainment units are located. Commanders and planners must consider all mission variables to include analysis of how each will affect the placement of units. Critical mission variables include mission (to include priority of support), enemy, terrain and weather, troops and support available, and time available. Applicable operational variables should be considered also. Sustainment support normally has an associated execution cycle. Examples, though not all inclusive, are:

- For unit distribution, a cycle is the time it takes for a distribution platform to move from a supply support activity (SSA), to the supported unit, and back to the SSA.
- For supply point distribution, a cycle is the time it takes for a supported unit vehicle to move from the unit location, to the SSA, and back to the unit.
- For a medical unit, a cycle is the time it takes for an ambulance to move from an ambulance exchange point to the medical unit, and back to the exchange point.

2-278. Optimal physical placement has a positive effect on the timing of support and ensures support missions can be executed to meet requirements. Commanders must physically locate sustainment units in a position that is close enough to the supported unit that an execution cycle is not inordinately long or time consuming. The time it takes to execute a cycle directly affects the overall time to execute support. Sustainment units with GS relationships support multiple units, each of which will be at a different distance. In this situation, planners must strike a balance when determining placement of sustainment units.

2-279. Another consideration for physical placement is the type of support provided by a unit. As an example, a composite supply company providing water treatment support to a BCT may be positioned within the BCT area of operations to minimize the time required to distribute the treated water to the BSB.

UNITY OF EFFORT

2-280. Commanders at all Army echelons, theater Army to company, must ensure operations planned and executed, contribute to and support the mission, commander's intent, and concept of operations of the higher headquarters. Continuous coordination, cooperation, and collaboration with higher and lower headquarters ensures all operations are fully synchronized, integrated, and achieves unity of effort.

2-281. Theater enabling commands, such as the TSC, are integrated into operations by the theater Army as well as multifunctional and functional sustainment battalions and companies. Commanders ensure, by using methods described below, that operations conducted by these commands are synchronized to ensure all contribute to and achieve the GCC objectives. The theater Army, in conjunction, with the TSC ensures proper support relationships are established between sustainment organizations and theater enabling command organizations.

2-282. There are various mechanisms available to commanders to enable them to achieve unity of effort. Mechanisms can be physical activities or processes commanders must understand in order to use them effectively. The discussion of the mechanisms below is not all-inclusive and is limited to the context of this field manual. To gain a more comprehensive understanding, refer to JP 6-0, FM 6-0 and ADP 6-0.

OPERATIONS PROCESS

2-283. Commanders use the operations process to achieve unity of effort. All components (planning, preparation, execution, and assessment) of it are essential. Commanders must be familiar with every aspect of the process and ensure it is executed to the fullest extent within the time available. This ensures commanders drive the detailed planning necessary to understand, visualize, and describe the OE. It also allows commanders to make critical decisions to direct and lead synchronized and integrated operations. For detailed information on the operations process, refer to JP 5-0 and ADP 5-0.

COMMAND POST OPERATIONS

2-284. CP operations provide commanders a means to execute continuous close coordination, synchronization, and information sharing across staff sections. Sustainment organizations do not have dedicated CPs based on a sub-section of the table of organization and equipment. Sustainment commanders organize their CPs in an ad hoc fashion based on operational and mission variables. Sustainment commanders must also consider mobility requirements and footprint when organizing CPs. Ideally, Commanders cross-functionally organize elements of staff sections in their CPs to conduct multiple, critical activities. These activities include supporting the commander's decision-making process, running estimate development, controlling and assessing operations, developing orders, coordinating with other headquarters, and maintaining a common operating picture (COP). A cross-functional CP organization facilitates planning synchronized across all warfighting functions. Cross-functional cells coordinate and synchronize forces and warfighting functions within a specified planning horizon. Cross-functional cells include a plans cell, a future operations cell, and a current operations integration cell.

STAFF ROLES AND RESPONSIBILITIES

2-285. The commander's coordinating, special, and personal staff officers and their ability to interrelate to support the commander's intent are integral parts of achieving unity of effort. Staffs support the commander in understanding, visualizing, and describing the operational environment; making decisions; and leading operations. Staff officers must clearly understand specific responsibilities associated with that staff position's role in the organization. For example surgeon cells at echelon and across the force advise commanders on medical capabilities and capacities necessary to support plans, and interface with logistics, financial management, and personnel elements to coordinate AHS support across the warfighting functions. Every commander and chief of staff/executive officer must strive to develop staff officers who are competent, exercise individual initiative, apply critical and creative thinking, are adaptive, communicate effectively, and are disciplined and self-confident. For additional information, see FM 6-0.

BATTLE RHYTHM

2-286. A command's battle rhythm is a deliberate daily cycle of command, staff, and unit activities intended to synchronize current and future operations. It normally consists of a series of meetings, including working groups, boards, briefings, and other CP actions that are synchronized by purpose and time. Examples include movement control board, distribution board, operational planning team, sustainment integration cell, logistics synchronization cell, and contracting support board. An effectively executed battle rhythm creates routine staff interaction and coordination. This, in turn, facilitates staff planning and the commander's decision-making. For additional information, see ADP 5-0, FM 6-0, JP 5-0, and JP 3-33.

MILITARY DECISION MAKING PROCESS

2-287. The military decision making process (MDMP) is an iterative planning methodology designed to help commanders and staffs to understand the situation and mission, develop a course of action, and produce an OPOD to communicate the commander's intent to subordinate organizations. MDMP facilitates collaborative planning amongst higher and subordinate commands by the continuous sharing of information. This section is not intended to provide a detailed discussion of the MDMP but to highlight aspects of it that enable commanders to achieve unity of effort.

Receive and Analyze the Mission

2-288. Commanders initiate MDMP upon receipt of a mission from higher headquarters. Commanders and their staffs conduct thorough mission analysis of the higher headquarters order to determine how the receiving unit contributes to the higher headquarters' mission, commander's intent, and concept of operations. Through mission analysis commanders and staffs gain an understanding of the situation, problems to solve, and identify what the command must accomplish. This includes a clear purpose of the operation and a time in which it must be executed to meet the higher commander's intent. Understanding this information allows commanders to develop a concept of operations that supports the higher commander. Commanders include

the higher headquarters' mission and intent in paragraph 1.d.1 of the OPORD issued to subordinate organizations.

Nested Concepts

2-289. Commanders and staffs ensure the concept of operations is aligned by purpose with that of the higher headquarters as commanders develop courses of action and ultimately convert one to a concept of operations. This planning technique is called nested concepts and is key to enabling unity of purpose and unity of effort. An effective OPORD includes a concept of operations that clearly describes how the subordinate units will support the higher headquarters mission and how the actions of subordinate units fit together to accomplish the mission. Commanders organize their forces by purpose and ensure the primary tasks for each subordinate unit includes a purpose that links to the completion or achievement of a higher headquarters objective, or end state.

Orders Production and Dissemination

2-290. When the commander decides on the best course of action, the staff prepares an OPORD that converts the course of action into a developed and clearly understood concept of operations. The OPORD is the means through which commanders communicate the command's mission and intent to subordinate commanders. The order includes all supporting information required including operational overlays.

LIAISON

2-291. Commanders may choose to organize and implement liaison elements based on higher headquarters' requirements or mission variables. Liaison is direct contact or intercommunication maintained between headquarters to ensure mutual understanding and unity of purpose and effort. Commanders may use liaison during operations to help facilitate a shared understanding and purpose among organizations, preserve freedom of action, and maintain flexibility. Liaison provides commanders with relevant information and answers to operational questions, thus enhancing the commander's situational understanding. Commanders may task subordinate commands to provide a single or multiple liaisons for general information or for specific information.

SUSTAINMENT INFORMATION SYSTEMS

2-292. Sustainment operations and command and control of sustainment forces are enabled by sustainment information systems. Large-scale combat operations require sustainment forces be more effective and efficient than in any other type of operation. Sustainment headquarters require the capability to anticipate requirements and build combat power using information systems. The supported sustainment automation support management office is responsible for ensuring these information systems are fully functional. See ATP 4-0.6 for roles and responsibilities of the sustainment automation support management office.

2-293. Army Enterprise Systems Integration Program is a key enterprise resource planning system that bridges between Global Combat Support System-Army (GCSS-Army) and Logistics Modernization Program for logistics information and business information. Sustainment information systems are enterprise resource planning systems. These systems function across all levels of warfare in the sustainment warfighting function. Enterprise resource planning systems are a type of software with integrated applications that have a common database to facilitate an integrated and near real-time view of sustainment information. Army enterprise resource planning systems include the GCSS-Army, General Fund Enterprise Business System, Logistics Modernization Program, and Integrated Personnel and Pay System-Army. Additionally, the Aviation Sustainment Enterprise initiative has started the fielding of Aircraft Notebook (ACN) to all three components; Active Army, Army National Guard, and Army reserve. ACN implements the Army Maintenance Management System - Aviation digital logbook functionality. ACN reduces the information technology footprint within an aviation unit by integrating multiple software applications such as aircraft Interactive Electronic Technical Manuals and Condition Based Maintenance Plus tools onto one hardware platform. For additional details about each system, see appendix C.

2-294. Army enterprise resource planning systems enhance support of large-scale combat operations by providing high levels of visibility to drive timely decision making. These systems provide the foundation

necessary for total asset and inventory visibility and total cost of ownership directly related to readiness. This visibility allows both maneuver commanders and sustainers to have more accurate and timely visibility of sustainment assets. This enables sustainment planners to more accurately forecast future requirements. Not only does this support large-scale combat operations through more accurate fulfillment of warfighter needs, but it also enhances force protection by reducing stockpiles and eliminates duplicative ordering of commodities.

2-295. Enterprise resource planning systems enable predictive analytics for sustainment. These systems also provide insight to questions about what is likely to happen, what can be done to make things happen, and how sustainment leaders can take advantage of opportunities and/or mitigate risks on a multi-domain extended battlefield. For additional details, see appendix C.

2-296. The unprecedented visibility of sustainment operations through enterprise resource planning systems depends on a higher availability of communications and digital information transmission in the cyber domains than previous sustainment information systems. Commanders and staff must plan for the impacts of physical attack, cyber-attack, and displacement operations on their ability to access these systems in order to execute real-time support and timely decision making.

SECTION V – TRAINING FOR LARGE-SCALE COMBAT OPERATIONS

2-297. Sustainment units train to support large-scale combat operations and a wide range of operations that include regular and irregular warfare, humanitarian assistance operations, security force assistance, and support to civil authorities. In today's complex and uncertain strategic environment, it is imperative that sustainment support remains globally responsive and supports not only the Army but also its joint and multinational partners. Meeting the challenges of an uncertain, complex, and interconnected strategic environment requires sustainment formations that are adaptive, innovative, flexible, and agile in training and operations.

2-298. Support of large-scale combat operations requires deployment of sustainment forces from all components on short notice. Therefore, the increased training readiness of sustainment units is key to the success of our Army; the majority of which are in the Reserve Component. Since the Army is largely a CONUS-based force, leaders and units must practice the ability to deploy into an austere theater through contested ports, conduct RSOI, and immediately support large-scale combat operations.

TRAINING CONSIDERATIONS FOR SUSTAINMENT UNITS

2-299. The complex and uncertain environment sustainment forces will operate in presents a number of challenges that should be incorporated into training.

SURVIVABILITY

2-300. Survivability is a key objective in all training, especially for sustainment formations, which are vulnerable due to size, limited protection resources, and the requirement to continue sustainment operations while simultaneously conducting force protection tasks. The use of enemy unmanned aerial vehicles and other surveillance means will require training on dispersion, cover and concealment, and the selection of terrain that masks sustainment formations – visually and electronically. Training in the protection function of unit and convoy defense on local and area security tasks is also critical in ensuring the survivability of sustainment units in an environment where there are no safe areas. Sustainment units must be equipped, structured, trained, and prepared to execute these tasks to ensure units can complete sustainment missions when maneuver support is unavailable.

MOBILITY

2-301. Large-scale combat operations over extended distances require all sustainment units be mobile. Leaders must ensure units replicate frequent moves and split-based operations of sustainment units and headquarters on a continual basis during training. In addition, measures to reduce the sustainment footprint also improve the mobility of sustainment forces. Movements of large numbers of vehicles cannot be adequately trained by simulation alone. For recommended mobility planning factors, see appendix D.

DISTRIBUTION

2-302. Operating in and around dense urban terrain presents many challenges to sustainment units. Units must train for OE characterized by congested and constrained routes, damaged infrastructure, and 360-degree threats from above and below ground. This may include the use of autonomous aerial delivery systems, provisioning of special equipment and ammunition requirements to supported SOF, and support to the local populace and unified action partners. Sustainment Soldiers train to analyze and predict the demand shifts in a dense urban environment for example, fuel demand for ground forces may decrease in an AO, while ammunition requirements—particularly small-arms and terminally guided and precision munitions—greatly increase. Understanding distribution modes and how to request them is a critical part of sustainment flexibility. Distributing supplies by air or waterway may be a better option in a situation when motor transport is not feasible.

2-303. Sustainment forces cache commodities to maintain flexibility. The sustainment force also trains to sustain the force in austere areas where pre-positioning of equipment may not be feasible, adequate bases may not be available, and the industrial base and infrastructure are poorly developed.

COMMUNICATIONS

2-304. Adversaries will attempt to disrupt, degrade, or curtail our communications and access to sustainment enterprise systems. In response to this threat sustainment units train and prepare to operate in a disconnected OE with redundant manual systems. Developing and maintaining good staff estimates provides sustainment staff flexibility to anticipate requirements in a disconnected OE.

2-305. Sustainment operations rely on effective enterprise resource planning systems which require access to the DOD Information Network. Setup of communications to gain access is an essential task that must be trained. Setup times are impacted by many operational variables, but generally the Combat Service Support Automated Information System Interface should be operational within 15-20 minutes and the Combat Service Support Very Small Aperture Terminal should be operational within 20-25 minutes.

TRAINING SUSTAINMENT FORMATIONS

2-306. Unit commanders at all levels are the critical link for implementing unit training management to ensure progressive readiness and unit proficiency within their formations. At all echelons, sustainment formations play a critical role in enabling military decision making within mission command, and sustainment organizations train collectively with our war-fighting partners to sustain this proficiency.

2-307. With the majority of EAB sustainment force structure being in the Reserve Component, commanders ensure these formations are well trained and integrated into the multi-component sustainment force structure prior to deployment. Commanders also leverage opportunities to strengthen sustainment training relationships with other Services, interagency organizations, private industry, and multinational partners whenever feasible.

2-308. Sustainment units at all levels integrate training with the units that the sustainment units support. Commanders do not train sustainment units in isolation. Rather, commanders develop organizational proficiency as part of a combined arms or joint team, supporting other war-fighting functions to achieve specified outcomes. Maneuver units and their supporting sustainment elements routinely train on resupply (including delivery of logistics packages), vehicle recovery, convoy operations, unit maintenance, casualty collection, HR support, and financial management team missions. Establishing the forward arming and refueling points (FARP) and conducting refuel on the move operations to support extended moves for operations like attacks, mobile defenses, and defensive retrograde are other examples of key sustainment activities integrated into maneuver unit collective training events.

2-309. Commanders maximize institutional and operational training opportunities at home station and ensure use of current tools, such as the Individual Critical Task List. The technical nature of sustainment core functions requires constant engagement and maintenance to prevent skill atrophy. Sustainment units strive for mastery-level proficiency of these essential tasks through multiple iterations of training events. That concept applies to not only the actual technical functions, but also staff activities and basic field craft.

2-310. Sustainment unit leaders plan, prepare, execute and assess unit training in accordance with FM 7-0. Collective training events are conducted in accordance with combined arms training strategies. The combined arms training strategies identify the type of events that may be used for specific training audiences, tasks to be trained in a collective event, duration for training events, and the resources required to conduct the training. The Army's standardized mission essential task list (METL) defines the essential tasks a unit must perform to be considered proficient in its core mission. Soldiers leave the institutional domain with foundational individual competencies; unit commanders build on that technical foundation while also training the collective skills required by the unit's METL. Commanders use the METLs to assess unit collective training proficiency. It is especially important that commanders plan training for supporting operations the Army has not had to conduct recently, such as RSOI and reconstitution.

2-311. Sustainment unit training employs multi-echeloned, collective training events to build a progressive path to unit proficiency whenever possible. The combat training center program gives commanders an opportunity to exercise collective sustainment tasks, employ elements of the sustainment enterprise, and fully execute the sustainment cycle in support of decisive action.

SUSTAINMENT LEADER DEVELOPMENT

2-312. Successful support of large-scale combat operations requires Army sustainers who are technically and tactically proficient, adaptive, and innovative. Sustainers must possess the ability to lead, plan, and support global readiness in complex operational and strategic environments. Developing leaders encompasses training and professional military education as the primary means by which leaders combine experiences gained during operational assignments with doctrine in preparation for large-scale combat operations. However, unit commanders also plan, resource, and execute professional development programs for leaders within their organization to build on the foundation formed during training and professional military education opportunities.

EXPEDITIONARY SUSTAINMENT

2-313. Leaders prepare themselves and their units to maintain readiness for deployment, and once operations commence, perform their roles in theater opening and closing and supporting conventional and SOF while establishing, defending, and moving support areas.

TOTAL FORCE SUSTAINMENT INTEGRATION

2-314. This sustainment competency involves two aspects, integrating the varied sustainment functions and integrating sustainment formations across Active Army, Army Reserve and National Guard. Sustainers need to understand the various sustainment functions and be able to integrate them to create a holistic sustainment plan. Sustainers also have an understanding of each component's capabilities and establish partnerships to effectively integrate them to provide optimal support to the force.

STRATEGIC SUSTAINMENT ENTERPRISE OPERATIONS

2-315. As sustainment leaders develop, leaders progress from the start point of understanding their roles in enabling tactical-level operations through an operational perspective to strategic enterprise operations. Leaders require an understanding of strategic roles, systems, and capabilities at the enterprise level and how the links work across the levels of war.

UNIFIED ACTION PARTNER INTEGRATION

2-316. *Unified action partners* are those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during the conduct of operations (ADP 3-0). Unified action partners include joint forces and components, multinational forces, and U.S. Government agencies and departments. Ultimately, all sustainment is aimed at ensuring the success of unified land operations, so sustainment leaders take into account the capabilities and requirements of unified action partners and establish appropriate relationships with them. As discussed

earlier in this chapter, Army sustainers will be both supporting and receiving support from unified action partners.

SUSTAINMENT INFORMATION SYSTEMS

2-317. Sustainment information systems provide the visibility required for sustainment decision making. It is important that Army sustainers understand what enterprise resource planning programs are, what enterprise resource planning programs the Army has, and how these are integrated. See appendix B for more information on sustainment information systems.

OPERATIONAL CONTRACT SUPPORT

2-318. OCS is the process of planning for and obtaining supplies, services, and construction from commercial sources in support of joint operations. While varying in scope and scale, OCS is a critical force multiplier across all phases and types of operations. Sustainment commanders and staffs need to be able to plan for, integrate, execute, and manage contracts and contractor personnel within the OE. The dynamic OE requires an agile, flexible approach to contracting. Planners should conduct risk analysis for OCS and consider operational risk, contractor risk, as well as performance, schedule, and cost risks. Contractor support is important to sustaining Army forces in the context of all four Army strategic roles.

UNDERSTANDING LOGISTICS

2-319. Sustainment leaders must be proficient in logistics to be successful in the execution and sustainment of large-scale combat operations. Leaders at all echelons must understand how integration and synchronization of logistics capabilities with operational objectives creates tactical successes. Leaders should be adept in the application of both operational art and science in executing logistics in contested OEs. Leaders at the operational and tactical levels must know when to accept risk, how to prioritize requirements, and how to balance resources in supporting large-scale combat operations. Sustainment leaders at each echelon must understand the economy of effort and responsiveness achieved through integration of multinational partners, OCS, and HNS into logistics support and mission success.

UNDERSTANDING FINANCIAL MANAGEMENT

2-320. Army financial management capabilities across the OE leverage influence through command relationships with unified action partners, Services, multinational, and joint forces. Commanders integrate financial management capabilities in the operational planning process during large-scale combat operations. Sustainment leaders must be familiar with financial management to effectively support large-scale combat operations. Sustainment leaders will rely heavily on financial management leaders and planners at all echelons to provide responsive financial management that meets the challenging nature of the operational environment. Financial management leaders and planners must be able to anticipate changing requirements created by changes in the mission or the operational environment. By applying the simplicity and stewardship principles, financial management leaders and planners ensure the transparency of their operations and demonstrate stewardship through the proper use of resources by complying with existing funding authorities, regulations, and statutes. Financial Management sustains the U.S. Army and its unified action partners through the execution of fund the force, banking & disbursing, accounting support & cost management, management internal controls, and pay support. See FM 1-06, for further information.

UNDERSTANDING HUMAN RESOURCE SUPPORT

2-321. Leaders are expected to expound upon formal training and experiences. It is extremely important for sustainment leaders to understand that HR support directly impacts readiness and sustainability in large-scale combat operations. The operating environment focuses on highly contested environments across all domains, especially the virtual/cyber domain. HR planners and leaders, at all echelons, will rely on integration with sustainment operations and planning processes to maintain systems and leverage resources necessary to the support all efforts in personnel accountability, casualty reporting, personnel replacement operations, and postal operations in a rapidly changing operating environment. Sustainment support of these functions,

especially at the tactical level, including the maintenance of unit strength through replacement operations, is critical to mission success.

UNDERSTANDING THE ARMY HEALTH SYSTEM

2-322. The AHS is a foundational capability that supports the CCDRs' efforts to prevent conflict and shape operational environments. The AHS forces participate in expeditionary operations, integrate with other Services, and support unified action partners. Sustainment leaders must understand that the AHS medical functions are complex in nature, are interrelated, are interdependent, and that medical command and control of force health protection and health service support require integration, coordination, and synchronization to ensure the complex interrelationships and interoperability of all medical assets remain in balance to optimize the effective functioning of the entire system. AHS planners must be included early on in the planning cycle to develop flexible, agile, and comprehensive plans to provide effective and efficient AHS support for tactical operations. To ensure effective and efficient AHS support, AHS support plans must adhere to the AHS principles (conformity, proximity, flexibility, mobility, continuity, and control). Sustainment leaders must understand that during large-scale combat operations, casualties begin to occur immediately upon engagement with the enemy. Due to the necessity to perform lifesaving interventions for Soldiers suffering combat trauma within minutes of wounding or injury, AHS resources must be arrayed in close proximity to the forces supported for rapid treatment, stabilization, and evacuation of patients. This permits the AHS assets to rapidly clear the battlefield of casualties and enhances the CCDRs ability to quickly take advantage of opportunities that present themselves during the operation.

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Chapter 3

Sustaining Operations to Shape

Chapter 3 provides an overview of sustaining operations to shape. It discusses considerations for sustainment planning and gives examples of activities conducted during shaping.

SECTION I – OVERVIEW OF SHAPING ACTIVITIES AND SUSTAINMENT FUNDAMENTALS

3-1. Two key concepts (deployment and distribution) in sustainment for shaping operations are the requirement for a comprehensive and current analysis of all the factors influencing sustainment and the crucial role that other agencies will typically play in sustaining these operations. Advance sustainment analysis, planning, preparation, and coordination are critical to successful sustainment operations.

SHAPING ACTIVITIES

3-2. Examples of shaping activities are set the theater, military engagements, security cooperation, combined training and exercises, and sustainment preparation of the OE. The following paragraphs describe these activities and provide examples of sustainment support. There are a number of sustainment considerations that typically apply to specific types of shaping activities. Shaping activities incorporate a large portion of conventional force and SOF core activities, requiring planning for both. The activities and associated support considerations are discussed below.

SET THE THEATER

3-3. Setting the theater is a continuous shaping activity and is conducted as part of steady-state posture and for contingency or crisis response operations. Set the theater describes the broad range of activities conducted to establish the conditions in an operational area for the execution of strategic plans. The GCC has overall responsibility for this activity, but executes many of its responsibilities through the TSC of the ASCC. The purpose of setting a theater is to establish favorable conditions for the rapid execution of military operations and the support requirements for a specific OPLAN during crisis or conflict.

3-4. Setting the theater involves all of the warfighting functions.

- The focus of the command and control warfighting function is the organization and the command and control of forces to accomplish missions. The ASCC tailors, and controls Army forces in the AOR. The TSC provides command and control of assigned and attached sustainment forces in the AOR.
- The movement and maneuver warfighting function focuses on mobilization, deployment, employment, and redeployment of forces. The ASCC conducts theater opening and is responsible for RSOI of Army forces. The TSC provides TACON for movement of forces into theater, conducts RSOI, and provides command and control for theater distribution.
- The intelligence warfighting function focuses on planning, collecting, producing, and disseminating intelligence. The ASCC provides Army intelligence capabilities to support CCMD operations. Part of that intelligence support is setting the theater from an intelligence perspective that is bigger than supporting sustainment operation (see FM 2-0). Supporting theater sustainment intelligence requirements is a significant and complex mission. To meet theater sustainment intelligence requirements the TSC G-2 directs, plans, collects, and disseminates intelligence to

subordinate units. However, the TSC G-2 also depends on national to tactical intelligence and the theater intelligence architecture for access to critical intelligence.

- The fires warfighting function plans and directs Army fires in coordination with joint fires. Sustainment supports joint and Army fires.
- Protection focuses on establishing force protection measures for Army forces. The ASCC is responsible for Army forces protection in the AOR. Sustainment plans, coordinates, and executes protection plans for sustainment forces.

3-5. Setting the theater during operations to shape (from a sustainment perspective) involves actions to provide sustainment (logistics, financial management, personnel services, and health service support) to SOF, SFAB, military engagements, and security cooperation as well as conduct sustainment preparation of the OE, and other activities in support of daily Title 10 requirements, contingency operations, and crisis response operations.

3-6. Sustainment support to setting the theater in operations to shape involves theater opening, receiving initial forces, equipment, and supplies and assembling them into mission-tailored units; and transporting them to their final destination. LOGCAP ensures a rapid response to emerging crises. The Army should also utilize HNS to the maximum extent possible to give sustainment units time to close in theater. It places set the theater as a priority and provides for holistic operational planning across the Army's strategic roles. LOGCAP planners are placed at the ASCC, TSC and corps with LOGCAP decision authority being at the ASCC.

3-7. Set the theater activities during operations to shape may also include the establishment of a distribution network, identify local procurement requirements, employing the theater gateway PAT, and setting the conditions for medical operations. The broad range of setting the theater activities also includes synchronization and integration of sustainment through the establishment of boards, bureaus, centers, cells, and working groups. For more information on setting the theater activities see chapter 4, JP 3-31, ADP 3-0, ADP 4-0, ATP 3-93, FM 1-0, FM 3-0, FM 3-94, FM 4-95 and ATP 4-10.

ARMY HEALTH SYSTEM SUPPORT TO SET THE THEATER

3-8. The MEDCOM (DS) maintains a regional focus that encompasses the GCC's entire AOR and is critical for the successful provision of AHS support to set the theater. The medical commander's ability to assess host nation medical capability/capacity and the presence of health threats prevalent in the AOR, facilitates the planning and execution of regional strategies for establishment of the theater joint trauma system and mitigation of identified threats. The MEDCOM (DS) provides the GCC an effective tool to assist in maximizing the use of scarce medical resources, shaping the security environment by building partner medical capacity, and alleviating health conditions that not only impact U. S. military forces, but multinational partners, and particular challenges faced by the host nation. Efforts must also be made to understand the roles and responsibilities of all agencies involved (to include the Department of State, World Health Organization, partner nations, and others) for integration and synchronization of all medical capabilities in the region. The MEDCOM (DS) also provides AHS support to set the theater through coordination and integration of strategic medical capabilities from the U.S. sustaining base. It also provides support through global health engagements, establishment and maintenance of medical support agreements, deploying medical technical expertise for consultation services and other support, and military medical training exercises, as well as the following:

- Executing AHS support to other Services.
- Ensuring adherence to eligibility criteria for treatment in U.S. military MTFs.
- Recommending theater evacuation policy adjustments.
- Providing theater food protection support.
- Coordinating with USTRANSCOM for patient movement plans.
- Ensuring integration and interoperability of theater medical capabilities.
- Providing AHS support to foreign humanitarian assistance and disaster relief.
- Conducting medical preparation of the OE.
- Maximizing use of host nation medical capabilities.

- Establishing and executing occupational and environmental health surveillance programs and countermeasures.
- Coordinating with the National Center for Medical Intelligence, Centers for Disease Control and Prevention, and other strategic partners for identification and mitigation of regional health threats.
- Planning and coordination for AHS support to—
 - Noncombatant evacuation operations.
 - Detainee operations.
 - RSOI and theater opening.
 - Large-scale casualty events and prolonged care.
 - Other Services.

3-9. The MEDCOM (DS) is assigned to the ASCC and serves as the theater medical command responsible for synchronization and execution of AHS support operations within the AOR. The MEDCOM (DS) commander coordinates with the ASCC surgeon to provide AHS support within the AOR.

MILITARY ENGAGEMENT

3-10. Military engagement is the routine contact and interaction between individuals or elements of the Armed Forces of the U.S. and those of another nation's armed forces, or foreign and domestic civilian authorities or agencies to build trust and confidence, share information, coordinate mutual activities, and maintain influence (JP 3-0). Military engagements are primarily State Department-led engagements. These occur as part of security cooperation, but also extend to interaction with domestic civilian authorities. Military engagements can reduce tensions and may preclude conflict; if conflict is unavoidable, these engagements may allow the U.S. to enter into it with stronger alliances or coalitions.

3-11. A military-to-military engagement requires less sustainment support than large-scale combat operations. *Host-nation support* is civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations (JP 4-0). Sustainers leverage contacts during this shaping activity to facilitate logistics partnerships, enhance interoperability, establish or refine HNS agreements, and gain access to potential critical infrastructure nodes. Routine interactions during operations to shape will help establish agreements and partnerships that may be mutually beneficial during follow-on operations. Sustainers are involved in all these engagements primarily to facilitate sustainment agreements and coordinate planning for future operations.

SECURITY COOPERATION

3-12. Security cooperation is all DOD interactions with foreign security establishments to build security relationships that promote specific U.S. security interests, develop allied and partner nation military and security capabilities for self-defense and multinational operations, and provide U.S. forces with peacetime and contingency access to allied and partner nations (JP 3-20). The Department of State leads and provides oversight for security cooperation efforts.

3-13. Sustainment commands simultaneously plan and synchronize sustainment operations for theater security cooperation activities. The Army approach to supporting the larger DOD security cooperation effort is either indirect or direct.

3-14. Indirect approach activities involve the U.S. supporting a nation with security cooperation programs, given legitimate authorities, designed to enhance its capability and capacity. The sustainment command supports the following programs and activities typical of the indirect approach:

- International military education and training.
- Multinational and joint exercises and exchange programs.

3-15. Direct approach activities involve U.S. forces assisting the host nation by conducting operations for the mutual benefit of the host nation and U.S. interests. These operations either provide a capability the host nation does not possess or increase the capacity of the host nation to conduct the operation.

3-16. Establishing a host nation coordination center is a means to enhance stability and interaction between nations. The lead element for coordination center is security cooperation (G-9), with representation from the logistics and medical (G-4, Surgeon), financial management (G-8, FMSC), engineers (G-7), G-3, host nation representatives, Department of State and any other governmental agencies or non-governmental organizations as required. A multinational commander, especially one that operates under a parallel command structure, establishes a coordination center during the shape role of an operation. It organizes and controls functional areas including logistics, and civil-military operations. A coordination center is the initial focal point for support issues such as force sustainment, medical support, infrastructure engineering, HNS, and movement control. As a multinational force matures, the center's role includes activities such as force provision or force deployment. Member nations provide action officers who are familiar with its activities when a coordination center is activated. Multinational forces are encouraged to maintain contact with parent headquarters. For more information, see FM 3-16.

3-17. *Security assistance* is an element of security cooperation that is authorized by the Department of State and administered by the DOD (ATP 3-93). It is a group of programs the U.S Government uses to provide defense articles, military training, and other defense-related services by grant, loan, credit, or cash sales. Security assistance programs are typically focused on the transfer of defense articles and services to eligible foreign governments, the provision of training and education to foreign military personnel, and the sale of construction services in support of partner nations' military establishments. Sustainers are frequently required to provide support and logistics training to support these activities.

3-18. Security force assistance are the DOD activities that contribute to unified action by the U.S. Government to support the development of the capacity and capability of foreign security forces and their supporting institutions (JP 3-22). Army sustainers interact with sustainers of partner countries in these operations. These partnerships assist in future interoperability and enhance partner nation militaries to be more self-sufficient in logistics capabilities.

3-19. Foreign internal defense is participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organization to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security. Sustainment support operations are limited by applicable U.S. law without an acquisition and cross servicing agreement (ACSA). Such support usually consists of transportation or limited maintenance support, although an ACSA can allow additional support. Sustainment of combat operations in foreign internal defense is similar to sustainment for other types of operations. However, the political sensitivities and concern for host nation legitimacy and minimum U.S. presence change the complexion of sustainment operations in foreign internal defense. As in security force assistance, sustainers are critical for developing well-established sustainment foundations. SOF play a critical role in executing foreign internal defense operations.

Shaping the OE: SOF Sustainment of Operation Inherent Resolve (Operation Eclipse)

Shaping the OE for SOF often requires unique sustainment operations. Special Operations Joint Task Force-Operation Inherent Resolve (SOJTF-OIR) planners and senior sustainment leaders in the CENTCOM AOR faced complex and challenging distribution problems in providing equipment and supplies for force partnered to defeat ISIS in northern Syria. At the root of those problems were multiple access denials from allied and partnered nations in the EUCOM and CENTCOM AOR's. Due to the political sensitivity of SOF operations, these denial issues accentuated the complexity of moving critical supplies. Solving this problem required a whole of government approach to facilitate the procurement and distribution of equipment to enable the military defeat of ISIS in northern Syria.

In OIR, with the door closed from consolidating supplies in Germany, CENTCOM was forced to act quickly to develop solutions as operations to retake Raqqa were nearing execution. CENTCOM, in conjunction with USSOCOM, established daily working groups and a general officer/flag officer board which encompassed elements from the U.S. State Department, Joint Staff, Army Materiel Command, USTRANSCOM and others across the Department of Defense to develop solutions enabling the flow of multiple short tons of equipment for operations in Syria. These engagements proved to be beneficial as senior leader engagements were able to secure a new aggregation node in EUCOM.

To support these efforts, 528th Sustainment Brigade (SO) (A) linked in with the 1st and 21st Theater Sustainment Commands, and became the action arm in facilitating the delivery of critical supplies from the U.S. The brigade established the aggregation node in the EUCOM AOR and coordinated the movement of equipment with 21st TSC. With an intact strategic distribution network, JTF-OIR and SOJTF-OIR had to develop a distribution apparatus that mitigated restrictions from the governments of Iraq and Kuwait. These restrictions prevented the flow of lethal aid to our partnered force from their borders. 1st TSC mitigated these restrictions by utilizing its existing support infrastructure to store equipment. SOJTF-OIR used a combination of SOF and AMD airframes to deliver the aid required in Syria.

Lastly, the Syria logistics cell, supported by JTF and 528th SB (later transitioned to 1st TSC), provided tactical command and control of sustainment operations in Syria. A key component to operational success was utilizing ground distribution to push lethal and non-lethal aid. The Syria logistics cell maximized the use of conventional and unconventional contracting means to develop a transportation system which pushed multiple short tons of equipment (averaging over 105 trucks per convoy) to support Operation ECLIPSE. SOF could not have executed their mission within northern Syria without the whole of government approach to develop the support distribution architecture that enabled the flow of lethal and non-lethal equipment to support the partnered force.

The integration and synchronization between the 1st TSC and 21st TSC provided the CCDR in the CENTCOM AOR the sustainment support needed to shape the operational environment. The support was critical in the establishment and execution of sustainment nodes within their theaters of operations which were integral to the success of SOJTF-OIR. Without these command efforts it would have been extremely problematic for operations in Syria to be executed. SOF operations were inherently dependent on the larger sustainment enterprise to achieve effects. This required planners at every level to be aware of the SOF requirement to ensure conditions were set to achieve victory.

3-20. In security cooperation, support considerations include support to U.S. forces and support to host nation forces based on a variety of authorizations. Support to host or partner nations is primarily driven by already established ACSAs. If ACSAs are not in place, local State Department officials act as lead for determining what support can be granted to host nations.

COMBINED TRAINING AND EXERCISES

3-21. Army forces build partner combat readiness and set conditions for future contingencies through training and exercises. Combined exercises familiarize both forces with the capabilities and shortfalls of the other force and develop procedures to leverage capabilities and mitigate shortfalls. These serve to sustain and/or develop interoperability between nations as well as build partnership capacity.

3-22. These exercises are extremely diverse in size, participation, duration, and sustainment requirements. The requirements may be a few aircraft being sustained by HNS or OCS with minimal DOD sustainment to large-scale training operations requiring a combination of HNS, OCS, and home station sustainment activities. These exercises may be with one U.S. military agency and another country or with joint agencies and multiple nations. These events can generate the very high support requirements. Sustainment commands are thoroughly embedded in planning process to determine support requirements, specific responsibilities, and support procedures. While the volume of requirements for short-term multinational training events may not be burdensome, the events are complex and require careful planning and synchronization. The use of multinational exercises establishes theater gateways and access agreements for activities like cross border movements and status of forces agreements.

SUSTAINMENT PREPARATION OF THE OPERATIONAL ENVIRONMENT

3-23. Sustainment preparation of the OE is a continuous shaping activity involving analysis to determine infrastructure, environmental, or resource factors in the OE that impact the Army's ability to sustain a commander's operations plan. Sustainment planners in the TSC and/or ESC use the sustainment preparation of the OE analysis to update and refine sustainment estimates and the concept of support. Analysis products cover such topics as selection of LOC, determination of operational stock assets, and design of a distribution network and information technology infrastructure for the theater.

Operation United Assistance: Challenges in Sustainment Preparation of the OE

Sustainment preparation of the OE using a whole of government approach contributed greatly to successful operations in Operation United Assistance. The Ebola Virus Disease that erupted in West Africa in February 2014 was one of the most deadly medical crises of modern times. By the time the epidemic had run its course in 2016, 28,616 infected individuals were identified in Guinea, Liberia and Sierra Leone. Of those, 11,310 died before the epidemic was brought under control by a massive international response. For the United States military, whose last such experience was the 1918 Spanish Influenza epidemic, this would be the first involving a disease-driven foreign humanitarian assistance mission.

Operation United Assistance was a Department of State led humanitarian assistance/disaster relief response to help combat the Ebola virus epidemic in West Africa. The austere environment, extended travel distances within the operational area, lack of modern facilities, and poor quality of necessary materials proved to be significant challenges for U.S. Army forces providing sustainment support. U.S. Army Africa deployed in September 2014 and established Joint Task Force-United Assistance as the spearhead of the Army's effort to shape the OE. The JTF preparation of the OE included establishing field hospitals, laboratory facilities, special Ebola treatment units, and the training of local personnel. Sustainment enterprise partners, such as U.S. Army Materiel Command, Defense Logistics Agency and its Joint Contingency Acquisition Support Office, established forward capabilities to tie in with the JTF. The enterprise united the efforts of a multi-disciplined, interagency team formed across nations, governments and non-government organizations, leading to success in Operation Unified Assistance.

3-24. The sustainment preparation of the OE identifies resources available to friendly forces and factors that impact sustainment for example, endemic diseases, and climate. Representative questions planners try to answer include—

- Are any agreements with host nation or multinational partners in place?
- Does the host nation have supply resources available to support U.S. forces?
- Are health threats present in the OE and have mitigation strategies been identified?
- What host nation facilities are available (airports, sea ports, military facilities, hospitals, barracks, water systems, electrical networks, warehouses, and other storage facilities are available)?
- Has geospatial information gathering, site reconnaissance and surveys of ports been conducted?
- What are the contracting options?
- What resources have other U.S. Government departments and agencies or unified action partners identified?
- What skills does the local labor force have?
- What host nation communications capabilities are available?
- What is the entry environment—permissive or non-permissive?
- Are host nation banking infrastructure and e-commerce capabilities available?
- Are considerations in place on host nation postal limitations and restrictions?

3-25. The theater Army works with the sustainment command to gather this and other information to develop support plans. A detailed estimate of requirements allows planners to advise the commander of the most effective method of providing adequate and responsive support, while minimizing the sustainment footprint. Sustainment preparation of the OE includes all the factors addressed in the following paragraphs.

Geography and Environmental Factors

3-26. Information on climate, terrain, flooding, precipitation, and endemic diseases in the AO is used to determine when and what types of equipment are needed. For example, water information determines the need for such things as early deployment of well-digging assets and water purification and distribution units. Endemic disease conditions, vector-borne illnesses, and local medical resources greatly influence requirements for Army medical assets. Terrain, weather, lengths of LOCs, and other factors influence maintenance and fuel requirements.

3-27. Sustainment planners must consider assistance through veterinary services to reduce risk and prevent disease during sustainment preparation of the operational environment. Methods to prevent disease include improving sanitation practices, waste management controls, and pest and vector control. These are crucial to disease prevention. Regional spraying and insect repellent application to guard against hazardous flora and fauna are examples of prevention methods.

Supply and Services

3-28. Planners require information on the availability and characteristics of supplies and services readily available in the operational area. Supplies such as subsistence items, water and ice, bulk petroleum, and barrier materials are the most common. Compatibility of commodities and services for example, electrical and fuel connectors and classes of supply, should be considered. Services that may be available consist of shower and laundry, sanitation services, and water purification. For additional information, see ATP 4-42.

Facilities

3-29. Identifying infrastructure and capacity to receive personnel, commodities, equipment and other resources is an imperative. Assessing availability of warehouses, cold-storage facilities, production and manufacturing plants, reservoirs, administrative facilities, hospitals, sanitation capabilities, hotels, barracks, military bases, airfields, and rail systems can greatly reduce the requirement for the deployment of U.S. assets.

Transportation

3-30. Development of any distribution plan depends on information regarding road and rail networks, inland waterways, airfields, truck availability, bridges, ports, cargo handlers, petroleum pipelines, materials-handling equipment, traffic flow, choke points, and potential movement control complications. Movement of cargo in theater must comply with laws, regulations, and rules for transporting materiel as established by the international agreements, the U.S. and the host nation. Cargo restrictions vary from theater to theater. The CCDR has the authority to set cargo restrictions. Non-materiel cargo restrictions include weight limits at APODs and SPODs, vehicle weight and dimension limits on routes, and certain airspace controls. Materiel cargo restrictions may include explosives, pyrotechnics, POLs, compressed gases, corrosives, and batteries. Planners also need to plan for any host nation administrative requirements for activities such as border crossings, customs, and diplomatic clearances. For additional information, see ATP 4-11.

Maintenance

3-31. Key planning considerations for maintenance support include the availability of host nation maintenance capabilities, information on contract maintenance assets, the commonality or standardization of major end items and repair parts across the force, and the host nation's internal capacity for additive manufacturing and fabricating repair parts. For additional information, see ATP 4-33.

General Skills

3-32. Sustainment planners at all echelons gather information on the general population with a focus on local personnel who can function as translators and skilled and unskilled laborers. Sustainment plans are influenced by availability of drivers, administrative clerks, dockworkers, materials-handling equipment operators, food service personnel, security guards, and mechanics.

3-33. Theater Army and sustainment command staffs can leverage such general skills through HNS, theater-support contracts, or ACSAs. These staffs may also be able to link to overseas training programs,

humanitarian and civil assistance programs, and civil augmentation program support contracts. Due to the lead-time necessary to award and execute contracts, planners should identify and develop requirements during pre-mission planning. Planners should also specify roles and responsibilities in annex W that must include appendices 1, 2, and 3 to ensure contracting support unit requirements to deploy are identified, contractor personnel, and contractor management are planned and sustained in the expeditionary force AO of appropriate OPLANs and concept plans.

Army Pre-Positioned Stocks

3-34. APS is equipment and supplies configured in unit sets forward-positioned afloat and ashore located at or near the point of planned use or at other designated locations. This allows units identified for early entry to deploy with limited to-accompany-troops equipment and draw unit equipment at an RSOI location. This reduces the initial amount of strategic lift required for power projection to sustain the warfighter until the LOC from the strategic base is established.

3-35. The five categories of APS are: pre-positioned unit sets, operational projects stocks, Army war reserve sustainment stocks, war reserve stocks for allies, and activity sets. The APS program is a key Army strategic program to facilitate strategic and operational reach. USAMC executes the APS program and provides accountability, storage, maintenance, and transfer (issue and receipt) of all equipment and stocks. USAMC works with DLA for disposition and re-stockage of supplies in APS based on shelf life and expiration timelines.

3-36. Prepositioned unit sets are equipment configured into unit sets (to include authorized stockage list (ASL), shop stock, and unit basic load, that are positioned ashore and afloat to reduce deployment response time and support the Army's force projection strategy. Operational projects stocks are materiel above normal table of organization and equipment, table of distribution and allowances, and common table of allowance authorizations tailored to key strategic capabilities essential to the Army's ability to execute its force projection strategy.

3-37. Operational project stocks are designed to support one or more Army operations, plans or contingencies. Army war reserve sustainment stocks consist of major and secondary end items to sustain the operation by replacing combat losses and supplies consumed in the operation. These stocks are pre-positioned in or near a theater of operations to provide essential stocks until wartime production and supply lines can be established. War reserve stocks for allies are pre-positioned in the appropriate theater and owned and financed by the United States and ensures U.S. preparedness to assist designated allies in case of war. Activity sets are pre-positioned equipment specifically to equip Army forces deploying outside CONUS to conduct training and exercises, to include joint and bilateral training opportunities.

3-38. Pre-positioned equipment serves as a display of United States power and influence. As a strategic resource, sea or land-based APS may be used as a deterrent providing a show of force without deploying large numbers of Soldiers to the theater. The primary purposes of APS are to reduce the initial amount of strategic lift required to support a predominately CONUS based force projection Army and to sustain the Soldier until sea lines of communication are established (ATP 3-35.1).

3-39. Theater sustainment stocks provide minimum essential support to combat operations and post-mobilization training beyond the capabilities of peacetime stocks, industry, and HNS. Army War Reserve Sustainment Stocks are pre-positioned in or near a potential operational area and are intended to be used until wartime production and supply lines can be established. These stocks consist of major end items to sustain the operation by replacing combat losses and to replace supplies consumed in the operation (ATP 4-91).

3-40. Medical APS stocks are managed, coordinated, accounted, and controlled by the U.S. Army Medical Materiel Agency and subsistence items are managed for the Army by DLA, which also provides operational rations for APS.

3-41. The Army locates its pre-positioned stocks at or near points of planned use or at other designated locations to reduce reaction time. Alternatives include pre-positioning stocks afloat (these include port construction equipment and material) or at an intermediate staging base. Planners may also call for assembling stocks in tailored packages for deployment with projected forces. See ATP 3-35.1 for additional information on APS.

Banking and Economy

3-42. Financial management leaders/planners analyze the economic impact of the use of currency (U.S. and foreign) on the local economy. This economic analysis is a detailed report provided to commanders to make decisions on applying the economic instrument of power, identifying all financial aspects of a specific geographical area, and the effect of a U.S. force presence will have on the specific AOR.

3-43. Banking support includes negotiating with host nation banking facilities, advising unit commanders on the use of local currency, and coordinating with strategic providers. Some examples are Office of the Under Secretary of Defense (Comptroller), the U.S. Treasury, Defense Finance and Accounting Service, Federal Reserve Bank, and the United States Army Financial Management Command.

Non-Organic Support

3-44. Approximately eighty percent of Army sustainment capabilities reside in the Reserve Component. The Soldiers and units that provide those capabilities may require several weeks to months to mobilize, train, and deploy before becoming available to support military operations in an AOR. The delayed arrival of this organic capability requires sustainment planners to coordinate and synchronize sustainment from non-organic sources, including HNS, ACSAs, and OCS.

Operational Contract Support

3-45. The OCS process enables commanders to acquire services, commodities, and construction support from commercial sources, thereby reducing sealift requirements, accelerating the deployment of combat power, and extending the commander's operational reach. Because of the long lead-time required to coordinate commercial support, planners need to clearly identify capabilities and limitations as part of the deliberate planning process. OCS augments sustainment capabilities through the integration of commercial sector support activities into military operations. OCS plays an important role in shaping operations by aiding in the establishment of favorable conditions for rapid execution of military operations. During operations to shape, sustainment planners at the theater level align allocated military resources against forecasted requirements and employ OCS to mitigate risk. OCS consists of three complementary functions: contract support integration, contracting support, and contractor management. Commanders and their staffs need to understand their roles and responsibilities in planning and managing OCS in their operational environment. See ATP 4-10 for information regarding OCS roles and responsibilities.

3-46. Sustainment planners must understand the different types of contracted support that enable military operations: theater support, external support, and systems support.

- Theater support contracts are awarded by contracting officers in the operational area. During shaping and all other operations, these contracts provide supplies, services, and minor construction, usually from commercial sources located within the operational area. These contracts range from small local contracts for a single unit (SOF) to operational area-wide contracts supporting the entire force.
- Military department or USSOCOM contracting offices, supporting systems program executive offices (PEOs) and program management offices, award systems support contracts. These contracts provide technical support, maintenance, and (in some cases) repair parts for selected military weapon and support systems. Systems support contracts are designed to support newly fielded weapons systems, including aircraft, land combat vehicles, and automated command and control systems. During operations to shape, the AFSB, in coordination with the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA [ALT]) forward operations office, assists in systems support coordination and integration. See ATP 4-91 for information regarding the AFSB and ATP 4-70 for information regarding ASA (ALT) forward operations.
- External support contracts are awarded by contracting organizations whose contracting authority does not derive directly from theater or systems support contracting authorities. The most common and well-known Army external support contract is the Logistics Civil Augmentation Program, LOGCAP provides comprehensive sustainment, minor construction, and other services for example port operations, transportation, and base operating support through its own external

umbrella contracts. These support Army operational planning with advanced logistics processes to ensure effective sustainment service delivery. This capability is especially relevant to shaping operations where sustainment elements have not closed upon the theater to assume their responsibilities. Additionally, utilization of LOGCAP and other external support contracts allows for the forward positioning of sustainment elements and continuity of support until reserve elements (COMPO 2 and 3) are in place. Employment of LOGCAP presents risks to operational security and planning considerations should consider where LOGCAP is positioned in the operational area. Other commonly used external support contracts include DLA prime vendor contracts, the Army Intelligence and Security Command global linguist contract, and military construction agent contracts. See ATP 4-10.1 for more information regarding LOGCAP.

Contract Support Integration

3-47. In theater, CSBs and AFSBs work together to deliver enterprise sustainment capability to deployed forces. In particular, each agency performs critical functions to enable and execute the OCS process, allowing the JFC to leverage contracted capabilities to set the theater, deploy the force, and sustain large-scale combat operations. Moreover, these organizations share multiple contract responsibilities which include the following —

- Assisting with contracted support planning, integration, identification of future contract requirements, and the development of annex W.
- Contractor management, including accountability of civilians authorized to accompany the force personnel and equipment.
- Integration, execution and administration of LOGCAP.

3-48. Early, effective coordination between these headquarters plays an essential role in executing responsive enterprise sustainment during large-scale combat operations.

Agreements with other Nations

3-49. Sustainment preparation of the OE considers whole-of-government initiatives, including bilateral or multilateral diplomatic agreements. These agreements allow U.S. forces to access ports, terminals, airfields, and bases within the AOR to support future military contingency operations. The Department of State and the appropriate U.S. diplomatic mission negotiate bilateral or multilateral agreements. Positive U.S. relations and successful bilateral engagement in one nation can impact U.S. interests in other regional locations. However, successful execution of bilateral events does not always guarantee continued access, so sustainment planners must plan for alternatives.

3-50. HNS is civil and military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations. Negotiating HNS and theater support contracting agreements may include pre-positioning of supplies and equipment, civilian support contracts, OCONUS training programs, and humanitarian and civil assistance programs. These agreements are designed to enhance the development and cooperative solidarity of the host nation and provide infrastructure compensation if deployment of forces to the host country be required. The pre-arrangement of these agreements reduces planning times in relation to contingency plans and operations.

3-51. Negotiation of agreements enables access to HNS resources identified in the requirements determination phase of planning. This negotiation process may facilitate force tailoring by identifying available resources (such as infrastructure, transportation, warehousing, and other requirements) which, if not available, would require deploying additional sustainment assets to support.

3-52. Many HNS agreements have already been negotiated between North Atlantic Treaty Organization (NATO) nations. Potential HNS agreements may address labor, support arrangements for port and terminal operations, use of available transportation assets in country, access to bulk petroleum distribution and storage facilities, possible bulk fuel and barrier material supply, and provision of field services. The U.S. initiates and continually evaluates agreements with multinational partners for improvement. These agreements should be specifically worded to enable planners to adjust for specified requirements.

3-53. ACSAs are bilateral international agreements that allow for the provision of cooperative logistics support under the authority granted in Title 10, United States Code, Sections 2341-2350. Under ACSAs, the Secretary of Defense can enter into agreements for the acquisition or cross service of logistics support, supplies, and services on a reimbursable, replacement-in-kind, or exchange-for-equal-value basis. These agreements can be with eligible nations and international organizations of which the U.S. is a member. An ACSA is a broad overall agreement, which is generally supplemented with an implementing arrangement. The implementing arrangement contains points of contact and specific details of the transaction and payment procedures for orders for logistics support. Neither party is obligated until the order is accepted. Also all ACSA must be coordinated with appropriate S-8/G-8/J-8 as applicable and written by the appropriate sustainment cell at the TSC or ASCC.

3-54. Exchanges of logistics support (which include both acquisition and provision of support) require the prior negotiation of a bilateral ACSA and implementing arrangement between the DOD and the foreign nation's armed forces. An implementing arrangement may contain specific procedures for the execution of transfers under the ACSA, especially Service-specific or geographic-specific procedures. In consultation with the Secretary of Defense, DOD has the authority to negotiate ACSAs and acquisition-only agreements.

3-55. U.S. and other forces participating in multinational operations operate under limitations imposed by applicable international agreements, including status-of-forces agreements, national laws, and regulations. The U.S. has negotiated a number of bilateral status-of-forces agreements that govern U.S. forces operating within another nation's territory. Status-of-forces agreements may also be multilateral and should be negotiated to apply to all participants in the multinational force. Detailed status-of-forces agreements provisions are usually contained in supporting technical arrangements.

3-56. Many of the areas addressed in the technical arrangements relate directly to sustainment issues: medical support, environmental obligations, customs and duties, postal agreements, movement control, landing rights and/or port utilization fees, and rights and protection of contractors. Accordingly, the multinational force sustainment and legal staffs may become closely involved with negotiation, implementation, and application of the status-of-forces agreements and technical arrangements to ensure such documents facilitate rather than hinder support of the operation.

ARMY HEALTH SYSTEM SUPPORT DURING SHAPE

3-57. AHS support activities identified for planning and coordination to set the theater are implemented and executed during operations to shape. The MEDCOM (DS), MEDBDE (SPT), and their subordinate units provide AHS support to theater opening, RSOI of early entry forces, integration of joint and multinational medical capabilities for establishment and execution of the theater trauma system, and regional health engagements in support of security cooperation and deterrence missions to build partner medical capacity, which promotes regional stability. Other key AHS activities during shape include the provision of AHS support for maintenance and execution of medical support agreements, home station medical readiness and training activities, force tailoring for generation of medical combat power, providing Army medical support to other Services and unified action partners, as well as assessment and release of theater APS and other medical logistics support. Efforts are also made to identify capability gaps and determine fills.

3-58. The role of the AMEDD in support of the GCC is to preserve the fighting strength by providing medically ready forces and trained, ready, and rapidly deployable medical forces. Preserving the fighting strength also focuses on maximizing the number of troops available for employment by preventing or mitigating health threats, maximizing return to duty rates, minimizing morbidity and mortality, and clearing the battlefield. To accomplish these tasks, the AMEDD leverages the surgeon cells (staff channel) at each echelon and medical command channels to provide AHS support of U.S. national objectives, the GCC's theater campaign plan, and the Unified Command Plan across the full range of military operations.

3-59. Medical staff channels (surgeon cells) conduct planning, coordination, synchronization, and integration of AHS support to plans. The chain of medical commanders execute AHS support to established plans. Starting with the Surgeon General, the surgeon cells at echelon identify, assess, counter and/or mitigate health threats throughout the range of military operations. The surgeon cells advise commanders on the optimal placement and coordinate use of medical assets to support operations (i.e. forward positioned forces, APS, adjacent/ supporting region assets).

3-60. During operations to shape, institutional medical organizations within the AMEDD (in coordination with the Defense Health Agency) conduct home station medical activities to maintain health readiness, support contingencies, and project medical forces in support of the GCC. At EAB, sustainment organizations without organic medical capabilities receive AHS support on an area basis. For METT-TC dependent medical augmentation support requirements, medical assets may be OPCON to echelon commanders. Organic medical elements at BDE and below provide DS to parent units.

ANALYSIS, PLANNING AND COORDINATION

3-61. Two key concepts in sustaining shaping operations are the requirement for a comprehensive sustainment preparation of the operational environment and the supporting role other agencies perform in sustaining these operations. Analysis, planning, and coordination are critical to successful sustainment operations.

THEATER ANALYSIS AND PLANNING

3-62. DLA planners conduct mission analysis and develop the DLA concept of logistics support for the theater. As part of the logistics supportability analysis process DLA works with the CCMD and Services to evaluate time-phased requirements against DLA capabilities (industrial base, stock status, contracts, etc.) to identify potential risks to mission execution. Requirements are translated into a sustainment wedge and provided to USTRANSCOM during time-phased force deployment conferences. Mitigation strategies for known shortfalls are developed for potential sourcing as part of setting the theater. Additionally, contracts are reviewed to ensure appropriate surge clauses are in place; market research is conducted to identify local procurement opportunities, readiness rates of deployable DLA capabilities are assessed, and DLA works closely with the Services to support readiness rates of critical weapon systems.

3-63. The ASCC conducts theater sustainment analysis as part of setting the theater. This analysis begins as part of shaping activities and continues as part of operations to prevent. This analysis identifies risk in terms of access, capabilities and capacities across the AOR. It consists of the actions taken by sustainment planners to optimize means (force structure, resources, and strategic lift) for supporting the commander's plan. These actions include identifying and preparing intermediate staging bases and forward operating bases; selecting and improving LOC; and forecasting and building operational stock assets forward and afloat. Sustainment preparation of the OE—part of setting the theater—identifies potential risks in terms of access, infrastructure capabilities, and capacities in theater so planners can develop alternatives and mitigating measures. Logistics planners use the sustainment preparation of the operational environment analysis to optimize the distribution system. The analysis products may include identifying forward operating bases, selecting LOC, determining operational stock assets, and designing a distribution and automatic information technology infrastructure for the theater. Chapter 4 of this field manual, ATP 4-94, and FM 4-95 provide detailed information for sustainment preparation of the OE.

3-64. The theater campaign plan is the GCC's vehicle for operationalizing the theater strategy. The theater campaign plan provides a framework within which the GCC conducts security cooperation activities and military engagement with regional partners through cooperative security and development. A theater campaign plan's main function is to provide guidance to coordinate steady-state components of contingency planning by conducting security cooperation activities across the AOR.

3-65. The theater Army develops the force structure required to support the theater campaign plan. The theater Army requests Army forces and the resources required to support them. These resources include sustainment capabilities required. The theater Army in conjunction with the sustainment command (TSC or ESC) provides support to forces participating in exercises to support the theater security cooperation plan. The theater Army in conjunction with the sustainment command (TSC or ESC) designs effective and efficient movement plans for land forces into and out of the theater of operations. The theater Army in conjunction with the sustainment command (TSC or ESC) also requests forces to support ongoing Army responsibilities for sustainment.

INTERAGENCY COOPERATION

3-66. During operations to shape, it is critical that sustainers work with other agencies to achieve integrated whole-of-government operations and synchronization of interagency activities, such as information sharing, security cooperation, and foreign assistance. This requires Army sustainers to develop and share detailed time-phased logistics requirements/estimates with interagency partners. During competition, the Department of State will play a large role in maintaining or establishing a path toward greater stability, with elements from the intelligence community and DOD in support. Other agencies that may provide crucial logistics support during shaping operations are DLA and USAMC. Liaison officers are often the first sustainment planners on ground. Liaison officers begin sustainment preparations and discussions with the ASCC, TSC, State Department officials, and country teams. The liaison officers may assist with expediting movement of equipment and logistics planning. USTRANSCOM may also send liaison officers to facilitate transportation operations.

DEPARTMENT OF STATE

3-67. The Department of State leads and provides oversight for security cooperation efforts through its bureaus, offices, and overseas missions. Security cooperation activities are conducted and coordinated throughout the AOR by, with, or through the ASCC to—

- Build defense relationships that promote specific U.S. security interests.
- Develop multinational and friendly military capabilities for self-defense and multinational operations.
- Provide U.S. forces with peacetime and contingency access to a host nation.

3-68. The TSC is heavily involved in the operations to shape and provide the sustainment support that makes shaping operations possible. Since the boundaries for Department of State are different from the boundaries of the GCCs the TSC through the ASCC may have to coordinate operations through multiple Department of State representatives.

SENIOR DEFENSE OFFICIALS

3-69. The senior defense official or defense attaché is the principal military advisor on defense and national security issues. The senior defense official is also the senior diplomatically accredited DOD military officer assigned to a U.S. diplomatic mission, and the single point of contact for all DOD matters involving the embassy or DOD elements assigned to or working from the embassy. This individual acts as the in-country focal point for planning, coordinating, supporting, and/or executing U.S. defense issues and activities in the host nation, including theater security cooperation programs under the oversight of the GCC. Army sustainers may be tasked to assist in establishing and maintaining sustainment foundations to enhance nation partnerships. For additional information regarding DOD operations at U.S. embassies see DODD 5105.75(D).

DEFENSE SECURITY COOPERATION AGENCY

3-70. The Defense Security Cooperation Agency plays a critical role in shaping activities. Defense Security Cooperation Agency's mission is to advance U.S. national security and foreign policy interests by building the capacity of foreign security forces to respond to shared challenges. Defense Security Cooperation Agency leads the broader U.S. security cooperation enterprise in its efforts to train, educate, advise, and equip foreign partners. Defense Security Cooperation Agency administers security cooperation programs that support U.S. policy interests and objectives identified by the White House, DOD, and Department of State. These objectives include developing specific partner capabilities, building alliances and partnerships, and facilitating U.S. access. Defense Security Cooperation Agency integrates security cooperation activities in support of a whole-of-government approach, provides execution guidance to DOD entities that implement security cooperation programs, exercises financial and program management for the foreign military sales system and many other security cooperation programs, and assists in the long-term development of the security cooperation workforces. Sustainers can leverage the Defense Security Cooperation Agency operation to facilitate partnerships and agreements.

Operation Unified Response and a Unity of Effort

Cooperation between unified action partners enables unity of effort. On January 12, 2010, a magnitude 7.0 earthquake struck the Caribbean island nation of Haiti. The earthquake left over 200,000 people dead and some 895,000 Haitians homeless. The immense devastation on the island generated an enormous humanitarian relief effort that required a whole-of-government approach to solve. Operation Unified Response (January 14 to June 1, 2010) demonstrated how a cooperative whole-of-government and global collaboration of more than 140 countries and over 1,000 non-governmental organizations could work together in an unprecedented large-scale foreign humanitarian assistance/disaster relief operation.

U.S. Southern Command exercised operational control over Joint Task Force-Haiti. The main effort for the joint task force during the first forty-five days was to support the World Food Program in greater Port Au Prince. The original intent of the program was to provide 16 million Meals Ready-to-Eat to feed the Haitian population in and around Port Au Prince. However, the taste of the Meals Ready-to-Eat and the high calorie count were foreign to the Haitians and made many of them ill.

The best option proved to be bringing in tons of bagged rice and beans. Not only were these types of food items readily available, rice and beans were also two of the main staples of the Haitian diet. This is one example of the adjustments made in support to the operation. Other Army elements worked to restore Haitian infrastructure.

During the restoration phase, Joint Task Force-Haiti activities focused on turning over responsibility for many support functions to civilian partners. One of these hand-overs included the resumption of Haitian government control of the Toussaint Louverture International Airport on 16 March. Transitions also occurred at the seaport after Army and Navy divers repaired the damaged pier in record time and by mid-March, the port was turned over to Haitian authorities.

Throughout Operation Unified Response, the center of gravity was the U.S. military's ability to relate to and interface with U.S. Agency for International Development, Office for the Coordination of Humanitarian Affairs and the non-governmental organization community. The two offices of primary responsibility for this type of activity were the Humanitarian Assistance Coordination Center and the J9. Neither of these sections were present in the joint task force-joint operations center. This unfortunately led to a significant time lapse in information being reported and distributed to the operations center.

A critical lesson learned from the humanitarian efforts in Haiti was that Service and non-governmental organizations should be synchronized, prioritized and sequenced to effect responsible management in the field. The influx of civilian and military resources during the early days of the crisis overwhelmed the logistics infrastructure in Haiti and complicated the response efforts. Unity of effort of unified action partners enabled the Army to meet the immediate needs of the Haitians and orchestrate an ever-increasing international response that was instrumental in the success of Operation Unified Response.

SECTION II –SUSTAINING OPERATIONS TO SHAPE

3-71. Friendly forces are always in contact during competition via space, cyberspace, and the information environment, whether in the strategic support area, the joint security area, or further forward. The primary

shaping activity with partners and allies is advancing multinational interoperability with a focus on large-scale combat operations in theaters containing peer threats. All shaping activities, including security cooperation, multinational exercises, security force assistance activities, should focus on multinational interoperability and identifying partner capabilities that could support prevailing in large-scale ground combat operations. Critical to determining requirements is regularly reviewing assumptions about agreements, partner capability and capacity, and the specific operational environments where large-scale combat operations are most likely to occur.

3-72. Shaping activities consist of various long-term military engagements, security cooperation, and deterrence missions, tasks, and actions intended to assure friends, build partner capacity and capability, and promote regional stability. Operations to shape typically occur in support of the Unified Command Plan that addresses the six AORs (U.S. Africa Command, U.S. Central Command, U.S. European Command, U.S. Northern Command, U.S. Indo-Pacific Command, and U.S. Southern Command) and GCC's theater specific plans. These operations help set the conditions for successful global and theater operations and to deter actions by adversaries that may challenge the stability of a nation or region contrary to the interests of the United States.

3-73. Shaping activities also include unit home station activities, including maintaining operational readiness, medical readiness, training, and contingency planning. Combined exercises and training, military exchange programs, and foreign military member attendance at Army schools are examples of home station shaping activities. Sustainment plays a key role in shaping operations; sustainment planners must be involved from the very beginning.

3-74. Shaping activities usually precede an operation and may continue during and after an operation as shown in figure 3-1. The purpose of shaping activities is to help set the conditions for successful execution of strategic plans. Global and theater shaping activities occur continuously to support global and theater requirements during competition and help set the conditions for successful execution of operations during conflict.

3-75. Shaping operations may continue after a named operation ends if the command continues to maintain the operation plan. Figure 3-1 shows military activities that may typically occur in preparation for and during large-scale combat operations. The nature of operations and activities during a typical combat operation will change from its beginning to the operation's end. Shaping activities continue through all phases of named operations. Global and theater shaping never ceases.

3-76. Shaping activities help identify, deter, counter, and/or mitigate threat actions that challenge country and regional stability. A GCC's theater campaign plan provides strategic guidance in pursuit of national objectives. Likewise, CCDRs may direct more focused geographic and functional shaping activities at the potential execution of specific contingency plans for various types of operations. Shaping activities provide sustainers a better understanding of the OE and informs operation assessment, planning, preparation, and execution.

3-77. Shaping activities are largely conducted through other interorganizational participants, for example Department of State, United Nations, and NATO, with the DOD in a supporting role. Sustainment units provide support as required for various shaping activities. Military engagement and security cooperation activities are executed continuously to enhance international legitimacy and gain multinational cooperation. These activities should improve perceptions and influence adversaries' and multinational partners' behavior, develop multinational and friendly military capabilities for self-defense and multinational operations, improve information exchange and intelligence sharing, provide U.S. forces with peacetime and contingency access, and positively affect conditions that could lead to a crisis. These activities prepare the OE in advance to facilitate access, should contingency operations be required. Strong regional partnerships are essential shaping activities in peacetime to ensure operational access during plan execution. It is through these partnerships the U.S. obtains and maintains resources, such as the rights of navigation and overflight that ensure global reach and rapid projection of military power.

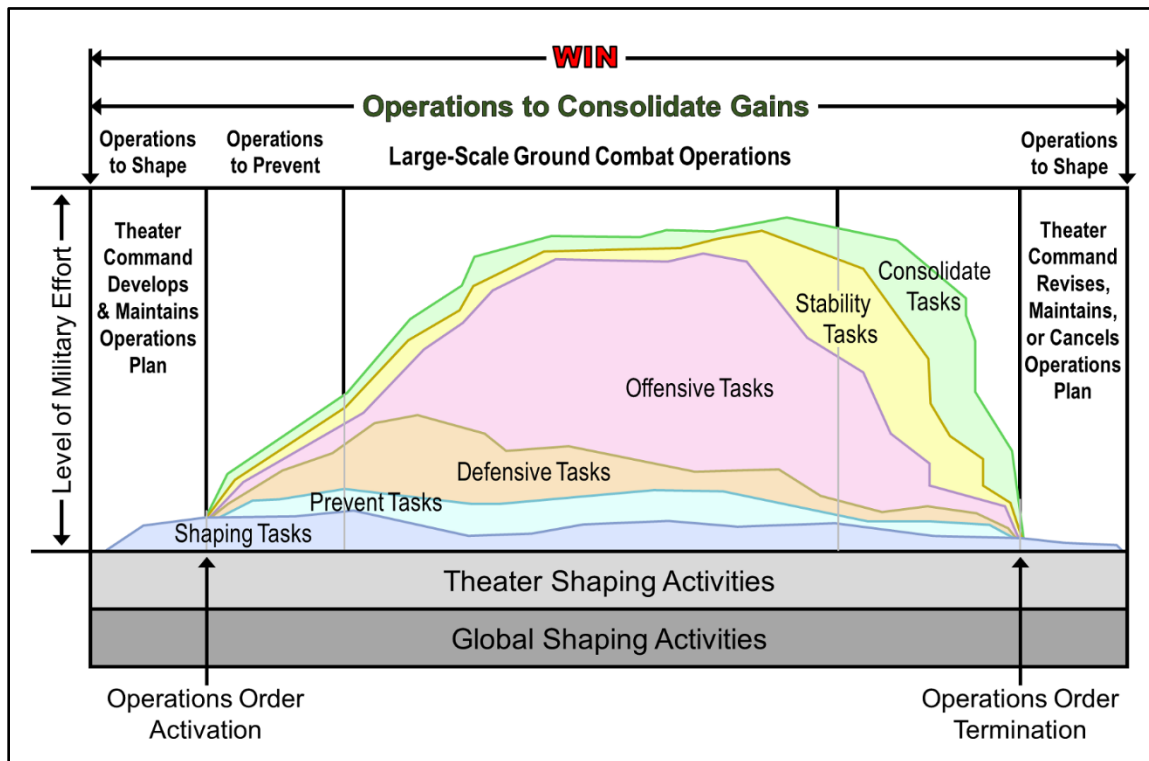


Figure 3-1. Army operations in large-scale combat operations

SECTION III – PLANNING CONSIDERATIONS

3-78. In addition to the sustainment activities and other considerations for operation to shape mentioned above, there are additional conditions and planning considerations for sustainment forces. In certain instances, such as forcible entry and in certain operational environments, OCS may not be readily available or accessible to sustainment planners. In these situations, sustainment planners must be prepared to meet the challenges of distributing supplies and bulk fuel utilizing military assets. Additional considerations are discussed below.

STRATEGIC, OPERATIONAL AND TACTICAL SHAPING ACTIVITIES

3-79. Certain conditions that must be set in theater cover shaping at the strategic, operational and tactical levels. These conditions must be in place to enable deployment, employment, sustainment and redeployment of forces. The conditions include—

- Whole-of-government initiatives.
- JOA.
 - Theater opening.
 - Port opening.
 - RSOI.
- Support to other Services.
- Theater distribution.

WHOLE-OF-GOVERNMENT INITIATIVES

3-80. Whole-of-Government Initiatives enables access to countries. It involves strategic organizations establishing host nation agreements, contracts, and clearances to allow forces to enter ports and airfields and operate on highways, rail lines and waterways in theater. It can be complex and time consuming. The number of governments and defense organizations involved can complicate and prolong the process to gain access to a country's infrastructure and commerce.

JOINT OPERATIONS AREA OPENING

3-81. Establishing a JOA relies on the efforts of strategic, operational and tactical level organizations. This condition must be tailored to accommodate size and capabilities of deploying forces. Specific tasks involved in establishing a JOA include theater opening, port opening and RSOI.

Theater Opening

3-82. Theater opening involves establishing and operating ports of debarkation (air, sea, and rail), a distribution system, and sustainment infrastructure. This condition facilitates port throughput for the RSOI of forces in theater. Specific capabilities include security forces, port opening teams, and command and control structures. Coordination between the supported CCDR, USTRANSCOM and other strategic organizations will determine who, what and how of theater opening

Port Opening

3-83. Port opening is a joint mission involving USTRANSCOM and its subordinate service component commands. The Air Force's Air Mobility Command is responsible for managing APODs, and the Military SDDC is responsible for managing SPODs. The Navy's Military Sealift Command is involved providing sealift from its organic fleet or through contracts with commercial ocean carriers. Multiple port opening options are available to the assist the GCC.

Joint Task Force-Port Opening

3-84. The joint task force-port opening is an option available to the GCC. The joint task force-port opening is designed to combine specific Air Force, Army, and Navy capabilities to provide commander USTRANSCOM with a ready-to-deploy, jointly trained force for opening ports and establishing the initial distribution network. The joint task force-port opening facilitates joint reception, staging, onward movement and integration and theater distribution by providing an interface at the APOD and/or SPOD and distribution node. Joint task force-port opening capabilities include:

- APOD and SPOD assessment.
- APOD and SPOD opening and initial operation.
- Distribution network assessment.
- Distribution node management.
- Cargo and passenger operations.
- Movement control including coordinating for onward movement of arriving cargo and passengers.
- Establishment of joint in-transit visibility and radio frequency identification network.

3-85. A key feature of the joint task force-port opening along with opening an APOD and SPOD is to open and initially operate an associated forward distribution node (such as a cargo marshalling or transload) within 10 kilometers of the airfield ramp area. The Army's key enabler to support this feature is the rapid port opening element.

3-86. The joint task force-port opening may be employed to provide early theater facilitation and capability to move the cargo off the ramp at the airfield to the forward node for eventual distribution into the theater.

Rapid Port Opening Element

3-87. Rapid port opening element is assigned to USTRANSCOM, and OPCON to SDDC. Rapid port opening element provides specific surface deployment and distribution support and operational capabilities

to APOD and SPOD. The rapid port opening element provides similar capabilities as a movement control team. For additional information, see ATP 4-16.

Transportation Brigade Expeditionary

3-88. The transportation brigade expeditionary provides command and control of assigned and attached port, terminal, and watercraft units conducting expeditionary port-opening, movement control, and austere intermodal operations at unimproved seaports in support of unified land operations. The transportation brigade expeditionary provides oversight of the Army watercraft and water terminal assets. The transportation brigade expeditionary has the ability to perform port management and can provide command and control to both operating and generating force deployed units.

SUPPORT TO OTHER SERVICES

3-89. Support to other services relies on joint interdependence that is essential to sustainment operations. Joint interdependence occurs when one service relies on another service's capabilities such as common-user land transportation. This allows services to maximize optimum use of resources and reduce duplication of effort and competition for the same resources. The CCDR implements joint interdependence through DAFL and can assign the Army the task of providing common-user support to other services.

THEATER DISTRIBUTION

3-90. Establishing the theater distribution network is an essential part of sustainment support and is pivotal to obtaining freedom of movement and action. It provides operational forces with the materiel and supplies and retrograde of repairable material needed to maintain readiness. Theater distribution involves four networks:

- Physical Network. It includes the means for distribution (airfields, roads, bridges, railroads, structures, pipelines) and the capabilities for supporting distribution operations.
- Financial Network. It facilitates distribution operations by providing policies, processes, and systems for the use of fiscal resources.
- Informational Network. It is the combination of all information systems that support theater distribution.
- Communication Network. It links the complex elements of distribution. It enables capacity, reliability, and security of communication networks that support the rapid transmission of global distribution data. Real-time communications are vital for successful execution of distribution operations.

3-91. The bulk of planning for Army sustainment in a theater is done by the ASCC and TSC. Planners focus on the challenges of geographically large and difficult to access areas. The planner develops means to generate and apply capabilities within the operational area.

3-92. The ASCC plans and coordinates means to identify and mitigate capability gaps. OCS to land forces is one of the options available. When directed, the theater Army may contract for the establishment of intermediate staging bases, possible locations for pre-positioned stocks, and possible assembly areas in support of operations to conduct large-scale combat operations and win.

3-93. Planners consider sustainment by type of support and across a continuum of possibilities to gain capabilities from other military partners, host nations, the sustainment enterprise, contracted support, and organic capabilities. OPLANs and concept plans are the basis for planning to evaluate total requirements and capabilities. For more information regarding considerations see chapter 5.

3-94. The following planning considerations may apply to multiple sustainment functions and are important for sustainers to consider during operations to shape:

- ACSA.
- International agreements.
- Established contracts (Theater, External [LOGCAP], and Systems Support).
- Customs requirements.

- Commercial capabilities.
- Requesting funding authorities.
- Non-combatant evacuation operations.

3-95. Risk, uncertainty and chance are inherent in all military operations. Sustainment planners must seek to understand, balance and take risks, rather than avoid risks, to ensure sustainment of the operational force. Risk considerations and other considerations should be addressed and mitigation strategies/alternatives developed as part of the sustainment plan. Sustainment commanders must assess and mitigate risks continuously throughout operations. The following is a sample list of risk considerations during operations to shape:

- Establishment of large APS sites constitute a high value target for potential adversaries (for both lethal targeting and intelligence collection purposes). How will the loss of an APS site impact operational requirements? Can we establish multiple sites and will the cost outweigh the force protection/redundancy benefits? How can the footprint be minimized while meeting requirements?
- Are APS sites, financial and supply automation and other systems hardened against cyber-attacks? How do you validate requirements received through electronic systems? Does the threat have the capability to change information versus directed denial of service attacks?
- Is the operational plan over reliant upon HNS, ACSAs and contingency contracts to support combat forces? Is there sufficient redundancy and flexibility in the instruments to rapidly adapt to changing requirements?
- Have you negotiated multiple points of access/entry? What happens if a HN denies country clearance?
- Has support to other services and other allies been factored into the support plan and the appropriate request/accounting processes been established?
- Can the shaping activities be misunderstood (considered threatening) and cause threat forces to accelerate their plans?

CONSIDERATIONS FOR SUSTAINMENT FUNCTIONS

3-96. Key considerations for sustainers in support of operations to shape are covered by functions below.

MAINTENANCE

3-97. Maintenance during operations to shape focus on planning and preparing for deployment while continuing to conduct routine equipment maintenance. The AFSB's LRCs may provide maintenance support at home station. Successful maintenance operations in theater requires units to deploy with their authorized stockage lists, shop stock, and bench stock items, because the flow of parts may be greatly restricted within countries during shaping operations. HNS, theater support contracting which includes local purchase, external support contracts (reach back contracting office and LOGCAP) and/or systems support contracts (reach back sustainment support) are force multipliers for maintenance in many of these operations. In such cases, if contracts are not already in place, contracting personnel support or travel with the lead elements of Army forces if feasible.

TRANSPORTATION

3-98. USTRANSCOM is responsible for moving units and equipment into theater. SDDC supports unit movements from the ports of debarkation in support of theater security cooperation exercises during shaping operations and RSOI of units and equipment. Once inside the AOR, the TSC and/or ESC provides recommendations for transit priorities. Special interest include border crossing agreements, infrastructure capacity (roads, bridges, and ports), customs and diplomatic clearance, and movement control. During shaping operations it is critical for sustainers to test transportation nodes and identify alternate LOCs. Aerial delivery capabilities should be identified and understood during this period, as requirements for alternate resupply may increase. Transportation plans for operational area opening and concepts of support may be tested during shaping. Movement boards are a mechanism to review and manage transportation plans, agreements, policies, and priorities. Use of movement boards are also a means of reviewing route status,

convoy protection plans, and transportation asset allocation to support distribution operations. For additional details, see ATP 4-16.

3-99. The GCC assigns lead Service responsibilities, normally through the contingency planning process, to achieve efficiencies and eliminate redundancies. These lead Service support functions can be for single or multiple common user functions and often include general supplies. The lead Service is responsible for forecasting operational requirements to support all operations from humanitarian assistance to large-scale combat operations. Lead Service sustainment planners should anticipate increased needs for bulk fuel, ammunition, construction and barrier material, and repair parts to support concept plans and OPLANS. The lead Service can also request support from DLA to decrease wait time, reduce cost, and improve military readiness.

3-100. ACSAs and OCS may be leveraged to attain several classes of supply. Food may also be provided through such arrangements. For clothing, individual equipment, tentage, and organizational tool sets, it is critical that units bring what is required to execute their anticipated tactical tasks with them. ACSAs should be considered for living arrangements.

3-101. The use of existing pipelines, military pipelines, assault hose lines, contracts, and enterprise bulk fuel and water agreements are all leveraged to provide bulk fuel and water. DLA-Energy support, interaction with other nations to develop ACSAs, contingency sites, fuel exchange agreements, and a quality surveillance testing program on products are critical to overall success. DLA establishes contracts with local vendors in the absence of pre-established agreements with nations in the AOR. Some considerations for planners include—

- Quality assurance and surveillance.
- Additives in the event of non-availability or high cost of fuel.
- Storage capacity and locations.
- Types of fuel required for an operation.
- Requirements for Army support to other services.
- Over the shore requirements, capabilities, and capacity.

3-102. For ammunition, planning includes an evaluation of receipt, storage, and issue options to include dispersion considerations required for net explosive weight. Planning should also include identifying locations within the AOR for a theater storage area and multiple ammunition supply points to provide redundant and robust storage capability in a forward location to receive stocks directly from the port and distribute laterally between supply points or to forward units.

3-103. It is also important to consider foreign ammunition during operations to shape. U.S. forces may be called upon to receive, store, and dispose of foreign ammunition. Logistics planners can leverage EOD assets that are trained in foreign ammunition for storage and compatibility determination. Quality assurance specialist ammunition surveillance can also assist with NATO and foreign ammunition storage and compatibility requirements.

3-104. Major end items are traditionally brought from home station for shaping operations. In the event of a replacement major end item being needed, supply managers request through current supply systems for replacement. In addition, paying agents can be used to make local purchases for emerging requirements. USAMC receives prioritization and authorization from HQDA to redistribute assets based on command priorities or replacements from other sources; these include OCONUS theater sustainment stock, unit deploying leave behind equipment, and APS. The theater AFSB manages the theater sustainment stocks, redistribution property assistance yard, and provides integrated issue of major systems. The AFSB also provides integrated fielding of all components of new equipment, normally at home station, in conjunction with new equipment training. Medical logistics planners must leverage APS, regional medical materiel and medical maintenance support agreements and contracts established during the competition phase of the contracting process. For critical items not available from those sources, units bring sufficient supplies to sustain operations.

DISTRIBUTION

3-105. Distribution is the operational process of synchronizing all elements of the logistics system to deliver the "right things" to the "right place" at the "right time" to support the GCC (JP 4-0). Distribution is the primary means that enables freedom of action, operational reach, and prolonged endurance during operations. Establishing a distribution network is critical to shaping an OE. It is enabled by a distribution management system designed to achieve support objectives. *Distribution management* synchronizes and optimizes transportation, its networks, and materiel management with the warfighting functions to move personnel and materiel from origins to the point of need in accordance with the supported commander's priorities (ADP 4-0).

3-106. Planning, coordinating and synchronizing strategic and Army capabilities for distribution are essential. Global distribution extends from the point of origin (garrison or point of supply) to the point of employment (the Soldier in theater). The Army conducts theater distribution as part of the global distribution system. Theater distribution is the flow of equipment, personnel, and materiel within theater to meet the CCDR's mission. The theater segment extends from the ports of debarkation or source of supply (in theater) to the points of need.

3-107. The TSC or ESC will establish movement boards to manage transportation policies, priorities, LOCs status, convoy protection and synchronization and transportation assets allocation to support theater distribution operations.

3-108. The TSC or ESC validated movement program should be published in an OPORD and executed by subordinate units like the sustainment brigade or movement control battalion. When transportation assets are tasked, the movement control board will ensure the transportation movement request is produced to capture transportation requirements. For additional details, see ATP 4-16.

3-109. During operations to shape, petroleum and water distribution planning is a key function of the quartermaster (POL and water) group. The quartermaster (POL and water) group continues planning the development, design and construction of the petroleum distribution system and storage facilities based on the operational plan of the theater commander. It also conducts evaluation of host nation petroleum systems and plans for the development, rehabilitation, and extension of host nation petroleum systems and storage facilities based on the operational plan of the theater commander. The quartermaster (POL and water) group also coordinates construction, rehabilitation, and maintenance requirements of petroleum facilities with the engineer command. For additional information, see ATP 4-43 and ATP 4-44.

MORTUARY AFFAIRS

3-110. DOD assigns the task of recovery and evacuation of military fatalities during joint operations to the Army. Sustainment planners must consider fatality estimates per phase, the flow of allocated mortuary affairs assets into the theater and the sustainment channels with the most expedient available transportation resources to evacuate human remains. The evacuation of human remains will be without delay to preserve the forensic evidence for the Armed Forces Medical Examiner. The logistical channels also provide for the evacuation of personal effects to the Joint Personal Effects Depot (CONUS). Establishing responsibilities and roles during shape is critical to the smooth operation of mortuary affairs for evacuation of human remains and personal effects out of the operational area. Sustainers must work with interagency and international partners for the recovery and evacuation of fatalities from—

- U.S. citizens.
- Allied and Coalition forces.
- Host nation.
- Prisoner of War/Detainee.

3-111. While evacuation of human remains out of the theater is paramount, mortuary affairs processing capacities and theater evacuation platforms can be overwhelmed due to the lethality of large-scale combat or CBRN operations. In this event, the GCC is empowered by Title 10 to authorize temporary interment for U.S. forces, and the responsibility may not be delegated to subordinate commanders. Temporary interment should only be considered as a last resort, and only when operational constraints prevent the storage or evacuation of human remains out of the operational area to a servicing mortuary or when it is deemed prudent

for the protection and health and welfare of personnel. Subordinate unit commanders must obtain permission from the GCC to conduct temporary interment operations. In extreme circumstances, when a unit is cut off and has no means to communicate with higher headquarters, the senior commander is responsible for deciding whether hasty burial will be utilized after all known support options have failed.

3-112. During operations to shape, sustainment planners explore all other options prior to temporary interment, but must develop plans for temporary storage, identify potential locations, and estimate the engineer assets required to conduct interment. Existing international agreements, Standardization Agreement 2070, and Quadripartite Standard Agreement 655 establish the precedent for interment of allied and coalition fatalities. However, plans for temporary interment overseas will require additional policies, procedures, and host nation approval prior to execution. For additional information, see appendix A, JP 4-0, and ATP 4-46.

First Army's Overlord Interment Plan

Training, planning, and preparation for mass casualty situations are critical components of successful mortuary affairs operations. During Operation Overlord, the Allied cross-channel assault was noteworthy for sustainment planning to a degree unprecedented in American military history. The effort to move more than 300,000 troops across the English Channel in a combined amphibious and airborne assault tested every aspect of sustainment operations. This included the necessity for the recovery and temporary interment of those killed in action. Today called Mortuary Affairs, this mission was then known as Graves Registration and was a vital function of the quartermaster corps.

Drawing on the American experience in World War I, when the Army established 2,240 separate temporary burial sites in France. For Overlord, the First Army's Burial and Graves Registration Plan for the initial landings planned for establishing temporary cemeteries at the Corps or Army level as opposed to divisional burial sites. To accomplish this, First Army supplemented its' three graves registration companies with two additional companies attached from the Services of Supply to provide graves registration support to each corps and one to the First Army headquarters. At D+6, there were fourteen graves registration platoons supporting the two American landing beaches, Omaha and Utah. As with many aspects of the sustainment plan, there were unexpected difficulties in the early stages of the invasion.

The 3rd Platoon, 607th Graves Registration Company landed on D-Day with the mission of establishing a cemetery in the vicinity of Omaha Beach. The fierce German resistance precluded the platoon from moving inland and a temporary cemetery was bulldozed in the sand and remains placed in the trench as a temporary interment measure. Pre-invasion planning had designated specific sites for cemeteries in each division sector and as the American's pushed inland, the 3/607th was able to set up their planned interment site, which was designated St. Laurent #1. On D+10 there were 457 remains from the temporary beach site moved here. Similar events occurred throughout the beachhead area.

At Utah Beach, the 4th Platoon, 607th was forced to bury 356 remains in an emergency burial site. The two airborne divisions who dropped behind the beaches, the 82nd and 101st, were accompanied by graves registration personnel who established temporary interment sites. SGT Elbert E. Legg of the 603rd Graves Registration Company landed by glider in the 82nd Airborne sector on D-Day and established a cemetery at Blosville where 530 remains were interred by D+6. The Quartermaster Section, 101st Airborne was forced to conduct hasty burials near Heisville. By June 10th, there were eight cemeteries at the two beachheads; one per division. The following week the graves registration platoons were pulled back from the divisions and one graves registration company was assigned to each corps. By 8 August, the eight cemeteries held 30,302 remains.

The graves registration operations in Overlord were planned in detail prior to the invasion. Critical to the successful execution of the mission was the presence of trained graves registration personnel who directed the interment operations. During operations to shape, sustainers should consider temporary interment as a last resort, and only when operational constraints prevent the storage or evacuation of human remains out of the operational area to a servicing mortuary. Early mortuary affairs planning for mass casualties is essential, as subordinate unit commanders must obtain permission from the GCC to conduct temporary interment operations.

GENERAL ENGINEERING SUPPORT

3-113. General engineering support to shaping operations focuses on building, repairing, and maintaining various infrastructure facilities; providing essential services; and ultimately building partner capacity to co-develop host nation capabilities to perform such tasks. Infrastructure development is often a series of technical tasks that fall under different sectors, such as electricity, road and rail transportation, water supply and sanitation, water treatment, and sewage.

3-114. Shaping the OE requires engineer planners anticipate the impact of geography, force projection infrastructure with specific engineer missions, and available engineer forces within the supported AOR. Engineer planners determine the basic mobilization, deployment, employment, and sustainment requirements of the CCDR concept of operations. Engineer planners secure funding within authorities and plan for procurement of class IV supplies and services. For more information on engineering, see FM 3-34.

OPERATIONAL CONTRACT SUPPORT

3-115. At the theater level, sustainment planners align allocated military resources against forecasted requirements and employ non-organic sources, such as OCS, to mitigate risk. Sustainment planners must also be prepared for theaters where forcible entry operations will be required, or an adversary with peer or overmatch capabilities that will limit available OCS support. As part of the military decision making process (MDMP), planners develop Annex W to ensure the synchronization of OCS capabilities within the commander's operational concept. This synchronization includes the identification of commercial support requirements, the location and capabilities of contracting support units, and the procedures and responsibilities for ensuring safety and accountability of contractors. Commanders at each echelon must plan for the integration of contracted capabilities, and should include planners from the supporting contracting support brigade and AFSB to address specific OCS capabilities.

3-116. Theater support contracts address theater specific requirements and include micro-purchases. Elements of the ACC deploy with combat forces to provide the necessary contracting authority to award these contracts in support of Army operations. External support contracts provide contingency requirements on a global scale, and often require administrative contracting, quality assurance, and government property administration support. The LOGCAP program, managed by ASC, provides deployed forces with the largest, most comprehensive external support contract within the DOD. External support contracts with the DLA, TRANSCOM and other DOD agencies also provide deploying forces with critical commercial support. Systems support contracts provide field services representatives to maintain and repair critical systems, both in CONUS and during contingency operations.

3-117. Sustainment headquarters at brigade and above include an organic OCS branch within the support operations section that plans and manages the OCS process. Because commercial support impacts multiple staff sections and lines of effort, commanders at EAB may establish bureaus, boards, centers, cells, and working groups to plan, synchronize and integrate desired effects. The theater Army (and when constituted, the field army) do not have an OCS cell and should form one within the G-4 staff to fulfill OCS planning and management. The cell members may include representatives from other sections, including the staff judge advocate (SJA).

Operational Contract Support: A Critical Enabler During OIR

Making optimal use of contract capabilities is a critical component to mission accomplishment as evidenced during OIR. In April 2013, Abu Bakr al-Baghdadi proclaimed the establishment of the Islamic State in Iraq and al-Sham. Combining remnants of the al-Nusra front and al Qaeda in Iraq, the new terrorist group increased its attacks against government forces on both sides of the Syrian-Iraqi border. Over the next few months, the group seized control of more than 100,000 square kilometers and occupied the Syrian city of Raqqa. In June 2014, the group attacked Iraqi government forces in Mosul, capturing the city along with a stockpile of heavy weapons. Subsequent Islamic State in Iraq and al-Sham attacks pushed south, threatening the northern suburbs of Baghdad.

In response to the Iraqi government's request, U.S. and coalition forces established a combined joint task force to initiate security force assistance operations to improve Iraqi security capabilities and defeat Islamic State in Iraq and al-Sham. Iraqi government restrictions on the deployment of U.S. military personnel within Iraq severely constrained the combined joint task's organic sustainment capabilities. The combined joint task force's staff established an operational contract support integration cell that effectively leveraged multiple commercial capabilities to house, feed, train, and equip Iraqi forces in preparation for the culminating attack to recapture Mosul.

During this period, the combined joint task force coordinated with subordinate maneuver, sustainment, and contracting headquarters to identify, synchronize and execute 328 different commercial support requirements at a cost of \$878 million dollars. In the final stage of preparation, commercial trucks moved 13 Bailey bridges from Kuwait to critical river crossing sites in Iraq, then transported the entire 9th Iraqi Division, including 110 heavy armored vehicles, to their final staging areas south of Mosul. There, other contractors repaired and refueled equipment while providing base life support to the Iraqis in preparation for the assault.

Beginning on 16 October 2016, Iraqi forces advanced along both sides of the Tigris River towards Mosul, while U.S. and coalition forces provided supporting fires. Subsequent fighting lasted until July 2017, with Iraqi forces overcoming improvised explosive devices, foul weather, and bitter resistance amidst the city's dense urban terrain. The ultimate success of Iraqi forces destroyed the remnants of Islamic State in Iraq and al-Sham in Iraq and provided U.S. military leaders with a blueprint for success in fighting by, with, and through coalition partners. The successful employment of contracted commercial support, meanwhile, demonstrated the importance of operational contract support as a critical enabler in support of combat and stability operations.

FINANCIAL MANAGEMENT

3-118. Financial managers must be prepared to provide funding support during operations in all four Army strategic roles. As the financial management strategic enterprise integrator, USAFMCOM utilizes its internal capabilities to deliver system support to financial Enterprise Resource Planning systems, financial audit and compliance support, Financial management technical training and evaluation, banking, and limited accounting for sustainment elements below corps. In addition, it directly coordinates with interagency enablers to include the Office of Secretary of Defense (Comptroller), the Assistant Secretary of the Army (Financial Management and Comptroller), Federal Reserve Banks, DFAS, and Treasury in support of the Financial Management enterprise. These interagency partners are critical in providing battlefield currency support, E-commerce, financial authorities and policies, and accounting support.

3-119. Resource management cells (J-8/G-8/S-8) must forecast and request funding authorization in advance for future operations through appropriate fiscal channels. Operation and maintenance, Army is the primary source of funding to support U.S. appropriations to be enacted by Congress for specific purposes. Special funding appropriations provide support to U.S. and non-U.S. military personnel and are generally for stability efforts. Financial managers must be prepared to execute and account for all special funding with the same level of effort required to execute and account for operation and maintenance Army funding.

3-120. Operations to shape may include funding support for organizing, equipping, and training foreign forces. Title 22, United States Code contains the Foreign Assistance Act, the Arms Export Control Act and other laws that authorize security assistance, developmental assistance and other forms of bi-lateral aid that financial management personnel must be familiar with to support stability operations. ARSOF and the supporting or supported conventional force have long used Title 22 funding, provided by the Department of State, in foreign internal defense operations that occur during stability operations or follow on from a larger stability operation. Congress has also authorized DOD to provide security cooperation support to foreign military and security forces, with Department of State coordination and Congressional notification, through chapter 16 of Title 10, U.S. Code.

3-121. The FMSC continuously works in close coordination with sustainment elements below corps to ensure the readiness of financial management units at the tactical level. Readiness support is provided through combined training opportunities and external evaluations. Financial management units provide pay agent training and payment support through cash, e-commerce and ACSAs during shaping exercises. Individual and collective training opportunities may be available during theater security cooperation and exercise events. For more information, see FM 1-06.

PERSONNEL SERVICES

3-122. Personnel services complement logistics by planning for and coordinating efforts which provide and sustain personnel. Personnel services contribute to personnel welfare (i.e. readiness, quality of life). Personnel services facilitate the Army's capability to prolong endurance. Personnel services include, HR support, legal support, religious support and band support. During operations to shape, there may be very high demands for personnel services support. However, operations to shape are generally the result of deliberate planning prior to the introduction of forces.

Human Resources Support

3-123. Successful human resources support is dependent on careful planning, coordination, synchronization, and continuous integration with strategic partners during shaping activities and must occur prior to, during, and after military action. The objective of HR support is to maximize operational effectiveness by anticipating, manning, and sustaining military operations. HR support operations accomplish this by building, generating, and sustaining the force to provide CCDRs with the forces required to set conditions to win future conflicts.

3-124. During the shape role, human resources support involves the national-level capability to plan, resource, manage, and control the human resources management life cycle functions for the Army. It involves integrating human resources functions and activities across the Army staff, among the respective components, and among the Services.

3-125. Human resources support during shaping activities include functions and tasks planned, coordinated, integrated, and executed by operational-level HR organizations and HROBs located within ESCs, DSBs, and sustainment brigades. These functions and tasks include casualty and postal operations, personnel accountability, and human resources planning and operations. Deliberate coordination and synchronization of these functions with strategic level partners like the Casualty and Mortuary Affairs Operations Division for casualty operations, military postal services agency for postal, and HRC for replacement operations are necessary in order to prolong endurance during large-scale combat operations. These habitual support relationships facilitate the CCDR's ability to extend operational reach.

3-126. During shaping activities, the ASCC G-1 coordinates with corps/division to establish theater replacement management networks, personnel flow, and postal flow estimates. The ASCC G-1 refines and validates the casualty estimation, establishes and manages the personnel portion of reconstitution or

reorganization efforts. To ensure initial HR capabilities are established prior to the main flow of forces arrive, HR support elements are included as part of the early entry element of the sustainment brigade assigned to the theater opening mission. The theater gateway PAT establishes initial theater personnel accountability and theater replacement networks. Its mission is to conduct personnel accountability in the RSOI process, load and unload personnel data from the deployed theater accountability system, and conduct limited essential personnel services for transient personnel.

3-127. Additional theater gateway PATs and military mail terminal teams, with corresponding HR companies and platoons, could be required if more than one inter-theater POD is used for RSOI and/or mail flows. However, with multiple entry points, it may be necessary for initial personnel accountability to be completed by PATs or the deploying units themselves. In this case, the arriving personnel data file would be passed to the theater gateway PAT at the primary POD.

3-128. The theater gateway PATs mission does not include conducting any other sustainment related requirements for life support and RSOI (billeting, feeding, equipping, and transportation of transient personnel). These activities are conducted by the DSB, sustainment brigade, DSSB, CSSB or MCT. For more details, see FM 1-0, ATP 1-0.2. Planning requirements include the placement and number of HR elements and units within a theater of operations. HR support responsibilities for early entry elements include:

- Initiating and establishing theater personnel accountability and personnel tracking.
- Establishing and operating theater casualty assistance center and conduct casualty operations.
- Establishing, operating, and maintaining a theater personnel database.
- Coordinating and synchronizing the establishment of a military mail terminal to support postal operations for theater.
- Estimating intra-theater mail movement usually by ground between the military mail terminal s and Army post offices.
- Replacement operations plan established.

3-129. The HROB is part of the early entry element of the sustainment brigade SPO, focusing on ensuring theater gateway PAT personnel are included as part of the early entry element for theater opening and the establishment of PAT support and initial postal support. Early establishment of postal infrastructure during theater opening or early entry operations limits the requirements for postal restrictions and allows the flow of mail to commence earlier. The HROB receives technical guidance from the HRSC and higher level HROBs, while receiving sustainment and execution guidance from the SPO section and the commander.

Band Support

3-130. Army bands support operations to shape by promoting regional stability. Through cultural exchange, bands are uniquely capable of influencing human behavior and perceptions without ever speaking a word. Army bands support CCDRs by promoting U.S. national interests and building partnerships. Army bands can exert a low-threat, influential effect when performing in support of the commander's outreach plan, or public and cultural diplomatic initiatives. See appendix A and FM 1-0 for more details.

HEALTH SERVICE SUPPORT

3-131. Army medical personnel provide AHS support to sustain forces deployed during operations to shape. The health service support mission includes medical treatment (organic and area support), hospitalization, medical evacuation (including medical regulating), and medical logistics (including blood management). Army HSS and force health protection capabilities are critical enablers during operations to shape and prevent. The ASCC commander has the authority to designate command and support relationships to deployed commands to integrate and synchronize capabilities (such as transportation, engineers, EOD, medical, and logistics) until later enabling commands arrive in theater. MEDCOM (DS) is responsible for integration, synchronization, and execution of AHS support to the deployed force.

3-132. Essential AHS support tasks during shape/prevent include the provision of support to stability efforts (which include regional health engagements), home station medical activities, and generation of medical combat power. Operations to shape and prevent are executed continually across all strategic roles with the intent of enhancing international legitimacy and gaining multinational cooperation to mitigate conditions that

could lead to a crisis. Therefore, AHS support to stability tasks is critical to the success of medical operations throughout the phases of conflict. Regional health threat assessments, medical infrastructure assessments, building partner medical capacity, establishment/maintenance of support agreements, and other AHS support activities to set the theater provide the foundation for planning, sustaining, and achieving effective medical support to the theater campaign plan.

SUPPORT TO ARMY SPECIAL OPERATIONS FORCES

3-133. Though applicable across the range of Army operations, ARSOF support planning and execution begins during operations to shape. As discussed in chapter 2, ARSOF sustainment structures (GSBs and 528th Sustainment Brigade [SO]) are lean and unable to provide all sustainment functions required to support ARSOF missions. ARSOF sustainment structures are designed to perform the following tasks:

- Enable expeditionary ARSOF missions.
- Deploy early and rapidly.
- Fill immediate and critical logistics requirements with organic formations.
- Provide the capability to plug into theater logistics structures to achieve required endurance.
- Tie the ARSOF units to the operational theater support structure.

3-134. ARSOF rely on ASCC logistics structures to provide Service CUL to all Army forces in the operational area regardless of command structure. ARSOF routinely arrive in the operational area early, execute forced-entry operations, and operate independently in small teams. Because of these factors, ASCC sustainment support to ARSOF is tailored to meet requirements based on the OE.

3-135. For example, a special forces group-led joint special operations task force with its organic GSB cannot simply plug into the distribution network of a single DSB or sustainment brigade and execute tactical distribution to each of the special forces battalions, companies, and special forces operational detachments alpha in its task organization. In most cases, a comprehensive concept of support, including multiple DSBs, sustainment brigades, CSSBs, and BSBs spread across the operational area, is required with some CSSBs providing area support to SOF.

3-136. In addition to Service common user logistics, ARSOF have requirements for SOF-peculiar equipment that requires supply, sustainment, and maintenance mechanisms outside of the Army common support structure. SOF-peculiar sustainment requirements are the responsibility of USASOC and U.S. Special Operations Command.

SOF SUPPORT IN UNDEVELOPED THEATERS

3-137. When a SOF unit deploys into an undeveloped theater for shaping operations, it must bring sufficient resources to survive and operate until it establishes a bare-base support system or makes coordination for TSC and/or ESC, host nation, or third-country support. All SOF units require services pertaining to food, water, and clothing, as well as medical and personnel needs. Operational project stocks and foreign-nation support agreements will be utilized as available. A bare-base support system may function from the CONUS, afloat (amphibious shipping or mobile sea bases), or at a third-country support base. The bare-base support system relies heavily on strategic and tactical airlift or sealift for resupply.

3-138. Deployed SOF units in an undeveloped AOR may have to bypass normal logistics support echelons. These units may maintain direct contact with their parent units, or may request a tailored support package from the 528th Sustainment Brigade to accompany them into the theater of operations. The brigade can then request directly from the wholesale logistics system and provide support and sustainment to the ARSOF units. The brigade may also rely on theater support contracting to obtain local support. The 528th Sustainment Brigade is capable of deploying a tailored brigade headquartered for command and control of operational-level logistics in support of ARSOF missions, until relieved by ASCC logistics command and control capabilities. The brigade is capable of providing command and control of Army CSSBs operating in support of ARSOF for up to six months. In practice, the solution may be some combination of all options.

SOF SUPPORT IN DEVELOPED THEATERS

3-139. In a developed AOR, the ASCC establishes a sustainment structure within the AOR that provides sustainment support to ARSOF. Pre-positioned war reserve materiel stocks, operational project stocks, and foreign-nation support agreements may provide support. The logistics force structure of ARSOF has the mechanisms to plug in to all joint and Army sustainment structures required for replenishment operations. Basic life support funding for SOF forces must be coordinated through financial managers.

3-140. ARSOF elements will require tailored organic ARSOF sustainment capabilities often augmented by theater ASCC or designated GCC lead for common user logistics support/EA. Special operations-peculiar support and services will be provided by USSOCOM IAW Title 10, Section 167. The nature of the SOF campaign and mission may also require leveraging host nation, interagency, or nonstandard logistics capabilities. See ATP 3-05.40 for more information on ARSOF Sustainment and FM 6-05 for more information on CF and SOF integration, interoperability and interdependence. For more information on special operations sustainment, see ATP 3-05.40, FM 3-05 and FM 6-05.

SECTION IV – ROLES AND RESPONSIBILITIES BY ECHELON

3-141. Sustainment activities during steady state shaping operations differ from shaping activities for contingency and crisis response operations. For example, sustainment tasks to support military engagement and security cooperation are less resource intensive than tasks conducted for large-scale combat operations. Regardless of the activities, the role of Army organizations do not change. A *role* is the broad and enduring purpose for which the organization or branch is established (ADP 1-01).

THEATER ARMY

3-142. The theater Army's role is ASCC to a GCC. The theater Army integrates land power within theater engagement plans and security cooperation activities. Integrating land power requires the theater Army to train and prepare Army forces for operations and to coordinate training and readiness requirements with Service force providers. Integrating land power also includes establishing and extending the network, sustainment infrastructure, and leveraging national to tactical intelligence assets, and protection capabilities that support operations throughout an AOR. The theater Army staff works closely with the TSC to develop plans to execute sustainment during shaping operations. Together, these staffs apply all the considerations discussed above to develop the plan, and the TSC executes the plan. Key activities during the planning process are:

- Plan and coordinate sustainment for security cooperation activities such as bilateral and multinational exercises to improve multinational interoperability and operations.
- Plan and coordinate sustainment for missions to train, advise and equip foreign forces.
- Provide recommendations to Army representatives negotiating basing and transit rights, establishing relationships, and formalizing support agreements.
- Participate in OPLAN and concept plan development to include the logistics supportability analysis and provide logistics estimates to interagency partners.

3-143. The TSC simultaneously plans and synchronizes sustainment operations for theater security cooperation activities, which include security assistance, joint and multinational exercises, security force assistance, civil-military operations, and decisive action operations in multiple operational areas.

3-144. Planners use the understanding of an OE and situational understanding developed during the execution of shaping activities to develop and refine these OPLANs as conditions change in various operational areas. For example, a TSC review of an OPLAN could reveal that a planned port or designated supply route are inadequate for large-scale combat operations. The TSC forwards a recommended alternative to the ASCC headquarters.

3-145. The ASCC G-1 is the senior Army HR representative/advisor in the theater. Its primary function is to plan and prioritize HR support to assure a unity of purpose and effort that maximizes the readiness and operational capabilities of forces within the theater. The TSC ensures HR organizations (human resource support company, military mail terminal, theater gateway PAT, HR Company) execute their HR missions

IAW the policies, priorities, and timelines established by the ASCC G-1/AG. Refer to FM 1-0 for specific roles and responsibilities.

Support Commands in Shaping Operations: 21st Theater Sustainment Command in Support of NATO

Support commands provide continuous sustainment support to the theater Army during operations to shape. Operations to shape include security cooperation activities and military engagements designed to increase partner capacity and build a cooperative environment with unified action partners.

The dissolution of the Soviet Union and the Warsaw Pact in 1991 resulted in former adversaries becoming members of NATO. The necessity for the U.S. Army and its allies to integrate these new partners spawned numerous exercises designed to enhance readiness and interoperability among the NATO forces. Recent examples of these theater shaping exercises are Saber Strike and Atlantic Resolve.

Saber Strike 2018 was the eighth iteration of the U.S. Army Europe-led exercise. Hosted by Poland, Latvia, Estonia and Lithuania, Saber Strike featured the participation of 19 allied and partner nations and over 18,000 troops. The U.S. 2nd Cavalry Regiment conducted a lengthy cross-border convoy of more than 900 Strykers and support vehicles from Vilseck, Germany into Poland to demonstrate the ability of NATO forces to rapidly respond to a crisis on the continent.

Simultaneously, the 1st Armored Brigade Combat Team deployed more than 45 M1 Abrams tanks and M2 Bradley Fighting Vehicles through the Port of Antwerp during Operation Atlantic Resolve 2018. This team joined more than 60 UH-60 Black Hawks, CH-47 Chinooks and AH-64 Apache helicopters of the 12th Combat Aviation and 1st Air Cavalry Brigades in Poland as part of Saber Strike. Critical to the success of these long-standing exercises is the sustainment operations orchestrated by the 21st Theater Support Command.

The mission of the 21st Theater Sustainment Command is to execute command and control of operational sustainment across the European Theater, conduct RSOI, set the JOA, execute theater opening, theater distribution, and theater sustainment in support of USEUCOM and NATO operations; and as directed, execute joint security operations, and support to USAFRICOM operations.

Inherent in operations to shape is the ability of U.S. sustainment forces to plan and synchronize sustainment operations in support of host/partner nations. Exercises such as Saber Strike are designed to enhance the interoperability of the U.S. forces with its host/partners and improve the host nation's ability to provide for its own defense and act as a viable partner in contingency operations.

3-146. Funding at the operational or theater level is engaged in resourcing requirements; identifying, acquiring, and distributing funds; tracking, analyzing and reporting execution in support of stated objectives to senior Army leadership and Army budget office. The theater G-8 is the senior financial resource manager in theater. The G-8 at the theater level is responsible for providing theater specific guidance, policy, and instructions for theater funding. Theater funding guidance is published in the form of an appendix to the theater OPORD or fragmentary order to the original OPORD. The appendix provides detailed instructions the theater staff and subordinate units need to follow in order to meet requirements for funding.

FIELD ARMY

3-147. The field army, when employed, focuses on deterrence and setting conditions for contingency operations should the adversary attack or the decision is made to initiate armed conflict. While the theater Army continues to shape the entire theater and address aggression outside this designated AO, the field army maintains the necessary formations and capabilities to provide credible deterrence and ensure the ability to quickly respond to escalation within the AO. The field army can conduct a land-based campaign of completion against the adversary on behalf of the GCC and, due to its presence, is postured to transition to a warfighting headquarters should conflict arise. The field army is also tailored in its capability and capacity as determined by the nature and capabilities of the near-peer adversary. As the near-peer adversary's capabilities change, so do those of the field army. Key activities during the planning process are:

- Prepares for potential armed conflict by conducting detailed analysis of critical adversary systems in conjunction with partners.
- Conducts an aggressive campaign of competition to counter and contain the near-peer threat as an integral part of the theater campaign.
- Maintains the necessary formations and other capabilities to provide credible deterrence.
- Utilizes dispersion, hardened facilities, deception, and multi-domain obscuration to create protected positions of advantage.

3-148. The ESC simultaneously attached to the field army plans and synchronizes operations for the field army security cooperation activities, including joint and multinational exercises, flexible deterrence operations, and decisive action operations in multiple operational areas.

3-149. Planners use situational understanding and the understanding of the OE developed during the execution of shaping activities to develop and refine OPLANs as conditions change in various operational areas. For example, an ESC could adjust sustainment requirements based on the field army being tailored for each region, with manning occurring based on potential or actual hostilities.

CORPS

3-150. Army units at the corps and lower echelons execute shaping tasks and provide the forces for security cooperation. Army forces may support security force assistance, foreign internal defense, or security force assistance by participating in multinational exercises, medical and other civil-military operations, development assistance, and training exchanges. Army forces at corps echelons and below directly engage with partner forces, governmental and nongovernmental organizations, and civilian populations to accomplish their mission, build rapport, and improve conditions to promote stability.

3-151. The ESC assigned to the corps participates in multinational exercises and supports readiness of corps units at home station. It may be tasked to support specific shaping operations if the scope of the operation and the command and control and distribution/materiel management requirements warrant a sustainment command presence. This may become important in multinational exercises or large-scale humanitarian assistance operations.

DIVISION

3-152. Division headquarters are often tasked to be the primary interface for the Army with various unified action partners during operations to shape. When regionally aligned, a division with a tailored package of its subordinate brigades and other enablers from both Active and Reserve Components is allocated to a CCDR to help execute that CCDR's theater campaign plan.

3-153. The DSB assigned to the division participates in multinational exercises and supports readiness of division units at home station. DSBs may be aligned to a specific country for partnership. If so, DSBs are task organized based on the sustainment command's deliberate analysis of requirements to support the CCDR's mission. Regionally assigned and aligned sustainment forces train and work together with partner nations in an effort to better understand each other's capabilities and operating procedures. These relationships are critical to establishing agreements and contacts that will mutually benefit both countries.

BRIGADE

3-154. Brigades deploying in support of operations to shape work closely with theater Army and country team staffs through their higher echelon headquarters. Commanders ensure that readiness priorities align with their mission and are both realistic and relevant.

3-155. BCTs and multifunctional support brigades have organic support capabilities, and should be integrated into the theater sustainment network during operations to shape. This may be some combination of enterprise organizations such as the TSC, ESC, host nation, or OCS.

3-156. Security force assistance brigades are a critical asset in shaping operations. These units lay the groundwork needed to build partnerships and agreements between unified action partner nations. Security force assistance brigades have limited organic support capabilities and are dependent upon the theater sustainment network during shaping operations.

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Chapter 4

Sustaining Operations to Prevent

Chapter 4 provides an overview of sustaining operations to prevent. It discusses sustainment preparation of the OE, planning considerations for operations to prevent, and sustainment to prevent activities.

SECTION I – OVERVIEW OF SUSTAINING OPERATIONS TO PREVENT

4-1. The purpose of operations to prevent is to deter adversary actions contrary to U.S. interests (FM 3-0). It is typically conducted in response to activities that threaten unified action partners and require the deployment or repositioning of forces in a theater to demonstrate the willingness to fight if deterrence fails. Furthermore, prevent activities enable the joint force to gain positions of relative advantage prior to future combat operations. As part of crisis response or limited contingency operations, operations to prevent are tailored in scope and scale to achieve a strategic or operational-level objective. It may be conducted as a stand-alone response to a crisis, as in a noncombatant evacuation operation, or as part of a larger joint operation such as large-scale combat.

4-2. Operations to prevent are characterized by actions to protect friendly forces and indicate the intent to execute subsequent phases of a planned operation. With the transition from shaping to deterrence, the theater Army shifts to refining contingency plans and preparing estimates for land power based on GCC guidance.

SECTION II – SUSTAINMENT FUNDAMENTALS

4-3. Sustainment of operations to prevent require a force array tailored to the type of operation, geographic location, permissiveness of the environment, threat, and a host of other considerations determined during the planning phase of prevent operations. Commanders must also consider possible sequels and branches during planning to ensure optimal command and support relationships are established, and the right mix of forces are identified for potential follow-on operations. The phased arrival of Army sustainment forces will require planners to integrate non-Army solutions, including acquisitions cross-service agreements and OCS, to enable the rapid deployment of combat forces.

4-4. The ASCC is responsible for all Army operations, to include reception of forces, sustaining forces, and preparing to redeploy forces. The ASCC also interacts with strategic and operational commands and organizations essential to the theater distribution network.

4-5. Assessment of the sustainment preparation of the OE and analysis conducted during operations to shape is a key activity for sustainers during operations to prevent. The outcomes of sustainment preparation of the OE informed OPLANs and time-phased force deployment data (TPFDD). The data also aided in identifying capabilities and capacities needed to successfully transition from operations to shape to operations to prevent and beyond. It is during operations to prevent that plans and estimates are refined, the theater distribution network is expanded, and actions are taken to deploy forces as required.

REFINING PLANS AND DEVELOPING ESTIMATES

4-6. DLA, in coordination with the CCMD and Services, continues to refine its mission analysis and logistics estimates to identify joint logistics requirements and continue to set the theater. Actions may include:

- Changes in stock positioning (for example- locations, quantities).
- Contract reviews for appropriate surge clauses and operational contingency zones.
- Market research to identify local procurement opportunities.

- Discussions with industrial base partners regarding production capacities.
- Identification of potential acquisition policy waivers that may be required.
- Close coordination with the Services on readiness rates and critical weapon systems.
- A readiness review of DLA deployable capabilities.

DLA may provide additional liaison officers or deploy a DLA Assessment Team with forward deployed units to coordinate support.

4-7. The TSC, ESC, DSB, and sustainment brigade refinement of sustainment plans and estimates is a continuous process. Sustainment planners will continue to conduct detailed analysis and assessment to update support requirements and availability of resources based on the ever changing OE. These estimates are provided to the CCMD and interagency partners for planning purposes. The availability of commercial support will play a particularly important role during early stages of operations to prevent and may change rapidly due to enemy activity or host nation policy.

Sustaining Overlord: The Logistical Planning for the Normandy Invasion

Refining logistics plans developed during operations to shape and developing estimates for complex operations are an inherent part of operations to prevent and the subsequent conduct of large-scale combat operations. Arguably, the most complex operation ever conducted by the United States Army, Operation Overlord, the cross-channel landing on the Normandy beaches, required a detailed logistical plan on a scale never before attempted.

The operation, intended to convey five divisions in two field armies across the twenty-mile wide English Channel to conduct an opposed amphibious assault landing against prepared defenses necessitated a logistical support plan that touched every aspect of sustainment. From the beginning of the United States entry in the war, the Allied plan had always been to conduct a cross-channel landing onto the European continent from England. The shortest route into the heart of Germany lay through France and the Low Countries. Preliminary raids, such as at Dieppe, had shown the folly of trying to assault established ports. From its inception, Overlord would be an amphibious operation. Initial planning for the operation began in March 1943, with a target of executing the invasion in May 1944.

Sustainment planners faced a daunting task in preparing the logistical plan. Moving the huge assault force across the Channel required a well-coordinated staging plan, the acquisition and loading of specialized landing craft, and a detailed plan to support the lodgment. Following the landing, there was the need for the establishment of temporary supply bases to support the forces ashore and the reception and on-ward movement of follow-on forces. Lastly, the plan needed to address the rebuilding of ports and establishment of the lines of communication to support the breakout from the beachhead. One unique requirement was the establishment of artificial harbors. Without access to ports such as Cherbourg, the Overlord planners had to develop a means of unloading the huge numbers of vehicles and tons of supplies at the beaches. The problem required a two-fold solution; construction of a breakwater to provide a sheltered anchorage and the installation of piers for the discharge of vessels. The solution, the floating Mulberry dock system, proved to be one of the great innovations of the war. The result of a massive engineering and resource investment, the artificial harbors proved to be the key to supplying the invasion force.

D-Day, 6 June 1944, saw the Allied armies successfully gain a foothold on the Continent following a bloody assault. Construction of the artificial harbors began on D+1 with the sinking of hulks to form the breakwater and the largest Mulberry pier was in place at Omaha Beach on D+16. By 18 June, using all methods, the Allies had discharged 116,000 tons of supplies, 41,000 vehicles and 314,514 troops across the beaches. A huge storm then struck and from 19-23 June, disabled the artificial port operations. Once back in action, the discharge of supplies increased so that by D+24, over 20,000 tons of material were being delivered daily. The logistical plan that supported Overlord and ability to adapt the plan successfully was instrumental in winning the war in Europe.

LOGISTICS ESTIMATION

4-8. Sustainers employ tools such as the Operational Logistics Planner that produces class of supply consumption estimates for units at all levels from team, to platoon, to company, to Army headquarters. Operational Logistics Planner enables staffs at all levels to estimate mission requirements for all class I, II,

III bulk, III packaged, IV, V, VI, VII, VIII, and IX as well as water, ice, and mail for their units. It also provides an analysis of the estimated transportation assets needed to get the supplies to the units. Operational Logistics Planner uses the latest Army approved planning rates and force structures. Units can be customized to add or remove equipment and personnel. For additional information, see appendix C.

CASUALTY ESTIMATION AND REPLACEMENT REQUIREMENTS

4-9. The Army G-1 is the functional proponent for overall casualty estimation (killed in action, captured, missing in action, and wounded in action, disease and non-battle injury) and must coordinate closely with the Army Surgeon General for Army evacuated rates, in support of projected manning requirements. Replacement requirements consist of the killed in action and evacuated Soldiers not return-to-duty, prisoner of war and missing in action. Casualty estimation is conducted at ASCC level and above as part of the planning process for contingency operations and approved by the CCDR.

4-10. The Medical Planners' Toolkit described below integrates several tools including the Casualty Rate Estimation Tool, which provides the capability for planners to emulate the plan to calculate the combat and noncombat injuries and illnesses that would be expected during military operations. Casualty estimates can be generated for ground combat, ship attacks, fixed facilities, and natural disasters. The Casualty Rate Estimation Tool generated patient streams are based on the casualty estimate and the user selected Patient Condition Occurrence Frequency distribution. It uses stochastic processes to allow users to evaluate medical planning risk.

4-11. Close coordination with the support operations officer in ESCs, DSBs, and sustainment brigades is required to ensure human resources planners are properly synchronized with logistics and medical planners. Casualty estimates support operations planning, future force planning, and staff training. Casualty estimation and replacement requirements should be planned during course of action development to assess force strength for missions within the concept of operations and scheme of maneuver to establish communications and electronic interface for personnel accountability and patient tracking early and enable timely and accurate information, especially during large-scale combat operations.

4-12. Mass casualties must be included in the planning process, as well as processing large-scale replacements. The ASCC G-1 must continuously coordinate with the corps/divisions for proper replacement flow in theater with allocated replacement seats in the TPFDD. During large-scale combat operations the Army's theater medical planners may anticipate a sustained rate of 3,600 casualties per day. These casualties will vary in severity of injury and represent killed in action, wounded in action, and disease and non-battle injuries. Army HR planners should anticipate having to replace approximately 25% of the total casualties and any prisoner of war or missing in action personnel. This equates to a sustained Army casualty replacement requirement of approximately 800 per day.

4-13. The ASCC G-1/AG is responsible for developing replacement requisitions as part of the deliberate planning process. HRC assists Army commands in developing replacement force packages by using a reinforcement sourcing process. This process guides collectively-trained soldiers, in crews, teams, or squads, to combat in a manner that preserves their morale and fighting spirit, benefiting them and the units they join. See appendix A and FM 1-0 for more details.

ARMY HEALTH SYSTEM SUPPORT DURING PREVENT

4-14. Army operations to prevent are an extension of operations to shape and are designed to prevent adversary opportunities to further exploit positions of relative advantage. AHS support, through synchronization and integration by the MEDCOM (DS), is a critical asset in the ASCC commander's mission to prevent/deter the escalation of future combat and positively impact the wellbeing of the HN population. Key AHS activities during prevent include the provision of medical support to flexible deterrence/response options, setting the theater for possible escalation. Medical planners continue support to the theater campaign plan, and provide medical support to force projection activities.

4-15. During the transition to operations to prevent, the surgeon cells at each echelon conduct planning refinement, coordination, synchronization, and integration of AHS support to flexible deterrence/response options. These options range from mobilization, force tailoring, repositioning forward stationed medical assets, providing the medical plan for forces in-transit, and/or employing expeditionary medical assets.

Surgeon cells at EAB derive or refine medical support requirements based on G-1 new or revised casualty estimations, and modify medical plans for capability and capacity sufficiency.

4-16. Surgeon cells at EAB assess, plan and coordinate medical activities to set the theater in anticipation of possible expansion of theater operations. This includes continued evaluation of health threats, leveraging regional medical agreements, and procuring support to expanded medical operations. Strategic medical command organizations continue conducting home station activities to maintain health readiness (Defense Health Agency), support contingencies, and reassess the sufficiency of AHS combat power generation to support rotational, expeditionary and escalation force structures for contingency operations. As required, theater-level medical commanders provide medical support to enable the RSOI of incoming medical units. The chain of forward positioned, rotational and /or expeditionary medical commanders execute AHS support to established plans.

MEDICAL PLANNING TOOLS

4-17. The Joint Medical Planning Tool, the Medical Planners' Toolkit, and the Medical Contingency Requirements Workflow are planning tools approved for calculation of medical requirements. The Joint Medical Planning Tool and Medical Planners' Toolkit are fully integrated for versatility and enhanced medical planning efficiency.

4-18. The Joint Medical Planning Tool is a computer-based simulation tool developed by the Naval Health Research Center that models patient flow from the point of injury through more definitive care. It supports research, medical systems analysis, operational risk assessment, and field medical services planning. The Joint Medical Planning Tool is based on empirical data, including over 400 patient conditions and their associated medical treatment tasks, times, consumable supplies, and the equipment necessary to accomplish patient care. It includes algorithms that calculate died of wounds due to treatment delay and complications. The Joint Medical Planning Tool spans the spectrum of theater-based levels of care and emulates all Service MTFs and their respective functional areas, including the number and type of personnel, and the type, speed, and capacity of transportation assets. The Joint Medical Planning Tool uses discrete-event stochastic processes to model patient arrivals, treatments, and outcomes as patients move from the point of injury through the network of MTFs and eventual return to duty or evacuation from the theater.

4-19. The Medical Planners' Toolkit is a suite of tools developed to support the joint medical planning community. This suite of tools provides planners an end-to-end solution for medical support planning across the range of military operations. The Medical Planners' Toolkit combines the Patient Conditions Occurrence Frequency tool, the Casualty Rate Estimation Tool, and the Expeditionary Medicine Requirements Estimator into a single desktop application. This allows the user to manage the frequency distribution of probabilities of illness and injury, estimate of casualties in a wide variety of military scenarios, and estimate level three theater-medical requirements. When used collectively, the tools provide matchless data and versatility to enhance medical planning efficiency. See JP 4-02, ATP 4-02.55, and ATP 4-02.7 for additional information.

4-20. The Medical Contingency Requirements Workflow is the authoritative source for estimating medical materiel contingency requirements by time and role of care. Medical Contingency Requirements Workflow is web-based and resides in the unclassified domain for users to perform class VIII analysis, run scenarios for contingency supply forecasting, and provide a variety of strategic, operational, and tactical tailorable support through national stock number and assemblage research capability. Medical Contingency Requirements Workflow also generates materiel item estimates using clinical treatment protocols supporting military and civilian patient-generating scenarios and replaces legacy processes previously driven from historical data (predict vs respond).

FINANCIAL MANAGEMENT PLANNING

4-21. During operations to prevent, FM forces are continuing to assist Commanders with setting the theater, tailoring and projecting FM support to the force. Some initial tasks include—

- Identifying funding authority for deployment operations and funding ISO operations, to include special funding authorities, throughout the strategic roles.
- Determining the requirement for multiple disbursing station symbol numbers (DSSNs) and dispersion throughout theater.

- Securing initial funding for central funding and cash management operations (for example establish a limited depository account).
- Establishing financial management policies and procedures to address finance and resource management operations (for example cash holding authority, fund certification thresholds).
- Analyzing current banking infrastructure throughout the theater and determining the need to expand synchronization.
- Identifying the mobility the financial management distribution network between strategic and operational echelons for replenishment (strategic lift, surface transportation) in the absence of host nation capabilities.
- Identifying existing and potential contracting vehicles for requirements.

POSTAL OPERATIONS PLANNING

4-22. Postal operations rely on a well-coordinated network to process mail and provide postal services within a theater of operations. It is an important combat multiplier and an essential consideration for military operations. It must be included in all planning and OPORDs. Information contained in the OPORD should describe all information to support efficient postal operations that will require planning for significant logistics given limited air and ground transportation in large-scale combat operations. Postal units must have assured real-time communications by voice and data as well as securable transportation. The HRSC must determine postal support requirements well before activities to prevent. Close coordination with the Military Postal Service Agency and corps/division planners is key. It is the theater commander's responsibility to determine at which point, in the Army roles for large-scale combat operations, postal operations should begin. Additionally, planners should anticipate and prepare for the lethal effects of large-scale combat operations battlefields and adverse weather conditions affecting postal operations (for example; delayed transportation, increased backlog, and possible battle/weather damage) in large-scale combat operations environments. See appendix A and FM 1-0 for more details.

DISTRIBUTION NETWORK

4-23. Sustainment commands establish the initial distribution network in the operational area, synchronize, and integrate intra-theater deployment and distribution operations. These commands monitor all segments of the distribution network that begins at the strategic source of support and extends to the point of employment. The TSC manages the strategic to operational links of the global distribution network. Figure 4-1 depicts key agencies involved in the distribution network. The ESC manages the operational to tactical links of the global distribution network. This includes the segment of the distribution network that begins at the POD or theater source and ends at the point of employment. Both the TSC and ESC have distribution management responsibilities executed through a DMC. The TSC or ESC will establish movement boards to manage transportation policies, priorities, LOC status, convoy protection and synchronization, and transportation asset allocation to support theater distribution operations. The sustainment commands also provide command and control of organizations that execute distribution and distribution management and control capabilities.

4-24. Establishment of the network is a complex joint effort. The GCC typically establishes a JDDOC. It is an integral component of the GCC's staff, normally under the staff supervision of the GCC J-4. A JDDOC may be co-located with the DMC. Some initial tasks of the JDDOC include:

- Monitor airlift and sealift flow.
- Provide movement control of arriving supplies, personnel, equipment, and units.
- Establish theater-wide capabilities required to meet anticipated transportation and throughput capacities.

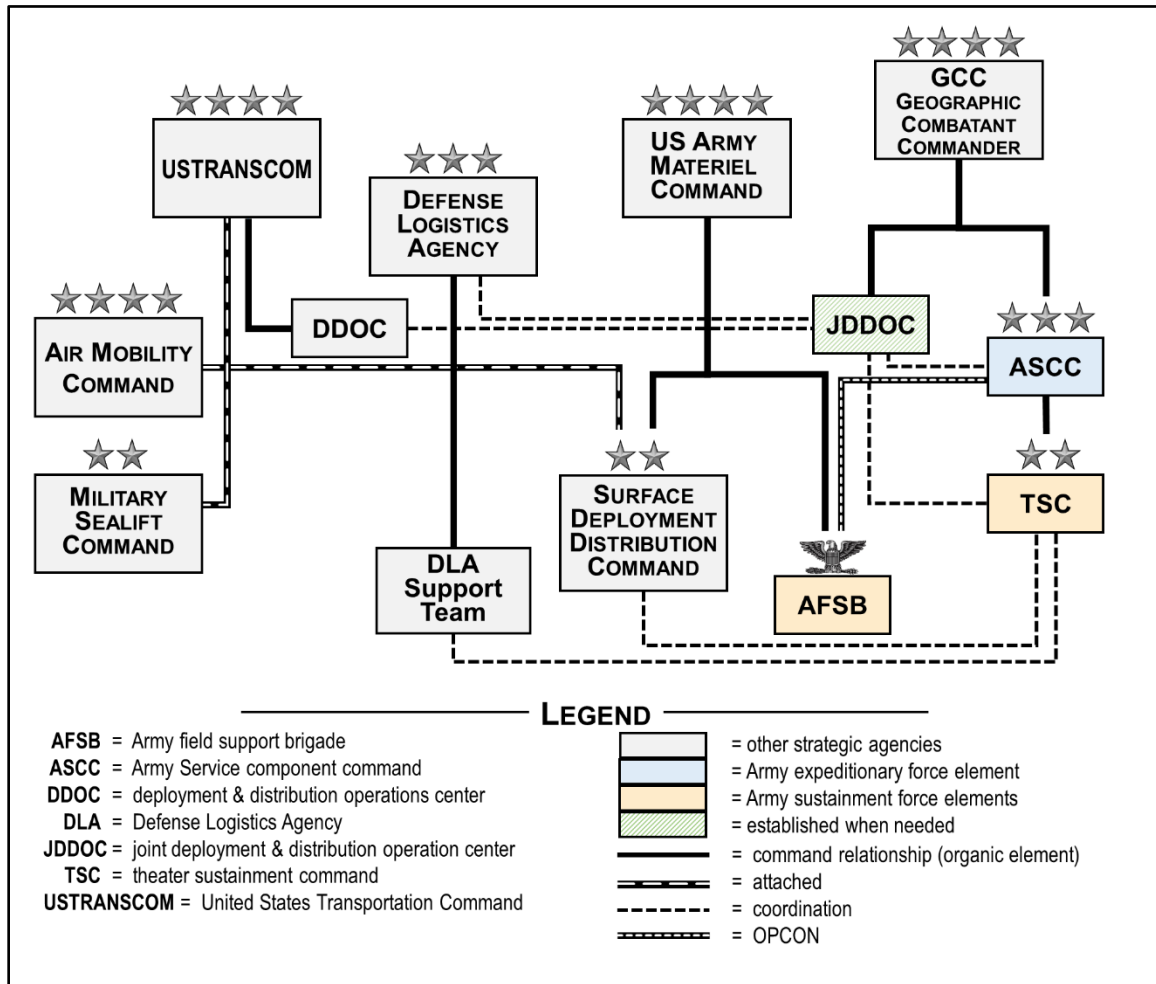


Figure 4-1. Strategic providers to Army theater distribution

SECTION III – PLANNING CONSIDERATIONS

4-25. One of the first variables the sustainment planner considers in supporting operations to prevent is the entry into theater. An operational area in which host country military and law enforcement agencies have control, as well as the intent and capability to assist U.S. operations that a unit intends to conduct, is known as a permissive environment. Sustainment in such an environment is complex but relatively easier to plan than for entry into a contested environment.

4-26. Conditions preceding large-scale combat operations vary depending on the threat. Some adversaries possess significant capability to employ anti-access and area denial strategies across all domains. Countering those strategies is the responsibility of the JFC. The land component commander's challenge is conducting forcible entry operations and deploying significant combat power in an environment where the enemy has an initial advantage.

4-27. Success for the sustainment of forcible entry operations in the Army strategic role of prevail in large-scale ground combat operations is contingent upon the sustainment preparation of the OE conducted during operations to shape and the refinement of plans in operations to prevent. As defined in JP 3-17, forcible entry is the seizing and holding of a military lodgment in the face of armed opposition or forcing access into a denied area to allow movement and maneuver to accomplish the mission. These operations are inherently complicated and always joint. In the case of a no-notice and/or crisis response mission, only hours separate the alert from the deployment. This intensifies the requirement for sustainment commanders and staffs to set

conditions for success through detailed planning and understanding of the maneuver plan, extensive preparation of supplies and equipment, and aggressive training to rehearse and prepare for actual operations. OCS support during forcible entry operations will be limited or non-existent. Planners need to consider sustainment using organic assets and available force structure.

4-28. The phases of a forcible entry operation are (1) preparation and deployment, (2) assault, (3) stabilization of the lodgment, (4) introduction of follow-on forces, and (5) termination or transition operations. Once an assault force seizes a lodgment, it normally defends to retain it, while the JFC rapidly deploys additional combat power by air and sea.

4-29. Sustainment of these operations is normally divided into three echelons during deployment: assault, follow-on, and rear echelons. Sustainment of forces during early entry operations focus on supply and distribution. Leveraging resupply by air including planned resupply, immediate airdrop resupply, and emergency airdrop resupply requests. Maintenance, transportation, and health service support for airborne or waterborne support require special planning considerations. The assault force is supported by both organic and external elements organized to distribute supplies, materiel, fuel, and ammunition forward by air or water LOCs. The exact organization and disposition of the assault and follow-on sustainment elements is a function of the assault force's mission and anticipated follow-on operations. Follow on forces may maximize the previous or initial planning considerations required for the amount of roads, facilities, electricity, water and sewage networks required. Sustainment and engineer planners must continuously review previous planning numbers and/or quickly adjust to new capability requirements.

4-30. Sustainment planners must consider all operational and mission variables that could potentially impact our ability to project and sustain forces. Environmental conditions contribute greatly to the fog and friction of war, and can be equally as devastating as enemy activities on operations. In some instances, resupply and combat operations can be halted all together. Although many environmental conditions are unavoidable, thorough planning and the consideration of contingency and branch plans can improve flexibility and lessen the impact on operations.

4-31. DSBs, sustainment brigades and their subordinate battalions provide the foundational capabilities for enabling forcible entry. The demands of simultaneous deployment and employment create a distinct set of dynamics. Operations are carefully planned and rehearsed in training areas and marshalling areas. Personnel and equipment are configured for employment upon arrival without RSOI. Depending on the response requirement DSBs, and/or sustainment brigades may play specialized roles in rapid deployment operations from home station in support of forcible entry. Once deployed, the DSB, or sustainment brigade and its task-organized subordinate units focus on sustaining both the assault and introduction of follow-on forces. Consideration should be given to early entry of human resources assets such as the theater gateway and PATs if the flow of forces will exceed the capacity of the unit elements to account for modular forces or individual deployers. Field ordering officers and paying agents must be part of the early entry operations and must have cash available to expedite local procurement support per written instructions provided by the FMSU.

4-32. Minimum sustainment elements of BSBs and/or FSCs accompany airborne forces into the airhead or lodgment during forcible entry. These elements perform the most essential services in the marshalling area or defer them. With no guarantee that follow-on supplies and support will make it through, whether due to enemy actions or other factors, assault forces maximize the amount of supplies and sustainment assets carried with them during entry operations.

4-33. As Army forces enter a theater, the TSC, ESC, DSB, sustainment brigades, and other subordinate sustainment units plan sequels and branches concurrently to ensure follow-on operations, escalation, de-escalation, transitions, and other operations are fully synchronized with GCC intent. During operations to prevent, the sustainment units refine the sustainment plan based on the refined GCC priorities of effort and intent. The sustainment plan specifies the concept of support, priorities of support, support relationships, and task organization for sustainment units.

4-34. The sustainment plan includes the distribution plan and movement plan. The distribution plan describes how sustainment flows from the theater base to the tactical level and return. The movement plan is a product of the distribution plan and synchronizes resources with requirements, applies movement control measures, and mitigates shortfalls by applying established priorities. The distribution plan is a living plan that can be adjusted to support various requirements or operations.

4-35. Supplies and materiel remain close to the maneuver force to ensure short response times for supplies and services. This includes uploading critical materiel—such as water, POL, and ammunition—to anticipate attempted occupation of a piece of terrain by more than one unit. Commanders make risk decisions regarding logistics preparations and avoidance of enemy detection, since logistics preparations may give indications of friendly tactical plans.

4-36. As sustainers plan for support of the force entering the theater, also considered are requirements during operations to prevent that may differ in scale, scope, and/or type from those associated with other operations. Planners identify and account for the unique requirements such as:

- Establishing civil security and control.
- Supporting essential services requirements.
- Integrating non-organic sustainment capability.
- Support to infrastructure development.
- Direct or indirect support to unified action partners.
- Build POL stockage objectives and inter-theater and intra-theater days of supply.

4-37. During operations to prevent, the quartermaster (POL and water) group continues to refine the petroleum concept of support and begin distribution of POL and water to forward storage facilities. It reviews and refines fuel consumption estimates and requirements to ensure effective petroleum distribution is available to meet tactical requirements. Fuel consumption estimates must be accurate in order to develop realistic plans in support of tactical forces. During operations to prevent, POL and water units increase security and quality surveillance measures to ensure availability and quality of bulk fuel and water to support operational requirements.

4-38. Risk, uncertainty, operational security and chance are inherent in all military operations. Sustainment professionals must seek to understand, balance and take calculated risks rather than avoid risks to ensure sustainment of the operational force. Sustainment commanders must assess and mitigate risk continuously throughout operations. These risks considerations and others should be addressed and mitigation strategies/alternatives developed as part of the sustainment plan. The following is a list of risk considerations (not all inclusive) during operations to prevent—

- Will the sustainment activities place the tactical plan at risk (i.e. provide the enemy with sufficient information to know the plan)?
- Have risk reduction measures been implemented and operational security measures been established to mitigate risks to operations? Are there sufficient forces to support combat operations if operations to prevent are not successful?
- Will sustainment activities precipitate early combat operations?
- Are sustainment systems hardened against cyber-attack? How do you validate requirements received through electronic systems? Does the threat have the capability to change information versus directed denial of service attacks?
- Is coordination with host nations sufficient to ensure smooth flow into and out of APOD and /or SPODs? Have limits of host nation ports been considered (i.e. net explosive weight limitations, hazmat requirements, etc.) and planned to be accommodated?
- Are security measures in place to protect critical resources such as commercial line haul, storage sites, stocks, caches, and critical infrastructure?

SECTION IV – SUSTAINMENT OF PREVENT ACTIVITIES

4-39. Army special operations conducted during operations to shape and operations to prevent conflict can hasten or delay the employment of a task force and provide more time for the JFC to make a decision or explore alternative options. More importantly, optimal use of special operations could eliminate the threat completely or the need for a large-scale conventional force deployment.

4-40. Sustainment of SOF in operations to prevent conflict includes supporting the deployment, RSOI, and sustainment of a special operations JTF. The 528th Sustainment Brigade supports crisis response and initial entry/ RSOI of a special operations JTF during this Army strategic role. The 528th Sustainment Brigade is augmented with Army sustainment enablers to conduct RSOI and establish initial theater distribution for

SOF operations for a limited time. See ATP 3-05.40 for more information on ARSOF sustainment and FM 6-05 for more information on CF and SOF integration, interoperability and interdependence.

4-41. Sustainment commanders at all levels have critical roles in each of the major activities that Army forces perform during operations to prevent:

- Execute flexible deterrent options and flexible response options.
- Tailor Army forces.
- Project the force.

EXECUTE FLEXIBLE DETERRENT OPTIONS AND FLEXIBLE RESPONSE OPTIONS

4-42. A flexible deterrent option is a planning construct intended to facilitate early decision making by developing a wide range of interrelated responses that begin with deterrent-oriented actions carefully tailored to create a desired effect. A flexible response option is the capability of military forces for effective reaction to any enemy threat or attack with actions appropriate and adaptable to the circumstances existing. Flexible deterrent options and flexible response options serve three basic purposes. First, providing a visible and credible message to adversaries about U.S. will and capability to resist aggression. Second, positioning U.S. forces in a manner that facilitates implementation of the operations plan or contingency plan if hostilities become unavoidable. Third, providing options for decision makers during crises. Flexible deterrent options and flexible response options allow for measured increases in pressure to avoid unintentionally provoking full-scale combat and to enable decision makers to develop the situation and gain a better understanding of an adversary's capabilities and intentions.

4-43. Flexible deterrent options and flexible response options are only credible as options when coordinated across all warfighting functions, including sustainment. Sustainment planners must work with ARFOR commanders to anticipate potential flexible deterrent options and flexible response options. Sustainment operations can be a flexible deterrent option. Examples include deploying sustainment capabilities and building logistics infrastructure which would present the adversary with multiple dilemmas that may change the intended course of action.

4-44. If the force cannot sustain the operation, it will fail in the goals outlined above. Sustainers need to know the size and composition of the forces to be supported, distances involved, threat capabilities, and other factors to estimate support requirements and prepare to support these operations. Sustainers also account for the requirement to rapidly escalate/deescalate from flexible deterrent option to large-scale combat and back based on changing conditions in the OE.

TAILOR ARMY FORCES

4-45. Force tailoring combines two complementary requirements—selecting the right forces and deploying the forces in the optimal sequence. Much of the effort for selection and deployment order occurs prior to deploying forces to a theater.

4-46. Throughout the process, sustainment commands work with the theater Army sustainment staff to track force composition and order of deployment to ensure support is available to sustain the force package. The right types and number of sustainment units should be integrated early into the force flow.

4-47. Selecting the right force involves identifying, selecting, and sourcing required Army capabilities and establishing their initial task organization to accomplish the mission. The result is an Army force package matched to the needs of the CCDR. The theater Army works with force providers (FORSCOM, U.S. Army Materiel Command, etc.) to match the composition of the force with the forces identified in theater security cooperation plans or contingency plans. In the deliberate sustainment planning process it is critical the Center for Army Analysis analyzes contingency plans and provides battle damage attrition estimates to the theater Army, TSCs, and USAMC LCMCs to ensure that adequate depot maintenance Forward Repair Activities support is identified and integrated into the force flow for planning purposes.

4-48. Force tailoring establishes the order of deployment for the force package, given the available lift and the GCC's priorities. The organization established in force tailoring is not necessarily the same as the task

organization for combat. It is a macro-level organization established to control the forces through deployment and RSOI.

4-49. The Army National Guard and the Army Reserve make up the Army Reserve Components. The Army National Guard represents Component 2 and the Army Reserve represents Component 3. Together, these two make up over half of the Army's total force.

4-50. The Army Reserve is largely composed of sustainment and maneuver support forces. Almost 80 percent of the Army's sustainment force structure is in the Army Reserve. The Army Reserve sustainment capabilities are essential for the operating force and provide the preponderance of sustainment, civil affairs and psychological capabilities.

4-51. Originally considered a strategic reserve force, the Army Reserve Components were not expected to deploy early into an operation. However, as the operational environment has changed and the balance of sustainment forces shifted from the Regular Army to the Army Reserves, Army Reserve Forces maintain higher levels of expeditionary readiness.

4-52. When authorized by Congressional resolution and directed by the president, the DOD may mobilize part or all the Army Reserve Components. There are 5 types of mobilization:

- Selective mobilization. For "domestic emergencies", the President may order expansion of the active armed forces by activation of Individual Ready Reserve units and/or individual Reservists to deal with a situation where the armed forces may be required to protect life, federal property, or to prevent disruption of federal activities. A selective mobilization would not be associated with a requirement for contingency plans involving external threats to the national security.
- Presidential reserve call-up. The President may augment the active forces by an involuntary call-up of units and individuals of the Selected Reserve or any member of the Individual Ready Reserve designated as essential up to 200,000 persons from all Services for up to 365 days to meet an operational requirement. No more than 30,000 of the 200,000 may be members of the Individual Ready Reserve. The President must notify Congress whenever this authority to call up the Individual Ready Reserve is exercised.
- Partial mobilization. In time of national emergency declared by the President or when otherwise authorized by law, an authority designated by the Secretary concerned may, without the consent of the persons concerned, order any unit and any member not assigned to a unit organized to serve as a unit, in the Ready Reserve under the jurisdiction of that Service Secretary to active duty for not more than 24 consecutive months. Not more than 1,000,000 members of the Ready Reserve may be on active duty, without their consent, under partial mobilization at any one time.
- Full mobilization. In time of war or national emergency declared by the Congress, or when otherwise authorized by law, an authority designated by the Service Secretary concerned may, without the consent of the persons affected, order any unit, and any member not assigned to a unit organized to serve as a unit, of a Reserve Component under the jurisdiction of that Service Secretary to active duty for the duration of the war or emergency and for six months thereafter.
- Total mobilization. Total mobilization involves expansion of the active armed forces beyond the approved force structure by organizing and/or activating additional units to respond to requirements of the emergency. All national resources, to include production facilities, needed to sustain additional forces will also be mobilized. Congressional authorization is required for these actions.

PROJECT THE FORCE

4-53. Force projection is the ability to project the military instrument of national power from the United States or another theater in response to requirements for military operations (JP 3-0). Five processes (mobilization, deployment, employment, sustainment, and redeployment) are integral to force projection. In support of operations to prevent, speed becomes a critical planning factor to consider to project combat-ready forces that can enable a position of advantage against an adversary. For additional information, see ATP 3-35.

4-54. Mobilization is the process of bringing the armed forces to a state of readiness in response to a contingency. Sustainment builds and maintains force readiness. Army generating sustainment forces in the execution of its Title 10 mission prepare Army forces for unified land operations. Upon alert for deployment generating force sustainment organizations ensure Army forces are manned, equipped, and meet all Soldier readiness criteria. Army active and Reserve Component units mobilize from Army installations that ensure Soldiers, equipment, materiel, and medical readiness are verified prior to deployment

4-55. Deployment as a process that enables force projection involves activities required to prepare and move forces, supplies, and equipment to a theater. The objective of deployment planning is to synchronize deployment activities to facilitate effective execution in the operational area. The steps used in deployment planning are:

- Analyze the mission.
- Structure forces.
- Refine deployment data.
- Prepare the force.
- Schedule movement.

4-56. The key output from the deployment planning steps is the TPFDD that incorporates commander's intent, available forces, and designated strategic lift. The TPFDD is both a force and a transportation requirements document. It is the Joint Planning and Execution System data-based portion of the operational plan. It contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operational plan including:

- In-place units.
- Units to be deployed to the JOA with a priority indicating the desired sequence for their arrival at the POD, including mobilized augmentees or units.
- Routing of forces deployed.
- Movement data associated with deploying forces.
- Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces.
- Estimates of transportation requirements, which are fulfilled by common-user lift resources, as well as those requirements that can be fulfilled by assigned or attached transportation resources.

RECEPTION, STAGING, ONWARD MOVEMENT, AND INTEGRATION

4-57. A critical portion of the deployment process often associated with operations to prevent is RSOI. It is this process that delivers combat power to the JFC in an AOR. RSOI is also a process the Army has not been challenged with to the extent required for large-scale combat operations in recent history. The increased challenge will stem from the initial deployment of large forces, and will continue with a heavy flow of replacements. Accurate casualty estimates and predetermined casualty shelves are a critical part of RSOI planning. RSOI goals are to link units with their equipment while maintaining a balanced flow of supplies, personnel, equipment, and units consistent with strategic lift capabilities and CCDR priorities.

4-58. Sustainment commands are assigned responsibilities for RSOI operations by the ASCC. The TSC will normally be assigned the responsibility of RSOI. Subordinate units of the TSC from an ESC, sustainment brigade, CSSB, down to a movement control team can be assigned specific tasks in support of RSOI. Specific tasks include feeding, billeting, limited supply, finance, personnel accountability, health service support, battlefield orientation, and transportation of replacements to their assigned units. Support for execution of RSOI is provided by some combination of theater support contracts, external support contracts (primarily the LOGCAP), regionally available commercial HNS, military assets, and Component 2 or 3 units deployed early. It requires sufficient capabilities and capacity to provide the support required by arriving units at POD. For example heavy vehicle operators and mechanics are required to move and repair vehicles being downloaded from ships for onward movement. The TSC and/or ESC directs the operation of the theater's PODs and the AOR distribution networks to minimize bottlenecks that may impede the flow of cargo and forces into and throughout the theater.

4-59. Effective RSOI consists of the processes that transform arriving personnel and equipment into forces capable of meeting operational requirements in accordance with established timelines. Army units are attached from the supporting commander (usually FORSCOM) to the ASCC. The ASCC subsequently passes TACON of the unit to the sustainment command managing RSOI activities. RSOI is an ongoing series of four interrelated and overlapping processes that ensure synchronized clearance of nodes and assembly of combat power that is then rapidly transported to point of need to support operational requirements. Reception is the process of unloading personnel and equipment from strategic modes of transport, marshaling the deploying units, transporting them to staging areas, and if required, providing life support. Staging is the process of rapidly assembling and organizing arriving personnel and equipment into units and force packages that constitute combat power, and then preparing units and forces for onward movement; life support is provided until the unit becomes self-sustaining. Onward movement is the process of moving combat power and supplies from reception facilities and staging areas to tactical assembly areas or other locations as designated by the GCC, moving arriving non-unit personnel and replacements to gaining commands, and moving arriving sustainment materiel from reception facilities to distribution sites. The sustainment command then transfers TACON of the units to the gaining JFC or joint functional command for integration.

4-60. The role of the DSB during RSOI operations is to complete the RSOI process themselves and then provide support to its division at and beyond the tactical assembly area. The sustainment command responsible for RSOI must consider the DSB a tactical unit and not part of the RSOI support structure. The DSB must complete the RSOI process and move forward to a tactical assembly area with its supported division.

4-61. Success of RSOI is measured by force closure. Force closure is the point in time when a supported JFC determines that sufficient personnel and equipment resources are in the assigned operational area to carry out assigned tasks. It is essential during RSOI operations that data relating to arriving unit personnel, unit equipment, contractors, containers, and the like be captured at each point of entry into the theater, i.e. APODs, SPODs, railheads, and border crossings to facilitate personnel/asset accountability and force closure reporting. For more information on force projection, see JP 3-35, ATP 3-35, FM 1-0 and FM 4-95.

4-62. The execution and support of RSOI requires a complement of various capabilities and units, which when synchronized and integrated, can efficiently and effectively receive and move forces (personnel and equipment) to key staging for assembly and onward movement while sustaining forces remaining behind. The optimal mixture of support and enablers tailored to receive forces will minimize the time it takes for units to maneuver through the RSO process. Three main nodes/functions (APOD, SPOD, and intermediate staging base [ISB]) are each slightly different in their make up yet connected to each other through the transportation of equipment, personnel, and materials. The amount of distribution assets on ground during the early phases of conflict directly correlate to a commander's ability to rapidly transition from operations to prevent conflict to large-scale combat operations. Planners should focus on the early deployment of sustainment assets during operations to prevent. RSOI planners will need to assess the threat risk as well as mission priority when determining the arrival and integration of units and enablers executing and supporting RSOI. The most common enablers from Army sustainment formations required for RSOI are—

- Transportation assets. Cargo transfer companies for their material handling equipment and vessel offload capabilities, transportation truck companies, heavy equipment transportation companies for movement of tracked vehicles, POL companies, movement control teams for traffic circulation.
- Quartermaster assets. Quartermaster companies for material storage and distribution, POL companies for fuel storage and distribution.
- Ordnance assets. Modular ammunition company to provide ammunition to units prior to their onward movement. Maintenance assets augmented by contracted support to maintain vehicle readiness throughout the process.
- Medical. Support for emergencies and sick call treatment.
- HR and financial management. Typically located at theater gateways and various intra-theater ports of debarkation to assist with initiating and establishing theater personnel accountability and personnel tracking. Financial management elements provide support for transient personnel.

4-63. In addition to the sustainment capabilities mentioned above, there are other assets that play a vital role in RSOI. The assets provide additional infrastructure capabilities, security, protection, and command and control of the RSOI process. EOD personnel provide commanders the ability to quickly respond to explosive

ordnance threat situations as these situations occur. Military police provide force protection for units conducting RSOI and convoy escorts for units moving from reception to staging areas. The engineer corps provides infrastructure improvements and establishes the power grids and determines power distribution for APODs, SPODs and ISBs. Chemical decontamination and reconnaissance capabilities must also be part of the RSOI effort. These assets must be requested and incorporated early in the flow of forces in to theater to support RSOI at the APODs, SPODs, and ISBs.

ARMY POWER PROJECTION

4-64. The Army Power Projection Program consists of four movement phases, PPPs and installation activities, movement of people and assets to ports of embarkation, port operations, and movement of personnel and equipment from ports of debarkation to the RSOI locations in theater. During all phases of force projection, sustainers play a role in planning and execution. Force projection requires detailed support and sustainment planning.

4-65. The Army Power Projection Program begins at a PPP or an installation, to include depots, armories, and other facilities. PPPs are located where one or more brigade size element is deploying. All movements from these activities hinge on out-load support at each site. Each site's infrastructure and capacity to receive strategic assets and perform out-load support in support of personnel and unit equipment is vital to meeting any RSOI timeline associated with a deploying unit. Critical players during this phase of RSOI include the deploying unit, installation senior commander, installation commander, ASC support elements, the LRC including its installation transportation office, SDDC and SDDC support elements including deployment support teams and/or rail operating teams. Force projection operations at an activity may consist of rail, air, line haul, and/or convoy operations that are necessary to begin movement of personnel and equipment to a port of embarkation.

4-66. The movement of personnel or equipment from a PPP to a port of embarkation requires close coordination with the installation transportation office and SDDC deployment support teams. Units that are not self-deploying to a port of embarkation require strategic lift. Installation transportation offices are the conduit to receive buses, trains, and line haul assets through USTRANSCOM contracts and are ordered based on the unit's deployment list and timelines in the Joint Operation Planning and Execution System.

4-67. Force projection further requires planning for the arrival of personnel and equipment at ports of embarkation to include port support activities, size and make up, staging areas, super cargo, joint inspections, frustrated cargo, and general life support for any supporting activity. Key players at APODs and SPODs include arrival/departure airfield control groups, movement control teams, and PATs.

4-68. USAMC provides support to Army power projection through its subordinate LRCs. LRCs are not deployable and provide support to Army installations across the Army's strategic roles. This support is described in chapter 2. LRCs also support Army power projection in accordance to AR 525-93. To support Army power projection, LRCs will —

- Facilitate container management for Army-owned and/or leased intermodal assets and the procurement authority for purchase or lease of intermodal assets.
- Appoint an installation container control officer to assist with the proper control of container assets, who is also trained to inspect and certify intermodal containers in accordance with the convention for safe containers.
- Prepare, coordinate, and execute operations supporting deployment and redeployment to include Arrival/Departure Airfield Control Group and installation marshalling and staging areas, rail, commercial truck, and other required installation deployment support activities.
- Assist deploying units with the procurement of deployment related blocking, bracing, crating, and tie-down requirements. Provide backup stocks for deployment related blocking, bracing, crating, and tie-down material and other essential supplies and equipment.
- Provide maintenance support guidance for equipment inspection and certification prior to movement to POE.
- In accordance with the Joint Travel Regulation, provide personal property and privately owned vehicle storage for deployed Soldiers during deployments.

AERIAL PORT OF EMBARKATION

4-69. USAMC is the DOD-designated single port manager for all worldwide common user/commercial aerial ports. APOE operations are divided into four areas: marshalling area, alert holding area, call-forward area, and ready line/loading ramp area. Operating within these areas is the deploying unit; the arrival/departure airfield control group and mobility forces, to include the contingency response element; and the load teams. Movement and documentation of equipment and personnel to the APOE may be in preparation for movement by commercial charter aircraft. If this is the case, actions at the APOE will be IAW commercial carrier instructions and the Joint Travel Regulation.

SEAPORT OF EMBARKATION

4-70. SDDC is the DOD-designated single port manager for all worldwide common user/commercial seaports. Units deploy equipment and supplies by sea through a port that is generally commanded or contracted by SDDC. Where SDDC does not have a transportation terminal battalion or other contractual agreements, an SDDC support team may temporarily manage cargo at the SPOE. USTRANSCOM directs the deployment of units and sustainment through SPOEs identified in the TPFDD. The port call message identifies the earliest/latest dates the unit must arrive at the SPOE for movement processing and vessel loading and gives the unit special instructions for a successful movement to the SPOE. USTRANSCOM's responsibilities include—

- Evaluate movement requirements and coordinate vessel selection between SDDC and MSC.
- Prepare and issue port call messages.
- Receive port support activities and direct their activities.
- Receive, stage, and transship unit equipment in the port.
- Establish and direct port communications.
- Enforce safety and physical security policies and procedures.
- Develop stow plans.
- Supervise vessel loading; inspect vessel readiness.
- Provide documentation.

4-71. The cargo manifest is documented in Global Air Transportation Execution System, commonly known as GATES, so the receiving organizations at the SPOD and installation can be prepared to receive the equipment. For movements originating in foreign countries, supporting commands and the Service transportation component coordinate with the JDDOC and SDDC forward operating elements to plan and execute the movement of forces to the port of embarkation.

AERIAL PORT OF DEBARKATION

4-72. The APOD function of receiving personnel from strategic lift need appropriate transportation support, material handling equipment and services for those personnel operating the airfield and other capabilities. Depending on results of the logistics preparation of the rear area, these enablers and functions can come from U.S. forces, contracted assets, or HNS. In cases where an airfield is part of the ISB, assets and capabilities required by the ISB can be integrated into the overall support and execution compliment. APOD operations will be inherently joint and possibly interagency with capabilities and functions coming from different Services.

SEAPORT OF DEBARKATION

4-73. The SPOD function of receiving equipment and materials from strategic lift need will also require appropriate transportation support, materials handling equipment, services for those personnel operating the port(s) and other capabilities. Due to normally adjacent locations of ports to suburban areas, security and force protection becomes much more critical and preventive measures resourced. Other considerations for capability/function scope and scale of manpower and resources is do due to strategic vessel unloading and port clearance could be the first major bottleneck with the RSOI process. Time and distance factors to the ISB and APOD also factor into the amount of transportation that will mitigate delay in clearance of the port. Depending on results of the logistics preparation of the rear areas, these enablers and functions can come

from U.S. forces, contracted assets, or HNS. SPOD activities will be managed by strategic partners in the form of SDDC and USAMC (APS and maintenance teams). SPOD operations will be joint in nature and possibly interagency with capabilities and functions coming from different Services.

INTERMEDIATE STAGING BASE

4-74. The ISB is the critical staging area with the focus of assembling all equipment, containers, personnel (and bags) as well as classes of supply to support onward movement and the immediate needs of the mission. ISB assets critical to RSOI execution will be command and control and billeting. The ISB must be planned with vision to establish operations with a traffic pattern that facilitates the rapid assembly of the unit and issuance of classes of supply for combat operations. Security is also of immediate concern, as units will be in the staging that are only partly assembled. The ISB is usually solely an Army footprint. If other services were on site, it would be to transition through the ISB. The ISB with massed forces and equipment makes the ISB a high payoff target for near peer threats and must be planned for accordingly with appropriate formations to mitigate the threat(s). Factors concerning the scale and scope of capabilities such as transportation depends on onward movement time/distance factors, maintenance readiness rates, number of containers units bring into theater, and types of equipment needed transportation support (i.e. tracked and engineer vehicles). Planners should also consider the duration of the ISB mission that typically endures until all forces have redeployed.

4-75. An ISB is a secure base through which forces and equipment deploy. While not a requirement in all situations, the ISB may provide a secure, high-throughput facility when circumstances warrant. The commander may use an ISB as a temporary staging area en route to a joint operation, as a long-term secure forward support base, and/or secure staging areas for redeploying units, and noncombatant evacuation operations. JP 3-35 defines an ISB as a tailorable, temporary location used for staging forces, sustainment, and/or extraction into and out of an operational area. It may be on land or at sea.

4-76. ISBs enable the forward staging forces to accomplish tasks and provide support from a location closer to the contingency operation. To best use ISBs for forcible entry operations, planners can pair those two tasks with these three purposes: build capacity, conduct intermodal transfer, and disaggregate and aggregate forces. Sustainment planners should develop contingency plans for the use of multiple ISBs or points of entry into the JOA as economic and political situations can rapidly deteriorate resulting in the unexpected closure of bases. For more detailed discussion of ISBs, see JP 3-35 and ATP 3-35.

4-77. The GCC, ASCC, field army or corps commander establishes a staff engineer section with a facilities and construction department that manages engineering and construction within the operational area. The staff engineer section is responsible for developing the base camp and bed-down plan for Service personnel and equipment arriving in the AOR. The staff engineer section provides recommendations for engineering and construction missions; establishes standards for construction; conducts coordination with the HN; participates in funding, utilization, and resourcing boards; and coordinates with United States Army Corps of Engineers and theater engineer command. Staff engineer section responsibilities include integrating force health protection and environmental. For additional information, see JP 3-34 and ATP 3-37.10.

Chapter 5

Large-Scale Combat Operations Sustainment

Chapter 5 describes sustainment of large-scale combat operations. It provides an overview of sustainment of large-scale combat operations and covers planning considerations unique to large-scale combat operations.

5-1. As a nation, the U.S. wages war by employing all instruments of national power—diplomatic, informational, military, and economic. The President employs the Armed Forces of the U.S. to achieve national strategic objectives. The nature and scope of some missions may require Army forces to conduct large-scale combat operations to achieve national strategic objectives or protect national interests.

SECTION I – OVERVIEW OF LARGE-SCALE COMBAT OPERATIONS SUSTAINMENT

5-2. Large-scale combat operations are characterized by simultaneous, geographically dispersed operations that occur in multiple domains. In large-scale combat operations against a peer threat, maneuver commanders conduct decisive action to seize, retain, and exploit the initiative. Maneuver commanders strive to achieve superiority across multiple domains (air, maritime, land, space, and cyberspace) early to allow the Army forces to conduct land operations without prohibitive enemy interference. This involves the orchestration of many simultaneous unit actions in the most demanding of OEs. For additional information on large-scale combat operations, see JP 3-0 and FM 3-0.

5-3. Characteristics of sustaining large-scale combat operations include volume, lethality, precision, and tempo. Large-scale combat operations will require a volume of reinforcements, materiel, and equipment significantly greater than other types of operations. It will be more lethal than other types of operations generating mass casualties and replacement of personnel and equipment on a large scale. Large-scale combat operations will require greater precision in our distribution network than other types of operations. It will be executed at a higher operational tempo than other types of operations that require flexible and adaptable sustainment structure to meet mission requirements.

28th Infantry Division in WWII: Lethality of Large-Scale Combat Operations

In October 1944, the U.S. First Army had created two large holes in the German Siegfried Line at Aachen and Roetgen. Hard fighting by the U.S. V Corps' 9th Infantry Division had opened the way to the Ruhr River valley. The V Corps' follow-on attack was given to the 28th Infantry Division, whose objective was the town of Schmidt. The attack would be through the heart of the Hurtgen Forest.

The 28th "Keystone" Division had arrived in Europe in July 1944 and had seen considerable combat in Operation Cobra. Commanded by Major General Norman D. "Dutch" Cota, the division was composed of three infantry regiments, the 109th, 110th and 112th. On 2 November, in cold, wet, overcast conditions, the division went into the attack. The battle quickly deteriorated from the American perspective as strong, well-sited German defensive positions took advantage of the thick, virtually impassable terrain to halt the advance. Deadly German artillery fire and the support of German armor inflicted heavy losses on the 28th. After ten days of fruitless struggle, on 12 November, the unit had to be withdrawn to be replaced by the 4th Infantry Division.

The 28th began the battle with 825 officers and 13,107 enlisted men. On 13 November, it reported losses of 214 officers and 4,454 enlisted, a total of 4,668 personnel. During the battle, the division received 115 officer and 3,728 individual replacements, virtually all barely trained infantrymen. Despite a near equal replacement of losses, the unit rapidly became combat ineffective. In the latter stages of the battle, the new replacements suffered the majority of the casualties. In large-scale combat operations, the loss of leaders and experienced Soldiers will be a significant issue for U.S. forces.

SUSTAINMENT CHALLENGES IN LARGE-SCALE COMBAT OPERATIONS

5-4. Large-scale combat operations are characterized by simultaneous, geographically dispersed operations that occur in various OEs and are challenged across multiple domains. It requires greater sustainment than other types of operations because of the higher operational tempo, greater lethality, and significantly increased consumption of supplies, and equipment. The lethal nature of large-scale combat operations increases the propensity for mass casualties, requirements for mortuary affairs, increased requirements for a robust medical architecture, and large-scale personnel and equipment replacements. Large-scale combat operations will require the distribution system to move a greater volume of personnel and equipment than in other types of operations. Increased velocity and precision will be required to sustain operations.

Sustaining Large-Scale Combat Operations Velocity, Precision and Volume

After Operation Desert Storm, the Army borrowed the idea of on-time delivery from commercial industry in order to avoid building large in-theater stockpiles. The computer revolution and automation allowed both industry and the military to plan the delivery of products to match customer demands. This eliminated the need for warehousing and depot supply units, reducing the logistics footprint in theater. The system depended on the ability to swiftly deliver the required supplies to precise locations.

During the planning for Operation Iraqi Freedom, the logistics planners of the 377th Theater Support Command predicted the amounts for each classes of supply units would need and the exact number of trucks needed to deliver them. Nothing would sit on the ground. When the planners briefed their distribution plan to the combined force land component command C4, he recommended adding additional trucks to mitigate operational risk. No one could have predicted what would cause the plan to unravel.

The first problem arose when the Secretary of Defense scrapped the TPFDD and in scrubbing the request for forces, eliminated anything he did not deem necessary. In some cases, forces were cut because no one in the room at the time could translate the meaning of the unit acronym. This resulted in the reduction of medium truck companies. The second problem arose when the operational readiness rate of the trucks ran around 50 percent instead of the predicted 75 percent. This resulted in a significant shortage of trucks. The 3rd Infantry Division had no water buffalos in theater. The 377th planners briefed this to the combined force land component command C4, who responded that if the 3rd Infantry Division wanted to drink bottled water, then bottled water would be delivered. This requirement was not in the original plan and the supporting contractor could not provide the necessary trucks until April. The ability to rapidly deliver the needed supplies was seriously degraded. The 3rd Infantry Division was going to run out of water.

The 3rd Infantry Division was scheduled to cross the berm on 19 March with five days of food and water on hand, but D-Day was delayed a day to 20 March. The Soldiers consumed a day's class I ration while waiting to cross the berm. The division was running critically low by 23 March when it met heavy enemy resistance just 100 miles from Baghdad. The next day, the 3rd Infantry Division began rationing food and water. A shortage of trucks to haul to the division was the reason for the shortfall.

One third of the echelon-above-corps tractors and trailers hauled water to the V Corps rear. The 24th Corps Support Group sometimes failed to have trucks or forklifts waiting for them since it was expected theater-level trucks would deliver directly to the front lines. Unable to unload the pallets of bottled water, the tractors and trailers were often held onto delaying the turn-around time.

On the morning of 25 March, just 50 miles from Baghdad, vicious sandstorms brought the 3rd Infantry Division to a complete halt for two days. Again, it ran short of food, water, and this time, fuel. An operational pause and a bombing campaign until the days of supply were built back up allowed the 3rd Infantry Division to resume the offensive. The process would repeat itself until the division reached Baghdad.

5-5. The magnitude, scale, and scope of large-scale combat operations present challenges in addition to velocity precision, and volume. The following discussion addresses the scope of sustainment of large-scale combat operations and presents a few challenges. Operational variables, mission variables, and many other

factors impact actual daily consumption rates and the following example is illustrative and is not intended to replace detailed mission analysis. The example uses a fighting force of two corps with six divisions. The six divisions consist of nine BCTs (five ABCTs, three SBCTs, one IBCT) and associated enablers.

5-6. The total fighting force of two corps with six divisions, nine BCTs, and enablers requires an average of 360K gallons of potable water and 520K gallons of non-potable water on a daily basis. Moving these requirements from the theater area forward requires 186 trucks to pull a combination of trailers, and fabric tank configurations. Moving the water farther forward into the tactical areas requires the use of 230 Heavy Expanded Mobility Tactical Trucks with a combination of palletized load systems, tank rack configurations, and towed water trailers. The 230 trucks must each tow another 2K gallon compatible water tank rack mounted on a palletized load systems trailer.

5-7. The corps headquarters and supporting enablers (medical brigade, operational fires command, military police brigade, military intelligence brigade, and reconnaissance brigade in this example) require a daily average of 633K gallons of fuel to operate. A minimum of one hundred and twenty seven 5K fuel tankers are required to support the corps daily fuel consumption. Support to meet the average daily consumption rate of 688 short tons of dry cargo for the corps and its enablers requires 78 palletized load systems trucks and trailers.

5-8. The division headquarters and its enablers (field artillery brigade, combat aviation brigade, MEB, DSB, and engineer brigade in this example) average daily consumption rate for large-scale combat operations is 445K gallons of fuel and 653 short tons of dry cargo. A minimum of ninety 5K tankers and 74 palletized load systems trucks and trailers are needed to support the requirements.

5-9. One day of supply in a division consisting of three ABCTs and a CAB consumes on average 642K gallons of fuel and 963 short tons of dry cargo. One hundred and twenty nine 5K fuel tankers and 120 palletized load systems and trailers are needed to fulfill the requirements.

5-10. Class V replenishment for a field artillery brigade aligned with a corps or under the OPCON of a JTF, land component command or other supported command is based on its task organization. Field artillery brigades may vary both in the number of battalions attached and in the type of firing platform fielded. Typically, brigades have from one to five rocket and missile multiple launch rocket system, high-mobility artillery rocket system or cannon battalions.

5-11. Multiple launch rocket system and high-mobility artillery rocket system equipped battalions have either two firing batteries with eight launchers apiece or three batteries with nine launchers each. Multiple launch rocket system rockets are packaged in pods that carry either one or six missiles. Each multiple launch rocket system carries two pods and a high-mobility artillery rocket system carries one. This establishes a combat load for a multiple launch rocket system battalion as 32 to 54 pods and 16 to 27 pods for the high-mobility artillery rocket system. Both multiple launch rocket system and high-mobility artillery rocket system battalions have 16 palletized load systems and trailers which in combination can carry eight pods for a basic load of 128 pods. The multiple launch rocket system battalion has a combined combat and basic load requirement of 160 pods and the high-mobility artillery rocket system battalion is slightly lower with a combined requirement of 144 pods. To deliver the combined combat load and basic load for a multiple launch rocket system battalion in one lift requires twenty trucks and trailers from a medium truck company (Palletized Load System). To do the same with a high-mobility artillery rocket system battalion requires only 18 palletized load systems and trailers. Alternatively a medium truck company (EAB line haul) (cargo) could complete the missions but, require 36 tractor-trailers to deliver the load for a multiple launch rocket system battalions and 40 for a high-mobility artillery rocket system. The tractor-trailers would also require materiel handling equipment augmentation to offload cargo.

5-12. A 155mm cannon battalion, typically fielding the self-propelled 155mm Paladin, has three firing batteries each with six cannon. The Paladin carries 37 rounds as a combat load. The 155mm battalion also has 18 ammunition carriers capable of transporting a basic load of 95 rounds each. The battalion's combat load is 666 rounds and the basic load adds an additional 1,710 giving it a combined total of 2,376 rounds. Using a planning weight of 95 pounds per 155mm shell, including propellant and fuse, the battalion would require 113 short tons to replace the combined combat and basic loads. A medium truck company (Palletized Load System) can deliver this load in one lift using 22 palletized load systems and trailers based on available

pallet positions. A medium truck company (EAB line haul) (cargo) would require two lifts to deliver the load based on available pallet positions. Between the lifts, a total of 73 line haul tractor-trailers would be required.

The Red Ball Express

After the breakout from Normandy in July 1944, an acute shortage of supplies and transportation plagued the Allied advance. Some 28 divisions were advancing across France and Belgium, each requiring 700-750 tons of supplies a day. Patton's Third Army was in danger of grinding to a halt from lack of supplies. The key to maintaining the pursuit was a continuous re-supply of fuel and ordnance. The solution was the Red Ball Express.

From the outset, the Army did not have enough trucks or drivers to support the divisions. The Army consolidated its trucks into provisional units that formed the Red Ball Express. Soldiers from all over the U.S. forces became drivers. The majority of these were young African-Americans serving in support units.

The first convoys quickly bogged down in civilian and military traffic. In response, a priority route, marked by signage featuring the Red Ball, was established on two parallel highways between the Normandy beachhead and the city of Chartres, France. The rules of the road were clear: trucks were to travel only in convoys of no fewer than five trucks each. Every truck was marked with a number showing its position in the convoy, and the trucks were to stay 60 feet apart and travel at 35 mph. Truck drivers drove around the clock to push supplies to the front. Their herculean effort in sustaining the Allied drive became famous.

At peak operation, the Red Ball Express was running 5,938 vehicles a day carrying 12,342 tons of supplies to forward depots. While lasting only 3 months, from August to November 1944, the Red Ball Express saved the Allied advance. Without it, the Allied offensive would have halted, prolonging the war. The Red Ball Express was an out-of-the-box solution to maintain the offensive momentum. It was only the first of several subsequent express routes, but because of its fame, veterans referred to all similar routes as the Red Ball Express.

THREATS TO SUSTAINMENT UNITS

5-13. A *threat* is any combination of actors, entities, or forces that have the capability and intent to harm U.S. forces, U.S. national interest, or the homeland (ADP 3-0). Threats may include individuals, groups of individuals, paramilitary or military forces, nation-states, or national alliances. In general, a threat can be categorized as an enemy or an adversary.

5-14. FM 4-0 is focused on sustaining large-scale combat operations against peer threats. A peer threat is an adversary or enemy with capabilities and capacity to oppose U.S. forces across multiple domains world-wide or in a specific region where it enjoys a position of relative advantage. Peer threats present credible challenges to sustainment forces through the use of information warfare, isolation, systems warfare, preclusion and sanctuary. Other considerations such as contested LOC and anti-access/area denial techniques coupled with challenges across multiple domains (air, land, maritime, space and cyberspace) challenge sustainment support to operations. Sustainment commanders must consider the OE and all the factors that affect their ability to sustain operations during planning.

5-15. Peer threats have the ability to influence and direct irregular forces, criminal elements, and hostile populations. Peer threats have the ability to impose disruptive effects in cyberspace that will challenge Army sustainment during pre-deployment, deployment, employment, and redeployment. These disruptive effects may occur at unit home-stations, ports of embarkation, while in transit to the theater, and upon arrival at ports of debarkation as well as within the theater.

5-16. Peer threats employ their capabilities across multiple domains to attack U.S. vulnerabilities, including sustainment facilities, networks and formations. Peer threats use their capabilities to create lethal and nonlethal effects throughout an OE. During combat operations, threats seek to inflict significant damage across multiple domains in a short period of time. Peer threats seek to delay U.S. forces long enough to achieve their goals and end hostilities before U.S. forces reach culmination. One effective way to delay U.S. forces, which generally operate on very long LOCs, is to disrupt sustainment operations and nodes. See FM 3-0 for additional information on peer threats.

5-17. Threat forces may employ tactics that force the U.S. Army into conducting large-scale combat operations in urban areas. Currently more than 50 percent of the world's population lives in urban areas, and this is likely to increase to 70 percent by 2050, making large-scale combat operations in cities likely. Large-scale combat operations in urban terrain is complex and resource intensive. In most urban operations, the terrain, the dense population, military forces, and unified action partners will further complicate sustainment operations. For additional information on operations in urban areas, see ATP 3-06.

5-18. Threat use of subterranean spaces and structures (any space or structure located below ground) as a means to covertly maintain the initiative against a more powerful military opponent may occur during large-scale combat operations. Such spaces and structures can be used for command and control, defensive networks, operations, storage, production, or protection. Continued improvements in the construction of subterranean environments have increased their usefulness and their proliferation. For additional information, see ATP 3-21.51.

ARMY HEALTH SYSTEM SUPPORT DURING LARGE-SCALE COMBAT OPERATIONS

5-19. Key AHS activities during large-scale combat operations include augmentation of organic medical treatment capabilities for large-scale casualty events, conducting area medical support, enabling prolonged care, and providing medical support to reconstitution operations. Army medical formations must provide medical support at the speed required by maneuver, within the constraints placed by sustainment, and in the best interest of the commander.

5-20. The surgeon cells at each echelon conduct planning, coordination, synchronization, and integration of AHS support to large-scale combat operations. At the strategic level, the Office of the Surgeon General coordinates with Defense Health Agency and the national health system for increased requirements of medical services and the Armed Services Blood Program for surge of class VIII (b). The Surgeon General and FORSCOM Surgeon work closely with HRC to develop medical force generation strategies in support of large-scale combat operations. Surgeon cells at EAB plan, coordinate, synchronize, and resource area medical support, augmentation to organic medical capability and capacity, medical support for large-scale casualty and evacuation events, enable prolonged care, and provide medical support to reconstitution operations. Medical brigade (SPT) commanders allocate resources to support these tasks and provide AHS support to reconstitution operations, as well as continued support to RSOI. The Somalia vignette in the next section provides discussion and planning considerations for prolonged care and large-scale casualty events. See FM 4-02 for additional information on AHS support.

Transportation and Logistics Considerations for Role 3 Medical Treatment Facilities

5-21. The hospital center and subordinate detachments require a significant amount of logistical and transportation support getting to and once in theater. When planning for placement of Role 3 MTFs, medical planners should consider these requirements (as shown in Table 5-1), external support available, and the amount of time it will take to disestablish, containerize, move, and reestablish a hospital. Planners and commanders cannot expect a hospital to relocate from one location to another and be able to provide the full complement of Role 3 medical care in the new location in just two to three days. Executing the move of a hospital center may take a significant amount of time (depending upon the distance required to move and training level of the unit) considering the required planning, coordination for resources, evacuation of all patients, systematically discontinuation of services, disassembling and packing the facility, conducting the move, and then re-establishing the facility is a significant undertaking. Table 5-1 lists logistics and transportation planning factors for movement and sustainment of Role 3 MTF.

Table 5-1. Hospital center logistics and transportation planning factors

<i>HOSPITAL CENTER SECTIONS</i>	<i>Diesel (Gal/Day)</i>	<i>Gas (Gal/Day)</i>	<i>Power (Kw/Day)</i>	<i>Water (Gal/Day)</i>	<i>Operation Space (Acres)</i>	<i>Housing (Acres)</i>	<i>Comm Trucks (Asstd)</i>	<i>Rail (flatcar)</i>	<i>Air (C-17)</i>
<i>HHD, Hospital Center 27 Pax</i>	10	0	118	Surgical 625	1.12	0.35	4	2	2
<i>Hospital Aug Det 24 Bed, Surgical 66 Pax</i>	360	97	380	Patient Care 4,135	1.09	0.2	13	6	6
<i>Hospital Aug Det 32 Bed, Medical 45 Pax</i>	240	75	263	UUL 3,889	0.23	0.2	12	6	6
<i>Medical Aug Det 60 Bed, ICW 33 Pax</i>	120	55	89	Laundry 3,836	0.32	0.14	5	3	3
<i>Medical Aug Det 60 Bed, ICW 33 Pax</i>	120	55	89	Shower 2,633	0.32	0.14	5	3	3
<i>Field Hospital 166 Pax</i>	1,006	176	755		6.78	0.39	37	15	13
<i>Field Hospital 166 Pax</i>	1,006	176	755		6.78	0.39	37	15	13
<i>Totals 536 Pax</i>	2,862	635	2,450	15,117	16.64	1.81	113	50	46
LEGEND:									
Aug = augmentee					ICW = intensive care ward				
C-17 = transport aircraft					Kw = kilowatt				
Comm Truck Asstd = commercial trucks (assorted)					Pax = passengers				
Det = detachment					UUL = universal unit list (drinking, personal hygiene, food preparation and non/portable water)				
Gal =gallon									
HHD = headquarters and headquarters detachment									

Enable Prolonged Care

5-22. Contested domains may require formations conducting semi-independent operations to hold onto injured personnel beyond doctrinal evacuation timelines. Medical care provided during those extended periods is called prolonged care. Strategies to enable prolonged care include medical force multiplication measures, pushing advanced medical capabilities forward, and augmentation of forward medical capacity. Medical force multiplication consists of pushing advanced knowledge, skills, and materiel enablers. This starts with tactical combat casualty care. Tactical combat casualty care allows every Soldier and combat lifesaver to address medical task organization solutions address expeditionary hospitalization capability and augmentation of forward holding capacity. Development of medical materiel solutions are also in progress to enable prolonged care and care enroute. However, significant total medical force structure capacity shortfalls for treatment and medical logistics remain. Leveraging medical agreements established during the competition phase and interoperability with unified action partners will mitigate some AHS shortfalls.

Medical Support in Dense Urban Environments

5-23. Security and finding the right location within distances that provide timely support are paramount to successful medical operations in dense urban environments. Infrastructure information obtained during shaping activities and close coordination with SOF and civil affairs assets help medical planners establish flexible options for casualty collection points and roles of medical care. Current science and technology

solutions improve physical access (for elevated structures) and extraction of casualties (surface and subterranean).

PLAN, RESOURCE, COORDINATE, SYNCHRONIZE LARGE-SCALE CASUALTY EVENTS

5-24. Patient movement occurs at the tactical, operational, and strategic levels and requires the synchronization and integration of Service component resources as well as coordination with air evacuation liaison teams and HR casualty liaison teams (CLTs) for personnel accountability. Strategic medical regulating officers coordinate and synchronize multi-modal global patient movement options (TRANSCOM, unified action partners, and the global patient evacuation enterprise) for projected and surging requirements. Operational medical regulating officers (MED BDE [SPT]/DSB/sustainment brigade) coordinate and synchronize medical evacuation operations with non-standard medical evacuation and casualty evacuation operations in conjunction with aviation and sustainment organizations. Tactical medical staff (BDE surgeon/BSMC/ battalion physician assistant) coordinate with the chain of command, organic sustainment assets (first sergeants/ FSCs), and supporting aviation assets for casualty evacuation and medical evacuation (air, ground, standard, and non-standard) operations. EAB CLTs and other HR elements leverage the liaison officer chain at Roles 3 and 4 MTF to maintain accountability and readiness status of personnel throughout the continuum of care.

5-25. Casualty information is collected from all available sources on the battlefield and reported through official channels as quickly as possible. Casualty managers at each echelon of command need to deploy as part of each echelon's early entry elements. In the absence of an HRSC, the senior element G-1 must be ready to immediately assume the role of the theater casualty assistance center. The casualty reporting mission needs to take priority and additional requirements for information from higher levels may increase the complexity of the reporting requirements.

5-26. During large-scale combat operations, units will report all casualties found on the battlefield to include American civilians, DOD or DA Civilians, contractors, and personnel of other Services. Units will record casualties that result from contingency operations on DA Form 1156 *Casualty Feeder Card*. To ensure accuracy without delay or as the battlefield allows, units will verify information on the DA Form 1156 before forwarding it to the appropriate battalion S-1 or division G-1. A field-grade officer from the casualty's battalion level unit will review and approve the completed DA Form 1156, initial, and supplemental casualty report for deceased, duty status whereabouts unknown, or excused absence whereabouts unknown with particular focus on timeliness of reports, detailed circumstances, and verification of the inflicting force.

5-27. When a casualty occurs, every level of command initiates an initial report to the next higher level and passes casualty information to the contingency casualty assistance center. The casualty assistance center continually reconciles, verifies, and consolidates incoming information before passing it to the casualty and mortuary affairs operations division at Fort Knox. The verified casualty report is transmitted to casualty and mortuary affairs operations division as quickly as possible. CLTs are assigned to Role 3 MTFs, mortuary affairs collection points, and other locations best suited to capture casualty information.

Battlefield Flow

5-28. The DA Form 1156 is used to submit an initial report when a casualty incident is observed. The DA Form 1156 is used to document critical information which is forwarded to the battalion S-1 section for submission to the brigade S-1 section. The brigade S-1 section prepares the initial casualty report using the Defense Casualty Information Processing System and forwards the report through the chain of command for further submission to casualty and mortuary affairs operations division.

Note: Based on guidance from the JTF, joint forces land component command, or coalition forces land component command, the ASCC may delegate authority to corps-level commanders to release casualty reports directly to casualty and mortuary affairs operations division with a copy provided to the theater casualty assistance center.

5-29. Due to the personal nature of information within casualty reports, the theater casualty assistance center, established by the HRSC, reports casualty information to the casualty and mortuary affairs operations

division using Defense Casualty Information Processing System as the official means of casualty reporting. In the absence of the HRSC, the senior element G-1/AG must immediately assume the role of the theater casualty assistance center.

5-30. Soldiers may immediately medically evacuate to a medical treatment facility where the CLT, in coordination with the Soldiers' unit, may generate the Defense Casualty Information Processing System report for submission to the theater casualty assistance center. Information includes date and time of the casualty, circumstances, and location. CLTs are allocated to the HRSC Casualty Operations Division operating the theater casualty assistance center.

Casualty Liaison Team

5-31. The CLT provides accurate and timely casualty reporting and tracking information at Role 3 MTF, theater mortuary affairs collection points, General officer commands, and the HRSC casualty operations division. CLTs facilitate real-time casualty information for commanders. Not only do CLTs provide accurate casualty information, but CLTs also act as a liaison for each affected commander and unit. CLTs provide updated status reports to affected units and inform them when Soldiers are evacuated from theater. CLTs also assist with coordinating a Soldier's return to duty.

5-32. The CLTs primary function is to ensure timely reporting of casualty information to the theater casualty assistance center and the unit S-1. The theater casualty assistance center verifies the information and sends it to casualty and mortuary affairs operations division to coordinate notification actions through the appropriate CONUS and/or overseas CONUS casualty assistance center. CLTs supporting G-1s assist commanders in maintaining accurate casualty information throughout the duration of an operation.

5-33. The CLTs begin coordination with patient administration offices to handle those casualties evacuated to military or civilian hospitals within their AO. CLTs located at a Role 3 medical treatment facility reviews each patient's status, documents newly arrived patients, and collects casualty related information for entry into the Defense Casualty Information Processing System. The Joint Patient Tracking Application assists G-1s and S-1s with casualty tracking and Soldier location information.

5-34. Mass casualty incidents or transfer of injured personnel may require treatment at hospitals outside theater. The CLTs are essential for providing updated information on all incapacitated, injured, and ill personnel through the theater casualty assistance center to casualty and mortuary affairs operations division. The casualty and mortuary affairs operations division then notifies the installation casualty assistance center, who in turn provides updated information to the primary next of kin. CLTs also provide updated information as personnel transit through MTFs.

5-35. The Office of the Surgeon General is responsible for identifying the MTFs within the sustaining base to treat patients in the AO through MTF sourcing and outside of the deployed AO for patients who evacuate from the deployed AO. Once identified, the theater casualty assistance center ensures the CLT network is established, positioned, and resourced to support the deployed AO for casualty reporting.

Casualty Assistance Center

5-36. The casualty assistance center responsible for the geographic AOR where the incident takes place is the reporting casualty assistance center. It is responsible for issuing initial and any supplemental casualty reports until casualty reporting requirements have been met or the Soldier is transferred to a location outside of the casualty assistance center's jurisdiction. The reporting casualty assistance center will transmit an initial casualty report for each individual involved. If operational requirements prevent units from meeting this time requirement, the initial casualty report will be transmitted as soon as possible.

SECTION II – PLANNING CONSIDERATIONS

5-37. Planning considerations include a known or anticipated support requirement, a known or anticipated problem, a readiness issue, a capability shortfall, enemy threat, or an aspect of operational or mission variables that influence sustainment support. If identified and used properly, planning considerations assist planners in identifying specific support or operational requirements based upon available information. Sustainment planners must also plan for execution of all sustainment functions and associated sub-functions

at all echelons; logistics, financial management, personnel services, and health service support. This includes personnel replacement, casualty reporting, medical treatment, medical evacuation, medical logistics/supply, and all sustainment functions.

5-38. Planners must consider the scope of support provided by the DSBs assigned to divisions. All units attached to the division are supported by the DSB and its organic DSSB. This includes the attached BCTs as well as other organizations supporting the division's operation. Units such as engineer, military police, chemical, air defense, may operate in the division's consolidation and support areas. If the scope of support requirements exceeds the capacity of the organic DSSB, additional modular logistics companies or an additional CSSB may be required to meet support requirements. The division G-4 and the DSB commander must continually assess the situation and make organizational changes as necessary.

5-39. Commanders and staffs should be very deliberate in planning sustainment support and only plan for support that is absolutely essential to mission accomplishment. Planning for non-essential support puts unnecessary demands on already-limited distribution and transportation assets and puts capability at needless risk. This may also deprive units of support for which units have a legitimate requirement. As an example, if Heavy Equipment Transporter System support is needed for a mission with no additional transportation requirements needed, commanders should request a Heavy Equipment Transporter System company, not a composite truck company, (heavy). The composite truck company comes with additional, unneeded types of trucks that will only burden the mission and waste a critical asset that can be legitimately used elsewhere. Another example is the use of laundry and shower units. These may be desirable but unnecessary for mission accomplishment.

5-40. The tempo and lethality of large-scale combat operations may overwhelm maintenance, medical, personnel replacement, and mortuary affairs capabilities. Additionally, the strain of support to other Services and multinational partners will exact a heavy toll on already constrained sustainment resources. For example, the quantity of air and ground distribution assets required to fulfill the Army's role as lead service for bulk petroleum (when designated) will place significant demands on the Army in support of large-scale combat operations. Because of these factors, sustainment planning should include coordination, integration, and synchronization at all levels for reinforcing sustainment support to the joint force and multinational partners.

5-41. AHS formations are designed as tailorable and modular units but require significant additional transportation resources for mobility. A Role 3 field hospital can take 72 hours to tear down, requires 22 additional flatbed trucks, and requires an additional 96 hours to be fully operational. Medical brigades (support) and medical battalions (multifunctional) can be task organized in different configurations based on METT-TC requirements, while roles of medical care are designed for modularity. Role 1 and Role 2 capabilities consist of the following medical modules:

- Combat medic section (Roles 1 and 2).
- Ambulance squad (Roles 1 and 2).
- Treatment squad (Roles 1 and 2).
- Area support squad (Role 2).
- Patient holding squad (Role 2).

5-42. Medical formation modularity facilitates augmentation, cross leveling and reinforcement of Role 1 and 2 medical capabilities within the division or with assets from the MEDBDE (SPT).

5-43. Evacuation of fatalities may not occur during large-scale combat operations based on the availability of transportation platforms and the tactical and operational situation. Casualty estimates indicate the capacity for human remains processing by mortuary affairs companies will be exceeded during large-scale combat operations, and the establishment of an in-theater mortuary may be required. Mortuary affairs companies prepare and temporarily store human remains until transportation to a CONUS port mortuary is available. Sustainment planners must coordinate for adequate cold storage capacity within close proximity to the theater mortuary evacuation point. Cold storage platforms such as refrigerated shipping containers and multi-temperature refrigerated container systems normally used for class I storage may be used for the temporary storage of remains. It is important to note that these containers can be returned to service for class I storage through a process of cleaning and disinfecting as outlined in TG 195A. Although a last resort, temporary interment operations may be the only option to account for and safeguard human remains until the cessation of hostilities. For additional information, see appendix A, ATP 4-46, and JP 4-0.

5-44. The high tempo of large-scale combat operations will result in gaps and seams that create both opportunities and risks as enemy formations disintegrate or displace. The variety of possible situations arising during large-scale combat operations requires sustainment operators establish a flexible and tailorable distribution system in support of tactical commanders.

5-45. Distribution management, using all modes, is the method by which sustainment commanders and staffs move materiel and personnel from an originating point to the point of employment. The distribution system extends from ports of debarkation and supply points in the joint security area and extends to the forward line of troops. Distribution execution becomes ever more complex and threatened by enemy action as it moves from higher to lower echelons. Distribution planners must understand that retrograde of materiel, casualties, and human remains is a significant component of distribution and requires extensive planning and management. Well-developed distribution plans, synchronized across all warfighting functions and echelons, and with redundancy are critical to ensure all units have the materiel and personnel needed for maximum capability. Figure 5-1 displays a graphic depiction of a distribution network.

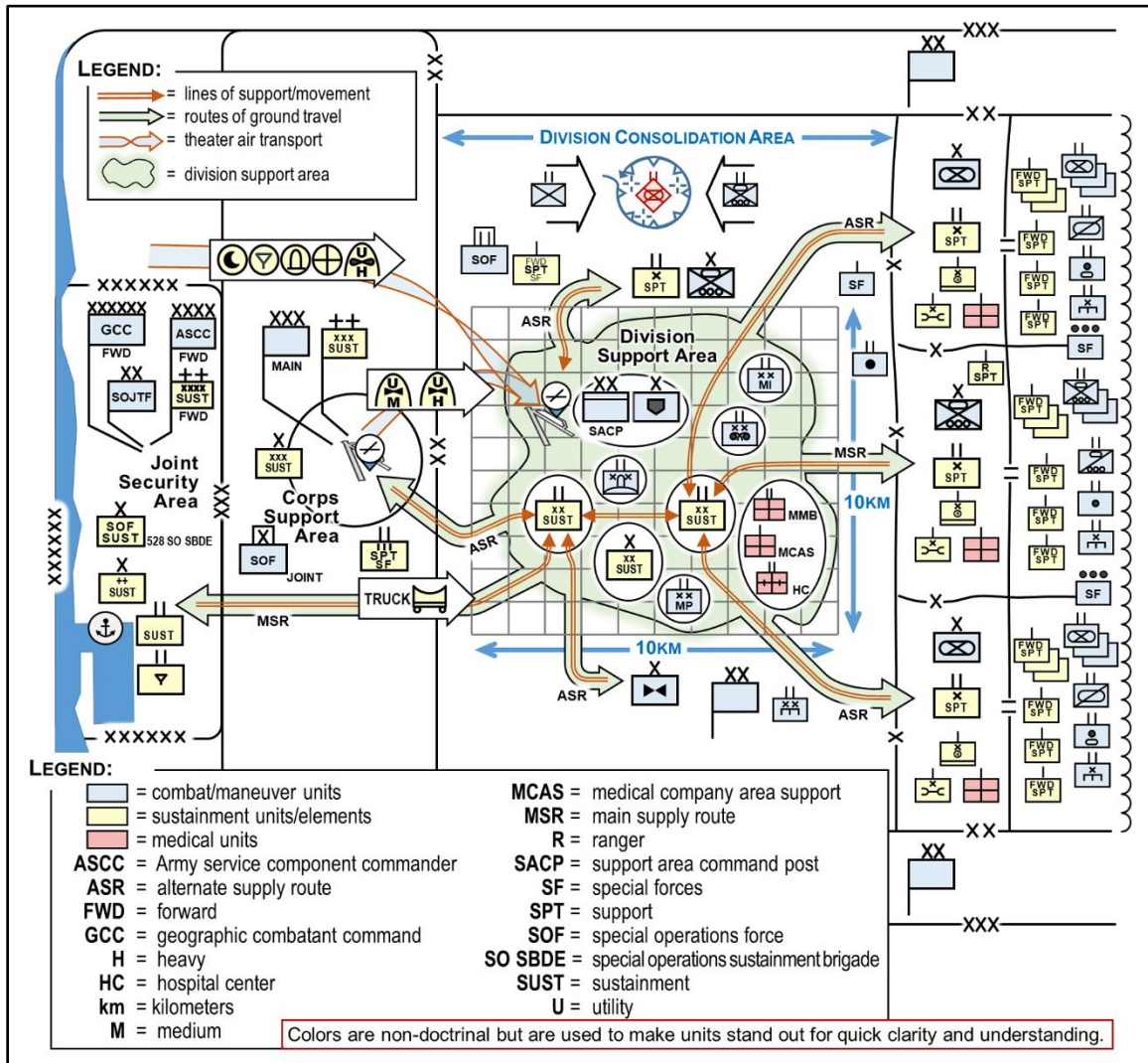


Figure 5-1. Distribution network

5-46. Sustainment planning is not a singular activity, but both a continuous and a cyclical part of the operations process. While planning may start based upon receipt of a specific mission as part of an iteration of the operations process, planning does not stop with the production of an order. During preparation and execution, the plan is continuously assessed against pre-established requirements and refined as the situation

changes. Thorough assessment of measures like died-of-wounds rates, percentage of requisitions filled, and operational readiness rates, funding authorities and funds available (status of funds), subordinates and others provide feedback as to what is working, what is not working, and how the unit can adapt to the changing conditions.

5-47. Sustainment planners should expect maneuver units to be degraded to a large degree in supplies, communications, and equipment readiness due to equipment failure due to tempo and operational loss. Planning considerations must factor in major end item battle loss attrition and battle damage sustainment and how the depots project OCONUS capabilities to support the OPLAN. During the set the theater planning process, theater Army's and their supporting TSCs must coordinate with the Center for Army Analysis and develop OPLAN battle loss and battle damage estimates with USAMC and its subordinate LCMCs who operate the depots. The TSCs, in conjunction with ASC and USAMC LCMCs, need to plan for the footprint, support requirements, and force protection of depot maintenance forward repair activities.

5-48. Units will also have large numbers of casualties that require immediate treatment and evacuation. Units should identify potential medically related commander's critical information as it pertains to the health threat. A rapid and accurate assessment of supported unit status and of support capability is critical. This is normally accomplished using command and control systems and specifically through LOGSTAT and PERSTAT reporting generated from the lowest levels through all command echelons. Sustainment planners at all echelons must ensure synchronization of replacement operations to sustain units suffering high casualties during large-scale combat operations. Corps, division, and brigade echelons require capability to receive, orient, and integrate replacements. HR planners send prioritized replacement requests, based on current strength and anticipated losses, to maintain units in combat at or near full strength. Units should have a standard operating procedure and plan to execute deliberate reorganization as a routine operation to integrate personnel replacements and equipment.

5-49. Mass casualties must be included in the planning process, as well as processing and integrating large-scale replacements at echelon. The ASCC G-1 must continuously integrate with the TSC, ESC, corps, and divisions for proper replacement flow in theater.

5-50. The ASCC G-1/AG is responsible for developing casualty estimates (arranged by skill and grade), corresponding replacement requirements, and identifying replacement staging bases as part of the deliberate planning process to support the OPLAN. Replacements are sourced as part of the TPFDD. For replacement units, HQDA will task Army commands, ASCC, and direct reporting unit commanders to provide replacement units to the requesting commander. HRC, in coordination with HQDA Deputy Chief of Staff Army G-1 and FORSCOM, executes total Army manning and assists Army commands in developing replacement force packages (buddy teams, squads, crews, platoon, company). HRC is responsible for implementing non-unit related personnel distribution to support replacement operations.

5-51. Sustainment planners should anticipate the effects of CBRN conditions. This includes impacts to supply routes and increases in requirements for non-potable water and chemical defense equipment. CBRN defense planning must include detailed procedures for processing contaminated human remains and equipment decontamination. IAW DOD and Federal policy, the safety of the living takes precedence over the evacuation of contaminated remains. If unable to be rendered safe for transport, contaminated human remains will not depart the theater of operations. Sustainment planners must identify and resource cold storage or interment. For more information on decontamination of human remains, see ATP 4-46.

5-52. Sustainment planners must consider fatality estimates, the flow of allocated mortuary affairs assets into the theater, and the sustainment channels with the most expedient available transportation resources to evacuate human remains. The evacuation of human remains should be without delay to preserve the forensic evidence for the Armed Forces Medical Examiner. The sustainment channels also provide for the evacuation of personal effects to the Joint Personal Effects Depot in CONUS. Evacuation of human remains and personal effects may place a significant strain on the transportation system. Planning must include transportation for U.S. citizens, multinational forces, HN, prisoners of war, and detainees.

5-53. Despite the increased demand for unit replacements expected in large-scale combat operations, the requirement for individual replacements always exists. To begin the personnel flow as soon as possible after deployment, the Army initially uses a push system based on personnel requirements from approved casualty estimates and existing personnel shortages. As soon as possible after deployment, data on actual battlefield

losses are used to adjust the push packages. While not a requisition system, the push package eventually reflects actual wartime requirements rather than casualty estimates. After utilization, the replacement system will transition to a pull operation based on theater requirements. ASCC G-1 consolidates replacement requirements from subordinate organizations, receives replacement priorities from the ASCC G-3, and passes to the national HR provider.

5-54. Theater replacement operations entail the coordinated support, accountability, and distribution of individual replacements from the point of origin to requesting commanders. The TSC commander ensures that replacements are delivered from higher to lower echelons as far forward on the battlefield as possible based on distribution priorities established by the theater commander and requirements provided by the theater G-1. Normally, replacements are processed through the theater gateway, integrated into the theater database for accountability, and placed into the distribution network for movement to the unit of assignment. The sustainment brigade then coordinates transportation for distribution of replacements based on established priorities to unit of assignment. Unit of assignment decisions are relayed from the ASCC through the TSC to the sustainment brigade responsible for theater distribution or from the supported unit to the HROB at other echelons. The HROB is the key integrator between G-1/AG at echelon and the sustainment enterprise.

5-55. Contracted sustainment support should include considerations for operational security and address the constraints and limitations of contracted support. Planning should address under what conditions contracted support should be used, and where to emplace it on the battlefield. During large-scale combat operations, planners should be aware of the location of contracting organizations forward of the corps rear boundary. This is for both operational security and effectiveness. Many contracting vendors use local nationals that may gather essential elements of friendly information and communicate that information to threat entities which could compromise an operation and lead to failure. Although local contracting for services and commodities might be limited due to operational area effects and constraints, these elements are present to support the maneuver forces with requirements anticipation, development, and provision of support.

5-56. Transition from offensive operations to defensive operations requires sustainment forces have class IV stocks on-hand. Forces require every option to defend from attacks and these include protective barrier material such as concertina wire, bastions, and lumber for overhead cover. Transition back to offensive operations may require aggregate for road repair, ford sites, and gap crossing preparation. Class IV is also required for detainee collection sites.

5-57. Sustainment planners should anticipate increased expenditures of munitions during large-scale combat operations that could exceed the availability in theater. The munitions section of the TSC and ESC DMC must monitor expenditure rates in relation to stockage levels, forecasts regarding current and future operations, and limitations to re-supply and recommend controlled supply rates to the CCDR. Reconciling controlled supply rates and required supply rates begins in operations to shape and are informed by OPLANS and anticipated expenditure rates.

5-58. Ammunition planning includes determining ammunition requirements, echeloning capabilities and ammunition units, establishing split-based operations where required, pre-configuring ammunition and resupply, and when required, using civilian, contractor, allied, and host nation capabilities. A combat configured load is a mixed ammunition package designed to provide for the complete round concept, type of unit, type of vehicle, capacity of transporter, and weapons system (ATP 4-35). Contents of the package are predetermined and provide optimum distribution velocity, quality and mix to support a particular weapon system or unit. Combat configured loads are built at the national-provider level or in a theater. Combat configured loads built at the national-provider level may be re-configured in theater at an ammunition supply point as required and delivered as far forward to the using unit as possible.

5-59. Sustainment and supported units should consider building combat configured loads to meet the class V demands for initial entry operations and large-scale combat operations. Configured loads represent a way of requesting or pushing ammunition rapidly with a mix of all or most of the munitions a weapons platform or unit needs. Combat configured loads can be quickly distributed to the platform level with little to no intermediate handling but are resource intensive. Building, storing, transporting, and rebuilding the configured load with unused class V requires significant amounts of personnel, facilities, haul, and security.

5-60. The supported unit commander determines ammunition required supply rates based on desired effects (obscure, destroy, defeat, suppress), knowledge of upcoming tactical operations, and input from subordinate

organizations including the supporting sustainment unit. The supported commander should also ensure a sustainment representative participates in targeting boards to provide subject matter expertise. The supporting unit commander manages the allocation and distribution of munitions based upon the supported commander's sustainment priorities. The supporting commander calculates and recommends composition of combat configured loads based upon the controlled supply rate, forecasting, and historical data.

5-61. Explosive ordnance threats may be present during the conduct of any or all of the Army strategic roles both in CONUS and OCONUS. EOD detects, identifies, conducts onsite evaluations, renders safe and conducts exploitation, disposal or other disposition of explosive ordnance, including weapons of mass destruction. Commanders manage risk posed by explosive ordnance by synchronizing and integrating EOD during the planning and execution of operations to protect life, property, and priority assets.

5-62. Sustainment commanders and leaders at all levels must have a complete understanding of the maneuver unit's concept of operation. This is the only way to understand and proactively anticipate the requirements to support current and future operations. It allows commanders to use command and control and the operations process to plan, prepare, and execute the appropriate support functions. Interaction with the supported unit planners is critical to this understanding. At the company level, this requires interaction with the maneuver company headquarters. At echelons with staff, the interaction must be with the S-1/G-1, S-3/G-3, S-4/G-4, S-8/G-8 and the unit surgeon. Sustainment planning must be executed concurrently with operational planning to ensure complete integration and synchronization.

5-63. The concept of operations drives requirement determination for all sustainment functions. Ideally, it will identify support priorities in terms of units, support functions, and commodities. This allows sustainment commanders to understand the sustainment requirements and to plan accordingly.

5-64. In addition to the concept of operations, sustainment commanders must understand the operational environment and the problems it presents to support operations. This is one of the most critical aspects of supporting large-scale combat operations. Time, space, enemy, and environmental threats all impact a sustainment commander's ability to develop an executable support concept. Planning for echeloned sustainment support should be done on a continuous basis. Figure 5-2 depicts an example of echeloned sustainment using field, combat, and company trains to include templated distances between locations. Operational and mission variables should be considered when actually selecting locations and determining distances between locations.

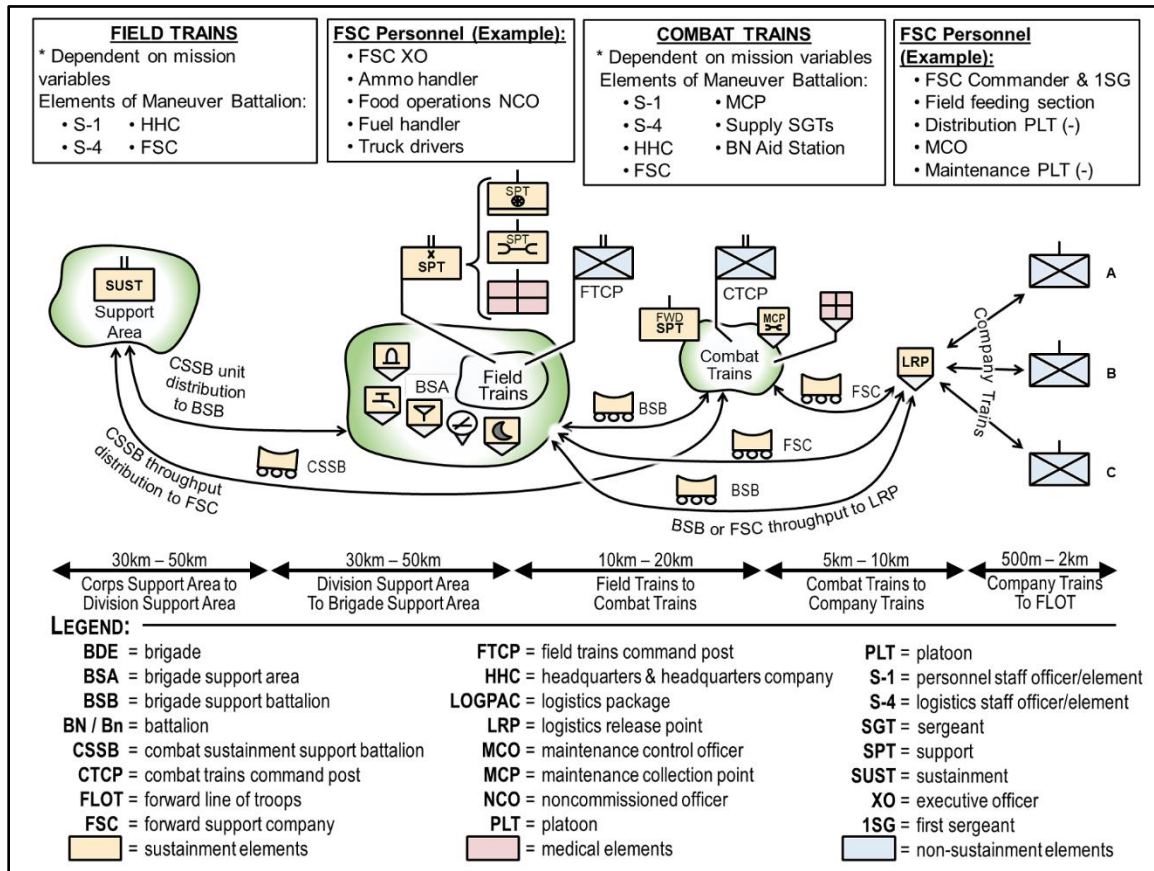


Figure 5-2. Example of echeloned support

5-65. Risk, uncertainty and chance are inherent in all military operations. Sustainment planners must seek to balance and understand risks, rather than avoid risks, to ensure continuous sustainment of the operational force. During large-scale combat operations, sustainment commanders must understand that taking risks may provide award versus the avoidance of risks altogether, especially in the execution of defensive and offensive operations. Sustainment planners should develop mitigation and risk reduction strategies to reduce and/or minimize the effects of risks. Military deception activities seek to hold the adversary's attention and can mitigate the impact of hazards that drive risk. Sustainment capabilities can be used at echelon by operational commanders to deceive an adversary. Conducting joint logistics-over-the-shore operations at multiple ports can deceive the adversary as to the true intent of the United States. Sustainment commanders must assess and mitigate risks continuously throughout operations. The ability to sustain units in the corps, division, and brigade areas of operation will incur significantly high risks resulting from conventional and hybrid threats. Sustainment units must be equipped, structured, trained, and prepared to execute reconnaissance and security tasks during large-scale combat operations to ensure their sustainment missions can be accomplished, when maneuver support is unavailable.

5-66. To deal with expected direct enemy attack by aircraft and long-range artillery, commanders plan to disperse into smaller bases and base clusters. This applies to all bases from the BSA to bases operating in the joint security area. Dispersion mitigates effects of long-range fires and attack aircraft, but commanders still consider all security integration implications of the base cluster. Commanders ensure base defense measures are adequate to detect and defeat small unit operations (Level I or Level II threats) and units use adequate cover and concealment measures to prevent detection by enemy forces. Security of based clusters should be integrated into planning.

5-67. Dispersion is essential, but it must be orderly enough to enable sustainment operations to continue after a brief period of reorganization and resupply with concurrent multi-echelon planning and coordination. Both

command and control nodes and support capabilities in the support and consolidation areas are lucrative targets for the enemy. While dispersion may provide protection against long-range fires, it potentially makes defending against other threats, like irregular forces or SOF, more difficult. In any case, for sustainment of large-scale combat operations, there can be no massive stockpiles outside of sanctuary, with appropriate assets assigned to maintain them. Sustainment commanders ensure as much dispersion as tactically prudent to prevent destruction. Wide dispersion of forces and lengthening LOCs create challenges for movement control, in-transit visibility, terminal operations, mode operations, and many other sustainment activities. The POL pipeline presents the same challenges. Pipeline security can be a significant challenge and cover a very large or isolated geographical area. Sustainment commanders must anticipate mitigating challenges presented by the need to disperse versus priorities of support. Shortfalls in transportation assets will require deliberative planning to overcome these mobility challenges.

5-68. Dispersion and the distributed nature of large-scale combat operations create increased requirements on transportation assets. Two corps with six divisions engaged in tactical formation for offensive operations may occupy an area roughly the size of Connecticut (5,000 square miles), significantly impacting demands on transportation assets. Planners must consider transportation requirements such as distribution and retrograde of materiel and personnel. For line haul operations, planners should consider one trip per day covering 90 miles one way to support materiel and personnel moving from the BSB to the FSC. For local haul operations, planners should consider two or more trips per day covering 20 miles each way to support materiel and personnel moving from the FSC to forward locations. Transportation requirements that exceed Army capabilities must be mitigated through support from contracting, the joint Services, multinational partners, or other unified action partners.

5-69. Large-scale combat operations will require significant mobility and constant displacement to avoid indirect fires and other threats. The need to constantly displace will create competition for transportation assets that will be required to shift from executing distribution operations to assisting with the mobility of various headquarters to prevent their destruction. Commanders will have to weigh risks and establish priorities of support.

MISSION ANALYSIS: REQUIREMENTS, CAPABILITIES, AND SHORTFALLS

5-70. For sustainment planning, the most important factors are requirements, capabilities, and shortfalls. For example, insufficient transportation assets impact the ability of sustainment units to rapidly disperse or displace. Extended supply lines present significant challenges to bulk petroleum distribution. Peer threats impact the Army's ability to outsource fuel distribution, forcing sustainment commands to use military assets over extended supply lines. The inability to leverage OCS or host nation assets may result in operational pause or culmination before reaching an objective. Commanders and staffs at all echelons assess what is needed to support the force, what is on hand, and how to mitigate any shortfalls in space and time. The results developed by applying command and control systems and analytics in support of large-scale combat operations differ from those during prevent operations in scope and composition, the analytical process is the same. The same is true of capability assessment. Chapter 2 outlines some basics.

5-71. Sustainment planners must also consider requesting the establishment of movement corridors in support of sustainment functions. The establishment of a movement corridor is, by necessity, a combined arms technique that could be listed as a mobility operation and a security operation because it extracts multiple supporting tasks and activities from both. Units establish a movement corridor to set the conditions to protect and enable the movement of traffic along a designated surface route. A movement corridor may be established to facilitate the movement of a single element, or it may be established for a longer period of time to facilitate the movement of a number of elements along a given route. The owner of an AO may establish a movement corridor within the AO along an established main supply route or a route designated for unit movement. See ADP 3-37 for additional information on movement corridors.

5-72. At brigade and below, BCTs with organic BSBs and FSCs have relatively robust logistics capability to fulfill maintenance requirements in most cases. However, a shortfall exists in ABCTs and SBCTs because these lack track and specialized armor maintenance capabilities beyond the FSC. Commanders in the two-level maintenance system have multiple options available for maximizing maintenance capabilities.

Commanders may want to consider echeloning maintenance and recovery assets to maintain responsive support to sustain momentum and preserve combat power. Commanders may choose to utilize multiple maintenance collection points to optimize repair and limited recovery resources. Commanders may also authorize battle damage assessment and repair, controlled replacement, or overrides to deficiencies so equipment can be operated under the specific limitations directed by higher authority. Establishing timelines, standards, and establishment of resources for these actions should be addressed in unit standard operating procedures.

5-73. Figure 5-2 provides a graphic depiction of echeloned maintenance capabilities for an organic FSC in support of an ABCT. In this example, the FSC commander arrays his field maintenance section and recovery section in three echelons. In the first echelon a field maintenance team, with two or more maintainers and a tracked recovery vehicle are located in each of the company trains. The teams assist the company's vehicle operators and personnel with verifying faults, repairing minor issues, and ordering parts.

5-74. Vehicles requiring repairs that exceed the timelines established in the unit standard operating procedures are evacuated from the company trains to the second echelon. In this example, the maintenance collection point containing the majority of the FSC maintainers is the second echelon. The maintainers work on vehicles and equipment to repair and return forward IAW unit standard operating procedure timelines.

5-75. Vehicles and equipment in this example of three echelons within a two-level maintenance system that exceed repair timelines in the unit standard operating procedure are further evacuated to the third echelon shown as the BSA in figure 5-3. The FSC commander keeps a small team of maintainers in the field trains located in the BSA. Their role is to make a final attempt to repair equipment at field-level maintenance before it is coded out and turned in for sustainment-level maintenance.

5-76. In the event the ABCT must move forward the maneuver commander must choose to either leave the maintenance collection point in place, move the maintenance collection point forward with the unit, evacuate the equipment in the maintenance collection point back to the BSA, or move the BSA forward to the maintenance collection point. There is significant risk associated with each course of action and the commander chooses the optimal one based on operational requirements.

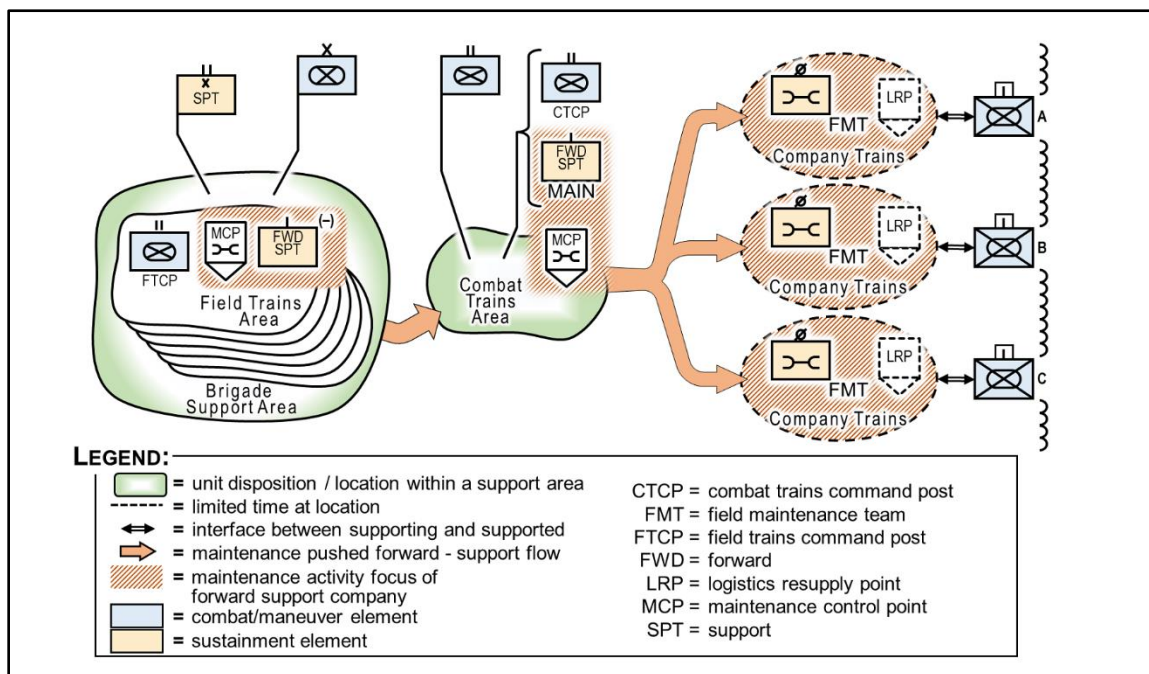


Figure 5-3. Example of echeloned FSC support to an ABCT

5-77. At brigade and below, BCTs with organic BSBs and FSCs also have relatively robust logistics capability to fulfill other support requirements. Their personnel services and health service support capability

is similar, with limitations and dependencies on EAB formations and their support relationships. Field artillery units have organic sustainment organizations, but lack certain capabilities (such as commodity maintenance, separate distribution and brigade support medical companies) that BCTs possess.

5-78. At brigade and below, BCTs with organic BSBs and FSCs most commonly execute supply point distribution to fulfill requirements by means of a logistics release point. The logistics release point may be any place on the ground where distribution unit vehicles take supplies and are met by the supported unit that then takes the supplies forward to their unit for subsequent distribution.

5-79. A unit uses a logistics release point to maximize efficient use of distribution assets and reduce the amount of time and distance the supported unit requires to travel in order to receive supplies needed for missions. The logistics release point is often located between the combat trains and the emplaced maneuver battalion's company trains. A logistics release point is normally established and secured for only a limited duration of time. Resupply at a logistics release point is a planned, coordinated, and synchronized operation conducted to mitigate shortfalls. Figure 5-4 depicts an example of a logistics release point on a battlefield.

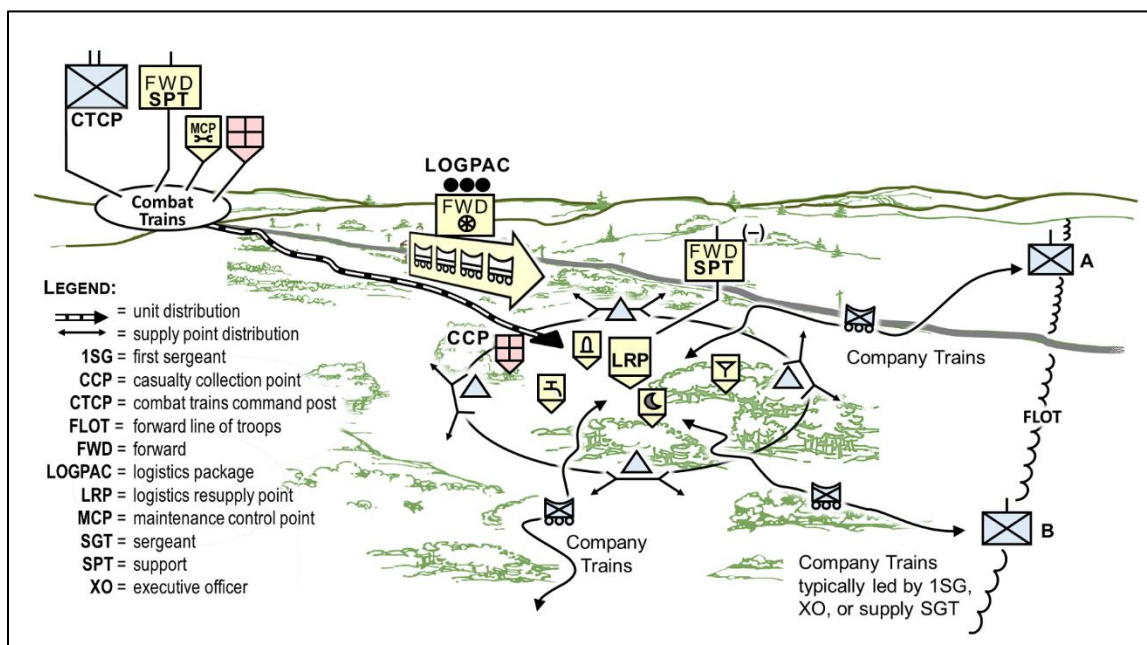


Figure 5-4. Example of a logistics release point

Using Logistics Packages to Provide Capabilities and Meet Mission Requirements

Units can utilize both unit distribution and supply point techniques when supplying a force at a logistics release point. For instance, the forward support company bringing supplies via a logistics package (LOGPAC) from the combat trains to a logistics release point is an example of unit distribution. An example of supply point distribution is when the first sergeant or XO of a maneuver company receives supplies from the logistics release point and returns to the company AO to distribute the supplies.

While a maneuver force can co-locate a logistics release point with the combat trains, the FSC and its supported maneuver battalion should establish the logistics release point between the combat trains and company trains. Establishing a logistics release point outside of the company trains increases the need for security, but it also allows maneuver commanders to maintain momentum and shorten the lines of communications for resupply. The forward support company commander and battalion S-4 plan the location, timing, and establishment of logistics release points for the maneuver battalion. Planners must consider mission variables and security considerations when determining the logistics release point's location.

Additionally, the maneuver force and sustainment planners must consider the timing of logistics release point operations. An FSC must deliver supplies to multiple companies during LOGPAC operations. The FSC could possibly deliver to multiple logistics release points depending on the situation and mission variables. There may only be a small window of time before elements of the LOGPAC must meet to return to the combat trains or BSA. The maneuver company first sergeants and FSC distribution platoon leader must consider timing of logistics release point operations, resupply of vehicles (particularly with class III and V), and the download of supplies.

Typically, a BSB can execute two LOGPAC convoys per day through planned resupply operations. Scheduled LOGPACs typically allocate supplies based on the sustainment concept of support, synchronization matrix, and consumption rates of the supported force. However, the BSB can add additional emergency LOGPAC convoys based on mission variables as needed.

Emergency resupply is the least preferred method of supply. While a few instances of emergency resupply may be required, especially when combat losses occur, requests for immediate resupply often indicates a breakdown in coordination and collaboration between sustainment and maneuver forces. Accurate reporting through logistics status reports are critical to reduce the number of required emergency resupply operations. Poor logistics reporting from units places a burden on the sustainment system by needlessly putting personnel and equipment at risk through additional resupply operations. It also degrades the efficient distribution of supplies across the BCT. Emergency resupply can lead to excess materiel and needless LOGPAC operations.

Using Logistics Packages to Provide Capabilities and Meet Mission Requirements (*continued*)

The time required to plan and execute a LOGPAC varies based on mission and operational variables. Many units operate on a 72-hour planning and execution time horizon for LOGPAC and convoy operations. Typically, a SPO section can provide forecasted LOGPAC requirements 72 hours or more when a warning order is provided from the operations section to the executing unit. Confirmation briefings to battalion leadership may occur 48 hours before execution. Additionally, intelligence updates and ISR requests occur within 24 hours of execution. Tactical unit leadership then conduct pre-combat checks and pre-combat inspections, convoy briefings, final intelligence updates, and rehearsals prior to execution on the day of execution. The planning horizon could be compressed for emergency resupply LOGPACs and convoys.

5-80. At the EAB level, Army sustainment capability is modular and based on the specific task organization of TSC and/or ESC, MEDCOM (DS), DSB, sustainment brigades, medical brigade, TBX, CSSBs, and DSSBs. Planners take into account other sources of support for example DLA, HNS, contracted support, and support from other Services. As discussed in the previous chapter planners assess support capabilities and build task organizations. How these capabilities are arrayed on the battlefield forms the foundation of the sustainment concept of support.

5-81. However, the analysis does not end with the formation of the task organization and concept of support. Commanders and staffs track and assess readiness of systems, personnel, and equipment as a baseline for adjusting support plans. The G-4 has coordinating staff integrating responsibility for the G-1, G-8, transportation officer, and the surgeon. At the brigade and battalion level, the S-4 is the primary staff for logistics. The G-4 (S-4) prepares annex F (Sustainment), annex P (Host-Nation Support) and annex W. Operational contract support in coordination with the AFSB and CSB, prepare appendices 1, 2, and 3 as these are key to setting the theater for contracting support and completing the operation order or operation plan. The logistics planner in the theater, corps or division assistant chief of staff, plans (G-5) provides sustainment input to annex A (Task Organization), annex C (Operations), and annex M (Assessment) to the operation order or operation plan. The sustainment staffs provide input to the operations staff for the COP.

5-82. The sustainment staffs determine sustainment requirements for subordinate units, track the sustainment status of subordinate units, and establish support priorities IAW the commander's priorities and intent. The S-4 or G-4 monitors logistics requirements, the S-1 or G-1 does the same for personnel readiness, the S-8 or G-8, for financial management, and the command surgeon for health service support. The staffs work in close coordination with the sustainment organizations supporting their echelon.

5-83. For logistics, the primary staff section in the TSC and ESC is the DMC. For HR, the HRSC synchronizes external human resources support with the TSC DMC and the HROB with the ESC DMC and the DSB or sustainment brigade support operations section. The surgeon cells within the ESC and DSB or sustainment brigade plan and assess medical operations; casualty care, medical evacuation and regulation, and medical logistics within the ESC and sustainment brigade AO. The ESC and DSB or sustainment brigade surgeons advise their commander on the health of the command and coordinate with the MEDCOM (DS) and MEDBDE (SPT) for AHS support at EAB. The DSB, sustainment brigade, TBX, DSSB, CSSB and BSB all have support operations sections. The key staff position in sustainment formations is the support operations officer. The support operations staff supports the headquarters' staff with the sustainment preparation of the OE, determining requirements, and determining maintenance workload requirements. In a support unit, the unit's current operations cell maintains the COP with sustainment specific input from the unit DMC or support operations staff.

5-84. Until the Army Readiness COP is fully operational, the tools used as a basis to track and assess readiness of systems, personnel, and equipment are the LOGSTAT reports and PERSTAT, which are executed by all types of units and originate at the lowest echelon, teams and squads. The reports flow from the lower echelons and are compiled at each subsequently higher echelon for assessment and analysis. At the

company echelon the information is compiled by the command element: company commander, executive officer, and first sergeant. At battalion and higher echelons, the information is received and analyzed by the S/G-1 and the S/G-4. Within sustainment organizations at battalion level and higher, the LOGSTAT is received and analyzed by the SPO staff. Figure 5-5 depicts the support SPO to G-4/S-4 linkages at each echelon. The PERSTAT is received and processed through the G-1 chain.

5-85. LOGSTAT and PERSTAT reports must flow through both operational headquarters and sustainment headquarters in parallel to provide a COP. As an example, a maneuver company within a BCT should submit a LOGSTAT to the battalion headquarters and to the supporting FSC. This provides the battalion headquarters with information to assess the company's readiness status and identifies critical shortages to the battalion staff. It also provides the FSC with the same information that identifies requirements and allows the FSC leadership to plan support.

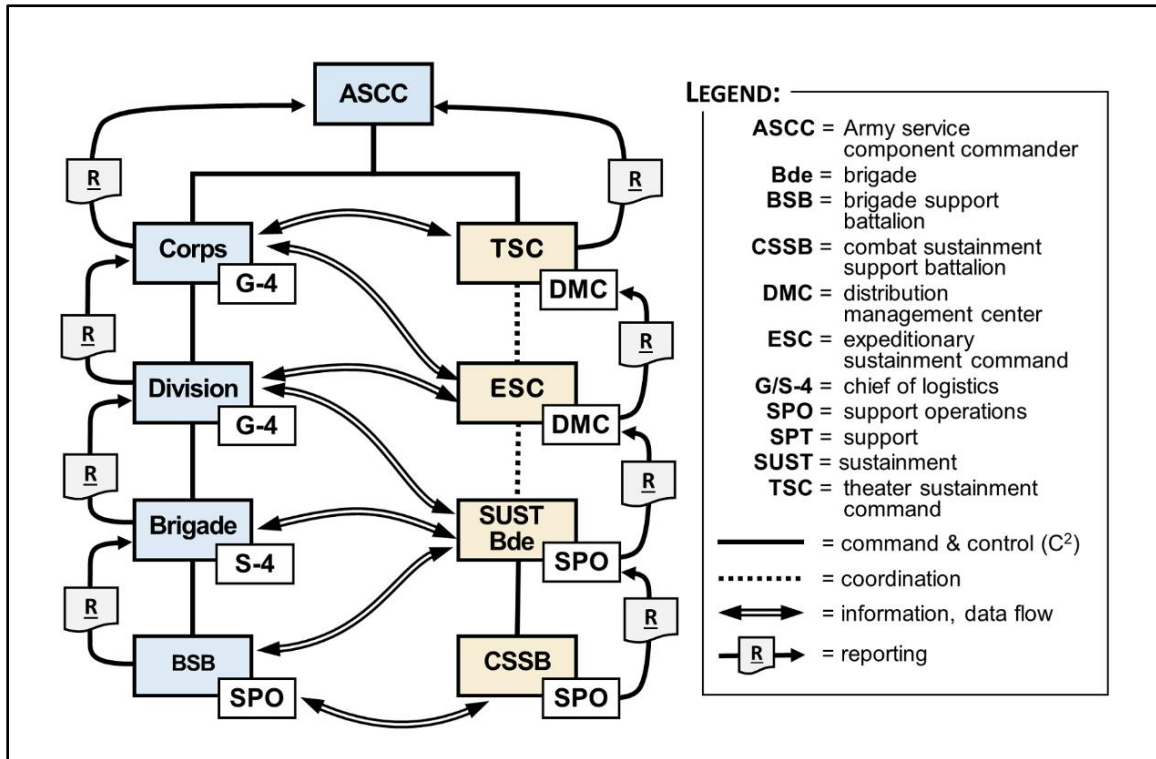


Figure 5-5. Support operations to G-4/S-4 linkages at echelon

5-86. LOGSTAT and PERSTAT reports should provide commanders with enough information to support decision making and be tied to the commander's critical information requirements. The reports should not contain superfluous information that is irrelevant and makes compiling the report too difficult or time consuming. Information submitted as a LOGSTAT and PERSTAT include, but is not limited to, personnel status to include critical military occupational skill shortages, status of critical supplies, status of major weapon systems, and status of critical support equipment. Examples include transportation assets, materials-handling equipment, water treatment resources, maintenance test sets, and funding authorities.

5-87. LOGSTAT and PERSTAT reports are submitted using available command and control or sustainment information systems. The content of the reports generated are based upon the needs of the commander and staff. Reports may be submitted via radio if required. Commanders plan for LOGSTAT and PERSTAT report submission during periods of degraded communications. Analog reports are a means for providing status reports during degraded operations. Effective LOGSTAT and PERSTAT reporting requires command emphasis. The timing of sustainment status report submissions is based on both the commander's requirements and unit rhythm of military operations. Typically, these reports are submitted at least once daily

as well as whenever a significant change occurs. During periods of increased intensity, the commander may require more frequent status updates. See appendix E for LOGSTAT and PERSTAT reports.

5-88. The Army has a deployed theater accountability system for use in a deployed theater. In the event the deployed theater accountability system is not available (due to lack of bandwidth, degraded communications or other issues), manual reports can be used such as the PERSTAT, personnel summary, and personnel requirements report. Within a deployed theater, the ASCC G-1/AG establishes PERSTAT reporting requirements for unit strengths to include required “as of” times. When operating in a joint environment, the joint PERSTAT requires the same data elements as the PERSTAT. Standardized LOGSTAT and PERSTAT reports are located at appendix E.

ASSESSMENT

5-89. Assessment is a critical part of planning considerations for sustainment operations. Assessment allows commanders, staffs, and leaders to gain the situational awareness of the current conditions and measure the effectiveness of sustainment operations. If conducted properly, assessment provides commanders, staffs, and leaders with the necessary information to determine all sustainment support requirements and adjust plans. Assessment should include the following requirements at a minimum:

- Assess the status of the support capability of organic, attached, and assigned units. This includes, but is not limited to, status of personnel strength, equipment readiness, critical equipment on hand, critical supplies on hand by classes, casualty status, organic medical capability, if applicable, and operational losses. This information is used to determine support requirements by sustainment function. It identifies problem areas such as combat ineffective units and shortages of critical supplies such as precision munitions.
- Assess the status of supported units to determine specific sustainment requirements, in order to, develop a concept of support that can effectively meet those requirements.
- Assess the status of sustainment support capability to determine if the support assets available have the required capability to support defensive operations. This assessment should determine if the sustainment task organization is adequate to support the defensive mission and identify shortfalls in terms of sustainment functionality.
- Assess time to execute sustainment operations, as it should also be a factor in determining sustainment support capability. Timing and windows for execution will vary during operations against a peer threat. Planners must know the time available versus time to execute versus next time to execute.
- Assess the operational environment to identify aspects that will present problems or cause difficulty to the support concept execution. All operational and mission variables should be examined to determine if any would impact the operation.

5-90. Ultimately, assessment allows commanders and staffs to diagnose problems and determine operational adjustments needed to ensure the support concept is adequate to achieve the desired results. It also provides commanders and staffs with information on how sustainment operations are progressing and identifies problem areas where commanders can expect friction or conflict.

5-91. Assessment precedes and guides every operations process activity and concludes each operation or phase of an operation. While assessment is listed as the last operations process task, it is continuous. Throughout execution, staffs use running estimates to assess if support operations are occurring as planned and the desired results are being achieved. This information is passed up through the chain of command and is compiled at each echelon. It must be reported parallel through maneuver and sustainment channels to build a common operational picture of the sustainment status.

5-92. Assessment should also determine specific sustainment functional gaps in capability and report to higher HQ for appropriate action. It includes, but is not limited to, the following—

- Status of required supplies by classes of supply to include class VIII. This should be in terms of quantities on hand to allow planners to balance on-hand quantities with required quantities. Planners should also assess supply positioning to ensure supplies are positioned properly to support the defense and priority efforts.

- Status of field maintenance capability to ensure it is adequate to repair damaged equipment to meet operational readiness requirements and timetables. The assessment should include critical maintenance equipment such as testing and fabrication equipment.
- Status of transportation capability to ensure it is adequate to transport required commodities. All types of transportation assets should be assessed: light, medium, heavy, aircraft, aerial delivery, water, rail, and petroleum transportation.
- Status of shower and laundry, field services, and mortuary affairs capability and location.
- Changes to distance that affect distribution calculations.
- Status of AHS capability to include treatment, holding, surgical, medical evacuation, and dental. Like supply, planners should assess the positioning of AHS units to ensure it supports the defense.
- Status of sustainment information systems interfaces to include Combat Service Support Automated Information System Interface and the Combat Service Support Very Small Aperture Terminal.
- Status of human resources support capabilities, casualties, personnel strength and availability of personnel replacements to ensure adequate human resources support, identify any critical personnel shortages and/or combat ineffective units to rebuild combat power or consider reconstitution. HR managers' report personnel requirements through a personnel requirements report. This report lists unit personnel replacement requirements by grade and military occupational specialty, and is based on comparison of authorized versus assigned strength.
- Unit commanders must use assessment to continuously measure their unit's capability to perform its mission and consider reconstitution efforts to include reorganization and regeneration. See appendix C for more details on reconstitution.
- Status of financial management capabilities, funding authorities and funds available (status of funds) to support mission requirements

SUSTAINMENT SYNCHRONIZATION

5-93. Logistics, financial management, personnel services, and health service support require coordination and synchronization at every stage of the planning process. This synchronization is crucial in large-scale combat operations with its inherent distributed nature. Only by integrating and synchronizing sustainment functions can the sustainment system achieve required effects at the speed, the volume, velocity, and lethality of large-scale combat operations.

5-94. Sustainment commanders and staffs present synchronized courses of action commensurate with sustainment capabilities to allow as much freedom of action as possible. Limitations such as insufficient infrastructure or non-availability of key classes of supply have a bearing on the commander's ability to execute the mission and are accounted for in the planning process. Sustainment leaders also coordinate, synchronize, and integrate the sustainment plan with joint and other unified action partners to ensure continuous linkage with strategic-level providers. A successful sustainment plan will extend operational reach, prevent culmination or loss of the initiative, manage transitions, exploit possible opportunities, and mitigate risk.

5-95. Identifying and accepting prudent risk is a principle of mission command. Throughout the operations process, commanders and staffs use risk management to identify and mitigate risks associated with all hazards that have the potential to injure or kill friendly and civilian personnel, damage or destroy equipment, or otherwise impact mission effectiveness. For sustainment commanders and staffs, identifying and mitigating risk must always include not only risk to finite and limited sustainment capabilities, but also how those capabilities are employed to enable freedom of action and extended operational reach.

5-96. Sustainment synchronization remains the focus as sustainment commanders plan for and coordinate support through such continuing activities as rhythm of military operations events, information collection, liaison, meetings, protection efforts, and reporting. For the purposes of sustaining large-scale combat operations, two of these—liaison and reporting—require special emphasis.

5-97. Liaison refers to contact or intercommunication maintained between elements of military forces or other agencies to ensure mutual understanding and unity of purpose and action. Most commonly used for

establishing and maintaining close communications, liaison continuously enables direct, physical communications between commands.

5-98. Sustainment commanders and staffs have the continuous requirement to coordinate with higher, lower, adjacent, supporting, and supported units and civilian organizations. The sustainment liaisons participate in boards, bureaus, cells, centers, and working groups, especially in the case of the TSC with the ASCC, the ESC with the corps, the DSB with the division, the BSB with the BCT, and ASB with the CAB. While the use of liaisons taxes organic staff manpower in sustainment organizations, their presence and active participation is essential to sustaining large-scale combat operations and mitigating the effects of dispersion, threat disruption of communications, and accelerated tempo.

5-99. Both maneuver and sustainment commanders rely on logistics and personnel status reports to identify support requirements and capabilities to enable large-scale combat operations. Sustainment staffs use data from sustainment estimation tools, higher headquarters orders, and documents such as country studies to develop running estimates. A running estimate is the continuous assessment facts, assumptions, constraints and limitations concerning the current situation and operational environment used to determine if the current operation is proceeding according to the commander's intent and if planned future operations are supportable. Using sustainment information systems, commodity managers include information in running estimates such as quantity on-hand, quantity consumed, expected quantity on-hand, expected consumption to anticipate requirements and assist in synchronization. Each staff element and CP functional cell maintains a running estimate focused on how its specific areas of expertise are postured to support future operations.

5-100. Current sustainment systems possess vulnerabilities and connectivity requirements that may make them susceptible to disruption and deliberate targeting by threat forces, both lethally and non-lethally. To mitigate this vulnerability and maintain an accurate readiness COP, organizations develop the rhythm of military operations, data cut-off times, as-of times, and reporting times. Commanders and staffs also balance the timeliness and potential latency of reporting with the amount of time needed to analyze data when evaluating unit readiness and combat capability.

5-101. Sustainment enterprise resource planning systems and associated decision support tools help provide near real-time status with minimal staff effort required to gather and display information from multiple databases. Integrating this information with command and control systems is crucial to give the sustainment leaders and supported commanders and staffs the identical current COP. The value of integrated sustainment information systems and command and control systems is that everyone on the network can see and use the same reported information to plan and control operations. For more details, see chapter 2 and appendix C.

5-102. Sustainment rehearsals are critical to synchronization and the success and accomplishment of the mission. Conducting sustainment rehearsals immediately after the combined arms rehearsal ensures understanding and synchronization of the unit's maneuver and sustainment plan as it traverses the battlefield. It is critical that the combined arms team and all elements of sustainment are represented and participate in sustainment rehearsals to ensure all sustainment commodities understand how these integrate with other elements of sustainment to accomplish the mission. The sustainment rehearsal helps synchronize the sustainment warfighting functions with the other warfighting functions to create a common understanding of the plan.

<p>Sustainment Rehearsals</p> <ul style="list-style-type: none">• Critical to success and mission accomplishment• Synchronizes the sustainment warfighting function with the other warfighting functions• Should be conducted immediately after the combined arms rehearsal• Facilitates understanding and synchronization of the unit's maneuver and sustainment plan• Participants must include the combined arms team and all elements of sustainment

SUPPORT AREA

5-103. The support area is a smaller, subordinate AO inside the commander's overall AO. The support area is normally, but not always, positioned within and surrounded by the consolidation area. It is where most of an echelon's sustaining operations occur (Figure 5-6 on page 5-27 depicts the joint security area and figure 5-7 on page 5-28 depicts a division and brigade support area). The geographic size of a support area is based on mission and operational variables and is difficult to quantify. These variables include the number of units

assigned to the support area, the existing threat, and the amount of terrain that can be influenced by the unit assigned support area responsibility. As an example for a division support area, if it is assumed to be a brigade-sized area, it will be approximately 10 square kilometers. This number is for general planning consideration and to give readers an idea of the geographic scope of a division support area and the impact it has on command and control and protection. It should be understood that division support area size may vary widely. The corps support area will be significantly larger.

5-104. Within the joint security area, strategic enablers such as USTRANSCOM, USAMC, DLA and each of their individual subordinate components link strategic support activities with theater support activities. Examples of these activities include synchronizing strategic and operational distribution of equipment, supplies and personnel; managing materiel and establishing contracts, establishing theater fuel farms and managing excess property turn-in. USASOC coordinates operational support requirements while monitoring SOF activities within the theater. The TSC, ESC and its attached sustainment brigade conduct RSOI for units arriving in theater and support the movement of those units forward to corps and division areas. MEDCOM (DS) provides command and control of all EAB medical units providing direct or GS to the corps and division areas. Other sustainment forces in the joint security area support activities including - classes I and III (Bulk) distribution, APOD and SPOD operations, personnel services, financial management activities, and other support tasks.

5-105. Within a division support area, a MEB is normally designated to control the area. If a MEB is not available, a BCT must be designated to control the area. For the corps support area, a MEB is normally designated to control the area. If a MEB is not available, a corps MP BDE with augmentation can control the corps support area. Support area control responsibilities include area security, terrain management, information collection, integration, and synchronization, civil affairs operations, movement control, mobility support, and clearance of fires, personnel recovery, airspace control, and minimum-essential stability tasks. This allows sustainment units to focus on their primary functions.

5-106. The corps headquarters is likely to position assets in the division support area to facilitate division operations and enable freedom of action. The division headquarters orchestrates the sustainment and protection tasks essential to ensuring freedom of action in the division close and deep areas. Planning in the support area largely influences current and future operations in the deep, close, and consolidation areas. The support area is not a single large base. It is a base cluster comprised of multiple bases, each established by units assigned to the support area. The MEB is responsible for terrain management to include placement and integrated protection of the bases.

5-107. Depending on the situation, including the threat, size of the support area, and number of units within the support and consolidation areas, division and corps commanders may employ a support area command post (SACP) in the support area to assist in controlling operations. The SACP enables division and corps commanders to exercise command and control over disparate functionally focused elements operating within the support and consolidation areas that may exceed the effective span of control of the MEB or division and corps main CPs.

5-108. At the corps level, the SACP is not a separate section in the corps' table of organization and equipment. The corps commanders form the SACP in the support area from the equipment and personnel from the main and tactical CPs when required. Normally, the deputy corps commander leads the corps SACP.

5-109. For the division, the SACP is organic to the division headquarters. The SACP consists of 14 personnel and has a command group, a movement and maneuver section, and a sustainment section. The DSB has a limited role in establishing the SACP. The DSB must however coordinate with the SACP for support prioritization. The primary role of the SACP is to provide command authority and general officer oversight of division support area operations and sustainment, medical and other division support activities. The SACP performs tasks and functions, as defined by the commander, based on operational & mission variables. The division SACP in the support area normally co-locates with the MEB, which provides the CP with signal connectivity, life support, security and workspace. Functions of the CP include planning and directing sustainment, terrain management, movement control, and area security. When augmented by the MEB staff, the CP may also plan and control combined arms operations with units under division or corps control, manage airspace, and employ fires. See figure 5-7 on page 5-28.

5-110. Sustainment forces prepare for the various threats in the support area. Threats in the division support area are categorized by the three levels of defense required to counter them. Any or all threat levels may exist simultaneously in the division support area. All threats pose potential risks to sustainment and other support operations. Emphasis on base defense and security measures may depend on the anticipated threat level. A *Level I threat* is a small enemy force that can be defeated by those units normally operating in the echelon support area or by the perimeter defenses established by friendly bases and base clusters. A Level I threat for a typical base consists of a squad-sized unit or smaller groups of enemy soldiers, agents, or terrorists. Typical objectives for a Level I threat include supplying themselves from friendly supply stocks, disrupting friendly command and control nodes and logistics facilities, and interdicting friendly LOCs.

5-111. Units must also employ cover and concealment to prevent observation and detection of sustainment equipment and bases by reconnaissance elements, reconnaissance aircraft, drones, or attack aircraft. Cover and concealment includes signature management and emissions control. Dispersion aids in concealment and limits destruction and losses in the event of an attack. Units at all echelons must conduct CBRN defense preparation.

5-112. At higher echelons military police units from the MEB enhance protection capabilities by performing area security within the support areas. These units perform response-force operations to defeat Level II threats against bases and base clusters located in that support area. A *Level II threat* is an enemy force or activities that can be defeated by a base or base cluster's defensive capabilities when augmented by a response force (ATP 3-91). These units maintain contact with Level III threats in the division support area until the tactical combat force under the MEB's control can respond. *Level III threat* is an enemy force or activities beyond the defensive capability of both the base and base cluster and any local reserve or response force (ATP 3-91).

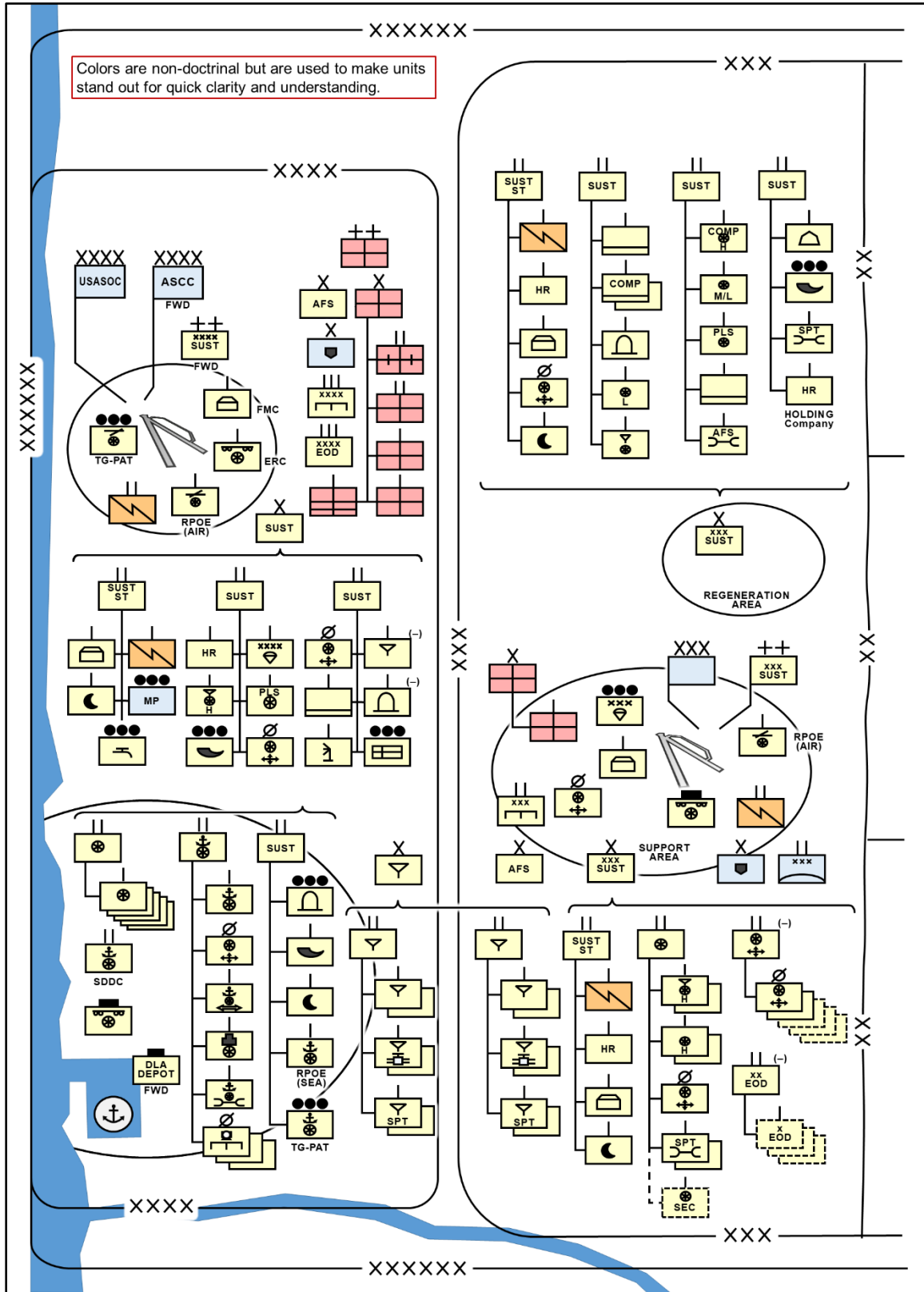


Figure 5-6. Support areas at echelon (joint security area/corps)

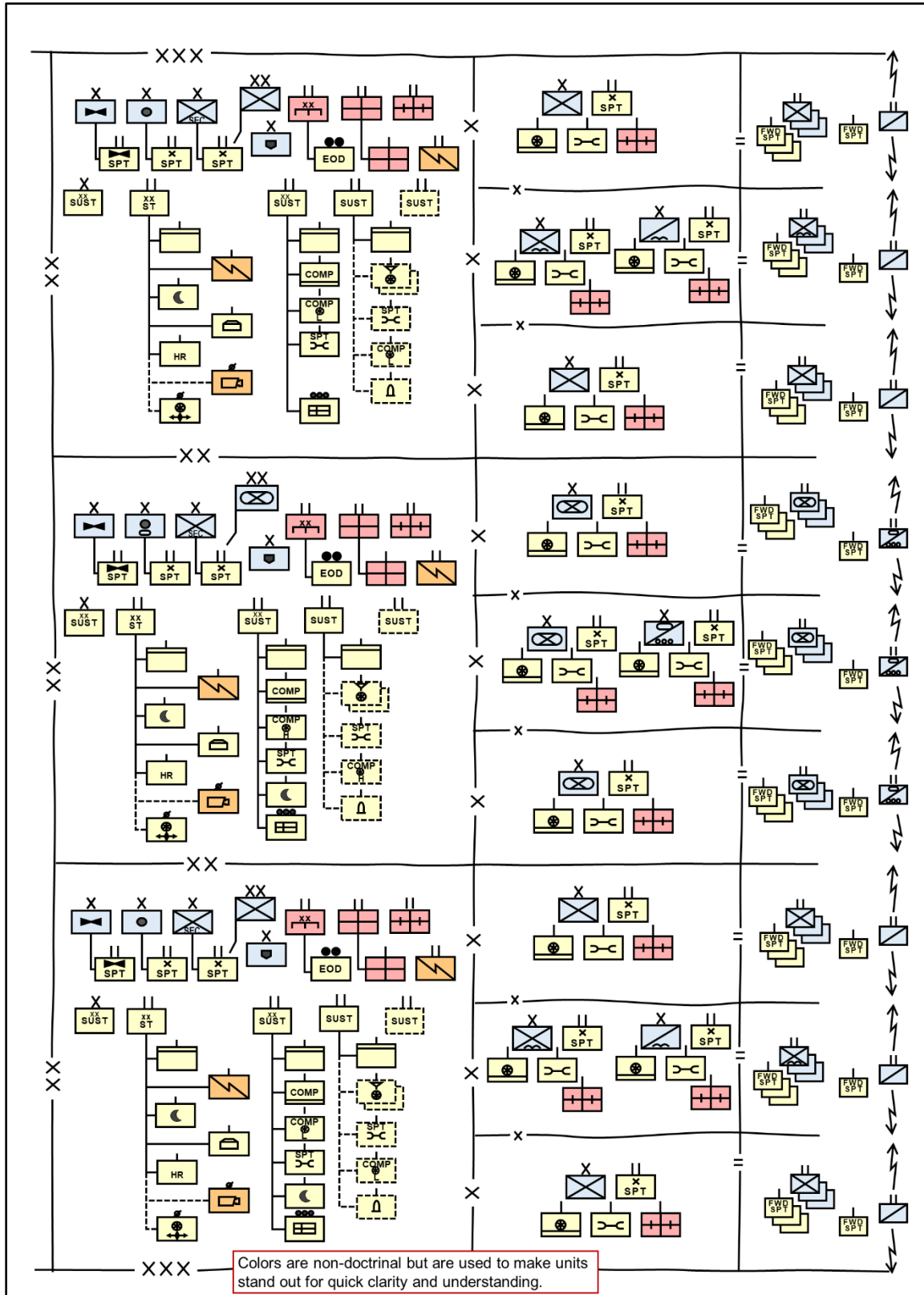


Figure 5-7. Support areas division and brigade

5-113. Corps and division commanders designate close, deep, support, and consolidation areas to describe the physical arrangement of forces in time, space, and focus. Commanders should always designate a close area and a support area, and designate a deep area and consolidation area as required. The consolidation area does not necessarily need to surround, nor contain, the support area base clusters, but typically, it does. The consolidation area requires a purposefully task organized, combined arms unit to conduct area security and stability tasks and employ and clear fires.

5-114. The *consolidation area* is the portion of the commander's area of operations that is designated to facilitate the security and stability tasks necessary for freedom of action in the close area and to support the continuous consolidation of gains (ADP 3-0). Corps and division commanders may establish a consolidation area, particularly in the offense as the friendly force gains territory, to exploit tactical success while enabling freedom of action for forces operating in the other areas. When designated, a consolidation area refers to an AO assigned to an organization that extends from its higher headquarters boundary to the boundary of forces in close operations where forces have established a level of control and large-scale combat operations have ceased.

5-115. Army forces consolidate gains as part of a combat operation to enable combat power for continued action against remaining enemy forces in support of a host nation and its civilian population, or as part of the pacification of a hostile state. These gains may include the establishment of population security temporarily by using the military as a transitional force, the relocation of displaced civilians, re-establishment of law and order, and restoration of key infrastructure. Concurrently, corps and divisions must be able to accomplish these activities while sustaining, repositioning, and reorganizing subordinate units to continue operations in the close and deep area.

5-116. Consolidation of gains activities may encompass a lengthy period of post-conflict operations prior to redeployment. Consolidation of gains may occur even if large-scale combat operations are occurring in other parts of an AO to exploit tactical success. Anticipation and early planning for activities after large-scale combat operations ease the transition process.

5-117. Commanders address the decontamination, disposal, and destruction of war materiel. Commanders must also address the removal and destruction of unexploded ordnance and the responsibility for demining operations. (The consolidation of friendly and available enemy mine field reports is critical to this mission.) In addition, if support areas are surrounded by a consolidation area, the higher echelon headquarters must clearly articulate the roles and responsibilities for controlling supply routes and clearance procedures. Additionally, the theater Army is prepared to provide medical support, emergency restoration of utilities, support to social needs of the indigenous population, and other humanitarian activities.

SECTION III – SUSTAINMENT OF TACTICAL ENABLING TASKS

5-118. Maneuver commanders direct tactical enabling tasks to support the performance of all-offensive, defensive, and stability tasks. Tactical enabling tasks are reconnaissance, security, troop movement, relief in place, passage of lines, encirclement operations, and mobility and countermobility operations. While sustainment supports all tactical enabling tasks, the tasks of troop movement and mobility require the most sustainment support.

SUSTAINMENT OF TROOP MOVEMENT

5-119. Troop movement is the movement of troops from one place to another by any available means (ADP 3-90). Troop movements are made by different methods; such as dismounted and mounted marches using organic combat and tactical vehicles; motor transport; and air, rail, and water means in various combinations. The method employed depends on the situation, the size and composition of the moving unit, the distance the unit must cover, the urgency of execution, and the condition of the troops. It also depends on the availability, suitability, and capacity of the different means of transportation. Troop movements may also be used as a form of deception. Concealing troop movements may deceive the adversary and divert their efforts from the main objective. Troop movements over extended distances have extensive sustainment considerations. Movement control boards are critical for planning troop and enabling movement. Movement control boards support synchronization and coordination of troop movement against distribution priorities. For additional information, see ATP 4-16.

ROAD MOVEMENT

5-120. Road movement is a route synchronization plan that involves movement of forces from ports of debarkation (PODs), redeployment of forces to ports of embarkation, movement of supplies and equipment, and movement of units. The goal of route synchronization planning is to sustain movements according to the commander's priorities and make the most effective and efficient use of the road networks. It requires synchronization and coordination with planners of unit movement and maneuver. Planning is done in a logical sequence and results in the publication of the route synchronization plan. The road movement planning is coordinated by the unit movement officer for Army deployment and redeployment and all other administrative moves. For additional information, see ATP 3-35, and ATP 4-16.

ARMY AIR MOVEMENT

5-121. Army air movements are operations involving the use of utility and cargo rotary-wing assets for other than air assaults. Commanders conduct air movements to move troops and equipment, to emplace systems, and to transport ammunition, fuel, to conduct aerial delivery, and other high-value supplies. Commanders may employ air movements as a substitute for ground tactical movements. Air movements are generally faster than ground tactical movements, but air movements can be vulnerable to enemy air defense systems or influenced by bad weather. The same general considerations that apply to air assault operations also apply to Army air movements. For additional information, see FM 3-0, FM 3-04, and FM 3-99.

RAIL AND WATER NODES

5-122. Operating forces can use rail and water modes of transportation to conduct troop movements, if these are available in an area of operations. Their use can provide flexibility by freeing other modes of transport for other missions, or circumventing closed or high threat highway routes. Their use normally involves a mixture of military and commercial assets, such as defense freight railway interchange railcars pulled by privately owned diesel-electric engines to transport tanks along railroad right-of-ways from one rail terminus to another. Responsibility for coordinating the use of railroads and waterways resides in the ARFOR headquarters in the theater of operations.

MOVEMENT CONTROL DURING LARGE-SCALE COMBAT

5-123. Sustainment of troop movement is achieved through movement control. Movement control links the tactical employment and sustainment of forces to national and operational objectives. During the execution of large-scale combat operations, movement control prioritizes and synchronizes movements to support actions in the division rear, close and deep areas. Coordination and synchronization of movements within an operational area are coordinated through the corps transportation officer, division transportation officer, movement control team and supporting movement control battalion. For additional information on road movement planning, route synchronization, automated information systems for movement, and movement tables see ATP 4-16.

CORPS TRANSPORTATION OFFICER

5-124. A corps on the move can consist of over 42,000 vehicles that cover vast expanses of terrain. Movement of a corps requires significant planning and preparation. The corps transportation officer is the primary technical advisor to the corps commander on theater transportation policy, mode operations, movement planning, in-transit visibility, and transportation automation systems. This also includes support of reception and onward movement of forces, replacement operations, and retrograde. The corps transportation officer also assesses the overall effectiveness of the TSC and/or ESC movement programs supporting corps operations during large-scale combat operations. Other corps transportation officer duties include, but are not limited to, the following—

- Coordinating transportation planning to support large-scale combat operations with the TSC and/or ESC, division, and separate brigade transportation officers to determine requirements.
- Establishing procedures for movements that cross boundaries, IAW the corps G-3 plans.
- Planning transportation support, develops policies, provides guidance, and recommends movement priorities and procedures for movement control and route synchronization.

- Planning, coordinate, and oversee large or special movements in conjunction with the TSC and/or ESC.
- Assisting major subordinate commands and units transiting the corps area.
- Preparing, in coordination with the TSC and/or ESC, the transportation portion of the corps plans and orders.

5-125. The corps transportation officer also coordinates with the corps G-3 during unit movements, force tracking, and maneuver planning. The corps G-3 plans and directs movement and maneuver of combat units through or within the corps area. This may require rapidly projecting these forces over extended distances on main supply routes. The corps G-3, coordinating with the G-4, establishes priorities for using main supply routes for movements and maneuver. Maneuver will normally have priority over movements. However, maneuver must be well coordinated with movements to prevent route congestion, enforce movement priorities, and provide continuous logistical support. The G-4, using the recommendations of the corps transportation officer, establishes plans and implements sustainment priorities for movement. These priorities become the basis of the TSC and/or ESCs distribution plan. For additional information, see ATP 4-16.

DIVISION TRANSPORTATION OFFICER

5-126. The division transportation officer is involved in the movement of units and maneuver elements in coordination with the division G-3. Additionally, the division transportation officer is a staff planner that advises the commander and coordinates transportation support with the division G-3 and G-4. The division transportation officer coordinates with the G-3 on operational movements, the G-4 on sustainment and also provides guidance and coordinates transportation issues with other staff sections and commanders. The division transportation officer advises the commander and staff on transportation matters during large-scale combat operations that include, but are not limited to—

- Division priorities for transportation and movement to support division plans and orders.
- The availability of subordinate brigade transportation assets.
- Movement regulating of main supply routes and alternate supply routes the division will control.
- Assisting the G-4 in preparing, updating and maintaining the transportation portion of the logistics estimate.

5-127. The division transportation officer is the focal point for transportation technical guidance and assistance for the division staff in areas of planning and in the execution of operations. Additional information on the division transportation officer is available in ATP 4-16. The division transportation officer also, but is not limited to—

- Conducting route synchronization (in coordination with the G-3 and supporting military police units) to include movement regulating teams, providing movement credits and march tables for sustainment convoys.
- Conducting concurrent planning with the staff to integrate movement, maneuver and transportation sustainment operations.
- Developing the deployment, movement, and route synchronization portions of the division operation plans and operation orders.
- Validating and coordinating the requirement for external transportation when requirements exceed a brigade's organic capability.
- Maintaining the status of subordinate brigade's transportation assets.

DIVISION SUSTAINMENT BRIGADE MOBILITY BRANCH

5-128. The DSB's mobility branch develops a movement program for their transportation assets in coordination with the division transportation officer. The branch executes the sustainment command's movement program based on the division transportation officer's established priorities. The DSB's mobility branch forecasts movement requirements for supplies, equipment and personnel in coordination with the materiel management and HROB with the support operations section. They determine transportation capabilities available by modes (air, land and water) and node to support division movement requirements. This may include contracted or host nation transportation capabilities. The DSB's mobility branch balances

transportation capabilities with division movement requirements based on priority established by the division G3 and division transportation officer. This includes planning known, anticipated, and contingency transportation requirements.

MOVEMENT CONTROL TEAM

5-129. The MCT has the capability to commit allocated transportation assets, regulate movement, and provide transportation services in a theater of operation. MCTs are subordinate elements of the movement control battalion and are positioned throughout the theater to assist in the decentralized execution of movement control responsibilities. MCTs are the entry point for joint and Army forces to request Army common user transportation assets when movement requirements exceed an organization's organic transportation capability. The MCT executes five movement control missions: intermodal, area, movement regulation, documentation and division support. When given the authority by the movement control battalion, MCTs can directly coordinate motor truck transportation with a DSB or sustainment brigade, host nation, or commercial assets and can coordinate for the use of allocated fixed/rotary wing assets in the aviation brigade.

5-130. Though an MCT may not have committal authority over Air Force aviation assets, HN rail, or Army watercraft, it will coordinate the use of those assets when those modes of transportation are the most efficient and effective means to meet the movement requirement. MCTs can provide transportation services to other organizations that include in-transit visibility of personnel, supplies, and equipment moving through the transportation system, assistance with transportation shipping documentation, and unit movement data processing as well as performing unit movement coordinator duties as required in the operational area. Additionally, MCTs can be used as an asset to collect intelligence or information when operating in their AOR. For additional information, see ATP 4-16.

5-131. A MCT can be attached or OPCON to a corps or division headquarters and placed under the control of the corps transportation officer or division transportation officer to augment that staff and assist in providing a range of transportation support planning, programming, and operations required to support the spectrum of military operations. The team operates on a 24-hour basis to assist the corps transportation officer or division transportation officer in planning, scheduling, controlling, and coordinating mode operations. The team's automation systems also provide the corps and division linkage to the theater movement control network, maintains in-transit visibility of materiel and personnel transiting into, within, and out of the corps and division areas. The MCT supporting the corps transportation officer and division transportation officer is not subordinate to a movement control battalion. Other functions the MCT can assist the corps transportation officer and/or division transportation officer with include—

- Execution of route synchronization.
- Coordination for use of main supply routes within the corps and division.
- Operating First Destination Reporting Point for sustainment convoys.
- Providing technical expertise to transportation users in the corps and division area of operations.
- Providing movement control support for any divisional movements.
- Providing movement control capability to a BCT and/or maneuver MEB as needed.

5-132. The MCT along with the corps and division transportation officers coordinate with movement control battalion to deconflict and coordinate the planned movement of convoys on controlled main supply routes in order to coordinate departure and arrival times, manage movement priorities, and synchronize protection enablers (route clearance, aerial surveillance, and other protection measures). Similar to the movement board, this coordination requires daily and weekly meetings such as a movement synchronization boards and groups to validate convoy departure times and issue movement credits, and as required initiate the process to reroute or divert convoys. Coordination at all levels must occur before and during movement with the S-3/G-3 or headquarters responsible for the operational areas the convoy is traversing.

5-133. While it is important to monitor the in-transit status of all convoys, the unit that controls the AO also plays a critical role in monitoring and supporting convoys that traverse controlled main supply routes and alternate supply routes. Changes to route status due to weather, enemy, and other mission threats, must be communicated to the highway traffic section of the movement control battalion for theater routes or the corps and division transportation officers for corps and division routes. Any changes to convoy departure times will be communicated from the movement control battalion's highway traffic section through the MCTs who

are responsible for communicating route status information and issuing movement credits to the corps and division transportation officers.

THE MOVEMENT CONTROL PROCESS

5-134. The movement control battalion and/or movement control team will determine the most appropriate mode of transportation, i.e. truck, rotary wing, or fixed wing. The movement control battalion and/or movement control team will consider a variety of factors to determine the most effective and efficient means to fill movement requirements. These considerations include, but are not limited to—

- Allocated transportation assets. The availability status of the mode operator's transportation assets must be a factor in determining which mode and which organization can execute the mission.
- Priorities. Provide service according to the command priorities for movement and support.
- Tactical. Depending on the type of military operation or phase, the environment can be extremely fluid and non-static. Coordinate with the requesting and destination units to determine potential changes in pickup or delivery locations.
- Routes. Rerouting may be required if there are changes to route classifications, the distribution pattern, or one of the other factors dictates a change.
- Host nation and commercial assets. Use is limited to those modes and assets provided by the host country or available through commercial contract.

5-135. Once all the considerations have been reviewed, the origin MCT requests a positive inbound clearance for sensitive, classified, oversize, overweight, strategic "door to door," or other priority shipments through the destination MCT before issuing a transportation movement request. The positive inbound clearance process assesses the unit's ability to receive the shipment considering the unit capabilities to have materiel handling equipment, storage, and personnel available. The destination MCT can also confirm the availability of backhaul cargo ready for shipment at this time. The destination MCT confirms the organization's location and ability to off-load the cargo to the origin MCT. If the organization is unable to receive a shipment, the origin MCT reschedules the shipment by coordinating for alternate delivery dates. Though the origin MCT can schedule routine shipments without an inbound clearance, a receiving organization through the destination MCT must notify the origin MCT that it cannot receive the shipment and request the shipment be held.

5-136. To execute the movement request (as shown in figure 5-8 on page 5-34), the MCT will commit a mode operator, IAW movement control battalion guidance, or forward the movement request to the movement control battalion. The mode operator may be a DSB, sustainment brigade, aviation brigade, host nation asset, or commercial organization. Commitments flow through predetermined channels developed between the TSC and/or ESC, movement control battalion, and the brigade level mode operator. Normally for Army assets, the movement control battalion or MCT will coordinate movements through a sustainment or aviation brigade headquarters. However, depending on the operational environment, the sustainment or aviation brigade may permit direct coordination with their subordinate units. When the MCT commits a mode operator, it creates a transportation movement request, which is a document that provides the details of that movement mission, for the mode operator. The mode operator tasks one of their subordinate battalions for the mission and submits a request for convoy or route clearance to its supporting MCT. If the mode operator cannot support the transportation movement request for any reason, it must notify the MCT immediately. The MCT either attempts to establish an alternate delivery date and time, selects another operator, selects another mode, or forwards the movement requirement to the movement control battalion.

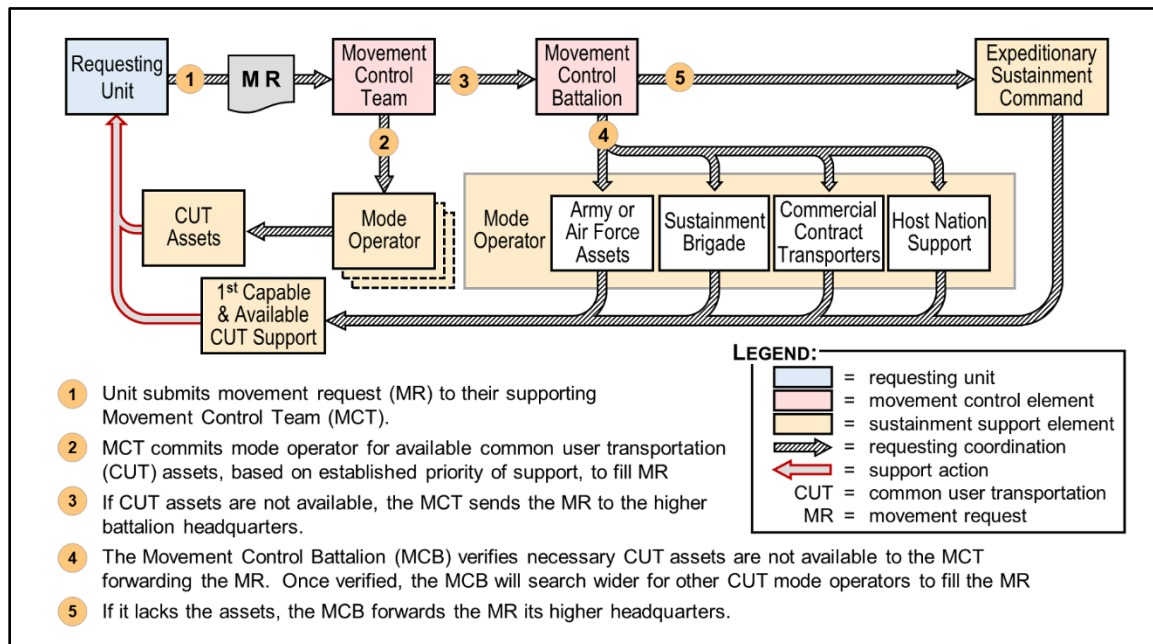


Figure 5-8. The movement control process

5-137. When the movement control battalion receives a movement request from a MCT, it will verify the common user assets available are committed based on the theater commander's priority of support. If an issue of prioritization arises, the movement control battalion will work to resolve the issue with the mode operator. When the mode operator's transportation assets are matched against valid commitments, the movement control battalion can forward the request to another MCT to use the assets that it has committal authority over, or the movement control battalion can execute the request if it has committal authority over transportation assets. The movement control battalion can also retain committal authority of allocated transportation assets if the operational environment dictates. Transportation assets such as Army aviation, rail, or Army watercraft are limited and selection of these modes can be retained at the movement control battalion. Additionally, the committing of host nation or certain commercial assets can be retained at the movement control battalion if necessary.

5-138. When the movement control battalion commits a mode operator it will create a transportation movement request for the movement and follow the process above. If the movement control battalion is unable to execute a movement request, it will forward the request to the TSC and/or ESC, or coordinate directly with a joint organization for the use of other Service's assets such as Air Force aircraft.

5-139. In the event that an unforeseen change in priorities requires a change to the transportation movement request after movement is initiated the MCT contacts the mode operator's convoy commander by radio or digital messaging to provide the revised transportation movement request. Transportation units normally have a mix of radio and digital communication systems mounted in their vehicles. For example, a 5k petroleum transportation company has a total of 71 vehicles, 70 radios and 24 digital messaging devices. Almost every vehicle in the company will be equipped with radios for internal and external communication. If a convoy is out of radio range and lacks digital communication devices the revised transportation movement request may be communicated to the convoy commander at a MCT or military police checkpoint along the convoy's route.

5-140. The destination MCT has the responsibility to close out all transportation movement requests terminating in their operational area. Although there are a variety of automation systems that will provide asset and in-transit visibility, MCT should make direct contact with the receiving organization to ensure the shipment has arrived when communications allow. To close out the transportation movement request, the destination MCT will contact the origin MCT to relay the mission is complete, or close out the transportation movement request in an automation system when available. The movement control battalion has the

responsibility to ensure commercial movements arranged by SDDC are closed out and reported to the TSC and/or ESC. For additional information, see ATP 4-16.

SUSTAINMENT OF MOBILITY

5-141. Freedom to move and maneuver within an operational area is essential to the application of combat power and achieving results across the range of military operations. An OE will present numerous challenges to movement and maneuver. These are typically overcome through the integration and synchronization of combined arms mobility and counter mobility in support of mission requirements. Sustainment units should be prepared to support gap crossing operations and aviation assets during the movement of maneuver troops. For additional information, see ATP 3-39.30, ATP 3-90.4, and ATP 3-90.8.

SUSTAINMENT OF GAP CROSSING OPERATIONS

5-142. Gap crossing operations require maneuver forces to break formations, concentrate within lanes or at crossing points, and reform on the far side before continuing to maneuver. Gap crossing types are deliberate, hasty, and covert. Gap crossings require large amounts of indirect fire support for obscuration and suppression that generates logistics requirements for ammunition and transportation. The amount of resources required to obscure the crossing is dependent on multiple variable such as duration required, weather, and terrain. In ideal conditions, a self-propelled howitzer battery firing 432 smoke rounds could provide a screen 350 x 200 meters for 1512 minutes. Obscuration requires close coordination, control, and detailed planning to maximize the desired effects on the enemy while not degrading friendly capabilities. This is especially important when conducting breaching in complex or restrictive terrain due to the close-in nature of the fighting. Artillery units conducting suppression and obscuration missions will displace frequently for survivability, requiring pre-positioning of munitions at various firing positions and position areas.

5-143. In urban areas, indirect delivered obscuration and suppressive fires will be more restricted. In some situations, using mortars (because of the ability to fire high-level trajectory), and smoke grenades rather than artillery-fired obscuration may be more effective. Planners consider the effects of wind and the time and assets required to build and maintain effective obscuration for the desired duration and submit requisitions for logistics support. Using indirect fire to provide obscuration often competes with other mission requirements and requires priorities to be established. Obscuration employed in multiple locations and at various times can confuse the enemy on the specific location and timing of breaching. For additional information on obscuration, see ATP 3-11.50. For additional information on field artillery operations, see FM 3-09. For additional details on gap crossings, see ATP 3-39.30, ATP 3-90.4, and ATP 3-90.8.

AVIATION OPERATIONS

5-144. Aviation operations related to sustainment increase mobility for light forces and provide additional options for distribution. These operations may include rotary, fixed wing and unmanned aerial systems. Sustainment forces should expect fuel and ammunition requirements to increase during aviation operations. Sustainment units should be prepared to conduct aerial resupply for maneuver forces. Planning considerations for aerial delivery should include type of airdrop asset and type of aerial delivery operation. Special planning considerations must include the fuel required by the aviation force. A company of CH-47 Chinooks could consume as much as 40,000 gallons of fuel in as little as two days. The brigade aviation element is critical to coordinating aviation as an enabler. See FM 3-04 for additional detail.

SECTION IV – RECONSTITUTION OPERATIONS

5-145. The scale, complexity, and increased destructive power of large-scale combat operations assumes an all-encompassing multi-domain fight, potentially resulting in the greater loss of personnel, weapon platforms, supplies, and equipment of our warfighting formations. Restoring combat power to the levels necessary, within a limited window of time to continue the fight, is the objective of normal, day-to-day sustainment actions, specifically personnel replacement operations, rebuild and maintain units at strength. Under exceptional conditions, with severely degraded units, constrained time, and limited or no personnel replacements, commanders may make the decision to execute reconstitution. Reconstitution operations are

extraordinary actions that commanders take to restore degraded units to an acceptable level of combat effectiveness as determined by the commander, commensurate with mission requirements and available time and resources. Reconstitution must be planned and resourced during operations to shape and prevent. The commander directing the reconstitution mission uses assets under their control, along with those provided by higher echelons.

RECONSTITUTION IS AN OPERATIONAL LEVEL EVENT

5-146. Reconstitution is not a sustainment operation, although sustainment plays an integral part. Reconstitution is an operational event enabled by all warfighting functions. Activities such as personnel and equipment restoration, health service support to restore combat power, and collective training, are involved to ensure combat readiness. The reconstitution effort should be thoroughly planned and understood by all involved to ensure success. Any maneuver, maneuver support, or sustainment unit may require reconstitution. Therefore, planners at all levels of command must have a contingency plan prepared to execute reconstitution operations, when necessary.

TWO TYPES OF RECONSTITUTION

5-147. Reconstitution operations consists of two elements: reorganization and regeneration. Reorganization involves the cross leveling of forces and resources following combat operations to increase combat effectiveness of an attrited unit. Regeneration involves the large-scale replacement of personnel, weapon platforms, equipment, and supplies; as well as the reestablishment and/or replacement of the chain of command, and the conduct of mission essential training. Regeneration operations take place at EAB, using corps, theater and strategic capabilities and resources to enable restoration of combat power. For additional information, see appendix C.

REGENERATION PLANNING

5-148. Regeneration, being the more complex of the reconstitution elements, returns degraded Army units into large-scale combat operations. Planning for reconstitution operations is necessary prior to beginning of large-scale combat operations. A critical aspect of regeneration is that of decision authority to direct units to conduct regeneration operations. Regeneration will require the removal of attrited units from the battlefield to an area that allows regeneration activities out of contact. Commanders must balance the resources required to move attrited units out of combat versus the overall mission, time constraints, and resources required.

OPERATIONAL READINESS THRESHOLDS OF UNITS UNDERGOING REGENERATION

5-149. Operational readiness thresholds that trigger both entry and exit criteria for regeneration are critical in determining the scope of operations. Operational readiness thresholds are measures used to determine a units capability to perform the missions or functions for which it is organized or designed. Thresholds to enter or exit regeneration must be determined by an operational. At the theater level, the operational plans should address combat power degradation thresholds to aid the commander in determining regeneration operations. Commanders must also consider further degradation of a unit during retrograde operations.

REGENERATION TASK FORCE

5-150. During large-scale combat operations, regeneration operations are resource intensive and METT-TC dependent. Designation of a specialized regeneration task force (RTF) allows for the rapid (days to weeks) execution of large-scale replacement operations. The RTF provides the synchronization of command and control, security, and sustainment support activities to a specified location, either within the corps consolidation area, joint security area, or outside of the theater, to rebuild a degraded unit's combat power. See appendix C for detailed information on reconstitution elements, activities and execution.

5-151. The RTF predetermines maintenance collection points suitable for Heavy Equipment Transporter System on and/or off-loading during hours of darkness with limited time available. Equipment towed or carried from the battle area goes to a central location that facilitates sorting of equipment. The RTF

determines special requirements for vehicles that require special road clearances prior to beginning regeneration.

5-152. Sustainment commanders must consider time constraints required to support regeneration versus sustainment of large-scale combat operations. Utilization of sustainment assets to support regeneration operations may affect the execution of distribution operations of classes I, III, and V supplies. The RTF may need to request echelon above brigade transportation assets to support regeneration.

5-153. Planners should prepare for all aspects of personnel services in the regeneration of a specific unit. Planners should consider finance, legal, morale, welfare and recreational, religious, and public affairs support action to the Soldiers of the attrited unit.

5-154. Information relevant to the combat readiness of the attrited unit may not be complete. This prevents identification and provision of needed major assemblies, repair parts, and other materiel. Previous LOGSTATs may reflect data that is 24 hours old. The assessment element needs adequate communications with the attrited unit and the RTF CP to ensure information is current.

5-155. Planners should also consider use of HNS. Host-nation facilities, personnel, and other resources can significantly enhance the regeneration effort. Coordination with host nation officials is vital.

5-156. Other sustainment planning considerations are as follows—

- Regeneration of units is an exceptionally intensive form of reconstitution requiring the direction of maneuver commanders two levels up, and substantial sustainment support.
- Attrited units are not able to support any sustainment requirements.
- Planners and the RTF should request equipment from theater reserve stocks.
- Movement control support should be requested by the RTF to assist with planning the attrited unit's move.
- Planners should standardize information required by the RTF from an attrited unit.
- Reconstitution plans should reflect procedures for managing replacements of Soldiers in attrited units.
- Reconstitution plans should include combat stress counselors and psychologists in the RTF.
- Planners should plan for the recovery of an attrited unit's disabled vehicles and crews from forward areas to the regeneration site.
- Planners should prepare for attrited units arriving to the regeneration site with a form of chain of command. However, regardless of how the attrited unit is organized, the RTF regenerates all the entities within the attrited unit.
- Planners should ensure the RTF should have a 24-hour operating capability.
- The regeneration site should be as close as possible to the attrited unit location to minimize amount of time and difficulty reaching the site.
- The site should be far enough away to prevent easy enemy interdiction and provide the safest feasible location for personnel executing regeneration operations.
- The site should contain enough space to conduct regeneration operations.
- Planners should be prepared to coordinate with the unit's parent organization. For example, the RTF may be required to coordinate a division property book office to establish correct hand receipts.
- Planners and the RTF should plan for signal support when conducting reconstitution in austere locations.
- Planners and the RTF should request decontamination support and prepare to handle decontaminated personnel and equipment.

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Chapter 6

Sustaining Large-Scale Defensive Operations

This chapter provides an overview of sustainment of large-scale defensive operations and addresses fundamental principles of sustainment during the defense. Chapter 6 also provides additional planning considerations unique to large-scale defensive operations and sustainment support of defensive tasks.

6-1. A *defensive task* is a task conducted to defeat an enemy attack, gain time, economize force, and develop conditions favorable for offensive or stability tasks (ADP 3-0). As one of the four decisive action tasks, the defense is a major, complex operation conducted to defeat an enemy attack. Although a defensive task normally does not achieve decisive victory, it sets the conditions necessary to regain the initiative through counterattacks.

SECTION I – OVERVIEW OF SUSTAINING LARGE-SCALE DEFENSIVE OPERATIONS

6-2. As a component of large-scale combat operations, the defense is a combination of highly complex tasks that place tremendous and continuous demands on Army sustainment organizations. Situational awareness, mission analysis, and detailed planning are keys to successful support operations. Commanders take advantage of the time available during a defense to build combat power. However, the time available is likely to be unknown since the enemy typically has the initiative. As a result, sustainment organizations and the functions executed play a critical role in supporting the defense and the success of subsequent future operations.

6-3. There are three defensive tasks executed during large-scale combat operations: mobile defense, area defense, and retrograde. A mobile defense defeats the attacking forces by permitting the enemy to advance into a position that exposes them to counterattack. An area defense orients on retaining terrain and denying enemy forces access to desired terrain while not destroying the enemy outright. A retrograde moves the friendly forces away from the enemy to gain time, preserve forces, place the enemy in unfavorable positions, or avoid combat under undesirable conditions.

6-4. Defending commanders combine the three types of defensive tasks to fit the situation. All three types of defense use mobile and static elements. In mobile defenses, static positions help control the depth and breadth of the enemy penetration and retain ground from which to launch counterattacks. In area defenses, commanders closely integrate patrols, security forces, and reserve forces to cover gaps among defensive positions. Commanders reinforce positions as necessary and counterattack, as directed. In retrograde operations, some units conduct area or mobile defenses or security operations to protect other units that execute carefully controlled maneuver or movement rearward. These units use static elements to fix, disrupt, turn, or block the attackers. Mobile elements are used to counterattack and destroy the enemy.

6-5. Commanders execute defensive tasks for various reasons, such as to retain decisive terrain or deny a vital area to the enemy, weaken or fix the enemy as a prelude to offensive actions, or increase the enemy's vulnerability by forcing the enemy to concentrate subordinate forces. The ultimate purpose of the defense is to create conditions for a counteroffensive whereby it allows Army forces to regain the initiative.

Pusan Perimeter: Defending to Develop Favorable Conditions for the Offense

On June 25, 1950, the 89,000 strong North Korean People's Army (NKPA) invaded the Republic of Korea (ROK) and quickly overwhelmed the ROK units, which suffered serious personnel and materiel shortages. Over the course of July, NKPA units pushed southward as the ROK army, and recently arrived American units, worked to slow the advance and establish a defensive perimeter. By August 4, Eighth Army Commander, Lieutenant General Walton H. Walker, established the 140-mile Pusan Perimeter that halted the NKPA. Walker's defensive line centered on holding the road and rail network that supplied the front. Over the course of the next 45 days, Walker had to hold the perimeter while his logistical organization built combat power in order to transition to the offensive and breakout of the perimeter.

The Pusan Logistical Command, established by Walker, served as the principal sustainment organization providing for all sustainment functions throughout the Battle of the Pusan Perimeter (August 4 - September 15). This logistical command centered on Pusan harbor, the most developed and biggest harbor on the peninsula. It was the center of the supply effort for United Nations forces within the Pusan Perimeter. Its four piers and intervening quays could berth 24-or-more deep-water ships, and could handle a capacity of 45,000 tons daily. As well, Pusan had a good transportation system of railroads running from the port to points north; it formed the backbone of the transportation system in Korea. On August 30, the 714th Transportation Railway Operating Battalion arrived in Korea and became responsible for operating the 500 miles of railway line within the Pusan perimeter.

Necessary munitions for the build-up either came from Japan as part of the refurbishment operation for WWII vehicles and munitions or shipped directly from the U.S. By August, an average of 4,000 vehicles a month cleared the repair shops in Japan and were transported to Pusan through an expedited rail-shipborne system to deliver them in two days. In addition, the Army shipped tanks from the United States. The SS Luxembourg Victory arrived in early August with a shipment of 80 medium tanks capable of defeating the T-34 Medium Tanks given to the NKPA by the Soviet Union. By the third week of August, through resupply and the deployment of armor units, American tanks outnumbered the NKPA tanks by at least five to one.

To provide for health service support, for the high rate of casualties among American and ROK forces, the Army established Mobile Army Surgical Hospitals (MASH) units. The 8055th M.A.S.H. was assigned to the 24ID in July. Shortly thereafter, the 8063rd and 8067th began operations within the Pusan Perimeter. These units often received 100-200 casualties per day. From these units, hospital trains returned wounded soldiers to Pusan for further care. To provide for class I supply, the Army had to rely on WWII-era K-rations available in Japan. None of the new C-rations were immediately available. The Quartermaster General issued orders that all available C-rations in the U.S were to be immediately shipped to Korea to feed U.S. and ROK personnel.

By September 1, United Nations Command (including ROK and British troops) had 180,000 men based in the Pusan Perimeter. On September 20, American and ROK units began to move forward and two days later, Walker issued his operations order for a full-scale breakout of the Pusan Perimeter.

6-6. The transition to offensive operations will normally be as a planned operation but may also be a hasty operation conducted to capitalize on tactical opportunities or an identified enemy weakness. Because of this,

sustainment commanders and leaders must stay cognizant of the status of the operation. Leaders must also use all available time to execute required sustainment functions knowing the mission may change quickly and frequently.

SECTION II – SUSTAINMENT FUNDAMENTALS

6-7. Enemy commanders look for opportunities to counter corps and division defensive tasks. The enemy will seek to employ special purpose forces, irregular forces, electronic warfare, long-range artillery, rockets, missiles, information capabilities, and cyberspace electromagnetic activities to disrupt sustainment activities. The enemy, to assist in targeting of sustainment units and locations, may exploit use of electronic signals, such as cell phones and geotagged photos. Sustainment commanders must be aware of these unintended threats and focus on those efforts that would help set the conditions necessary to regain the initiative during defensive operations.

6-8. All sustainment functions are planned and executed to support defensive operations and build combat power to prepare for future offensive operations. The exact type and extent of support operations and the organizations executing them will vary by echelon based on the support requirement. Even though defensive operations may be the main effort, simultaneous offensive operations with their support requirements are also likely to be ongoing.

6-9. Sustainment commanders and staffs plan for increased requirements in class IV, V, and IX items to support the defensive effort and build class III (bulk and package) stocks to prepare to transition to offensive operations. Sustainment planners anticipate where the greatest need might occur during operations and consider pre-positioning sustainment stocks far forward to reduce response times for critical support. Planners also consider alternative methods for delivering sustainment in emergencies. Sustainment of defensive tasks requires a coordinated planning effort designed to maximize synchronization, integration, and continuity of support at all echelons. Commanders and staffs at every echelon must anticipate operational requirements, be responsive in requisitioning and distributing resources, and be prepared to improvise tactics and techniques for execution that ensures responsiveness even in unexpected situations.

SECTION III – PLANNING CONSIDERATIONS

6-10. Sustainment planning is both a continuous and a cyclical activity of the operations process. For sustainment planning, the most important factors are requirements, capabilities, and shortfalls. As outlined in the paragraphs below, planning considerations assist planners in identifying specific support or operational requirements based upon available information.

6-11. Many planning considerations affect the ability to execute large-scale defensive operations. These considerations must be recognized, analyzed in the time available, and prioritized based on the commander's intent.

6-12. Planning considerations must encompass all warfighting functions to ensure the plan is integrated across all functions and domains. A planning consideration may have various levels of effects that drive support requirements across all warfighting functions. The following discussion describes considerations that must be considered during planning for sustaining large-scale defensive operations.

Sustainment Planning in Large-Scale Combat Operations

- Plan class IV for transitions from offense to defense
- Expect Increases in class V
- Plan for pre-positioning of supplies
- Plan retrograde support
- Increased demand for class VIII
- Mass casualties
- Large scale personnel replacements in a short period

PLANNING CONSIDERATIONS FOR SUSTAINMENT

6-13. The planning considerations listed below for sustainment are examples of what sustainment planners may take into account during defensive operations. It should not be considered all-inclusive. Considerations will vary for individual operations. The list is common planning considerations for sustainment during all defensive tasks. If a defense task has a special consideration, it is indicated in the list:

- Plan for execution of all sustainment functions and associated sub-functions at all echelons; personnel services, health service support and logistics. This includes personnel replacement, casualty reporting, medical treatment, medical evacuation, medical logistics/supply, and all logistics functions.
- Shift maintenance and recovery capabilities in the FSC. BCT commanders, staff, and support operations offices should weight the main defensive effort by cross-leveling sustainment/logistics assets within the brigade.
- Prioritize main effort support for spoiling attacks, counter attacks, and follow-on offensive operations. Plan for all sustainment functions required to build combat power; personnel, supply, maintenance, and medical. Preposition supply classes I, water, IIIB/P, IV, V, VIII, and IX centrally and well forward. Consider the use of mission-configured loads. Balance forward positioning of resupply and rapid mobility.
- Ensure that proper handling and storage requirements are addressed for temperature sensitive medical products when prepositioning class VIII.
- Expect high demand for classes IV and V to support the defense preparation efforts. Ensure adequate transportation assets are available to move the required tonnage.
- Plan for heavy equipment transportation assets to support the retrograde defense task. This transportation is required to move serviceable and unserviceable main battle tanks, infantry/cavalry fighting vehicles, Stryker systems, and other heavy equipment away from the enemy.
- Plan for the appropriate type of water distribution. During large-scale combat, sustainment planners should expect to distribute only bulk water from the corps' rear boundary forward to the forward line of own troops. Bottled water requires contracted support and, if used, should only be planned for the joint security area.
- Expect competition between the need to support unit mobility and the need to conduct distribution operations. Plan for mobility and transportation support to units fighting over a dispersed area in a static area defense, and in a dynamic mobile or retrograde defense.
- Plan for troop transportation assets to support the retrograde defense task. This is required to move large numbers of personnel during the retrograde.
- Plan for back-haul of equipment and supplies during the retrograde. This is for serviceable, unserviceable, equipment and repairable class IX items.
- Echelon support for the retrograde task to ensure seamless movement from the main battle area to the support and consolidation areas.
- Expect high demand for obscurant supplies and equipment.
- Coordinate with the supporting DSSB to provide support to BCT units when the BSB is in retrograde movement.
- Expect an increase in demand for class VIII (medical materiel and blood products).
- Plan for increased use of batteries for technologies that require them.
- Plan for limited visibility and limited distribution routes.
- Plan for maximum use of unit distribution of classes of supplies.
- Plan for reinforcing support to aviation brigades for downed aircraft recovery operations.
- Expect increase in aerial delivery operations.
- Anticipate mass casualties and large-scale personnel replacements to include potential reconstitution of severely degraded units.
- Plan for continuous replacement operations, specifically the transportation and integration of replacement personnel into units in the tactical close area.
- Plan for primary, alternate, contingency, and emergency communications plans ensuring effective personnel asset visibility and LOGSTATs are delivered.

PLANNING CONSIDERATIONS FOR COMMAND AND CONTROL

6-14. The planning considerations for command and control are listed below:

- Expect enemy attacks on space and cyberspace domains to include the electromagnetic spectrum that will degrade communications and digital information transmission. Attacks on these domains affect sustainment operations in terms of satellite communications, positioning, navigation, timing, information collection, internet operations, computer systems, and frequency modulation communications. Commanders must develop and execute a primary, alternate, contingency, and emergency communications plan ensuring redundancy. In addition, fast-paced offensive operations conducted prior to the defense may have prevented sustainment information systems from functioning for a period of time, creating a lag in requisitions and data exchange. Commanders capitalize on the time available during the defense to ensure all required sustainment information is passed.
- Identify sustainment forces that will support the defense reserve force in all types of defense tasks. Commanders will determine what risk is acceptable in attaching sustainment units to the reserve.
- Understand how terrain may limit/degrade communications and force retransmission stations. This is important for Combat Service Support Automated Information Systems Interface/Very Small Aperture Terminal operations. Understanding terrain can also provide some degree of protection to EW by masking antennas from the enemy while still providing line of site to friendly forces.
- Assess sustainment task organization frequently to ensure it is adequate and positioned properly to support the sustainment mission. Plan for replacement of units that are lost as a result of enemy attack.

PLANNING CONSIDERATIONS FOR MOVEMENT AND MANEUVER

6-15. The planning considerations for movement and maneuver are listed below:

- Expect sustainment resupply and support elements to operate outside the unit boundaries and beyond the forward line of own troops while supporting covering, guard, screening forces, counter and spoiling attack forces. Sustainment units must understand tactical enabling tasks and operational control measures used by maneuver forces in perimeter defense.
- Understand/anticipate how terrain, defense obstacles, fire support coordination measures, movement restrictions, and terrain will affect the methods of resupply. These factors must be considered in all distribution management and movement control plans.
- Expect increases in requirements for unmanned aircraft of items (Class III(B), V, and IX repair parts) to increase during defensive operations. Unmanned aircraft systems often require motor gasoline or aviation gasoline. This requirement must be included in LOGSTATs, requisitioning, storage, and distribution.
- Task and coordinate with movement control units for road usage or de-confliction during retrograde operations. This is critical to ensure the retrograde is not hindered by uncoordinated or conflicting unit movement on available routes. Commanders must identify main and alternate movement routes.
- Plan for support to SOF operating in the BCT area. This includes special ammunition and non-standard equipment maintenance.
- Plan for support to attack helicopter operations in the close area. This includes planning for aviation-grade fuel, maintenance, munitions, and placement of FARP.
- Coordinate with the consolidation and support area terrain managers to deconflict airspace for aerial delivery, Air Force air land delivery, and aeromedical evacuation requirements.

“Thank God for the Airdrop”: Aerial Resupply in the Relief of Bastogne

Wacht am Rhein, the German Army counter-offensive initiated on 16 December 1944, caught the Allies completely by surprise. The operation was launched with more than 400,000 troops in twenty divisions spearheaded by armored forces driving through the Ardennes Forest and was designed to split the Allied forces and recapture Antwerp. The largest battle fought by the U.S. Army in World War II, the Battle of the Bulge featured numerous famous actions; none more so than the heroic stand of the 101st Airborne Division at Bastogne.

The “Screaming Eagles” of the 101st were in Reims recovering from their fierce combat in Operation Market Garden when the orders came on 17 December to move to Bastogne, the center of a key road network. Commanded by Brigadier General Anthony McAuliffe, the division’s artillery commander, the trucks carrying the troops began reaching their assembly areas around Bastogne on the 19th. So precipitous had been the movement from Reims that most of the infantry did not have their basic load of ammunition and many were without winter clothing, sleeping bags, helmets and other combat equipment. On arrival, the 101st quickly established defensive positions around the city.

Already in the city were two armored task forces, the 10th Armored Division’s Combat Command B and the 9th Armored Division’s Combat Command R. Closing in on Bastogne were three divisions of the XLVII Panzer Corps, the 26th Volksgrenadier Division, 2nd Panzer and Panzer Lehr. On 20 December, the German forces joined west of the city, cutting off all access into Bastogne. The 101st Division rear area was overrun on 19 December, and when a 90-truck resupply convoy was ambushed and forced to turn back, the logistics situation in Bastogne rapidly became dire.

On 21 December, BG McAuliffe requested aerial resupply. Poor weather prevented resupply flights until 23 December, when Troop Carrier Command parachuted pathfinder teams into Bastogne followed by 241 aircraft dropping supplies. On Christmas Eve 160 planes were able to deliver supplies. Christmas Day again saw impossible flying conditions. The largest airdrop of the battle took place on the 26th, when 289 planes delivered supplies to the city. Shortly thereafter, elements of the U.S. 4th Armored Division broke the German stranglehold around the city and relieved Bastogne. The defense of Bastogne had fatally delayed the German timetable and the U.S. would soon be back on the offensive. Hitler’s gamble had failed.

For isolated units not supportable by ground transportation, aerial resupply is a viable method for sustaining the forces. In the case of the defense of Bastogne, the ability to airdrop ammunition, fuel and medical supplies had saved the 101st. U.S. air superiority was offset to a great degree by adverse flying conditions. While resource intensive and weather dependent, aerial resupply can be the answer.

PLANNING CONSIDERATIONS FOR INTELLIGENCE

6-16. The planning considerations for intelligence are listed below:

- Intelligence is critical for planning sustainment operations in support of the defense. It starts with an understanding of the overarching operational variables but then extends to detailed intelligence estimates, intelligence preparation of the battlefield products, and other intelligence products that describe enemy capabilities and courses of action. From these products, planners can estimate friendly casualty rates and munition expenditure rates, plan protection operations, and have a

better understanding of where and when sustainment capabilities are needed. See ADP 2-0 and FM 2-0 for more information on the intelligence warfighting function.

- Like the other warfighting functions, there are some unique aspects of sustainment support to defensive operations that are critical to the intelligence warfighting function. Low-density intelligence and electronic warfare maintenance is especially critical to the intelligence architecture and intelligence operations.

PLANNING CONSIDERATIONS FOR FIRES

6-17. The planning considerations for fires are listed below:

- Forecast increase consumption of long range and precision munitions for BCT and corps fires units.
- Anticipate frequent and rapid relocation of fires units to shift supporting units accordingly.
- Ensure quantity and positioning of modular ammunition units at EAB are sufficient to support fires ammunition requirements.
- Ensure that ammunition transportation assets are adequate and properly positioned to support ammunition distribution for fires operations. The TSC must coordinate with the GCC J-4 and strategic providers to ensure required munitions are being distributed to the theater.

PLANNING CONSIDERATIONS FOR PROTECTION

6-18. The planning considerations for protection are listed below:

- Plan for establishing base cluster operations to create dispersion and facilitate concealment. Commanders should plan to disperse large, consolidated bases from which sustainment units operate into smaller bases to form a base cluster. This is for all bases from the BSA to bases operating in the joint security area. Consider all security integration implications of the base cluster.
- Plan for CBRN conditions. This includes increase in requirements for non-potable water and chemical defense equipment. CBRN defense planning must include detailed procedures for processing of contaminated human remains and equipment decontamination.
- Plan for positioning of EOD assets to render safe and dispose of explosive hazards, provide counter explosive ordnance/improvised explosive device defeat capabilities, and removal of lodged rounds in aircraft, armored vehicles, mortars, artillery tubes, and other weapon systems.
- Expect direct enemy attack by small unit/special operations ground forces, attack aircraft, and long-range artillery. Commanders must ensure that base defense measures are adequate to detect and defeat small unit operations (Level I or Level II threats). Units must use adequate cover and concealment measures to prevent detection by enemy forces. Dispersion mitigates effects of long-range fires and attack aircraft.
- Plan for adequate convoy security for convoys supporting the mobile defense. This may be from internal sources or from coordinated external sources.

ADDITIONAL PLANNING CONSIDERATIONS

6-19. Just as significant as the commodity requirements for supporting a large-scale defense are the many implications for tactics, techniques, and procedures employed by sustainment forces. Sustainers anticipate how terrain, defensive obstacles, fire support coordination measures, and movement restrictions will affect sustainment operations. These factors are considered in all distribution management and movement control plans. Planners expect to weight sustaining operations support for spoiling attacks, counter attacks, and follow-on offensive operations. This may require sustainers to weight the main defensive effort by cross-leveling sustainment assets. In some cases, sustainers pre-position classes I, IIIB/P, IV, V, VIII, and IX stocks, as well as water centrally and well forward, but always balance forward positioning of sustainment assets with the need for rapid mobility. While supporting covering, guard, screening forces, counter and spoiling attack forces, sustainers plan for support elements to operate outside the unit boundaries and beyond the forward line of own troops. Sustainers also take into account operational control measures to include

passage of lines with maneuver forces in perimeter defense. Finally, sustainment leaders identify sustainment forces that will support the defense reserve force in all types of defense tasks. Commanders determine what risk is acceptable in attaching sustainment units to that reserve force.

6-20. Large-scale defensive operations also place a burden on medical resources due to the magnitude and lethality of forces involved. Medical units anticipate large numbers of casualties in a short period of time due to the capabilities of modern conventional weapons and the possible employment of weapons of mass destruction. These mass casualty situations can exceed the capabilities of organic and DS medical assets. To mitigate this risk, planners should anticipate the possibility for mass casualty situations and coordinate with area support medical units to help absorb the acute rise in battlefield injuries. The command surgeon or medical operations officer at echelon works with the logistics and operations officers to develop mass casualty plans and advise commanders on integrating all available resources into an effective plan. Casualty evacuation is a unit level responsibility and must occur concurrently with operations.

6-21. Unit commanders must plan for and ensure the availability of casualty evacuation assets to augment the available ambulances in the event of a mass-casualty situation. Unit commanders must also ensure integration of the casualty evacuation plan with the medical evacuation plan. Evacuation of casualties during mobile defense is especially challenging due to possible relocation of receiving MTFs and threats to evacuation routes. Units should always plan for mass casualty situations and have an evacuation plan, including identification of casualty evacuation assets and casualty collection points. The casualty evacuation plan should complement and be synchronized with the medical evacuations plan (ambulance exchange points and routes), for the use of both standard and nonstandard air and ground platforms in addition to lifts of opportunity. For additional information on mass casualty operations, see ATP 4-02.3 and ATP 4-25.13.

6-22. Mortuary affairs planners must strive to support the defense in depth. Because of the fixed nature of mortuary affairs assets and evacuation routes, these assets and routes are more vulnerable to enemy action. Mortuary affairs planners must identify both primary and secondary LOC for evacuating the human remains of friendly, enemy, and local nationals. Planners must be aware of this, and ensure that policies and procedures are established for the prompt, dignified return of these human remains to local government officials, Red Cross, Red Crescent, or family members. For additional information, see appendix A, ATP 4-46, and JP 4-0.

6-23. Sustainment planners and maneuver commanders in the defense should be prepared to execute reconstitution operations to rebuild combat power. Commanders assess the unit's readiness capability and determine the most expedient method to bring the unit to an acceptable combat posture through reorganization or regeneration. For additional information on reconstitution, see appendix C.

6-24. To support defensive operations, sustainment forces at all echelons consider echeloning support assets to expedite replenishment for critical support. Sustainment forces have limited protection capabilities and may be required to execute security tasks until arrival of dedicated maneuver security elements.

ECHELON ABOVE BRIGADE SUSTAINMENT

6-25. The companies operating at echelons above the brigade provide all sustainment support to defense enabling units operating in the division support or consolidation areas. These companies also provide area support for units transiting these areas and provide sustainment support to the BCTs. These units will normally be attached to a DSSB, CSSB, DSB, or a sustainment brigade. Functional companies may be attached to a functional battalion when available. Examples of functional battalions include motor transport battalion, petroleum support battalion, and movement control battalion. Support is executed based on priorities and support relationships established in the order issued by the DSSB, CSSB, DSB, or sustainment brigade in support of the overall theater distribution effort.

Sustainment Functional Battalions

- Motor transport battalion
- Petroleum support battalion
- Movement control battalion

6-26. During the defense, commanders address several unique sustainment requirements. Commanders determine which supplies are needed, how often to supply, and which method of supply best supports defensive operations. Priorities for replenishment are normally bulk water, ammunition, and materials to

construct obstacles for defensive positions. There is normally a reduced need for bulk fuel. There may also be an increased demand for decontaminants and CBRN collective and personal equipment.

6-27. Distribution is a critical aspect of sustaining defensive operations to ensure adequate resupply at all times. Echelon above brigade sustainment units work within the distribution network to execute operations through the integration and synchronization of materiel management and transportation. Distribution builds and maintains combat power with the delivery of supplies, personnel, and equipment as replenishment support to a BSB, extends operational reach of maneuver forces, maintains freedom of action, and prolongs endurance.

6-28. A composite or quartermaster supply company resupplies BSBs and EAB units conducting or supporting defensive operations. Resupplies include general supply, fuel, water and retrograde support. Supply stocks are replenished by other supply companies executing supply support within the theater. The replenishment is delivered to the supply company via EAB transportation companies executing theater distribution that supports the overall theater distribution plan.

6-29. Troop movements and resupply convoys with combat-configured loads are delivered to maneuver units on a scheduled basis during the defense. The composite or functional transportation companies provide heavy, medium, light, bulk water and bulk petroleum transportation capability through various types of units. The transportation company role is to provide transportation support and execute convoys to move supplies, equipment, and personnel replacements in support of defensive operations.

6-30. Truck companies should expect to provide unit distribution to units in the brigade close area and even into the brigade deep area to support screening and security operations. Enemy attack aviation and long-range fires capabilities dictate well dispersed march orders. Movement into the brigade deep area requires additional convoy security.

6-31. During defensive operations, there are a number of different formations that require unique munitions support and capabilities. The field artillery brigade executing deep fires, air and missile defense units, combat engineers, and the CAB all have specific munitions requirements. The modular ammunition company provides ammunition support to these units while also providing ammunition resupply support to the BCT distribution company. The modular ammunition company ammunition managers must configure ammunition loads required to support the defense by type of ammunition and priority of movement.

6-32. Sustainment planners should expect high demands on all field services during defensive operations. There are various types of field service companies and the role of each in supporting defensive operations depends on the type of service the company is designed to perform. Field service capabilities are aerial delivery, field feeding, shower and laundry, mortuary affairs, and water treatment. Food Service support for EAB units is supported by the field feeding company. This support must be part of the planning process to ensure food service equipment and manpower is coordinated to support feeding operations. See ATP 4-41 for additional details. Field service companies execute operations based on priorities and support relationships established in the order issued by sustainment commanders. The field service functions are critical to rebuild combat power, prepare for transition to offensive operations, and to restore unit morale.

6-33. Commanders provide maintenance support as far forward as possible during the defense. Maintenance collection points help reduce the need to evacuate equipment. The thrust of the maintenance effort is to fix as far forward as possible those systems that can quickly be returned to the unit in combat-ready condition. The support maintenance company is the only echelon above brigade unit performing field-level maintenance, including all low density, and limited recovery support to units on an area basis. The support maintenance company provides field maintenance support to units that do not have organic maintenance capability in EAB. Test, measurement, and diagnostic equipment capabilities reside in the support maintenance company to provide calibration and repair support to divisional and echelon above brigade units. The support maintenance company does not have maintainers trained to make repairs on ABCT or SBCT combat platforms.

6-34. During defensive operations, financial management focuses on supporting contracting and local procurements by funding paying agents to pay local vendors for specific defense operations requirements. Other tasks executed during defensive operations include securing and safeguarding captured currency (enemy, allied, neutral, U.S., or mutilated currency), commercial vendor services and contract payments,

disbursing and funding support, controlling currency (U.S. or local), providing enemy prisoners of war and civilian internees pay support, special programs, and supporting monetary compensation/consolation.

6-35. Human resources planners should expect large numbers of casualties in a short period of time in support of defensive operations and must be prepared to process mass casualties and large scale personnel replacements to include reconstitution to maintain personnel accountability and build combat power to prepare for future offensive operations.

6-36. Medical planners must stay in close coordination with the other sustainment planners when preparing for defensive operations. Medical evacuation personnel generally must negotiate extended LOC to reach the patient, complete vital tactical combat casualty care, and evacuate the Soldier. The medical company (area support) provides Role 1 and Role 2 AHS support to units supporting defensive operations. The medical company (area support) is attached to a MMB and executes area medical support operations within an area identified in the operation order issued by the MMB commander. The medical company (area support) can task-organize and is tailorable to the operating environment and mission requirements dictated by defensive operations. For additional information, see FM 4-02 and ATP 4-02.3.

6-37. Evacuation of fatalities during the defense may be highly problematic. Limited availability of lift will be prioritized to life saving and defense enhancement. Task organized mortuary affairs teams for echelons at or below brigade will have limited fatality storage. Planners will make every effort to conceal fatalities from the view of the living and safeguard human remains from access of carrion scavengers.

BRIGADE COMBAT TEAM SUSTAINMENT

6-38. All three types of BCTs have companies that support brigade operations. The types and quantities of these companies is the same for each BCT but the exact composition and capability of the supporting companies will differ based on the type of BCT. All BCTs have a distribution company, a field maintenance company, BSMC, and six forward support companies. Each FSC supports a specific maneuver battalion. These companies are organic to the BSB and each has a specific role.

Distribution Company

6-39. The distribution company's role is to provide supply distribution to the BCT units executing defensive operations. It executes a combination of supply and transportation functions to accomplish supply replenishment to support defensive operations. The distribution company plans, directs, and supervises supply distribution in support to a BCT to ensure that anticipatory replenishment is executed IAW the support concept.

6-40. The distribution company commander and key leaders must constantly conduct distribution management to integrate supplies with available transportation assets and control the movement of these according to the distribution plan. During large-scale defensive operations, the distribution company anticipates the time requirements for increased fuel, munitions, barrier material, and potable water distribution. The DSSB operating at EAB replenishes the distribution company with all classes of supplies. The BSB SPO officer coordinates with the DSB SPO officer to ensure this support is in place.

6-41. Degraded LOC during the defense may make it necessary for the distribution company to preposition sustainment stocks centrally and well forward within the main battle area. Planners should coordinate EAB throughput to reduce transportation requirements of limited organic assets. The BSB commander sets priorities of support for the distribution company based on the concept of operations. When requirements exceed the capability of the distribution company, aerial delivery or throughput resupply directly to units might be required to ensure timely delivery of supplies.

Field Maintenance Company

6-42. The field maintenance company's role is to provide field-level maintenance support to the BSB and brigade combat elements not supported by an FSC. The field maintenance company provides repair capability for automotive, ground support, communications and electronics, and armament. The field maintenance company also provides limited field-level maintenance support to the FSCs for low density commodities such as communications, electronics, and armament equipment. The field maintenance company is not

equipped with additional maintainers. Maintainers are pushed as far forward as possible to make repairs at the point of need. During the defense, the field maintenance company is critical to repair damaged equipment to build combat power.

6-43. Large-scale combat operations demands a maintenance system that is focused on returning systems to operational status quickly and as close as possible to the point of failure or damage. Properly planned and executed field maintenance allows rapid repair of non-mission capable weapon systems and critical equipment.

6-44. The field maintenance company may be required to use recovery assets to assist FSCs in recovering damaged equipment from the point of failure to a maintenance collection point or BSA. Recovery and evacuation vehicles should position themselves at critical locations on the battlefield to keep disabled vehicles from blocking movement routes while using equipment transporters and armored vehicles with inoperative weapon systems to accomplish this, if necessary.

6-45. During large-scale defensive operations, maintenance requirements may overwhelm field maintenance company capabilities. The commander establishes maintenance, recovery, and evacuation requirement priorities (including timelines) and destruction criteria for inoperable equipment within the OPOD based on capabilities. Considerations should be given to weigh this priority with additional repair part capabilities to include authorized stock list items, shop stock lists, line and shop replaceable units, and combat spares.

Brigade Support Medical Company

6-46. The BSMC provides AHS support to BCT units conducting defensive operations. The BSMC provides Role 1 and Role 2 medical care in support of a BCT and AHS support on an area basis to all BCT units that do not have organic medical assets.

6-47. Medical support associated with large-scale defensive operations anticipates significant casualties just as in the offense. Integrated planning would include casualty evacuation use of planned medical evacuation routes, identified ambulance exchange points, and should include the augmentation of medical equipment and medical providers for the provision of en route care when available.

6-48. During the defense, medical evacuation from the forward security or striking force area poses significant challenges because of distance, limited situational awareness, and rapid changes in the tactical situation. In a mobile defense, considerations must be given to the fixing force that will likely suffer higher casualty rates than the striking force as it absorbs the enemy's main attack. Defensive forces may be conducting noncontiguous combat operations with a high probability that movement routes are interdicted. This makes it imperative the COP is available to ground and air ambulances and is accurate and updated frequently.

Forward Support Company

6-49. The FSC provides support to a maneuver battalion during defensive operations. The FSC provides field feeding, field-level maintenance, and distribution support to the supported battalions. FSCs provide the BSB commander the ability to prioritize the logistics effort in support of large-scale defensive operations. FSCs become the vital link from the BSB to the supported battalions and provide the brigade, battalion, and BSB commanders the greatest flexibility while supporting defensive operations.

6-50. FSC support occurs through disciplined logistics status reporting, use of command and control, and sustainment systems, to gain situational understanding, develop a common operational picture of the current and future operations, and plan for their supported maneuver battalion. This is imperative to synchronize the concept of operations with priorities of support to ensure continuity and responsiveness.

6-51. The FSC positions maintenance assets as far forward as the tactical situation permits to return inoperable and damaged equipment to the operation as quickly as possible. For the ABCT, the FSC is the sole source of maintenance support for the M1, M2/3, and M109A6 weapon systems. For the SBCT, the FSC is the sole source of maintenance support for the Stryker systems. Commanders may utilize multiple maintenance collection points and array their mechanics on the battlefield. Commanders may further, authorize battle damage assessment and repair, controlled replacement, or x overrides to in order to preserve

combat power. Brigade commanders must weight the main defensive effort by cross-leveling FSC maintenance assets.

6-52. The FSC commander must anticipate operating in the brigade deep area if supporting guard or covering forces. The commander must also expect to operate in this area if supporting a mobile defense.

6-53. Continuous exchange of configured loads of supplies on BSB's distribution company flatracks, water tank racks (HIPPOs), modular fuel system, and multi-temperature refrigerated container systems and retrograding empty FSC flatracks is a resupply technique that should be employed during defensive operations to increase the supported maneuver commander's tactical flexibility and decrease the sustainment transportation asset's time on station when resupplying.

AVIATION BRIGADE SUSTAINMENT

6-54. Aviation brigades also have companies that support brigade operations. The types and quantities of the companies that make up the ASB is the same for each aviation brigade, but the exact composition and capability of the supporting companies will vary based on the type of aviation brigade. All ASBs have a headquarters and support company, a distribution company, a brigade signal company, and an aviation support company. These companies are organic to the ASB and each has a specific role.

Aviation Support Company

6-55. Aircraft maintenance above aviation operational battalion/squadron level is provided by the aviation support company. The aviation support company is the only unit staffed and equipped to perform ground recovery of brigade or squadron airframes. The aviation support company is generally responsible for dedicated recovery missions, both air and ground. Additionally, the aviation support company can facilitate self-recoveries and perform battle damage assessment and repair as part of a downed aircraft recovery team mission. Aviation support companies may provide personnel and equipment to augment the aviation maintenance company/troop performing downed aircraft recovery team missions when directed by the aviation brigade.

6-56. The aviation support company commander is responsible for forming a downed aircraft recovery team with rapid response times and robust capabilities mirroring the requirements of an aviation maintenance company/troop downed aircraft recovery team program. The aviation support company downed aircraft recovery team program should expand beyond the aviation maintenance company/team program by including the primary responsibility for conducting aerial and ground dedicated recovery missions. Additionally, the aviation support company generally supports recovery missions for aircraft in the aviation brigade area of coverage not assigned to the brigade, transitioning the operational area or operating in the brigade area of coverage. The priority for the aviation support company downed aircraft recovery team program is dedicated aircraft recovery, with self-recovery and battle damage assessment and repair as contingency operations.

Distribution Company for an Aviation Battalion

6-57. The distribution company provides support for the aviation brigade and receives, temporarily stores and issues class III (B). The distribution company also establishes and operates class III (aviation fuel) and class V transload sites in the brigade sustainment area to resupply brigade operations. Utilizing brigade and battalion assets, the distribution company provides fuel to all brigade aircraft within the assembly area.

6-58. The distribution company also manages the SSA and is responsible for maintaining the authorized stockage list. During large-scale defensive operations, the flow of critical class IX repair parts into the SSA is critical to enable the rapid repair of airframes, and maintain or improve the combat power of the aviation brigade.

Brigade Signal Company

6-59. The brigade signal company provides network and signal support to the CAB headquarters.

Forward Support Company for an Aviation Battalion

6-60. Aviation battalion FSCs are organized with a company headquarters, distribution platoon, and a ground maintenance platoon. The distribution platoon provides aircraft refuel capability, ammunition specialists, water, and transportation. All aviation battalions have an organic FSC. Attack and cavalry aviation battalions also have a class five section. When mission dictates, FSCs can be augmented by the ASB with personnel and equipment.

6-61. During large-scale defensive operations, the FSC may be tasked with establishing and operating multiple FARPs to meet mission requirements, and will require additional support from the ASB and DSSBs to distribute class III (bulk and package) and class V forward. The enemy situation will dictate the duration a FARP will remain operational, and will move often to avoid detection and improve survivability.

Aviation Maintenance Company/Troop

6-62. The aviation maintenance company/troop manages the battalion/squadron maintenance program, operates a centralized tool room, and performs field-level maintenance and scheduled services. The primary mission of the aviation maintenance company/troop is to sustain combat power in support of the battalion/squadron mission. The aviation maintenance company/troop conducts field-level maintenance, troubleshoots airframe and component malfunctions, performs maintenance and repair actions, removes and replaces aircraft components, and performs maintenance test flights and maintenance operational checks.

6-63. The aviation maintenance company/troop provides sustainment support by processing, requesting, and storing class IX shop stock and bench stock. Supply personnel operate unit-level Army logistics information systems, requisition class IX (Air) serviceable spares, and manage the battalion/squadron class IX (Air). The aviation maintenance company/troop performs unit-level repairs on aviation life support systems. Aviation maintainers operate and maintain assigned ground support equipment.

6-64. During large-scale defensive operations, the aviation maintenance company/troop must remain mobile and prepared to move often to provide responsive support and repair to their supported battalion/squadron. The aviation maintenance company troop/possesses enough organic vehicles to transport 75 percent of their table of organization and equipment in a single lift, and will require external support coordinated through the battalion and brigade staff to move the remaining 25 percent.

6-65. Maintenance assets will move as far forward as the tactical situation permits to repair unserviceable and damaged aircraft to return them to the fight as quickly as possible. The aviation maintenance company/troop utilizes field maintenance teams and split based operations to conduct both scheduled and unscheduled maintenance to meet the maintenance requirements for their supported battalion/squadron. When mission requirements exceed the aviation maintenance company's/troop's capacity the company coordinates with the ASB to receive additional field maintenance teams from the ASB's aviation support company.

AREA DEFENSE

6-66. *Area defense* is a defensive task that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright (ADP 3-90). The focus of the area defense is on retaining terrain where the bulk of the defending force positions itself in mutually supporting, prepared positions. Units maintain their positions and control the terrain between these positions.

SUSTAINMENT SUPPORT DURING AREA DEFENSE

6-67. The sustainment mission in an area defense requires a careful balance between forward positioning of supplies and maintaining the responsiveness and rapid mobility necessary to ensure survivability of sustainment assets. The area defense typically requires less fuel consumption, provides more time for maintenance repairs, and requires less complex casualty evacuation procedures due to the static nature of this defense.

6-68. Priorities for replenishment are normally ammunition and materials to construct obstacles and defensive positions. Maintenance and medical support, with their associated repair parts and medical

supplies, are located as far forward on the battlefield as possible. There may be an increased demand for decontaminants and CBRN collective and personal protective equipment. The commander considers stockpiling or caching ammunition and limited amounts of petroleum products centrally within the main operational area.

6-69. The supply of obstacle materials in a defense can be a significant problem that requires detailed coordination and long lead times. Push packages of these supplies ensures units engaged in defensive operations receive needed supplies. The commander plans for the transportation and manpower required in obtaining, moving, and uncrating barrier material and associated obstacles-creating munitions, such as demolition charges and mines.

6-70. The use of echelon support greatly enhances sustainment capabilities during the area defense. The commander ensures the echelon sustainment officers (G-1/S-1, G-4/S-4, and the G-8/S-8, surgeon) and the commanders of the sustainment units supporting the defending force understand the commander's tactical intent. These officers and commanders can then establish support priorities IAW the commander's intent and plan sustainment operations to ensure the supportability of the operations.

PREPARATION FOR AREA DEFENSE

6-71. To the extent possible, operators deliver combat-configured loads to maneuver units on a scheduled basis during the area defense. Combat-configured loads are packages of potable and non-potable water; CBRN defense supplies; barrier materials; ammunition; POL; medical supplies; and repair parts tailored to a specific size unit. This eliminates the need to request supplies and reduces the chance that a lapse in communications will interrupt the sustainment flow and jeopardize the integrity of the defense. The commander resupplies the supported maneuver unit using this push system until it requests otherwise. Commanders use sustainment information systems to accurately tailor these combat-configured push packages to the demands of the supported maneuver units.

6-72. In contiguous operations, the commander positions echelon sustainment facilities farther away from the forward edge of the battle area in a defense than in the offense to avoid interfering with the movement of units between battle positions or the forward movement of counterattack forces. These facilities are located far enough behind friendly lines that likely enemy advances will not compel the relocation of critical sustainment capabilities at inopportune times. However, those sustainment capabilities supporting the unit are located close enough to provide responsive support. In noncontiguous operations, the commander positions sustainment facilities in bases and base clusters within the perimeters of ground maneuver units to provide security and avoid interrupting their sustainment functions.

6-73. Commanders provide maintenance support as far forward as possible at maintenance collection points to reduce the need to evacuate equipment. The thrust of the maintenance effort is to fix as far forward as possible those systems that can be quickly returned to the unit in combat-ready condition, as sustainers focus on preparing the defensive force to go on the attack. The commanders ensure that multifunctional forward logistics elements contain the maximum variety of maintenance personnel with appropriate equipment, such as repair sets, kits, and outfits, to rapidly repair weapon systems.

6-74. Medical support associated with the defense anticipates significant casualties, just as in the offense during large-scale combat operations. The BSMC and medical company (area support) provide Role 1 and Role 2 medical support. The BSMC provides support to BCTs and the medical company (area support) is and EAB asset operating under the command and control of the MMB. During large-scale combat operations, the Role 2 medical companies prepare for the defense by positioning assets to best support the flow of casualties without impeding combat operations. The BSMC also reviews and integrates the casualty evacuation and medical evacuation plans for units in the area defense.

6-75. The conduct of troop movements and resupply convoys is critical to a successful defense. Staffs balance terrain management, movement planning, and traffic-circulation control priorities. Staffs also plan multiple routes throughout the AO and closely control their use. The commander may allocate mobility resources to maintain main supply routes to support units and supplies moving forward and to evacuate personnel and equipment to the rear. The commander coordinates air and ground movements supporting the commander's scheme of maneuver with any other affected Services. Commanders also coordinate such

movements with any affected organic and external Army aviation, fire support, air defense units, and ground maneuver units.

6-76. During the preparatory phase of the defense, sustainment operators normally pre-position supply stocks, particularly ammunition and barrier materials, in the battle positions of defending forces. Sustainment operators also establish maintenance and casualty collection points. Sustainment operators must address these and other sustainment preparations in the planning process to avoid compromising the operation.

MOBILE DEFENSE

6-77. *Mobile defense* is a defensive task that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force (ADP 3-90). The mobile defense focuses on defeating or destroying the enemy by allowing enemy forces to advance to a point where the enemy is exposed to a decisive counterattack by the striking force. The striking force is a dedicated counterattack force in a mobile defense constituted with the bulk of available combat power. A fixing force supplements the striking force. The commander uses the fixing force to hold attacking enemy forces in position, to help channel attacking enemy forces into ambush areas, and to retain areas from which to launch the striking force.

SUSTAINMENT SUPPORT DURING MOBILE DEFENSE

6-78. The sustainment mission of a mobile defense requires sustainment planners look beyond the fixing force's shaping operations, to support the striking force's decisive counterattack. The greater the distance the striking force must cover when moving from its assembly area to its final objective, the greater the amount of supplies needed to support that move. The mobile defense typically requires more fuel, provides less time for maintenance repairs, and requires more complex casualty evacuation procedures due to the dynamic nature of this defense.

6-79. Commanders establish casualty evacuation procedures for both the fixing force and the striking force and ensure that all unit personnel are trained in first aid procedures (self-aid, buddy aid, and combat lifesaver), evacuation of the sick and wounded, and medical aspects of injury prevention. The fixing force will likely suffer a higher percentage of casualties than the striking force as it absorbs the enemy's attack. When the striking force must move a considerable distance from its sustaining base, the commander should consider establishing a forward logistics element.

PREPARATION FOR MOBILE DEFENSE

6-80. The main battle area is where corps and division commanders want to conduct the decisive operation by employing a combination of fixing and striking forces to fix then destroy an attacking enemy force. The sustainment commander supports main battle forces by pre-positioning tailored supplies to expedite the construction of counter-mobility and survivability positions, forward positioning maintenance and recovery assets to regenerate combat power, and expedite personnel fills and returns-to-duty to reconstitute fighting formations.

6-81. The fixing force typically consists of one-third to one-half of the defender's combat power. It shapes the enemy penetration or contains the enemy's advance through a combination of an area defense and a delaying action to establish conditions for a decisive attack by the striking force. It typically has most of the counter-mobility assets of the defending unit. The sustainment commander supports operational tempo by delivering mission essential tailored supplies and materiel as far forward as possible by employing unit distribution, and preplanned and preconfigured packages of essential items.

6-82. The striking force typically consists of two-thirds to one-half of the defender's combat power. It decisively engages the enemy as attacking forces become exposed in their attempt to overcome the fixing force. The striking force is normally fully tasked organized with all functional and multifunctional support and sustainment assets before its actual commitment. The sustainment element should be task organized into a forward logistics element resourced with fuel, munitions, medical evacuation, and maintenance recovery assets. The forward logistics element is capable and prepared to rapidly replenish the striking force prior to commitment, evacuate personnel and systems, and sustain mission essential capabilities throughout the battle. Additionally, sustainment must be prepared to support the transition to a spoiling attack with refueling,

rearming, casualty evacuation, and battle damage assessment and repair of warfighting capability to extend operational reach.

RETROGRADE

6-83. *Retrograde* is a defensive task that involves organized movement away from the enemy (ADP 3-90). The enemy may force these operations or a commander may execute them voluntarily. The higher commander of the force executing the retrograde must approve the operation before its initiation in either case. Retrograde is a transitional operation; it is not conducted in isolation. It is part of a larger maneuver scheme designed to regain the initiative and defeat the enemy.

SUSTAINMENT SUPPORT DURING RETROGRADE

6-84. The sustainment mission of a retrograde typically requires the sustainment of forces engaging the enemy, the organized movement away from the enemy, and the protection of sustainment capabilities and resources in echeloned support. Regardless of the type of retrograde, all echelons of sustainment need to have contingency plans necessary to ensure an uninterrupted flow of support to the maneuver units tactically employed in defensive combat while at the same time displacing and/or preparing to displace the supporting unit. Plan for heavy equipment transportation assets to support the retrograde defense task.

6-85. During retrograde operations, sustainment units echelon their movements to maintain adequate support to the committed force. Sustainment units also maintain maximum dispersion consistent with control and local security. Their goal is to provide uninterrupted support and maximum protection during the time it takes to conduct the retrograde operation. By echeloning support, the commander reduces the amount of time each sustainment unit spends moving, preventing it from performing its primary support tasks. To reduce congestion and interference with the operations of combat, functional, and multifunctional support units, the commander should displace supporting sustainment assets as early as possible, normally during periods of limited visibility. The early displacement of sustainment units can also prevent revealing friendly future operations to the enemy.

6-86. Commanders anticipate the effects of retrograde movements on sustainment elements to ensure adequate support for the operation and the prompt evacuation of casualties. Retrograde movements generally result in increased distances between sustainment and combat units, which makes providing this support more difficult. Retrograde operations generally require more class III and possibly more class V supplies than during the other defensive tasks. Increased supply of bulk fuel and ammunition combine to increase the demand for transportation assets and space on main supply routes. This, in turn, increases the need for movement control and pre-positioned services and supplies. Sustainment units carry and cache necessary fuel and ammunition stocks as required by the specific situation.

PREPARATION FOR RETROGRADE

6-87. The sustainment provided is mobile enough to cope with demands of the fluid tactical situation that typically occurs during a retrograde operation. The sustainment commander prevents unnecessary supplies from accumulating in areas that will be abandoned. Only essential medical and logistics support should be located in the area involved in the retrograde operation.

6-88. The maneuver commander establishes maintenance, recovery, and evacuation priorities and destruction criteria for inoperable equipment in the OPORD. Maintenance requirements generally overwhelm the organic capabilities of forward units during a retrograde operation. Forward units place as much maintenance, recovery, and evacuation assets forward as possible to augment or relieve combat elements of the burden of repairing unserviceable equipment. Recovery and evacuation vehicles position themselves at critical locations to keep disabled vehicles from blocking movement routes. Forward units use all available means to accomplish this, including equipment transporters and armored vehicles with inoperative weapon systems. When recovery and evacuation are impossible, units destroy inoperable equipment to prevent capture. When possible, units destroy the same vital components in each type of system to prevent the enemy from rapidly exploiting captured friendly systems through battlefield cannibalization.

6-89. The commander assigns transportation priorities for the movement of combat troops and their supplies, the movement of obstacle materials to impede the enemy, and the evacuation of casualties and repairable equipment. The commander keeps main supply routes open and decontaminated as necessary. Units control the back-haul of transportation assets before the retrograde begins, reducing the amount of transportation needed to support the operation. Tasking of and coordination with movement control units for road usage or de-confliction during retrograde operations is critical to ensure the retrograde is not hindered by uncoordinated or conflicting unit movement on available routes.

6-90. Generally, the commander uses many separate supply routes rather than just a few main supply routes. Some routes remain open for traffic moving to the front while the bulk of functional and multifunctional support and sustainment units displace farther rearward. Commanders designate and reserve routes for evacuating displaced civilians. Commanders avoid designating routes that cross or otherwise interfere with the unit's main supply routes as much as possible.

6-91. Assignment of medical evacuation precedence is necessary. The precedence provides the supporting medical unit and controlling headquarters with information to use in determining priorities for committing their evacuation assets. For this reason, correct assignment of precedence cannot be overemphasized; over classification has often been an issue during operations. Patients are evacuated as quickly as possible, consistent with available resources and pending missions. Medical elements supporting the retrograding force must provide rapid evacuation of casualties to medical facilities. Medical evacuation requirements are especially demanding in the large AOs common to the retrograde. Commanders may augment the ground ambulance capabilities of supporting forward medical units.

6-92. Military police elements are involved primarily in maneuver and mobility support operations to support and preserve the commander's freedom of movement. The commander may augment supporting military police forces to establish traffic control post and route and convoy security. Military police also provide support through the execution of interment and resettlement operations.

6-93. FMSUs can send the workload from commercial vendor services and other functions back to units outside the immediate area of operations for processing. Payments and disbursements done remotely can be effective if needed during large-scale defensive operations and mobile defense. For additional details, see appendix A and FM 1-06.

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Chapter 7

Sustaining Large-Scale Offensive Operations

This chapter describes sustainment of large-scale offensive operations. It is divided into four sections. The first section provides an overview of sustainment of large-scale offensive operations. The second addresses fundamental principles of sustainment during the offense. The third section covers additional planning considerations unique to large-scale offensive operations. The fourth section discusses sustainment support of offensive tasks.

7-1. An *offensive task* is a task conducted to defeat and destroy enemy forces and seize terrain, resources, and population centers (ADP 3-0). The intent of an offensive task is to impose the commander's will on the enemy. Against a capable, adaptive enemy, the offense is the most direct and sure means of seizing, retaining, and exploiting the initiative to gain physical, temporal, and cognitive advantages and achieve definitive results.

SECTION I – OVERVIEW OF SUSTAINING LARGE-SCALE OFFENSIVE OPERATIONS

7-2. There are four offensive tasks executed during large-scale combat operations: movement to contact, attack, exploitation, and pursuit. These tasks enable commanders to impose their will on the enemy and deprive the enemy of resources, seize decisive terrain, deceive or divert the enemy, develop intelligence, or hold an enemy position.

7-3. Sustainment commanders and their staffs prepare to support each offensive tasks. Sustainment determines the depth, duration, and endurance of Army operations, and plays a key role in enabling decisive action. Failure to provide adequate sustainment during offensive operations can result in a tactical pause, culmination of offensive operations, and prevent consolidation of gains. Operational and sustainment planners at each echelon of command work closely to synchronize sustainment support to allow commanders the freedom of action to maneuver and provide extended operational reach for the offense.

SECTION II – SUSTAINMENT FUNDAMENTALS

7-4. Offensive tasks involve an intense operational tempo, requiring sustainers to continually update their running estimates to anticipate friction points on the battlefield. Sustainers need to be able to accurately envision the offensive operation in time and space to accurately forecast operational requirements. Continuous coordination between planners at the various echelons is required for mission success.

7-5. If offensive momentum is not maintained, the enemy may recover from the shock of the first assault, gain the initiative, and mount a successful counterattack. Maintaining an understanding of offensive operations and future operations allows sustainment planners to simultaneously transition between offensive operations and the consolidation of gains. What starts out as a movement to contact could rapidly turn into a lengthy pursuit of enemy forces requiring extended operational reach to capitalize on opportunities. This requires robust planning and consideration for all possible outcomes.

Sustaining Offensive Operations

- Continually update running estimates
- Support offense and consolidate gains simultaneously
- Understand enemy threat and challenges
- Increased class III (bulk and package) and class IX requirements
- Increased casualties and personnel replacements over extended battlefield

7-6. Offensive operations require situational understanding of the enemy threat. Sustainment commanders should not assume unobstructed LOCs and should anticipate challenges across multiple domains. These

commanders prepare for challenges of degraded sustainment systems, interdicted LOCs, and challenges from an enemy that has equal or overmatch capabilities. Sustainment commanders and planners prepare to push forward critical supplies in an OE where degraded systems and communications exist.

7-7. If the force is to maintain the initiative and combat power necessary for the successful performance of offensive tasks, the continued forward movement of units and sustainment support is critical. Maintaining the initiative in the close area often results in significant numbers of bypassed enemy forces and remnants of defeated units as friendly forces maneuver deep into enemy areas by avoiding enemy units in well prepared positions. The fluidity and rapid tempo of operations pose challenges when planning for the area security of support and consolidation areas.

7-8. Enemy commanders look for opportunities to counter or at least hinder the performance of corps and division offensive tasks. Enemy commanders attempt to strike deeply into friendly support and consolidation areas using multiple combinations of lethal and nonlethal effects from multiple domains. The enemy will seek to employ special purpose forces, irregular forces, electronic warfare, long-range artillery, rockets, missiles, information capabilities, and cyberspace electromagnetic activities to disrupt sustainment activities. Sustainment commanders remain aware of conventional enemy units and other elements bypassed during the advance of friendly forces and the threat presented by their presence in support and consolidation areas.

7-9. Sustainment units synchronize with maneuver units to ensure security of support and consolidation areas. Corps and division headquarters must plan to keep CPs operating, sustainment capabilities functional, respective LOCs open, and supply stocks at an acceptable level. The conduct of noncontiguous operations increases the difficulty of these tasks, as does the lack of friendly host nation security forces.

7-10. Sustainment of offensive tasks is a high-intensity operation. Sustainment commanders and staffs plan for increased requirements in class III (B), IX items, and personnel replacements to sustain the pace and tempo of operations. Plan and rehearse command and control, forward positioning, orders issuance, personnel accounting, logistical support, processing, and transportation of replacements, and most critically maneuver unit rapid integration of replacements. Sustainment planners anticipate where the greatest need might occur during offensive operations. Planners consider positioning sustainment units in close proximity to operations to reduce response times for critical support. Planners also consider alternative methods for delivering sustainment in emergencies. Extended LOCs require analysis of how to best emplace forward sustainment elements to support the commander. It is important to clearly lay out key actions for rehearsing offensive operations for example casualty evacuation routes, logistics release points, support area displacement times and locations, detainee collection points and holding areas, and fuel and ammunition resupply points to foresee potential problems and means to mitigate them. Figure 7-1 shows a representative output from the rehearsal process for sustainment of the offense.

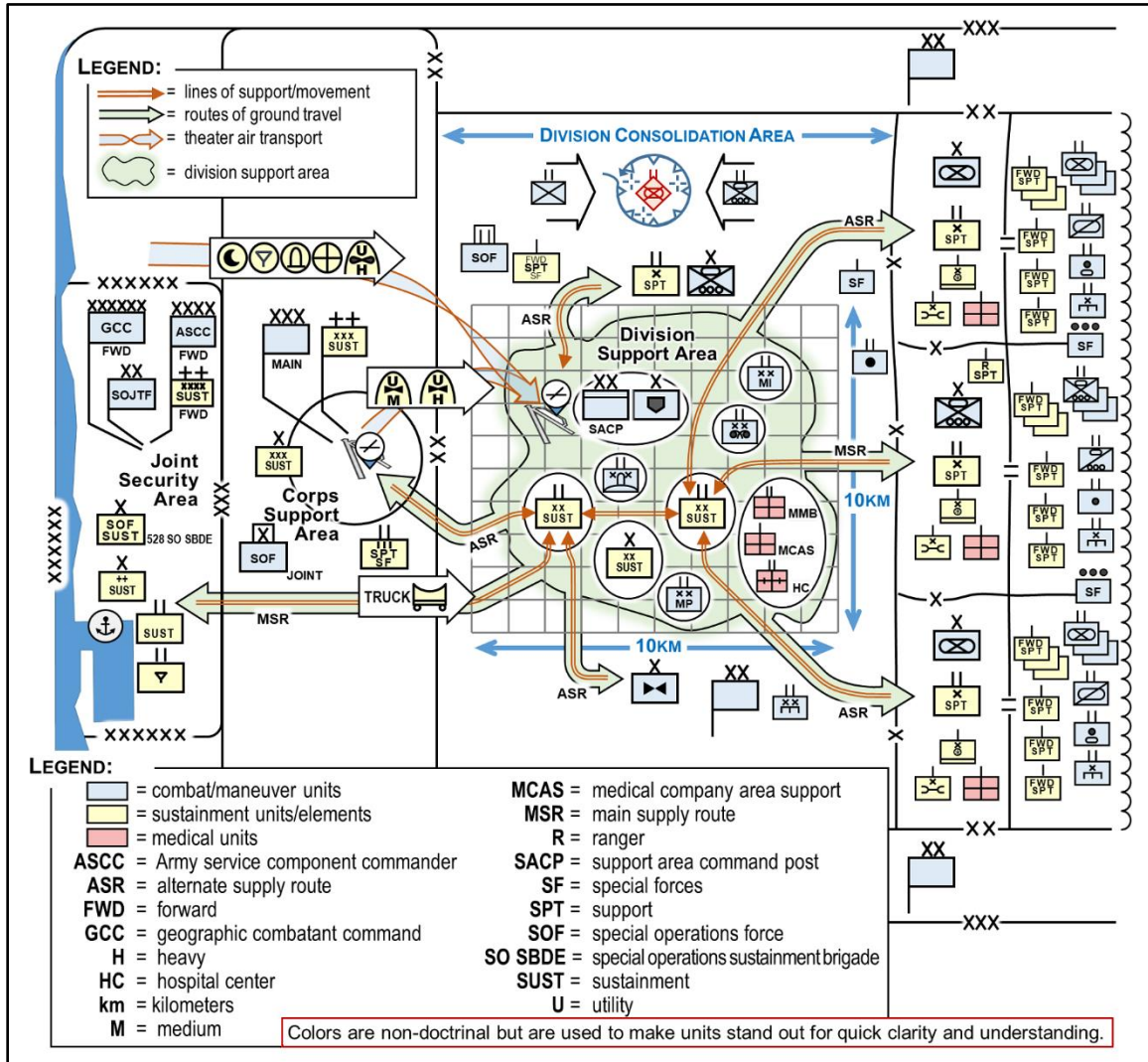


Figure 7-1. Sustainment rehearsal outputs

SECTION III – PLANNING CONSIDERATIONS

7-11. Sustainment planning is both a continuous and a cyclical activity of the operations process. For sustainment planning, the most important factors are requirements, capabilities, and shortfalls. As outlined in the paragraphs below, planning considerations assist planners in identifying specific support or operational requirements based upon available information.

7-12. Many planning considerations impact the ability to execute large-scale offensive operations. These considerations should be recognized, analyzed in the time available, and prioritized based on the commander's intent.

7-13. Planning considerations must encompass all warfighting functions to ensure the plan is integrated across all functions and domains. A planning consideration may have various levels of effects that drive support requirements. Planning considerations for large-scale offensive operations should include, at a minimum, the following considerations organized by warfighting function.

PLANNING CONSIDERATIONS FOR SUSTAINMENT

7-14. The planning considerations listed below for sustainment are examples of what sustainment planners may take into account during offensive operations. This list is not considered all-inclusive and considerations will vary for individual operations. The list is common planning considerations for sustainment during all offensive tasks. If an offensive task has a special consideration, it is indicated in the list:

- Plan for execution of all sustainment functions and associated sub-functions at all echelons; personnel services, health service support and logistics. This includes personnel replacement, casualty reporting, medical treatment, medical evacuation, medical logistics/supply, and all logistics functions.
- Forecast expected number of casualties and prepare appropriate medical treatment, surgical, and evacuation capabilities. Planners must also assess the best positioning of medical units to ensure support to offensive operations.
- Anticipate conducting large-scale personnel replacement operations in support of units with high casualties.
- Planners anticipate supporting reconstitution operations for maneuver units experiencing high casualties and loss/damage of equipment.
- Unit's reorganization is routine process that occurs on an objective. Reorganization activities should include the integration of replacement personnel when able.
- Continuous replacement operations during offensive operations are critical to maintaining momentum and prolonging endurance.
- Regeneration of units is an exceptionally intensive form of reconstitution requiring the direction of maneuver commanders two levels up, and substantial sustainment support.
- Submit personnel replacement priority request based on forecasted casualty estimate to enable forward positioning of personnel replacements.
- Commanders, staffs, and support operations officers at all echelons should weight the offensive effort by cross leveling sustainment/logistics assets. This includes maintenance and recovery capabilities.
- Plan for all sustainment functions required to build combat power; personnel, supply, maintenance, and medical. Preposition supply classes I, water, IIIB/P, IV, V, VIII, and IX as far forward as the tactical situation permits. Consider the use of combat configured loads. Balance forward positioning of resupply and rapid mobility.
- Expect high demand for classes III (B), III, IX and V to support the offensive preparation efforts. Ensure adequate transportation assets are available to move the required tonnage.
- Plan for heavy equipment transportation assets to support retrograde. This transportation is required to move unserviceable main battle tanks, infantry and/or cavalry fighting vehicles, Stryker systems, and other heavy equipment to maintenance collection points located behind offensive operations.
- Ensure field maintenance capability is adequate to repair or evacuate damaged equipment to meet the readiness requirements and the maneuver commander's intent. This requires planned coordination between the maintenance and transportation units and likely requires movement control points along routes.
- Anticipate time needed to execute logistics as distances increase.
- Anticipate requirements to provide subsistence, medical, transport, shelter to enemy prisoners of war and displaced civilians.
- Financial managers at each echelon responsible for capturing increase costs, applying available resources to validate requirements, identifying unfunded requirements, and securing funding for reconstitution requirements.
- Plan for increased consumption of fuel and ammunition by aviation brigades.
- Forecast for placement of HR assets to support numerous functions to include inter-and intra-theater transient personnel accountability, casualty tracking at Role 3 MTF, and postal operations where the operating environment allows. The theater gateway will typically be placed by the ASCC at the primary inter-theater APOD. PATs will be placed where the intra-theater transient

passenger flow dictates. RSO activities will be supported by transportation and sustainment capabilities.

- Plan for the appropriate type of water distribution. During large-scale combat, sustainment planners should expect to distribute only bulk water from the corps rear boundary forward to the forward line of own troops. Bottled water requires contracted support and, if used, should only be planned for the joint security area.
- Commanders, staffs and sustainment planners at all echelons must be prepared to support regeneration and reorganization as part of reconstitution operations.
- Plan for the execution of mortuary affairs operations for fatalities as a result of large-scale combat operations. Planners should also prepare for temporary interment when directed by the GCC.

PLANNING CONSIDERATIONS FOR COMMAND AND CONTROL

7-15. The planning considerations for command and control are listed below:

- Expect enemy attacks on space and cyberspace domains to include the electromagnetic spectrum that will degrade communications and digital information transmission. Attacks on these domains affect sustainment operations in terms of satellite communications, positioning, navigation, timing, information collection, internet operations, computer systems, and frequency modulation communications. Commanders must develop and execute a primary, alternate, contingency, and emergency communications plan ensuring redundancy.
- Identify sustainment forces that will support reserve forces in all types of offensive tasks. Commanders will determine acceptable levels of risks prior to attaching sustainment units to the reserve.
- Understand how terrain and distance may limit/degrade communications and force utilization of retransmit stations. This is important for Combat Service Support Automated Information Systems Interface/Very Small Aperture Terminal operations.
- Assess sustainment task organization frequently to ensure it is adequate and positioned properly to support the sustainment mission. Plan for replacement of units that are lost degraded due to enemy attack.

PLANNING CONSIDERATIONS FOR MOVEMENT AND MANEUVER

7-16. The planning considerations for movement and maneuver are listed below:

- Expect sustainment resupply and support elements to operate in the deep and close areas while supporting offensive operations. Sustainment units must understand operational control measures to include passage of lines and crossing of boundaries with maneuver forces in the offense.
- Understand and/or anticipate how terrain, enemy action, fire support coordination measures, and movement restrictions will affect the methods of resupply. These factors must be considered in all distribution management and movement control plans.
- Expect increase in items (class III, V, VIII, and IX) to support offensive operations. Ensure adequate transportation assets are available to move supplies and equipment forward in the operational area.
- Coordination with movement control units for road usage or de-confliction during offensive operations. Commanders must identify main and alternate movement routes.
- Plan for support SOF at all echelons. This includes delivery of special ammunition and special, non-standard equipment maintenance.
- Plan for support to attack helicopter operations at all echelons. This includes planning for aviation-grade fuel, maintenance, munitions, and placement of FARPs.
- Coordination with the consolidation and support area terrain managers to coordinate and/or deconflict airspace for aerial delivery, Air Force air land delivery, and aeromedical evacuation requirements.
- Prioritize the use of transportation assets needed to support movement and maneuver requirements against transportation assets needed for sustainment requirements.

Fueling Offensive Operations: The Inland Pipeline Distribution System in Operation Iraqi Freedom I

One of the most significant issues in Operation Desert Storm was the U.S. Army's difficulty in providing sufficient fuel to sustain offensive combat operations. Class III (Bulk) petroleum represents the single largest commodity by volume in the conduct of large-scale combat operations. The late deployment of specialized petroleum, oil and lubricant units in Desert Storm forced V Corps to depend heavily on road-bound contracted fuel trucks. This resulted in intermittent shortages that affected unit operations.

During Operation Iraqi Freedom I, sustainment planners placed the deployment and operation of the Inland Pipeline Distribution System under a single unit, the 49th Quartermaster Group. Between January and March 2003, the 49th, in coordination with the 416th Engineer Command, designed, constructed and operated a 220 mile-long Inland Pipeline Distribution System running from two Kuwaiti refineries to four tactical petroleum terminals capable of storing in excess of 4 million gallons of fuel. This was in preparation for the beginning of combat operations.

With the pipelines established in Kuwait, the combined force land component command made the decision to extend the pipeline into Iraq to follow the coalition advance. On 20 March 2003, a few hours after the start of combat operations, personnel from the 808th Engineer Company began the process of establishing a route for the new pipeline (IPDS III) and preparing crossing points in the border berm. Inland Pipeline Distribution System III was a 58-mile long pipeline running from Breach Point West to Logistics Support Activity Viper in Iraq. A fourth line, Inland Pipeline Distribution System IV, extended the line from Logistics Support Area Viper to Logistics Support Area Cedar I, bringing the total pipeline distance in Kuwait and Iraq to 220 miles supporting a storage capacity of 15 million gallons system wide.

While the pipeline was the system to move bulk fuel, the combined force land component command plan would not have succeeded without the ability to deliver the fuel from the tactical petroleum terminals to the combat forces. This proved to be the most challenging part of the Class III operation. A key component of the combined force land component command theater distribution plan involved using American and British military vehicles and host nation contract tankers to move fuel as the tactical petroleum terminals were being filled and after the completion of the Inland Petroleum Distribution System. The shortage of fuel trucks did cause issues on the drive to Baghdad, as did the lack of vehicles needed to move the Inland Petroleum Distribution System equipment that plagued the engineers during the construction of the pipeline. As is often the case, the ability to deliver the required commodities is the most difficult part of sustainment operations.

PLANNING CONSIDERATIONS FOR INTELLIGENCE

7-17. The planning considerations for intelligence are listed below:

- Intelligence is critical for planning sustainment operations in support of the offense. It starts with an understanding of the overarching operational variables but then extends to detailed intelligence estimates, intelligence preparation of the battlefield products, and other intelligence products that describe enemy capabilities and courses of action. From these products, planners can estimate friendly casualty rates and munition expenditure rates, plan protection operations, and have a better understanding of where and when sustainment capabilities are needed. See ADP 2-0 and FM 2-0 for more information on the intelligence warfighting function.

- Like the other warfighting functions, there are some unique aspects of sustainment support to offensive operations that are critical to the intelligence warfighting function. Low-density intelligence and electronic warfare maintenance is especially critical to the intelligence architecture and intelligence operations.

PLANNING CONSIDERATIONS FOR FIRES

7-18. The planning considerations for fires are listed below:

- Forecast increased consumption of long-range and precision munitions for maneuver units. The TSC must coordinate with the GCC J-4 and strategic providers to ensure increased amounts of munitions are being distributed to the theater supporting offensive operations.
- Anticipate frequent and rapid relocation of fires units to shift supporting units accordingly.
- Ensure quantity and positioning of modular ammunition units at EAB are sufficient to support fires ammunition requirements.
- Ensure that ammunition transportation assets are adequate and properly positioned to support ammunition distribution for fires operations. The TSC must coordinate with the GCC J-4 and strategic providers to ensure required munitions are being prioritized and distributed to the theater.

PLANNING CONSIDERATIONS FOR PROTECTION

7-19. The planning considerations for protection are listed below:

- Plan for CBRN. This includes increase in requirements for non-potable water and chemical defense equipment. Planning must include detailed procedures for processing of contaminated human remains and equipment decontamination.
- Expect direct enemy attack by small unit and/or special operations ground forces, attack aircraft, and long-range artillery. Commanders must ensure that sustainment units supporting offensive operations are adequate to defeat enemy small unit operations (Level I or Level II threats). Dispersion mitigates effects of long-range fires and attack aircraft.
- Plan for adequate convoy security for convoys supporting the offensive operations. This may be from internal sources or from coordinated external sources.

ADDITIONAL PLANNING CONSIDERATIONS

7-20. Sustainment forces must anticipate longer LOCs, potential degraded communications, bypassed enemy forces, and movement restrictions during offensive operations. These factors should be considered in all distribution management and movement control plans. This may require sustainment commanders to weight the main offensive effort by prepositioning personnel replacements, class III, V, VIII, and IX stocks, as well as, water centrally and well forward. The sustainment commander must balance forward positioning of sustainment assets with the need for freedom of action and operational reach.

7-21. Refuel on the move can be tailored to many tactical situations but the primary purpose is to extend reach and tempo for the offensive operation. Figure 7-2 on page 7-8 displays an example of a refuel on the move configuration.

7-22. When vehicles enter a refuel on the move site for refueling, a predetermined amount of fuel is issued (usually timed) and the vehicles move out to return to their convoy or formation. The rapid employment of the refuel on the move distinguishes it from routine convoy refueling operations.

7-23. Ideally refuel on the move operations utilize rear fuel assets while forward assets remain full. In the BCT concept, ideally the distribution company conducts the refuel on the move, while the forward support companies pass through remaining full. The concept can be extended based on the size and scope of the operation, for example, the DSSB can be the force conducting the refuel on the move for the whole division, while the entirety of the BCT's fuel assets push through remaining topped off.

7-24. Any level unit, to meet mission requirements, can conduct refuel on the move operations. Typically, a FSC will conduct refuel on the move operations to support maneuver units between engagements or to increase time on target while maneuver units peel back and flow through the refuel on the move and return

to the current engagement. A refuel on the move can be as simple as utilizing heavy expanded mobile tactical trucks or modular fuel systems, or as complex as needed utilizing any equipment available to support the largest of movements. For additional information, see ATP 4-43.

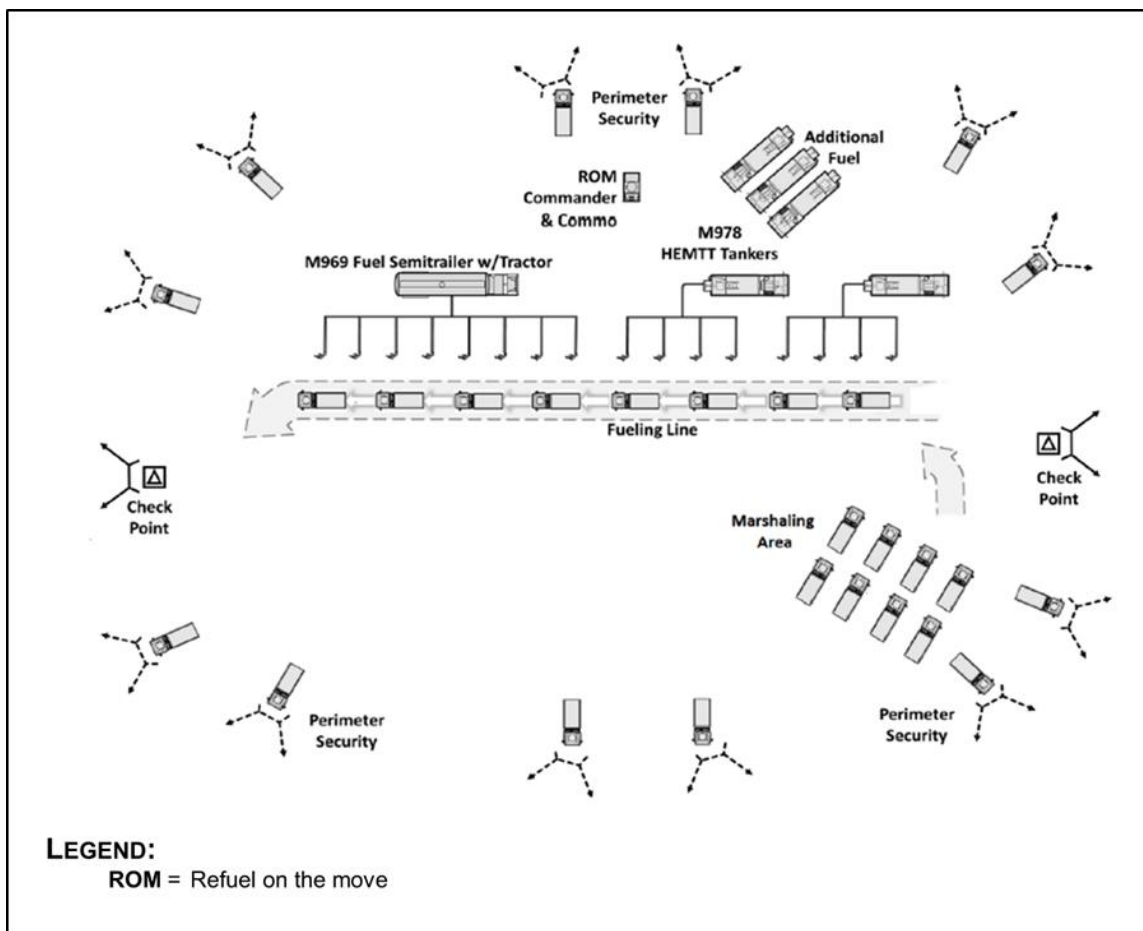


Figure 7-2. Example of a refuel on the move configuration

7-25. Sustainment planners and maneuver commanders conducting offensive operations should be prepared to execute reconstitution operations to rebuild combat power. Commanders assess the unit's readiness capability and determine the most expedient method to bring the unit to an acceptable combat posture through reorganization or regeneration. For additional information on reconstitution, see appendix C.

7-26. While it is advantageous to locate sustainment as far forward as possible in support of offensive operations, sustainment planners must be aware of various threats. Planners should anticipate encounters or direct action from bypassed enemy forces, SOF, and long-range artillery. Sustainment assets must be mobile and able to move with advancing maneuver forces. Planners must avoid large, consolidated bases and form dispersed, temporary base clusters. This applies to all bases in corps and brigade security areas.

7-27. The fluidity and rapid tempo of operations pose challenges when planning for the area security of support and consolidation areas. If the corps or division is to maintain the initiative and combat power necessary for the successful performance of offensive tasks, the continued forward movement of units and sustainment support is critical. Sustainment personnel must also plan and prepare for supporting consolidation of gains and security of the support area. Maneuver commanders will assign consolidation area to a BCT or division as an area of operations. Those forces will clear their AOs of stay behind forces and bypassed enemy units to ensure friendly freedom of action as their parent corps or division continues to advance. These forces should be combined arms organizations specifically task organized for the

consolidation of gains requirements in their AOs. These units begin performing selective stability tasks once the units establish area security within the consolidation area.

7-28. Risk, uncertainty and chance are inherent in all military operations. Sustainment professionals must seek to understand, balance and take risks rather than avoid risks to ensure sustainment of the operational force. Sustainment commanders must assess and mitigate risk continuously throughout large-scale combat operations. The following is a sample list of risk considerations during large-scale offensive operations:

- Are sustainment forces properly dispersed and camouflaged? Are movements in and out of sustainment areas coordinated to avoid drawing attention to the area?
- Does the force have a sufficient number of mobile fueling vehicles to maintain offensive momentum? At what point will a loss of tankers cause mission failure?
- Are sufficient quantities of the correct class V available for rapid replenishment? Are munition dumps established forward and their contents dispersed?
- Are sustainment systems hardened against cyber-attack? How do you validate requirements received through electronic systems? Does the threat have the capability to change information verses directed denial of service attacks?
- Do medical units have sufficient class VIII to address mass casualty events?
- Are sufficient recovery vehicles available and placed to support rapid transportation of disabled vehicles to maintenance collection points?
- Does the enemy have plans to leave stay behind forces to interdict sustainment lines of supply? Do friendly forces have sufficient EOD assets available and positioned to remove enemy ordnance or IEDs emplaced on the MSRs?
- Are reinforcements available by skill/grade, and accessible in sufficient quantity to replace losses and maintain units at strength? Which units are the resourcing priority at what points during the operation?

These considerations and others should be addressed and mitigation strategies/alternatives developed as part of the sustainment plan.

7-29. Large-scale offensive operations place a burden on medical resources due to the magnitude and lethality of forces involved. Medical units and commanders at all levels must anticipate increased numbers of casualties as corps and division forces advance. Planning for casualty evacuation is a unit level responsibility. Evacuation of the sick and wounded must occur concurrently with operations and requires total force participation or support in terms of transportation. Nonmedical vehicles (both air and ground) can be used to transport casualties with little or no change in configuration. Units should plan for and train on appropriate use of organic vehicles (both air and ground) and equipment (litters) for movement of casualties. See ATP 4-25.13 for additional information on casualty evacuation. CLTs must coordinate with Role 3 hospitals to ensure accurate tracking and personnel accountability.

7-30. Explosive ordnance disposal commanders must provide support during large-scale offensive operations by detecting, identifying, conducting on-site evaluation, rendering safe, exploitation, and conducting disposal or disposition of explosive ordnance, including CBRN weapons of mass destruction. Planners should consider requirements to mitigate explosive ordnance encountered during offensive operations. Commanders and planners must incorporate EOD requirements within their class V forecasts. Explosive ordnance filled with insensitive high explosives requires significantly more class V for safe disposal.

SECTION IV – SUSTAINMENT OF OFFENSIVE TASKS

7-31. The objective of sustainment during offensive operations is to support operations and enable the maneuver forces to conduct the four offensive tasks: movement to contact, attack, exploitation, and pursuit. Offensive tasks are normally organized into a security force, a main body, and a reserve. Sustainment units supporting these offensive tasks are focused on sustaining and maintaining combat power necessary to defeat, destroy or dislocate enemy forces. Successful sustainment commanders and planners will act, rather than react, during offensive operations. To support offensive operations, sustainment forces at all echelons consider echeloning support assets to expedite replenishment of critical support.

ECHELONS ABOVE BRIGADE SUSTAINMENT

7-32. During the offense, LOCs lengthen and requirements for many classes of supply and replacement of personnel increase. Certain aspects of the distribution network like rail, pipelines, or inland waterways may not be feasible during the offense. The fast pace of the offense generally requires ground or air resupply. Offensive operations inherently create a need for emergency resupply, but it is vital that sustainers ensure the economy and efficiency of the distribution network. Motor transport is the primary mode of transportation during the offense. Its flexibility in allowing multiple stops and rerouting assets enables dynamic battlefield support. Usage of trailer transfer points can speed up throughput velocity of critical supplies to an offensive operation.

7-33. During the offense class V supply is critical for maintaining momentum. Depending on the operation, consumption rates may double or triple normal consumption. In addition to accounting for volume, sustainment planners also forecast the various types of ammunition used by the corps and division in the offense. For example, fighting peers with air capabilities requires large quantities of air defense munitions. Units fighting enemy infantry in restricted and urban terrains use large quantities of small arms and artillery ammunition, as well as water. Units attacking enemy armored forces require large quantities of anti-armor munitions. Sustainment planners proactively prepare to support maneuver units in the offense with configured loads of ammunition, along with fuel and repair parts. Considerations for storage points include proximity to main and alternate supply routes, supported units, terrain, and security. Additionally, ammunition holding area personnel displace forward as the offense progresses to ensure responsive support as part of the concept of support.

Echelon Above Brigade Sustainment

- Lengthening line of communications
- Critical need for class III, V, VIII, and IX
- Increased use of aerial delivery
- Coordinated medical support
- Increased maintenance and recovery requirements
- Transport, life support, and integration of personnel replacements

7-34. In the offense, combat intensity and the depth of the area of operations increases. Aerial delivery may reduce the impact of these factors, allowing the combat commander to take the initiative, while reducing the likelihood of overextending their supply lines. During periods of air superiority and while operating in areas with limited enemy air defense capability, the use of aerial delivery reduces the ground threat to transportation and distribution operations and can be used to extend LOCs. In addition, if forces become isolated, aerial delivery can be used as the primary means of resupply. It is also an effective method of resupplying combat outposts where it is difficult for ground transportation and distribution lines to reach.

7-35. Medical planners closely coordinate with other sustainment planners when preparing for an offensive operation. Medical planners also work closely with staffs within the other warfighting functions to determine the scope of the operation, develop estimates for the quantity and types of support required, and develop a priority of support based on the anticipated need. Medical evacuation is an integral planning factor when preparing for an offensive operation. Two basic problems confront the supporting evacuation units in offensive operations: maintaining contact with the supported unit and maintaining mobility of the medical treatment facility supporting operational formations.

7-36. Logistics planners include shower and laundry as considerations in their planning. A field service company can be placed as far forward as the supported BCT. The goal is to provide a minimum of one shower and one change of clothing at least every seven days. Planners assess the feasibility of these provisions and implement them where and when the operation allows.

7-37. Maintenance personnel place maximum effort on preparing equipment for combat. The maintenance assets move closely behind the combat unit's main body to ensure rapid recovery, repair, and return of damaged and/or disabled equipment. Maintenance assets position themselves to support the combat units out of enemy observation. Risk is high when performing on-site maintenance and recovery operations as combat forces are advancing rapidly. Planners balance risk with support requirements to ensure critical capabilities are not lost.

7-38. Critical class IX items are identified and placed forward as far as possible to reduce the strain on transportation networks. Sustainers anticipate increased consumption of class IX items due to substantial maneuvering while on the offense. Logistics packages are the most common and efficient means of class IX

resupply for tactical units. The increased requirement for transportation assets will inherently increase maintenance requirements across the board.

7-39. During offensive operations, financial management focuses on securing and safeguarding captured currency (enemy, allied, neutral, U.S., or mutilated currency) as well as supporting contracting and local procurements. This is accomplished by funding paying agents to pay local vendors for specific offensive operations requirements. LOC between supported units can often be challenged during offensive operations, so financial management units and detachments must remain mobile and effectively respond to requests for support. Other tasks executed during offensive operations include commercial vendor services and contract payments, disbursing and funding support, controlling currency (U.S. or local), providing enemy prisoners of war and civilian internees pay support, special programs, and supporting monetary compensation/consolation.

7-40. Human resources planners should expect large numbers of casualties over extended battlefield depth during offensive operations and must be prepared to process mass casualties and large-scale personnel replacements to sustain combat power. Replacements must be forecasted and any lack of replacement capacity briefed to maneuver commander as risk to mission. A high operational tempo during high-intensity large-scale combat operations, coupled with potentially degraded systems and communications, will negatively impact personnel status and casualty reporting.

7-41. Replacement operations entails the coordinated support, accountability, and delivery of individual replacements from the point of origin to requesting commanders in deployed units. The TSC commander ensures that replacements are delivered from higher to lower echelons as far forward on the battlefield as possible based on distribution priorities established by the theater commander. Normally, replacements are processed through the theater gateway under the command and control of the TSC. Allocation decisions are relayed from the ASCC through the TSC and ESC to the sustainment brigade responsible for theater distribution. The sustainment brigade then coordinates transportation for movement of replacements to prioritized units at echelon.

BRIGADE COMBAT TEAM SUSTAINMENT

7-42. The BSB plans for increased requirements of fuel, ammunition and repair parts during the offense. It will prioritize support according to the division priorities, including transportation of replacements to attrited units. It will plan to support maintenance and recovery of division assets in the offense. Medical evacuation also poses significant challenges in the brigade AO. Sustainment planners must be prepared to support ambulance exchange operations on any asset to reduce turnaround time of assets supporting medical evacuation. Increased distances due to rapid changes in the tactical situation will require the BSB to move with the offense.

7-43. Regularly scheduled combat configured loads with packages of potable and non-potable water, ammunition, fuel, and repair parts tailored to BCT enable offensive momentum and freedom of action. If communications are degraded, the BSB will automatically push critical supplies to units in the offense.

DISTRIBUTION COMPANY

7-44. The distribution company provides the vital link between the supported unit and the echeloned support above it. It executes a combination of supply and transportation functions to accomplish supply replenishment to support operations. During the offense, the distribution company delivers classes of supplies. To shorten times between deliveries, the distribution company may pre-position sustainment stocks centrally as close as the tactical situation permits. The distribution company should expect to replenish mechanized units conducting offensive operations twice daily.

7-45. Continuous exchange of configured tactical logistics packages on BSB's distribution company flatracks, water tank racks, tank rack module, and multi-temperature refrigerated container systems should be employed within the distribution network to maintain the tempo and responsiveness needed during offensive operations

7-46. Planners should coordinate EAB throughput directly to units to reduce transportation requirements of limited organic assets. The BSB commander sets priorities of support for the distribution company based on the concept of operations.

FIELD MAINTENANCE COMPANY

7-47. During offensive operations, the field maintenance company will be responsible for fixing or recovering damaged BSB equipment. Repairs will be conducted if the tactical situation permits and if the repair can immediately return equipment to the offensive operation. Commanders emphasize the use of self- and like-vehicle recovery methods to the greatest extent possible. These practices minimize the use of dedicated recovery assets for routine recovery missions. When priorities dictate, the BSB may coordinate with EAB to supplement BSB assets with additional repair part capabilities and combat spares.

7-48. The field maintenance company may be required to use recovery assets to assist FSCs recover damaged vehicles and equipment to a maintenance collection point or BSA. Recovery and evacuation vehicles should position themselves at critical locations on the battlefield to keep disabled vehicles from blocking movement routes while using equipment transporters and armored vehicles with inoperative weapon systems to accomplish this, if necessary. Equipment, such as radios and other electronics, will be evacuated to the Bravo Company of the FSC for repair.

BRIGADE SUPPORT MEDICAL COMPANY

7-49. Casualty treatment and medical evacuation are more challenging due to the nature and tempo of the offensive operation. Medical evacuation from the BCT to the corps or division become more difficult due to lengthening LOC, changes in the tactical situation, and changes in situational awareness. During movement to contact and attack, it is expected that more casualties will occur. The BSMC provides Role 2 medical treatment and evacuates patients to the next role of care. During large-scale combat, air and ground ambulances will be critical assets in returning casualties from the field. The BSMC maintains situational awareness of ground and air ambulances in the brigade area of operations. Ambulance exchange points should be established to account for lengthened LOCs and reduce ambulance turnaround time.

FORWARD SUPPORT COMPANY

7-50. The FSC will adapt to changing mission and operational variables during the offense. The commanders of the supported maneuver unit and FSC will determine the best placement of the FSC during the offense. The FSC should anticipate operating near the forward line of troops and beyond it if the tactical situation dictates. The extended distances at which the FSC must operate during the offense will impact operational readiness rates and place additional fatigue on equipment and personnel.

7-51. Sustainment planners should prepare tactical logistics packages and push packages containing fuel, ammunition, repair parts and water during offensive operations. During delivery of configured loads, return of vital distribution assets (for example, flat racks, containers) should be done through retrograde of materiel. This increases the supported maneuver commander's tactical flexibility and decreases the resupply time.

7-52. The FSC conducts repairs as far forward as possible. If the tactical situation permits and a repair can immediately return equipment to the offensive operation it should be repaired at or just behind the forward line of own troops. If the equipment requires maintenance then it may be evacuated to the maintenance collection point. If the operational tempo requires the maintenance collection point to displace, the decision has to be made by the commander whether to move the disabled equipment, leave it behind with a team of mechanics and security or destroy it. The latter is the least preferred method.

AVIATION BRIGADE SUSTAINMENT

7-53. The ASB plans for increased requirements of fuel, ammunition and repair parts to meet the demands of the aviation brigade. The high operational tempo and dispersed formations will require the use of multiple FARPs to support aviation battalions/squadrons. To support the increased requirements the ASB SPO officer coordinates with the DSB to conduct unit distribution directly to the FARPs or to predetermined logistics release points. Utilizing EAB throughput directly to a unit reduces transportation requirements of limited

organic assets will allow the distribution company to execute emergency resupply operations or prepare to relocate the ASB.

7-54. Downed aircraft recovery missions will exceed the capacity of the aviation maintenance and aviation support companies and require support from the DSB to assist with aircraft recovery and evacuation to sustainment level maintenance activities as needed. The aviation maintenance company attempts to rapidly and accurately diagnose aircraft damage or serviceability to repair aircraft at forward locations with forward maintenance teams. When the time and situation allows, forward maintenance teams repair on site, rather than evacuate aircraft; these repairs include battle damage assessment and repair.

MOVEMENT TO CONTACT

7-55. *Movement to contact* is an offensive task designed to develop the situation and establish or regain contact (ADP 3-90). Commanders conduct a movement to contact when an enemy situation is vague or not specific enough to conduct an attack. A movement to contact employs purposeful and aggressive reconnaissance and security operations to gain contact with the enemy main body and develop the situation, and is conducted with the smallest force possible.

SUSTAINMENT SUPPORT DURING MOVEMENT TO CONTACT

7-56. Movement to contact sustainment support has the potential to place increased demands on BCT and EAB sustainment. Once forces make contact, the commander makes the decision to attack, defend, bypass, delay or withdraw, which allows sustainers to refine their running estimates. The security force and main body should be weighted with priority for sustainment support.

7-57. BCT sustainment support must be tailored to fit the mission and task organized appropriately. The distribution company anticipates requirements and consumption rates for fuel and ammunition. Support operation officers coordinate for unit distribution. Pre-positioned supplies along supply routes provide options and flexibility to decrease the distance for echeloning sustainment support. Aviation support and reconnaissance are essential to large-scale movements to contact. Sustainment planners should anticipate increased requirements for aviation fuel, ammunition and maintenance during movement to contact. Sustainment planners must understand the tactical situation and place critical support assets in accordance to the corps and division plan for movement to contact supporting the mission plan. Supporting forces should be placed at a distance that facilitates a flexible response to requests for support.

PREPARATION FOR MOVEMENT TO CONTACT

7-58. Movement to contact focuses on finding the enemy, making contact with the smallest force possible and then using movement and combat formations to deploy and attack rapidly. Movement to contact requires task organizing a security force, a main body and a reserve. Based on mission variables, a portion of the main body composes the reserve and the commander's sustaining base. The forward security force and the main body perform reconnaissance continuously.

7-59. The security force is normally organized into a covering force to protect the main body from becoming decisively engaged and develop the situation before it is committed. This covering force will normally be the unit's main effort task organized to accomplish specific tasks to facilitate mobility and countermobility. If the unit is unable to resource a covering force for security operations, then an advance guard may be used in place of the covering force. The advance guard operates forward of the main body to ensure its uninterrupted advance by reducing obstacles to create passage lanes, repair roads and bridges, or locate bypasses. The advance guard also protects the main body from surprise attack and fixes the enemy to protect the deployment of the main body when it is committed to action. If the command's rear or flanks are not protected, it must also provide its own flank and rear security by establishing a screen or guard. If the mission variables allow it, combat aviation units may establish a flank screen.

7-60. The main body consists of forces not detailed to security duties. It is normally the element that will conduct the decisive operation within the conduct of the movement to contact. The combat elements of the main body prepare to respond to enemy contact with the unit's security forces. If the situation allows, the commander can assign a follow and support mission to a subordinate unit. This allows that subordinate unit

to relieve security forces from such tasks as observing bypassed enemy forces, handling displaced civilians, and clearing routes. A follow and support mission prevents security forces from being diverted from their primary mission. The commander designates a portion of the main body for use as the reserve. The reserve typically constitutes approximately one-fourth to one-third of the force. On contact with the enemy, the reserve provides flexibility to react to unforeseen circumstances and allows the unit to quickly resume its movement.

7-61. Sustainment forces should be within supporting distance to facilitate a flexible and mutually supporting response. Preparations should be made to push as far forward as possible those supplies that are needed by the covering, guard and screen forces of the security elements. Pre-positioned supplies along supply routes will provide options and flexibility to decrease the distance for echeloning sustainment support. Sustainment planners should anticipate increased requirements for fuel, munition, and maintenance during movement to contact. Sustainment planners must understand the tactical situation and place critical support assets in accordance to the corps and division plan for movement to contact supporting the mission plan.

7-62. The division or corps headquarters staff coordinates with the supporting sustainment organization to ensure the tactical commander's sustainment requirements are met. The corps or division echelon staff informs the commander of any shortfalls in available sustainment support so the movement to contact concept of operations and tactical plan can be modified to meet sustainment capabilities.

7-63. BCT commanders tailor their units' organic sustainment assets to the mission. Commanders decentralize the execution of sustainment, but that support must be continuously available to the main body. This includes using daily-preplanned logistics packages with standardized allocation of supplies to replenish stocks. Special logistics packages can also be dispatched, as needed.

7-64. During a movement to contact, main supply routes frequently become extended as the operation proceeds. Aerial resupply may be necessary to support large-scale movement to contact or to maintain the momentum of the main body, but is inadequate for a mechanized force on its own. Combat trains containing fuel, ammunition, medical, and maintenance assets move with their supported battalion or company team. Fuel and ammunition stocks remain loaded on tactical vehicles in the combat trains, to instantly move when necessary. Battalion field trains move with a higher support echelon, such as the BSB, in the main body of each BCT.

ATTACK

7-65. An *attack* is an offensive task that destroys or defeats enemy forces, seizes and secures terrain, or both (ADP 3-90). Attacks incorporate coordinated movement supported by fires. Attacks may be part of either decisive or shaping operations. A commander may describe an attack as hasty or deliberate, depending on the time available for assessing the situation, planning, and preparing.

SUSTAINMENT SUPPORT DURING AN ATTACK

7-66. Attacking forces place large demands on BCT and EAB sustainment. Sustainment units are placed as far forward as prudence allows. From these forward locations, sustainment units can sustain the attacking force and provide priority of support to the units conducting the decisive operation.

7-67. Sustainment planners must understand how a corps and division will conduct an attack. During an attack, corps and division forces will conduct decisive and shaping operations. Decisive operations consist of the immediate and decisive destruction of enemy forces and its will to resist. Decisive operations may utilize capabilities ranging from long-range precision fire systems to attack helicopters, and will employ the majority of combat power. Maintenance requirements and equipment readiness should be addressed prior to beginning an attack. Sustainment planners should anticipate placing fuel, ammunition and repair parts as far forward as possible to support forces in an attack. As the attacking force advances, sustainment units and capabilities displace forward as required to shorten supply lines, using displacement techniques designed to ensure uninterrupted support to maneuver units. The size of the force a command devotes to the echelon support area security mission depends on the threat in the attacking force's support area.

PREPARATION FOR ATTACK

7-68. In an attack, friendly forces seek to place the enemy in positions to be defeated or destroyed. An attack is normally violent and rapid. The commander seeks to keep the enemy off-balance while continually reducing the enemy's options. The commander normally organizes the force into a security force, a main body, and a reserve, all supported by sustainment organizations.

7-69. During an attack, a commander resources dedicated security forces only if the attack will uncover one or more flanks or the rear of the attacking force as it advances. Normally, an attacking unit does not need extensive forward security forces as most attacks are launched from positions in contact with the enemy.

7-70. The commander organizes the main body into combined arms formations to conduct the decisive operation and necessary shaping operations. As soon as the tactical situation clarifies enough to allow the commander to designate the decisive operation, the commander focuses available resources to support that decisive operation's achievement of its objective. All of the force's available resources operate in concert to assure the success of the decisive operation.

7-71. The commander uses the reserve to exploit success, defeat enemy counterattacks, or restore momentum to a stalled attack. Once committed, the reserve's actions normally become or reinforce the echelon's decisive operation. The strength and composition of the reserve vary with the reserve's missions, the forces available, the form of offensive maneuver selected, the terrain, and the risk accepted. Often a commander's most difficult and important decision concerns the time, place, and circumstances for committing the reserve.

7-72. The commander resources sustaining operations to support the attacking force. A maneuver battalion commander and the supporting BSB commander organize the maneuver battalion's supporting sustainment assets into combat and field trains. In an attack, the commander tries to position sustainment units well forward. From these forward locations, the units can sustain the attacking force and provide priority of support to the units conducting the decisive operation. As the attacking force advances, sustainment units and capabilities displace forward as required to shorten supply lines, using displacement techniques designed to ensure uninterrupted support to maneuver units.

7-73. Even in fluid situations, attacks are best organized and coordinated in assembly areas. Unless already in an assembly area, the attacking unit moves into one during the preparation phase. While in the assembly area, preparations are made to synchronize and coordinate the attack prior to moving into attack positions. Units should be replenished with fuel and ammunition as the unit moves in the assembly area or prior to movement into attack positions or crossing the line of departure. These preparations include protecting the force, performing reconnaissance, moving sustainment support forward, conducting rehearsals, refining the plan and positioning the force and sustainment assets for subsequent actions to maintain momentum, prolong endurance, and ensure freedom of maneuver.

7-74. The commander emphasizes simple and rapidly integrated fire support plans during rehearsals. This ensures overall coordination and synchronization with maneuver and sustainment assets. As part of the rehearsal process, the commander reviews the anticipated battle sequence with subordinate leaders to ensure all units understand the plan, the relationship between fire and movement, and the synchronization of sustainment assets to support.

7-75. During an attack, sustainment planners should anticipate increased requirements for fuel, ammunition, maintenance, casualty operations, and replacement operations due to the rapid tempo and violent nature of these operations. Aerial resupply may be necessary to support a large-scale attack or to maintain the momentum of the main body. Combat trains containing fuel, ammunition, medical, and maintenance assets move with their supported battalion or company team. These stocks remain loaded on tactical vehicles in the combat trains, in order to instantly move when necessary.

7-76. The commander ensures that attacking maneuver forces have the functional and multifunctional support and sustainment assets necessary to conduct the operation and maintain the attack's momentum as part of the preparation process. That support and sustainment effort must anticipate branches and sequels to ensure the uninterrupted advance of the maneuver force.

EXPLOITATION

7-77. *Exploitation* is an offensive task that usually follows the conduct of a successful attack and is designed to disorganize the enemy in depth (ADP 3-90). Exploitation is the bold continuation of an attack to maximize success. Exploitation is an inherently dynamic task that requires a decentralized approach to execution. Sustainment commanders must understand the appropriate application of the mission command philosophy prior to execution and support of exploitation. Exploitation forces drive swiftly for deep objectives, seizing enemy CPs, severing enemy escape routes, and striking at enemy reserves, artillery, and logistics units to prevent the enemy from reorganizing an effective defense.

SUSTAINMENT SUPPORT DURING EXPLOITATION

7-78. Sustainment support to exploitation forces continue to require large demands. Maneuver commanders maintain control of forces during exploitation to avoid the overextension of forces, which in turn, may be limited more by vehicle failures and the need for fuel than by combat losses and ammunition. A commander may replace a unit during exploitation when a pre-established diminished combat power to maintain speed and momentum is reached.

7-79. Transportation assets and supplies are necessary to sustain maneuver forces and become increasingly important as an exploitation progresses. As supply lines lengthen, security of routes will also become a problem. The largest possible stocks of fuel, spare parts, and ammunition should accompany the exploiting force so that momentum does not slow for lack of support.

7-80. When possible, EAB sustainment assets should follow an exploiting force along LOCs for distribution. Organic maintenance teams within the attacking BCTs repair disabled vehicles or send them to collection points along designated main supply routes for evacuation and repair.

PREPARATION FOR EXPLOITATION

7-81. The forces conducting an attack are also the forces that initially exploit that attack's success. An exploitation force proceeds directly from the attack and is normally planned as a sequel to an attack. Exploitation forces should be large and reasonably self-sufficient combined arms organizations, such as BCTs. Exploitation forces receive support from joint fires, Army aviation, and echelons above corps electronic warfare and offensive cyberspace operations assets when striking at deep objectives to prevent the enemy from reorganizing an effective defense.

7-82. The units that create an opportunity to exploit should not be expected to continue the exploitation to an extended depth. If the initial attacking units incur significant loss of combat power, then the commander replaces them with other subordinate units to continue the exploitation. During exploitation preparation and execution, the commander balances the force conducting the exploitation's need for speed and momentum against its need for security as it begins to move beyond supporting range of the rest of the force. The commander must be careful not to allow a force conducting exploitation to move outside of supporting distance of the main body.

7-83. An exploitation demands a force with a significant mobility advantage over the enemy. This mobility advantage may be provided by forces with tracked or wheeled armored combat vehicles. Attack helicopters and air assault assets may constitute a portion of the exploiting force's combat power. These forces are extremely useful in capitalizing on their mobility to attack and cut off disorganized enemy elements. Forces can also seize or control key terrain or vital enemy transportation nodes along the exploiting force's route of advance. The commander integrates combat engineers into the exploiting force to help breach obstacles, keep ground forces maneuvering, provide countermobility protection to the flanks, and to keep supply routes open.

7-84. The commander must anticipate the exploitation and ensure the sustainment plan supports the force throughout the duration of the exploitation. This includes designating future main supply routes, logistics release points, maintenance collection points, casualty collection points, MTF, and ambulance exchange points. In sustaining the exploitation, fuel consumption and vehicle maintenance are primary concerns of sustainment planners. Supplies and the transportation assets to carry the supplies necessary to sustain the force become increasingly important as an exploitation progresses.

7-85. In an exploitation, security of routes will also become a problem as supply lines lengthen. The largest possible stocks of fuel, spare parts, and ammunition should accompany the exploiting force so that momentum does not slow for lack of support. Aerial resupply may be necessary to move critical supplies forward during the exploitation. Aviation units will utilize FARPs to reduce aircraft turnaround times during these resupply missions.

7-86. The exploitation force typically covers a wider front than an attacking force. This may cause both sustainment support and fire support assets to operate outside of normal supporting range to their supported elements. Sustainment operators must be prepared to bound their sustainment assets farther forward and move them more often than in an attack. Like sustainment support, fire support assets must also displace forward to ensure the continued provision of fires on and beyond enemy formations. To provide the required support, these fire support units can be attached to subordinate elements of the exploiting force. The commander can also use available air interdiction and close air support by fixed-wing aircraft to augment or replace Army fire support assets during exploitation. Sustainers can normally plan on subordinate forces using less ammunition during an exploitation than in an attack because fleeing enemy forces are normally not in prepared positions.

PURSUIT

7-87. *Pursuit* is an offensive task designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it (ADP 3-90). Pursuit is the relentless destruction of retreating enemy forces who have lost the capability to effectively resist. Pursuit is an inherently dynamic task that requires a decentralized approach to execution. Sustainment commanders must understand the appropriate application of the mission command philosophy prior to execution and support of pursuit. Pursuit requires great energy and resolution on the part of an attacking commander. Fatigue, dwindling supplies, diversion of friendly units to other tasks, and approaching darkness may all be reasons to discontinue an attack, but commanders must insist on continuous pursuit as long as the enemy is disorganized and friendly forces can continue.

SUSTAINMENT SUPPORT DURING PURSUIT

7-88. Pursuit requires increased consumption of fuel and ammunition. Equipment failures and increased maintenance requirements may also occur during pursuit. Sustainment planners must anticipate these requirements, and push packages of fuel, ammunition and repair parts to corps and division forces in the pursuit. Sustainment planners must also be prepared to support the direct-pressure force and encircling force during the pursuit. Sustainment commanders must advise maneuver commanders of the limit of advance where the maneuver commander could outrun supply.

7-89. The direct-pressure force conducts hasty attacks to maintain enemy contact and its forward momentum until the complete destruction of the retreating enemy force. In the pursuit, the direct-pressure force usually conducts the main attack until the enemy force has been destroyed or encircled. The direct-pressure force consist of armor units and requires increased amounts of fuel and ammunition. An enveloping force gets to the enemy's rear area as swiftly as possible by the most advantageous routes to cut off the enemy's retreat and blocks the enemy's escape. The encircling force is required to be mobile to cut off the enemy's retreat. The encircling force will require increased amounts of fuel and repair parts.

PREPARATION FOR PURSUIT

7-90. A pursuit focuses on the complete destruction of fleeing enemy forces. As the enemy defenses begin to disintegrate, an exploitation may develop into a pursuit. A pursuit normally begins when an enemy force attempts to conduct retrograde operations. At that point, it becomes most vulnerable and a well-executed pursuit leaves the enemy trapped, unprepared, and unable to defend. A successful pursuit requires aggressive and unrelenting pressure against the enemy to prevent enemy reorganization and preparations of defenses.

7-91. The commander in a pursuit tries to combine direct pressure against the retreating forces with an enveloping or encircling maneuver to place friendly troops across the enemy's lines of retreat. Pursuits normally include the rapid shifting of units, continuous day and night movements, hasty attacks, containment of bypassed enemy forces, large numbers of prisoners, and a willingness to forego some synchronization to

maintain contact with and pressure on a fleeing enemy. A successful pursuit requires flexible forces, initiative by commanders at all echelons, and a high tempo during execution.

7-92. The commander assigns subordinate forces security, direct-pressure, encircling, follow and support, and reserve missions during pursuit. The direct-pressure forces should be armor-heavy. The commander can assign available airborne or air assault units the encircling mission because of their ability to conduct vertical envelopments. The subordinate unit assigned the follow and support mission reinforces the combat power of the unit assigned the direct-pressure mission and reduces bypassed small enemy pockets of resistance. The reserve allows the commander to take advantage of unforeseen opportunities or respond to enemy counterattacks. During the pursuit, artillery, engineer, and sustainment units will often be attached to the maneuver unit supported.

7-93. Engineer mobility and countermobility assets are instrumental in sustaining the rate of advance and hindering the enemy's withdrawal. Engineers prepare the route of advance and support the lateral dispersion of units transitioning to the pursuit. During the pursuit, the commander must plan for engineers to provide assault bridging and emergency road repairs to sustain the tempo of the pursuit. The commander also plans to use engineer assets to block any bypassed enemy's withdrawal routes by using antivehicle mines, demolitions, and obstacles. Heavy engineer breaching demands to support maneuver include increased amounts of demolitions, mine-clearing line charges, and special ammunition.

7-94. The commander uses all available sustainment assets to provide essential support to the force pursuing the enemy. Sustainment units should plan for increased demand for fuel and maintenance as the tempo of operations increases. Sustainment units should be highly mobile and able to provide prolonged endurance and reach during the pursuit. Priority for sustainment normally goes to units having the greatest success. Sustainment planners need to anticipate success since the depth of the pursuit depends on the capability of sustainment assets to support. Sustainment planners supporting the encircling force need to be prepared to provide casualty evacuation over possibly unsecured LOCs. The commander may also need aerial resupply or heavily guarded convoys to support this force. Security for sustainment convoys and LOC become major planning considerations.

7-95. Conducting a pursuit is a prudent risk. Once the pursuit begins, the commander maintains contact with the enemy and pursues retreating enemy forces without further orders. The commander maintains the pursuit as long as the enemy appears disorganized and friendly forces continue to advance. Sustainment capabilities will have a tremendous impact on the ability to mount a successful pursuit. Like exploitation, pursuit tests the audacity and endurance of those capabilities. Pursuit requires great energy and resolution on the part of the attacking force. Extraordinary physical and mental effort is necessary to sustain the pursuit, transition to other operations, and translate tactical success into operational or strategic victory.

Chapter 8

Sustaining Operations to Consolidate Gains

Chapter 8 provides an overview of consolidate gains and discusses some essential elements of consolidate gains; shifts in priorities of support necessary to sustain operations to consolidate gains; sustainment planning considerations for consolidate gains; and sustainment considerations during transition to follow-on operations.

8-1. *Consolidate gains* are those activities to make enduring any temporary operational success and set the conditions for a stable environment allowing for a transition of control to legitimate authorities (ADP 3-0). Commanders continuously consider activities necessary to consolidate gains and achieve the end state. Operations to consolidate gains present unique challenges to sustainment planners. While remnants of enemy formations may pose a continuing threat to U.S. forces during these operations, U.S. forces will also face threats from criminal and insurgent forces. Deployed sustainment headquarters continue to provide sustainment support to maneuver forces while enabling combat power for continued action against remaining enemy forces. As with sustainment for other missions, successful support for operations to consolidate gains requires sustainment commanders to anticipate shifting priorities and integrate simple and responsive solutions to dynamic battlefield conditions.

SECTION I – OVERVIEW OF SUSTAINING OPERATIONS TO CONSOLIDATE GAINS

8-2. Activities to consolidate gains may occur over a significant amount of time and involve transitions in both focus and partners. Emphasis will shift from actions to ensure the defeat of remaining threat forces to measures that address the needs of the population and eventually to the transfer of responsibility from Army forces to a host nation government, interagency partner, or other organizations.

8-3. Consolidation of gains activities are conducted by a separate maneuver force in the designated corps or division consolidation areas. A corps or division commander typically assigns responsibility for the consolidation area to a task-organized division or BCT. Consolidation activities include security and stability tasks and will likely involve combat operations against bypassed enemy forces.

8-4. Successful operations to consolidate gains employ a combination of offensive, defensive, and stability tasks to achieve continued operational success. Operations to consolidate gains assume that enemy forces will employ all means available to protract the conflict, even as organized enemy resistance continues in other sectors. To defeat these efforts, commanders take into account both the purpose of an operation and the capacity for the enemy to resist. Success depends on the commander's ability to exploit tactical success by establishing security and stability in a manner sufficiently decisive to achieve national strategic aims.

Consolidation of Gains during the Battle of Okinawa, WWII

The Battle of Okinawa, the last major American offensive of World War II, was a major battle of the Pacific War fought on the island of Okinawa by U.S. Tenth Army against the Imperial Japanese Army. The 82-day battle began with the initial invasion of Okinawa on 1 April 1945 and lasted until 2 July 1945. The 10th Army amphibious assault, the largest in the Pacific theater of World War II, consisted of joint Marine and Army forces.

The battle of Okinawa is often considered one of the bloodiest in the Pacific and produced approximately 75,000 Allied and 84,166 – 117,000 Japanese casualties. It was characterized by intense, deliberate, and methodical operations across the northern and southern portions of the island effectively dividing the island in half. The U.S. forces, in every instance, were able to dislodge and destroy the enemy using both offensive and defensive operations. Throughout, however, U.S. commanders had to make conscious decisions to focus combat power on the consolidation of gains. This was done by detecting and defeating enemy opposition in areas behind the main battle to protect logistics bases, headquarters, and secure hard-won terrain.

Despite the fact the forces operating in the northern portion of the island reached the northern-most point of the island and declared it secure by 18 April, the Japanese commander launched an offensive on 4 May. This included an insertion of commandos in the north that succeeded in destroying 70,000 U.S. gallons of fuel and nine planes before being killed by U.S. forces. In the southern sector of the operation, a large portion of a Japanese battalion infiltrated the U.S. lines penetrating as deep as one mile behind the U.S. front. This Japanese element was successful in blocking a major U.S. route used to distribute supplies to a division-sized force. The Japanese also used direct fire to block the use of a U.S. supply point and motorpool. To counter this infiltration, the U.S. commanders used two infantry companies to attack and destroy the enemy. Although successful, this U.S. counter effort took three days during which U.S. headquarters were threatened and logistics operations were significantly compromised.

Although organized Japanese resistance actually ended on 22 June, the 10th Army faced a formidable task of consolidating gains of the offensive victory by conducting deliberate operations toward the Army's rear area to isolate and defeat bypassed Japanese elements. Only after the consolidation of gains was complete, could the U.S. forces declare victory.

On 23 June 1945 the U.S. Tenth Army began consolidating the gains of defeating the main elements of the Japanese Imperial Army. U.S. commanders clearly understood that a significant number of Japanese soldiers had been bypassed and the estimated numbers of enemy constituted a potentially destructive force. The consolidation of gains effort was a thorough and coordinated offensive campaign to eliminate the disorganized but still-dangerous remnants of the Japanese Imperial Army in southern Okinawa. The ten-day plan assigned one Army corps and one Marine amphibious corps respective zones of action for the completion of the task. Despite being disorganized, well-armed groups of Japanese were able to engage the U.S. troops in several bloody skirmishes. The U.S. offensive to clear by-passed enemy ended on 30 June, sooner than expected. The consolidation of gains effort resulted in 783 U.S. casualties. It was only at this point that U.S. commanders were confident in declaring the Battle of Okinawa over on 2 July 1945.

8-5. The consolidation area refers to an AO extending from higher echelon boundaries to the boundaries of forces in the close area (figure 8-1 and figure 8-2 on page 8-4). The consolidation area may or may not include support areas and focuses on supporting units engaged in on-going combat operations. The need to consolidate gains represents a separate and distinct mission, and planners should avoid assigning consolidation responsibilities to forces, including sustainment units, that are committed to close operations. Units assigned to consolidate gains require their own dedicated support, with sustainment forces task organized to meet that operation's unique mission requirements. Once operations to consolidate gains commence, the senior sustainment headquarters in support of that operation may establish one or more support areas within the consolidation area.

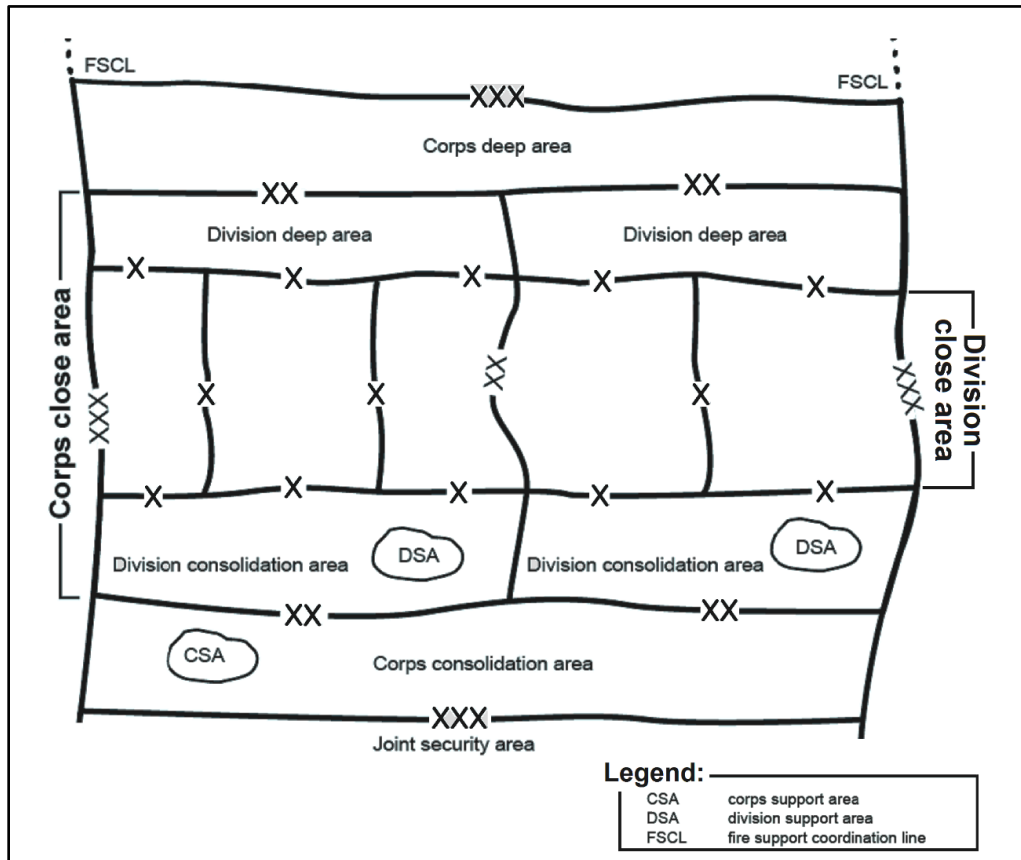


Figure 8-1. Notional sustainment area framework

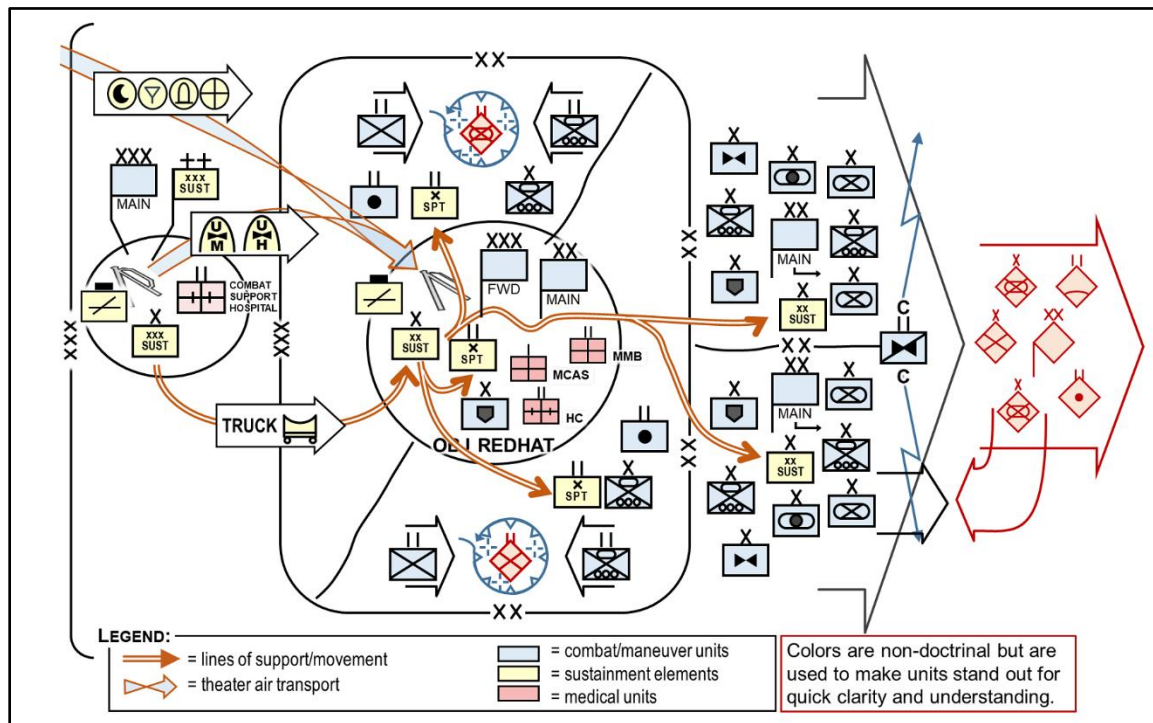


Figure 8-2. Representative sustainment framework within operations to consolidate gains

SECTION II – SUSTAINMENT FUNDAMENTALS

8-6. During operations to consolidate gains, sustainment priorities continue to focus on support to combat operations. Priorities include establishing gains security, restoring combat power, and preparing for continued operations to destroy remaining enemy forces. However, as the area becomes more stable and security increases, sustainment priorities include conducting stability tasks, providing medical treatment, and repairing LOCs.

8-7. The increased violence and lethality of large-scale combat operations create the potential for widespread devastation within areas occupied by U.S. forces. Commanders ensure the performance of minimum essential stability tasks as soon as possible after initiation of operations to consolidate gains. These tasks depend heavily on sustainment and include the provision of security, water, food, shelter, power generation, and medical treatment. The urgency of these requirements may dictate significant shifts within the commander's priorities of supply and support. The demand for potable water may be especially challenging.

Sustaining Operations to Consolidate Gains

- Sustain combat operations
- Restore combat power
- Stability tasks
- Medical treatment
- Lines of communication repair

8-8. Because combat operations may damage or destroy existing roads, bridges, canals, airfields, port facilities and rail systems, sustainment forces coordinate with engineer elements for repair or replacement of damaged LOCs. Additionally, sustainment forces coordinate with maneuver elements for route security. Enemy forces are likely to target LOCs to disrupt sustainment operations.

8-9. Successful stability operations require effective coordination between military and civilian efforts. Where possible, the Department of State coordinates U.S. stabilization and reconstruction tasks. Sustainment functions directly support these tasks. To achieve unity of effort, sustainment commanders synchronize efforts with U.S. and foreign government agencies, international agencies, nongovernmental organizations, other unified action partners, and contractors. As the security situation improves, Army forces may transfer responsibility for minimum-essential stability tasks to other forces or appropriate civilian organizations while

transitioning to the performance of primary stability tasks. Sustainment forces anticipate this transition to avoid mission failure. For more information on stability operations, see ATP 3-07.5.

SECTION III – PLANNING CONSIDERATIONS

8-10. In addition to sustaining combat operations, sustainment of operations to consolidate gains may involve the provision of essential government services, emergency infrastructure reconstruction, and humanitarian relief for the local population. Typically, it involves support for both U.S. forces and other unified action partners.

8-11. Forces conducting operations to consolidate gains may require the full complement of sustainment capabilities, especially if those operations are prolonged. During the initial stages, however, sustainment planners should prioritize the following functions:

- Ammunition.
- Medical evacuation.
- Explosive ordnance disposal.
- Maintenance.
- Transportation.
- Supply and distribution operations.
- General engineering support.
- Operational contract support.
- Personnel accountability.
- Postal operations.
- Essential personnel services.
- Field services.
- Special funding appropriations.

8-12. Sustainment commanders must continuously assess risk and develop plans to mitigate risk throughout operations. Risk, uncertainty and chance are inherent in all military operations. Sustainment professionals must seek to understand, balance and take risks rather than avoid risks to ensure sustainment of the operational force. Below is a sample list of risk considerations during operations to consolidate gains:

- Does the consolidation area have the correct mix of forces to address combat with by-passed forces while assisting with consolidation of gains?
- Are MCT, movement control battalions, and convoy commanders prepared to task organize and redirect enroute missions as priorities change?
- Are movement control personnel engaged in updating the status of all roads within the consolidation area?
- Are sufficient amounts of class V available to provide support to limited combat operations within the consolidation area, while maintaining support ongoing large-scale combat operations?
- Are sufficient amounts of class VIII medical supplies for the local population, prisoner of war camps and contract laborers on hand?
- Are sufficient class IX parts available to allow maintainers to make repairs where time permits to vehicles temporarily repaired through battle damage assessment and repair methods?
- Are sufficient EOD personnel available to rapidly clear improvised explosive devices discovered within the area of operations?
- Are contracts in place that can be used to assist with restoring essential services if host nation or local, national or U.S. agencies are not able to assist? Are sufficient combat personnel available to provide security for contractors or non-governmental aid workers?
- In preparation for stability operations are meals planned for civilian emergency rations in the correct quantity and of the proper type? For POW centers? For displaced people? Are contracted assets available for transporting the class III to the area of need? Can tents be utilized for temporary shelter for civilians, contractors and prisoners of war?

These considerations and others should be addressed and mitigation strategies/alternatives developed as part of the sustainment plan.

8-13. Intelligent use of medical assets and agreements identified during shaping operations can set the conditions for operations to consolidate gains. Medical formations take into consideration the major military and civilian events in development and their impact on medical operations throughout the theater. Displaced civilians, humanitarian crisis, injured enemy combatants and non-combatants, and detainee medical care are within the scope of factors to consider. If planned correctly, medical plans addressing these issues should offer a sequential, interorganizational or whole of government approach to enable the transition of medical formations from first contact to successful hand-off of responsibilities or continuation of AHS support theater operations across all strategic roles.

8-14. Planning considerations for the provision of AHS support to consolidate gains include the duration, size, scope, and complexity of the operation, population supported, host- nation medical capabilities and internal capacity for medical care of the local populace and displaced civilians. Replacement by and integration of Army Component 2 and 3 medical units, AHS support to retrograde operations, and planning for transitions should also be considered.

8-15. Sustainment estimates should account for humanitarian requirements and potential increases in the size, scope, and duration of these mission requirements. Minimum essential stability tasks leverage all available sources, including local government and commercial sources, other government agencies, and non-governmental organizations. In previous conflicts, international aid organizations have provided especially effective support for humanitarian needs, but these agencies require a safe and secure environment in which to operate.

8-16. During consolidation of gains operations, humanitarian needs may include providing food, water, shelter, and medical support to local and dislocated persons. Along with host nation and other governmental and non-governmental organizations when available, sustainment forces anticipate these requirements and plan to provide support necessary to sustain the population until local civil services are restored. Although operations to consolidate gains are designed to transition control of these areas to appropriate authorities as soon as possible, past experience indicates the duration and complexity of these operations frequently exceed planning estimates. Sustainment commanders should be adaptive and prepare for the possibility of extended operations.

8-17. Explosive ordnance disposal commanders must provide support to sustaining operations during consolidation of gains by detecting, identifying, conducting on-site evaluation, rendering safe, exploitation, and disposal or disposition of explosive ordnance, including weapons of mass destruction. Considerations must be made to mitigate both explosive ordnance designed to function after a time delay as well as unexploded ordnance, as both pose significant risk to overall consolidation of gains. Considerations for class V resupply must be addressed with specific emphasis needed when contending with explosive ordnance filled with sensitive high explosives; such munitions require significantly greater amounts of class V to dispose of correctly. Counter-improvised explosive device considerations must be addressed based upon the identified threat of criminal and insurgent forces during this operation. Counterinsurgency operations will potentially occur simultaneously during this operation.

8-18. As security improves within the area of operations, the OCS process enables sustainment commanders to utilize contracted capabilities in support of force protection, reestablishment of basic services, and repairs to critical infrastructure. Planners must carefully consider the impact of OCS to avoid disrupting local economies or inadvertently funding enemy or criminal activities. As operations to consolidate gains shift towards stability tasks, commanders may increase their reliance on commercial support in order to shift organic forces to other critical missions.

8-19. Sustainment planning should include long-term sustainment for U.S. forces remaining in theater to prevent recurrence of hostilities. Sustainment planning should also be conducted for transfer to civil authority or other legitimate agency.

SECTION IV – SUSTAINMENT TO CONSOLIDATION OF GAINS TASKS

8-20. The TSC and ESC coordinate strategic sustainment support for the operational area to enable the corps, division, and brigade formations to conduct operations. The TSC and ESC anticipate consolidation of gains sustainment support requirements and are prepared to support with barrier materiel, explosive ordnance disposal support, and humanitarian assistance. The DSB and support battalions support BCTs and enabling units by providing critical supply, transportation, and humanitarian support typically required during consolidation of gains operations. The paragraphs below provide examples of consolidation of gains activities.

AREA SECURITY OPERATIONS

8-21. Units establish security as their first priority during operations to consolidate gains. Security operations encompass five tasks—screen, guard, cover, area security, and local security. These operations seek to protect the force from surprise and reduce the unknowns in any situation. These operations may also seek to protect the civilian population, infrastructure, and institutions within the unit's AO. Security operations require effective reconnaissance and may involve combat operations against enemy remnants, irregular forces, and criminal elements. During security operations, sustainment commanders anticipate a continuing demand for sustainment with an increased demand for explosive ordnance disposal support, class IV barrier materials, and manpower to establish and maintain security for critical facilities, convoys, and supply routes.

PRIMARY STABILITY TASKS

8-22. As the consolidation mission transitions to performance of primary stability tasks, sustainment requirements and priorities change. Depending on the scope and duration of these tasks, sustainment commanders require additional capabilities and may leverage non-organic support capabilities, such as acquisition cross-service agreements and OCS, to support unique mission requirements identified below.

Sustaining Stability Tasks

- Establish civil security
- Establish civil control
- Restore essential services
- Support to governance
- Support economic and infrastructure development
- Conduct security cooperation

8-23. Army forces conduct six primary stability tasks in coordination with joint forces and other governmental agencies. These tasks are the establishment of civil security, the establishment of civil control, the restoration of essential services, support to governance efforts, support to economic and infrastructure development, and security cooperation operations. Sustainment units should synchronize efforts across these primary stability tasks to ensure sustained mission success.

ESTABLISH CIVIL SECURITY

8-24. If a legitimate civil government cannot assume responsibility for the security sector, military forces perform these tasks from the onset of operations through transition while helping develop host nation security and police forces to assume these responsibilities. Initial efforts seek to achieve three main goals: establishing a safe and secure environment, developing legitimate and stable security institutions, and consolidating host nation capacity-building activities. Depending on theater-level guidance, Army sustainment units may provide logistics and health service support to local government agencies. Commanders account for and report support provided to external agencies. External support contracts for services such as security force assistance actions will most likely require an increase in OCS contracts, which will become more complex and costly. Increased use of external support contracts for services such as staff augmentation and security force assistance tasks can be expected during security force assistance.

ESTABLISH CIVIL CONTROL

8-25. The establishment of civil security depends on the restoration of civil control. Enemy forces, insurgencies, organized crime, and general lawlessness within the AO threaten public order and safety and jeopardize successful operations to consolidate gains. These same threats may disrupt or jeopardize

sustainment efforts within the operational area. In the absence of local law enforcement capability, Army forces play an active role in establishing and maintaining civil control. Mission requirements may include traffic control, security of public and private property, and the restoration of essential services, in coordination with the United States Agency for International Development. Military forces identify modernization needs and the means to achieve them, which will most likely require contract support for the reconstruction of local civil infrastructure and/or services such as staff augmentation to plan and execute modernization efforts.

RESTORE ESSENTIAL SERVICES

8-26. As Army forces establish civil security and re-establish civil control, Army forces transition from performing minimum-essential stability tasks to the restoration of local civil services. These efforts provide or support humanitarian assistance while also providing shelter and relief for displaced civilians and preventing the spread of epidemic disease. Sustainment forces may be tasked to provide preventative health care to local inhabitants. These efforts should be synchronized with other restoration efforts within the operational area to ensure unity of effort. Immediate humanitarian needs are always the highest priority of effort in this area. Army forces may utilize a combination of theater support and some external support contracts to assist the host nation in restoring essential services such as tasks related to civilian dislocation, famine prevention and emergency food relief programs, water supply points, nonfood relief programs, public health programs and education programs. Commanders must have a detailed OCS plan for ensuring contract support actions are fully coordinated between multinational and interagency partners, have a synchronized acquisition strategy, and are overall supportive of the civil-military aspects of the operation or campaign plan.

SUPPORT TO GOVERNANCE

8-27. Governance is the set of activities conducted by a government or community organization to maintain societal order, define and enforce rights and obligations, and fairly allocate goods and services. During the initial response phase of the stability framework, international law requires military forces to act as the transitional military authority to provide basic civil administration and establish governance if the host nation's government or community organizations cannot provide governance. As Army sustainment units support development of host nation institutional capability and capacity, these units foster good governance by advising, assisting, supporting, and monitoring other sustainment actors. As in other stability tasks, OCS can be leveraged in addition to theater resources to provide experienced staff to support governance.

SUPPORT ECONOMIC AND INFRASTRUCTURE DEVELOPMENT

8-28. The lethality of large-scale combat operations can devastate both the social fabric and the economic viability of effected regions. Re-establishment of security and governance depends largely on the repair of critical infrastructure and the restoration of economic viability within a given AO. Commanders may use the OCS process to repair facilities, purchase goods and services, and stimulate economic growth. This capability, however, comes with numerous risks. If commanders fail to synchronize OCS with other operational goals, the sudden infusion of cash within a local economy may disrupt civil services, create hyperinflation, and inadvertently fund criminal and insurgent activities. Army sustainment units should focus on restoring capabilities that existed prior to large-scale combat operations that are supportable by local means rather than developing new capacities unsustainable by local means to facilitate a smooth transition to host nation government or civilian agencies. Other tasks may include generating employment opportunities, infusing monetary resources into the local economy, stimulating market economy and fostering recovery through microeconomics.

8-29. Prolonged economic and infrastructure development will involve significant contracted support in addition to theater support to provide a positive economic and social impact on the local populace. Army forces should expect the number of contracts to increase and become more complex and costly as contracting efforts expand to the reconstruct local civil infrastructure. Because of the complexity and importance of contracted actions in developing infrastructure, commanders must have a detailed OCS plan for ensuring contract support actions are fully coordinated between multinational and interagency partners and support the end state transition to host nation government or civilian agencies.

8-30. Economic development efforts include efforts to ensure the host nation's capability to regain the authority to govern and administer banking systems. The Army financial management enterprise, which includes the financial management officer and banking officer, includes economic analysis planning in collaboration with unified action partners, U.S. national providers, and local authorities to assist in these efforts. See FM 1-06 for additional information on financial management.

8-31. Military forces support the efforts of other agencies to strengthen the economy and/or foster development. Intergovernmental organizations such as the World Bank, International Monetary Fund, and the Organization for Economic Co-operation and Development help at the regional and national levels to set sound economic policies and establish conditions for long-term development and investment at the local level. The end state of this primary stability task is the overall creation of a sustainable economy.

CONDUCT SECURITY COOPERATION

8-32. Security cooperation is a State Department-led function in which U.S. Army forces assist foreign defense agencies in establishing and building defense relationships. These defense relationships promote specific U.S. security interests, develop multinational and friendly military capabilities for self-defense and multinational operations, and provide U.S. forces with peacetime and contingency access to a host nation. During operations to consolidate gains, sustainment units support U.S. Army assistance in training, equipping, and advising foreign military forces as part of the successful transition to host nation sovereignty. For more information on Army support to security cooperation, see FM 3-22.

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Appendix A

Principles of Sustainment

This appendix covers the principles and components of the four elements of sustainment—logistics, financial management, personnel services, and health service support.

SUSTAINMENT WARFIGHTING FUNCTION

A-1. The *sustainment warfighting function* is the related tasks and systems that provide support and services to ensure freedom of action, to extend operational reach, and to prolong endurance (ADP 3-0). The endurance of Army forces is primarily a function of their sustainment. Sustainment determines the depth and duration of Army operations. Successful sustainment enables freedom of action by increasing the number and quality of options available to the commander. Sustainment is essential for retaining and exploiting the initiative. The sustainment warfighting function consists of four major elements: logistics, financial management, personnel services, and health service support. Each element is guided by a set of specific principles.

PRINCIPLES OF LOGISTICS

A-2. The principles of logistics are the same as the principles of sustainment and are essential to maintaining combat power, enabling strategic and operational reach, and providing Army forces with endurance. These principles are independent, and are interrelated.

INTEGRATION

A-3. One of the primary functions of the sustainment staff is to ensure the integration of sustainment with operations plans. Integration is combining all of the sustainment elements within operations assuring unity of command and effort. It requires deliberate coordination and synchronization of sustainment with operations across all levels of war. Army forces integrate sustainment with unified action partners to maximize the complementary and reinforcing effects of each Service component's and other unified action partner's resources. One of the primary functions of the sustainment staff is to ensure the integration of sustainment with operations plans.

ANTICIPATION

A-4. Anticipation is the ability to forecast operational requirements and initiate necessary actions that most appropriately satisfy a response without waiting for OPORDs or fragmentary orders. It is shaped by professional judgment resulting from experience, training, education, intelligence, and intuition. Commanders and staffs need to understand and visualize future operations to identify appropriate required support. Commanders and staffs then start the process of acquiring the resources and capabilities that best support the operation. Anticipation is facilitated by automation systems that provide the COP on which judgments and decisions are based. Commanders integrate risk management into the operations process to identify threats, assess those threats, and emplace controls to mitigate the risk of gaps in support. Anticipation is also a principle of personnel services.

RESPONSIVENESS

A-5. Responsiveness is the ability to react to changing requirements and respond to meet the needs to maintain operational reach, freedom of action, and prolonged endurance. It is providing the right support in the right place at the right time. Responsiveness is facilitated by a COP facilitated by the Army Readiness COP and follow-on business intelligence tools associated with Army enterprise resource planning systems.

That COP enables commanders to see all supported forces, anticipate requirements based on situational understanding, and provide support when and where needed. Responsiveness involves identifying, accumulating, and maintaining sufficient resources, capabilities, and information necessary to meet rapidly changing requirements. Through responsive sustainment, commanders maintain operational focus and pressure, set the tempo of friendly operations to prevent exhaustion, replace ineffective units, and extend operational reach.

SIMPLICITY

A-6. Simplicity relates to processes and procedures to minimize the complexity of sustainment. Unnecessary complexity of processes and procedures leads to the confusion. Clarity of tasks, standardized and interoperable procedures, and clearly defined command relationships contribute to simplicity. Simplicity enables economy and efficiency in the ethical use of resources, while ensuring effective support of forces.

ECONOMY

A-7. Economy is providing sustainment resources in an efficient manner that enables the commander to employ all assets to the greatest effect possible. Economy is achieved through efficient management, discipline, prioritization, and allocation of resources. Economy is further achieved by eliminating redundancies and capitalizing on joint interdependencies. Disciplined sustainment assures greatest possible tactical endurance and constitutes an advantage to commanders. Economy may be achieved by contracting for support or using host nation resources that reduce or eliminate the use of limited military resources. By efficiently and ethically managing Army resources, Army professionals are stewards who act in the best interest of the American people.

SURVIVABILITY

A-8. Survivability is all aspects of protecting personnel, weapons, and supplies while simultaneously deceiving the enemy. Survivability consists of a quality or capability of military forces to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission. This quality or capability of military forces is closely related to protection (the preservation of a military force's effectiveness) and to the protection warfighting function (the tasks or systems that preserve the force). Hostile actions and environmental conditions can disrupt the flow of sustainment and significantly degrade forces' ability to conduct and sustain operations. In mitigating risks to sustainment, commanders often rely on the use of redundant sustainment capabilities and alternative support plans.

CONTINUITY

A-9. Continuity is the uninterrupted provision of sustainment across all levels of war. Continuity is achieved through a system of integrated and focused networks linking sustainment to operations. Continuity is achieved through joint interdependence, linked sustainment organizations, a strategic-to-tactical level distribution system, and integrated information systems. Continuity assures confidence in sustainment allowing commanders freedom of action, operational reach, and endurance.

IMPROVISATION

A-10. Improvisation is the ability to adapt sustainment operations to unexpected situations or circumstances affecting a mission. It includes creating, inventing, arranging, or fabricating resources to meet requirements. It may also involve changing or creating methods that adapt to a changing OE. Sustainment leaders apply operational art to visualize complex operations and understand additional possibilities. These skills enable commanders to improvise operational and tactical actions when enemy actions or unexpected events disrupt sustainment operations. While deception is related to survivability in that deception contributes to survivability, improvisation is where logisticians can actively achieve deception of enemy forces.

LOGISTICS ELEMENTS

A-11. Logistics is planning and executing the movement and support of forces. It includes those aspects of military operations that deal with: design and development; acquisition, storage, movement, distribution, maintenance, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services. For the sustainment warfighting function, explosive ordnance disposal tasks are discussed under protection and intelligence warfighting functions (ADP 3-37 and FM 2-0) Army logistics include the following—

- Maintenance.
- Transportation.
- Supply.
- Field services.
- Distribution.
- Operational contract support.
- General engineering support.

A-12. Logistics involves both operational art and science. Knowing when and how to accept risk, prioritizing a myriad of requirements, and balancing limited resources all require operational art while understanding equipment capabilities, consumption rates, OCS and HNS. Logistics integrates strategic, operational, and tactical support of deployed forces while scheduling the mobilization and deployment of additional forces and materiel.

MAINTENANCE

A-13. Maintenance is all actions taken to retain materiel in a serviceable condition or to restore it to serviceability. The Army utilizes a tiered, two-level maintenance system comprised of field and sustainment maintenance. Command teams, maintenance personnel and planners must have a complete understanding of two-level maintenance fundamentals in order to properly plan and execute their mission. Maintenance is necessary for endurance and performed at the tactical through strategic levels of war. See ATP 4-33 for more information.

Field Maintenance

A-14. Field maintenance is repair and return of equipment to the user and is generally characterized by on-system maintenance. It often includes replaceable line unit and component replacement, and battle damage assessment, repair, and recovery. It is focused on returning a system to an operational status. Field level maintenance is not limited to remove and replace, but also provides adjustment, alignment, and fault/failure diagnoses. It includes battle damage assessment, repair, and recovery tasks performed by either the crew or support personnel to maintain systems in an operational state. Field maintenance includes all actions performed at unit level to maintain equipment readiness.

A-15. Field maintenance is performed by Soldiers as far forward as possible with the equipment being retained by or returned to the owning unit. Crewmembers, equipment operators, and ordnance trained maintainers perform field maintenance. All Army modification table of organization and equipment maintenance units perform field maintenance. Field-level maintenance consist of two subcategories, operator/crew and maintainer and is performed on an unserviceable piece of equipment communication or weapon system utilizing line replaceable units or modules and component replacement or repair. It is normally performed by the owning unit or a supporting unit using tools and test equipment found in the unit. The unit should retain and repair the item until it is ready to return to service. Field maintenance is not limited to simply remove and replace actions. If the maintainers possess the requisite skills, proper tools, proper repair parts, references, and adequate time the item should not be evacuated for sustainment maintenance. This is especially relevant to BCTs. The expertise to fix major weapons systems (Abrams, Bradley, Paladin and Stryker Combat Vehicle) resides only in the supporting FSC. There are no maintenance units equipped or manned who can perform field-level maintenance repairs to these weapon systems outside the BCT. The BSB in SBCT is the only exception as the field maintenance company includes assigned mechanics to maintain the medical company's Stryker medical vehicles (ambulances). The BSB has organic low-density

specialty maintainers whose mission is to provide maintenance for specialty equipment in the BCT. These personnel maintain equipment the forward support companies are not structured to accomplish including missiles, fire control and signal systems. Field-level maintenance also includes adjustment, alignment, service, applying approved field-level modification work orders, fault/failure diagnoses, battle damage assessment and repair, and recovery. Field-level maintenance is always repair and return to the user and includes maintenance actions performed by crew members, operators and ordnance corps trained maintainers. These maintainers at echelons below brigade level are found in the owning unit, FSC and field maintenance company. See ATP 4-33 for a description of the field maintenance subcategories.

Sustainment Maintenance

A-16. Sustainment maintenance is generally characterized as off-system component repair or end item repair and return to the supply system or by exception to the owning unit. It is performed by national-level maintenance providers. The intent is to perform commodity-oriented repairs on all supported items to one standard that provides a consistent and measurable level of reliability. Off-system maintenance consists of overhaul and remanufacturing activities designed to return components, modules, assemblies, and end items to the supply system or units, resulting in extended or improved operational life expectancies. Sustainment maintenance includes all actions usually performed by a special repair activity to conduct off-system maintenance.

A-17. Sustainment maintenance is performed by DOD civilians and contractors who return equipment to a national standard, after which the equipment is placed back into the overall supply system. When a unit sends equipment to a sustainment maintenance organization the owning unit, in most cases removes the equipment from the property book. Only in rare instances such as unit reset, will the equipment be returned to the unit. Sustainment-level maintenance is comprised of two subcategories below sustainment level maintenance and sustainment level maintenance. Sustainment-level maintenance is utilized when crew, operator, operator-maintainer or maintainers lack the requisite skills, proper tools, proper repair parts, or references to complete repairs using field maintenance. Based on the extent of damage to the specific item, leaders must decide the best course of action based on operational and mission variables. There is no absolute checklist. Field-level maintenance is the preferred method of repair. The intent of sustainment-level maintenance is to perform commodity-oriented repairs to return items to a national standard, providing a consistent and measureable level of reliability. The USAMC through the ASC and its subordinate AFSB and AFBn execute contingency sustainment maintenance missions. Sustainment-level maintenance supports both operational forces and the Army supply system. See ATP 4-33 for a description of the sustainment maintenance subcategories.

TRANSPORTATION

A-18. Army transportation units play a key role in facilitating endurance. Transportation units move sustainment from ports through the system to points of employment, and retrograde materiel as required. The tenets of transportation operations include centralized control and decentralized execution, forward support, fluid and flexible movements, effective use of assets and carrying capacity, in-transit visibility, regulated movements and interoperability. For additional information, see FM 4-95.

Movement Control

A-19. Movement control is the dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over LOCs to sustain land forces. Movement control balances requirements against capabilities and requires continuous synchronization to integrate military, host nation, and commercial movements by all modes of transportation to ensure seamless transitions from the strategic to the tactical level of an operation. Proper management of the movement control function aids the operational commander in applying control over the depth of the battlefield. It is a means of providing commanders with situational understanding to control movements in their operational area. Movement control responsibilities are embedded in an infrastructure that relies on coordination to ensure transportation assets are used efficiently while ensuring LOCs are de-conflicted to support freedom of access for military operations. See ATP 4-16 for more information on movement control.

Intermodal Operations

A-20. Intermodal operations use multiple modes (air, sea, highway, rail) and conveyances (for example truck, barge) to move troops, supplies, and equipment through entry points and the network of specialized transportation nodes to sustain land forces. These operations use movement control to balance requirements against capabilities and capacities to synchronize terminal and mode operations ensuring an uninterrupted flow through the transportation system. Intermodal operations consist of facilities, transportation assets, and materials-handling equipment required to support the deployment and distribution enterprise. Included under this function are terminal operations and container management.

A-21. Terminal operations consist of the receiving, processing, and staging of passengers; the receipt, transit, storage and marshalling of cargo; the loading and unloading of transport conveyances; and the manifesting and forwarding of cargo and passengers to a destination. These operations are essential in supporting deployment, redeployment, and sustainment operations. The three types of terminals are air, water, and land (ATP 4-13).

A-22. Container management is the process of establishing and maintaining visibility and accountability of all cargo containers moving within the Defense Transportation System. ATP 4-12 provides additional information on container management.

Mode Operations

A-23. Mode operations are the execution of movements using various conveyances (truck, lighterage, railcar, aircraft) to transport cargo and personnel. Mode operations include the administrative, maintenance, and security tasks associated with the operation of the conveyances. There are two transportation modes of operation, surface and air, available to support military operations. The surface mode includes motor, water, and rail. The air mode consists of fixed-wing and rotary-wing aircraft. Intermodal operations are covered in ATP 4-13.

Theater Distribution

A-24. Theater distribution is the flow of personnel, equipment, and materiel within a theater to meet the GCC's missions (JP 4-09). Theater distribution is a process of synchronizing all elements of the logistics system to deliver the right things to the right place at the right time to support the GCC. Theater distribution begins at the POD and ends at the unit. Personnel and materiel enter the theater by surface (land or water) or by air and move through the various transportation modes/hubs/nodes to their destination or point of use.

SUPPLY

A-25. Supply is essential for enhancing Soldiers' quality of life. It provides the materiel required to accomplish the mission. Supply classes are listed in table A-1.

Table A-1. Classes of supply

Class	Description
Class I	Subsistence, including health and welfare items.
Class II	Clothing, individual equipment, tentage, tool sets and tool kits, hand tools, administrative, and housekeeping supplies and equipment (including maps). This includes items of equipment, other than major items, prescribed in authorization/allowance tables and items of supply (not including repair parts).
Class III	Petroleum, oils, and lubricants: petroleum and solid fuels, including bulk and packaged fuels, lubricating oils and lubricants, petroleum specialty products; solid fuels, coal, and related products.
Class IV	Construction materials, to include installed equipment and all fortification/barrier materials.
Class V	Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.
Class VII	Major items: A final combination of end products which is ready for its intended use: (principal item) for example, launchers, tanks, mobile machine shops, vehicles.

Table A-1. Classes of supply- (continued)

<i>Class</i>	<i>Description</i>
Class VIII	Medical materiel, including medical peculiar repair parts.
Class IX	Repair parts and components, including kits, assemblies and subassemblies, reparable and nonreparable, required for maintenance support of all equipment.
Class X	Material to support nonmilitary programs; such as agricultural and economic development, not included in class I through IX.

FIELD SERVICES

A-26. Field services maintain combat strength of the force by providing for its basic needs and promoting its health, welfare, morale, and endurance. Field services provide life support functions. ATP 4-42 has additional information on field services. A means of providing support is Force Provider, which can provide life support capabilities for Soldier sustainment during operations. It can also support humanitarian assistance, disaster relief and noncombatant evacuation operations. For additional details, see ATP 4-45.

Shower and Laundry

A-27. Shower and laundry capabilities provide Soldiers a minimum of two weekly showers and up to 17 pounds of laundered clothing each week (comprising three uniform sets, undergarments, socks, two towels and two wash cloths). The shower and laundry function does not include laundry decontamination support.

Field Feeding

A-28. Field feeding operations are a basic unit function and one of the most important factors in Soldiers' health, morale, performance and welfare. The standard is to provide Soldiers at all echelons three quality meals per day. Field feeding and field sanitation are intrinsically linked. Effective field feeding and field sanitation practices include the timely disposal of refuse and waste to avoid unit signature trails and prevent adverse health issues as a means of force protection. For additional information on field feeding operations and the Army food program see AR 30-22. For additional information on sanitation standards, see ATP 4-41 and TB MED 530.

Water Production and Distribution

A-29. Water production and distribution are essential for hydration, sanitation, food preparation, medical treatment, hygiene, construction, and decontamination. The water production is both a field service and a supply function. Quartermaster supply units normally perform purification in conjunction with storage and distribution of potable water.

Aerial Delivery

A-30. Aerial delivery includes parachute packing, air item maintenance, and rigging of supplies and equipment. This function supports airborne insertions, airdrop, and air-land resupply. It is a vital link in the distribution system and provides the capability of supplying the force even when land LOCs have been disrupted, or terrain is too hostile, thus adding flexibility to the distribution system. Aerial delivery is covered in more depth in ATP 4-48.

Mortuary Affairs Operations

A-31. Mortuary affairs provides for the search for, recovery, identification, preparation, and disposition of human remains of persons for whom the Services are responsible by status and executive order. The mortuary affairs program starts at the unit level with search and recovery operations. It continues until all human remains are returned to the person authorized to direct disposition and all personal effects are returned to the person eligible to receive effects. The mortuary affairs program covers the initial search and recovery, tentative identification, coordinated evacuation, and contamination mitigation (if necessary) of all human remains and personal effects. At the tactical level, mortuary affairs companies establish mortuary affairs collection points for the recovery and evacuation of human remains to the theater mortuary evacuation point.

Mortuary affairs companies establish theater mortuary affairs evacuation points where human remains are either evacuated or stored in refrigeration. If these means are not available, only the GCC can authorize temporary interment of remains.

Temporary Interment/Disinterment

A-32. When human remains cannot be rapidly evacuated out of a theater of operations, the human remains will need to be under temporary storage or interment. Interment should be used as a last resort. The GCC is the only commander authorized to permit the temporary storage, interment, and disinterment operations in the theater. All commanders are to ensure the preservation and accountability of human remains are under their control. When conducting interment or disinterment operations, it is important to take religious considerations into account when feasible. For additional information, see ATP 4-46.

Interment Techniques

A-33. The interment site may consist of any number of rows. Each row holds 10 human remains, head to foot, lengthwise. The rows are approximately 70 feet long, 3 feet deep, as wide as the earth-moving equipment blade (minimum of 2.5 feet) 7 feet between rows. Earth-moving equipment should be used if possible, as it can open all types of soil with relative ease. Ideally, rows should be side by side, but may not be if terrain conditions prohibit. For additional information, see JP 4-0 and ATP 4-46.

Processing

A-34. When human remains are received all documentation and information is turned over to interment site personnel. If a list of human remains is present, it is verified as the human remains are offloaded. Upon verification, mortuary affairs personnel sign for the human remains. Although not all inclusive, the following steps must be performed during processing:

- Assign each human remains an interment processing number by using the next available sequential number from DD Form 1079 (*Disinterment Register from Temporary Interment Sites*). Use one page of DD Form 1079 for each row of 10 human remains. The number consists of a cumulative number and the current calendar year for example, 00024-02.
- Prepare two metal tags for interment operations. Etch the processing number on each tag and attach both tags to the human remains. One tag will later be attached to the interment shroud.
- Place the human remains in a human remains pouch or wrap with shrouding material. Remove one metal tag from the human remains and attach it to the outside of the human remains pouch or shroud.
- Then assign the next available interment site row and space number for example, Row 10, Space 6, on DD Form 1079. The assignment of the actual row and space number to the human remains should not take place until the human remains are located at the interment site.
- Enemy, multinational, and Armed Forces of the United States human remains should be interred in separate rows to aid in later disinterment operations.

(See ATP 4-46 for additional information.)

Closing the Site

A-35. When all interments have been completed in each row, the row may be refilled. A bucket loader-type vehicle should be used for refill. Care should be taken not to drive over the rows, even after the rows have been refilled. The beginning and end of each row should be marked with a metal stake. The stake should extend into the ground at least 2 feet, and 2 feet should be left above ground. Securely affix a metal tag to each stake indicating the row number. Use a global positioning system device (if available) to determine the location of each row, and record it on DD Form 1079, block 4.

A-36. All forms and records will be hand-carried by special courier to the Joint Mortuary Affairs Office or Theater Mortuary Affairs Office. The Joint Mortuary Affairs Office or Theater Mortuary Affairs Office will provide one copy of all records of HN or adversary interments to the HN government. Send the original records for all interments conducted by U.S. forces to the Joint Mortuary Affairs Office at the CCMD, for correct disposition and archive.

Row Disinterment Techniques

A-37. Whenever conducting disinterment operations, all personnel should wear high efficiency particular air respirators, gloves, aprons, and other types of protective clothing IAW component services health and safety guidance. Once in the general area of the interment site, the global positioning system device, in conjunction with maps, may be used to determine the exact location of each row.

A-38. A chaplain, if present, may offer a prayer or other appropriate religious support. If a chaplain is not available, the senior military person may lead those present in 60 seconds of silence, with bowed heads, as a memorial. Perform the following upon disinterment:

- Open the row from either end. Using a backhoe and digging with care, the operator may dig down approximately 1 1/2 feet. Multiple rows may be opened simultaneously depending on the availability of equipment. Dig the remaining depth with hand tools so as not to mutilate the human remains.
- Remove the dirt from all sides of the human remains carefully. Look for the metal tag that was pinned to the outside of the human remains pouch or shroud.
- Match the number on the tag to the DD Form 1079 processing number recorded during interment operations.
- Complete the DD Form 1079 and prepare processing tag in the same manner as in interment operations. Attach this tag to the human remains pouch or shroud.
- If the human remains pouch or shroud is not intact, the soil in the immediate area should be sifted for skeletal anatomy and personal effects.
- Place human remains and human remains pouch on a litter and remove them from the row or interment site.
- Refill all rows and return the area as closely as possible to the original condition after all rows have been opened and human remains removed. Human remains are processed at a Mortuary Affairs Collection Point adjacent to the disinterment site.

A-39. The non-commissioned officer-in-charge will report through command channels to the Joint Mortuary Affairs Office or Theater Mortuary Affairs Office when all human remains have been disinterred from the interment site. Include the condition of the restored land being vacated in this report. Once a site has been evacuated, the Joint Mortuary Affairs Office or Theater Mortuary Affairs Office is responsible for turning the land back to the appropriate host government agency. If the human remains of deceased personnel from other nations are still buried at the site, maintain the site if operationally feasible or until custody of the site can be turned over to the appropriate government.

A-40. The use of non-military mortuary affairs support or HNS and theater support local national or third country national support should be limited to general labor, administration, transportation, and facility support. Only U.S. military, U.S. Government civilians, or DOD contracted civilians should be used to accomplish search, recovery, processing of U.S. human remains and inventory of personal effects. If an agreement cannot be negotiated, mortuary affairs support is performed under current U.S. military procedures.

DISTRIBUTION

A-41. Distribution is the operational process of synchronizing all elements of the logistics system to deliver the right things to the right place at the right time to support the GCC (JP 4-0). It delivers the right quantity as determined by logisticians in synchronization with operational commanders and mission. Distribution is more than physical distribution of materiel; it also includes synchronizing the functions of warehousing, inventory control, outbound transportation, materials handling, packaging, communications, and services such as maintenance.

A-42. Distribution provides operational commanders with endurance and operational reach. It ensures that forces are receiving the materiel when needed and in the right quantities. Sustainment planners establish a distribution system in theater to support the needs of operational forces. The distribution system extends from the source of supply to the point of need (ATP 4-0.1).

OPERATIONAL CONTRACT SUPPORT

A-43. OCS encompasses the entire process of planning and executing contract support during contingency operations. The OCS process begins when a requiring activity identifies a need for commercial support, and it concludes with contract closeout. Both acquisition (contracting officers) and non-acquisition personnel and activities have OCS roles and responsibilities in this process. For more information, see ATP 4-10.

GENERAL ENGINEERING SUPPORT

A-44. General engineering consists of those engineering capabilities and activities, other than combat engineering, that provide infrastructure and modify, maintain, or protect the physical environment (JP 3-34). It encompasses those engineer tasks that establish and maintain the infrastructure required to conduct and sustain military operations. Although primarily executed through general engineering resources, engineers combine capabilities from all three engineer disciplines (combat, general, and geospatial engineering) to enable logistics and force protection.

A-45. The tasks most frequently performed under general engineering include building, repairing, and maintaining roads, bridges, airfields, and other structures and facilities needed for PODs, main supply routes, and base camps. General engineering units also plan, acquire, manage, and remediate real estate; provide power system support; manage utilities and waste management; and assess environmental impacts. Additional information on general engineering support is in ATP 3-34.40.

FINANCIAL MANAGEMENT PRINCIPLES

A-46. Financial management is guided by the principles of stewardship, synchronization, anticipation, improvisation, simplicity, and consistency.

STEWARDSHIP

A-47. The DOD is entrusted by the American people as steward of the vital resources (funds, material, land, and facilities) provided to defend the nation. All available resources shall be used in the most efficient means possible (JP 3-80). The Army operates under the mandate to use all available resources in the most effective and efficient means possible to support the CCDR. Although not mutually exclusive, these two goals, effectiveness and efficiency, do not have the same meaning. Financial management leaders must understand that effectiveness describes how well consumed resources achieve the commander's desired outcome or end-state. Efficiency speaks to the process in which resources are consumed to produce the desired outcome or end-state with maximum amount of output with the least amount of input—doing things the right way. Good stewardship relies on sound business processes as well as timely and accurate financial information to facilitate sound decision-making in which financial management capabilities are used in compliance with existing statutory and regulatory guidance that meet standards of audit readiness.

SYNCHRONIZATION

A-48. Synchronization is the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time (JP 2-0). Synchronization of financial management operations requires financial management leaders to arrange the placement of financial management units and personnel in time, space, and purpose to ensure commanders receive the requisite financial management capability. To achieve synchronization, financial management leaders coordinate with the appropriate Military Services, DOD organizations, national financial management providers and intergovernmental organizations to align financial management capabilities to theater requirements. Financial managers use the planning and orders process to synchronize financial management throughout all phases of an operation and tailor financial management to the unique and changing dynamics of the OE and mission.

ANTICIPATION

A-49. Anticipation is the ability of financial management leaders to forecast financial management requirements based upon professional judgment honed by experience, knowledge, education, intelligence,

and intuition. The ability of Army forces to combine its core competencies into a fluid mix of offensive and defensive tasks, and stability operations depends on a philosophy of command that emphasizes broad mission-type orders, individual initiative within the commander's intent, and leaders who can anticipate and adapt quickly to changing conditions (ADP 3-0). Financial managers visualize future operations and determine the appropriate support at the right time and in the right composition. Anticipating requirements necessitates staying abreast of OPLANs, understanding commanders' lines of effort and desired end-state. Financial managers anticipate changes in their mission and the OE through detailed planning and continual coordination with supported commanders' staff (for example: G-3/5/7/9). Leaders frequently survey the OE to anticipate shifts in capabilities that impact financial management operations. Anticipation necessitates financial management leaders to stay abreast of OPLANs, commander's lines of effort, and desired end-state.

IMPROVISATION

A-50. Improvisation is the ability to adapt operations and plans for financial management to changing situations and missions. It includes task organizing financial management units in non-traditional formations, submitting fiscal legislative proposals to acquire new fiscal authorities, applying existing financial and communication technologies in new ways, and creating new tactics, techniques and procedures to meet evolving requirements resulting from changes in the OE and consequent modifications to the mission.

SIMPLICITY

A-51. Simplicity relates to processes and procedures to minimize the complexity of sustainment (ADP 4-0). This principle speaks to financial management processes, procedures, and the requirement to minimize complexity in functions to reduce confusion. Simplicity fosters efficiency in the conduct of operations and enhances the effective control of financial management to our forces. Clarity of tasks, standardized and interoperable procedures, and clearly defined command relationships contribute to simplicity. Simplicity facilitates the optimal use of financial management capabilities while ensuring effective and efficient support of forces.

CONSISTENCY

A-52. The principle of consistency involves the provision of consistent financial management capabilities to the force throughout the AO. Financial managers must coordinate with the appropriate DOD organizations, coalition forces, and joint forces to ensure the uniform provision of support to all forces in theater. This includes making appropriate provisions for limited military pay and services, establishing banking and currency support payment of travel entitlements, and cash operations to support the acquisition process (JP 3-80). Consistent financial management guidance requires involvement in the operations process through the development of financial management appendices to OPLANs and close coordination of financial management capabilities and staff elements within theater.

FINANCIAL MANAGEMENT

A-53. Financial management consists of finance operations and resource management.

FINANCE OPERATIONS

A-54. The finance operations mission is to support the sustainment of Army, joint, and multinational operations through the execution of key finance operations tasks. These key finance operations tasks are to provide timely commercial vendor services and contractual payments, various pay and disbursing services, and oversight and management of the Army's Banking Program. Finance operations also implement financial management policies and guidance prescribed by the Office of the Under Secretary of Defense (Comptroller) and national providers (such as the U.S. Treasury, Defense Finance and Accounting Service, and Federal Reserve Bank).

RESOURCE MANAGEMENT

A-55. The resource management mission, accomplished by S-8/G-8/J-8 personnel, is to analyze resource requirements, ensure commanders are aware of existing resource implications in order for them to make resource informed decisions, and obtain the necessary funding that allows them to accomplish their mission. Resource management is the critical capability within the financial management competency that matches legal and appropriate sources of funds with thoroughly vetted and validated requirements. Key resource management tasks are providing advice and recommendations to the commander, identifying sources of funds, forecasting, capturing, analyzing and managing costs; acquiring funds, distributing and controlling funds; tracking costs and obligations; establishing and managing reimbursement processes; and establishing and managing the Army Managers' Internal Control Program.

FINANCIAL MANAGEMENT CORE COMPETENCIES

A-56. The core competencies of financial management are fund the force, banking and disbursing, pay support, accounting support and cost management, and management internal controls.

FUND THE FORCE

A-57. Fund the force is a critical capability, which matches legal and appropriate sources of funds with thoroughly vetted and valid unit requirements. Fund the force provides flexibility through monetary integration to augment, and in some cases, leads the effort in obtaining the effects the commander is trying to achieve on the battlefield. Key tasks include identifying, acquiring, distributing and certifying funds and obligating funds to units, providing payments in cash or via electronic funds transfers in support to contracting operations, and commercial vendor services.

BANKING AND DISBURSING

A-58. Banking support encompasses financial management activities ranging from currency support (local or U.S.) of U.S. military operations to liaising with host nation banking officials and strengthening local financial institutions. Other activities within banking support include establishing e-commerce and limited depository capabilities, as well as coordination with U.S. embassies, U.S. Army Financial Management Command, Defense Finance and Accounting Service, and Department of the Treasury entities to support theater banking initiatives.

A-59. Disbursing is the arm within financial management ensures all payments are made IAW DOD regulations. It is strongly recommended that all elements of the fiscal triad are co-located to facilitate fiscal communication, accuracy of documentation, and timely payment of goods and services. Disbursing is the paying of public funds to entities to which the U.S. Government is indebted; the collection and deposit of monies; the safeguarding of public funds; and the documenting, recording, and reporting of such transactions (FM 1-06).

PAY SUPPORT

A-60. This support function provides for full U.S. pay (including civilian pay where not supported by DFAS); travel support; local and partial payments; check-cashing and currency exchange to Soldiers, civilians and U.S. contractors; and non-U.S. pay support (such as enemy prisoner of war, host nation employees, day laborers, civilian internee). Pay support also includes support to noncombatant evacuation operations in the form of travel advances. Finance offices ensure all Soldiers, regardless of component, receive timely and accurate pay in accordance with existing statutes and regulations.

ACCOUNTING SUPPORT AND COST READINESS

A-61. Accounting support entails the accurate and complete recording of financial transactions within the Army FM support information systems. Additional accounting support involves review and reconciliation of these financial transactions to ensure the proper expenditure of entrusted funds.

A-62. Cost management transforms accounting data into valuable and accurate cost information that enables the commander's decision-making process. It collects and links financial (cost) data with non-financial (output and performance) data and presents information in a way directly related to the major mission objectives of the unit or organization. The process is the accurate measurement and thorough understanding of the full cost of a unit/organization's processes, products and services to support leader's decision-making and fiscal stewardship, thereby maximizing the effectiveness and efficiency of the organization's operations.

AUDIT READINESS

A-63. Audit readiness ensures that organizations produce timely, accurate, and relevant information that is consistently auditable. With the Chief Financial Officers Act of 1990, Congress mandated that all federal agencies produce auditable financial statements. The Office of the Under Secretary of Defense Comptroller outlines the DOD priorities for improving financial information and achieving financial statement audit readiness and directs DOD components to improve budgetary information, as this is the information most useful to the Department's decision makers. Specifically, DOD components focus on improving budgetary processes and information to obtain an unqualified audit opinion on the Statement of Budgetary Resources. Transition to enterprise resource planning systems will help in this area.

PRINCIPLES OF PERSONNEL SERVICES

A-64. The principles of personnel services guide the functions for maintaining Soldier and family support, establishing morale and welfare, and providing personal legal services to personnel. The following principles apply to personnel services.

SYNCHRONIZATION

A-65. Synchronization is ensuring personnel services are effectively aligned with military actions in time, space, and purpose to produce maximum relative readiness and operational capabilities at a decisive place and time. It includes ensuring that personnel services are synchronized with the operations process: plan, prepare, execute, and assess.

TIMELINESS

A-66. Timeliness ensures decision makers have an access to relevant personnel services information and analysis that support current and future operations. It also supports a near real-time COP across all echelons of support.

ACCURACY

A-67. Accuracy of information influences the decisions made by commanders and also Soldiers and their Families. For Soldiers, accurate information affects their careers, retention, compensation, promotions, and general well-being. For Family members, accuracy of information is critical for next-of-kin notification. Personnel services providers must understand the dynamic nature of a system's architecture and that data input at the lowest level has direct impact on decision made at the highest level.

CONSISTENCY

A-68. Consistency involves providing uniform and compatible guidance and support to forces across all levels of operations. Providers of personnel services must coordinate with the appropriate DOD organizations, governmental organizations, and Services to ensure uniformity of support.

PERSONNEL SERVICES

A-69. Personnel services are sustainment functions that man the force, maintain Soldier and Family readiness, promote the moral and ethical values of the nation, and enable the fighting qualities of the Army. Personnel services involve planning and coordinating efforts that sustain personnel. Personnel services relate to personnel welfare (for example readiness, quality of life). Personnel services include the following—

- Human resources support (FM 1-0).
- Legal support (FM 1-04).
- Religious support (FM 1-05).
- Army band operations (ATP 1-19).

PRINCIPLES OF HUMAN RESOURCES SUPPORT

A-70. Human resources support is guided by three of the principles of sustainment: integration, anticipation, and responsiveness and three of the principles of personnel services: synchronization, timeliness, and accuracy.

HUMAN RESOURCES SUPPORT

A-71. The functions of human resources support are described below under their respective human resources core competency. Human resources core competencies are Man the Force, Provide HR Services, Coordinate Personnel Support and Conduct HR Plans and Operations. All of these functions and tasks affect the personnel aspects of building combat power within an organization. FM 1-0 provides doctrine on HR support.

MAN THE FORCE

A-72. Man the force consists of personnel readiness management, personnel accountability, strength reporting and personnel information management.

Personnel Readiness Management

A-73. Personnel readiness management involves analyzing personnel strength data to determine current combat capabilities, projecting future requirements, and assessing conditions of individual readiness. Personnel readiness management is directly interrelated and interdependent upon the functions of personnel accountability, strength reporting, and personnel information management.

Personnel Accountability

A-74. Personnel accountability is by name management of the location and duty status of every person assigned or attached to a unit. It includes tracking the movement of personnel arriving to and departing from a unit. For deployed units, this includes maintaining visibility of individuals entering, transiting, and departing theater for reasons that range from normal rest and recuperation to treatment at a medical treatment facility. Battalion and brigade S-1 personnel readiness teams are at the tip of the spear for managing the automation systems that support Army-wide personnel accountability and require a team of HR professionals who are competent with automated HR systems and understand the personnel accountability process.

Strength Reporting

A-75. Strength reporting is the process of using by-name data to create a numerical end product. Strength reporting is conducted at all levels of command (G-1 and S-1). The personnel strength reporting process starts with by-name strength related transactions submitted at battalion or separate unit-level and ends with personnel database updates at all echelons of command. Strength reports reflect the combat power of a unit and are used to monitor unit strength, prioritize replacements, monitor deployable/non-deployable personnel, execute strength distribution, and make tactical and HR support decisions.

Personnel Information Management

A-76. Personnel information management encompasses collecting, processing, storing, displaying, reconciling, and disseminating relevant HR information about units and personnel. Commanders, HR professionals, and planners rely on personnel information databases when performing their mission. Refer to AR 25-22, *The Army Privacy Program*, for specific recordkeeping requirements under the Privacy Act.

PROVIDE HUMAN RESOURCE SERVICES

A-77. HR services are those functions conducted by HR professionals specifically impacting Soldiers and organizations and include essential personnel services, postal operations, and casualty operations. Essential personnel services functions are performed by G-1s and S-1s. Postal operations are performed by HR personnel in G-1s, postal organizations, military mail terminal teams, HRSCs, HR companies, and monitored within the HROBs. Casualty operations are performed by S-1s and HR unit personnel (for example, HRSC; HROBs; HR company; and CLTs and monitored within the HROBs.

Essential Personnel Services

A-78. Essential personnel services provide timely and accurate HR functions affecting Soldier status, readiness, and quality of life and allows Army leadership to effectively manage the force. Essential personnel services includes awards and decorations, evaluation reports, promotions and reductions, transfers and discharges, identification documents, leaves and passes, line of duty investigations, Soldier applications, and coordination of military pay and entitlements.

Postal Operations

A-79. Postal operations provide mail and postal finance services within the deployed AO. Processing mail involves receiving, separating, sorting, dispatching, transporting, and redirecting ordinary, official, insured, certified, return receipt, and registered mail; conducting multi-national and international mail exchange; and handling official casualty, contaminated/suspicious, and enemy prisoner of war mail. Postal finance services include selling postage stamps, cashing and selling money orders, mailing packages, providing insured/certified mail services and registered/special services (including classified up to SECRET level), and processing postal claims and inquiries.

Casualty Operations

A-80. Casualty operations management includes collecting, recording, reporting, verifying and processing of casualty information from unit-level to HQDA (within 12 hours of incident). The recorded information facilitates next of kin notification (within 4 hours of notification from Casualty and Mortuary Affairs Operations Division to local casualty assistance center), casualty assistance, casualty tracking and status updates, and provides the basis for historical and statistical reports. This information is also shared with other DOD and Army agencies to initiate required actions. Accuracy and timeliness are critical components of casualty operations that depends on assured communications and reliable access to personnel information.

COORDINATE PERSONNEL SUPPORT

A-81. Coordinate personnel support functions normally require coordination by G-1s and S-1s or generally fall under the G-1 and S-1 responsibility. These functions include morale, welfare and recreation; command interest programs; and Army band operations.

RETENTION OPERATIONS

A-82. The objective of coordinate retention operations is to improve readiness, force alignment, and maintain Army end strength through the development and retention of Soldiers. While unit commanders and leaders are ultimately responsible for retaining Soldiers at their level, HR professionals are charged with coordinating with career counselors located at battalion and above organizations who are technical experts in advising commanders on all aspects of the Army Retention Program. HR professionals also assist career counselors in determining retention eligibility, retention options, and assist with eligibility for special commissioning programs consistent with published regulations and Department of the Army directives.

Command Interest Programs

A-83. Command interest programs are of general interest to organizations and Soldiers and include such programs as the equal opportunity program, Army voting assistance program, Army substance abuse program, Army body composition program, Army continuing education system, sexual harassment/assault

response and prevention program, Army sponsorship program, Family readiness, and other programs; however, this list is not all-inclusive. All command interest programs have regulatory guidance or statutory requirements that S-1s must follow to ensure successful execution of the program.

A-84. The objective of coordinate retention operations is to improve readiness, force alignment, and maintain Army end strength through the development and retention of Soldiers. While unit commanders and leaders are ultimately responsible for retaining Soldiers at their level, HR professionals are charged with coordinating with career counselors located at battalion and above organizations who are technical experts in advising commanders on all aspects of the Army Retention Program. HR professionals also assist career counselors in determining retention eligibility, retention options, and assist with eligibility for special commissioning programs consistent with published regulations and Army directives.

Army Band Operations

A-85. Army band support provides support to the deployed force by tailoring band support throughout military operations. Army Bands promote the Army and our national interests, enable commanders to shape the environment to accomplish their mission, and set the conditions that lead to trust and confidence in America's Army and its readiness to conduct operations in peacetime, conflict, and war. Refer to ATP 1-19, *Army Music*, for specific information regarding Army Band support.

Morale, Welfare, and Recreation and Community Support

A-86. Morale, welfare, and recreation operations include unit recreation, sports programs, and rest areas for military and deployed DOD Civilian personnel. Morale, welfare, and recreation personnel provide these services and facilities in coordination with unit points of contact. G-1s and S-1s coordinate and plan for morale, welfare, and recreation operations. Morale, welfare, and recreation support includes coordinated Army and Air Force Exchange Service (and American Red Cross support).

CONDUCT HUMAN RESOURCES PLANNING AND OPERATIONS

A-87. HR planning and operations are the means by which HR leaders envision a desired HR end state in support of the operational commander's mission requirements through the use of the Military Decision-Making Process, Rapid Decision and Synchronization Process, and Army Design Methodology. It communicates to subordinate HR professionals the intent, expected requirements, and desired outcomes in the form of an OPLAN and OPORD, and the process of tracking execution of the planned HR support to ensure effective support to the operational commander through the following processes:

- Assessing the current situation and forecasting HR requirements based on the progress of the operation.
- Making execution and adjustment decisions to exploit opportunities or unforecasted requirements.
- Directing actions to apply HR resources and support at decisive points and time.

Operate Human Resources Command and control Nodes

A-88. Enabling HR command and control nodes by establishing, operating, and maintaining connectivity to HR data and voice communications nodes required for HR operations. HR command and control nodes are required to enable HR personnel access to HR systems and should provide access across all commands and echelons.

Legal Support

A-89. The Judge Advocate General is the Army proponent for legal services and matters. The Judge Advocate General has overall responsibility for legal services based on statutory, regulatory, delegated, and general authority, as well as by designation and assignment. The Judge Advocate General directs the delivery of Army legal services across a broad spectrum of legal functions.

A-90. Legal support to operations encompasses all legal services provided by members of the Judge Advocate Legal Services in support of units, commanders, and Soldiers. The Judge Advocate Legal Services provides

legal services to the Army and joint force under two core legal competencies: Legal Support to the Army and Legal Support to Soldiers and Family Members.

A-91. The Legal Support to the Army core competency encompasses legal support provided to commanders and units, as well as to the Army as an institution. The legal functions included in this core competency include Administrative and Civil Law, Contract and Fiscal Law, Military Justice, and National Security Law.

A-92. The Legal Support to Soldiers and Family Members core competency encompasses all legal services provided to the Soldier and/or Family Members. The legal functions included in this core competency contain Client Services and Trial Defense Services.

Legal Support to the Army Core Competencies

A-93. Administrative law is the body of law containing the statutes, regulations, and judicial decisions that govern the establishment, functioning, and command of military organizations.

Administrative and Civil Law

A-94. The practice of administrative law includes advice to commanders and litigation on behalf of the Army involving many specialized legal areas:

- Military personnel law.
- Government information practices.
- Investigations.
- Relationships with private organizations.
- Labor relations and civilian employment law.
- Military installations.
- Government ethics.

A-95. Administrative law attorneys perform the following functions:

- Advise commanders, review actions, and litigate cases involving military personnel law.
- Advise Army officials regarding their obligations under the Freedom of Information Act and Privacy Act.
- Advise investigating officers, review investigations for legal sufficiency, and advise appointing authorities concerning investigative findings and recommendations.
- Advise Army officials concerning support for, and relationships with, private organizations.
- Advise Army officials concerning labor relations, including certifying and negotiating with labor unions, grievances and arbitration, and unfair labor practice allegations.
- Advise Army officials concerning the recruiting, hiring, evaluating, and disciplining of employees, and represent the Army in litigation arising from employee grievances and discrimination complaints.
- Advise installation commanders concerning the legal authorities applying to military installations.
- Advise Army personnel concerning government ethics, and supervise the command financial disclosure and ethics training programs.

A-96. Civil law is the body of law containing the statutes, regulations, and judicial decisions that govern the rights and duties of military organizations and installations regarding civil authorities. The practice of civil law includes environmental law, the law of federal employment, federal labor relations, government information practices, federal litigation, regulatory law, intellectual property law, and other specialized areas of law. See FM 1-04 for additional information on the scope of this legal function.

Affirmative and Third Party Claims

A-97. The Army claims program investigates processes, adjudicates, and settles claims on behalf of, and against, the United States worldwide. The claims program supports commanders by preventing distractions to the operation from claimants and promoting good will with the local population by providing compensation for personal injury or property damage caused by Army or personnel. Categories of claims during operations

include claims alleged against Army or personnel acting within the scope of employment and claims by the United States against individuals who injure Army personnel or damage Army property.

A-98. Although the client services legal function includes personnel claims or claims by Soldiers and Department of the Army Civilians, claims by third parties or affirmative claims, in particular foreign claims belong to the core competency of Legal Support to the Army.

Contract and Fiscal Law

A-99. Contract law applies domestic and international law to acquire goods, services, and construction. The practice of contract law includes battlefield acquisition, contingency contracting, bid protests and contract dispute litigation, procurement fraud oversight, commercial activities, and acquisition and cross-servicing agreements.

A-100. Contract law responsibilities include furnishing legal advice and assistance to procurement officials during all phases of the contracting process. It includes overseeing an effective procurement fraud abatement program and providing legal advice to the command concerning battlefield acquisition, external contractor support for contingencies and the LOGCAP, acquisition cross-servicing agreements, the commercial activities program, and overseas real estate and construction.

A-101. Legal counsel must participate fully in the acquisition process, be continuously available to their clients, involve themselves early in the contracting process, communicate closely with procurement officials and contract lawyers in the technical supervision chain, and provide legal and business advice as part of the contract management team. Additionally, expertise may be required at the multinational command headquarters to advise concerning international acquisition agreements.

A-102. Fiscal law applies domestic statutes and regulations to funding military operations, and supporting non-Federal agencies and organizations. Fiscal law responsibilities include providing legal advice on the proper use and expenditure of funds, interagency agreements for logistics support, security assistance, and support to non-Federal agencies and organizations. Additionally, expertise may also be required at the multinational command headquarters to advise concerning international support agreements. See FM 1-04 for additional information on the scope of this legal function.

Military Justice

A-103. Military justice is the administration of the Uniform Code of Military Justice. The purpose of military justice, as a part of military law, is to promote justice, to assist in maintaining good order and discipline in the armed forces, to promote efficiency and effectiveness in the military establishment, and thereby to strengthen the national security of the United States (Manual for Courts-Martial). The Judge Advocate General is responsible for the overall supervision and administration of military justice within the Army. Commanders oversee the administration of military justice in their units and communicate directly with their SJAs about military justice matters. Two organizational components of military justice exist within the Judge Advocate General's Corps: the SJA and the Chief, U.S. Army Trial Judiciary.

A-104. The SJA is responsible for military justice advice and services to the command. The SJA advises commanders concerning administrative boards, the administration of justice, the disposition of alleged offenses, appeals of nonjudicial punishment, and action on courts-martial findings and sentences. The SJA supervises the administration and prosecution of courts-martial, preparation of records of trial, the victim-witness assistance program, and military justice training.

A-105. Military justice services are centralized to facilitate timely and efficient delivery. Normally, courts-martial are processed at theater Army, corps, division, TSC, or other headquarters commanded by a general court-martial convening authority. Army brigade and battalion commanders, as well as JTF commanders, have special and summary court-martial convening authority and may require support to conduct courts-martial. See FM 1-04 for additional information on the scope of this legal function.

National Security Law

A-106. The practice of National Security law includes the legal functions previously known as International and Operational law, but also includes some areas of law practiced at the highest levels of the U.S.

government. There are six legal tasks included in the National Security Law function: Constitutional Law, Cyber Law, Intelligence Law, International Law, Operational Law, and Special Operations Law. This legal function includes the domestic, foreign, and international law that directly affects the conduct of operations. See FM 1-04 for additional information on the scope of this legal function.

Legal Support to Soldiers and Families Core Competency

A-107. Client services and trial defense services are offered to Soldiers and their families. Their functions are described in the paragraphs below.

Client Services

A-108. The legal function of client services includes the legal tasks: Claims by Soldiers and Department of the Army Civilians, Medical Evaluation and Disability Law, Soldier and Family Legal Assistance, and Special Victims' Counsel Services. Each of these legal tasks centers on service to individuals as opposed to service to the Army as an institution. See FM 1-04 for additional information on the scope of this legal function.

Trial Defense Services

A-109. Trial Defenses Services provides legal support to Soldiers regarding judicial and nonjudicial disciplinary matters and represents Soldiers before courts-martial and administrative boards. See FM 1-04 for additional information on the scope of this legal function.

Religious Support

A-110. The religious support mission of the chaplain corps is to assist commanders in the responsibility to provide for the free exercise of religion, and to provide religious, moral, and ethical leadership to sustain a ready force of resilient and ethical Soldiers and leaders. Unit ministry teams and chaplain sections, comprised of at least one chaplain and one religious affairs specialist, possess three core competencies: nurture the living, care for the wounded, and honor the dead. The religious support mission is executed through two required capabilities—providing support and advising the command. For additional information on religious support, see FM 1-05.

Provide Religious Support

A-111. The Army requires the capability to provide religious support across extended distances, which accommodates the free exercise of religion and spirituality, and supports resiliency efforts to sustain Soldiers. Chaplain sections and unit ministry teams ensure provision of religious support that meets the religious and spiritual requirements of the unique military culture. Religious support includes providing those aspects of religious education, clergy counsel, pastoral care, authentic worship, and religious and spiritual expression that would otherwise be denied as a practical matter to Soldiers under the varied circumstances of military contingencies.

Advise the Command

A-112. The advisement capability is both internal and external. External advisement describes advice to commanders concerning potential impact of religion and culture of local populations that are external to the unit itself in an AO. ATP 1-05.03 has more information. Internal advisement is defined as a required religious support capability that advises on religion, morals, and morale within units, and ethical decision making of the command. ATP 1-05.04 has details. Internal advisement is concerned with two distinct types of potential operational impacts: 1) religious, moral, and morale needs and concerns of Soldiers, authorized civilians, and their Families, and 2) ethical decisions made on behalf of the command or organization.

BAND SUPPORT

A-113. Band support is an element of personnel services and is aligned under the sustainment warfighting function. Army bands support the Army through the provision of tailored music that enhances Warrior

morale, supports Army recruiting efforts, provides comfort to recovering Soldiers, reinforces relations with host nation populations, and maintains a connection with the American public and Army Families. Army band operations is a subordinate key function of the HR support core competency, coordinate personnel support. (FM 1-0)

A-114. Army bands promote the Army and our national interests, enable commanders to shape the environment to accomplish their mission, and set the conditions that lead to trust and confidence in America's Army and its readiness to conduct operations in peacetime, conflict, and war. (ATP 1-19).

A-115. Army bands provide support to the force by tailoring music support throughout military operations. Music instills in Soldiers the will to fight and win, fosters the support of our citizens, and promotes America's interests at home and abroad. Music serves as a useful tool to reinforce relations with host nation populations and favorably shapes the civil situation throughout the peace building process. Inherently capable of providing a climate for international relations, bands serve as ambassadors in multi-national operations or to the host nation population. ATP 1-19 has more details.

Core Competencies

A-116. Army Band's four core competencies enable bands to provide flexible, relevant, and ready music to support unified land operations: render honors, strengthen unit morale and esprit de corps, enhance host nation relations, and communicate national values and beliefs.

Flexibility

A-117. Army bands support joint, interagency, and multi-national operations and are comprised of multiple teams that provide flexible and relevant music, tailored to meet the requirements of support operations in multiple operating environments. This design enables bands to support both deployment operations and home station missions concurrently, allowing commanders to simultaneously spread the positive impact of Army bands across the deployed force, international community, and the American public at home. Army bands based in the U. S. and its territories continue to provide music support of Army recruiting and public relations during overseas contingency operations (FM 1-0). For more information on Army bands, see ATP 1-19.

Coordinate Band Support

A-118. Coordinated band support activities with our joint partners and government agencies outside the DOD serve as a means of optimizing cooperation. These activities, developed in coordination with morale and welfare activities sections, food services, and other support elements, can create opportunities to enhance relations with our joint, interagency, multinational, and unified action partners.

A-119. Army bands support operations by reassuring allies and promoting regional stability. Through cultural exchange, bands are uniquely capable of influencing human behavior and perceptions without ever speaking a word. Army bands supports CCDRs by promoting U.S. national interests and building partnerships. By tapping into shared values, Army bands can exert a low-threat, influential effect when performing in support of the commander's outreach plan, or public and cultural diplomatic initiatives.

Strategic Messaging

A-120. The presence of an Army band presents an opportunity for CCDRs to convey strategic messaging, setting the conditions to alter the opinions and attitudes of audiences through band support operations. Army band performances create an occasion for communication. Bands help shape the environment for interagency and host nation success during stability. During this phase of operations band support may include, but is not limited to, ceremonial, diplomatic, host nation outreach, Soldier morale, or memorial support. Through the provision of tailored music performances, Army Band also enhances Soldier resilience, morale, and esprit de corps.

Readiness

A-121. Army bands contribute to unit readiness by providing opportunities for Soldiers and civilians to combat the negative effects of stress through music. Stress associated with large scale combat operations can

wear down individual morale and reduce unit effectiveness. Army bands perform music that builds morale and cohesion, therefore enhancing quality of life and promoting resilience in harsh environments such as large-scale combat operations. Families are expected to experience increased stress because of prolonged deployments under large-scale combat operations environments. Music performed by Army bands connects service-members to the Army values, reduces stress in a large-scale combat operations environment as well as back on the home front, and allows Soldiers and civilians to maintain focus on the mission at hand.

Synchronization

A-122. An Army Band liaison officer (42C) position may be established to synchronize and integrate band support for joint, interagency, diplomatic, or multinational events that can support unified action partners. These events may include ceremonial, protocol, outreach, music mentorship, or entertainment activities throughout an area of operations. By capitalizing on the near-term benefits associated with low-threat music engagement, band support operations can help build interpersonal trust, improve understanding, and help pave the way for cooperation between U.S. forces, host nation, and our unified action partners.

PRINCIPLES OF THE ARMY HEALTH SYSTEM

A-123. The AHS mission includes both health service support and force health protection. The health service support mission is part of the sustainment warfighting function. The force health protection mission falls under the protection warfighting function. The principles of the AHS are the enduring tenets upon which the delivery of health service support and force health protection in a field environment is founded. See FM 4-02 for a detailed description of AHS support.

A-124. The principles of AHS support guide medical planners in developing operational plans that are ethical, effective, efficient, flexible, and executable. AHS plans are designed to support the tactical commander's scheme of maneuver while still retaining a Soldier/patient focus. The AHS principles apply across all medical functions and are synchronized through the exercise of medical command and control and close coordination and synchronization of all deployed medical assets through medical technical channels. The principles of the AHS are conformity, proximity, flexibility, mobility, continuity, and control.

CONFORMITY

A-125. Conformity with the tactical plan is the most basic element for effectively providing AHS support. To develop a comprehensive concept of operations, the medical commander must have direct access to the tactical commander. AHS planners are involved early in the planning process and once the plan is established it must be rehearsed with the forces it supports.

PROXIMITY

A-126. The AHS principle of proximity is to provide AHS support to sick, injured, and wounded Soldiers at the right time and the right place and to keep morbidity and mortality to a minimum. AHS support assets are placed within supporting distance of the maneuver forces that are being supported, but not close enough to impede ongoing combat operations. As the rhythm of military operations of the medical commander is similar to the tactical commander's, it is essential that AHS assets are positioned to rapidly locate, acquire, treat, stabilize, and evacuate combat casualties. Peak workloads for AHS resources occur during combat operations.

FLEXIBILITY

A-127. Flexibility is being prepared and empowered to shift AHS resources to meet changing requirements. Changes in tactical plans or operations make flexibility in AHS planning and execution essential. In addition to building flexibility into OPLANs to support the tactical commander's scheme of maneuver, the medical commander also ensures flexibility to rapidly transition from one level of violence to another across the range of military operations. As the current era is one characterized by conflict, the medical commander may be supporting simultaneous actions along the continuum from stable peace through general war. The medical commander exercises command authority to effectively and efficiently manage scarce medical resources to benefit the greatest number of Soldiers in the AO.

MOBILITY

A-128. Mobility ensures that AHS assets remain in supporting distance to support maneuvering forces. The mobility, survivability (such as armor plating and other force protection measures), and sustainability of medical units organic to maneuver elements must be equal to the forces being supported. Major AHS headquarters in EAB continually assess and forecast unit movement and redeployment. AHS support is continually responsive to shifting medical requirements in the OE. In noncontiguous operations, the use of ground ambulances may be limited depending on the security threat and air ambulance use may be limited by environmental conditions and enemy air defense threat. Therefore, to facilitate a continuous evacuation flow, medical evacuation is a synchronized effort to ensure timely, responsive, and effective support is provided to the tactical commander. The only means available to increase the mobility of medical units is to evacuate all patients the medical units are holding. Medical units anticipating an influx of patients must medically evacuate patients on hand prior to the start of the engagement.

CONTINUITY

A-129. Continuity in care and treatment is achieved by moving the patient through progressive, phased roles of care, extending from the point of injury or wounding to the CONUS support base. Each type of AHS unit contributes a measured, logical increment in care appropriate to its location and capabilities. In current operations, lower casualty rates, availability of rotary-wing air ambulances, and other situational variables often enable a patient to be evacuated from the point of injury directly to the supporting combat support hospital. In more traditional combat operations, higher casualty rates, extended distances, and patient condition may necessitate that a patient receive care at each role of care to maintain physiologic status and enhance chances of survival. The medical commander's depth of medical knowledge, ability to anticipate follow-on medical treatment requirements, and assessment of the availability of specialized medical resources can adjust the patient flow to ensure each Soldier receives the care required to optimize patient outcome. The medical commander can recommend changes in the theater evacuation policy to adjust patient flow within the deployed setting.

CONTROL

A-130. Control is required to ensure that scarce AHS resources are efficiently employed and support the tactical, operational, and strategic plans. It also ensures the scope and quality of medical treatment meet professional standards, policies, and U.S. and international law. As the AMEDD is comprised of 10 interdependent and interrelated medical functions, control of AHS support operations requires synchronization to ensure the complex interoperability of all medical assets remain in balance to optimize the effective functioning of the entire system.

HEALTH SERVICE SUPPORT

A-131. Health service support encompasses all support and services performed, provided, and arranged by the AHS to promote, improve, conserve, or restore the behavioral and physical well-being of Army personnel and as directed, unified action partners. Health service support includes—

- Casualty care which encompasses a number of AMEDD functions, including—
 - Medical treatment (organic and area medical support).
 - Hospitalization.
 - Dental care (treatment aspects).
 - Behavioral health/ neuropsychiatric treatment.
 - Clinical laboratory services.
 - Treatment of CBRN patients.
- Medical evacuation (including medical regulating).
- Medical logistics (including blood management).

CASUALTY CARE

A-132. Casualty care encompasses all issues pertaining to the provision of clinical services for the treatment of Soldiers from the point of injury to successive roles of care. Casualty care includes the following sub-functions: medical treatment (organic and area medical support), hospitalization, the treatment aspects of dental care and behavioral health/neuropsychiatric treatment, clinical laboratory services, and treatment of CBRN patients.

Medical Treatment (Organic and Area Medical Support)

A-133. The medical treatment function encompasses Roles 1 and 2 medical treatment support. Role 1 medical treatment is provided by the combat medic or by the physician, the physician assistant, or the health care specialist in the battalion aid station/Role 1 medical treatment facility. Role 2 medical care provides greater resuscitative capability than is available at Role 1 and is rendered by the medical company in the BSB or by the medical company (area support), which is an EAB asset. These roles of care are provided by organic assets or on an area support basis from supporting medical companies or detachments. The area support function encompasses emergency medical treatment, advanced trauma management, routine sick call, emergency dental care, preventive medicine, and combat and operational stress control support.

Hospitalization

A-134. The Army's hospitalization capability consists of Role 3 combat support hospitals and hospital centers purposely positioned to provide support in the AO. At Role 3, the combat support hospital and hospital centers expands the support provided at Role 2 and is staffed and equipped to provide care for all categories of patients, to include resuscitation, initial wound surgery, damage control surgery, and postoperative treatment. Hospitalization capabilities deploy as modules or multiple individual capabilities that provide incrementally increased medical services in a progressively more robust AO. The hospitalization capability in the AO offers essential care to either return the patient to duty (within the theater patient movement policy) and/or stabilization to ensure the patient can tolerate evacuation to a definitive care facility outside the area of operations (this support is key to early identification and treatment of mild traumatic brain injuries).

Dental Care

A-135. Dental care provided as part of health service support includes far forward dental treatment, treatment of oral and dental disease, and early treatment of severe oral and maxillofacial injuries. Dental personnel may also be used to augment medical personnel (as necessary) during mass casualty operations.

Behavioral Health

A-136. The primary focus of behavioral health/neuropsychiatric treatment is to screen and evaluate Soldiers with maladaptive behaviors. The purpose of this function is to provide diagnosis, treatment, and disposition for Soldiers with neuropsychiatric/behavioral health-related issues.

Clinical Laboratory Services

A-137. Clinical laboratory services provide basic support within the theater, to include procedures in hematology, urinalysis, microbiology, and serology. Role 2 medical company (area support) and brigade support medical companies, when operating with or collocated with a forward resuscitative and surgical team or other resuscitative and surgical team, may augment the clinical laboratory and blood storage capabilities of that element. The combat support hospital and hospital center perform procedures in biochemistry, hematology, urinalysis, microbiology, and serology in support of clinical activities. The hospital also provides blood banking services.

Treatment of Chemical, Biological, Radiological, and Nuclear Patients

A-138. Health service support operations in a CBRN environment are complex. Medical personnel may be required to treat CBRN injured and contaminated casualties in large numbers. Medical treatment is provided

in protected environments and protective clothing must be worn. Movement of CBRN casualties can spread contamination to clean areas. All casualties are decontaminated as far forward as the situation permits and are decontaminated before being admitted into a clean medical treatment facility. The admission of one contaminated casualty into a clean medical treatment facility will contaminate the facility, thereby reducing treatment capabilities in the facility. ATP 4-02.7 has additional information.

MEDICAL EVACUATION (INCLUDING MEDICAL REGULATING)

A-139. Medical evacuation is the timely and effective movement of the wounded, injured, or ill to and between MTF on dedicated and properly marked medical platforms with en route care provided by medical personnel. The provision of en route care on medically equipped vehicles or aircraft enhances the patient's potential for survival and recovery and may reduce long-term disability. Medical regulating is the coordination and control of moving patients to MTFs that are best able to provide the required specialty care. See ATP 4-02.2 for additional information.

MEDICAL LOGISTICS

A-140. Medical logistics encompasses planning and executing all class VIII supply support to include management of the following functions: medical materiel, medical equipment maintenance and repair, optical fabrication and repair, patient-movement items, medical gases, blood storage and distribution, regulated medical waste (including hazardous material), medical facilities and infrastructure, and medical contracting. The system is anticipatory with select units capable of operating in a split-based mode. ATP 4-02.1 has details.

ARMY MEDICAL SUPPORT TO OTHER SERVICES

A-141. The Surgeon General is responsible to the Secretary of the Army (under the supervision of the Chief of Staff of the U.S. Army) for execution of assigned responsibilities as outlined in Title 10 U. S. Code Section 3013(b). In this role, The Surgeon General serves as the Army's strategic enabler for globally integrated health services and provides AHS support to other Services through oversight of assigned EA or lead Service responsibilities for a number of medical functions. This requires the synchronization and integration of national medical resources on a global scale to ensure that Soldiers and unified action partners receive the best possible operational medical support regardless of their geographic location. The Surgeon General's EA or lead Service responsibilities include—

- Serving as the DOD sole provider for veterinary public and animal health services in support of all of the military Services (except for the food inspection mission on U.S. Air Force installations).
- Serving as the EA for the Armed Services Blood Program for blood and blood product distribution.
- Serving as the DOD EA for medical research for prevention, mitigation, and treatment of blast injuries.
- Coordination for joint patient movement or strategic evacuation.
- Providing intra-theater aeromedical evacuation (which includes medical evacuation from ship-to-shore and shore-to-ship for U.S. Navy and Marine personnel).
- Coordinating for medical support to joint special operations forces. See FM 4-02 for additional information.

A-142. The MEDCOM (DS), medical brigade (support) (MEDBDE [SPT]), and subordinate units are responsible to The Surgeon General and the ASCC commander (through coordination with the ASCC surgeon) for regionally focused execution and oversight of AHS support to other Services within the AO. When designated, the MEDCOM (DS) is also responsible for providing operational medical logistics support to other Services. In cases where the ASCC is designated by the CCDRs as the single integrated medical logistics manager, functions are most commonly carried out through a coordinated effort between the ASCC surgeon, the MLMC, the medical logistics company, and the MEDBDE (SPT), supported by the MEDCOM (DS) to provide common user medical logistics support for joint operations in theater.

MEDICAL OPERATIONAL CHALLENGES

A-143. For the class VIII single integrated medical logistics manager mission, the MLMC provides information management and distribution coordination; the medical logistics company provides supply requisition, processing, and medical maintenance support; the MEDBDE (SPT) provides planning and supervision; and the MEDCOM (DS) provides theater-level oversight of medical logistics operations. The medical detachment (blood support) provides collection, manufacturing, storage, and distribution of blood and blood products for brigade and EAB AHS units and other Services as required. The MEDCOM (DS) maintains a command link with the MEDBDE (SPT) and coordination link with the TSC/ESC through the MLMC (forward team) collated with the DMC.

A-144. AHS support to the deployed force faces several operational and ethical challenges to include MTFs mobility, medical evacuation, and prolonged care.

A-145. Army medical personnel provide en route medical care however, current medical capabilities are not designed to hold or treat non-stabilized patients on the move. Continued treatment and holding of high priority patients (i.e. surgical cases) is necessary until stabilized for movement. Once treatment of high priority patients begins, it must be continued until completed to reduce the risk of loss of life, limb or eyesight.

A-146. Current medical formations will culminate quickly if required to conduct forward movement or relocation with patients. Current medical formation design and equipping may not be capable of providing continued support within the timelines allotted by maneuver forces and the constraints placed by logistics common user transportation. This is especially true for Role 3 MTFs.

A-147. Current medical force structure lacks sufficient en route care capability and capacity (to include air and ground transport medical treatment platforms, equipment and supplies, and medically trained personnel).

Ethical Obligations

A-148. Health care personnel are trusted Army professionals, guided by the moral principles of the Army Ethic and by the ethics of their professional calling. Their education, training and commitment to those ethical principles, coupled with the requirements of international law as it pertains to the treatment of detainees and civilians during conflict help to ensure the ethical treatment of all sick and wounded personnel.

A-149. The determination of eligibility for medical care is a complex issue. The determination of eligibility for medical treatment in Army MTFs is established in accordance with command guidance, practical humanitarian and medical ethical considerations, availability of U.S. medical assets (in relationship to the threat faced by the force), and potential training opportunities for medical forces.

A-150. Any individual requesting medical care should receive a timely medical assessment of his condition. Although individuals may not be eligible for treatment in accordance with Army regulations or command policy, life-, limb-, or eyesight-saving procedures will be provided to stabilize the individual for transfer to the appropriate civilian or other nation MTF. See FM 4-02 for additional detail.

Adherence to the Law of Land Warfare

A-151. The conduct of armed hostilities on land is regulated by both written and unwritten law. This law of land warfare is derived from two sources, custom and lawmaking treaties such as the Geneva and Hague Conventions. The rights and duties set forth in these conventions are part of the supreme law of the land; violation of any one of them is a serious offense. The following are several ethical considerations applicable to the conduct of AHS support:

- Article 223.B Self-defense as defined by the Geneva Conventions, stipulate that medical personnel are restricted to the use of small arms for self-protection and defense of patients. The increased demand for medical support during large-scale combat operations will prohibit use of medical personnel for perimeter defense and other security details.
- Strict adherence to the provisions of the Geneva conventions prohibits concurrent storage of class VIII with other classes of supplies (i.e. food or ammunition).
- Class VIII supplies and equipment are also afforded protective status under the provisions of the Geneva Conventions. Captured medical supplies and equipment are protected from intentional

destruction. Units having custody of enemy supplies and equipment will turn them over to the supporting medical facility. Local or captured class VIII materiel will only be used to support enemy prisoners of war or civilian detained/retained personnel.

- The Geneva Conventions (405 c.) also stipulate that “in the practice of the U.S., religious buildings, shrines, and consecrated places employed for worship are used only for aid stations, medical installation, or for the housing of wounded personnel awaiting evacuation, provided in each case that a situation of emergency requires such use.” See FM 6-27 for additional information.

A-152. The process of abiding by the principles of ethical treatment of personnel regardless of national/adversarial affiliation and navigating rules regarding employment of weapon systems, markings, and duties, can be challenging. Units are strongly encouraged to consult with their servicing SJA and unit ministry team for advisement. See FM 4-02 and ATP 4-02.46 for additional information on the Geneva Conventions and AHS support to detainees.

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Appendix B

Army Sustainment Information Systems

This appendix discusses information systems in two contexts. First, it covers automated information systems that specifically support sustainment functions. Then it talks about how sustainment information systems are integrated in the overall command and control system. ATP 4-0.6 has additional information on information systems.

ARMY SUSTAINMENT INFORMATION SYSTEMS

B-1. Army sustainment information systems provide commanders and staffs situational understanding—building the COP and improving the quality and effectiveness of Army readiness by enhancing the decision support process. Sustainment information systems receive, house, and present the data that become the information, which in turn, sustainment leaders use to build and maintain combat power to ensure mission success for the warfighter. Current sustainment information systems include the Unit-Level Logistics System-Aviation (Enhanced), Standard Army Ammunition System-Modernization, Transportation Coordinators'- Automated Information for Movement System II, Army Food Information Management System, and a host of human resources systems. Even though some of these non- enterprise resource planning legacy systems are web-based, these do not leverage the integrated efficiencies of enterprise resource planning systems. Army sustainment enterprise resource planning systems include the GCSS-Army with its hubs Army Enterprise Systems Integration Program, Integrated Personnel and Pay System-Army, Global Fund Enterprise Business System, and Logistics Modernization Program. As the Army continues its transition to enterprise resource planning systems, the advantages accruing to the supported commander as identified in chapter 1 will continue to grow. This section lays out current systems and those coming on line in the short term.

GLOBAL COMBAT SUPPORT SYSTEM-ARMY

B-2. GCSS-Army subsumed multiple legacy Standard Army Management Information Systems to combine ground maintenance, unit supply, property management, warehouse management, and finance into an enterprise resource planning system. As such, it is the principal warfighting system for logisticians to achieve readiness and support operations across multiple domains. Having a consolidated, integrated database for those functions gives both sustainers and supported commander's up-to-date visibility of the resources that can be used to weight the operation. GCSS-Army uses a commercial off-the-shelf system run on system applications and products based software. GCSS-Army meets congressionally mandated auditability requirements and provides the logistician with total tactical-level supply chain and equipment health visibility. The product has been fully fielded but continues to add improved functionality to the baseline. Sustainment Automation Support Management Offices provide tactical support to GCSS-Army systems.

INTEGRATED PERSONNEL AND PAY SYSTEM-ARMY

B-3. The Integrated Personnel and Pay System-Army is an on-line human resource system that provides integrated personnel, pay, and talent management capabilities in a single system. It provides end-to-end tracking of pay and personnel data and give individual Soldiers access their Soldier record brief. The system will automate the pay process while linking human resource transactions such as dependent changes and promotions. Integrated Personnel and Pay System-Army also provides integrated access by granting visibility and transaction functionality to commanders, Soldiers, and Army human resource professionals. Embedded security and common access card restrictions will ensure safeguarding of critical information. This warfighter system gives commanders visibility and transaction role authority over their personnel and improve readiness

by synchronizing personnel movement and deployment status. Integrated Personnel and Pay System-Army uses a commercial off-the-shelf system run on Oracles' PeopleSoft-based software. Sustainment Automation Support Management Offices provide tactical support to Integrated Personnel and Pay System-Army systems.

GENERAL FUND ENTERPRISE BUSINESS SYSTEM

B-4. The General Fund Enterprise Business System is the Army's accounting system of record. General Fund Enterprise Business System provides accurate, timely, and reliable cost information and makes the information available to all users on a real-time basis. General Fund Enterprise Business System enables the Army to comply with current statutory and regulatory requirements. It interfaces with GCSS-A creating a financial system of record. Under the accounting management, GCSS-A leverages the General Fund Enterprise Business System core design template providing a single business process that allows the Army to integrate logistics, financial, maintenance, property accountability of assets and accounting data.

LOGISTICS MODERNIZATION PROGRAM

B-5. The Logistics Modernization Program is one of the largest integrated supply chain, overhaul, and maintenance enterprise resource planning systems in the world and provides true visibility of the national-level logistics production baseline. Sustainers use the Logistics Modernization Program to build, sustain, and maintain national-level combat power at the strategic level. The Logistics Modernization Program maintains data for assets entering the Army system through commercial vendors and contractors, and accommodates depot to shop-floor-level maintenance status. It is the primary sustainment system for USAMC's depots and arsenals and is the entry point for supply parts fulfillment with DLA. The Logistics Modernization Program manages the Army's industrial base and tracks schedule, cost planning, production orders, and procurement. The Logistics Modernization Program's Enterprise Data Warehouse provides data to the Army Enterprise Systems Integration Program, which gives sustainment leaders strategic planning visibility. The Logistics Modernization Program uses a commercial off-the-shelf system run on system applications and products-based software.

ARMY ENTERPRISE SYSTEMS INTEGRATION PROGRAM

B-6. The Army Enterprise System Integration Program is not an enterprise resource planning system. It serves as an integrator between multiple enterprise resource planning systems and stand-alone sustainment systems, and acts as a data-brokering hub between those systems. Army Enterprise System Integration Program's brokering translates and synchronizes different data formats and multiple operating systems. Those transactions that are able to pass from enterprise resource planning system to enterprise resource planning system do not need Army Enterprise System Integration Program resolution and do not engage the data hub, but many transactions do require such brokering. Army Enterprise System Integration Program also is the single authoritative data source for catalog, material, and vendor data. It is the portal for non-standard item entrance into the Army supply system. Army Enterprise System Integration Program uses Army Centralized Business Analytics to provide business intelligence analysis and tailored visualizations for readiness decision making. Army Enterprise System Integration Program uses a commercial off-the-shelf system run on System Applications and Products-based software.

AUTOMATED MILITARY POSTAL SYSTEM

B-7. The Automated Military Postal System connects military post offices and other military postal activities around the world directly to the Military Postal Service Agency via the worldwide web. Instead of relying on telephone messages, e-mails, or other secondhand communication methods, Automated Military Postal System users can view the information about their military post offices on their own desktops and make changes or corrections to the information themselves.

DEFENSE CASUALTY INFORMATION PROCESSING SYSTEM – PERSONNEL CASUALTY REPORTING

B-8. The Defense Casualty Information Processing System-Personnel Casualty Reporting is an automated system used to record and report casualty data. The system is employed by human resource units, typically CLTs, battalion and brigade level S-1 sections, and G-1 and/or Adjutant Generals, performing casualty reporting missions. While not required, battalion S-1 sections may use the Defense Casualty Information Processing System-Personnel Casualty Reporting to submit their casualty reports to higher HQs. When adequate Non-classified Internet Protocol Router Network access is available, the web-based component of the Defense Casualty Information Processing System-Personnel Casualty Reporting should be used for casualty reporting. Gaining access and configuring the web-based component of Defense Casualty Information Processing System-Personnel Casualty Reporting requires prior coordination with the casualty and mortuary affairs operation center and the casualty reporting chain of command. The web-based component of Defense Casualty Information Processing System-Personnel Casualty Reporting is available only on Non-classified Internet Protocol Router Network.

DEPARTMENT OF THE ARMY MOBILIZATION PROCESSING SYSTEM

B-9. Department of the Army Mobilization Processing System is a Secret Internet Protocol Router network hosted business process application that takes a force request for a unit mobilization from initiation, through required Department of the Army staff review and to the Assistant Secretary of the Army for Manpower and Reserve Affairs, the Army principal delegated the authority to order units to involuntary mobilization. For more information, refer to FM 1-0.

DEFENSE ENROLLMENT ELIGIBILITY REPORTING SYSTEM

B-10. The Defense Enrollment Eligibility Reporting System is a database maintaining personnel and benefits information for active and Reserve Component Soldiers, retired uniformed service members, eligible family members, and other DOD personnel and DOD contractors requiring logical access. It verifies eligibility when producing common access cards and supports benefit delivery including medical, dental, and life insurance and educational benefits. In addition, the Defense Enrollment Eligibility Reporting System enables DOD e-business (including providing identity management), reduces fraud and abuse of government benefits, and supports medical readiness.

DEPLOYABLE REAL-TIME AUTOMATED PERSONNEL IDENTIFICATION SYSTEM

B-11. The Deployable Real-Time Automated Personnel Identification System workstation is a laptop workstation designed for use in both tactical and non-tactical environments. It provides Defense Enrollment Eligibility Reporting System updates and issues common access cards to Soldiers at home station or in a deployed environment. The also provides the user with a common access card personal identification number reset capability. This system works only when connected to the Defense Enrollment Eligibility Reporting System and has the same operational capability as the standard desktop version of the Real-Time Automated Personnel Identification System workstation.

TACTICAL PERSONNEL SYSTEM

B-12. This stand-alone database provides an ad-hoc ability to create a temporary system to account for unit personnel. It has limited ability to perform robust personnel accountability or strength reporting. Human resource professionals use the Tactical Personnel System primarily to create manifests for transportation by air. It produces automated manifests that can be loaded in Air Force manifesting systems and deployed theater accountability system.

ARMY DISASTER PERSONNEL ACCOUNTABILITY AND ASSESSMENT SYSTEM

B-13. The Army Disaster Personnel Accountability and Assessment System is a web-based application designed to augment the disaster accountability process by aiding in the determination of the status and locations of all Army affiliated personnel — Soldiers, Army Civilians, contractors authorized to accompany

the force, and family members when directed by the Secretary of Defense. It is the official tool for personnel accountability during natural or manmade disasters. The system provides DOD and Army leadership a means of determining the status of Army personnel and family members in an affected area and facilitates decisions on allocating resources for recovery and reconstitution.

DEPLOYED THEATER ACCOUNTABILITY SYSTEM

B-14. The Deployed Theater Accountability System establishes and maintains personnel accountability. It is a classified system fielded to all human resource commanders, personnel, and organizations and consists of three distinct levels: mobile, major command, and enterprise. It provides reliable, timely, and efficient accountability for Soldiers, DOD Civilians, contractors authorized to accompany the force, and foreign nationals enabling commanders at all echelons to track their personnel by name, unit, location, and date. It also allows commanders to track their personnel while in transit, populating duty status changes by synchronizing to the major command system. The major command system transfers historical records to the enterprise server daily.

ELECTRONIC MILITARY PERSONNEL OFFICE

B-15. The Electronic Military Personnel Office application provides the Army with a reliable, timely, and efficient method for performing personnel actions, personnel accountability, and strength reporting. S-1 sections at all levels use it to update active duty Soldier information. Electronic Military Personnel Office transactions establish or update the Total Army Personnel Database records and ultimately (daily) the Integrated Total Army Personnel Database at HRC. Electronic Military Personnel Office modules give users, human resource managers, and commanders at all echelons visibility of the location, status, and skills of their Soldiers. The Enterprise Datastore (commonly referred to as Datastore) provides personnel data snapshots from the Electronic Military Personnel Office database to support logical and decision-making needs for users within the total Army hierarchy. Daily updates ensure the data are accurate, reliable, and available in a timely manner.

ENLISTED DISTRIBUTION AND ASSIGNMENT SYSTEM

B-16. The Enlisted Distribution and Assignment System is a real-time, interactive automated system that supports the management of the enlisted force. Assignment and distribution managers at HRC use the Enlisted Distribution and Assignment System to create requisitions and process assignments, create and validate requisitions, and add or modify requisitions. It also provides enlisted strength management information. The information is static and updated on a daily basis. The system provides access to summary reports, requisition reports, personnel information, assignment information, and a data dictionary lookup function.

INTERACTIVE PERSONNEL ELECTRONIC RECORDS MANAGEMENT SYSTEM

B-17. The Interactive Personnel Electronic Records Management System is the repository of Soldier's human resource records and legal artifacts for all components. The Army military human resource record contains a copy of all permanent documents. Documentation is placed into the Soldier's Army military record in accordance with AR 600-8-104, *Army Military Human Resource Records Management*. For family members, accuracy of information is critical for next-of-kin notification.

REGIONAL LEVEL APPLICATION SOFTWARE

B-18. The United States Army Reserve uses the Regional Level Application Software as a client-server, web-enabled application for the management of personnel and resources. It shows the overall readiness posture of a unit by Soldier, and generates Total Army Personnel Database-Reserves transactions and electronically transmits the data to HRC.

STANDARD INSTALLATION/DIVISION PERSONNEL SYSTEM

B-19. The Standard Installation/Division Personnel System performs functions similar to those performed in the Electronic Military Personnel Office for the active component. It is the Army National Guard's database of record for personnel. Each of the states and territories maintains its own database and transmits updates to the National Guard Bureau, which loads these state-level changes into Total Army Personnel Database-Guard.

TOTAL OFFICER PERSONNEL MANAGEMENT INFORMATION SYSTEM

B-20. The Total Officer Personnel Management Information System provides officer and warrant officer information retrieval and data query functionality. It has two subsystems: Total Officer Personnel Management Information System-II and Electronic Total Officer Personnel Management Information System. The Total Officer Personnel Management Information System-II is a Windows-based program that provides users easy access to data with its web-based interface. Assignment and distribution managers at HRC use this system to create and validate requisitions and process assignments for officers. It is also used by the HQDA, Army commands, and installations to manage officer strength and distribution. Key uses include personnel queries, officer strength reports, and requests for orders. The Electronic Total Officer Personnel Management Information Systems is a read-only system, and requires access clearance. It gives users the ability to pull officer and warrant officer information, such as promotion orders and requests for orders.

MORTUARY AFFAIRS REPORTING AND TRACKING SYSTEM

B-21. The Mortuary Affairs Reporting and Tracking System is an Army web-based application used by all Services in a theater of operations to facilitate the tracking of human remains and personal effects from a mortuary affairs collection point to a final destination, such as the Dover Air Force Base Port Mortuary or the Joint Personal Effects Depot (CONUS). Mortuary affairs specialists electronically generate standard DOD forms to facilitate the shipment, documentation, identification, processing, and tracking of human remains and property. The Joint Mortuary Affairs Center on behalf of Headquarters, Department of the Army, G-4 provides functional oversight and expertise for the Mortuary Affairs Reporting and Tracking System. When requested, Joint Mortuary Affairs Center provides training to the Services to support the theater mortuary affairs mission, deployment requirements and annual training. Mortuary affairs operators requiring access to the Mortuary Affairs Reporting and Tracking System must request access through their theater mortuary affairs officer.

ARMY FOOD MANAGEMENT INFORMATION SYSTEM

B-22. The Army Food Management Information System is not an enterprise resource planning system, but rather a highly developed web-based system that provides an automated Army worldwide food service program. Army Food Management Information System provides users the capability to order, receive, inventory, and invoice class I supplies to include field rations. It also supports the operations of dining facilities for menu planning, production and recipe management, automated head count, labor scheduling, cash collection, and equipment replacement. The Army Food Management Information System is a centralized repository that eliminated batch processing and meets the web-based requirement. It also reduces overhead for each installation contract and ensures integrated and coordinated improvements.

TRANSPORTATION AND AMMUNITION SYSTEMS

B-23. Sustainment information systems include both enterprise resource planning systems and stove-piped legacy Standard Army Management Information Systems. Currently, the Transportation Coordinators'-Automated Information for Movements System II enables users to manage all aspects of transportation operations. It provides automated support to functions performed by a wide range of users from unit movement officers, to installation transportation officers, to mode managers responsible for transportation and distribution.

B-24. The Standard Army Ammunition System-Modernization system is the Army's web-based management, reporting, and accounting system for retail Class V ammunition receipt, store, maintain, and

issue operations performed by tactical units and installation activities. It employs barcode and radio frequency identification technology to support these tasks. The system acquires, receipts, accounts, stores, issues, and disposes of other classes of supplies, so it could accommodate class V operations.

AVIATION LOGISTICS INFORMATION SYSTEM

B-25. Aviation maintenance tracking is transitioning to an enterprise resource planning system called Army Enterprise Systems Integration Program. Aircraft Notebook will replace the Unit Level Logistics System – Aviation (Enhanced) and the Unmanned Aircraft System – Initiative as the fully integrated maintenance management system; Aircraft Notebook will be employed by the United States Army installation aviation maintenance activities. The Aircraft Notebook platform provides a single point access to the maintainer at the aircraft in the form of software applications necessary for completing and recording maintenance activities on U.S. Army aircraft. The Aircraft Notebook's interface applications provides an electronic, automated, and fully-integrated solution for maintainers to record and report maintenance activities. The Platform Maintenance Application implements the requirements of DA PAM 738-751, *The Army Maintenance Management System – Aviation* and readiness reporting in accordance with AR 700-138, *Army Logistics Readiness and Sustainability*. The Platform Maintenance Application implements controls that comply with TM 1-1500-328-23, *Aeronautical Equipment Maintenance Management Procedures* and supports the Tasked Based Maintenance and the Condition Based Maintenance processes. The Platform Maintenance Application gathers requirements for the platform Project Manager offices and implement needed interfaces with numerous Army information systems such as platform ground station software, the Centralized Aircrew Flight Records System, Maintenance Consolidated Database System, and Enterprise Material Status Reporting providing a family of systems synchronization. The Aircraft Notebook software will also be the bridging software for the GCSS-Army Increment 2 solution.

MEDICAL COMMUNICATION FOR COMBAT CASUALTY CARE

B-26. Medical Communication for Combat Casualty Care is a ruggedized system-of-systems containing medical software packages fielded to tactical medical forces throughout the theater and in the U.S. It supports a comprehensive medical information system, enabling lifelong electronic medical records, streamlined medical logistics, and enhanced situational understanding for Army operating forces.

B-27. Deployed medical forces use the Medical Communication for Combat Casualty Care system to gain quick, accurate access to patient histories and forward casualty resuscitation information. The system also provides units with automated tools facilitating patient tracking, medical reporting, and medical logistics support. CCMDs worldwide use the Medical Communication for Combat Casualty Care system to access medical surveillance information, resulting in enhanced medical situational understanding. Sustainment Automation Support Management Offices support the Medical Communication for Combat Casualty Care system.

DEFENSE MILITARY PAY OFFICE SOFTWARE SUITE

B-28. Defense Military Pay Office software suite provides processing access to the military pay system to facilitate pay support. This software is provided for all components (Active, National Guard and Reserve), IAW Defense Finance and Accounting Service policies and procedures for contingency operations. Access to the military pay system of record depends on the availability of dedicated communications. If online query capability is not available, a batch process Defense Military Pay Office download provides near-time query capability. In addition, the Defense Military Pay Office Standard Inquiry System provides the capability to download and archive pay data for an individual, or an entire unit, to facilitate offline pay support.

DEPLOYABLE DISBURSING SYSTEM

B-29. Deployable Disbursing System provides automated disbursing support. The system provides the capability to write Department of the Treasury or Limited Depository Account checks, plus the daily accountability and reconciliation for all transactions. Deployable Disbursing System receives information from the commercial vendor support and travel modules, which allows the writing of checks to pay vendors and travel claimants. It is capable of being used in remote military operations within contingency locations

with foreign currency. Deployable Disbursing System integrates with General Fund Enterprise Business System to enable deployed disbursing functions. Deployable Disbursing System creates pay vouchers and formatted output for upload to the military pay system for payment.

ACQUISITION CROSS-SERVICING AGREEMENT GLOBAL AUTOMATED TRACKING AND REPORTING SYSTEM

B-30. ACSA Global Automated Tracking and Reporting System is a DOD system of record for the Office of the Secretary of Defense, Joint Staff, CCMDs, and Service components to manage and track all ACSA transactions. ACSA Global Automated Tracking and Reporting System serves as a repository for concluded ACSAs and implementing arrangements. The system is required to close out all ACSA transactions and reconcile ACSA bills for both the United States and ACSA countries and organizations.

SUSTAINMENT INFORMATION SYSTEMS INTEGRATED INTO COMMAND AND CONTROL

B-31. Sustainment information systems are essential for providing commanders and staffs situational understanding and building the common operational picture. These systems enable command and control, and support the centralized planning and decentralized execution of operations. The paragraphs below describe these systems.

ARMY READINESS - COMMON OPERATING PICTURE

B-32. The Army Readiness Common Operating Picture is a command and control information capability that quickly provides shareable, actionable, tailorable, near real-time, and accurate integrated information to meet the visibility requirements of commanders, sustainers, and operators at all echelons. It is a tool commanders use to understand, visualize, and describe the sustainment status in their operational area allowing better and timely decision-making. It supports staff and command activities within the organization and enables users to participate in and support activities external to the command. All components, inter-organizational, and supporting agencies have the ability to access this COP.

BUSINESS INTELLIGENCE/BUSINESS WAREHOUSE

B-33. The Army Business Intelligence/Business Warehouse is a system that collects, stores, analyzes, and reports Army sustainment data for readiness decision making. It uses Systems, Application, and Products with logic and algorithms for descriptive analytics (what has happened), diagnostic analytics (why it happened), predictive analytics (what might happen), and prescriptive analytics (how we can make it happen). The Army Readiness-COP supports descriptive analytics and provides sustainers the ability to diagnose problems. This capability improves Army readiness by giving leaders the ability to better understand the current sustainment status and anticipate requirements more precisely.

ENTERPRISE RESOURCE PLANNING SYSTEMS IN SUSTAINMENT ESTIMATES AND MILITARY DECISION MAKING PROCESS

B-34. Accurate sustainment estimates are critical in assessing the supportability of courses of action for the concept of operations/operation orders. These estimates are the analytical result of how sustainment factors affect mission accomplishment by detailing the requirements and capabilities, conclusions, and recommendations on the feasibility of specified courses of action. These estimates are also used to continue to sustain current operations as the operations progress.

B-35. Historically, sustainment planners have used some combination of historical data and planning tools to determine requirements and capabilities, along with data from stove-piped sustainment automated systems to compute what resources were on hand. The movement to enterprise resource planning systems is greatly enhancing our ability to see availability of resources across the force. Without them, sustainment planning is based on pulling historical information from multiple, often conflicting data sets to project support requirements for future courses of action. The lack of clarity and associated mistrust have led to overestimating logistics requirements to make sure operational forces do not run out of key supplies and

services. As a result, the logistics footprint grows, along with a negative impact on survivability and mobility. With shared databases and near-real time data, planners have a far better picture of capabilities.

JOINT BATTLE COMMAND PLATFORM LOGISTICS

B-36. Joint Battle Command Platform Logistics is a satellite-based command and control platform system. Joint Battle Command Platform Logistics is part of the Joint Battle Command-Platform Family of Systems under the Mission Command Mounted Computing Environment. Joint Battle Command Platform Logistics is the successor to Joint Capability Release Logistics and provides commanders with near real-time data on the location and status of movements. This visibility enables effective and efficient use of limited distribution platforms. It can re-route supplies to users with higher priority needs, direct platforms to avoid identified hazards, display unit location changes, and provide near real-time traffic regulation and control. All CUL transport vehicles, selected maneuver support and sustainment tactical wheeled vehicles, and some Army watercraft are fitted with the Joint Battle Command Platform Logistics hardware.

LAST TACTICAL MILE

B-37. Enterprise resource planning systems that share databases across multiple functions substantially reduce the requirement to enter data multiple times. However, enterprise resource planning systems do not eliminate all requirements for data entry. Some data is entered via scanning devices and some transactions are generated automatically when other actions are taken. Work continues on mechanisms to reduce input requirements. This includes reducing the steps required to process a transaction within the system by “bundling” steps, and increasing sensors on platforms to automatically sense fails or requires attention.

OPERATIONAL LOGISTICS PLANNER

B-38. Operational Logistics Planner is the dissemination platform used for Army logistics planning factors. It is a stand-alone program approved for use on Army computers by the Network Enterprise Center. There are two editions of the tool, one for unclassified work and the other for installation on the secure internet protocol router computers for classified work. In compliance with AR 700-8, the United States Combined Arms Support Command manages the collection, development, maintenance, validation, review, and dissemination of Army logistics planning data and factors.

B-39. The data for all classes of supply have been collected from current and historical operations, which is provided by six Department of the Army proponents and three joint proponents. The data describes how units use their vehicles under the six joint operations phases and the four military operations to inform class III (P) and (B) estimates. HQDA G-4 approves the data and processes annually for Army planning and the HQDA G-3 Force Management uses it in the Total Army Analysis.

Appendix C

Reconstitution

This appendix discusses reconstitution elements, and execution.

OVERVIEW

C-1. Commanders should expect larger losses to personnel, supplies, and equipment in their formations because of the highly destructive nature of large-scale combat operations. Even with continuous and effective sustainment support, units may rapidly become combat ineffective as a result of enemy action. Commanders at all levels must be prepared to conduct reconstitution efforts to return ineffective units to a mission capable status as quickly as possible to meet campaign objectives.

C-2. Reconstitution operations are extraordinary actions that commanders plan and implement to restore attrited units' combat effectiveness commensurate with the mission requirements and available resources. Reconstitution should be considered when the operational pace, mission, or time, does not allow for replacement. Reconstitution restores combat power to the levels necessary, within a limited time to continue the fight, beyond the capabilities and available time of normal day-to day sustainment action. Reconstitution requires both generating and operating force involvement. Key considerations for reconstitution operations are: combat readiness of the unit, mission requirements, risk, and the availability of replacements. Commanders must decide what type of reconstitution effort would be best for the organization based on METT-TC.

C-3. Reconstitution is not a sustainment operation although sustainment plays an integral part. All sustainment functions are executed during reconstitution. It is not simply about replacing equipment. HR, medical, supply, and maintenance personnel work closely with maneuver forces to rebuild combat power. Maneuver commanders (CCDR, ASCC, corps, or division) direct reconstitution execution as an operation and, as with all operations, the staff plays a vital role. The G-3/S-3 role is particularly critical. G-3/S-3 is responsible for coordinating reconstitution planning and activities. The mission and commander's intent are the keys in reconstitution planning, decision-making, and execution. The higher commander's plan establishes the intent, concept, and priorities. These influence subordinate commanders' reconstitution plans. The reconstitution effort should be thoroughly planned and understood by all involved to ensure success. Any maneuver, maneuver support, or sustainment unit may require reconstitution. Therefore, planners at all levels of command should anticipate it. Reconstitution operations require anticipation, extensive prior planning, preparation, rehearsals, and assessment that must be resourced at the National level and nested within the OPLAN. Reconstitution planning also provides a conceptual framework for restoring the fighting force during large-scale combat operations.

RECONSTITUTION ELEMENTS

C-4. Reconstitution consists of two major elements—reorganization and regeneration. Reorganization is the expedient cross-leveling of internal resources within an attrited unit in place to restore necessary combat effectiveness as directed by the unit commander. Regeneration is the intentional restoration of a unit's combat power that requires time and resource intensive operations which includes equipment repairs/replacements, supply replenishment, mission essential training, and personnel replacements in accordance with theater commander guidance.

REORGANIZATION

C-5. Reorganization is action to shift resources within an attrited unit to increase its combat effectiveness. Commanders of all types of units at each echelon may conduct reorganization. Reorganization may be conducted when the operational tempo is such the risk for removing a unit from the operation may jeopardize

the mission. There are two types of reorganization operations: immediate and deliberate. The type of reorganization operation executed is based on mission variables.

C-6. Both types of reorganization may include such measures as—

- Cross-leveling equipment and personnel.
- Matching operational weapon systems with crews.
- Forming composite units (joining two or more attrited units to form a single mission-capable unit).

C-7. With reorganization and regeneration, the goal is to improve the unit's capability until more extensive efforts can take place, if resources, the tactical situation, and time permit. Since reorganization involves activities internal to a unit, it is the most expedient means of maintaining combat power during early phases of an operation. In forward units, it remains the most expedient method throughout the operation. During reorganization operations, it is crucial that support is surged according to the unit commander's priorities. With this support, reorganized units may remain effective for extended periods. Commanders may be able to delay or avoid the need to conduct regeneration operations.

Immediate Reorganization

C-8. Immediate reorganization is the rapid and usually temporary restoring of attrited units to minimum levels of effectiveness. Normally, the commander implements immediate reorganization in the combat position or as close to that site as possible to meet near-term needs. Immediate reorganization consists of cross-leveling personnel and equipment, matching weapon systems to crews, or forming composite units (joining two or more attrited units to form a single mission-capable unit).

Deliberate Reorganization

C-9. Deliberate reorganization is conducted when more time and resources are available. It usually occurs farther away from hostile activity than immediate reorganization. Procedures are similar to those for immediate reorganization. However, some replacement resources may be available. Also, equipment repair is more intensive and more extensive cross-leveling is possible.

REGENERATION

C-10. Regeneration is the intentional restoration of a unit's combat power and is considerably more resource intensive than reorganization. Regeneration is also time intensive and normally requires days to weeks to execute. It requires large-scale replacement of personnel, equipment, and supplies. Regeneration involves reestablishing or replacing the chain of command and conducting mission essential training to get the regenerated unit to a required readiness standard. Because of the intensive nature of regeneration, it occurs at a designated regeneration site after the unit disengages from combat operations. The regeneration site is normally situated in a relatively secure location away from the battlefield, but still most conducive to regenerate combat power under the constraints of time and geography.

C-11. Regeneration requires resources from higher echelons and may include elements from the generating force, OCS, and HNS. Since regeneration typically requires large quantities of personnel and equipment, commanders carefully balance these needs against others in the command as well as the mission. The commander determines if resources required to regenerate a unit would be better used elsewhere in the command to accomplish the mission.

C-12. General principles that apply to regeneration are listed below.

- It requires a decision by the commander with control of the resources required to conduct regeneration.
- No table of organization and equipment Army unit or other resource exists specifically to conduct regeneration. Regeneration uses existing units and systems. A RTF is established and task organized from elements under the directing commander's control.
- Regeneration is a planned action integrated into the formal planning process and included in the OPLAN.

- Generally, units are regenerated from at least two command levels above. However, a committed division actively engaged in offense operations cannot regenerate a subordinate unit.
- In an immature theater resources required to conduct regeneration may not be available.
- Regenerating units must be removed from their positions and moved to a regeneration site. Units conducting regeneration must not be included in operational plans or orders until the unit is returned to a mission capable status.
- A major regeneration effort takes considerable time; normally calculated in terms of several days to weeks. Commanders must understand the time required to conduct a complete regeneration is greater than the time required to achieve a lesser degree of regeneration.
- Factors that drive a decision to conduct regeneration change based on mission and operational variables.
- Normal sustainment support continues as the unit requiring regeneration withdraws to the regeneration site.

ASSESSMENT

C-13. Assessment is not a phase of reconstitution but it is critical in determining the need to reconstitute and which phase of reconstitution to execute. Assessment measures a unit's capability to perform its mission. It occurs in two phases. The unit commander conducts the first phase. The commander continually assesses the unit before, during, and after operations. If the commander determines the unit is no longer mission capable even after reorganization, the commander notifies his commander. Higher HQs either changes the mission of the unit to match its attrited capability or removes it from combat. External elements may also have to assess the unit after it disengages and has moved to the regeneration site. This is the second phase. These elements do a more thorough evaluation to determine regeneration needs. These elements also consider the resources available.

C-14. The commander's Phase I or initial assessment is ongoing throughout the large-scale combat operations. During the Phase I assessment, commanders must assess the status of five major areas within their unit: effectiveness of the unit chain of command, personnel strength, equipment readiness and equipment on hand, critical supplies on hand by class of supply, and unit training. This information is used to determine if the unit is mission capable or will need to be reconstituted. This status information is passed up through the chain of command and is compiled at each echelon. It must be reported parallel through maneuver and sustainment channels to build a common operational picture of unit status. After the unit commander has completed the Phase I assessment and determines that reorganization cannot restore a unit to its required level of combat effectiveness, the commander may recommend for approval for the unit to undergo regeneration.

C-15. The Phase II external assessment begins during the move to the regeneration site and provides extensive details on resources required to regenerate the unit. This assessment validates and modifies as required per the regeneration plan developed before the onset of large-scale combat operations.

C-16. During the second phase of assessment, personnel attached to the RTF conduct a detailed unit assessment. The external assessment determines the status of the same five major areas as the initial assessment. The organization conducting the external assessment is normally from organizations two echelons above the regenerating unit. The external assessment team must include Maneuver and Fires, Operational Support and Effects, and Force Sustainment personnel to make a complete assessment.

C-17. The result of the second assessment is a detailed report coordinated with the attrited unit's commander. The report informs the RTF's headquarters on the status of the attrited unit and the resources required to return it to a mission-capable level. The commander with control of the required resources decides whether to commit the resources to that regeneration effort or employ them elsewhere to maximize the command's capability to accomplish its mission.

PLANNING

C-18. Reconstitution is a major mission for a division, corps, or theater Army. Three of the most significant considerations for executing the elements of reconstitution are time, location, and geography. Regeneration

operations require significantly more time than reorganization operations because it involves large-scale replacements of personnel, equipment, supplies, training, and the development of unit cohesion within the newly regenerated unit by using external resources. Commanders at all echelons carefully weight the time/combat power restoration trade-off. Time, along with other resource constraints, factors into the level of regeneration achievable to gain an enhanced level of combat readiness. Although time may guide the decision towards one element or the other, the commander is the decision authority for reconstitution operations.

C-19. Regeneration is normally approved two command levels up. At the division level, the division commander determines candidates for reconstitution within the BCTs and brigade-level enabler formations. At the theater level, the operational plans and applicable standard operating procedures aid the commander in determining what level of combat power degradation triggers when to conduct reconstitution and which reconstitution element to conduct. Each operations plan (OPLAN) and standard operating procedures (SOP) for reconstitution should be thoroughly planned and understood by each echelon command and staff. The plans should include, but not limited to timelines, rehearsals, and possible RTF locations, sources of supply, financial management considerations, roles/responsibilities, required training, and procedures to reestablish or reinforce command and control. The commander may adjust guidelines in an OPORD, directing the trigger event/decision point for each element of reconstitution.

C-20. A significant consideration in planning reconstitution is the availability and accessibility of locations and facilities used for regeneration. A semi-permanent facility is preferred to conduct regeneration for improved security, force protection, and access to local infrastructure (water, electricity, key for multiple strategic transportation nodes). Semi-permanent facilities provide more space to process and organize combat platforms for repair, bench stock to perform sustainment maintenance, theater sustainment stocks for redistribution, and more conducive environment to replenish and replace Soldiers and equipment. In addition, these types of facilities enable a better connection with the logistics enterprise and industry base. The availability to ports, airfields, railway, and main/secondary support routes is vital for movement of retrograde and redistribution of equipment and personnel.

C-21. Other general planning considerations are—

- Successful reconstitution requires integration of all aspects of the unit and its support system. This includes all sustainment functions.
- Planners integrate security for regeneration actions into the overall OPLAN.
- Planners should consider the opportunity to use HSN, levels of contracts, government agencies, and U.S. Army Materiel Command resources whenever possible in the regeneration process.

EXECUTION

C-22. Once the commander decides to remove a unit from combat and formally assess it for possible regeneration, the commander and staff adjust the tentative regeneration plan and activate the RTF. The directing commander directs the RTF to regenerate the attrited unit using assets under the command's control or provided by higher echelons.

REGENERATION TASK FORCE COMPOSITION

C-23. The RTF includes Maneuver and Fires, Operational Support and Effects, and Force Sustainment elements to fulfill its responsibilities. The RTF should be comprised of personnel that are the same branch as the type of unit being regenerated in order to effectively assess the effectiveness of the unit and determine its requirements to return to the fight. This is based on the commander's effectiveness goals.

C-24. The sustainment element of the RTF requires enough personnel with the requisite expertise in functional sustainment areas required for regeneration. Sustainment provided to support the regeneration comes at the expense of support to other units. Rarely will there be adequate sustainment organizations available to commit these units to solely support regeneration operations. All sustainment functions of logistics, financial management, personnel services, and health service support must be provided to regenerate a unit. Regeneration typically requires large quantities of personnel, equipment, supplies, and services. Commanders carefully balance these needs against mission requirements in the command.

Dedicating this support means other units may not receive normal levels of support. This is the support prioritization decision that commanders constantly make.

C-25. Planners should not consider the capabilities of organic sustainment personnel and assets of a unit being regenerated. In most cases, these organic sustainment elements must be regenerated as well, and will not be able to assist in providing support to the regeneration effort.

C-26. An assessment element of the RTF conducts the Phase II assessment discussed previously. The assessment element also assists in executing regeneration operations. The assessment personnel provide continuity from the assessment phase through the regeneration execution. The knowledge gained during assessment is useful in facilitating the process. For example, the personnel responsible for assessing command and control of the attrited unit should have a major role in reestablishing the chain of command. The personnel know the status of the unit and the personnel resources available to fill the chain of command. In addition, whenever possible, the core of this assessment element should be the element that determines whether the regenerated unit has met the commander's effectiveness requirement. The RTF must certify the unit leadership, personnel, and equipment are physically ready for re-missioning, and it must certify the unit's completion of multi-functional training to standards established in the OPLAN before releasing the regenerated unit to the gaining commander.

C-27. The RTF should also include a liaison element to establish contact with the attrited unit. The liaison element accompanies the unit to the regeneration site and remains there to assist in further assessment and regeneration execution. The function of the liaison element entails sending preliminary assessments and requirements to the RTF to expedite the regeneration process. This liaison/assessment element may include a battle damage assessment team.

SITE SELECTION

C-28. Location for regeneration must be considered not only by the proximity to the combat zone, but the level of risk the commander can assume based on threat to the regeneration operations. During large-scale combat operations, location of the regeneration site must also be considered within the respective theater, external to theater operations inside/outside the continental United States based on the requirements of the Army and current status of the fight.

C-29. The division or corps controlling the area where the regeneration occurs evaluates the terrain and recommends regeneration sites to the commander. Three site selection factors that require consideration and balance are—

- The regeneration site should be as close as possible to the attrited unit location to minimize amount of time and difficulty reaching the site.
- The site should be far enough away to prevent easy enemy interdiction and provide the safest feasible location for personnel executing regeneration operations.
- The site should contain enough space to conduct regeneration operations.

C-30. The regeneration site requires a very significant amount of terrain to effectively execute all regeneration functions and training. The site will be difficult to conceal and without adequate protection countermeasures will be easy to detect. Terrain managers should carefully consider the visual and electromagnetic spectrum signature of the site and plan to mitigate the impacts these have on enemy detection. The commander must carefully balance dispersion with command and control and execution of regeneration functions. The regeneration site should be secure as possible from threat of long-range fires and enemy ground infiltration. A key consideration is site selection is mobility of essential RTF elements and regeneration assets. Controlling movement of regeneration assets into and out of the site must be carefully planned and executed.

MOVEMENT TO THE REGENERATION SITE

C-31. Once the regeneration site is selected, the RTF sends an advance party to the site to prepare it to receive the attrited unit. The advance party should arrive 12 to 24 hours before the attrited unit. It establishes a reception area, RTF CP, and set up for initial sustainment support. The advance party plans the positioning of the attrited unit and the regeneration assets within the site.

C-32. The RTF advance party establishes local security and concealment according to the defense plan coordinated with the CP. The advance party requests additional security assets as required. The party moves regeneration supplies and equipment into the site. The attrited unit is responsible for moving itself to the regeneration site if possible. If the unit lacks the transportation assets required for the move, it communicates this to the liaison element to request support from the higher command.

C-33. As the unit disengages and moves to the regeneration site, normal maneuver procedures continue. These include—

- Passage of lines.
- Relief in place.
- Decontamination, if required.
- Battle damage assessment and repair.
- Treatment and evacuation of casualties.
- Recovery of damaged equipment.
- Resupply as required to allow movement to the regeneration site.

C-34. Elements of the RTF, to include sustainment elements conducting regeneration, use organic transportation assets to move to the regeneration site. If the RTF requires additional transportation assets, it requests them through the commander directing regeneration. Planners should understand that regeneration assets might represent a considerable requirement for transportation. Planners can minimize such requirements by carefully selecting a site at or near an established support area.

REGENERATION ACTIVITIES

C-35. Once the attrited unit arrives at the site, the RTF directs it to the appropriate location within the regeneration site. The RTF directs damaged reparable equipment to the maintenance collection point. It directs operable equipment and usable supplies to a marshaling, storage, or staging area with the supply unit of the RTF. The RTF also begins essential support services to surviving personnel. Support may include the following, but not limited to—

- Hot meals and sustenance support.
- Sundries issue/distribution.
- Bulk fuel and water replenishment.
- Health service support (to include casualty treatment, combat stress control, preventive medicine).
- Laundry and shower support.
- Individual equipment replacements.
- Chaplain support.
- Morale, welfare, and recreation activities.

Reestablish Command

C-36. The key to any successful reconstitution is a viable chain of command within the unit undergoing regeneration. Accordingly, command and leadership positions within the attrited unit are the first to be assessed, reinforced, and/ or reestablished by the RTF. During the regeneration phase of reconstitution, the attrited unit is under the command and control of the RTF Commander until assessed and certified for reassignment/remission. If there is a viable, functioning chain of command still in place for the attrited unit, the remaining leaders retains command of the unit to maintain unit cohesion. Only when the unit leadership proves to be nonexistent or unable to exercise command, should the command structure be rebuilt and replaced under the guidance of the RTF commander.

Sustainment Activities

C-37. At the same time the RTF is reestablishing the command and control structure of the unit, the enabling sustainment element begins support operations. Materiel and personnel assets for regeneration come from a variety of sources using existing sustainment systems and resources. If the RTF is a division-level organization, it transmits requirements beyond its capabilities to the corps. The corps, when applicable,

identifies replacement needs to the supporting ESC or TSC. The division and corps surgeon staffs also coordinate with MEDCOM (DS) and/or MEDBDE (SPT) for AHS support. Planners should also take advantage of opportunities to contract for supplies and services. Such assets may either play a direct role in the RTF or, more likely, temporarily replace capabilities normally provided by elements forming the RTF.

C-38. As stated earlier, all sustainment functions are executed during regeneration. These activities occur simultaneously and continuously until the commander's effectiveness goals are met.

C-39. During reconstitution operations, financial management leaders/planners should perform financial management activities such as—

- Coordinate for reconstitution estimates/costs to repair equipment.
- Develop cost capturing methods.
- Develop and maintain financial management running estimate.
- Review requirements and funding authorities' responsibilities, to include contracting and procurement.
- Review interagency financial support agreements.
- Establish reporting and reimbursement requirements in coordination with J-4/G-4/SPO officer/S-4.
- Request special appropriations.
- Review cost estimates and fund certification.

C-40. All personnel services support activities must be planned and executed. This includes—

- Personnel replacement operations.
- Casualty reporting.
- Postal support.
- Morale, welfare, and recreation.
- Legal support.
- Religious support.

C-41. AHS support to reconstitution focuses on returning Soldiers to duty as the most efficient way of maximizing the number of trained and physically fit Soldiers to the attrited unit. Other AHS support includes—

- Patient triage and prioritization.
- Sick call.
- Patient stabilization.
- Medical treatment including surgery to save life and limb.
- Replenishment of class VIII (including medical peculiar repair parts).
- Field and sustainment level medical equipment maintenance and repair.
- Medical evacuation to the next higher medical facility.
- Combat and operational stress control.

C-42. Maintenance activities include—

- Battle damage assessment and repair.
- Recovery of damaged and immobile equipment.
- Field maintenance on all equipment commodities.
- Aircraft maintenance.
- Sustainment maintenance requirements if applicable.

C-43. Transportation support includes—

- Movement of all classes of supplies to include liquids.
- Movement of replacement equipment to include heavy equipment.
- Movement of personnel replacements.
- Retrograde of damaged equipment and unserviceable items.

- Training the regenerated unit.

C-44. To raise the newly regenerated unit to a specified level of combat effectiveness requires training. The training program depends on the following—

- Time available.
- Combat effectiveness goal.
- Number of replacements involved.
- Level of training of survivors and replacements.
- Use of any non-like replacement items.
- Size and location of the regeneration site.
- Tactical situation.

Appendix D

Mobility Planning Considerations

This appendix discusses mobility ratings and planning considerations for units operating within the corps and division areas. Mobility is critical to survivability during large-scale combat operations. At corps and echelons below corps, mobility can be broken down into tactical mobility and sustainment mobility. Competition for transportation assets is high and careful considerations should be made for the trade-offs between tactical mobility and sustainment mobility.

TACTICAL MOBILITY

D-1. Tactical mobility is the ability for units to displace personnel and equipment during combat operations in order to survive enemy threats, maintain momentum, and extend operational reach. Achieving tactical mobility varies based upon unit composition and based upon operational requirements, units will require external support from EAB transportation enablers. A BCT with organic equipment takes 3 turns over the course of 24 hours to displace 25-30 miles. Displacing the DSB without external transportation support requires 6-8 turns and 48-72 hours. The total time for a division task organized with enablers and 3 BCTs to displace is 11 days. The DSB is unable to conduct sustainment operations while displacing. Additionally, without augmentation the BSB will have to pull supplies from the DSB. Pulling supplies from the BSB limits the senior tactical commander's flexibility and the ability to seize and maintain momentum.

D-2. Augmented with two palletized-load system companies, one heavy equipment transport company, and one light/medium truck company a BCT can displace in 8-10 hours and the DSB in 24 hours. Augmentation extends the divisions' tactical reach by enabling the DSB to push supplies to the BSB and the BSB to subsequently push supplies to the FSCs.

D-3. By design, tactical units are more mobile and therefore require fewer transportation assets to relocate. However, corps and division enablers have limited organic transportation assets and require significant assistance to move rapidly over long distances. Figure D-1 displays the estimated transportation assets required to facilitate 100 percent mobility for identified units.

DIV HQ	Requires 4 MTV, 13 LHS, 5 LMTV, 10 Expando Vans
IBCT	Requires 84 MTV, 8 LHS, 14 FMTV TRAC, 1 LMTV, 8 Expando Vans
ABCT	Requires 5 LHS, 17 MTV TRAC, 5 LMTV, 7 Expando Vans
SBCT	Requires 1 MTV, 5 LHS, 18 FMTV TRAC, 3 LMTV, 7 Expando Vans
FIRES	Requires 2 LHS, 3 LMTV, 8 Expando Vans
CAB	Requires 35 MTV, 10 LHS, 18 FMTV TRAC, 2 HEMTT TRAC, 28 LMTVs, 8 Expandos
MED BDE	Requires 81 MTV, 98 PLS w/Trailer, 18 FMTV TRAC, 17 HMMWV
SUST	Requires 6 MTV, 14 LHS, 6 FMTV TRAC, 2 HETS, M915 TRAC & TRL, 8 Expandos

Figure D-1. Estimated transportation requirements for tactical mobility

SUSTAINMENT MOBILITY

D-4. Sustainment mobility is the ability to move all classes of supply from the division support area to the forward line of own troops. A DSB requires 140 palletized-load systems to hold and store one day of supply for organic BSBs, and provide limited distribution to EAB units operating in the division’s AO. The DSB’s composite truck company requires augmentation to support sustainment mobility. Without augmentation, the composite truck company’s capacity is consumed with supporting tactical mobility. The lack of augmentation requires BSBs to pull supplies from the DSA instead of receiving supplies from the DSB. The FSCs in turn must then pull supplies from the BSA and push supplies to the forward line of own troops multiple times a day. This method limits the division’s operational reach to 100-145 miles.

D-5. By design, BCTs have two mobile days of supplies with one day of supplies located at the FSC and one day of supplies located at the BSB. The third day of supplies is not mobile and is stored at the A company in the DSSB. Forward distribution to the BSBs requires augmentation from two palletized-load system companies, or one palletized-load system company equipped with leader follower technology. Table D-1 displays the estimated sustainment distribution requirement to sustain the identified units.

Table D-1. Estimated sustainment truck requirements

<i>Unit</i>	<i>Dry Supplies & Ammo</i>	<i>CL I (Water) Hippo</i>	<i>CL III (Fuel) Tanker TRM</i>	<i>Total PLS Systems</i>
<i>Truck/Asset Type</i>	<i>M1075 w/M1076 (Dry) (Current Ammo Data)</i>	<i>M1075 w/M1076 Hippo</i>	<i>M1075 w/M1076 (TRW) or M1088/M915 w/Tanker</i>	<i>M1075 w/M1076 Total w/Pallets, TRWs, Hippo (Current Ammo Data)</i>
Div HQ	2.50	1.00	1.50	5.00
ABCT	23.50	4.00	24.00	51.50
SBCT	19.50	4.00	10.00	32.00
IBCT	16.00	4.00	6.00	26.00
CAB	9.50	2.50	12.50	24.50
Div Fires	13.50	2.00	5.50	21.00
Div MEB	8.00	2.00	7.00	17.00
Div Eng BDE	10.50	2.00	14.00	26.50
Div SB	14.00	3.50	15.00	32.50
LEGEND: Hippo = Load Handling System Compatible (2,000 gallons) Water Tank Rack PLS = Palletized Load System TRM = Tank Rack Module M915 = Truck Tractor, 14 Ton M1075 = 16.5 Ton PLS Truck M1076 = PLS Trailer M1088 = Medium Tactical Vehicle (5 Ton Tractor)				

D-6. An example of a unit requiring additional external transportation support would be an IBCT. An IBCT is unable to move all of its organic personnel and equipment in one move. To move its organic personnel and equipment, it requires an additional 70 MTVs for troop transport, eight LHS with PLS trailers, and 14 M1088 trucks with M172 trailers. Assuming it would take three turns to complete movement, it requires an additional 24 MTVs, three LHS with PLS trailers, and five M1088 trucks with M172 trailers. Moving a distance of 15KM over unimproved surfaces and not taking into account enemy threat would take approximately 30 minutes and an estimated 30 minutes to load/unload personnel and equipment. It would take an estimated six hours to get the remainder of the IBCT from its starting point to its destination using three turns.

D-7. Another example of a unit requiring additional truck assets would be a CSSB and DSSB. A CSSB and DSSB are unable to move all of its organic equipment in just one move. To move only its organic equipment and personnel, not including a sustainment load, a CSSB and DSSB require an additional 34 LHS with 23 PLS trailers, 10 M1088 trucks, one M172 trailers, four M871 trailers, two HETS, one M915 with M870 trailer, and six MTVs for troop transport. Five are required to tow MTV trailers that do not have prime

movers. Assuming it would take three turns to complete movement, it requires 12 LHS and eight PLS trailers, three M1088 trucks, two M871 trailers, one HET, and two MTVs. Moving a distance of 15KM over unimproved surfaces and not taking into account enemy threat would take approximately 30 minutes. Using an experienced crew to load/unload equipment and secure the load would take an estimated 30 minutes without any complications. It would take an estimated six hours to get the remainder of the CSSB and DSSB personnel and equipment from its starting point to its destination using three turns and factoring loading and unloading time.

D-8. Table D-2 displays the estimated mobility ratings of units operating in the corps and division areas, and is designed to assist planners when allocating transportation assets and developing the task organization for assigned missions. Estimated unit mobility ratings change frequently with adjustments to force structure and military tables of organization and equipment. Sustainment planners must account for these changes and update running estimates and concepts of support accordingly.

D-9. The mobility ratings in table D-2 are based on the unit’s ability to move 100 percent of their TOE equipment in a single lift, and does not account for moving all personnel in the single lift. Calculations are based off of unprotected conditions and assumes that troop carrying platforms can be used as such. Units without a mobility rating vary in composition based on the task organization and an accurate mobility rating cannot be assessed until subordinate units are attached.

Table D-2. Estimated mobility rating

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Corps Headquarters	64%
Corps Main Command Post	54%
Corps Tactical Command Post	73%
Military Police Brigade	81%
Headquarters and Headquarters Company, Military Police Brigade	79%
Military Police Battalion	81%
Headquarters and Headquarters Detachment Military Police Battalion (Combat Support)	50%
Military Police Company, Combat Support	87%
Corps Headquarters	64%
Corps Main Command Post	54%
Criminal Investigation Division Element	96%
Engineer Brigade	76%
Headquarters and Headquarters Company, Engineer Brigade	81%
Engineer Battalion	76%
Headquarters and Headquarters Company, Engineer Battalion	100%
Horizontal Construction Company	78%
Clearance Company	67%
Multirole Bridge Company	89%
Topographic Engineer Company	64%
Engineer Support Company	46%
Vertical Construction Company	57%
Engineer Construction Company	75%
Sapper Company	93%
Brigade Signal Company (Maneuver Enhancement Brigade/Combat Aviation Brigade/Sustainment Brigade)	100%
Corps Maneuver Enhancement Brigade	81%
Headquarters and Headquarters Company, Maneuver Enhancement Brigade	97%
Chemical, Biological, Radiological and Nuclear Battalion	92%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Chemical, Biological, Radiological and Nuclear Company, (Movement Support)	95%
Headquarters and Headquarters Company, Chemical, Biological, Radiological and Nuclear Battalion	99%
Chemical, Biological, Radiological and Nuclear Company, Area Support	76%
Engineer Battalion	73%
Headquarters and Headquarters Company, Engineer Battalion	100%
Clearance Company	67%
Mobility Augmentation Company	68%
Sapper Company	93%
Engineer Support Company	46%
Military Police Battalion	78%
Headquarters and Headquarters Detachment, Military Police Battalion (Combat Support)	50%
Military Police Company, Combat Support	87%
Combat Aviation Brigade	84%
Headquarters and Headquarters Company, Combat Aviation Brigade	79%
General Support Aviation Battalion	88%
Headquarters and Headquarters Company, General Support Aviation Battalion	100%
Command Aviation Company (UH-60)	100%
Heavy Helicopter Company	99%
Medical Company Attack Aviation (15 Aircraft)	100%
Aviation Maintenance Company (Aviation Unit Maintenance) (General Support Aviation Battalion)	75%
Forward Support Company, General Support Aviation Battalion With / Air Traffic Service (1X15 Medical)	96%
Air Traffic Services Company	100%
Assault Battalion (UH-60)	88%
Headquarters and Headquarters Company, Assault Battalion	79%
Assault Company (UH-60)	98%
Aviation Maintenance Company (Aviation Unit Maintenance) (UH-60)	76%
Forward Support Company, Assault Battalion	97%
Attack/Reconnaissance Battalion (AH-64)	84%
Tactical Unmanned Aircraft System Platoon	81%
Attack/ Reconnaissance Company (AH-64)	100%
Aviation Maintenance Company (Aviation Unit Maintenance) (AH-64)	59%
Forward Support Company, AH-64	97%
Aviation Support Battalion (Combat Aviation Brigade)	76%
Headquarters and Support Company (Aviation Support Battalion)	75%
Distribution Company (Aviation Support Battalion)	71%
Aviation Support Company (Aviation Intermediate Maintenance) (Combat Aviation Brigade)	59%
Brigade Signal Company (Maneuver Enhancement Brigade/Combat Aviation Brigade/Sustainment Brigade)	100%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Headquarters and Headquarters Company, Medical Command (Deployment Support)	
Headquarters and Headquarters Company, Medical Command Operational Command Post	100%
Headquarters and Headquarters Company, Medical Command Main Command Post	100%
Medical Brigade (Support)	
Medical Brigade, Early Entry Module	100%
Medical Brigade, Expansion Module	10%
Medical Brigade, Campaign Module	10%
Medical Battalion (Multifunctional)	
Early Entry Element, Medical Battalion (Multifunctional)	100%
Campaign Support Element, Medical Battalion (Multifunctional)	15%
Medical Company (Area Support)	100%
Medical Company (Ground Ambulance)	100%
Dental Company (Area Support)	50%
Medical Logistics Management Center	
Medical Logistics Management Center, Base	10%
Medical Logistics Management Center, Forward Team (Early Entry)	100%
Medical Logistics Management Center, Forward Team (Follow On)	100%
Medical Logistics Company	
Medical Logistics Company (Base)	30%
Medical Logistics Company (Early Entry Team)	30%
Medical Logistics Company (Contact Repair Team)	100%
Medical Logistics Company (Forward Distribution Team)	100%
Headquarters and Headquarters Detachment, Hospital Center	35%
Field Hospital (32 Bed)	35%
Hospital Augmentation Detachment (Surgical 24 Bed)	0%
Hospital Augmentation Detachment (Medical 32 Bed)	0%
Hospital Augmentation Detachment (Intermediate Care Ward 60 Bed)	0%
Medical Detachment, Minimal Care	35%
Forward Resuscitative And Surgical Team (Airborne)	100%
Forward Resuscitative And Surgical Team	100%
Medical Team (Optometry)	100%
Headquarters, Medical Detachment (Blood Support)	
Collection, Storage & Distribution Team	100%
Collection, Manufacturing & Distribution Team	30%
Distribution Team	50%
Medical Detachment (Preventive Medicine)	100%
Medical Detachment (Combat And Operational Stress Control)	
Medical Detachment Combat And Operational Stress Control Main Support	47%
Medical Detachment Combat And Operational Stress Control Forward Support	74%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Headquarters, Medical Detachment (Veterinary Service Support)	60%
Food Procurement And Laboratory Team	100%
Veterinary Medical And Surgical Team	50%
Veterinary Service Support Team	67%
Area Medical Laboratory	10%
Headquarters And Headquarters Detachment, Combat Support Hospital (248 Bed)	
Hospital Company (84 Bed)	
Transportation Element, Hospital Company (84 Bed)	100%
Combat Support Hospital (248 Bed)	0%
Headquarters Section, Early Entry Hospitalization Element (44 Bed)	100%
Early Entry Hospitalization Element (44 Bed), Hospital Company (84 Bed)	0%
Headquarters Section, Hospitalization Augmentation Element (40 Bed)	35%
Hospitalization Augmentation Element (40 Bed), Hospital Company (84 Bed)	0%
Headquarters Section, Hospital Company (164 Bed)	0%
Hospital Company Bravo (164 Bed)	
Corps Military Intelligence Brigade	59%
Headquarters and Headquarters Company Military Intelligence Expeditionary Brigade	69%
Military Intelligence Battalion Expeditionary	
Headquarters and Headquarters Detachment, Expeditionary Military Intelligence Brigade	100%
Counter Intelligence & Human Intelligence Company, Military Intelligence Battalion	100%
Military Intelligence Company (Collection and Exploitation) (Expeditionary Military Intelligence Battalion)	52%
Military Intelligence Battalion (Aerial Exploitation)	
Headquarters, Headquarters and Service Company Military Intelligence Battalion (Aerial Exploitation)	75%
Aviation Company (Electronic Warfare) Military Intelligence Battalion, (Aerial Exploitation) (Corps)	26%
Headquarters and Headquarters Battery, Division Artillery in lieu of Office Headquarters and Headquarters Battery	100%
Headquarters and Headquarters Battery, Field Artillery Brigade	98%
Target Acquisition Battery (Field Artillery Brigade)	100%
Field Artillery Battalion Multiple Launch Rocket System	
Headquarters and Headquarters Battery, Field Artillery Battalion, Multiple Launch Rocket System	76%
Field Artillery Battery, Multiple Launch Rocket System	98%
Forward Support Company, Multiple Launch Rocket System	100%
Military Intelligence Battalion Expeditionary	
Headquarters and Headquarters Detachment, Expeditionary Military Intelligence Battalion	100%
Counter Intelligence & Human Intelligence Company, Military Intelligence Battalion	130%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Military Intelligence Company (Collection and Exploitation) (Expeditionary-Military Intelligence Battalion)	52%
Air Defense Artillery Brigade Headquarters (Theater)	50%
Air Defense Artillery Battalion (Patriot)	
Headquarters and Headquarters Battery, Air Defense Artillery Battalion (Patriot)	81%
Air Defense Artillery Battery (Patriot)	67%
Maintenance Company Air and Missile Defense Battalion	95%
Air Defense Artillery Battalion (Indirect Fire Protection Capability/Avenger)	
Headquarters and Headquarters Battery, Air Defense Artillery Battalion (Indirect Fire Protection Capability /Avenger)	100%
Air Defense Artillery Battery (Intercept)	81%
Air Defense Artillery Battery (Avenger)	100%
Maintenance Company, Air Defense Artillery Battalion (Indirect Fire Protection Capability/Avenger)	97%
Corps Sustainment	81%
Ordnance Company, Explosive Ordnance Disposal	100%
Modular Ammunition Ordnance Company	78%
Quartermaster Field Service Company (Modular)	100%
Petroleum Support Company	100%
Headquarters and Headquarters Detachment, Petroleum Support Battalion	100%
Field Feeding Company (Echelon Above Brigade)	85%
Supply Company	100%
Composite Supply Company	48%
Mortuary Affairs Company	100%
Corps Aerial Delivery Company	50%
Human Resources Company	70%
Financial Management Support Unit	94%
Support Maintenance Company	85%
Movement Control Team	100%
Headquarters and Headquarters Detachment, Movement Control Battalion	100%
Headquarters and Headquarters Detachment, Transportation Motor Transport Battalion	100%
Composite Truck Company Light	99%
Transportation Medium Truck Company (Cargo) (Echelon Above Brigade Tactical)	81%
Transportation Medium Truck Company (Palletized Load System) (Echelon Above Brigade Tactical)	99%
Transportation Light-Medium Truck Company	50%
Transportation Medium Truck Company (Petroleum, Oils, and Lubricants 5K) (Echelon Above Brigade Linehaul)	50%
Combat Heavy Equipment Transporter System Company	97%
Inland Cargo Transfer Company	50%
Headquarters and Headquarters Company and Special Troops Battalion/Division Sustainment Troops Battalion	98%
Headquarters and Headquarters Company, Expeditionary Sustainment Command	49%

Table D-2. Estimated mobility rating (*continued*)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Headquarters and Headquarters Company, Combat Sustainment Support Battalion	98%
Division Headquarters	62%
Division Main Command Post	45%
Division Tactical Command Post	79%
Sustainment Brigade	85%
Sustainment Brigade Headquarters	98%
Combat Sustainment Support Battalion (Division Assigned)	83%
Headquarters And Headquarters Company, Combat Sustainment Support Battalion	100%
Composite Supply Company	48%
Transportation Composite Truck Company (Light)	99%
Field Feeding Company	85%
Support Maintenance Company	85%
Armored Brigade Combat Team	77%
Headquarters And Headquarters Company, Armored Brigade Combat Team	94%
Combined Arms Battalion (Infantry) (Armored Brigade Combat Team)	65%
Headquarters and Headquarters Company, Combined Arms Battalion (Infantry) (Armored Brigade Combat Team)	80%
Rifle Company, Combined Arms Battalion (Armored Brigade Combat Team)	52%
Armor Company, Combined Arms Battalion (Armored Brigade Combat Team)	74%
Combined Arms Battalion (Armor) (Armored Brigade Combat Team)	70%
Headquarters and Headquarters Company, Combined Arms Battalion (Armor) (Armored Brigade Combat Team)	81%
Armor Company, Combined Arms Battalion (Armored Brigade Combat Team)	74%
Rifle Company, Combined Arms Battalion (Armored Brigade Combat Team)	52%
Cavalry Squadron (Armored Brigade Combat Team)	69%
Headquarters And Headquarters Troop, Cavalry Squadron (Armored Brigade Combat Team)	79%
Cavalry Troop, Cavalry Squadron (Armored Brigade Combat Team)	61%
Armor Company, Cavalry Squadron (Armored Brigade Combat Team)	74%
Brigade Engineer Battalion, Armored Brigade Combat Team	79%
Headquarters and Headquarters Company, Brigade Engineer Battalion, Armored Brigade Combat Team	100%
Tactical Unmanned Aircraft System Platoon	61%
Combat Engineer Company, Brigade Engineer Battalion, Armored Brigade Combat Team	53%
Brigade Signal Company (Armored Brigade Combat Team/Infantry Brigade Combat Team)	100%
Military Intelligence Company Brigade Combat Team With / Company Intelligence Support Team	73%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Military Intelligence Company Brigade Combat Team With / Company Intelligence Support Team	78%
Tactical Unmanned Aircraft System Platoon	68%
Field Artillery Battalion, 155 Self-Propelled (Armored Brigade Combat Team)	81%
Headquarters and Headquarters Battery, Field Artillery Battalion, 155 Self-Propelled (Armored Brigade Combat Team)	83%
Field Artillery Battery, Field Artillery Battalion (3X6) 155 Self-Propelled (Armored Brigade Combat Team)	80%
Brigade Support Battalion (Armored Brigade Combat Team)	92%
Headquarters and Headquarters Company, Brigade Support Battalion (Armored Brigade Combat Team)	82%
Distribution Company, Brigade Support Battalion (Armored Brigade Combat Team)	68%
Field Maintenance Company, Brigade Support Battalion (Armored Brigade Combat Team)	100%
Medical Company, Brigade Support Battalion (Armored Brigade Combat Team)	100%
Forward Support Company (Cavalry Squadron) Brigade Support Battalion (Armored Brigade Combat Team)	98%
Forward Support Company (Brigade Engineer Battalion), Brigade Support Battalion (Armored Brigade Combat Team)	91%
Forward Support Company (Field Artillery Battalion), Brigade Support Battalion (Armored Brigade Combat Team)	89%
Forward Support Company (Combined Arms Battalion) (Armor), Brigade Support Battalion (Armored Brigade Combat Team)	100%
Forward Support Company (Combined Arms Battalion) (Infantry), Brigade Support Battalion (Armored Brigade Combat Team)	99%
Stryker Brigade Combat Team (Stryker Brigade Combat Team)	75%
Headquarters And Headquarters Company, Stryker Brigade Combat Team	92%
Infantry Battalion (Stryker Brigade Combat Team)	68%
Headquarters and Headquarters Company, Infantry Battalion (Stryker Brigade Combat Team)	94%
Rifle Company Infantry Battalion (Stryker Brigade Combat Team)	59%
Cavalry Squadron (Stryker Brigade Combat Team)	60%
Headquarters And Headquarters Troop, Cavalry Squadron (Stryker Brigade Combat Team)	100%
Cavalry Troop, Cavalry Squadron (Stryker Brigade Combat Team)	44%
Weapons Troop, Cavalry Squadron (Stryker Brigade Combat Team)	67%
Brigade Engineer Battalion, Stryker Brigade Combat Team	80%
Headquarters and Headquarters Company, Brigade Engineer Battalion, Stryker Brigade Combat Team	100%
Combat Engineer Company, Brigade Engineer Battalion, Stryker Brigade Combat Team	57%

Table D-2. Estimated mobility rating (continued)

<i>Unit Type</i>	<i>Estimated Mobility Rating</i>
Combat Engineer Company, Brigade Engineer Battalion,	61%
Brigade Signal Company (Stryker Brigade Combat Team)	100%
Military Intelligence Company Stryker Brigade Combat Team With Company Intelligence Support Team	73%
Military Intelligence Company Brigade Combat Team With Company Intelligence Support Team	78%
Tactical Unmanned Aircraft System Platoon	68%
Field Artillery Battalion, 155 Towed (Stryker Brigade Combat Team)	81%
Field Artillery Battery, (Stryker Brigade Combat Team)	82%
Headquarters and Headquarters Battery, Field Artillery Battalion, 155 Towed (Stryker Brigade Combat Team)	80%
Brigade Support Battalion (Stryker Brigade Combat Team)	90%
Headquarters and Headquarters Company, Brigade Support Battalion (Stryker Brigade Combat Team)	99%
Distribution Company, Brigade Support Battalion (Stryker Brigade Combat Team)	85%
Field Maintenance Company, Brigade Support Battalion (Stryker Brigade Combat Team)	91%
Medical Company, Brigade Combat Team (Stryker Brigade Combat Team)	88%
Forward Support Company (Cavalry Squadron) Brigade Support Battalion (Stryker Brigade Combat Team)	97%
Forward Support Company (Brigade Engineer Battalion), Brigade Support Battalion (Stryker Brigade Combat Team)	79%
Forward Support Company (Field Artillery), Brigade Support Battalion, (Stryker Brigade Combat Team)	86%
Forward Support Company (Infantry), Brigade Support Battalion, (Stryker Brigade Combat Team)	97%
Infantry Brigade Combat Team (Infantry Brigade Combat Team)	80%
Headquarters, Infantry Brigade Combat Team	58%
Infantry Battalion (Infantry Brigade Combat Team)	33%
Headquarters and Headquarters Company, Infantry Battalion (Infantry Brigade Combat Team)	79%
Rifle Company, Infantry Battalion (Infantry Brigade Combat Team)	5%
Weapons Company, Infantry Battalion (Infantry Brigade Combat Team)	73%
Cavalry Squadron (Infantry Brigade Combat Team)	65%
Headquarters and Headquarters Troop, Cavalry Squadron (Infantry Brigade Combat Team)	74%
Motorized Cavalry Troop, Cavalry Squadron (Infantry Brigade Combat Team)	82%
Dismounted Cavalry Troop, Cavalry Squadron (Infantry Brigade Combat Team)	22%
Brigade Engineer Battalion, Infantry Brigade Combat Team	82%
Headquarters and Headquarters Company, Brigade Engineer Battalion, Infantry Brigade Combat Team	95%
Combat Engineer Company, Brigade Engineer Battalion, Infantry Brigade Combat Team	84%
Combat Engineer Company, Brigade Engineer Battalion, Infantry Brigade Combat Team	68%

Table D-2. Estimated mobility rating (continued)

Unit Type	Estimated Mobility Rating
Brigade Signal Company (Armored Brigade Combat Team/ Infantry Brigade Combat Team)	100%
Military Intelligence Company Brigade Combat Team With /Company Intelligence Support Team	73%
Tactical Unmanned Aircraft System Platoon	78%
Tactical Unmanned Aircraft System Platoon	68%
Field Artillery Battalion, Composite (3X6) (Infantry Brigade Combat Team)	80%
Headquarters and Headquarters Battery, Field Artillery Battalion, Composite (3X6) (Infantry Brigade Combat Team)	78%
Field Artillery Battery, Field Artillery Battalion, Composite (3X6) (105 Towed) (Infantry Brigade Combat Team)	84%
Field Artillery Battery, Field Artillery Battalion, Composite (155 Towed) (Infantry Brigade Combat Team)	75%
Brigade Support Battalion With /Forward Support Company (Infantry Brigade Combat Team)	84%
Headquarters and Headquarters Company, Brigade Support Battalion (Infantry Brigade Combat Team)	82%
Distribution Company, Brigade Support Battalion (Infantry Brigade Combat Team)	68%
Medical Company, Brigade Support Battalion (Infantry Brigade Combat Team)	90%
Field Maintenance Company, Brigade Support Battalion (Infantry Brigade Combat Team)	80%
Forward Support Company (Cavalry Squadron) Brigade Support Battalion (Infantry Brigade Combat Team)	90%
Forward Support Company (Brigade Engineer Battalion), Brigade Support Battalion, (Infantry Brigade Combat Team)	77%
Forward Support Company (Field Artillery) Brigade Support Battalion, (Infantry Brigade Combat Team)	89%
Forward Support Company (Infantry) Brigade Support Battalion, (Infantry Brigade Combat Team)	96%
Field Artillery Brigade (2x Multiple Launch Rocket System and 2 x 155 Self-Propelled)	91%
Headquarters and Headquarters Battery, Field Artillery Brigade	98%
Multiple Launch Rocket System Battalion	91%
Headquarters and Headquarters Battery, Field Artillery Battalion, Multiple Launch Rocket System	76%
Field Artillery Battery, Multiple Launch Rocket System	98%
Field Artillery Battalion 155 Self-Propelled (Field Artillery Brigade)	91%
Headquarters and Headquarters Battery, Field Artillery Battalion 155 Self-Propelled (Field Artillery Brigade)	75%
Field Artillery Battery, Field Artillery Battalion, 155 Self-Propelled (Field Artillery Brigade)	96%

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Appendix E

LOGSTAT and PERSTAT Report Formats

This appendix describes the LOGSTAT and PERSTAT reports used by units operating within the corps and division areas. The reports are used to identify each unit's specific logistics and personnel requirements.

E-1. LOGSTATs are a snapshot taken in time. LOGSTAT reports account for each unit's specific requirements based on task organization, equipment density, and assigned mission. LOGSTATs include the unit's on hand stockage levels, and what the unit expects to have over the next 24, 48, and 72 hours. The reports must be detailed enough to be useful but simple enough for everyone to prepare and understand. Logistics reporting can easily become an overwhelming task for the staff and result in information overload for the battalion and brigade commanders.

E-2. Reports may be in different formats, but every leader must know the status of equipment and the on hand supplies particularly of ammunition, food, water, and fuel. In order to provide support, BSB commanders, in conjunction with the brigade S-4, use a logistics status report to coordinate with supporting and supported units. The LOGSTAT report enables the higher command and support units to make timely decisions, prioritize, cross-level, and synchronize the distribution of supplies to sustain units at their authorized levels.

E-3. The LOGSTAT report is an internal status report that identifies logistics requirements, provides visibility on critical shortages, allows commanders and staff to forecast future support requirements, project mission capability, and informs the common operational picture. This report provides planners at the battalion and brigade levels with the information necessary to forecast future support requirements and coordinate appropriate resupply to the maneuver forces. Accurately reporting the logistics and AHS support status is essential for keeping units combat ready. Brigade SOPs establish report formats, reporting times, and analog and digital redundancy requirements. Units must also establish and rehearse effective primary, alternate, contingency and emergency communication plans with task organization changes.

E-4. The logistics status report is the primary product used throughout the brigade and at higher levels of command to provide a logistics snapshot of current stock status, on-hand quantities, and future requirements. The logistics status report is a compilation of data that requires analysis before action. Providing the commander a bunch of numbers with percentages and colors is useless. The commander requires an analysis based on the data along with a recommendation for action.

E-5. The brigade commander's preferences and the mission determine what the logistics status report looks like and what it contains. The LOGSTAT report is customizable to the commander's preferences, and units do not necessarily have to produce logistics status reports from a logistics information system. The format presented to the commander must be easy to understand and act on.

TIMELY AND ACCURATE REPORTING

E-6. Planners base the data collection for the logistics status report on operational and mission variables and should not overwhelm subordinate units with submission requirements. A report that grows too cumbersome will overwhelm staffs and fail in a high operational tempo. It is important the brigade standardizes the logistics status report throughout all units and that each unit consistently provides input, regardless of their level of support. The brigade S-4 decides the logistics status report format ensuring the data the BSB requires is included. In some cases, a higher level S-4 will determine the logistics status report format. It is important to note, the brigade tracks the higher-level requirements as well as any specific brigade commander requirements.

E-7. The brigade and battalion S-4s should ensure the data requested is sufficient to answer applicable CCIR and priority information requirements. Some possible details to include in a logistics report are gallons of fuel on hand and projected usage, class I and water status, changes to anticipated expenditure rates, class V status, and any incident having significant impact on the operational capability of a logistics unit or logistical posture of any tactical unit. Capturing the status of weapons systems and critical equipment is also necessary. Some commanders track special event meals or status of critical low-density equipment. The battalion must clearly define the reported metric criteria, such as percentages or colors, and define them in unit SOP. Typical reporting metrics include cases, number of items, gallons, liters, and other specific metrics. The BSB may include information such as logistics information systems' connectivity status, route and transportation node status, and distribution platform capabilities.

E-8. The frequency of a logistics status report varies. Units often complete a logistics status report twice daily, but during periods of increased intensity, the commander may require status updates more frequently. As long as automation is available, logistics status reports relayed via near-real time automation provide the commander with the most up-to-date data.

E-9. The organization's battle rhythm is critical when considering report cut off times, as of times, and reporting times. Automated feeds will offer near real time, but if a unit is consolidating information manually, the unit will have to determine cut off and reporting times to synchronize with the rest of the brigade. If logistics updates are part of the brigade commander's daily battle rhythm or part of an update briefing, the brigade should make logistics reporting times as current as possible for these events to provide the commander with the best status. It is also important to allow enough time to analyze the data in order to provide the commander with a considered recommendation on future courses of action.

E-10. The BSB must be mindful of internal and external stockage of supplies and their accurate reporting. Unit on hand supplies are those items for BSB internal consumption. Supply point items are those items that are for distribution to the BCT, including resupplies to companies in BSB. It is important the BSB S-4, S-3, and SPO officer account for these two groups of supplies separately to ensure the accuracy of the reports.

LOGISTICS STATUS REPORT FLOW

E-11. The command relationship of units within the brigade determines who reports to whom. Although the unit SOP should address how attached or OPCON elements within the brigade report their logistics status, mission orders must delineate relationships and establish reporting requirements. Normally logistics reporting parallels logistical support responsibility, but the requirement may change throughout the mission. Lack of clarity could result in a unit getting too much or not enough of a critical class of supply or the unnecessarily tasking valuable distribution assets.

E-12. Leaders at all levels analyze the logistics status report and forecast requirements based on current balances and upcoming mission requirements. Once logistics information is gathered, a leader may cross level materiel within the organization. For example, a unit first sergeant would cross-level supplies within a company, and the battalion S-4 cross-levels supplies within the battalion. The battalion S-4 submits a consolidated logistics status report to the brigade S-4.

E-13. The brigade S-4 receives the logistics status report from all subordinate units. The brigade S-4, with the brigade XO's concurrence, determines which units receive designated supplies and shares that information with the BSB SPO officer. The BSB SPO officer acknowledges required supply actions per the brigade S-4, synchronizes distribution, updates the supply point on hand status, forecasts resupply requirements for the brigade, and plans resupply. The section updates the logistics status report with the BSB supply points' adjusted balances and additional or new forecasted requirements. The BSB SPO officer forwards the entire report to the brigade S-4 and provides a courtesy copy to the supporting DSB SPO officer.

E-14. Figures E-1 and E-2 on page E-4 display the LOGSTAT format minimum requirements. Commanders may add unit specific information based on type of unit, on hand equipment, type or phase of an operation, mission requirements, and commanders' requirements.

Logistics Status Report (LOGSTAT)							
Unit:				Date/Time:			
Location:				Headcount:			
Line 1	Class I	Combat Load	On Hand	Next 24	Next 48	Next 72	Status % (R/A/G/B)
	MRE (Each)						
	UGR (module)						
	Water, Bulk (Gallons)						
	Water, Bottled (Each)						
	Ice						
Line 2	Class II						
Line 3	Class III						
	Bulk						
	Packaged						
Line 4	Class IV						
Line 5	Class V						
Line 6	Class VI						
Line 7	Class VII						
Line 8	Class VIII						

SAMPLE

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Figure E-1. Notional example of a LOGSTAT report page 1

Logistics Status Report (LOGSTAT)							
Unit:				Date/Time:			
Location:				Headcount:			
Line 9	Class IX						
Line 10	Class X						
Additional Remarks:							
Legend:							
FMC: Fully Mission Capable				R: Ready			
MRE: Meal Ready-to-Eat				A: Ammunition			
OR%: Operational Readiness Percentage				Green			
UGR: Unitized Group Ration				Black			
Instructions:							
Daily Suspense Is:							
Submit To:							
Overall Status:							

SAMPLE

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Figure E-2. Notional example of a LOGSTAT report page 2

E-15. Personnel status reports, also commonly referred to as PERSTAT reports, are a snapshot taken in time. PERSTAT reports account for each unit’s personnel. Figure E-3 and figure E-4 on page E-6 display the PERSTAT format minimum requirements. Commanders may add unit specific information based on commanders’ requirements.

Personnel Status Report (PERSTAT)			
REPORT NUMBER: P005 {USMTF # G880}			
GENERAL INSTRUCTIONS: Use to report the status of the unit's personnel. Reference: FM 1-0.			
Line 1	Date and Time:		DTG.
Line 2	Unit:		Unit making report.
Line 3	From:		DTG for the beginning of period applying to personnel information.
Line 4	To:		DTG for the end of report period.
Line 5	Unit:		Designated unit for which the personnel status information is submitted.
Line 6	Authorized:		Number of personnel authorized by personnel classification.
Line 7	Assigned:		Number of personnel assigned by personnel classification.
Line 8	On Hand:		Number of personnel on hand by personnel classification.
Line 9	Gains:		Number of personnel gains by personnel classification.
Line 10	Replacements:		Number of personnel gained that are replacements by personnel classification.
Line 11	Returned to Duty:		Number of personnel gained duty through medical channels by personnel classification.
Line 12	Killed:		Number of personnel KIA by personnel classification.
Line 13	Wounded:		Number of personnel WIA by personnel classification.
Line 14	Non-battle Loss:		Number of disease non-battle injury losses by personnel classification.

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Figure E-3. Notional example of a PERSTAT report page 1

Personnel Status Report (PERSTAT)	
REPORT NUMBER: P005 {USMTF # G880}	
GENERAL INSTRUCTIONS: Use to report the status of the unit's personnel. Reference: FM 1-0.	
Line 15	DUSTWUN/Missing: _____ Number of DUSTWUN/MIA by personnel classification.
Line 16	Deserters: _____ Number of deserters by personnel classification.
Line 17	AWOL: _____ Number absent without leave by personnel classification.
Line 18	Captured: _____ Number of personnel captured during the reporting period.
**Repeat lines 5 through 18 to report the personnel summary for additional units. Assign sequential lines to succeeding iterations. For example, first iteration is 5 through 18; second iteration is 5a through 18a; third iteration is 5b through 18b; and so on.	
Line 19	Narrative: _____ Free text for additional information required for report clarification.
Line 20	Authentic: _____ Report authentication.
Personnel Status Report Abbreviation Key.	
AWOL	absent without leave
DTG	date-time group
DUSTWUN	status-whereabouts unknown
KIA	killed in action
MIA	missing in action
OH	on hand
WIA	wounded in action

Figure E-4. Notional example of a PERSTAT report page 2

Appendix F

Sustainment Symbols

This appendix depicts and describes the unit symbols used in FM 4-0. Readers should refer to MIL-STD 2525D and ADP 1-02 for more information about military symbols.

F-1. Military symbols are governed by the rules in MIL-STD 2525D. ADP 1-02 is the Army proponent publication for all military symbols and complies with MIL-STD 2525D.

F-2. ADP 1-02 provides a single standard for developing and depicting hand drawn and computer-generated military symbols for situation maps, overlays, and annotated aerial photographs for all types of military operations. A military symbol is a graphic representation of a unit, equipment, installation, activity, control measure, or tactical task relevant to military operations that is used for planning or to represent the common operational picture on a map, display, or overlay. Table F-1 contains examples of select sustainment symbols used in FM 4-0.

Table F-1. Sustainment symbols


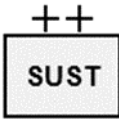

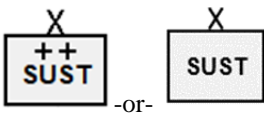
<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Theater Sustainment Command		
Expeditionary Sustainment Command		
Corps Logistics Support Element		
Sustainment Brigade		

Table F-1. Sustainment symbols (continued)



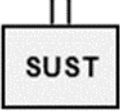
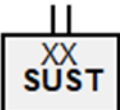
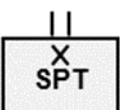
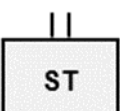
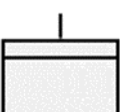
<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Division Logistics Support Element		
Division Sustainment Brigade		
Combat Sustainment Support Battalion		
Division Sustainment Support Battalion		
Brigade Support Battalion		
Special Troops Battalion		
Headquarters and Headquarters Company		

Table F-1. Sustainment symbols (continued)







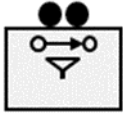
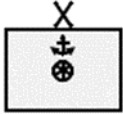
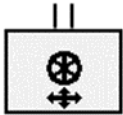

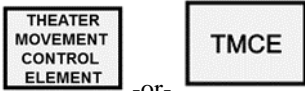
<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation:</i> <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Human Resources Sustainment Center		
Financial Management Support Center		
Theater Petroleum Center		
Petroleum Liaison Team		
Transportation Brigade Expeditionary		
Movement Control Battalion		
Theater Movement Control Element		

Table F-1. Sustainment symbols (continued)


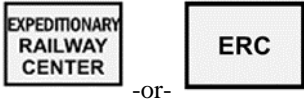
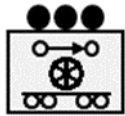
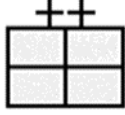
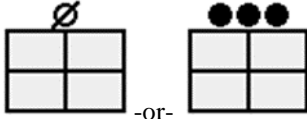
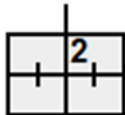
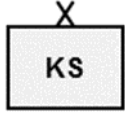
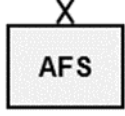
Unit	Unit Symbol	<p>Staff Representation: <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i></p>
Expeditionary Rail Center		
Railway Planning and Advisory Team		
Medical Command (Deployment Support)		
Medical Logistics Management Center		<p>The size of this element (and its echelon marker) is based on the volume of activity</p>
<p>Medical Company (Area Support) - Or - Medical Company, BSB</p>		
Contracting Support Brigade		
Army Field Support Brigade		

Table F-1. Sustainment symbols (continued)

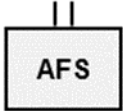

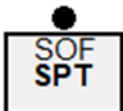


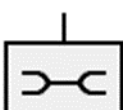
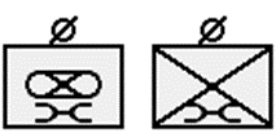
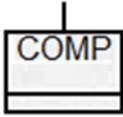
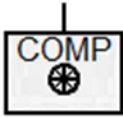

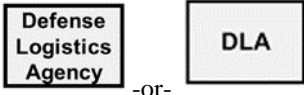


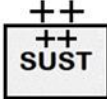


<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation:</i> <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Army Field Support Battalion		
LOGCAP Forward Team		
Army Special Operations Forces Support Cell		
Rations Supply Section		
Field Feeding Team		
Maintenance Company		
Maintenance Recovery Teams		

Table F-1. Sustainment symbols (continued)

Unit	Unit Symbol	<i>Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Composite Supply Company		
Composite Truck Company		
Mortuary Affairs Collection Point Squad		
Defense Logistics Agency		
Joint Deployment and Distribution Operations Center		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>64th TSC</p> </div> <div style="text-align: center;">  <p>26th ESC 64th TSC</p> </div> <div style="text-align: center;">  <p>32nd Sust Bde 26th ESC</p> </div> <div style="text-align: center;">  <p>US Army 189th CSSB 32nd Sust Bde Area Spt</p> </div> </div> <p style="text-align: center;">Examples of sustainment units with side text amplifiers.</p>		
<ol style="list-style-type: none"> 1. A “task force” amplifier is not placed over sustainment unit echelon markers since sustainment units are inherently modular, and a task force, by definition. 2. Staff elements, such as centers, agencies, bureaus, and cells, are only for staff charts. Staff charts are intended to display the organization or element either spelled out or abbreviated. Staff charts are not governed by ADP 1-02. Do not mix staff representations with unit icons. Field units should use icons as per ADP 1-02 when graphically depicting units on a map. Where a staff element is depicted using ADP 1-02 rules, it is depicted as subordinate to a special troops battalion, and not within the command staff. 3. Units with icons in a border-box and an echelon marker are inherently expeditionary. 4. Echelon marker relates to the number of people not the title of the organization. For example, a team of 15 personnel is depicted with two or three pips. 5. Major commands use their abbreviation. These may appear on command charts along with expeditionary units, depicted using ADP 1-02 icons. 		

Appendix G

Rules and Basis of Allocation

This appendix describes the rules of allocation for select Army units in the corps and divisions areas during the conduct of offensive and defensive operations.

G-1. Table G-1 displays the rules of allocation for sustainment units operating in the corps and division areas. It is designed to assist planners when allocating sustainment units and developing task organizations for the conduct of large-scale combat operations.

Table G-1. Rules of allocation

<i>Unit</i>	<i>Relationship</i>	<i>Organization</i>
Theater Sustainment Command	1-assigned	Army Service Component Command
Expeditionary Sustainment Command	1-attached	Theater Sustainment Command
Expeditionary Sustainment Command	1-assigned	Corps
Sustainment Brigade	1-attached	Expeditionary Sustainment Command
Special Troops Battalion	1-organic	Sustainment Brigade
Combat Sustainment Support Battalion	1-attached	Sustainment Brigade
Division Sustainment Brigade	1-assigned	Division
Division Sustainment Troops Battalion	1-organic	Division Sustainment Brigade
Division Sustainment Support Battalion	1-organic	Division Sustainment Brigade
Brigade Support Battalion	1-organic	Brigade Combat Team, Field Artillery Brigade, Aviation Brigade
Army Field Support Brigade	1-OPCON	Army Service Component Command, CONUS based deploys 1 Corps Logistics Support Element OPCON to corps
Army Field Support Battalion	1-OPCON	Division, CONUS based deploys 1 Division Logistics Support Element OPCON to division
Corps Support Brigade	1-OPCON	Army Service Component Command, corps
Signal Company	1-assigned	Sustainment Brigade Special Troops Battalion/Division Sustainment Troops Battalion
Mortuary Affairs Company	1-attached	Corps (normally attached to a CSSB supporting the corps)
Financial Management Support Center	1-assigned	Theater Sustainment Command or Expeditionary Sustainment Command conducting theater opening; A committed corps
Financial Management Support Unit	1-assigned	Sustainment Brigade Special Troops Battalion; Division Sustainment Brigade Sustainment Troops Battalion
Financial Management Support Detachment	1-organic	Financial Management Support Unit; Maneuver Brigade/Support Brigade; Financial Management Support Team
Human Resources Operations Center	1-assigned	Corps G-1; Division G-1
Human Resources Sustainment Center	1-assigned	Theater Sustainment Command or Expeditionary Sustainment Command conducting theater opening

Table G-1. Rules of allocation (continued)

<i>Unit</i>	<i>Relationship</i>	<i>Organization</i>
Human Resources Operations Branch	1-assigned	Expeditionary Sustainment Command Distribution Management Center support operations section; Division Sustainment Brigade support operations section
Human Resources Company Headquarters	1-assigned	Sustainment brigade Special Troops Battalion
Human Resources Platoon	1-assigned	Theater Gateway Personnel Accountability Team
Theater Gateway Personnel Accountability Team	1-attached	Sustainment brigade Special Troops Battalion; Division Sustainment Brigade Sustainment Troops Battalion
Casualty Liaison Team	1-assigned	Role 3 Medical Treatment Facilities, One per Mortuary Affairs Company; One per Human Resources Sustainment Center, COD; and one per General Officer-level command (w/exception to Army Service Component Command/Theater Sustainment Command).
Military Mail Terminal	1-attached	Sustainment brigade Special Troops Battalion
Postal Platoon	4-attached	HR Company
Legend: CONUS = continental United States OPCON = operational control		

G-2. Medical units listed in table G-2 are provided to represent current AHS force structure. However, it is important to note that the Medical Command (Deployment Support), Medical Brigade (Support), and subordinate medical units are task-organized based on the size, complexity, and duration of the operation and the population supported.

Table G-2. Medical basis of allocation

<i>Unit</i>	<i>Assignment</i>	<i>Allocation</i>
Medical Command (Deployment Support)	Army Service Component Command	One per theater.
Medical Brigade (Support)	Medical Command (Deployment Support)	One per two to six subordinate battalions or like units such as the Field Hospital. Minimum first Medical Brigade (Support) comes in as two subordinate battalions.
Multifunctional Medical Battalion	Medical Brigade (Support)	One per three to six subordinate company/detachment size units.
Medical Company (Area Support)	Multifunctional Medical Battalion	One per 10,000 non-brigade combat team troops supported in the brigade, division and/or corps headquarters and Army Service component Command area.
Area Medical Lab	Medical Command (Deployment Support), Medical Brigade (Support), or other deployed medical unit	One per theater.
Medical Logistics Management Center	Medical Command (Deployment Support)	One unit required in the force. Unit contains a non-deploying base unit, two forward teams (Early Entry), and two forward teams (Follow On). Each team deploys and supports a theater Army.
Brigade Support Medical Company	Brigade Support Battalion	One per Brigade Support Battalion, Airborne, Armor, Infantry, and Stryker BCT.
Medical Company Air Ambulance	General Support Aviation Battalion	One per General Support Aviation Battalion.

Table G-2. Medical basis of allocation (continued)

<i>Unit</i>	<i>Assignment</i>	<i>Allocation</i>
Medical Company Ground Ambulance	Multifunctional Medical Battalion	0.33 per brigade combat team, 0.5 per division headquarters and 2 per Army Service Component Command.
Medical Logistics Company	Multifunctional Medical Battalion	One per 13 short tons of class VIII issued and received per day. 1 per theater opening offset by workload.
Dental Company (Area Support)	Medical Command (Deployment Support) or Medical Brigade (Support)	1 per 43,000 Army population supported in the theater. (Based upon the ratio of one dentist in support of 1,175 troops).
Medical Detachment Veterinary Service Support	Medical Command (Deployment Support), Medical Brigade (Support), or Multifunctional Medical Battalion	For major combat operations (phase I-III), maximum of: one per 60,000 personnel supported in all U.S. forces, DOD components and other units/organizations as directed or one per 300 military working dogs and DOD contracted working dogs in support of all U.S. forces, DOD components and other units/organizations as directed or one per senior Army headquarters. For stability operations (phase IV), same as major combat operations (phase I-III).
Medical Detachment (Preventive Medicine)	Medical Command (Deployment Support), Medical Brigade (Support), Multifunctional Medical Battalion, Medical Company (Area Support), or task force medical command and control headquarters in the Corps or echelon above brigade units.	One detachment per 17,000 personnel supported at the Corps or echelons above brigade.
Medical Detachment (Blood Support)	Multifunctional Medical Battalion	0.035 per Field Hospital; 0.035 per Hospital Augmentation Detachment (Surgical 24 Bed); 0.039 per forward resuscitative and surgical team; and 0.007 per Medical Company (Area Support)/ Brigade Support Medical Company (First Blood Support Detachment arrives with the arrival of the first Field Hospital, forward resuscitative and surgical team or Medical Company (Area Support)/ Brigade Support Medical Company).
Medical Detachment (Combat Operational Stress Control)	Multifunctional Medical Battalion	One per 39,000 Army population supported in theater. Minimum of one.
Medical Team (Optometry)	Medical Command (Deployment Support) or Medical Brigade (Support)	One per 15,000 population supported in an area of operation.
Hospital Center (240-Bed)	Medical Brigade (Support)	One per maximum Two Field Hospitals (32 Bed); First one comes in at one Field Hospital.
Field Hospital (32-Bed)	Hospital Center (240-Bed)	Based upon occupied hospital beds of different patient categories.
Hospital Augmentation Detachment (Surgical, 24-Bed)	Hospital Center (240-Bed)	Based upon occupied hospital beds of different patient categories.
Hospital Augmentation Detachment (Medical, 32-Bed)	Hospital Center (240-Bed)	Based upon occupied hospital beds of different patient categories.
Hospital Augmentation Detachment (Intensive Care Ward, 60-Bed)	Hospital Center (240-Bed)	Based upon occupied hospital beds of different patient categories.
Medical Detachment, Minimal Care	Medical Brigade (Support)	Based upon occupied hospital beds of different patient categories.
Hospital Augmentation Team, Head and Neck	Medical Command (Deployment Support) or Medical Brigade (Support)	1 per 650 wounded in action/Disease Non- battle injury Occupied Beds for directed support to host nation population at risk at 1 team per 67,000 supported population.

Table G-2. Medical basis of allocation (continued)

<i>Unit</i>	<i>Assignment</i>	<i>Allocation</i>
Medical Team, Forward Surgical (Airborne)	Medical Command (Deployment Support) or Medical Brigade (Support)	One per brigade combat team, one per airborne brigade combat team, one per Special Forces Group, and one per brigade combat team assigned to a theater conducting stability and reconstruction operations.
Medical Team, Forward Resuscitative and Surgical	Medical Command (Deployment Support) or Medical Brigade (Support)	One per Armor Brigade Combat Team, one per Infantry Brigade Combat Team (not including Airborne), and one per brigade combat team assigned to a theater conducting stability and reconstruction operations.
Medical Team, Forward Resuscitative and Surgical (Airborne)	Medical Command (Deployment Support) or Medical Brigade (Support)	One per committed Infantry Brigade Combat Team (Airborne), one per Special Forces Group (Airborne), maximum of 3. One per 2 committed Airborne Brigade Combat Teams in lesser contingency and one per Infantry Brigade Combat Team (Airborne) in a forced entry package.
Combat Support Hospital (248-Bed)	Medical Command (Deployment Support), Medical Brigade (Support), or Joint and/or Combined Task Force	3.78/1000 conventional, 3.957/1000 blister, and 1.315/1000 nerve hospital patients in the corps.
Hospital Company (84-Bed)	Combat Support Hospital (248-Bed)	One per Combat Support Hospital (248 Bed).
Hospital Company (164-Bed)	Combat Support Hospital (248-Bed)	One per Combat Support Hospital, (248 Bed).

Source Notes

This division lists sources by page number. Where material appears in a paragraph, it lists both the page number followed by the paragraph number. All websites accessed on 31 July 2019.

Chapter 3

- 3-5 Equipping a Partnered Force for Offensive Operations: SOF Sustainment of Operation Inherent Resolve (Operation Eclipse): from staff officers of the 528th Sustainment Brigade, provided in an email on 7 January 2018.
- 3-7 Operation United Assistance: Challenges in Sustainment Preparation of the OE: Reibestein, Jeffrey, Logistics in Support of Operation United Assistance: Teamwork, Transition and Lessons Learned, United States Africa Command Public Affairs, June 19, 2015. Available at <https://www.africom.mil/media-room/article/25458/logistics-in-support-of-operation-united-assistance-teamwork-transition-and-lessons-learned>. United States Africa Command, Directorate of Logistics, Operation United Assistance: Logistics Partnership Success, author unknown, January 12, 2015. Available at <https://www.africom.mil/media-room/article/25102/operation-united-assistance-logistics-partnership-success>.
- 3-16 Operation Unified Response and a Unity of Effort (Earthquake struck the Caribbean island nation of Haiti): Dr. Isaac Hampton II, U.S. Army South 2010, Annual Command History, Press. Army Center of Military History, Washington D.C., 2012.
- 3-25 First Army's Overlord Internment Plan: Ross, William F., and Charles F. Romanus, The Quartermaster Corps: Operations in the War Against Germany, (Washington DC, Office of the Chief of Military History, 1965), 681.
- 3-27 Operational Contract Support: A Critical Enabler During OIR: Army Magazine, Supporting the Next Fight: Sustainment Tool Belt includes Contractors, Vol 68, No. 4, April 2018, 46-49.
- 3-32 Support Commands in Shaping Operations: 21st Theater Sustainment Command in Support of NATO. DOD, Public Affairs Office, Third Atlantic Resolve Aviation Brigade Arrives in Europe, June 22, 2018. Available at <https://www.defense.gov/News/Article/Article/1558059/third-atlantic-resolve-aviation-brigade-arrives-in-europe/>. U.S. Army Europe, Public Affairs Office, Saber Strike 2018, June 26, 2018. Available at <http://www.eur.army.mil/SaberStrike/>.

Chapter 4

- 4-3 Sustaining Overlord: The Logistical Planning for the Normandy Invasion: Planning Overlord, Pimlott, John, The Historical Atlas of World War II, New York, (Henry Holt & Co., 1995), 158-163. (Copyright Pending)

Chapter 5

- 5-2 28th Infantry Division in WWII: Lethality of Large-Scale Combat Operations: MacDonald, Charles B., and Sidney T. Mathews, U.S. Army in World War II, Three Battles: Arncliffe, Altuzzo and Schmidt, Department of the Army, Office of the Chief of Military History, Washington, DC, 1974, 404-414.
- 5-3 Sustaining Large-Scale Combat Operations Velocity, Precision and Volume: Keith R. Beurskens (editor), The Long Haul; Historical Case Studies of Sustainment in Large-Scale Combat Operations, Ft Leavenworth: Army University Press, 2018. Available at <https://www.armyupress.army.mil/Portals/7/combat-studies-institute/csi-books/the-long-haul-lsco-volume-4.pdf>.
- 5-5 The Red Ball Express: King, Benjamin, Richard C. Biggs, and Eric R. Criner, Spearhead of Logistics: A History of the United States Army Transportation Corps, (Fort Eustis, VA, U.S.

Army Transportation Center), 1994, 233-239. Ruppenthal, Roland G., Logistical Support of the Armies, Vol I: May 1941-September 1944, (Washington DC, Office of the Chief of Military History), 1953, 309-310.

Chapter 6

6-2 Pusan Perimeter: Defending to Develop Favorable Conditions for the Offense: Roy E. Appleman, Series: United States Army in The Korean War, Title: South to the Naktong, North to the Yalu, (June-November 1950). Other info: Printed 1992, CMH Pub 20-2-1 Center of Military History United States Army Washington D.C. 109-120 and 250-265.

6-7 "Thank God for the Airdrop": Aerial Resupply in the Relief of Bastogne, Trevor N. Dupuy, Hitler's Last Gamble: The Battle of the Bulge, December 1944 – January 1945, (New York: Harper Collins Publishers, 1994), 177. "Thank God for the Airdrop": Aerial Resupply in the Relief of Bastogne, Michael Collins and Martin King, Voices of the Bulge: Untold Stories from Veterans of the Battle of the Bulge. (Minneapolis, MN: Zenith Press, 2011).

Chapter 7

7-6 Fueling Offensive Operations: The Inland Pipeline Distribution System in Operation Iraqi Freedom I: Department of the Army, Deputy Chief of Staff for Logistics, Operation Desert Storm – Sustainment, (Washington DC, December 1990), 38-39. Fort Leavenworth, KS: Combat Studies Institute Press, 2004.

Chapter 8

8-2 Consolidation of Gains During The Battle of Okinawa, WWII: Okinawa, The Last Battle, Center of Military History, United States Army Washington, D. C., 2000, Library of Congress Catalog Card Number: 49-45742, 26,283,471,473-474.

Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definitions. The glossary lists terms for which FM 4-0 is the proponent with an asterisk (*) before the term. For other terms, it lists the proponent publication in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ABCT	armored brigade combat team
ACC	Army Contracting Command
ACSA	acquisition and cross servicing agreement
ACOS	Assistant Chief of Staff
ADCON	administrative control
ADP	Army doctrine publication
AFSB	Army field support brigade
AFSBn	Army field support battalion
AHS	Army Health System
AMEDD	Army Medical Department
AO	area of operations
AOR	area of responsibility
APOD	aerial port of debarkation
APOE	aerial port of embarkation
APS	Army pre-positioned stock
AR	Army regulation
ARSOF	Army special operations forces
ASB	aviation support battalion
ASC	Army sustainment command
ASCC	Army Service component command
ATP	Army techniques publication
BCT	brigade combat team
BSA	brigade support area
BSB	brigade support battalion
BSMC	brigade support medical company
CAB	combat aviation brigade
CBN	contracting battalion
CBRN	chemical, biological, radiological, and nuclear
CLSE	corps logistics support element
CLT	casualty liaison team
CONUS	continental United States

COP	common operating picture
CP	command post
CSB	contracting support brigade
CSSB	combat sustainment support battalion
CUL	common-user logistics
DAFL	directive authority for logistics
DLA	Defense Logistics Agency
DMC	distribution management center
DOD	Department of Defense
DODD	Department of Defense Directive
DSB	division sustainment brigade
DSSB	division sustainment support battalion
DSTB	division sustainment troops battalion
EA	executive agent
EAB	echelons above brigade
EOD	explosive ordnance disposal
ESC	expeditionary sustainment command
FARP	forward arming and refuel point
FORSCOM	Forces Command
FM	field manual
FMSC	financial management support center
FSC	forward support company
G-1	assistant chief of staff, personnel
G-2	assistant chief of staff, intelligence
G-3	assistant chief of staff, operations
G-4	assistant chief of staff, logistics
G-5	assistant chief of staff, plans
G-8	assistant chief of staff, financial management
GCC	geographic combatant commander
GS	general support
GCSS-Army	Global Combat Support System-Army
GSB	group support battalion
HNS	host-nation support
HQ	headquarters
HQDA	Headquarters Department of the Army
HR	human resources
HROB	human resources operations branch
HRSC	human resources sustainment center
IAW	in accordance with
IBCT	infantry brigade combat team
IMCOM	Installation Management Command

ISB	intermediate staging base
J-4	logistics directorate of a joint staff, logistics staff section
JDDOC	joint deployment and distribution operations center
JFC	joint force commander
JOA	joint operations area
JP	joint publication
JTF	joint task force
LCMC	life cycle management command
LOC	line of communications
LOGCAP	Logistics Civil Augmentation Program
LOGSTAT	logistics status report
LRC	logistics readiness center
MEB	maneuver enhancement brigade
MEDCOM (DS)	medical command (deployment support)
METL	mission essential task list
METT-TC	mission, enemy, terrain, troops, time available and civil factors
MLMC	medical logistics management center
MMB	multifunctional medical battalion
MTF	medical treatment facilities
NATO	North Atlantic Treaty Organization
OCONUS	outside the continental United States
OCS	operational contract support
OE	operational environment
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
PAT	personnel accountability team
PERSTAT	personnel status
POD	port of debarkation
POL	petroleum, oils, and lubricants
PPP	power projection platform
RSOI	reception, staging, onward movement, and integration
RTF	regeneration task force
S-1	battalion or brigade human resource staff officer
S-4	battalion or brigade logistics staff officer
SBCT	stryker brigade combat team
SDDC	surface Deployment and Distribution Command
SJA	staff Judge Advocate
SOF	special operations forces
SPOD	seaport of debarkation
SPOE	seaport of embarkation

TACON	tactical control
TB MED	technical bulletin medical
TBX	transportation brigade expeditionary
TG	technical guide
TPFDD	time-phased force deployment data
TM	technical manual
TMCE	theater movement control element
TSC	theater sustainment command
U.S.	United States
USAMC	United States Army Materiel Command
USSOCOM	United States Army Special Operations Command
USTRANSCOM	United States Transportation Command

SECTION II – TERMS

administrative control

Direction or exercise of authority over subordinate or other organizations in respect to administration and support. (JP 1)

adversary

A party acknowledge as potentially hostile to a friendly party and against which the use of force may be envisaged. (JP 3-0)

alliance

(DOD) The relationship that results from a formal agreement between two or more nations for broad, long-term objectives that further the common interests of the members. (JP 3-0)

anticipation

The ability to foresee events and requirements and initiate necessary actions that most appropriately satisfy a response without waiting for operations orders or fragmentary orders. (ADP 4-0)

area defense

A type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright. (ADP 3-90)

area of influence

A geographical area wherein a commander is directly capable of influencing operations by maneuver or fire support systems normally under the commander's command or control. (JP 3-0)

area of interest

That area of concern to the commander, including the area of influence, areas adjacent thereto, and extending into enemy territory. (JP 3-0)

area of operations

An operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces. (JP 3-0)

ARFOR

The Army component and senior Army headquarters of all Army forces assigned or attached to a combatant command, subordinate joint force command, joint functional command, or multinational command. (FM 3-94)

assessment

Determination of the progress toward accomplishing a task, creating a condition, or achieving an objective. (JP 3-0)

base

A locality from which operations are projected or supported. (JP 4-0)

campaign

A series of related operations aimed at achieving strategic and operational objectives within a given time and space. (JP 5-0)

close area

The portion of a commander's area of operations where the majority of subordinate maneuver forces conduct close combat. (ADP 3-0)

close combat

Warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets. (ADP 3-0)

combat power

(Army) The total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time. (ADP 3-0)

command and control

The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. (JP 1)

command and control system

The arrangement of people; processes, networks, and command posts that enable commanders to conduct operations. (ADP 6-0)

common-user logistics

(DOD) Materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and/or multinational partner in an operation. (JP 4-09)

container management

The process of establishing and maintaining visibility and accountability of all cargo containers moving within the Defense Transportation System. (ADP 4-0)

continuity

The uninterrupted provision of sustainment across all levels of war. (ADP 4-0)

consolidate gains

Activities to make enduring any temporary operational success and to set the conditions for a sustainable security environment, allowing for a transition of control to other legitimate authorities. (ADP 3-0)

culminating point

The point at which a force no longer has the capability to continue its form of operations, offense or defense. (JP 5-0)

cyberspace electromagnetic activities

The process of planning, integrating, and synchronizing cyberspace and electronic warfare operations in support of unified land operations. (ADP 3-0)

cyberspace operations

The employment of cyberspace capabilities where the primary purpose is to achieve objectives in or through cyberspace. (JP 3-0)

decisive action

The continuous, simultaneous execution of offensive, defensive, and stability operations or defense support of civil authorities tasks. (ADP 3-0)

decisive operation

The operation that directly accomplishes the mission. (ADP 3-0)

decisive point

A geographic place, specific key event, critical factor, or function that, when acted upon, allows commanders to gain a marked advantage over an enemy or contribute materially to achieving success. (JP 5-0)

deep area

Where the commander sets conditions for future success in close combat. (ADP 3-0)

defensive operation

An operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations. (ADP 3-0)

defense industrial base

(DOD) The Department of Defense, government, and private sector worldwide industrial complex with capabilities to perform research and development, design, produce, and maintain military weapon systems, subsystems, components, or parts to meet military requirements. (JP 3-27)

depth

(Army) The extension of operations in time, space, or purpose to achieve definitive results (ADP 3-0)

distribution

(DOD) 5. The operational process of synchronizing all elements of the logistics system to deliver the “right things” to the “right place” at the “right time” to support the geographic combatant commander. (JP 4-0)

distribution management

Synchronizes and optimizes transportation, its networks, and materiel management with the warfighting functions to move personnel and materiel from origins to the point of need in accordance with the supported commander’s priorities. (ADP 4-0)

distribution system

(DOD) That complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units. (JP 4-09)

economy

Providing sustainment resources in an efficient manner that enables the commander to employ all assets to the greatest effect possible. (ADP 4-0)

enemy

A party identified as hostile against which the use of force is authorized. (ADP 3-0)

execution

The act of putting a plan into action by applying combat power to accomplish the mission and adjusting operations based on changes in the situation. (ADP 5-0)

executive agent

(DOD) A term used to indicate a delegation of authority by the Secretary of Defense or Deputy Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense. Also called EA. (JP 1)

flexibility

The employment of a versatile mix of capabilities, formations, and equipment for conducting operations. (ADP 3-0)

force projection

The ability to project the military instrument of national power from the United States or another theater, in response to requirements for military operations. (JP 3-0)

force tailoring

The process of determining the right mix of forces and the sequence of their deployment in support of a joint force commander. (ADP 3-0)

hybrid threat

The diverse and dynamic combination of regular forces, irregular forces, terrorist, or criminal elements acting in concert to achieve mutually benefitting effects. (ADP 3-0)

information environment

The aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information. (JP 3-13)

intermediate staging base

A tailorable, temporary location used for staging forces, sustainment and/or extraction into and out of an operational area. (JP 3-35)

interorganizational cooperation

The interaction that occurs among elements of the Department of Defense; participating United States Government departments and agencies; state, territorial, local, and tribal agencies; foreign military forces and government agencies; international organizations; nongovernmental organizations; and the private sector. (JP 3-08)

improvisation

The ability to adapt sustainment operations to unexpected situations or circumstances affecting a mission. (ADP 4-0)

integration

Combining all of the sustainment elements within operations assuring unity of command and effort. (ADP 4-0)

interagency coordination

Within the context of Department of Defense involvement, the coordination that occurs between elements of Department of Defense, and participating U.S. Government departments and agencies for the purpose of achieving an objective. (JP 3-0)

intermodal operations

The process of using multiple modes (air, sea, highway, rail) and conveyances (for example truck, barge, containers, pallets) to move troops, supplies and equipment through expeditionary entry points and the network of specialized transportation nodes to sustain land forces. (ADP 4-0)

in-transit visibility

(DOD) The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients and personal property from origin to consignee, or destination across the range of military operations. (JP 4-01.2)

joint force

A force composed of elements, assigned or attached, of two or more Military Departments operating under a single joint force commander. (JP 3-0)

joint operations

Military actions conducted by joint forces and those Service forces employed in specified command relationships with each other, which of themselves, do not establish joint forces. (JP 3-0)

lead Service or agency for common-user logistics

(DOD) A Service component or Department of Defense agency that is responsible for execution of common-user item and/or service support in a specific combatant command or multinational operation as defined in the combatant or subordinate joint force commander's operation plan, operation order, and/or directives. (JP 4-0)

Level I threat

An small enemy force that can be defeated by those units normally operating in the echelon support area or by the perimeter defenses established by friendly bases and base clusters. (ATP 3-91)

Level II threat

An enemy force or activities that can be defeated by a base or base cluster's defensive capabilities when augmented by a response force. (ATP 3-91)

Level III threat

An enemy force or activities beyond the defensive capability of both the base and base cluster and any local reserve or response force. (ATP 3-91)

line of effort

(Army) A line that links multiple tasks using the logic of purpose rather than geographical reference to focus efforts toward establishing a desired end state. (ADP 3-0)

line of operations

(Army) A line that defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives. (ADP 3-0)

logistics

Planning and executing the movement and support of forces. It includes those aspects of military operations that deal with: design and development; acquisition, storage, movement, distribution, maintenance, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services. (ADP 4-0)

maneuver

(Army) Movement in conjunction with fires. (ADP 3-0)

mission command

The Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. (ADP 6-0)

mode operations

(Army) The execution of movements using various conveyances (truck, lighterage, railcar, aircraft) to transport cargo. (ADP 4-0)

movement control

The dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over line of communications to sustain land forces. (ADP 4-0)

multinational logistics

(DOD) Any coordinated logistic activity involving two or more nations supporting a multinational force conducting military operations under the auspices of an alliance or coalition, including those conducted under United Nations mandate. (JP 3-16)

mutual support

That support which units render each other against an enemy, because of their assigned tasks, their position relative to each other and to the enemy, and their inherent capabilities. (JP 3-31)

nongovernmental organization

A private, self-governing, not-for-profit organization dedicated to alleviating human suffering; and/or promoting education, health care, economic development, environmental protection, human rights, and conflict resolution; and/or encouraging the establishment of democratic institutions and civil society. (JP 3-08)

offensive operation

An operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers. (ADP 3-0)

operational energy

The energy required for training, moving, and sustaining military forces and weapons platforms for military operations. (JP 4-0)

operational environment

A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operational framework

A cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations. (ADP 1-01)

operational reach

The distance and duration across which a joint force can successfully employ military capabilities. (JP 3-0)

personnel services

Sustainment functions that man and fund the force, maintain Soldier and Family readiness, promote the moral and ethical values of the nation, and enable the fighting qualities of the Army. (ADP 4-0)

point of employment

In distribution operations, a physical location designated by the commander at the tactical level where force employment, emplacement, or commodity consumption occurs. (JP 4-09)

point of need

In distribution operations, a physical location within a desired operational area designated by the geographic combatant commander or subordinate commander as a receiving point for forces or materiel, for subsequent use or consumption. (JP 4-09)

point of origin

In distribution operations, the beginning point of a deployment, redeployment, or movement where forces or materiel are located. (JP 4-09)

position of relative advantage

A location or the establishment of a favorable condition within the area of operations that provides the commander with temporary freedom of action to enhance combat power over an enemy or influence the enemy to accept risk and move to a position of disadvantage. (ADP 3-0)

principle

A comprehensive and fundamental rule or an assumption of central importance that guides how an organization or function approaches and thinks about the conduct of operations. (ADP 1-01)

protection

Preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. (JP 3-0)

redeployment

(Army) The transfer of forces and materiel to home and/or demobilization stations for reintegration and/or out-processing. (ATP 3-35)

rehearsal

A session in which the commander and staff or unit practices expected actions to improve performance during execution. (ADP 5-0)

retrograde

(Army) A type defensive operation that involves organized movement away from the enemy. (ADP 3-90)

retrograde of material

An Army logistics function of returning materiel from the owning or using unit back through the distribution system to the source of supply, directed ship to location, or point of disposal. (ATP 4-0.1)

responsiveness

The ability to react to changing requirements and respond to meet the needs to maintain support. (ADP 4-0)

security cooperation

All Department of Defense interactions with foreign security establishments to build security relationships that promote specific United States security interests, develop allied and partner nation military and security capabilities for self-defense and multinational operations, and provide United States forces with peacetime and contingency access to allied and partner nations. (JP 3-20)

security force assistance

The Department of Defense activities that support the development of the capacity and capability of foreign security forces and their supporting institutions. (JP 3-20)

security operations

Those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces. (ADP 3-90)

shaping operation

An operation at any echelon that creates and preserves conditions for success of the decisive operation through effects on the enemy, other actors, and the terrain. (ADP 3-0)

simultaneity

The execution of related and mutually supporting tasks at the same time across multiple locations and domains. (ADP 3-0)

simplicity

Relates to processes and procedures to minimize the complexity of sustainment. (ADP 4-0)

stability mechanism

The primary method through which friendly forces affect civilians in order to attain conditions that support establishing a lasting, stable peace. (ADP 3-0)

stability operations

An operation conducted outside the United States in coordination with other instruments of national power to establish a secure environment while providing essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. (ADP 3-0)

stability tasks

Tasks conducted as part of operations outside the United States in coordination with other instruments of national power to maintain or reestablish a safe and secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. (ADP 3-07)

supporting distance

The distance between two units that can be traveled in time for one to come to the aid of the other and prevent its defeat by an enemy or ensure it regains control of a civil situation. (ADP 3-0)

supporting effort

A designated subordinate unit with a mission that supports the success of the main effort. (ADP 3-0)

supporting range

The distance one unit may be geographically separated from a second unit yet remain within the maximum range of the second unit's weapons systems. (ADP 3-0)

sustaining operation

An operation at any echelon that enables the decisive operation or shaping operations by generating and maintaining combat power. (ADP 3-0)

sustainment

The provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion. (ADP 4-0)

sustainment warfighting function

The related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. (ADP 3-0)

synchronization

The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time. (JP 2-0)

survivability

(DOD) All aspects of protecting personnel, weapons, and supplies while simultaneously deceiving the enemy. (JP 3-34)

task-organizing

The act of designing a force, support staff, or sustainment package of specific size and composition to meet a unique task or mission. (ADP 3-0)

tempo

The relative speed and rhythm of military operations over time with respect to the enemy. (ADP 3-0)

tenets of operations

Desirable attributes that should be built into all plans and operations and are directly related to the Army's operational concept. (ADP 1-01)

terrain management

The process of allocating terrain by establishing areas of operation, designating assembly areas, and specifying locations for units and activities to deconflict activities that might interfere with each other. (ADP 3-90)

theater closing

The process of redeploying Army forces and equipment from a theater of operations, the drawdown and removal or disposition of Army non-unit equipment and materiel, and the transition of materiel and facilities back to host nation or civil authorities. (ADP 4-0)

threat

Any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland. (ADP 3-0)

unified action

The synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (JP 1)

unified action partners

(Army) Those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during the conduct of operations. (ADP 3-0)

unified land operations

The simultaneous execution of offense, defense, stability, and defense support of civil authorities across multiple domains to shape operational environments, prevent conflict, prevail in large-scale ground combat, and consolidate gains as part of unified action (ADP 3-0)

unity of effort

Coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization, which is the product of successful unified action. (JP 1)

warfighting function

A group of tasks and systems united by a common purpose that commanders use to accomplish missions and training objectives. (ADP 3-0)

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