

Information Technology Opportunities for British Business in The Kingdom of Saudi Arabia.

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An Executive Summary

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Saudi Arabia

Introduction

This document represents the shorter executive summary of a more comprehensive report, the result of a six-day visit to the Kingdom of Saudi Arabia. Its purpose was to determine where the best opportunities might lie for British companies within the Kingdom's rapidly expanding information technology sector.

The Growth of eCommerce in Saudi Arabia

In a global market valued at \$354 billion, where the US holds a 46% market share, the overall value of eCommerce in the Arab world is estimated to have amounted to \$3billion in 2000/2001 and is expected to reach \$5billion by 2005.

Of the estimated \$1.9 billion of eCommerce that has taken place within the Gulf (GCC¹) area in 2001 Saudi Arabia was responsible for generating approximately \$1 billion of eCommerce activity².

With 21 million inhabitants and more than one-quarter of the world's proven oil reserves, the Kingdom of Saudi Arabia is the world's largest oil producer and one of the twenty largest economies in the world. In 2000 the estimated size of the Kingdom's IT product market was \$3.8 billion with computer sales representing \$500 million. Of the hardware purchased, 35% was assembled locally. Saudi Arabia now represents the Arab world's largest market for IT products with over 33% of its PC sales in 2001. However, the potential growth of eCommerce is constrained by the absence of a regulatory environment, low penetration of the Internet and advanced telecommunications (broadband)³.

The Kingdom is joining the information age and plans are being developed to to develop the capital, Riyadh into a major IT and telecommunications centre. ⁴. A \$7.0 billion investment has been made in developing a modern telecommunications infrastructure capable of supporting eCommerce and the demands of a growing information conscious society. The Saudi Arabian government believes that while the country may lie behind its smaller neighbours in terms of rapid Internet-related achievement, a relative view of its size must be maintained, when judging its progress towards the goal of universal access to telephony and the Internet.

In tackling the demands of a connected, 21st century economy, twenty-nine separate laws need to be revised or reviewed in order to support the mechanics of eCommerce in the Kingdom. The Saudi Ministry of Commerce is tackling the challenges of e-commerce legislation and the details are soon to be published.

¹ Gulf Cooperation Council

² Dr Said Al Shaikh – Chief Economist – National Commercial Bank of Jeddah – 2001 figures that also define eCommerce as telecommunications related. This includes sales by telephone. E.g. airline tickets.

³ The Saudi Commerce & Economic Review

⁴ Arab News 3-02-02

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These new regulations will be based on guidelines set forth by the United Nations Commission on International Trade Law (UNCITRAL)⁵.

The Ministry of Finance and SAMA (The Saudi Arabian Monetary Authority) are responsible for the development of the new regulatory framework. New laws and changes to legislation, presently moving through a consultation process, will mirror other countries in addressing:

- Authentication
- Right of access/security
- Litigation
- Validation of data

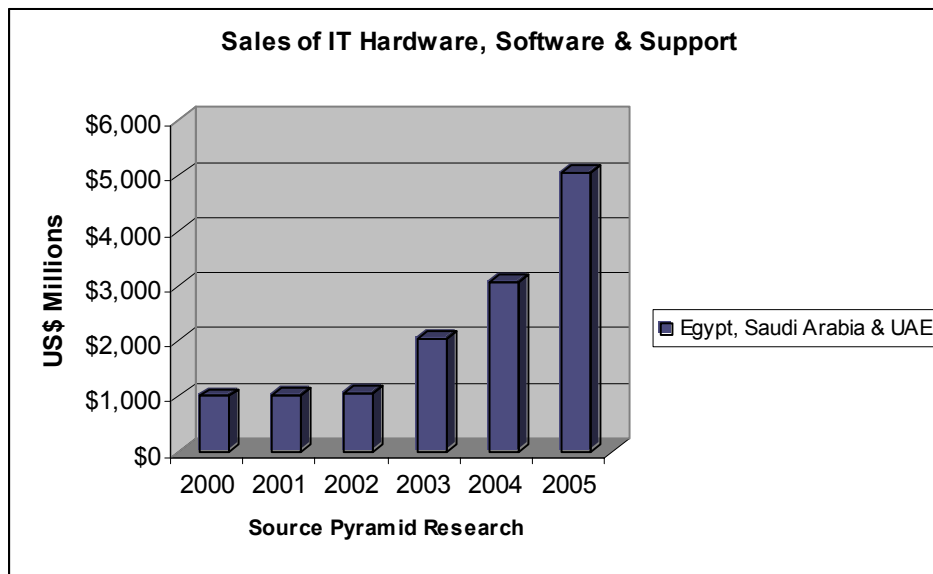
Much like Europe, a principal feature of the new regulations will involve the recognition of electronic signatures. Other provisions relate to the security of financial transactions, confidentiality of operations and systems security. A technical committee set up to formulate these regulations consists of five members, chaired by the Deputy Minister of Commerce, Dr Alamy. The other members are the Deputy Minister of Finance & National Economy, the Vice Chairman of KACST⁵ the Deputy Governor of SAMA⁶ and the advisor to the President of Saudi Telecom.

The future of on-line financial services in the Kingdom is the responsibility of SAMA and this agency is overseeing five projects under the control of its eWorking Group.

- The PKI infrastructure
- The provision of a common root certificate for the financial sector to be cross-certified by KACST
- Building a secure facility to host all certificates
- ePayment and b2b infrastructure development
- A new payment system to support business to consumer (b2c) transactions

⁵ King Abdul Aziz City for Science and Technology

⁶ Saudi Arabian Monetary Agency



Communications Infrastructure

Telecommunications

Saudi Telecom (STC) is the Kingdom's exclusive 'Telco', controlling both fixed-line and cell phone access. The company valued at between \$15 and \$20 billion, claims one of the "most advanced networks, not only in the region but probably in the world and all the Kingdom's principal cities are well connected, with fibre, DSL and Frame Relay capability.

STC, which has a current capacity for 2.2 million mobile phone connections, has recently awarded Ericsson and Nokia a SR 2.45 billion contract to expand the Kingdom's mobile phone system by adding 2.8 million lines to the network within two years. STC is also expected to announce new reductions in mobile communications and telephone charges before opening the market to international companies.⁷

Marconi has been awarded a \$28.5 million contract to advise STC on the redesign and expansion of Kingdom's GSM network. The next major development in the GSM sector will be the launch of a second operating license to run in competition with STC.

Saudi Telecom is 100% government owned. Since 1998 it has been going through a process of 'corporatization' to prepare for privatization and competition. Liberalisation of the telecoms sector is one of the key areas for negotiation in Saudi Arabia's application for World Trade Organisation (WTO) membership in 2006.

⁷ Arab News 3-02-02

The Internet in Saudi Arabia

The Kingdom's Internet capacity is reportedly served by four SDN1 (155mb) connections. The King Abdul Aziz City for Science and Technology (KACST) controls all Internet access and releases bandwidth to Saudi Telecom, which it then re-sells to ISPs.

KACST acts as a firewall for the whole Kingdom, blocking anything viewed as unsuitable. As all message traffic and content is passed through and is monitored by KACST, it represents a single point of congestion and potentially, a single point of failure for the Kingdom's network.

Sitting astride the Internet connection to the outside world, KACST will become the Kingdom's national certificate authority (root) for Public Key Infrastructure (PKI). Some sectors, finance (SAMA, SABIC⁸ Aramco⁹) etc will have their own certificates, cross-certified by KACST, as will the banks and STC for cross-certificate purposes with other sectors. These subordinate certificate authorities will be selected and operate on a commercial basis.

Internet Growth

The Kingdom, through a series of initiatives, plans to grow its Internet subscriber base to 21% of the population by 2004. There are presently 31 ISPs in the Kingdom of which 26 are reported to be operational.¹⁰ Between them, the five largest ISPs, which include Saudi Telecom's, own SaudiNet control 65% of the subscriber market.

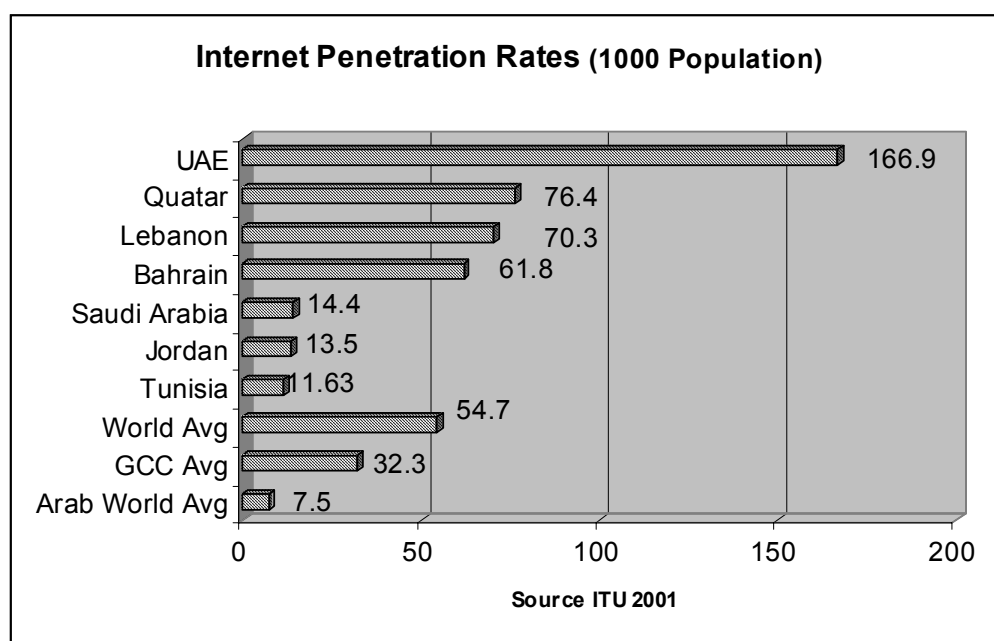
Accurate statistics are hard to come by in the Kingdom and figures in the public domain may be treated as confidential by the authorities once they are transferred on to a computer. Contributing to the uncertainty over accurate Internet subscriber statistics is the system of pre-paid access cards, similar to cellular phone cards. Dial-up cards are the most popular access medium - 100 SR monthly (£20) for 60 hours of Internet access plus the cost of local call charges (50-80 pence/hour). With low credit card penetration in the Kingdom (less than 40%) the pre-paid system of buying Internet provides the only practical means of paying for mass consumer access. KACST estimates that there are now 460,000 Internet accounts. As families and business share access, the true figure is guesstimated at 900,000 users and does not take into account the extensive use of Microwave (VSAT)¹¹ customers connecting with Servers outside the Kingdom.

⁸ Saudi Arabian Basic Industries Corporation – 70% government owned petrochemicals conglomerate and accounts for 5% of Saudi GDP.

⁹ Aramco's oil exports provide approximately three quarters of the government's annual income and commonly account for about 90% of the total value of Saudi exports.

¹⁰ The statistics on Internet access and costs are open to variation

¹¹ Very Small Aperture Transmitter



Less than 5% of the population use on-line banking and banks are planning 18 months ahead, anticipating a rapid growth in the Internet subscriber population. Critical mass for Internet banking is perceived to be 20-25% of the population but banks are witnessing 4 – 5 times annual growth in the number of customers using Internet banking and expect progress to be rapid once confidence in the infrastructure and the service are in place. The Banks currently offering Internet banking services are:

- Arab National Bank
- National Commercial Bank
- Saudi British Bank
- Saudi American Bank
- Riyadh Bank

Information Technology Opportunities in the Kingdom

A Business to Business Market

Business opportunities for UK technology companies in the Kingdom involve partnership and potential investment. Addressing the latter first, initial research has revealed that Saudi investors are expressing interest in possible partnership or equity investment in UK technology companies that can offer products or services; ideally those appropriate to the Kingdom's infrastructure requirements.

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The Kingdom's largest business, Saudi Aramco, which holds one million items on its supplier catalogue, is encouraging its partners and suppliers to join its b2b exchange. The company has 900 partner agreements in place and a target of 1200 to transfer to a full eCommerce process. SABIC, the Saudi Basic Industries Company is also following a b2b exchange strategy¹², this time involving some of the largest banks. Between them, these important exchange-based supply-chain initiatives are seen as acting as a powerful incentive for Saudi companies to become very quickly 'eCapable' in the business-to-business space

Having made the larger capital investment in infrastructure and technology, many of the Kingdom's government departments and businesses require expert advice and assistance in what is best described as facilitating the middleware and storage requirements, central to eCommerce; (See table 1.) the middleware that underlies successful eBusiness. According to one report¹³, "The corporate focus is moving towards storage and security issues, which represent the two fastest IT growth areas in the Middle-east". Most of the industry's largest players in the software and integration space are already active in the Kingdom. Oracle is close to the eGovernment agenda and Microsoft has won an \$800, million project to modernize the education sector. Aramco, the largest business in the Kingdom have moved their systems to SAP and has awarded a contract to STME for the development of a network storage infrastructure that will allow Aramco's Exploration & Petroleum Engineering Centre to protect, manage and analyse exploration and field development activities. EMC, IBM and Sun Microsystems maintain a strong presence across both the public and private sectors.

*Different Market Opportunities by IT Sector*¹⁴

Infrastructure	Devices	Applications / Content
R&D	R&D	R&D
Production	Production	Analysis/Consulting
Sales/Marketing	Sales/Marketing	Design
Installation	Wholesale/ Retail	Implementation
Maintenance	Accessories	Operation
Training	Content	Knowledge Management
Security	-	Content development - Arabisation
Business Process Automation	-	Procurement and cataloging
Back Office Integration	-	Electronic Data Storage (EDS)

Business to business (b2B), which includes the procurement element of eGovernment, offers an area of expanding potential for British companies offering "Leading edge and not bleeding edge" skills in software development and consultancy. Saudi Arabia represents 60% of the GCC¹⁵ market and driven by the earlier

¹² The Saudi Exchange Consortium

¹³ Middle East Economic Digest

¹⁴ Source Ericsson Consulting GmbH

¹⁵ Gulf Cooperation Council

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Aramco example, portals and b2b exchanges like www.shebaak.com and www.Tawaf.co.sa are springing-up. In Dubai, www.Tejari.com¹⁶, is a successful example of a b2b exchange for the port of Dubai It reportedly receives 80% of its business from Saudi companies leading a senior official to remark that the same facility should exist in the Kingdom.

While the largest businesses, government departments and top 30% of companies in the Kingdom may be working directly with the likes of IBM Global Services and leading management consultancies, such as Accenture and Ernst & Young, at a more fundamental level, many businesses and government departments in the Kingdom, still operating on a hierarchical rather than a flat management model, need to pursue the goal of business process reengineering; uniting paper procedures and legacy systems with the very public-facing world of the Internet browser. A visible opportunity lies within the middle tier of developing Saudi companies who need support in 're-wiring' existing business processes in anticipation of the arrival of a model of Web services, championed by the likes of IBM, Microsoft, Sun and Oracle.

Traditional opportunities for UK companies appear to be as broad (see Table 2.) as the Kingdom's fast-growing technology market is deep but the real need consistently expressed, appears to lie in the area of infrastructure development; "Middleware, security and web-stuff".

A principal challenge lies in the development of unified service offerings. The technology investment of the last fifteen years has produced silos of data, islands of information that are clearly not well integrated. This is an obstacle to progress and business needs to explore the service-oriented architectures, which commonly fall under the heading of web services. Gartner predicts that Web services tools and infrastructure software¹⁷ will grow globally from less than \$2 billion in 2001 to \$35 billion in 2006 and skills in this field will be as important to the Kingdom's future development as anywhere else.

Much like network security, applications integration is a 'Hot technology' and entirely appropriate to the Saudi market. That said, while tools from such as Silverstream and BEA are widely available, the advanced integration skills that these require are in short supply and are likely to act as brake on efforts to integrate and connect business in the Kingdom.

Part way through a complex and long technology-shopping spree, the government of the Kingdom has installed the infrastructure backbone required to facilitate an ambitious 'e-agenda' but has discovered, as other nations have, that the gap between ambition and execution has been filled by reliable middleware, sound management practises and good advice, all of which are required in one measure or another, before the agenda can progress to its next stage, supported by new legislation and a will to pursue eGovernment. These are among the factors that will fuel the Kingdom's aspirations, using its size, influence and wealth to become the region's dominant information 'hub' economy within a decade.

Saudi Arabian perceives the UK as being strong in the provision of integration and education. At the same time the UK is recognized as being able to offer much of the software and consultancy experience required in building end-to-end ebusiness and eGovernment; as illustrated by many different companies working with The Office of the e-Envoy to deliver eGovernment solutions and services in the UK.

¹⁶ Shipping, clearance and a b2b exchange for the Port Authority

¹⁷ Internet software technologies known by acronyms like XML – SOAP, Java (J2EE) and UDDI

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As the more detailed, companion research report reveals, interest from both business and government in the Kingdom surrounds the provision of services and expertise related to:

- Business process automation (BPA)
- Business process re-engineering (BPR)
- Back office integration (BOI)
- Enterprise resource planning (ERP)
- Customer Relationship Management (CRM)
- Infrastructure development (ERP to ASP)
- Storage management
- Supply chain management
- Procurement and cataloging
- EGovernment applications and experience
- Content development - Arabisation
- Portal/Shop-front development (eCommerce)
- All aspects of Internet security and authentication
- Knowledge management
- Skills development and training

Much of the work required today involves business process re-engineering and developing the policies and procedures that will permit a medium-sized corporate Intranet to open a portal to the Internet. Such an exercise involves all the elements of content, security, business process automation and the many other integration processes listed above. UK businesses with an interest in the potential of the Saudi Arabian market need to possess a clear vision of their product or service's place and the part it will play in assisting Saudi business or government to achieve its goals. To quote one businessman "Bleeding edge technologies have little in the way of mindshare at this time but competitively priced expertise and leading edge technology are likely to receive a polite reception".

In summary, its size, ambition and the level of infrastructure and investment makes Saudi Arabia an attractive prospect for British businesses able to offer the appropriate skill-sets, 'fitness for purpose' elements that the Saudi Arabian government and businesses need to build the backbone of an information society. On a one a to ten scale of Internet and eCommerce development, where the UK might score an 8 and the US a 10, the Kingdom of Saudi Arabia, might, score a 1 or a 2. While not quite a blank sheet of paper, the necessary parts are in place for the Kingdom to make an aggressive attempt at becoming the region's dominant information society player before the end of this decade. While the overall business climate for IT in Europe over the last twelve months has been one of recession, growth and investment is still taking place among the Gulf States. While this has been happening ¹⁸ the Saudi Arabian government has relaxed a number of the regulations that made business involvement in the Kingdom a challenge for

¹⁸ See detailed report on business opportunities in the Kingdom

overseas companies, a gesture intended to attract the skills, the services and the investment that the country requires to move forward. These factors of environment and infrastructure should make the Kingdom a potentially attractive source of business for UK companies with the right portfolio of skills, products and services to offer the Kingdom's government and business community.

The GITEX Show – April 2002

The target audience for UK companies attending the GITEX Exhibition in April 2002 should therefore include:

- Potential consumers of services and products such as ISP's, banks, government bodies.
- Distributors or representatives who will act as third party resellers especially for those wishing to resell branded products.
- Partners who will act as the Saudi facing element for the service or product delivery.
- Support service organizations - such as accountants and lawyers - who can act on behalf of organizations in the establishment of their representative offices.

The GITEX exhibition represents a solid opportunity for a small number of interested UK companies, assisted by Trade Partners UK, to meet potential partners and customers in the Kingdom and quickly determine what the opportunity costs of doing business in Saudi Arabia might be. At this time, the Saudi government is keen to encourage technology transfer and is well inclined towards British companies; stressing the strong infrastructure skills that the UK is recognized for.

The Author

Simon Moores is well known for his role as technology pundit on both the BBC and Sky News and as Chairman of The Research Group. He writes for both The Observer Newspaper and Computer Weekly magazine and also chairs a number well-respected IT User Groups and Forums, which include The Microsoft Forums – The Security Forum, The eGovernment Forum, and The ASP/xSP Community.

An advisor to the UK government's Office of the e-Envoy, Dr Moores assists The Foreign & Commonwealth Office, Trade Partners UK and The British Council and represents the Office of The e-Envoy at international government -focused events and conferences.

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