The Role of IT in enabling the transformation of Saudi Arabia

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The Role of IT in Enabling the Transformation of Saudi Arabia

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OVERVIEW

“Economic Diversification” has been Saudi Arabia’s Achilles heel for a few decades now. Although, Saudi Arabia's oil wealth has allowed it to undergo unprecedented modernization, including widespread infrastructure development and strengthening the business environment, diversifying away from an oil-based economy has been a challenge. A key factor leading to diversification initiatives is the sharp decline of global oil prices leading to significant revenue shortfalls in many energy-exporting nations. Additionally, the socio-political dynamics of the region have added to the complexity though the impacts of public unrest in Saudi Arabia were swiftly controlled by the announcement of major economic stimulus packages from the government. In lieu of the current situation, “Saudi Vision 2030”, a comprehensive plan comprising of regulatory, budget and policy changes that will be implemented over the next 15 years in the hope of making the kingdom less reliant on crude was recently announced to build a "prosperous and sustainable economic future" for the kingdom.

PREVIOUS TRANSFORMATION INITIATIVES AND WHAT LIES AHEAD

"Diversification" has been a key focus of Saudi Arabia for years now. A key component of this diversification plan was the construction of four planned economic cities. Originally due to be finished in 2020, the new economic cities announced a decade ago are yet to begin contributing to the country's economy, partly due to project delays and the fact that they have not attracted the once-hoped-for level of foreign investment. Also, the completion of the King Abdullah Financial District (KAFD), the $10 billion financial hub in Riyadh, is said to be hampered with delays, cost overruns and a lack of enthusiasm from potential tenants and investors. The government now aims to transform the district into a special business zone with competitive regulations coupled with visa exemptions for foreign workers.

The Saudi budget for 2016, albeit a reduction in spending compared to the previous years, indicated a continuation of the prior year’s diversification plan, including the government’s ongoing efforts to boost long-term non-oil development through focused investment programs. Focus areas included education, infrastructure, health, social services, security services, municipal services, water and water treatment services, and roads and highways. In the coming years, education, healthcare, science, technology, and e-governance projects will continue to be priority sectors.

KSA IT MARKET OVERVIEW

Economic forecasts based on oil prices depreciation have made many Saudi organizations adopt a wait-and-see approach. With approximately 90% of the country's revenues generated by the oil and gas industry, the Saudi government has started utilizing its enormous foreign reserves to guard against economic deficit. While this slowdown did not have a significant impact on the ICT market in 2014 and 2015, in 2016 and beyond the market is expected to experience slower growth due to reduced government spending and postponement of projects.

In spite of the fluctuating oil prices, the Saudi Arabian IT market is expected to grow to $14.6 billion from $13.7billion in 2015, making it the largest in the

Middle East and Africa region.[1] IT Services (10.8% year-on-year growth) and Packaged Software (9.9% year-on-year growth) are expected to drive this growth while hardware spending is expected to slow down. The communications, government and BFSI sectors are expected to drive this growth primarily on the basis of transformational projects.

Indicator	Value	Country Rank 1/144
ICT usage		
Mobile phone subscriptions/100 pop.	184.2	6
Individuals using Internet, %	60.5	51
Households with personal computer, %	72.6	39
Households with Internet access, %	72.7	32
Electricity production, kWh/capita	9,008.0	17
Business-to-business Internet use*	5.5	34
Business-to-consumer Internet use*	4.6	63
Software piracy rate, % of software installed	50	39
Impact of ICT on new services and products*	5	30
Importance of ICT to government vision*	5.2	8
ICT skills		
Quality of math and science education*	4.1	73
Internet access in schools*	4.6	63
Adult literacy rate, %	94.7	52
Knowledge-intensive jobs, % of workforce	26.6	54
Business and Innovation		
Quality of management schools*	4.2	78
Firm-level technology absorption*	5.4	31

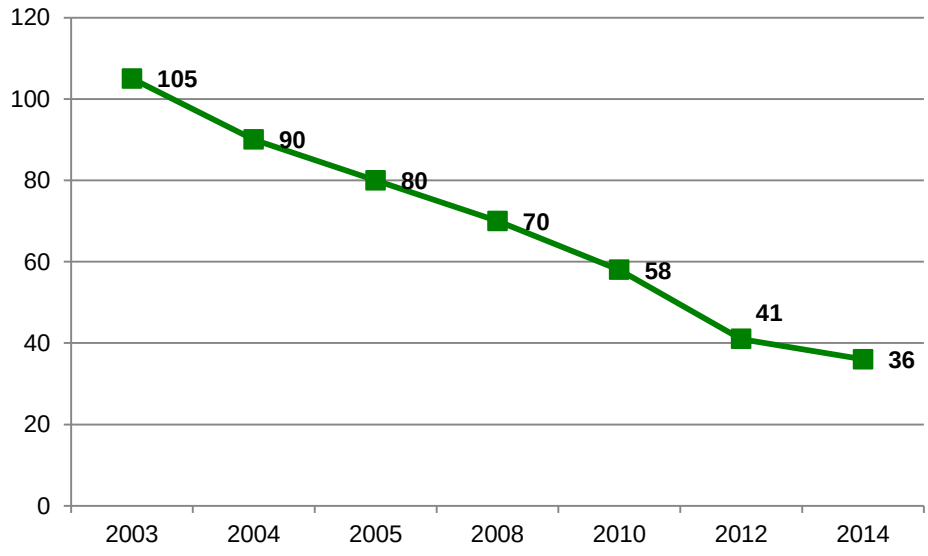
1 IDC Futurescape Predictions 2015

Capacity for innovation*	4	55
ICT PCT patents, applications/million pop.	2.1	39

NOTE: Indicators followed by an asterisk (*) are measured on a 1−7 (best) scale

THE RISING IMPORTANCE OF E-GOVERNANCE

The Saudi government has been emphasizing the importance of technology investment in its strategic plans in recent years, and has made ICT investment a top priority. Saudi Arabia is ranked 8th worldwide in reference to the importance of ICT to the government vision[2]. The focus was also reflected in the E-Government Development Index (EGDI), a UN e-government Survey, where Saudi Arabia was ranked 36th out of 193 countries in 2014, after being 41st in 2012. According to the study, the Kingdom ranked 8th among the 47 leading countries in e-government in Asia. Saudi Arabia was ranked second among the fastest-growing government accounts during the period from 01/07/2014 to 01/05/2015, according to the classification of the Economic Cooperation and Development Organization (OECD).



KSA IN UN RANKING OF EGOVERNMENT[3]

2 The Global Information Technology Report 2015
3 Yesser

In line with the kingdom's drive of improving citizen-centric services, since its inception, the e-government program (Yesser) has significantly simplified previously complex government processes. Some of the most prominent services offered by Yesser include implementation of a number of diverse works relating to skills development, coordination for the financing of e-government transactions and e-services projects, Government Cloud Computing, Government Service Observatory, National Enterprise Architecture (NEA), National e-Government Portal (Saudi), Single Sign-on (SSO) , Government SMS Gateway , e-Correspondence System, National Contact Center (Amer), Government Service Bus (GSB), Government Secure Network (GSN), Yesser Data Center.

Some notable successes of the e-government initiatives include:

- National e-Government Portal (SAUDI) - is a portal through which citizens, residents, businesses and visitors from anywhere can access the e-government services in the Kingdom. The portal contains a number of electronic guides, including more than 1600 government agencies, involving branches and regions - in Arabic and English – featuring relevant websites and contact information. SAUDI also contains more than 210 URLs for acts/resolutions/regulations in Arabic, and more than 40 acts/resolutions/regulations in English, in addition to the Government Services Guide, including government services information, URLs of services, and the requirements for getting, renewing, canceling services, or changing its properties. The portal offers more than 2035 services to individuals and 1035 services to the business sector, as well as 57 miscellaneous services for visitors to the Saudi Arabia and 38 services for the government agencies. Interestingly, the official account of SAUDI on Twitter (@saudigov) ranked second in the world on the list of the fastest growing government accounts during the period from 07/01/2014 to 05/01/2015, according to the classification of OECD.
- Absher is the electronic gateway of Ministry of interior for General Directorate of Passport (GDP), which facilitates procedures for over 6 million citizens as well as expatriate residents regarding identity cards, passports and visas amongst many others. As per the recent statistics from the ministry, there were 8 million exit/re-entry visas were processed

through the Absher website at the end of 2015 along with 679,239 final exits visas, over 1.1 million Muqeem cards and 513,075 Iqamas were renewed. Additionally, there were over 1.2 million travel permits issued, 544,151 service transfers, 265,074 amendments to professions, 187,907 passports, and 1.3 million visit visa extensions. There were also over 350,000 services provided through Saudi Post (Wasel). Plans are underway to bring some of these services to the mobile platform as the Interior Ministry recently launched a new upgraded version of the Absher version for smartphones.

- National Contact Center (Amer) is a platform to help, support and respond to queries of the Saudi community on e-government initiatives such as inquiries or procedures provided by government agencies to citizens and residents. It is linked to 15 governmental agencies (22 more in the pipeline) and supports 171 services.

REGIONAL CASE STUDIES OF IT DRIVEN TRANSFORMATION

In the coming decades, several factors are slated to reshape the government's delivery of services to the public. However, the introduction of new digital technologies is likely to be the most important factor of all. Across the globe, government bodies are undertaking digital transformation initiatives for a myriad of reasons, of which the satisfaction and experience of a changing citizen is one and cost savings another. Some examples of these transformation initiatives are beginning to emerge from some technologically mature Western countries as well as the Middle East

- The National Health Service (NHS), the publicly funded healthcare system in England, is targeting to be paperless by 2018.
- The Government's Digital Strategy in the UK is looking to save between £1.7 and £1.8 billion a year by going digital.
- Multimedia Development Corporation (MDeC) is driving the "Digital Nation" program in Malaysia spanning across the government, business and the citizens, with a mandate of improving Malaysia's e-government ranking from 52 into the 10-20 range over the coming years.

- Singapore's Smart Nation vision is already underway and is based on ultra-high speed, pervasive, intelligent and trusted ICT infrastructure, as well as a vibrant ICT ecosystem with a ready pool of tech talent.
- The Digital India project is an ambitious campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improving online infrastructure by making the country digitally empowered in the field of technology.
- The UAE government is heavily investing in key transformative and digital programs, in line with its position as a world leader - having ranked 3rd globally in 2014 in digital government performance, according to Accenture. The UAE is pushing strongly ahead, with its 2020 vision thanks to institutions and initiatives such as Smart Dubai that are aiming to make Dubai the smartest and happiest city in the world. Dubai's aspiration to become a truly smart city are underpinned by the three themes of communication, integration and cooperation
- Qatar Digital Government (QDG) is a cross-governmental, stakeholder-led initiative formed to foster cooperation and champion the cause of digital government in Qatar. QDG aims to enhance customer experience, provide individuals and businesses greater access to government services, improve government efficiency and increase government openness.

ADOPTION OF TRANSFORMATIONAL DELIVERY MODELS

This drive towards citizen centric services amidst turbulent economic scenarios is making the job of a CIO more challenging. Technology decision makers are turning to concepts like cloud, mobility, business analytics etc. to improve efficiency while controlling budgets. According to Gartner, business intelligence and cloud remain the top priorities within public sector entities globally. This reflects the maturing investments of sustained national e-government and digital government initiatives especially in the Middle East region.

Top Technology Priorities in Government vs All Industries Worldwide

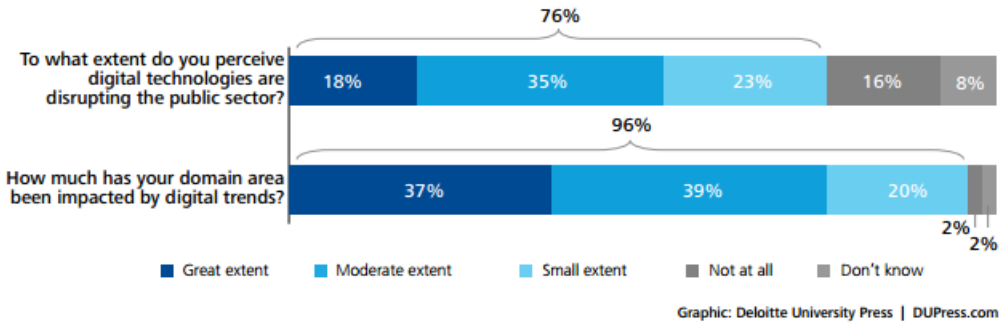
for 2016[4]

	Government	All Industries
Business Intelligence and Analytics	1	1
Cloud	2	3
Infrastructure and Data Center	3	2
Mobile	4	6
Security	5	7

According to the same report, Government CIOs estimate that 44% of business processes are now undergoing digital change, with 62% to be impacted within two years and 80% within five years.

Deloitte and MIT Slogan Management Review conducted a detailed survey[5] to gauge the impact of disruptive technologies within the public sector and the survey result highlighted that 76% of respondents cited that digital disruption within government entities is inevitable. Not surprisingly, cost and budget pressures coupled with citizen demands emerged as the two primary drivers, accounting for 75 percent of responses, whereas government directives drive only 14 percent of agencies. These results, however, differ vastly across countries. For example, United Kingdom, where cost and budget pressures drive 56 percent of public sector organizations; at the other end is Canada, where 64 percent of government bodies cite citizen demands as the primary driver of digital transformation.

4 Gartner - 2016 CIO Agenda: A Government Perspective.
5 The 2015 Digital Business Global Executive Study and Research Project by MIT Sloan Management Review and Deloitte



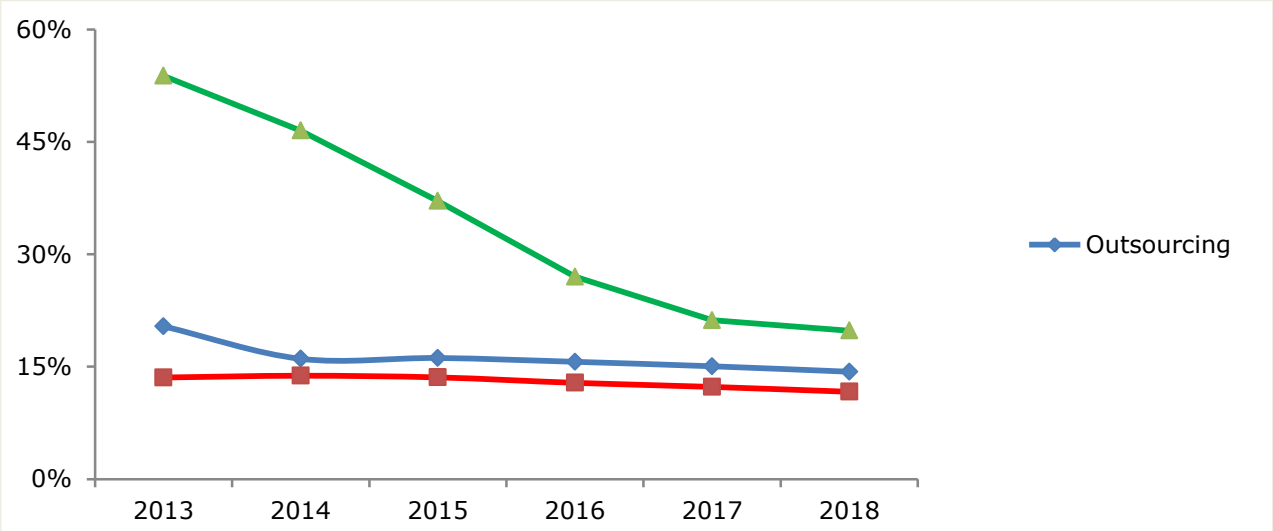
Since businesses in Saudi Arabia operate in a multifaceted environment, the confluence of legal, regulatory, technology and business development increases the complexity of an organization's existing governance, risk, and compliance (GRC) program. Additionally, measuring ROI from IT investments remains a key priority for Saudi CIOs. With government spending and the overall performance of the economy both highly dependent on oil-based revenues, CIOs are increasingly facing challenges in securing large budgets for IT investments. In the wake of diminishing revenues or profits and increasing competition, the boardroom is closely scrutinizing budget requests, with only the most critical projects being approved. Business leaders across verticals are putting a special emphasis on realizing organizational goals through the effective use of IT, which can only be achieved by aligning IT and business objectives to drive innovation and competitiveness.

According to IDC, Measuring RoI from IT investments (62%) and obtaining IT budgets for IT investments (60%) are the biggest challenges CIO's in the kingdom are currently facing. [6] The same survey highlighted that, Saudi organizations are investing significantly in automating their processes and enabling high levels of information sharing and availability through enterprise resource planning (ERP), business intelligence (BI), and analytics applications. 57% and 37% of the CIOs, respectively, said that they implemented ERP and analytics solutions in 2014. Big Data and analytics technologies, while still being in a fairly nascent stage, are expected to see higher levels of adoption over the next 24–36 months.

6 IDC Saudi CIO survey 2015

As the preferences of Saudi CIO's evolve, mainly due to cost and efficiency pressures, the concept of remote delivery within the kingdom is gaining traction. The same is reflected in IDC's forecast for the Saudi IT market, where the research firm believes that cloud services will outpace the traditional on-site models of IT delivery. The choice of IT management model for CIOs is a trade-off between the degree of control and cost of management. As the Saudi market matures, the modus operandi for the majority of organizations is expected to shift from in-house to outsourcing discrete components (managed services), to full-fledged outsourcing, to cloud (utility model). At the same time, businesses as well as government bodies in the region are undertaking their own digital transformations, rethinking what customers value most and creating operating models that take advantage of what's newly possible for competitive differentiation. According to IDC, the total market value for Internet of Things (IoT) technology and applications in the Middle East and Africa will increase from $5.81bn in 2015 to $7.03bn in 2016, with spending on areas like public cloud services expected to grow at almost six times the rate as the rest of the IT industry by 2019. In fact, today's surge in ICT spending by organizations across the region is predicted to topple $260bn in 2016 as those in the Middle East and Africa embrace digital transformation initiatives.

KSA Cloud vs Outsourcing vs Overall IT Services Growth Rates7



7 IDC

According to a recent IDC survey, cost savings due to better utilization of resources (66%), faster implementation or deployment of IT resources (59%) followed by greater scalability and flexibility (54%) are the biggest drivers of cloud adoption in Saudi Arabia.[8] As organizations in the kingdom learn to do more with less, the inherent benefits of a true cloud deployment (e.g., cost savings and increased operational efficiency) will drive the uptake of such services in the kingdom. By leveraging benefits like metering and chargeback, CIOs can add visibility to IT costs, making budgets easier to control. By making IT operations more visible in this way, cloud can enable organizations to realign both their technology and staff in order to maximize efficiency.

IMPACT OF TRANSFORMATION ON THE SAUDI MARKET

As the digital revolution, widespread adoption of smart and connected ICT by consumers, businesses, and governments, gathers momentum in Saudi Arabia, it is clear that digital technologies will contribute to the economic strength, societal well-being and effective governance of the kingdom. The whitepaper has touched upon several e-initiatives that the Saudi government has undertaken to overhaul the length and breadth of citizen services, however, the impact of this transformational phase will impact every sector.

The banking industry, for example, began its digital journey years ago; however the unprecedented influx of devices has renewed the impetus of actionable omni-channel strategies. Over the coming years, how Saudi banks and other financial institutions learn about, interact with and satisfy customers' will determine market leadership. Apart from understanding customers' needs, wants and demands, investing in the precise mixture of IT infrastructure and innovative new technologies will help banks to address the unstated needs of the Saudi customer the way airlines understand the preferences of their frequent

8 IDC Saudi CIO Survey 2015

flyers or certain progressive retailers understand the likes or dislikes of their customers.

Similarly in the Telco space, operators will continue to invest in technology to become more agile and efficient in the way they deliver their services, and this will necessitate a certain level of introspection, both internally and externally, in order to transform. The focus, again, has to be equally dispersed between optimizing the existing infrastructure and harmonizing the channels that customers interact with so as to deliver a much-enhanced user experience. From stagnating revenues, increasing operating costs to the threat from the emergence of over-the-top (OTT) players, telecom operators will need to adopt aggressive digitization strategies to capture sizeable opportunities in adjacent businesses and broader digital ecosystems. As the kingdom becomes more connected, the concept of Internet of Things (IoT), will, over a period of time, link all manner of devices. This emerging phenomenon will be a windfall for the telecom industry, as it could translate into the possibility of further monetizing the additional network traffic.

The small and medium enterprises (SMEs) in the kingdom will be affected by the anticipated changes in the Saudi business environment. It comes as no surprise that the Saudi government has earmarked this sector as a high priority growth driver as part of the diversification initiatives. With the increase in coordination between relevant authorities and stakeholders for developing supportive regulatory and legal frameworks, to the establishment of specialized institutions within the banking sector with an SME focus, it seems like this sector in Saudi Arabia is finally ready to realize its immense potential. Traditional information systems have, to a certain extent, curtailed the ability of these small and medium-sized enterprises to compete, grow and survive. The use of disruptive technologies like cloud computing (email/productivity/collaboration tools along with Infrastructure-as-a-service {IaaS}), line of business software, enterprise mobility etc., for contemporary management and day to day functionality will gradually become a norm, as opposed to a necessity.

IN CLOSING

It is evident that technology cannot replace oil, but it is becoming an indispensible enabler in creating new businesses, enhancing citizen centric services and in many ways shaping a country's digital future. Although it is still at a relatively immature stage, the IT ecosystem in Saudi Arabia is rapidly evolving, and customer demands are becoming more complex. ICT utilization and spending by businesses is increasing swiftly and the business environment is becoming more competitive, putting pressure on IT departments to meet ever-increasing business requests. Innovation is becoming a key component of organizational strategic initiatives to drive business growth while enhancing customer experience and product / service quality.

The Saudi Vision 2030 will bring technology to the forefront and CIO's will realize that the stakes are much higher as they become the vital link between the onrush of new technologies and the urgent need for aligned business strategies. Designing, implementing and managing IT transformation are all key priorities for Saudi CIOs. IT strategies and roadmaps are critical to Saudi organizations at a time when commercial performance expectations, risk management abilities and cost-reduction considerations are paramount. This trend will be accentuated as the "Saudi Vision 2030" vision starts taking shape.

One critical factor that would be a key differentiator in a rapidly transforming and highly competitive market is quality of service (QoS). While disruptive technologies such as cloud, big data and the Internet of Things will drive the proliferation of the digital economy across various industries throughout the kingdom, the growing importance of availability for the 'Always-on' businesses and services will be vital.