



CIT Industry prospects under NTP 2020

Insights and analysis

PURPOSE OF PAPER

This paper aims to evaluate the significance of technology enabled change in delivering the priorities set out in National Transformation Program (NTP) 2020, it deliberates the graduation of communication technology from a connectivity provider to being the vanguard platform and catalyst in achieving the set target.

CONTEXT: NATIONAL TRANSFORMATION PROGRAMME (NTP) - ROADMAP OF VISION 2030

Vision 2030 stems from three pillars defining that Kingdom of Saudi Arabia (KSA):

- I. Is the “*heart of Arab and Islamic world*”
- II. Will become the “*Global investment powerhouse which will be used to stimulate our economy and diversify our revenues*”
- III. Is strategically located and can be hub for global trade among Europe, Asia and Africa

The overall vision is supported by defined targets that need to be delivered by 2030, they are

- increase non-oil government revenues from SAR 163 billion to SAR 1 trillion by 2030 (from 16% to 50% of the GDP)
- increase foreign direct investment from 3.8% to 5.7% of GDP in line with more developed economies
- lower unemployment from 11.6% to 7%
- Increase the private sector contribution to the GDP from 40% to 65%
- Increase the SME contribution to the GDP from 20% to 35%
- Improve Kingdom’s competitiveness (GCI be WEF) from 25th to be in the top 10
- Improve participation of women in the workforce from 22% to 30%

The National Transformation Program 2020 is part of the wider Vision 2030 strategy approved in April 2016. It is part of 13 other executive initiatives supporting the vision – other include Fiscal Balance Program (FSB) (Balanced Budget 2030), Privatization Program, Public Investment Fund Restructuring Program, Human Capital Program, Strategic Partnership Program etc. Studying various aspect of several of these initiatives clearly has underlying themes which complement each other, in-time and with moderated assessment the programs can finetune and calibrate the findings. The orchestra to the programs is well defined. All programs gravitate towards well defined goals and quantified objectives

NTP, as part of the bigger scheme provides a detailed assessment of each government department/organization along with yearly objectives and KPI’s each benchmarked against as-is, GCC and International standings. For right now, 543 initiatives have been set out across 24 government departments, with targets set for 2020 at a cost to the government of SAR 268 billion.

The underlying theme of the transformation is to diversify from oil revenue and public spending to a more wholesome economic growth with various non-oil entities contributing the share. It focuses on technology as a catalyst and key enabler. This transformation is expected to be far-reaching and entails:

- a significant shift towards a more active and significant private sector. This is expected to create 450,000 jobs in the nongovernment sector by the year 2020 and a target for private sector will contribute to 40% of the program’s outcomes
- prioritizing development of those sectors that maximize employment opportunities for Saudi nationals
- establishing and supporting growth of enterprises that can compete both domestically and internationally
- a core priority of knowledge transfer and creating an entrepreneurial culture
- Participation of private and digital sector is key to the success of the program, although Fiscal Balance Program fervently focuses on the capex reduction, at the same time realizing the importance of technological integration investment in technology both by public and private sector have been encouraged.

Digital transformation and influx of technology is the key pivot, to that end NTP has specifically identified five common digital platforms, 29 essential digital initiatives and several national digital assets that may be invested to apply CIT as the driver for transformation

To achieve the envisaged outcomes, telecom service providers will be the key players. Technological Enablement and Infrastructure will be the main pillars on which several of these initiatives rely on

FSB, for example focuses on enhancing the government revenue by increasing non—oil revenues by spending on strategic areas and introducing Cap-Ex reforms in three key ministries of Education, Health and Municipal and Rural Affairs, all three when discussed in

NTP have allocated a major share of budgets towards Digital Transformation

Similarly, for Energy Sector reforms, emphasis is on gaining efficiency through technology, Smart Meters, “on-demand” usage of lighting, digital platforms and sensors in electrical distribution

IMPORTANCE OF TECHNOLOGY SECTOR IN DELIVERY OF OUTCOMES WITHIN NTP

There are several indicators of how important technology and integration is to the current government, Deputy Crown Prince Mohamed bin Salman (MBS) visited Silicon Valley in 2016, he unequivocally laid out the agenda and appetite of his government to be part of the digital age, more than \$30B USD were spent on ICT in 2015 alone, this budget is to increase by 20% in next five years. NTP, in granular benchmarking and allocation of budgets have transcribed budgets to support ICT inclusion. Ministry of Communication and Information Technology (MoCIT) has been trusted to head the ICT’s agenda through Vision Realization Office (VRO) and lead e-governance program (Yesser) – Key initiatives set by MoCIT under the patronage of Ali Al-Soma are to further enhance on 68% Internet penetration by focusing on High-speed broadband, FTTH, rural penetration, help increase 4G penetration. SME inclusion in the digital world is a key performance indicator for the ministry, local digital content is an area of focus, KSA nationals as ICT professionals are well below the critical mass to carry out a national movement into the digital age, public private partnership and the framework is a defined KPI for MoCIT. In brief, there is a widespread recognition at micro and macro level that the role of digital technology is rapidly shifting, from being a driver of marginal efficiency to an enabler of fundamental innovation, economic prosperity and disruption. Economic transformation in tandem with digital technology drivers is a common theme, especially in the context of the scale and impact of digital revolution impacting society.

Specific outcomes expected from investment in technology sector (within the remit of NTP), include:

- innovative use of ICT in the public service will deliver better value for taxpayers by creating efficiencies through integration, consolidation and sharing of common infrastructure, systems and resources
- creating ICT shared services to support integration across the wider public service to drive efficiency, standardization, consolidation, reduction in duplication and control cost

- adoption and facilitation of digital technologies will increase productivity, improve the relationship between citizens, business and government and will deliver social and economic benefits for Saudi Arabia
- Increase the IT industry contribution of 1.12% to 2.24% of the GDP
- Remove legislative barrier hindering growth of e-commerce

In summary, the government has recognized and is investing in digital transformation of the economy as a key tenant of delivering its broader plans of economic competitiveness and increased public sector efficiency. Some of the strategic objectives defined in NTP are listed in Fig 1.

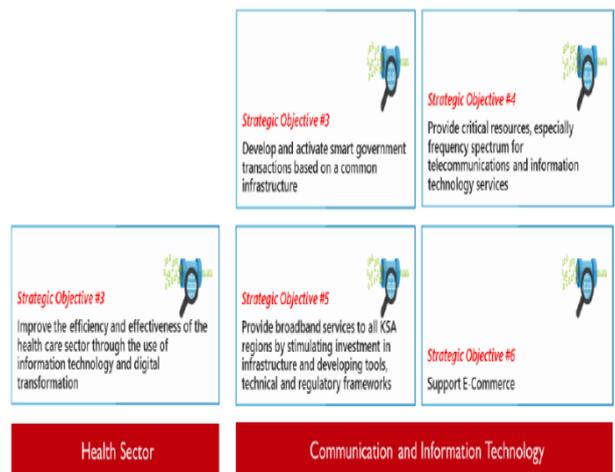


Figure 1: ICT relevant Objectives in Vision 2030

DIGITIZATION: KEY PRIORITIES

The digital element of the NTP programme has specifically focused on making the kingdom’s ICT network ready for the digital age, so that it can meet expectations such as 5G networks required to satisfy universal coverage needs, bit rates of 10 Gbps, reduction of latency to the range of 1ms and an ability to connect millions of devices. The digitization of all government services is as relevant to government agencies as it is to the private sector. The key digital transformation priorities under NTP include:

- Improving spread and quality of broadband connectivity
- Unify the government IT infrastructure for new e-services
- Integrate government data into an enhanced Saudi E-Portal gateway

- Accelerate modernization through Digital Transformation sub-committees
- Develop unified national applications
- Enhance the payment eco-system

Amplified clear from the discussion above is the fact that KSA, under MBS, through NTP has set the course, opportunities are aplenty, at the helm are the MNO's and ICT industry. While the telecom faces the clear and imminent danger of decreasing revenue, the opportunity set by the Government is a lifeline like none. Connectivity, Cloud, Entertainment, VAS, Social, Mobility, Big Data, Fintech, Digital Content are few of the many opportunities which are to be harnessed

FOCUS AREAS FOR ICT INDUSTRY

Digital choices will shape reinvention opportunities for all public and private sector providers in the ICT domain. With focus on digitization of government departments and increased incentives for public private partnership, the ICT industry will need to evolve and develop to deliver the role forecasted/projected under NTP. From our research and experience, we specifically identify telecommunication, cloud and banking sectors as being critical in this context (we explore each sector's importance below):

Telco's face increasingly tough times as digitization reshapes the industry landscape. In the past five years, the telecom industry has entered a period of slow decline, with revenue growth down from 4.5 percent to 4 percent, EBITA margins down from 25 percent to 17 percent, and cash-flow margins down from 15.6 percent to 8 percent. But digitization is not just a threat; it offers telecom companies an opportunity to rebuild their market position, reimagining their business systems and creating innovative offerings for customers. Telcos can aggressively pursue digitization to capture opportunities in broader eco-system.

Specific examples include:

- driving network investments through optimization and convergence
- transforming mobile data-driven services through

conversion to LTE advanced and 5G – technologies that will gain momentum

- removing redundant platforms, automating core processes, and consolidating overlapping capabilities
- revamping go-to-market strategies, quality of service, and customer experience, as expected under the new unified licensing system.

Also, the NTP will shake up the **cloud marketplace**. For successful implementation of the NTP initiatives, the national-level cloud directive will move from public consultation to implementation. By adopting cloud computing, government agencies can create a central pool of shared resources – software and infrastructure which will result in reduction in ICT spending. Also, currently the Saudi Arabian government operates in a strict hierarchical manner and the process for approvals and purchase orders is a time-consuming activity. Specific examples of advantages of cloud implementation will include:

- provide the capability to eliminate these time-consuming activities and provision resources in a quicker manner
- access to the most updated technology as it will allow the government to constantly have access to the most updated software and hardware
- it is expected that international players will expand their footprint by establishing local hosting capabilities. This will lead to competition among providers, which will lead to aggressive pricing and bundling and heightened customer service.

The **banking sector** also has potential to gain great leverage from the NTP. It needs to offer diverse channel customer experience, with a focus on differentiated experience using data and apps via software defined platforms. Also, there is an urgent need to transform bank branches to enhance quality of customer service. While to cash in on several NTP initiatives related to payment processing through online channels, banks need to work on their branchless banking platforms to provide Fintech services to the government and end users. The role of technology and partnerships is pivotal in the successful use of alternative delivery channels. To successfully gain traction out the NTP, the state of Information and Communication Technology (ICT) is the banking sectors most essential and critical requirement. Through ICT, banks will be able to offer a wide menu of services such as:

- branchless/mobile banking

- electronic clearing systems
- electronic funds transfer
- smart cards
- Government to Persons (payments)

Social, uptake for the Saudi consumer has been considerably high – they rank 7th in term of Social Network Adoption, they are one third of the GCC market - using Social as an anchor is employable path to engage and harvest the digital future -

Mobile penetration for KSA is 179%, ARPU is staggering **market size is the largest** in the region plus the data consumption is very high, with these as the basics, the KSA market is the big boy of the region, the size and the revenue gives them the **advantage of volumes** – it automatically gives the operators volumes and pricing advantage- provisioning of cloud, big data analytics, Fintech, VAS, Security all naturally fall into the balance of the dictation of the KSA ICT players, they are positioned to dictate. The market is regulated and has the protection which allows the local operators to take advantage and establish the infrastructure required to be leaders in the transformation.

INSIGHTS FROM DEVELOPING GOOD PRACTICE RELEVANT TO NTP

There are several digitization initiatives earmarked under the NTP. Some of the key initiatives will be undertaken under the auspices of this program are related to cloud infrastructure and digitizing the education sector. We have identified a two digitalization related case studies which we believe are particularly relevant in the context of public private partnership.

- **CASE STUDY I (TELCO):** Increasing risks point to greater responsibility for operators to ensure a secure global internet. Cyber-attacks pose a significant threat, but cybersecurity also presents an important opportunity for the telecom industry as carriers of global internet data. The GSMA, the industry body for mobile operators, has spearheaded the effort to develop an industry-wide solution to help consumers take greater control of securing their data. The Mobile Internet authentication service is available to create and manage a digital universal identity via a single login. The service securely authenticates users, enabling them to digitally confirm their identity and their credentials, and grants safe access to mobile and digital services, such as e-commerce, banking, health, digital entertainment and e-government. In this way GSMA is helping operators fulfill an important role in customer

identity, while also enhancing customer convenience and experience by removing the need to remember multiple passwords.

- **CASE STUDY II (CLOUD TRANSFORMATION):** Since cloud based solutions are a major focus area in the NTP, we have identified our first key case study on this solution. USA.gov is the US federal government's primary information portal providing information on subjects that include benefits and grants, taxes, jobs, education, health, voting, technology, and business and nonprofit guides. The traffic to the website is highly unpredictable depending upon key issues that are being discussed in the national public forum, natural disasters and elections. A cloud-based solution represented the best choice to handle these spikes in traffic as a cloud infrastructure is much better able to deal with on-demand scalability than most traditional IT infrastructures. This has improved the site's flexibility to meet emerging needs. The movement to the Cloud-based solution has helped the General Services Administration (GSA) in reducing the site upgrade time to a maximum of one day, from nine months earlier. Moreover, the downtime has been reduced drastically to a 99.9% availability from about two hours earlier with the traditional hosting setup. In terms of costs, GSA used to pay US\$2.35 million annually for USA.gov, in the legacy system. This includes hardware refresh and software licensing costs of \$2 million and personal costs of US \$350,000. By moving to cloud services, GSA now pays an annual total of \$650,000 for USA.gov and all associated costs, a cost saving of US \$1.7 million or 72%.
- **CASE STUDY III (BANKING):** Roshan's M-Paisa, Etisalat's M-Hawala and AWCC's My Money are the current mobile money service providers in Afghanistan. MTN has yet to launch its brand. While mobile money has been a success in some parts of Africa, in particular Kenya, to "bank the unbanked", m-money has yet to break through in Afghanistan. On a national level, research found that 5% of SIM owners have subscribed to mobile money but only two-thirds of subscribers actually perform functional transactions, with most services essentially not used at all.

Key findings were that mobile money users are predominately recipients of funds and prefer to withdraw money from banks even if non-bank agents are easier to reach. Also 56% of mobile

money non-users state that they would consider subscribing to mobile money, but they have a general lack of awareness of the service and its benefits. This case study is pertinent to the banking sector as it showcases the response to mobile wallets at a national level. Important recommendations to boost penetration and usage of services include:

- increasing awareness of the service and educate potential customers
- develop a customer friendly and easy to use interface in local languages
- develop the ecosystem and incentivize “active” usage
- address liquidity issues and train agents to ensure better service

CONCLUSION

The line adopted through the National Transformation Program is one which has set the right direction for Saudi Arabia’s future. While there are several sectors which will be directly affected by the program; we have highlighted three (teleco, cloud and banking) which we feel will be instrumental in successful implementation. Keeping in context the opportunities identified and relevant case studies examined certain research questions arise. These research questions are equally applicable to all three sectors identified but keeping in view the audience of this white paper we will mention the following key areas from the telecom perspective which we feel are highly pertinent on understanding how:

- models need to be adopted to support public-private partnership?
- regulators drive coordination through national digital agendas?
- telco sector defines near-term action plans for main transformation areas?
- industry begins to deliver consumer centric services?
- telcos provide agile, integrated and seamless connectivity and digital services?