GCC: The Age of Digitalization is Here

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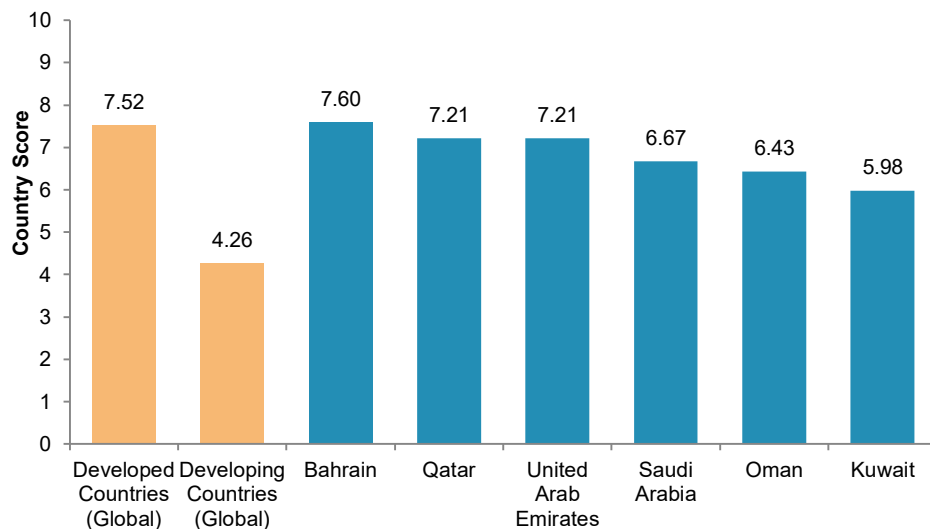
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GCC: The Age of Digitalization is Here

Key topics covered

- What is the current scenario of ICT development and digital competitiveness in GCC?

- How will improving digital competitiveness help GCC?

- What are the national digitalization programs and smart initiatives planned and/or implemented by governments in GCC?

- Which are the digital transformation focus areas for businesses in GCC?

- What are the key things to consider to ensure steady progress in this transformative journey?

GCC countries' relatively mature ICT infrastructure can act as a foundation for a transformative journey involving the region's economy

ICT Development Index[1] Country Score

2017 | Figures in Units (Score)

[1] The ICT Development Index seeks to capture indicators of a country's ICT access, use, and skills such as mobile cellular penetration, internet use, and gross tertiary enrollment.

Factors Driving High ICT Development in GCC

ICT Infrastructure

- GCC region is endowed with a mature telecom market, with high internet bandwidth speed and mobile penetration levels. On the back of a highly developed telecom infrastructure in the region, web- and mobile app-based services have strong potential to access the market.

Internet Usage

- Internet usage in the region is high due to consumption of data-intensive multimedia and applications. The governments' push for 5G and broadband is expected to provide a strong impetus for creation of bandwidth-heavy applications that fulfil personal and commercial needs.

A relatively mature ICT infrastructure can act as a catalyst to modernize GCC's industrial landscape, which faces economic risk due to over-dependence on exports of oil and other natural resources for fueling its economy
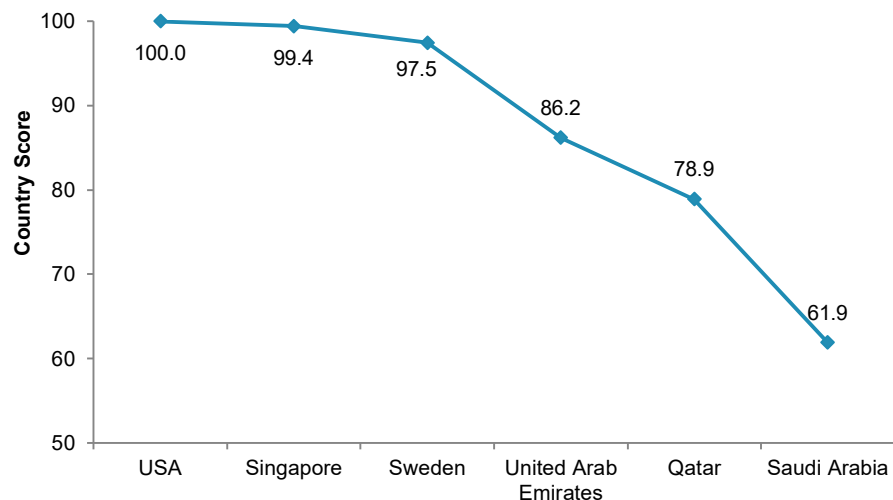
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*The Arab region includes all GCC countries such as Saudi Arabia, the UAE, Qatar, and other Arab-dominated countries in North Africa and West Asia.

Source: IMD World Competitiveness Center, International Telecommunication Union, Arab Digital Economy Conference

So far the region has lagged behind in digital competitiveness due to existing knowledge and technology – related challenges
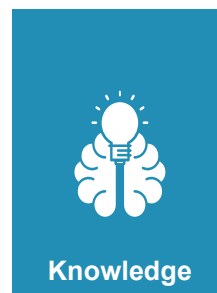
Digital Competitiveness[2] Country Score

2018 | Figures in Units (Score)

[2]Digital competitiveness seeks to capture a country's transformation based on its digital know-how, enabling technological factors, and transformation preparedness.

Factors Impeding Digital Competitiveness in GCC

Knowledge
- GCC countries lag behind in digital competitiveness as they have traditionally not focused on R&D, leading to limited development of knowledge in the region.

Technology
- The region's regulatory and technological framework is in its nascent stage with scope for improvement in ease of starting business and contract enforcement laws.
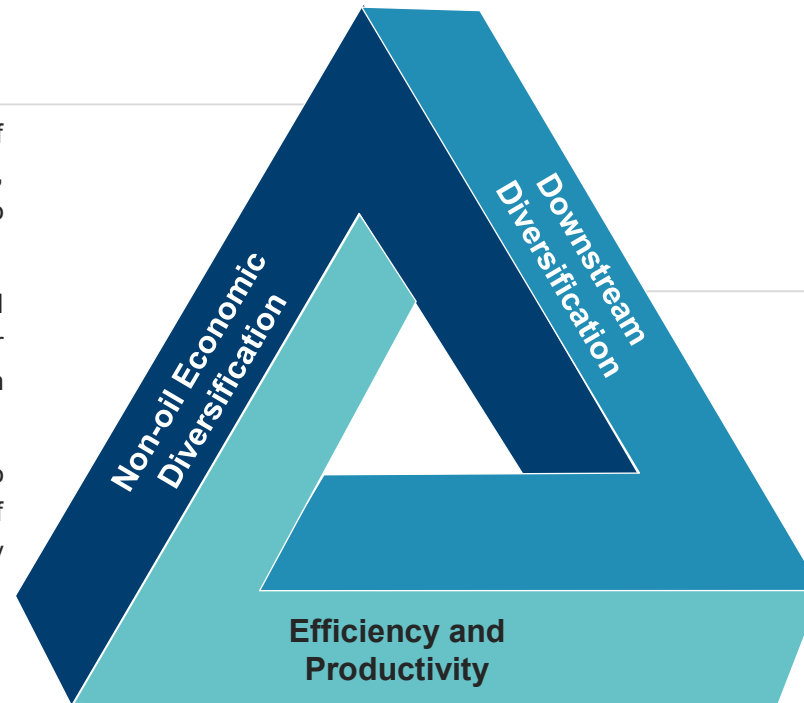
Improvement in digital competitiveness can boost the Arab* region's GDP by up to USD 0.3 trillion annually, benefiting both government as well as businesses

*The Arab region includes all GCC countries such as Saudi Arabia, the UAE, Qatar, and other Arab-dominated countries in North Africa and West Asia.

Source: IMD World Competitiveness Center, International Telecommunication Union, Aranca Analysis

High digital competitiveness will enable GCC countries to diversify into new markets, improve industrial efficiency, productivity

- GCC's dependence on exports of natural resources, especially oil and gas, makes its economy highly vulnerable to commodity price fluctuation.

- As the world transitions away from oil and gas towards renewable sources for energy needs, economic diversification is imperative for GCC.

- Digitalization can help GCC foray into new non-oil sectors through the use of analytics and automation and by transforming into a knowledge economy.

Non-oil Economic Diversification

Downstream Diversification

Efficiency and Productivity

- GCC can use its access to oil and gas natural resources and seek to unlock value downstream in industries such as plastics.

- By leveraging technologies such as 3D printing, GCC can manufacture high-tech downstream products at low cost and move on to dominating this sector.

- The move would enable GCC to utilize its available natural resources to maximum potential.
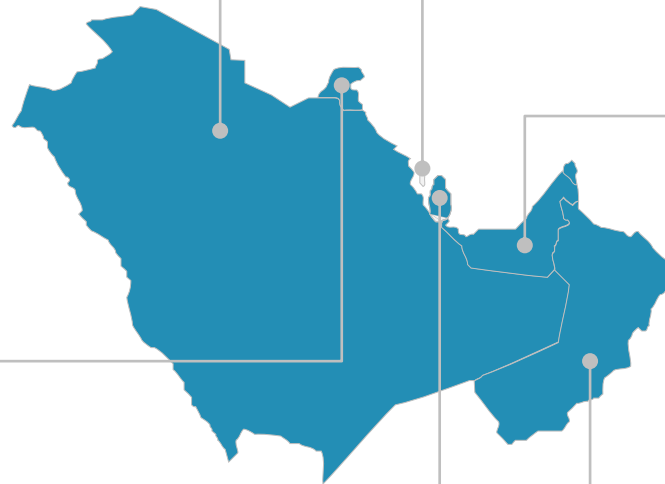
- Digitalization can help reduce industrial operating costs by shortening project cycle times, downtime, and the need for manual monitoring of assets.

- The gains in efficiency and productivity can thus help GCC's traditional oil and gas industry to protect profits despite the low oil prices.

Taking cognizance of the benefits of digital transformation, governments of various GCC countries have launched national programs in this regard

The Saudi Vision 2030 and National Transformation Program aim to achieve operational excellence, improve economic drivers, and enhance the standard of living by implementing digital infrastructure projects.

The New Kuwait 2035 Vision aims to boost digital innovation across different sectors, with focus on key technologies such as AI, machine learning, IoT, advanced analytics, and blockchain.

Qatar's Smart Nation Program was launched with the objective of developing ICT infrastructure. It focuses on technology and innovation in five sectors: transportation, logistics, environment, healthcare, and sports.

Bahrain's Information & eGovernment Authority seeks to modernize the government and private sector through adoption of technologies such as cloud computing, blockchain, and AI.

The UAE government's Centre of Digital Innovation (CoDI) is an initiative aimed at building a smarter and digitally transformed nation. It has launched various programs, such as Virtual Health Lab and UX Lab, to foster innovation. The center also undertakes R&D activities focused on AI and the Fourth Industrial Revolution (4IR), including robotics and 3D printing.

Other initiatives such as **Expo 2020 Dubai, UAE Strategy for Artificial Intelligence, and Dubai's Smart City** support the platform for digital innovation.

Oman' digital initiative (eOman) plans to achieve digital transformation by creating opportunities in the e-government and e-services space, facilitating IT development.

The push for transformation has prompted governments in GCC countries to implement various smart initiatives to directly benefit citizens

Smart Government
(Applications and Open Data Platforms)

GCC governments have developed applications such as **Dubai Now, MyGOSI** and **Kaharama** to provide one-stop access to government services including utility bill payment, filing suggestions and complaints, and enquiring about social security application and status.

GCC countries are still at a nascent stage of open data dissemination. Countries such as the **UAE** and **Qatar** publish data sets in machine readable format, with the **UAE**, as an example, publishing more than **1,000 open data sets**.

Smart Healthcare
(IoT, Robotic Surgery, Applications)

The UAE has successfully mobilized **robots** to perform complicated procedures such as heart surgeries, hysterectomies, bariatric surgeries, and knee surgeries. The country has also adopted **robotic dispensing** at some of its pharmacies, which helps eliminate human errors in the procedure.

Qatar plans to offer healthcare-on-demand through applications such as **doctor finder, automated appointment scheduling, virtual consultation and digital checklist** to diagnose symptoms.

Smart Tourism
(Augmented Reality, IoT, Blockchain)

Dubai Culture and **Visit Abu Dhabi** are award-winning smartphone apps developed to offer a digital touring experience via **augmented reality. Qatar's Augmented City** application aims to use location information and video recognition to provide interesting content and offers.

GCC is focusing strongly on improving its tourism sector and to attract millions of visitors annually. Technology-based initiatives such as **unified travel passes** and **blockchain-enabled loyalty programs** aim to support these tourism targets.

Similarly, several key players in important business sectors in this region too have started to focus on digital transformation initiatives (1/2)

Oil and Gas
(Big Data, Cloud Storage, and IIoT)

Saudi Aramco, an oil and gas company, signed an **agreement (USD 700 million)** with **Honeywell** to explore opportunities in technologies based on **big data, cloud storage, and IIoT** to improve Aramco's operation process.

RasGas, a Qatari LNG supplier, **started using big data and analytics in the cloud** to **support and improve process optimization through its operations areas.**

Banking and Financial
(Blockchain, Machine Learning, Cognitive Technologies, AI, and Big Data)*

The Central Bank of the UAE undertook a joint project with the Saudi Arabian Monetary Authority to use **blockchain technology** for the issuance of digital currency to facilitate cross-border transactions between countries.

Mashreq, a private bank in the UAE, has **leveraged technologies such as machine learning, cognitive technologies, AI, and big data** to improve its operational efficiency and enhance customer experience in digital banking. Systems based on these technologies were used in back- and front-end systems.

Retail
(Augmented Reality and Data Analytics)

Pure Gold Jewellers invested USD 10 million in the development of new concept stores **in the UAE, Kuwait, and Oman.** The stores offer "experiential tables" that increase customer engagement while purchasing jewelry with the help of **augmented reality.**

SOUQ.com, an e-commerce platform, partnered with SAP and NTT Data to support real-time transactions and drive overall growth. **The platform would employ cloud enterprise solutions to analyze data in real time and build a secure platform for SMEs.**

Similarly, several key players in important business sectors in this region too have started to focus on digital transformation initiatives (2/2)

Construction
(3D Printing and Robotics)

Arabtec Construction, along with Robert Bird Group, partnered with **3D Vinci Creations** to built a **3D concrete printing center** in Dubai. The objective of the center is to identify **future capabilities of 3D concrete printing and digitalization** of the construction sector.

ALEC, a construction company **in the Middle East, has employed robotics to build the three-tower Marina Gate.** The application of robotics would automate business processes such as panel installation, plastering, and chasing activities. Overall, its application would improve quality and efficiency in a project.

Transport
(AI, Robotics, and IoT)

Emirates Transport partnered with Oracle to implement **Oracle Cloud Applications** that would capitalize on **AI and IoT** to introduce innovative service offerings, drive customer experience, and realize operational efficiency.

Dubai's Roads and Transport Authority (RTA) has installed a robot. It is an integrated and fully automated machine that generates a vehicle registration plate. The solution uses AI and 4IR technologies to print the plates. The system reduces any possibility of human error and increases performance efficiency.
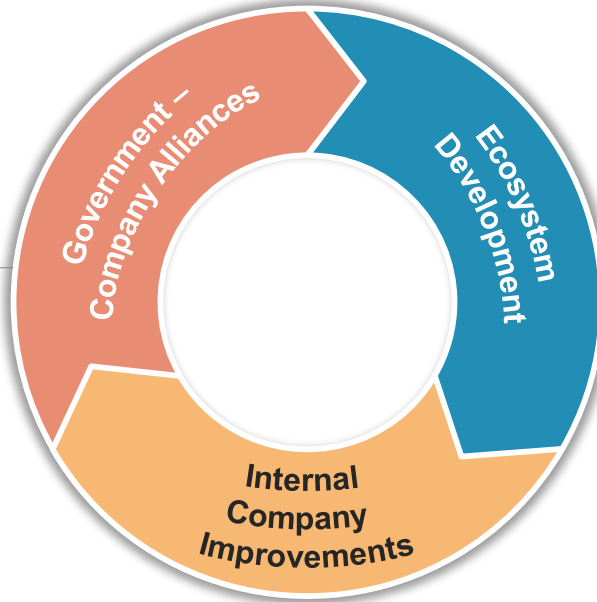
Manufacturing
(Cloud Application and 3D Printing)

Ducab, a cable manufacturing company, partnered with **Oracle** to undergo **supply chain transformation** with the aid of **cloud application technologies.** These would help automate processes, optimize service levels, and drive efficiency while remaining agile in the process.

Siemens AG and Strata Manufacturing PJSC partnered with Etihad Airways Engineering, an aircraft manufacturing company, **to improve their designs.** The idea was to **leverage the potential of 3D printing** in order to improve the designing and manufacturing of aircraft parts.

To sustain the momentum and ensure steady progress in this transformative journey, cooperation between various stakeholders and implementation of individual initiatives would be crucial

- Private organizations can aid the government in the planning and implementation of technology infrastructure initiatives.

- Governments can support the private sector by simplifying laws and policies. The private sector, on the other hand, can provide its expertise on the technical and financial feasibility of various projects such as smart cities and broadband connectivity.

Government – Company Alliances

Ecosystem Development

Internal Company Improvements

- Collaboration between local implementation partners, local independent software vendors and global IT solution companies would help in building an ecosystem for digital initiatives in the GCC region.

- This blend of local and international expertise would help distill the key international best practices applicable in the GCC landscape.

- With markets becoming prone to rapid changes, in order to prevent company obsoletion, focus on innovation needs to be an ongoing process rather than a onetime activity.

- Creation of dedicated teams and efficient pilot testing of digital initiatives is the need of the hour to improve project turnaround times.

About Aranca

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- We speak 30+ languages
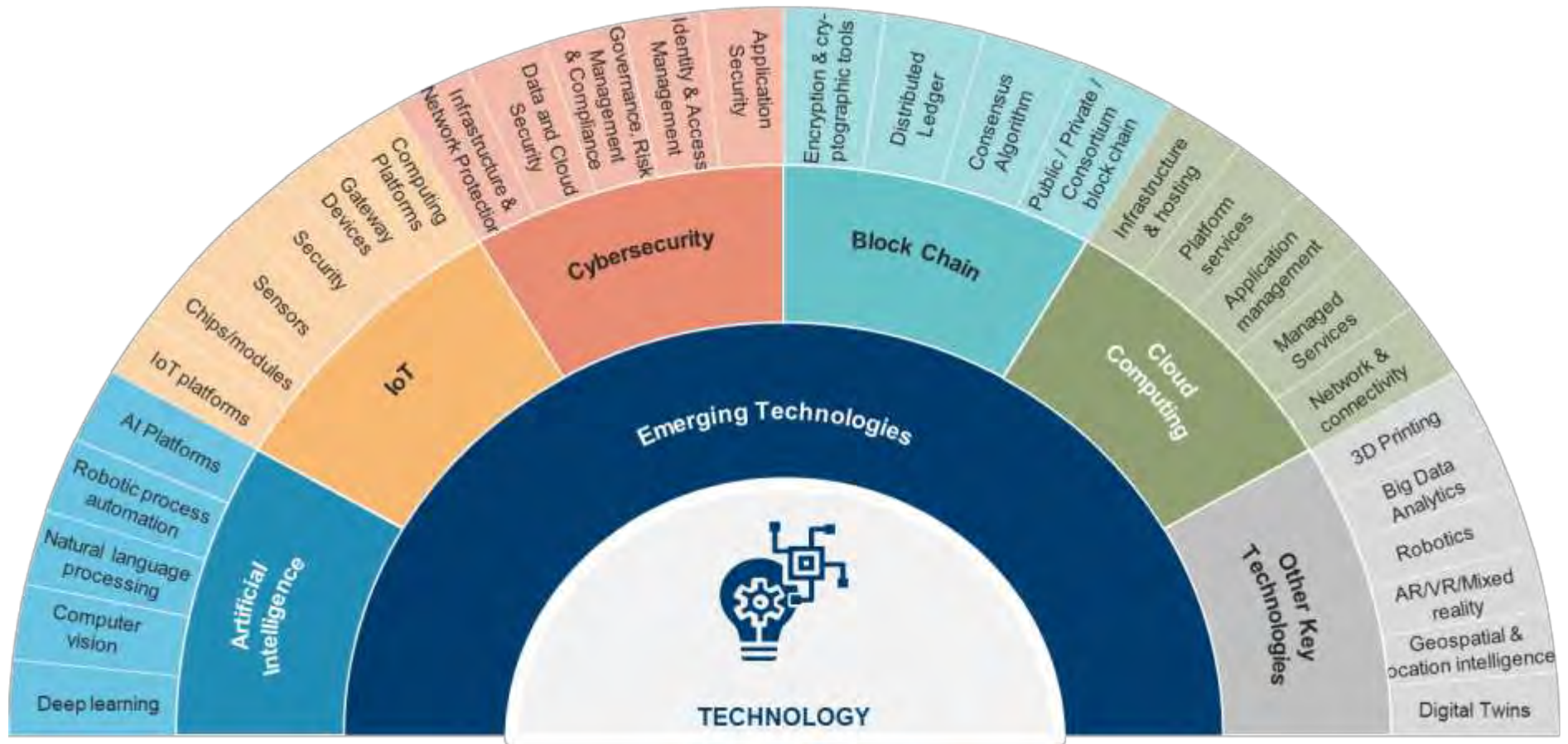- Conduct 30K interviews every year

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