



Dubai ICT Sector

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Dubai Chamber of Commerce and Industry



Introduction

Dubai ICT Sector

- Over the years, Dubai managed to offer a healthy environment for ICT operators, with its strong, high-tech and high-coverage network combining well with a tech-savvy and internationally connected population.
- This in combination with the repeatedly demonstrated commitment by the government of Dubai – and that of the UAE to become a world leader in terms of IT.
- Initiatives such as Smart Dubai and the Dubai Future Foundation, along with a Ministry for Artificial Intelligence (AI) and a Minister for the Future, are all positive indicators of the Emirate's forward-looking commitment.
- As one of the UAE's seven Emirates, Dubai is subject to federal ICT law and is part of a single, nationwide ICT infrastructure. As in the rest of the UAE, the telecoms market in Dubai is served by the two providers, Etisalat and DU. The UAE telecom operators have and will continue to play a central role in the rollout of Artificial Intelligence (AI), Blockchain technology and big data applications across the UAE.
- Dubai is well placed to take a leading position in all the aforementioned areas. Dubai has the potential to become a global data center hub. In line with international trends, digital services such as security, data and cloud solutions have emerged as a major growth areas.
- In its persistent endeavors to pursue digitization agenda and the increasing number of contracts for digital solutions by the government, both DU and Etisalat are building dedicated digital services divisions and looking to secure strategic positions in the market, where digital services are open to international providers.
- Broad range of Dubai ICT related investment opportunities are expected to be created in sectors such as utilities, health, transport and industry, among others.
- Besides, the forthcoming Expo 2020, beginning in October 2020, will act as a focal point for much of this development, setting a timeline for many current projects, such as 5G and Smart Dubai.

- **Dubai Smart City:** The rapid development of Dubai various economic sectors has necessitated the upgrading of the traditional processes and business models to ensure efficiency and speed. As a result, effective government became increasingly imperative especially when it comes to Government to Consumer (G2C) and Government to Government (G2G) services.
- **Frontier Technologies:** provision of digital solutions to the existing urban systems, made it possible to do more with less. Thus leveraging emerging technologies such as Blockchain, Artificial Intelligence (AI), along with harnessing Data Science capabilities, become an infrastructure requirement to realize the vision of becoming one of the world most smart cities.

Six Dimensions to deliver the Strategy



Smart Dubai Initiatives

- **Dubai Smart City Initiative:** is a seven-year plan, developed by Dubai's government to embed various technologies into all kinds of urban systems. In April 2015, Dubai was crowned as the MENA region smartest City.
- **Start-up Support:** Smart Dubai and partners in the UAE government are committed to transforming the UAE into the new test bed for startups and entrepreneurs to innovate and scale emerging technologies.
- **Blockchain Strategy:** launched in October 2016, as a key long-term technology for enhancing public sector and its administrative procedures. 3 strategic pillars are covered, Government Efficiency, Industry Creation, and International Leadership.
- **Paperless City:** By 2021, Dubai aims to be a completely paperless city, ensuring all government transactions are 100% digitized, saving over 130,000 trees, around 40 hours of work per person and over US\$10 mln.



Dubai Blockchain Strategy



ICT Free zones

- UAE Government has several free trade zones (FTZs) including Dubai Internet City (in 1999), Dubai Media City (in 2000) and Dubai Silicon Oasis (in 2005) that are specialized in the ICT industry and act as global centers for high technology and innovation.
- Incentives within these zones include among others, 100% import and export tax exemptions, 100% repatriation of capital and profits and corporate tax exemptions for 50 years, on a renewable basis.
- The minimal trade barriers have made the UAE generally, and Dubai specifically, the preferred location for businesses serving the entire Middle East and North Africa (MENA) and is driving demand for IT software and services from the private sector.
- In addition, the Dubai Future Foundation runs additional program such as Dubai Future Accelerators, a nine-week program that brings IT entrepreneurs, businesses and government entities together in order to facilitate new ideas and commercialize them.



- Home to 1600 companies, more than 60% of Fortune 500 companies.
- offers non-native entrepreneurs 100% ownership of their company.
- 50-year exemption from both income and corporate taxes.
- Home to world's most significant technology multinationals – including IBM, Cisco, Oracle and Microsoft.



- offers foreign ICT entrepreneurs 100% ownership of their company.
- 50-year exemption from both income and corporate taxes.
- Home to the Dubai Technology Entrepreneur Centre.
- Offers the largest start-up center in the MENA region.
- DSO offers seed funding.



- Established in 2001. Free zone benefits of 100% business ownership and exemption from taxes.
- Catering to businesses in segments such as Publishing and Printing, Music, New Media, Leisure and Entertainment, Broadcasting, Film, Information Agencies and Media and Marketing Services.



- offers non-native entrepreneurs 100% ownership of their company.
- 50-year exemption from both income and corporate taxes.

Source: Dubai Chamber Research , official sources

Dubai Economic Structure

Information and communication technology (ICT) sector accounted to 4.1% of Dubai real GDP in 2018 and expected to have positive outlook in the medium term.

Dubai GDP by Economic Sector (% share)

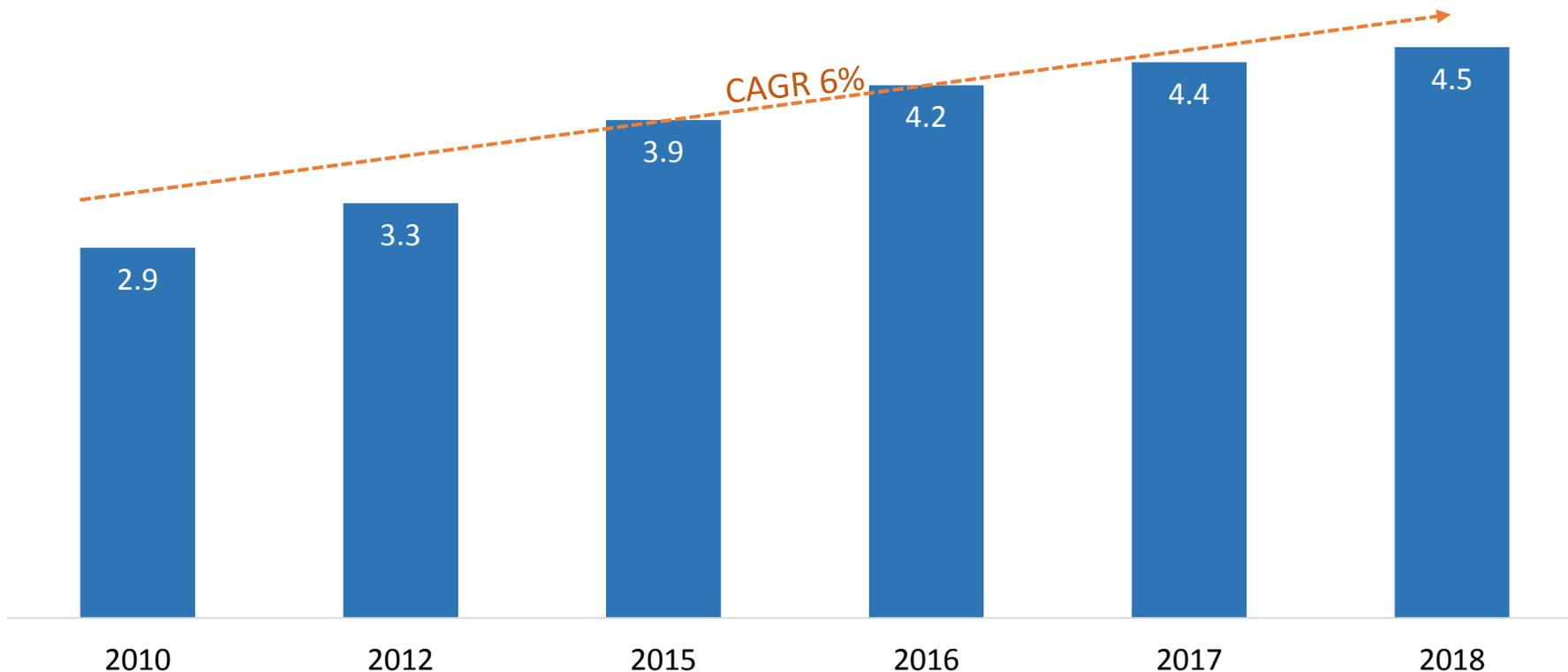


Source: Dubai Chamber Research based on Dubai Statistics Centre

Dubai ICT Sector-value added

In 2018, Dubai ICT sector recorded an annual real GDP growth of about 2.7%. Over the period 2011-2018, the sector registered a robust CAGR of about 6% .

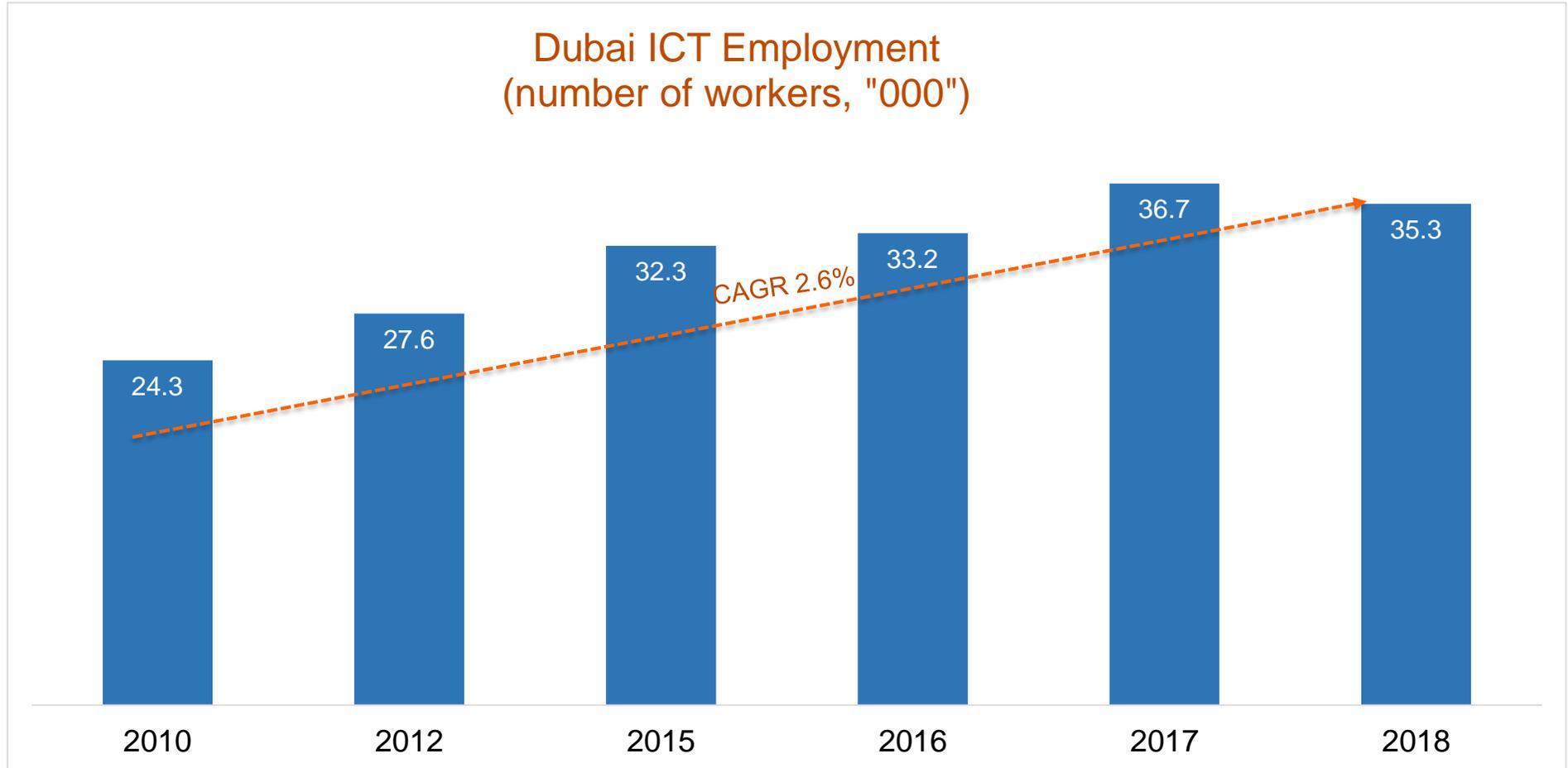
Dubai Information and Communication Technology Sector GDP (US\$ bln)



Source: Dubai Research based on Dubai Statistics Centre

Dubai ICT Sector- Employment

over years, the number of Dubai ICT sector employees has increased significantly , due to the expansion in the sector activities.



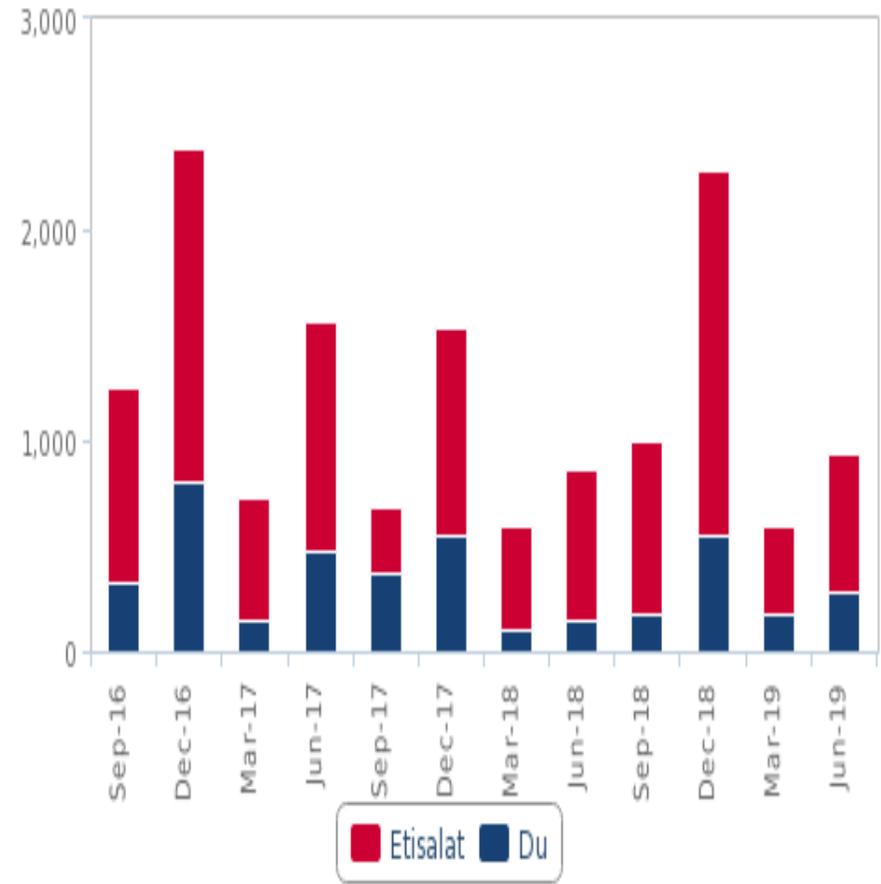
Source: Dubai Research based on Dubai Statistics Centre

Main Synergies

5th Generation of wireless Technology (5G)

- One of the most important developments in Dubai ICT sector is the introduction of the fifth generation of wireless technology for digital cellular networks or 5G technology in 2018.
- Besides bringing greater speed and capacity, the potential of this technology lies in enabling businesses and individuals a greater use and application of advanced technology, including the internet of things (IoT), industrial automation and virtual reality.
- 5G is expected to drive innovation-based competition between industry players while accelerating Dubai's smart city transformation.
- The main site of Expo 2020 – the Dubai Exhibition Centre – became the country's first 5G-active area, providing a network with speeds 20 times faster than 4G, with virtually zero delay.
- Increased uptake of 5G technology is set to create significant opportunities for international providers of digital services in areas such as security, IoT, data storage and AI.

UAE Mobile Operator Investments (AED mln)



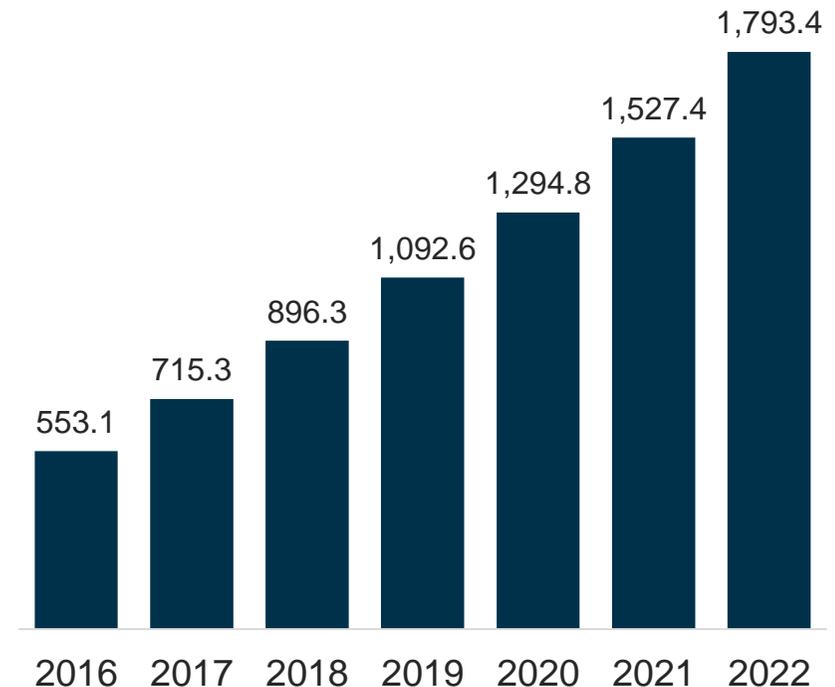
Main Synergies

Cloud Computing



- Over the past few years, the UAE cloud computing industry has expanded significantly and is forecasted to create over 32,000 jobs in the UAE between 2017 and 2022. The cloud computing allows computing services such as storage, databases and networking to be delivered over the internet.
- With the significant investments by the UAE government in cloud computing as well as strong technological infrastructure, the sector is projected to maintain its growth in the next few years.
- The UAE is the region's most significant player in cloud computing infrastructure spending. In 2019, its estimated spending on cloud computing was about US\$ 1.1 bln and expected to reach US\$ 1.8 bln by 2022. The Government Information Authority (GIA) is currently developing cloud technology to be used by Federal government entities in the UAE, and the services it offers include electronic hosting, file management and database systems, intranet portals, email and meeting management systems.
- Despite these significant expansions, there is still sizeable room for sector development that will require the expertise and know-how of international investors, especially in industries where cloud services is still underutilized, such as aviation, hospitality and manufacturing.

UAE Cloud Computing spending, (US\$ mln)



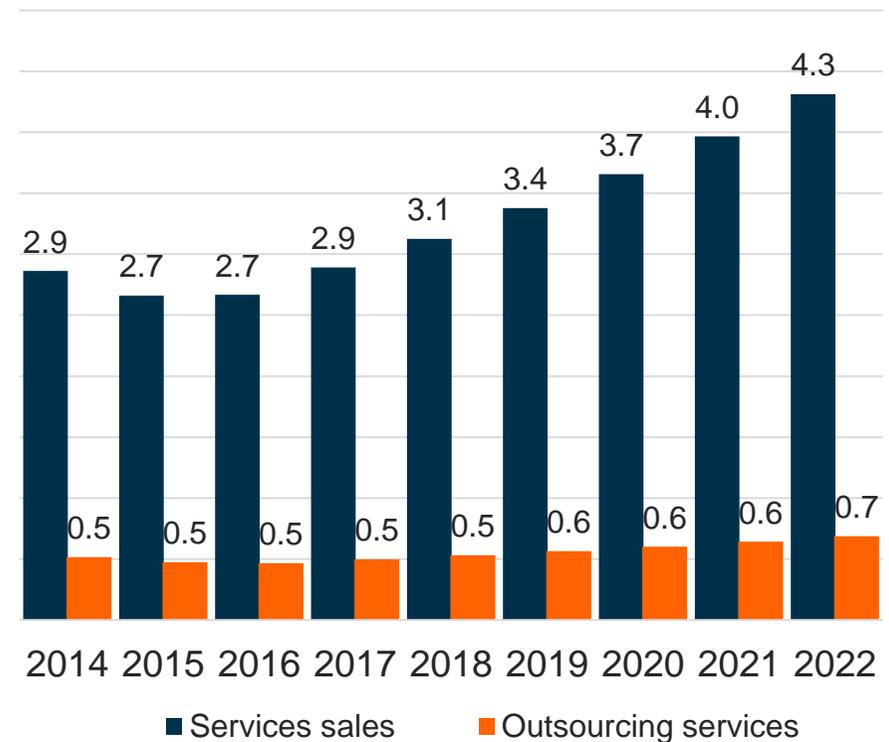
Source: Dubai Chamber Research based on Fitch Connect

Main Synergies

Cybersecurity

- The increased usage of digital networked solutions based on cloud computing, data analytics and internet of things (IoT), have underlined the increased demand for cybersecurity services.
- The UAE's strategic geographical position and the increased importance of its economy to the world through trade, tourism and oil and gas resources have triggered rapid growth in its IT security market, as cybersecurity solutions will be required to protect critical infrastructure.
- In order to tackle the rising levels of cybercrime in the country, it is expected that the UAE government to increase the budget allocation for cybersecurity substantially over the next 5 years and beyond, acquiring equipment for surveillance and communications monitoring. Cybersecurity software and services solutions demand growth is expected to be a prominent trend in the UAE over the medium term.
- Several local players are developing cybersecurity capabilities to capitalize on rising demand, while international IT security firms are expanding their presence in the country.

UAE Information Technology Related Services Sales (US\$ bln)



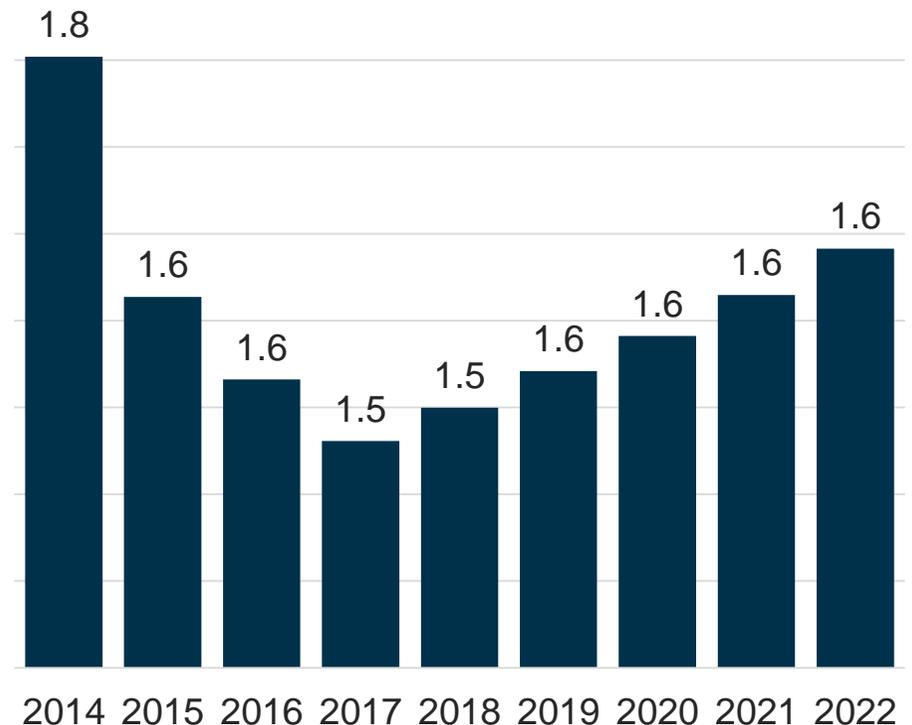
Source: Dubai Chamber Research based Fitch connect

Main Synergies

Internet of Things (IoT) solutions

- The UAE, and particularly Dubai, has emerged as a leading global location for the deployment of IoT solutions to enhance public infrastructure as it becomes a 'smart city'.
- In Q417, Dubai launched its Internet of Things' strategy and data wealth initiative, a move that underlined the Emirate's focus on digital infrastructure as a key national asset and will further support spending on smart living in light of Vision 2021.
- The swift transformation of Dubai transformation as a one of the world smart cities was made possible by the largest and strongest partnership of its kind between Dubai's public and private sector (PPP).
- Internet of Things (IoT) solution portfolio cover among others sectors such as retail and hospitality verticals. As well as IoT portfolio on manufacturing, healthcare, transportation and energy verticals.
- The government has a strong interest in developing the IoT sector in the UAE and is estimated to spend more than US\$35 billion by 2019, with anticipated annual growth of 29%.

UAE Computer Hardware Sales US\$ bln



Source: Dubai Chamber Research based on Fitch Connect

Main Synergies

Blockchain

- In 2016, Dubai Blockchain Strategy (DBS) was launched by Smart Dubai and Dubai Future Foundation, a research body. The main aim of DBS is to pioneer uses of the technology in the Emirate and to enable Dubai government to be the 1st blockchain-powered government in the world.
- DBS strategy is aiming besides increasing the government efficiency, to boost business creation and improve the quality of people life in many aspects such as pre-approved passports and pre authenticated, temporary digital wallets.
- In June 2017 Smart Dubai announced plans to achieve the DBS objectives by 2020, at which point all relevant government services and transactions will be moved to the platform.
- There are more opportunities for applying blockchain in the private sector. It has been indicated that the use of blockchain in Dubai is still at the experimentation and pilot program stage, rather than the extensive adoption phase. The adoption of blockchain technology is expected to have a major impact on Dubai and UAE economies.

Blockchain Timeline in Dubai



2020 Dubai is to transfer **100%** of Dubai applicable services to **Blockchain**.

Including **services** of **electricity bills** by DEWA, **land registration** by DLD, DIFC Courts, **court of Blockchain**



2018 Launching of the **Dubai Pay Blockchain Settlement and Reconciliation System**.

13 Test cases for **Blockchain**

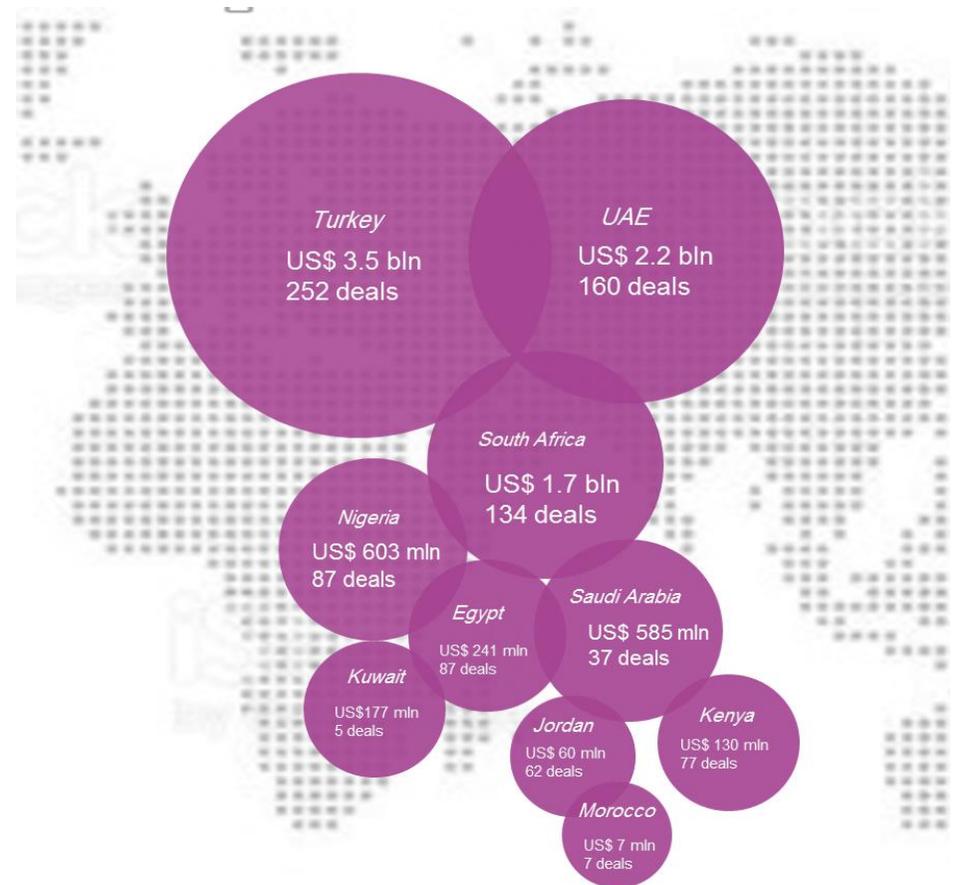
Source: Dubai Chamber Research based on OBG

Main Synergies

Artificial Intelligence

- The ambitious plans of the UAE government to have the most innovative country by 2021, indicates that a considerable share of the government budget has been set aside to import the appropriate technology and achieve the Vision 2021.
- Artificial Intelligence (AI) is already integrated in the UAE systems by enabling breakthrough advances in areas like telecom, healthcare, education and transportation.
- Over the past 10 years, the largest investments in the AI in the Middle East & Africa (MEA) region is seen in Turkey, UAE and South Africa.
- Artificial Intelligence (AI) is equally crucial to the UAE's security industry. As part of the government's UAE Centennial 2071 plans, the UAE AI Strategy 2031 was created to improve efficiency in the transport, health, space, renewable energy, water, technology, education, environment, and traffic sectors.
- The aviation industry too is being integrated with AI; Emirates is developing an AI-powered assistant for customers, and the UAE's aviation authority has signed an agreement to explore the use of AI in air traffic management.

Relative spending on AI transactions across the region Based on value of transactions from 2008-2018



Source: Dubai Research based on Microsoft