

وزارة الاتـــــط وتـقـنيــــة الـمعلــومــــات MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY

Saudi Arabi: Leadership of Digital Economy in the Middle East



" our revenues..."

His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud Crown Prince, Prime Minister

Our nation holds strong investment capabilities, which we will harness to stimulate our economy and diversify

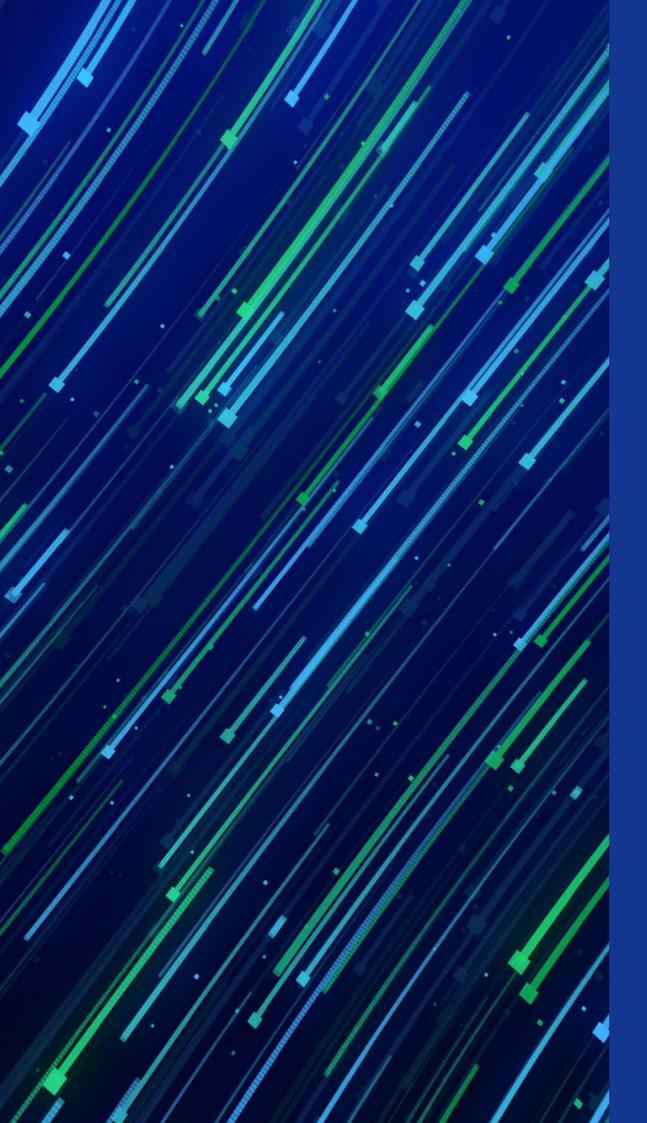


Table of Contents

Statement of the MCIT

Saudi Vision 2030 ICT achievements in the Kingdom

The Ministry of Communications and Info Strategy Strategic objectives of the Ministry Regulation Initiatives MCIT Vision Mission Statement National Technology Development Program Future Skills Digital Content Council (DCC) Attaa Digital ThinkTech Riyadh Techstars Accelerator Center of Digital Entrepreneurship (CODE)

Saudi Arabia supporting ICT evolution

National infrastructure Data centers enablement Fiber infrastructure Business Startups and entrepreneurship Skills & Saudization Technology industry

Saudi Arabia - The transformation of the

The transformation of the Kingdom The growing role of women Quality of Life - Saudi Green Initiative Entertainment and culture NEOM - A blueprint for the future

Government partners in transformation

National Digital Transformation Unit (NDU Digital Government Authority (DGA) Communications, Space & Technology Col Saudi Federation for Cybersecurity, Progra Saudi Data and Artificial Intelligence Auth Digital Cooperation Organization Contact us

	ð
	9
	12
ormation Technology	15
	16
	16
	16
	16
	17
	17
am (NTDP)	17
	17
	17
	18
	18
	19
:)	19
	21
	23
	25
	27
	29
	31
	33
	35
Kingdom	37
	38
	38
	39
	4C
	41
	43
ר)	44
	46
mmission (CST)	49
amming and Drones (SAFCSP)	5C
nority (SDAIA)	53
	54
	56

8

Statement of the Ministry of Communications and Information Technology

MCIT orientations to enable the Kingdom to lead digital transformation efforts

- 1- Supporting the growth of ICT sector and improving its environment, which contributes to increasing its demand and enhancing its competitiveness.
- 2- Strengthening the position of the Kingdom of Saudi Arabia as a center linking the East with the West, Africa, Asia and Europe, by taking advantage of its strategic location and its tireless efforts to increase the number of submarine cable landing stations and approving all future technologies that support these efforts and enhance its position to provide capabilities and points of contact.
- 3- Rationalizing energy consumption in data centers by cooperating with stakeholders to provide sustainable, cost-effective and eco-friendly energy options.
- 4- Improving access to digital services through strengthening the infrastructure of telecom service providers and linking them with content owners through the Saudi Arabian Internet Exchange (SAIX) initiative, which aims to provide a neutral and non-profit point for Internet exchange in the Kingdom, which the improvement of the digital services quality and developing ICTs.
- 5- Optimising the quality and ease of access to telecommunication services at reasonable costs and providing network coverage for all users and regions throughout the Kingdom.
- 6- Cooperating with the stakeholders to develop laws related to data management and privacy, including striking an optimal balance between privacy and technical development.
- 7- Promoting local demand for telecommunication services while improving the quality of the communication experience.
- 8- Facilitating access to the existing digital infrastructure through coordination between stakeholders in the public and private sectors, and emphasizing the importance of cooperation in infrastructure participation.







Saudi Vision 2030 – the foundation of

Saudi Arabia's transformation

Saudi Arabia began its ambitious and far-reaching process of transformation since 2016 with Saudi Vision 2030, creating the foundation for change in the Kingdom.

Under the leadership of the Custodian of the Two Holy Mosques, King Salman bin Abdulaziz Al Saud, In April 2016 we embarked upon the largest and most comprehensive program of economic and social transformation that any nation has undertaken.



Designed by His Royal Highness Crown Prince Mohammad bin Salman Al Saud, Crown Prince, Prime Minister, Saudi Vision 2030 set out an ambitious program that would transform the Kingdom to take its place at the heart of the Arab and Islamic worlds, leverage its strategic location to connect the Middle East with Africa, Asia and Europe and grow to become a global investment powerhouse. The Saudi Vision 2030 plan sets out a clear path for the future of Saudi Arabia: a future of economic diversification that will create a prosperous future for the people of Saudi Arabia. We have set multiple targets across many different sectors and domains to achieve this program, with measurable results and ambitious yet achievable goals.

Three main pillars define Saudi Vision 2030 - to create a vibrant society, a thriving economy and an ambitious nation. In support of these pillars, the leadership have implemented a very wide range of transformative programs and initiatives, which have encompassed everything from government restructuring and legislation review, to establishing project management and performance measurement, increasing FDI and private sector to contribution to GDP, building human capital and bringing women into the workforce.

We have focused on programs to revitalize our cities and improve healthy living. We have set the direction to promote culture and entertainment, improve healthcare and encourage volunteering and create pride in our nation.

Saudi Vision 2030 has initiated unprecedented change in the Kingdom, and set us well on the path to achieving the goals of the program, with many significant accomplishments across each of the pillars.

Our vibrant society has hosted over 2,000 sports, culture and entertainment events attended by 46 million visitors. We have five registered UNESCO heritage sites, and restored more than 37 million square meters of green spaces. Pilgrims can now secure a visa for Umrah in five minutes instead of 14 days.

Our thriving economy has already met the 2030 target for female participation in the workforce. The Public Investment Fund has increased its assets to \$400 billion (1.4 trillion Saudi Riyals) while the contribution of SMEs to GDP has increased by 9%. The nation has risen five rankings in the Global Competitiveness Index. We have held the largest IPO in history, with the flotation of Saudi Aramco.

Our ambitious nation has seen non-oil revenues increase significantly. 335 government services have been digitalized on the Absher platform. The number of volunteers has doubled annually to reach 409,000. The Kingdom has risen eight places on the World Bank's government effectiveness rankings.

These are only a few of the achievements that have been made. As an indicator of Saudi Arabia's ambition and commitment to Saudi Vision 2030 and our ability to realize these plans, our accomplishments so far point to the successful completion of the Vision by the end of the decade, and a bright future for Saudi Arabia ahead.

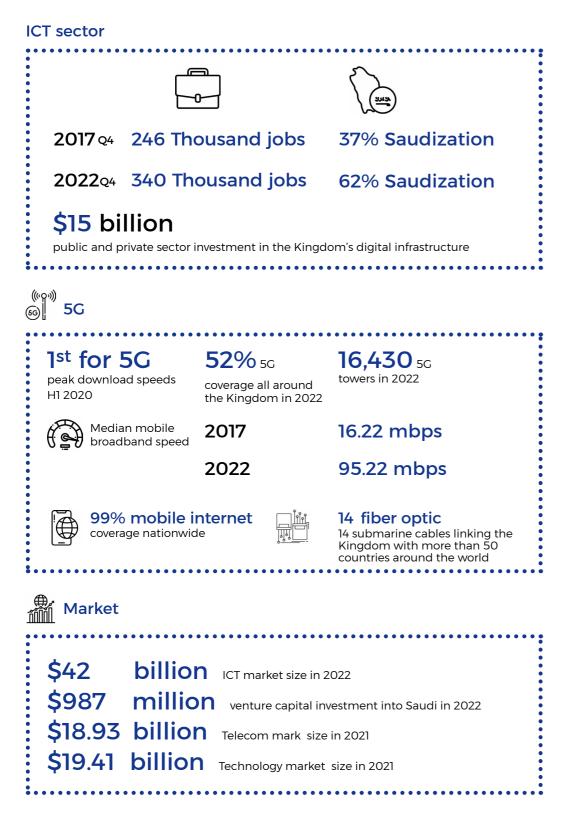
For More informations about Saudi Vision 2030: https://www.vision2030.gov.sa

Key achievements:

visitors to sports, culture and

ICT achievements in the Kingdom

Saudi Arabia's ICT sector is breaking barriers and setting new standards as the digital transformation of the Kingdom gains momentum. From 5G to startup investment, Saudi Arabia is taking its place as a global hub for technology.





Firsts:

- 2021





 1st place among G20 countries in digital competitiveness -European Center for Digital Competitiveness in 2021 • 2nd place in government excellence - ITU in 2021 • 1st place in Women empowerment programs in ICT - ITU in

The Ministry of Communications and Information Technology

<image>

The Ministry of Communications and Information Technology

The Ministry of Communications and Information Technology (MCIT) of Saudi Arabia is responsible for creating the foundation for a thriving ICT sector in the Kingdom. This is achieved by meeting and exceeding international standards, fostering the skills for an advanced digital economy and contributing to job creation. Furthermore, by implementing economic diversification to raise GDP and establishing strategic plans, MCIT ensures the Kingdom is able to stay abreast and benefit from developments and technologies at a local and global level, and support government systems and platforms.

Strategy

The strategy of MCIT includes an ambitious action plan based on attracting leading international companies, mainly specialized in emerging technologies to Saudi Arabia; increasing the local content shared in the information technology sector; improving the technical skills of the local workforce, and promoting knowledge, as well as technical and digital awareness. The plan also encompasses driving technical innovation by promoting research and development and the startup ecosystem in the Kingdom, enabling the development of the Kingdom's giga projects, as well as supporting coordination and collaboration with all public and private sector stakeholders in ICT.

The ICT Strategy 2019-2023 comes as part of MCIT's efforts aimed at establishing a strong, technologically advanced digital infrastructure that contributes to accelerating digital transformation in support of Saudi Vision 2030's goals of building a digital society, a digital government, a thriving digital economy and an innovative future for the Kingdom.

Strategic Objectives of the Ministry

- Growing the ICT sector by 50%
- Increasing the ICT sector's contribution to GDP by \$13.4 billion (50 billion Saudi Riyals)
- Supporting efforts to localize technology in the Kingdom by raising the percentage of workforce localization to reach 50%
- Attracting foreign investment
- Contributing to supporting women's empowerment and participation

Regulation

MCIT is responsible for regulations for the Kingdom in a number of areas, including communications, anti-cybercrime and public service policy.

Initiatives

In order to further the objectives of its vision and mission, MCIT has launched a number of strategic programs, in partnership with other government entities, universities and the private sector, that are intended to address key areas of development, including skills, entrepreneurship, content and digital inclusion. MCIT's programs include:





MCIT vision

To lay the foundations for the pilla and an innovative future.

Mission statement

Build a digital infrastructure with international standards that enables innovative talents to seize the opportunities of the fourth industrial revolution that contribute towards economic sustainability, global leadership and quality of life.

National Technology Development Program (NTDP)

NTDP is a national program that contributes to developing the technology ecosystem in the Kingdom and creating sustainable growth for the ICT sector in partnership with the private sector. The program is intended to include all stakeholders that can support and influence the growth of the technology market, with the aim of making the Kingdom an attractive regional center for innovation and investment.

NTDP will support growth and investment in Saudi technology companies so they can compete locally, regionally and globally. It will enable the digital economy through the effective use of traditional and emerging technologies within various fields in collaboration with stakeholders in the sector. NTDP will also create a technology business ecosystem that integrates companies, universities, research centers and human resources in collaboration with stakeholders in the sector.

To help technology companies in the Kingdom access funding to enable them to grow, NTDP has launched the Technology Growth Financing Initiative, which provides loans for micro, small and medium-sized businesses for IT and digital projects.

The Initiative, launched in partnership with the Kafalah Program that is a program of the SaudiIndustryDevelopmentFund (SIDF), is intended to ensure that organizations can access appropriate funding, guaranteed by the Technology Growth Financing Initiative, for ICT projects and expansion, to contribute to the sustainable growth of the sector in the Kingdom.

Future Skills

The Future Skills initiative aims to build and stimulate a sustainable ecosystem for the development of digital skills and contribute to bridging the gap between supply and demand in accordance with the requirements of the labor market. This is being done by increasing opportunities for specific training for national cadres locally, reducing training costs and stimulating and increasing quality partnerships, qualifying distinguished national cadres capable of meeting the requirements of the current and future labor market.

Digital Content Council (DCC)

Digital Content Council has the aim of stimulating the digital content market in the Kingdom, enhancing the quality and volume of local content production and creating meaningful employment opportunities in the sector.

DCC has launched 36 initiatives, with funding of \$1.1 billion (4.7 billion Saudi Riyals) directed at developing digital content and will focus on expanding the proportion of locally produced content. In addition, it will provide jobs in four major digital sectors including video, audio, video games, and advertising. DCC is also responsible for enhancing regulations around digital content and creating the infrastructure for the industry. It will also develop programs to attract investment in the sector.

DCC is a partnership between the Ministry of Media, Ministry of Culture, Ministry of Commerce, Ministry of Investment, the Communications, Space & Technology Commission (CST), the General Commission for Audiovisual Media (GCAM) and the Saudi Authority for Intellectual Property (SAIP).



To lay the foundations for the pillars of a digital strategy to enable a connected present

Attaa Digital

Attaa Digital, also known as the Digital Giving Initiative, was established in September 2018 and is sponsored by the Ministry of Communications and Information Technology to spread digital awareness among Arab users. The need for such an organization arose following the rapid increase in internet usage with 93% now online, of which 70% is on social media. Yet despite Arabs representing 5.8% of all users online, only 0.6% of content is Arabic.

As the first qualitative voluntary initiative, Attaa Digital aims to encourage greater Arab participation by empowering Arabic content creators with the tools they need to produce enriching technical Arabic content. Attaa Digital offers logistic services, upskilling, support in accelerating the process of digital transformation, help for non-profit sectors as well as encouraging volunteer work and launching the first Arab volunteer platform focused on uploading technical Arabic content.

So far, more than 19 million people have benefited from the initiative with over 300 experts, more than 1,700 programs, and in excess of 40 ambassadors, 96 partners and over 260,000 members. Attaa Digital's programs include content libraries, camps and more.

ThinkTech

ThinkTech is an umbrella initiative focused on strategic awareness projects in Saudi Arabia launched by the Ministry of Communications and Information Technology. It aims to anticipate the latest technology developments that can support in achieving sustainable development and spread awareness about emerging technologies. The initiative also seeks to cover the technical knowledge needs of all Arabic speakers to create a digital society.

To achieve these goals, it has successfully worked with more than 200 partners, over 300 experts, Translated 1,700 technical terms into Arabic. In the process more than 23 million people have benefited through this work.



Riyadh Techstars Accelerator

Riyadh Techstars Accelerator, a partnership between Raed Ventures Investment Fund, and Techstars, a US-based accelerator network, is focused on supporting Saudi entrepreneurs and startups to grow their businesses in the Middle East and North Africa, and to attract startups to the Kingdom to expand the digital economy. Participating startups receive funding, hands-on mentorship from the Techstars and MCIT networks, access to training and other resources, and access to the global Techstars network.

Center of Digital Entrepreneurship (CODE)

An initiative of MCIT, the Center of Digital Entrepreneurship (CODE) seeks to expediate and lead the development of digital knowledge, empowering local talents and enabling digital entrepreneurship in all startup phases. CODE supports startups at any stage of their journey, through funding support, innovation labs, training and bootcamps and incubation and accelerator programs. In addition, it aims to empower entrepreneurs, provide mentorship and create access to investors.

To support the initiative, CODE has an ecosystem of partnerships with innovation labs run by universities, government entities, leading Saudi companies and multinationals across the Kingdom. These lab partnerships help founders in areas such as product design, technical support and development.

CODE offers a range of services for entrepreneurs, including access to mentorship programs and opportunities to apply to become a mentor. To support funding, CODE has relationships with a number of sources of investment that cover everything from early stage funding through to Series A funding. Entrepreneurs are also able to utilize a series of related services to help their business, including financial and legal services, access to regulation and data, skills and training support and access to the startup community. The program includes perks such as discounts on ICT services from major vendors and monthly reports on entrepreneurship news. CODE also organizes regular sessions on specific topics and industry sectors for startups under the CODEUp banner.

CODE has organized Tech Champions, an accelerator and business incubator program organized in partnership with government and semigovernment entities to develop ideas in culture, sports, Awqaf (charitable giving) and financial technology; and Game Changers, a program that aims to recruit entrepreneurs in Saudi Arabia and train and mentor them to form indie video games companies in the Kingdom. CODE also organized the Blockchain Challenge to develop ideas based on blockchain in the areas of contracts, supply chain and creative industries.





T

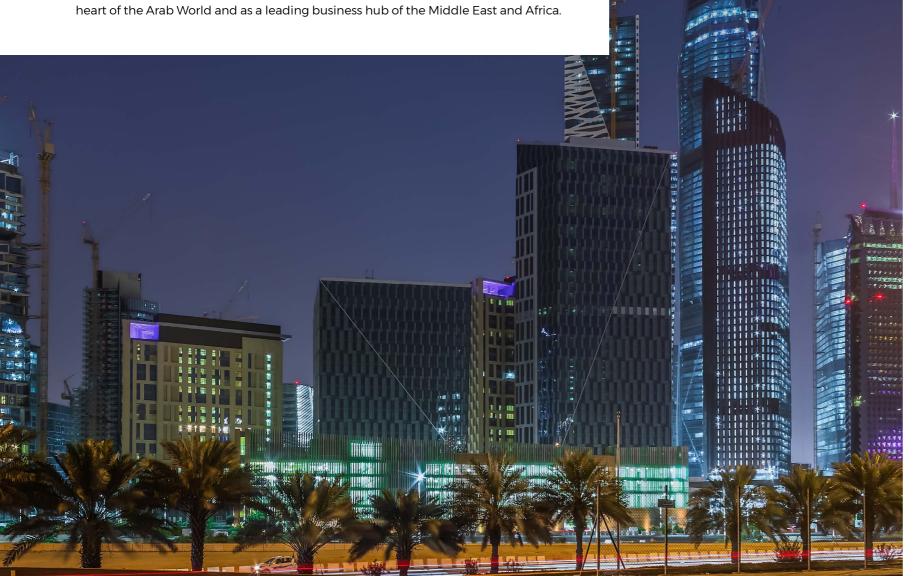


Saudi Arabia supporting ICT evolution



How Saudi Arabia is supporting...

The Kingdom of Saudi Arabia has made great progress in many different areas since the inception of Saudi Vision 2030. Across multiple sectors and spheres of business, the government has led new initiatives and programs that have developed core capabilities and increased our readiness to take our place at the heart of the Arab World and as a leading business hub of the Middle East and Africa.



The transformation programs in the Kingdom have a wide and diverse scope. However, our goals have focused on economic development and our most important advances came in areas that will be critical to creating the foundations of a modern digital economy. In areas including key national communications infrastructure, ease-of-doing business, encouraging entrepreneurship, building human capital, developing new technologies and driving technology adoption, our programs have already transformed the Kingdom.

National infrastructure

An advanced communications infrastructure is essential for digital transformation, and under the guidance of MCIT, Saudi Arabia has been able to create one of the fastest, most modern wireless networks in the world.

In partnership with the private sector, we have ensured that the finances were available to upgrade and expand our telecommunications networks. Throw Supporting 4G broadband initiative to coverage 94% in 2021 of the populated areas of the country, and thanks to our 5G networks, we now rank among the top 5 countries when it comes to 5G roll-out and 5G peak download speed.

Capital investments of telecoms companies increased by 13% CAGR in four years, from \$3.2 billion (12 billion Saudi Riyals) to \$4.8 billion (18 billion Saudi Riyals) in 2020. In total, the public and private sectors combined have invested \$15 billion (55 billion Saudi Riyals) to expand and develop the Kingdom's digital infrastructure.

The investment has been channeled into infrastructure and technology upgrades that have created a Strong infrastructure for business and consumers. Our telecoms companies have constructed 6,902 new 5G towers across 60 governorates in 2021 alone, and we have a total of 16,430 5G towers in 2022. Riyadh has the third place globally in 5G download speed of any city in the world (OpenSignal 2021),

The investment also means that 99% of all populated areas are covered with mobile internet, with rural mobile broadband coverage exceeding 8.5 times what it was five years ago. The infrastructure expansion has also seen Saudi Arabia move up the global rankings of mobile broadband speed, from 107th in 2017, to rank among the top ten in 2021, and second among the G20 countries.

Within the framework of preparations for the Internet of Things, the Fourth Industrial Revolution, and smart technologies, and what they require of an increase in bandwidth, the Kingdom has enhanced the allocation of frequency spectrum through redistributing 1100 MHz of frequency to increase mobile broadband speeds, and expand the corresponding national communications in the Saudi Internet Exchange.

By this step, the Kingdom has ranked second among the C20 countries in terms of the amount of spectrum re-allocated to mobile phone services, after which the Communications, Space and Technology Commission (CST) announced the National Frequency Spectrum Strategy, which allocated more than 23 GHz of spectrum to increase the speed and coverage of 5G.

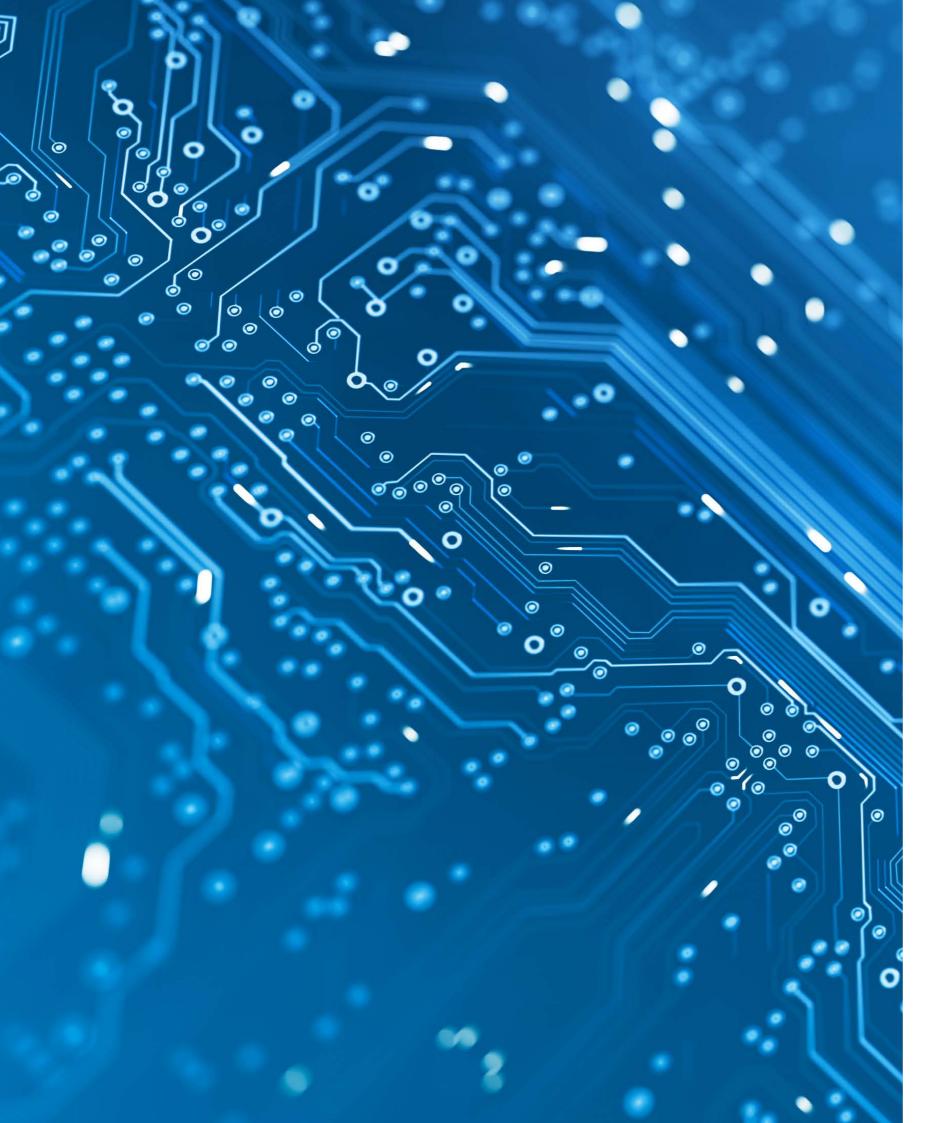


\$15 bi investment i infrastructur

Riyad 3rd place gla download sp

.

llion
in telecoms
re la
h
obally in 5G
peed Opensignal 2021



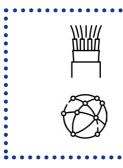
Data centers enablement

with its

On top of that, the kingdom is pursuing an ambitious environment sustainability program with its Green Saudi initiative, targeting 50% of the Kingdom's domestic energy needs from renewables, which meets the data centers providers carbon reduction commitments. In addition, Saudi Arabia has issued a reduced electricity power tariff that goes down to \$0.048/kwh for cloud computing data centers making it a An attractive option for data center investors by taking advantage of the resources and obtaining the necessary facilities and permits for the implementation of mega projects.

infrastructure.

Finally, MCIT plays a major role in enabling data centers investors through availing the needed resources such as lands options, facilitating national and international connectivity, and liaising with government entities for permits.



Saudi Arabia is leading a comprehensive digitization strategy that is focused on the development of KSA as a digital hub with Data Centers as core assets with an objective to build 1300MW of capacities by 2030. The kingdom has an attractive environment for data center building

highly reliable, effictent and cost-effective power infrrastructure suiting the expanding global demands of data centers facilities.

The Kingdom hosts data centers for two major international cloud service providers, which is evidence of its importance in the regional sector and an indication of the strength of its international communications

1,300 MW data center capacity by 2030	



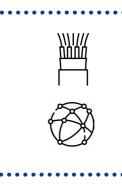
Fiber infrastructure

The Saudi government has rushed to build a global fiber network and international capabilities and connections to increase the digital economy. Therefore, it financed projects to build fiber optic networks under the supervision of the Ministry of Communications and Information Technology, including direct financing of about 40% of the Kingdom's fiber optic networks. As a result, the local network has achieved huge gains in terms of speed and connectivity, and more than 3.5 million homes have been received the optical fiber broadband services, more than double the proportion recorded five years ago.

In line with the Kingdom's ambitions to achieve a leading position in the Middle East, Africa and Asia, we have been keen to develop local and international contacts at the same time to ensure a major role for the Kingdom in the regional digital sector.

International bandwidth capacity has been increased to 18 terabits per second. The Kingdom currently has 14 undersea fiber optic cables and three terrestrial cables, providing world-class fiber optic connectivity.

It is planned to supply fiber optic networks with satellite communication systems in the future. NEOM has entered into a joint venture agreement with OneWeb, the global communications network that operates in space, with the aim of providing a high-speed satellite communication network to NEOM, Saudi Arabia and the region in general. OneWeb's group of low Earth orbit satellites provides a faster and more reliable system of communication, enabling advanced cognitive digital systems for NEOM, businesses and rural communities. The agreement includes a long-term strategic partnership in the research and development of future communication systems.



鬥	21th country worldwide by number of submarine cable landings
÷ (S)	18 terabit per second Submarine cables capacity



Business

components of our growth.

Several government entities are leading Saudi Arabia's businessfocused efforts. Under the Public Investment Fund (PIF), Saudi Arabia launched the Shareek ("Partner") is a dynamic and high-impact program that aims to increase domestic investments of private sector companies (listed and non-listed companies) to reach SAR 5 trillion by 2030 through the support and unlocking of Governmentapproved incentives. The program offers incentives to enable private sectors to reach the target of 65% contribution to total GDP.

Regulation reforms related to business have focused on cross-border trade, judicial reform and procedures aimed at enhancing transparency. These efforts have paid off with international recognition - Saudi Arabia was the most improved economy in the world according to the World Bank's Doing Business 2020 report, and the World Economic Forum's Global Competitiveness ranking placed Saudi Arabia as the 39th most competitive economy worldwide.

Creating an open, transparent, and attractive business environment in the Kingdom has been a key pillar of Saudi Vision 2030, and attracting inward investment and increasing private sector participation are essential

Since 2018, Saudi Arabia has allowed 100% foreign ownership of companies, and the Ministry of Investment (MISA) is supporting efforts across the board to help businesses wishing to come to Saudi Arabia. Support is available to help companies with work permits and licensing, along with finding premises and land.

Through the Meras program, developed by the Saudi Business Center, companies can now access a one-stop-shop to establish new businesses, and in some cases, setup can be completed in just one day. The Meras eServices Platform offers a single unified platform for all eServices provided by government agencies to business.

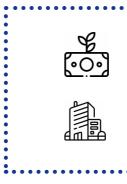
To support established businesses, Saudi Arabia has developed talent discovery programs and skills development programs, and the Saudi Digital Academy is able to deliver bespoke training curricula developed with the private sector to meet the needs of specific businesses.



Startups and entrepreneurship

companies in the region.

The Kingdom's venture capital funding is increasing rapidly-in Q42022, \$987 million in venture capital was directed to Saudi digital startups the largest share in the Middle East and North Africa region, and more than double of what was attracted in 2020 and 2021 and 2022 combined.



Small-to-medium businesses and startups are a cornerstone of economic activity, and Saudi Vision 2030 pledges to raise the contribution of SMEs to Saudi Arabia's GDP from 20% to 35% by 2030. To support SMEs, foster innovation and nurture the entrepreneurial spirit of Saudis, the Kingdom has initiated programs to develop the culture of startups and encourage new businesses, as well as create funding to support the sector.

TAQNIA, which is operated by the Public Investment Fund, has invested over \$13 million (50 million Saudi Riyals) in startups since 2011 across multiple sectors, with the aim of commercializing the R&D output of research institutions locally and internationally, and transferring technologies into Saudi Arabia. Funding from Shareek is also reserved for the SME sector.

Monshaat, the Kingdom's SME authority, is helping SMEs by removing obstacles to doing business, facilitating access to funding, supporting SMEs in marketing and exporting products and service.

Additionally, accelerators such as Misk Innovation, are focused on early-stage innovation, and bringing world-class partners to share Silicon Valley expertise and growth hacking techniques with emerging

To support FinTech, the Saudi Capital Market Authority (CMA) established the Financial Technology Experimental Permit (FinTech ExPermit), and today there are 13 licensed FinTech companies in the Kingdom, with 15 more participating in sandbox environments.

\$987 million VC investment in Saudi Arabia, In Q4 2022
7th on WEF growth rate of innovative companies



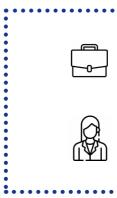
Skills & Saudization

People must be at the heart of any national program, and Saudi Arabia is placing great focus on preparing the population of the Kingdom, especially women and young people, to take the lead in our transformation initiatives. Saudi Arabia has an extensive program to develop the human capital and capacity that will be required to realize Saudi Vision 2030.

The Ministry of Education, in cooperation with MCIT, has introduced digital skills into the public school curriculum, training over a million students and 11,000 teachers in core technology areas.

Saudi Arabia's capacity-building programs have already established a strong skills base in the Kingdom, and significantly advanced the employment of Saudis, including Saudi women. The number of jobs in the ICT sector grew from 246,000 jobs in 2017 Q4 to around 340 Thousand jobs in 2022 Q4, while the Saudization rate increased from 37% to 54.1%. Women's participation in the ICT workforce tripled from 7% in 2017 to 32.5% today - higher than the European average of 17%.

Today, the Kingdom ranks ninth globally in the growth of digital skills inside the workforce, according to the World Economic Forum, and the Women Empowerment Program in Technology was recognized with an EQUALS award from the ITU in 2020.



The Future Skills Initiative, launched by MCIT in partnership with the private sector, has already trained more than 40,000 men and women in high impact disciplines like artificial intelligence and cybersecurity, along with skills training, professional development and career support to contribute to the creation of high-quality employment opportunities.

In a major launch this year, the Saudi Federation for Cybersecurity, Programming and Drones (SAFCSP), along with MCIT and the Saudi Data and Artificial Intelligence Authority (SDAIA), announced an extensive program and investment in future skills, through the Tuwaig 1000 Bootcamp, an initiative to train students and place them in employment in cybersecurity, programming, artificial intelligence and the video games sector. The programs aim to improve the digital skills of 100,000 Saudi youngsters by 2030, and make at least one Saudi citizen out of every 100 a software programmer.

> 340 Thousand Number of jobs in the ICT sector, Q4 2022 32.5% women's participation in ICT workplace



Technology industry

Saudi Arabia's ambitions for technology extend beyond just adoption and utilization of new solutions created in other markets - we aim for Saudi Arabia to become a technology leader and innovator in its own right, with a healthy and competitive private ICT industry.

To foster the growth of Saudi Arabia's technology sector and support its expansion to regional and global leadership, the Kingdom has implemented a number of initiatives to extend financial support and to expand the technology business ecosystem.

To ensure that our regulatory environment is better aligned for growth, the National Digital Transformation Unit (NDU) has conducted a comprehensive review of over 200 regulations in 15 sectors, and created 25 new and updated regulations that enable innovation and new business models such as crowdfunding platforms regulations and peer-to-peer car rental platforms regulations.

Our flagship program to support the sector is the National Technology Development Program (NTDP). With a budget of \$660 million (2.5 billion Saudi Riyals), the program is intended to accelerate growth across startups and SMEs to build local businesses, as well as encourage investment and strategic partnerships with the Kingdom, and attract global talent and R&D to Saudi Arabia.

NTDP includes an SME loan guarantee program to support Saudi technology-focused SMEs and strengthen trust between technology companies and financial entities, as well as other initiatives to facilitate access to finance so that local technology companies can expand. NTDP also works on attracting international investment and companies to the Kingdom. At the same time, it helps develop technology entrepreneurship and emerging technology companies, and promotes cooperation between private sector, universities and research centers to foster research in the Kingdom and attract financing.

Saudi Arabia has already attracted international partners to support the growth of the technology industry. This year, the Public Investment Fund announced a partnership with China's eWTP Capital to form the Saudi Chinese eWTP Arabia Capital Fund, a \$400 million (1.5 billion Saudi Riyals) fund to support technology startups in the Kingdom.

The Kingdom's digital economy is accelerating its growth, and now contributes 15% of Saudi GD.



\$660 million NTDP fund to support Saudi technology sector 15.8% contribution GDP contribution to Saudi Arabia's digital economy



The transformation of the Kingdom

Beginning with Saudi Vision 2030, Saudi Arabia is on a journey of transformation unlike anything seen before.

The Kingdom of Saudi Arabia is in the midst of an unprecedented program of transformation and modernization. The rapid pace of change in the Kingdom is exceeding all expectations and setting new standards in how a nation can redefine itself and its place on the world's stage.

Saudi Arabia is already at the heart of the Arab world, as the birthplace of Islam and the home of the two cities of Makkah AlMukarramah and Al-Madinah AlMunawarah. The global location of Saudi Arabia, situated between Europe, Asia and Africa, makes the Kingdom a natural gateway to all three continents, and an obvious choice as a business destination. Some 35% of the world's population is within a four-hour flying time from Saudi Arabia, while in eight hours, 80% of the world is in reach. No wonder that pre-pandemic, over 117 airlines operated through the Kingdom.

With the major trade route of the Red Sea in the west, Saudi Arabia is investing to expand its position as a central logistics hub, with an integrated transport infrastructure including sea and rail, that will connect international trade across the markets of the Middle East, East Africa and West Asia.

As befits a G20 economy, Saudi Arabia has a high GDP, a stable monetary system, and a well-capitalized financial sector. The Saudi stock exchange, Tadawul, is the largest in the region, with a market capitalization of more than \$1.9 trillion (7.1 trillion Saudi Riyals). Saudi Vision 2030 has realigned the Kingdom's economy to create a dynamic, competitive and innovative nation. Reliance on oil revenues is down from 81% in 2015 to 67% in 2018. The Kingdom ranks seventh globally in the growth rate of innovative companies, according to the Global Competitiveness Report issued by the WEF, and Saudi Arabia has jumped 30 ranks since 2019 in the World Bank's ease of doing business rankings. Regulations to increase cross-border trade, investor protection, contract enforcement and increased transparency saw Saudi Arabia rated by the World Bank as the fourth best reformer among the G20 countries in 2018.

The government of Saudi Arabia is leading the way in the transformation of the Kingdom, especially in the area of digitization of government services. Today, 97% of government services are provided electronically, enabling quick and easy interaction with the government. The Absher platform, for example, which provides essential e-government services for citizens and residents, serves more than 18 million users with up to 280 services, handling transactions in just minutes.

The growing role of women

The role of women in the Kingdom has expanded rapidly in recent years. The removal of restrictions that prevented women from driving and gender segregation in restaurants now means more participation for women in society. But the greatest achievement has been in the unprecedented numbers of women joining the workforce in all manner of roles. Women's participation in the workforce has gone from 20% in 2017 to 33% today, exceeding the target of 30% set out in Saudi Vision 2030. There has been significant creation of jobs for women from the private sector, and opportunities are being taken up by women of all ages and education levels.

Saudi women are also taking up the challenge of entrepreneurship. Today, women own more than 40% of all small businesses in the Kingdom, a 16% increase since the launch of Saudi Vision 2030 and 10,000 women have benefited from the Social Development Bank, and started micro enterprises that in turn have generated \$213 million (800 million Saudi Riyals) in revenues.





Quality of Life

One of the principles of Saudi Vision 2030 is not just to advance the economy of the Kingdom, but to improve the quality of life of citizens and residents, and to make Saudi Arabia a desirable place to live in. In health, education and other key indicators, progress is well under way. Riyadh ranks among the safest cities in the world, and improvements in healthcare in Saudi Arabia have already increased the life expectancy in the Kingdom. The rate of doctors per capita matches that of the United States of America, and a nationwide platform for digital healthcare has enabled the rapid roll-out of telehealth services.

The number of virtual consultations in 2020 reached more than 50 million using the Seha ("Health") app, and more than 70 million appointments were booked during 2020 using the Mawed ("Appointment") app. This resulted in reducing the number of visits to doctors at hospitals using telemedicine service and the Seha app by 50%, accompanied by a decrease in the rates of waiting times for medical consultations, as these rates dropped from months to days.

The aim is to complete 50% of all consultations using AI technology, which will add more than \$3.2 billion (12 billion Saudi Riyals) to the Kingdom's GDP.

In education, Saudi Arabia is investing heavily in developing schools and universities. Online education allowed over six million students to continue their education despite the pandemic. In 2021, King Abdulaziz University ranked in the top 200 universities worldwide on the Times Higher Education World University Rankings, the first time a Saudi institution reached the top 200, and five universities in the country count in the top 400.

Saudi Green Initiative

The Kingdom has announced a major commitment to sustainability and environmental concerns, with the launch of the Saudi Green Initiative (SGI) in 2021. Under the SGI, Saudi Arabia aims to reach net zero carbon emissions by 2060, with initiatives in the energy sector that will reduce emissions by 278 million tons per year to 2030.

The initiative is backed by investments worth more than \$186.6 billion (700 billion Saudi Riyals), and will include a major forestation program, planting more than 450 million trees, rehabilitating eight million hectares of degraded lands and assigning new protected areas that will see 20% of the total area of Saudi Arabia designated as protected. Riyadh will have at least 30% electric vehicles by 2030, and the city will halve its carbon emissions by 2030.

Circular Carbon Economy

The Circular Carbon Economy (CCE) framework is an integrated, inclusive and pragmatic approach to managing emissions. To date, Saudi has implemented more than 30 CCE initiatives across the energy system, enabling climate action while bolstering economic growth.

Investment in the green transition

Saudi Arabia believes it is possible to achieve a responsible transition to net zero, without compromising on economic development. Through an inclusive approach, the Kingdom will generate investment, jobs and opportunities to benefit millions of people.

Global collaboration

Knowledge-sharing and international cooperation is essential in the race against climate change. Saudi Arabia is actively scaling up cross-border efforts to help create a more sustainable future.

Whole-of-society action

nergy transition, land protection and afforestation are important components of climate action. But a shared vision and determination are essential for success. The Saudi Green Initiative is a whole-of-society ambition that is activating public and private sectors and enabling citizens to achieve ambitious national targets.



Entertainment and culture

One of the fastest growing new sectors for Saudi Arabia is entertainment and culture. From headline sporting and cultural events to the establishment of world-class stadia and entertainment venues, Saudi Arabia is rapidly staking its claim as the region's hub for leisure for both residents and tourists. Since the launch of Saudi Vision 2030, the Kingdom has hosted over 2,000 events attended by 46 million visitors, including the Formula 1 Saudi Arabian Grand Prix, Diriyah E-Prix (Formula E), World Championship Boxing, Dakar Rally, WWE and the world's biggest e-Sports event Gamers Without Borders.

The Kingdom offers a mix of old and new, with five registered UNESCO heritage sites, including Al-Ula heritage site, the Diriyah historic city and the upcoming Red Sea luxury tourism destination and the Qiddiya entertainment hub for the latest in leisure options. Saudi Arabia's cinema business is booming, with over 70 cinemas expected to open by end of 2022. The regular Seasons festivals, which bring entertainment programs to Saudi Arabia's top cities and tourism sites, are now wellestablished and coming back stronger than ever after the pandemic.

Riyadh becoming a global capital

As Saudi Arabia grows into its new role as an international hub for the region, Riyadh is stepping up to become a global capital, and its economic footprint represents 44% of Saudi Arabia's nonoil GDP. In future, the city will expand in multiple areas, with ambitions to be rated among the smartest cities in the world.

Some \$220 billion (825 billion Saudi Riyals) of government money has been spent or earmarked for Riyadh projects, and private sector investment will further add to the initiatives that are driving the city into the future. The population is set to expand to around 15-20 million, and along with the NEOM smart city, will be a focus for government job creation and growth initiatives. A number of multinational companies have already announced plans to establish regional headquarters in Riyadh with the King Abdullah Financial District becoming the focus for business in the capital. Riyadh will also become the largest industrial city in world, supported by six special economic zones centered on the city. Transport links, including rail, are being developed to connect Riyadh to the rest of the Kingdom and Gulf Cooperation Council (GCC) countries.

The economic development is only part of Riyadh's story. There are over 20 mega projects launched that will transform Riyadh into a global city for culture, entertainment and leisure, including King Salman Park, Green Riyadh, Riyadh Art and Sports Boulevard, among others. Programs to enhance the quality of life in Riyadh, including plans to plant millions of trees, are just some of the initiatives that will see Riyadh rapidly evolve into a vibrant, cosmopolitan city offering world-class lifestyle and livability options.





NEOM - A blueprint for the future

The showpiece of Saudi Arabia's development, and an indicator of the Kingdom's ambitions for the future, NEOM is set to become the second major urban center in the Kingdom. Located on the Red Sea in the northwest of Saudi Arabia, NEOM is a smart city development that will drive economic diversification, contributing 380,000 jobs and \$48 billion (180 billion Saudi Rivals) to Saudi GDP by 2030.

The development is being created with new standards of livability and sustainability, with carbon-positive urban developments powered by 100% clean energy, autonomous mobility solutions and Artificial Intelligence driven systems to enhance infrastructure capabilities and improve the quality of life. NEOM intends to create a home and workplace for more than a million citizens from around the world.



Government partners in transformation

National Digital Transformation Unit

The National Digital Transformation Unit (NDU) is the executive arm of the National Committee for Digital Transformation, which oversees the Kingdom's digital transformation plans in line with Saudi Vision 2030, in support of the goal of making Saudi Arabia one of the top 20 digital countries in the world.

NDU's role is to drive excellence in digital transformation by enabling, accelerating, and coordinating efforts across the government and private sectors. NDU delivers consultancy on digital transformation through aligning initiatives across government agencies, acceleration through creating partnerships between public and private sector, supporting digital transformation initiatives, and coordinating to overcome obstacles through the National Committee for Digital Transformation strategies.

A key focus for NDU is to drive excellence in digital transformation across different sectors by accelerating national digital projects that service both public and private sectors as well as implementing digital policies and regulations that complement these goals. This is being done by creating sustainable digital job opportunities for Saudis, speeding up digital transformation across a number of different sectors, supporting the effective growth of new business models and increasing local content to grow the contribution of the digital economy to GDP. This involves driving the digital government, e-commerce and digital education, as well as the fourth industrial revolution.

NDU was responsible for aligning and developing the Digital Economy Policy in Saudi Arabia, which sets out the strategic direction for the growth of the digital economy by harnessing human capital, innovation, connectivity and the use of national digital platforms. The policy intends to clearly set out the Kingdom's position with regards to the digital economy, and to ensure the alignment of all government agencies to achieving growth and creating competitive advantage for the Kingdom.

The advancement of the digital economy in the Kingdom will also increase the quality of life for Saudi citizens and residents, through the provision of advanced government services, increased awareness, engagement and participation in the digital economy, shifting Saudi Arabia from a digital consumer to a digital producer, to further grow the digital economy and technology-based businesses.





Digital Government Authority

The Digital Government Authority (DGA) was established in March 2021, with the aim of creating a world-class digital government for Saudi Arabia.

DGA is committed to develop the national digital strategy, digital government framework and policies and support government agencies in delivering simple, secure and trusted digital services for citizens. Through adoption of digital transformation of government services in line with international best standards, DGA is expected to raise the Kingdom's place in the U.N. e-government ranking.

Saudi Arabia has over 1,500 government websites that offer a range of 4,000 e-services, and DGA takes a leading role in regulating these digital government platforms, websites and services, developing a digital ecosystem for the government agencies and building cooperation with the private sector and relevant international organizations.

Among the key functions of DGA is participation in the preparation of Saudi Arabia's national digital government strategy, establishing policies on DGA's activities and preparing plans and projects required for their implementation, and setting technical standards for the government's digital transformation models.

DGA also helps build national capacity in digital government and provides advice, guidance and services to government and private agencies around digital government, manage digital government clouds and backstops government agencies in respect of digital government services to adopt and empower modern technologies. DGA also conducts studies, consumer satisfaction surveys and research on digital government.







Communications, Space & Technology Commission (CST)

Established to harness and regulate the boundless potential of technology by developing the communications infrastructure of Saudi Arabia, the Communications, Space & Technology Commission (CST) plays a vital role in ensuring state-of-the-art digital services are widely accessible, fairly provided to users and meet the highest technology standards.

CITC works to protect consumers while Stimulate investment by making sure the Kingdom's market is competitive, efficient and fair to consumers, as well as being capable of creating the growth required to meet present and future socio-economic needs of Saudi Arabia. This work is underpinned by four core principles: innovation, transparency, enablement and collaboration.

By leveraging its role as the regulator of telecommunications, information technology and emerging technologies, CITC is enabling the creation of a synergetic ecosystem of services to drive the Kingdom's digital transformation. To help set the stage for success, CITC revamped its regulatory regimes, which in turn allowed for a number of achievements to be made possible:

- 9th among G20 nations

- globally

• Saudi Arabia is now ranked as a fifth generation (G5) digital regulator by the International Telecommunication Union (ITU), which constitutes the highest level of regulatory maturity. Within G5 Regulators, Saudi Arabia is ranked first in the MENA (Middle East and North Africa) region and is placed

The deployment of state-of the-art wireless technologies, including the largest regional 5G network, with coverage rapidly expanding across the Kingdom, ensures the entirety of Saudi Arabia can reap the benefits of 5G technology, and the most advanced WiFi technologies; such as WiFi 6e. This will be supported by the allocation of the largest amount of radio spectrum in the Europe, Middle East and Africa regions for both licensed use (for example in 5G) and license-exempt use such as with WiFi 6e

The creation of a national open access fiber optics network for both consumers and enterprises to offer the ability to subscribe to any licensed operator regardless of the infrastructure provider, and ensure fixed connectivity services reach all users in the Kingdom

Under CST's overview, Saudi Arabia has been rated among the top 10 countries in the world for mobile internet speed

Riyadh being designated as the capital with the highest 5G speeds

Saudi Federation for Cybersecurity, Programming and Drones

Technology is constantly evolving and as such it is imperative that governmental organizations are able to fully realize the potential such innovations can bring to a nation. This is where the Saudi Federation for Cybersecurity, Programming and Drones, which was established on 31st October 2017, plays a critical role. SAFCSP works to empower the local workforce by enhancing their capabilities in cybersecurity, software development, drones and advanced technologies based on the highest international standards.

Its goal is to have a programmer among every 100 Saudis by 2030 by creating the foundations for next-generation capabilities in advanced technologies to thrive. This is being done by inspiring current and future generations of innovators and advanced technologies professionals with a series of initiatives and events. By doing so, young people will be empowered to develop qualifications through intensive bootcamp-style training, as well as enabling the required tools and investment opportunities. SAFCSP is also supporting beneficiaries with employment and by launching their startups.

The federation currently runs 154 training courses, with more than 240 events, and has worked with more than 3,200 trainees. SAFCSP runs a wide range of initiatives to help promote coding in the Kingdom. These include Tuwaiq 1000 Bootcamp for programming, youth, cybersecurity, and data science, the 7/7 Bootcamp, Hajj Hackathon, AlArtathon and the Homathon.

In addition, there are four main platforms that SAFCSP works with:

- The Bug Bounty hunt is the largest of its kind in the Middle East. It uses the outstanding skills of cybersecurity researchers in discovering software vulnerabilities to track down, identify and catch computer bugs for a safer and more reliable cyberspace
- CyberHub is a SAFCSP initiative to develop the potential of students and support student clubs focused on the cybersecurity field in Saudi universities. The aim is to match the needs of the Saudi labor market and be aligned with Saudi Vision 2030
- The Satr e-Learning platform provides a number of specialized courses in programming and technology fields. It offers a fun learning environment for students with a diverse range of educational content to learn the latest technologies
- CoderHub covers all the aspects and basic concepts that are needed to clearly understand various programming topics







Saudi Data and Artificial Intelligence Authority

SDAIA's mission is to unlock the value of data as a national asset to realize Saudi Vision 2030's aspirations, by setting the National Data & AI Strategy and overseeing its execution through harmonized data policies, data analytics and insights capabilities and the continuous innovations in data and Al.

Al and data are fundamental to achieving Saudi Vision 2030, and around 70% of Saudi Vision 2030's goals are directly impacted by the programs that are overseen by SDAIA, which is why Saudi Arabia has created the most comprehensive government AI program of its kind anywhere in the world.

SDAIA oversees three execution arms:

- .
- .

Saudi Arabia has already implemented a data infrastructure with a centralized ecosystem of resources to support government agencies to successfully complete their AI initiatives, including a National Data Bank, G-Cloud and a whole-government analytics and AI platform.

In October 2020, SDAIA launched the National Strategy for Data & Al, a long-term vision with a multi-phase approach to building up Saudi Arabia's capabilities in AI. The NSDAI is focused on strategic goals and actions around six key pillars: ambition, skills, policy and regulation, investment, research and innovation, and ecosystem.

SDAIA is also responsible for positioning the Kingdom as a global leader in the elite league of data-driven economies, and in 2020 launched the Global AI Summit, an annual event to bring together thought leaders in AI to discuss high-level issues in this field.

To support the Kingdom's fight against COVID-19, SDAIA developed the Tawakkalna and Tabaud apps that helped control the spread of the virus.

The Saudi Data and Artificial Intelligence Authority (SDAIA) was formed in 2019, to be responsible for artificial intelligence strategy, execution, infrastructure and capacity building for all Saudi government entities, as well as creating and executing the National Strategy for Data & Al.

• The National Data Management Office (NDMO), which is the main regulator and enabler of national data policies and best practices

The National Information Center (NIC), which is the main operator of government data infrastructure, advanced analytics and AI-powered insight platforms, and G-Cloud services

The National Center for Artificial Intelligence (NCAI), which drives the national AI strategy execution, AI innovation and capabilities building

SDAIA has formed long-term partnerships with the World Bank and the International Telecommunication Union (ITU) and announced joint initiatives to accelerate the adoption of AI to support development goals.

Digital Cooperation Organization

The Digital Cooperation Organization (DCO) is a global organization founded by seven countries that share digital aspirations and have common interests towards shaping an inclusive digital future: The Kingdom of Bahrain, the State of Kuwait, the Hashemite Kingdom of Jordan, the Federal Republic of Nigeria, the Sultanate of Oman, the Islamic Republic of Pakistan and the Kingdom of Saudi Arabia.

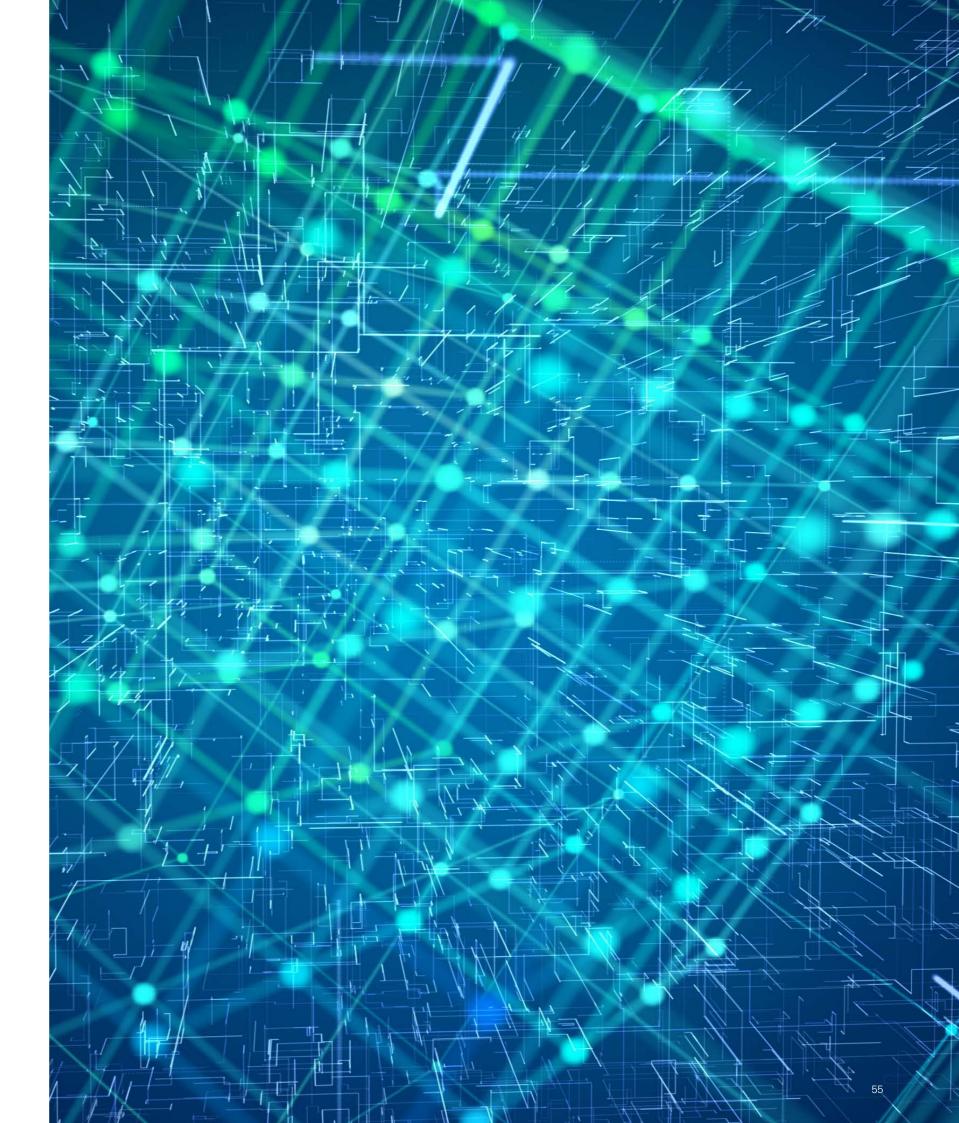
Representing the digital aspirations of half a billion people – 270 million of whom are under the age of 25 – and leveraging 6,300 digital start-ups and 46 million small and medium sized enterprises across three regions, DCO is focused on accelerating social welfare and economic prosperity by empowering women, youth and entrepreneurs to shape an inclusive digital future.

Driving the execution of this people-focused digital agenda is the DCO Secretariat, which works closely with member country governments and other non-government members and stakeholders by gathering and sharing knowledge, analysis and insights on best practices, identifying critical gaps and key opportunities, supporting and advocating policy development and facilitating funding for high-impact and profitable projects.

Collaboration inside DCO - among nation states and other stakeholders - follows a multilateral and multi-stakeholder and spans across 10 people-focused areas:

- 1. Access to connectivity
- 2. Cross-border data flows
- 3. Ethical use of technology
- 4. Digital identity management
- 5. Data pooling and user privacy
- 6. Mobility of skilled ICT labor
- 7. Accelerating start-ups and SMEs
- 8. Adoption of emerging technologies
- 9. Alignment on digital taxation
- 10. Cooperation on R&D and innovation

Given the interconnected nature of DCO's agenda and the facilitative role of governments, membership to the DCO is open to stakeholders across international organizations, the private sector, industry associations, nongovernmental organizations, civil societies, academic and R&D institutions.





Contact us



Further information To find out more about MCIT and the Kingdom's ICT initiatives, please visit: Ministry of Communications and Information Technology https://www.mcit.gov.sa/en

For inquiries and comments digitalhub@mcit.gov.sa



