

**Consultation for the Global Symposium for Regulators (GSR-23) Best Practice Guidelines on  
“Regulatory and economic incentives for inclusive sustainable digital future”**

**Contribution from the Kingdom Of Saudi Arabia Communications, Space and Technology Commission  
(CST)**

**Defining regulatory and economic incentives to stimulate the development of digital infrastructure, especially in rural isolated areas.**

In keeping with the goals of The Kingdom, The Communications, Space & Technology commission (CST) is playing its part to achieve the targets embodied by Vision 2030 and the United Nation Sustainable Development Goals (SDGs) to stimulate the development of digital infrastructure by launching innovative initiatives:

- 1. Local Roaming Service** in villages and rural areas. Local roaming service enables rural users to change their mobile network provider to another service provider to overcome loss of coverage in rural ‘grey zones’, areas in which there is coverage from at least one service provider irrespective of whether it is their service provider. The service involves no additional fees on the user and covers the full range of mobile services (voice, high-speed internet, and SMS). As well as extending coverage for rural users in villages and hamlets, it also serves to foster infrastructure competition between service providers for around 5 million users in 21,000 mainly rural regions of the Kingdom. Since its launch, its daily average usage from this initiative has reached 25,000 SMS, 340,000 voice calls, 7 TB data from 236,000 local roamers.
- 2. Open broadband** for public and private sectors. This initiative enables service providers to offer broadband services to consumers by using fixed broadband infrastructure (optical fibers) that has already been deployed. It allows service providers, including existing broadband service providers, to provide services in areas where they don’t have their own fiber infrastructure. This increases consumer choice in areas that lack fixed broadband infrastructure competition, thereby increasing access and competition. Ultimately, this initiative aims to stimulate the investment environment, fostering increased competition, and improving user experience and choice for more than 7 million homes that are in areas connected to optical fiber.
- 3. Carrier Services Provision License (CSP).** CST has introduced this license type to solicit public and private facilities entities from outside the ICT sector such as electricity, water, and railway service providers to provide their telecommunication infrastructure capacities (for example optical fibers, towers and ducts) to other licensees that hold relevant ICT licenses. This will enable these CSP license holders to use their existing infrastructure to generate new revenue streams while increasing downstream competition in the provision of affordable broadband services. CST regulations and decisions will permit ICT infrastructure of service providers to be shared. The initiative increased competition and improved network coverage, leading to greater affordable digital connectivity for sustainable development and accelerating the digital transformation of the wider economy. One of the early success stories is “Dawiyat Integrated” which is owned by SEC (Saudi Electricity Company).

Since its launch, it has deployed 80,000 Km of fiber optics and 200 Telecom Towers in more than 1,500 locations in the Kingdom.

- 4. Non-Terrestrial Networks Regulations.** Next-generation wireless networks are envisioned to break the boundaries of the current terrestrial-based systems and facilitate the wide use of Non-Terrestrial Networks (NTNs). NTN consists of variants of space-borne and aerial communication networks including GEO, MEO, LEO satellite constellations, High Altitude Platform Systems (HAPS), Low Altitude Platform Systems (LAPS), and air-to-ground (A2G) networks. NTN elements and components are evolving to become an integral part of the future connectivity landscape owing to its ability to offer “anything, anytime, anywhere” connectivity, thus connecting the unconnected, especially in rural and isolated areas. In this context, the Kingdom of Saudi Arabia has developed a state-of-the-art set of regulations for Non-Terrestrial Networks. The NTN regulations aim to provide communication services using cutting edge wireless technologies and enable the wide spread of NTN technologies. The NTN regulations, include three regulatory tools; (i) the Regulation for Registration of Telecommunication Space Stations; (ii) Regulation for Provisioning of Telecommunication Services Over Non-terrestrial networks (NTN); and (iii) Regulations for Provisioning of Operation Services of Non-terrestrial Networks.

#### **Identifying the right incentives required to insure the introduction of emerging ICT technologies and business models**

The Kingdom government has been at the forefront of adopting new technologies to evolve the way it provides services. It has replaced traditional processes with digital ones, developing five-year plans to achieve ambitious quality and efficiency targets. Its aim is to completely shift to a model of e-government services and take a leading role in the digital transformation of the country that will result in the emergence of a knowledge hungry economy and an immersive e-commerce language. The e-government programs will not only support government agencies but also help drive the adoption of emerging ICT technologies and business models by the private sector and ultimately improve the experience of citizens and end-users. Following are some of the incentives to enable new and emerging ICTs:

- 1. Emerging Technologies Sandbox.** In line with the Vision 2030, CST has launched the Emerging Technology Sandbox in order to increase investments, foster innovation and encourage the introduction of new ET products and services. Through the Sandbox environment, CST is aiming to increase both legal certainty and cross-government cooperation, and to driving knowledge sharing through collaboration. The resulting flexible environment will stimulate the launch of innovative business models, solutions, and services and support entrepreneurs and innovators in deploying services using emerging technologies. CST in cooperation with the Public Transport Authority and the National Regulatory Committee issued its first of a kind approval to provide Connected Vehicles Services in the Kingdom. This approval was granted to 11 companies, which serve 24 global brands. Through this approval, the company will be able to provide "Connected Vehicles" services in the Kingdom. This approval comes in line with CST's strategic role as a digital regulator, licensing IoT and emerging technologies services in the Kingdom including IoT-VNO, NB-IoT.
- 2. Digital Infrastructure.** The KSA strategy has always put robust digital infrastructure at the core of its efforts to accelerate the digital transformation of the country. The KSA believes that this policy has

already demonstrated its utility during potentially disruptive public and private sector crises in recent years by ensure business continuity and e-government services in areas such as educational service provision and health operations. The improved quality of digital services was achieved by collaborating with the private sector. This has resulted in high prevalence of Internet use in the Kingdom, which reached 100% of its population, with download speeds of the mobile Internet reached 180.2 megabits per second, consumption of data per capita reached 37 GB per month in 2022, the total volume of Internet data traffic in the Kingdom increased to 35 million TB, an increase of 17% over the year 2021.

- 3. Space Program.** The Kingdom of Saudi Arabia has emerged as a key player in introducing emerging technologies and boosting space-based business models in the region. As the country continues to diversify its economy, the Kingdom has recognized the potential for space exploration and satellite technology to drive economic growth. Through partnerships with international space agencies and private companies, the Kingdom has been able to develop cutting-edge technologies and build a space infrastructure that enables a range of innovative space-based business models. By fostering a culture of innovation and collaboration, the Kingdom is playing a vital role in advancing its space industry and positioning itself as a global space leader.
- 4. National Regulatory Committee.** As the Kingdom of Saudi Arabia aims to enhance its status as a G5 regulator, and in a bid to foster enhanced regulatory, collaboration, coordination and harmonization, the Kingdom has launched the National Regulation Committee, a high-level esteemed committee with membership of Nine different Saudi national regulatory authorities responsible for digital regulations across key economic verticals (such as Telecommunication and Information Technology, Transport, Capital Markets, Civil Aviation, Data/AI, Media, Tax/Customs, Electricity and Competition) By debating upcoming regulations and laws on emerging technologies where the committee enables multi-stakeholder/multi-sectoral collaborates aiming to accelerate the regulation and adoption of these technologies accross which increases the effectiveness and coherence of the regulatory environment in the Kingdom, and accelerates and facilitates the process of regulating emerging technologies sooner caused by the overlap in the tasks of multiple regulators. This business model ultimately can facilitates the identification of further incentives to accelerate the developed and deployment of emerging ICT technologies