

## Consultation for the Global Symposium for Regulators (GSR-24) Best Practice Guidelines on “Charting the course of transformative technologies for positive impact”

### Contribution from the Kingdom of Saudi Arabia - Communications, Space and Technology Commission (CST)

#### What are the challenges and opportunities faced by policy makers and regulators in embracing transformative technologies for greater impact?

Transformative technologies like generative AI, augmented reality, robotics, Distributed Ledger Technology (DLT), quantum computing, and more, offer great promise for shaping the future and improving various sectors like healthcare, education, and commerce. However, different countries face unique obstacles in fully realizing the potential of these technologies. Despite the opportunities they present, countries may have its own socio-economic challenges that impact their adoption and utilization:

- 1. Technology accessibility:** The importance of technology accessibility is crucial in today's interconnected world especially for developing countries. It ensures that technology is available and usable by everyone, regardless of their country's abilities, economic status, location, or expertise. Accessible technology acts as an equalizer, driving economic growth, improving education and healthcare. By providing equal access to digital resources, accessible technology promotes social inclusion and reduces disparities addressing challenges like poverty, healthcare, and disasters and improving millions of lives worldwide.  
While Generative AI holds immense transformative potential, a significant digital divide exists in its utilization. Developing nations, in particular, face challenges in fully capitalizing on this technology. Limited access to essential generative AI infrastructure and a dearth of technical expertise act as significant barriers.
- 2. Data Localization:** The global data flow through the internet significantly boosts productivity, growth, facilitates innovation, and fosters trade, entrepreneurship facilitating social interactions and knowledge diffusion. Nevertheless, there is a growing need for better approaches to address cross-border data issues such as data sovereignty to keep sensitive information within national borders, aiding compliance with local and domestic regulations, enhancing security and privacy through adherence to domestic data protection and cybersecurity standards, stimulating investment in local in infrastructure.
- 3. Cybersecurity Concerns:** Increased reliance on technology can make a country more vulnerable to cyberattacks. Global collaboration and robust cybersecurity measures and infrastructure are essential.

CST sees these challenges as opportunities aligning with KSA's 2030 vision and SDGs. To address them and achieve national objectives, the Saudi Arabia is developing ambitious strategies like the National Digital Economy Strategy and National Space Strategy, along with megaprojects like NEOM, Qiddiya, and the international events like World Cup 2034 and Riyadh Expo 2030. Despite the challenges, there are unique opportunities to use transformative technologies for positive impact, as an example, the

Kingdom's initiatives to confront health challenges through the Saudi Genome Program, which focuses on big data to promote precision medicine, stimulate digital health, and reduce hereditary and genetic diseases. In this regard, a research is conducting by King Abdulaziz City for Science and Technology in collaboration with National Guard Hospital in Riyadh, Google and a startup called 'NanoPalm, was able to develop a new treatment for hereditary sickle cell anemia using generative AI and nanotechnology to complete the drug formulation. Instead of taking 10 to 15 years to formulate the drug, which historically cost up to 3 million dollars, today the cost reduced to 300 thousand dollars. In less than two years, the new treatment uses large linguistic models to link proteins and enzymes with nanorobot technology. Additionally, SDAIA, the Saudi Data and Artificial Intelligence Authority, has been at the forefront of spearheading significant endeavors in Saudi Arabia pertaining to data and artificial intelligence. The National Center for AI (NCAI), organizationally linked to SDAIA, was founded to champion the nation's AI priorities in collaboration with public and private sector partners. Its mission is to propel the Kingdom towards AI innovation by coordinating research, development, and support activities aligned with the National Strategy for AI, advancing education, raising awareness, unifying national efforts through implementing research projects, and fortifying research and innovation capabilities in the AI field. Their efforts encompass the formulation and execution of the national strategy for data and AI, establishment of robust data infrastructure, promotion of AI research and innovation, cultivation of AI talent, and facilitation of AI applications across various government services. Through these multifaceted initiatives, we are leveraging data and AI technologies to drive economic growth, enhance governmental services, and elevate the overall quality of life for its citizens.

The Saudi initiative "guidelines on safe use of generative AI" aims to provide support for generative artificial intelligence research, increase awareness of ethical considerations of generative artificial intelligence, develop and govern policies for generative artificial intelligence and provide support for generative artificial intelligence research and development.

### **What are the key regulatory measures and guiding principle to follow to foster positive and inclusive impact of transformative technologies?**

The new strategy of CST "RISE 2030", which is approved in March 2024, draws the pathway for innovation and enablement as an innovative regulator, focusing on the broader digital economy and for the first time to combine digital and space as a regulator. By integrating various sectors like communications, space, IT/ET, and spectrum, CST aims to lead future economies. They prioritize customer protection, market growth, and fair competition. To encourage innovation, CST has launched programs like the Emerging Technology Regulatory Sandbox and the IoT Challenge. These initiatives promote investments and IoT-based products in sectors like transport, sports, water, entertainment, and tourism.

Aligned with Saudi Vision 2030 and the National Digital Economy Strategy, Saudi Arabia has launched the Cloud Computing Special Economic Zone, which is a zone that encompasses companies providing cloud-computing services while introducing innovative business and commerce models. The Zone has a unique flexible model that allows Cloud Service Providers to provide various cloud-computing services

from the zone, with the ability to build and operate data centers from all over the Kingdom. The Zone strengthens ICT and innovation infrastructure, making the Kingdom a regional tech hub. This initiative diversifies the economy, attracts investments, and supports entrepreneurs. For the space sector, CST launched the first Space Entrepreneurship Alliance, which is an approach based on a comprehensive ecosystem, by providing access to resources and services like shared workspaces and technical labs, as well as support initiatives like accelerator programs, workshops, and Hackathons. The Alliance also seeks to connect entrepreneurs with investors and experts in the field, aiming to create an entrepreneurial ecosystem in the Space Sector and will be a platform to gather stakeholders to support Saudi entrepreneurs in innovation to support entrepreneurship and added space specializations to scholarship programs. They organized the Space Challenge camp and established training programs to develop national capabilities in space sciences.

### **How to drive positive behaviours of market players? How to minimize risks while maximizing benefits?**

Saudi Arabia is taking a big leap in AI with their new "Generative Artificial Intelligence for All" Initiative, launched alongside the Digital Cooperation Organization. This program focuses on generative AI. The initiative has three main thrusts: funneling resources into generative AI research, helping member countries establish responsible AI use policies, and providing training to boost overall expertise in generative AI across participating nations. This ambitious program reflects Saudi Arabia's vision to be a frontrunner in ethical AI development and its widespread adoption.

Saudi Arabia is working to create fair market rules that promote responsible behavior, reduce risks from new technologies, and boost economic and social progress. Effective rules start with understanding the situation and involving stakeholders like businesses and consumers.

**To encourage good behavior:** Effective public consultation processes is implemented that include hearing sessions with all stakeholder both nationally and internationally. Other measures include rewarding ethical practices by giving positive public recognitions, work together with businesses to educate consumers about their digital rights.

**To reduce risks and increase benefits:** Focus regulations on high-risk areas without stifling innovation. Check regulations thoroughly before implementing them through conducting Regulatory Impact Assessments. Invest in better regulatory enforcement, support startup innovation. Another dimension to drive positive behaviors of market players is level up regional and international collaboration. One recent initiative in this regard is the Digital Regulation Network (DRN), which was establish through a collaborative effort driven by the International Telecommunication Union (ITU), as Saudi Arabia valued and participated in discussions and consultations leading to the DRN's establishment. The establishment of DRN involves a multifaceted and iterative process that requires collaboration, expertise, and adaptability to address the rapidly evolving digital landscape. The aim of the Network is to accelerate sustainable digital transformation through common approaches to collaborative digital policy, regulation, and governance across economic sectors and borders.

Additionally, train the workforce for digital jobs, revamping education to focus on these skills, and working with businesses to create relevant training. All this aims to prepare their workforce for the

digital jobs of tomorrow. Relatively, we have established the Digital Regulatory Academy (DRA), a specialized academy in digital regulations in partnership with leading international institutions in this field. DRA aims to work on developing human cadres in digital regulations with a view of achieving harmonized Saudi digital regulatory ecosystems with involvement of related sectoral regulators to enable digital economy in the Kingdom and reinforcing transformation into a digital society, improving the quality of various services provided to beneficiaries.