

15 April 2024

From: TRA – Kingdom of Bahrain
To: Telecommunication Development
Bureau (BDT)

Subject: Consultation for the GSR-24 Best Practice Guidelines and call for participation of young innovators on Artificial Intelligence and Robotics in action – Global Symposium for Regulators (GSR-24)

In today's rapidly changing and evolving world, we as regulators and policy makers have also updated and modernized our regulatory approaches to make sure that they are fit for purpose.

In Bahrain we have taken a more pro-innovation approach to cope and adapt to the consistent advancement of technology. Furthermore, collaborative efforts with industry players and other stakeholders within the technology landscape have helped us to stay abreast of dynamic and disruptive changes to our sector.

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

Challenges in embracing transformative technologies faced by regulators in our region can be categorized in the following:

- **Rapid speed of transformation:** The rate at which transformation and disruption occurs in telecommunications is quite fast. Market players, innovators and pioneers operate in new frontiers that may not be covered by traditional regulatory frameworks. As a result, we have evolved to an innovation first regulator where we worked on initiatives and introduced tools that put us at the forefront of disruptive technologies. Through the introduction of our Regulatory Sandbox, we offers an Innovation Licence for participants to test, trial and experiment their innovations in Bahrain. This has enabled us to learn from innovators and ensure that our framework and ecosystem are supportive and conducive to emerging ideas and technologies.
- **Availability and access to digital infrastructure:** Transformative technologies rely on robust digital infrastructure, like high-speed connectivity, data availability, storage and computing power. In Bahrain we have done well in ensuring that world class connectivity is made available everywhere and furthermore worked on other initiatives such as the Cloud First Policy to encourage the utilisation of digital technologies.
- **Skills and knowledge in new areas of technology:** Adopting and implementing wide-spread use of technologies requires skilled personnel, both internally within the workforce of regulators/policymakers and externally in relation to consumer awareness.

In TRA we have taken multiple steps to ensure that our personnel have access to world class resources to raise their own knowledge and competencies. Furthermore we have done well to raise consumer awareness on technologies and online activity to elevate people's understanding of the impact of these technologies.

- Giving local context to global trends: transformative technologies outpace policy development, so it is very important for jurisdictions to be flexible and collaborative with stakeholders from across the technology landscape to build competency and credibility. In the Kingdom we have leveraged our relationships with other world leading jurisdictions through knowledge sharing sessions to learn from and listen to their experiences to expand our understanding.
- Cybersecurity threats: With an increased reliance on technology, there is a higher rate of vulnerability to cyberattacks, which we have mitigated by working closely with security organs and cybersecurity entities and organizations.
- Risk-averse Regulation vs Pro-Innovation: Bahrain has differentiated itself as an innovator across many sectors, and has worked towards creating frameworks directed towards striking a balance between risk management, ethics and encouraging innovation.

Further to the challenges mentioned above and the steps taken to overcome them, we have identified other opportunities for policymakers and regulators to leverage transformative technologies for significant impact

- Prioritizing leap-frogging: Bahrain has done well to lead and be an early adopter of different mobile technologies throughout the years, however chronological evolution of technology is not a must, countries can leapfrog over older technologies and directly adopt the latest advancements and not have to worry about substantial investments to replace legacy systems.
- Focus on local innovation: We have found that prioritizing local R&D to identify areas where technology can address critical development challenges in key sectors and create homegrown technology solutions. These solutions are hence tailored to the country's specific needs and requirements which is extremely crucial to ensure efficient use of the right technologies and directing the appropriate resources towards them.
- Public-Private Partnerships "PPPs": Regulators should collaborate with private companies and public entities to leverage expertise and resources for technology adoption in non-tech sectors, kick starting a revolution using emerging and impactful technologies such as AI.

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

Regulatory measures need to create the right and most suitable ecosystem to allow for the positive impact of transformative technologies. From our own experience, we have seen that by focusing on the following we have put in place conducive factors towards an environment that encourages sound adoption of transformative technologies.

- Sound data governance: We have implemented data flow measures, data protection, privacy, security and ownership controls. These data controls by way of regulations and or guidelines must be put in place for responsible data collection, availability, access, storage and use.
- World class cybersecurity standards: We have created platforms for information sharing between telecom companies, security agencies, and other relevant government bodies to enhance the overall the cybersecurity portfolio of the country.
- Consumer protection and accountability: Consumer adoption is the greatest measure of embracing transformative technologies. To achieve that we have worked on initiatives that raise awareness in consumers and also ensured entities have protocols in place for accountability by ways of codes of conduct/practice.
- Harmonisation: We are cognisant of the rapid reach of transformative technologies and how they extend to many domains across the globe. This made us work even more closely with globally recognized frameworks and international best practices for development and deployment. We believe that harmonisation at the right time, could assist in driving ecosystems that ensure compatibility, fostering a competitive and accessible tech landscape that is inclusive for everyone.

Furthermore, we believe that guiding principles need to be factored in regulatory frameworks, where striking a balance between promoting innovation and safeguarding public interest is vital. We have made sure that our frameworks are flexible enough to adapt to evolving technologies, but also firm enough to ensure responsible development and risk management. Regulations, laws and legislation can achieve this but in certain instances can be too rigid and time consuming, hence limiting the room of operation, hence affecting innovation. This is where we have seen in the instance of transformative technologies, a light touch approach by way of principle-based guidelines is indeed more appropriate, especially when we are still figuring out the impact of these disruptive and transformative technologies.

Artificial Intelligence in its nature, focuses on increasing productivity and efficiency in operations by way of reducing dependency on physical tasks performed by humans. Therefore, if we are to ensure positive and beneficial impact we must include human based values in guidelines in the designing, developing, deploying and use of transformative technologies. Concepts such as Human-centred design, must be implemented and not ignored in responsible AI solutions to prioritize ethical considerations throughout the development process.

Inclusivity and equity are also sound principles that ensure everyone has access to and can benefit from transformative technologies. This includes addressing the digital divide and creating technologies that are non-discriminatory and cater to diverse needs and abilities.

Finally, sustainability and consideration of the environmental impact of developing and using transformative technologies must also be taken into account where policies should encourage sustainable practices throughout the technology lifecycle.

- **How to drive positive behaviours of markets players? How to minimize risks while maximizing benefits?**

Enforcing positive behaviours is easily said than done. Depending on circumstances, sometimes ex-ante tools must be defined to mitigate and prevent risks, and in others ex-post approaches can be considered where regulators react to a situation or intervene when questionable behaviour is observed. Either way we must encourage and drive positive behaviour through constant collaboration to minimize risk and maximise benefits.

We believe the below mechanisms can be used to help encourage positive behaviours from market players.

- Foster a culture of responsibility by introducing industry wide codes of conduct that enforce ethical practices concerning data governance, cybersecurity, responsible development and advertising practices.
- Engage in multi-stakeholder dialogue between policymakers, telecom/tech companies, and consumer advocacy groups to identify and address industry challenges and opportunities.
- Incentivize positive behaviour such as spectrum allocations based on public benefit by way of investing in infrastructure development in underserved areas or promoting digital inclusion. We can also provide tax breaks or regulatory costs relief for R&D focused on technologies that address social challenges in healthcare or education and provide subsidies for secure infrastructure.

By implementing these strategies, policymakers can create an environment where telecom and technology companies prioritize responsible behaviour, innovation, and public good. This fosters trust, minimizes potential risks, and maximizes the positive impact of transformative technologies on society for an equitable future for their country.