







CONSULTATION ITU - GSR

National Telecommunication Commission

CONATEL







ITU QUESTIONNAIRE:

Under the overall theme of "Charting the course of transformative technologies for positive impact", you are invited to provide your ideas, views and experiences on:

- What are the challenges and opportunities faced by policy-makers and regulators in embracing transformative technologies for greater impact?
- What are the key regulatory measures and guiding principles to follow to foster positive and inclusive impact of transformative technologies?
- How to drive positive behaviours of market players? How to minimize risks while maximizing benefits?

Answers:

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

Policy-makers and regulators have to navigate a complex landscape when adopting transformative technologies such as artificial intelligence, blockchain, Internet of Things and cloud computing. These technologies could have a significant impact on various sectors, from healthcare and transport to finance and agriculture. However, they pose both challenges and opportunities that need to be carefully considered.

Challenges:

- **Digital divide**: Gap in access, gap in use, connectivity, lack of infrastructure in rural areas, mountainous topography in most of the national territory, low digital literacy.
- Lack of understanding: Many policy-makers and regulators do not have an in-depth knowledge of transformative technologies and how they work. This can make it difficult to assess the potential risks and benefits of these technologies and develop appropriate policies and regulations.







- Regulatory uncertainty: The rapid development of transformative technologies creates an
 uncertain regulatory environment. This can deter investment and innovation and make it
 difficult for companies to operate in multiple jurisdictions.
- Ethical and privacy issues: Transformative technologies can raise ethical and privacy issues, such as the use of personal data, algorithmic decision-making and mass surveillance. Policy-makers and regulators must develop regulatory frameworks that protect individual rights and freedoms.
- **Digital divide**: Unequal access to transformative technologies can exacerbate existing inequalities and create new digital divides. Policy-makers and regulators must take steps to ensure that everyone has equitable access to these technologies and their benefits.
- Lack of institutional capacity: Many governments lack the institutional capacity to regulate
 and monitor transformative technologies. This requires investment in capacity building,
 skills development and the creation of new governance structures.

Opportunities:

- Greater efficiency and productivity: Transformative technologies can enhance efficiency
 and productivity in various sectors, which can lead to economic growth and better quality
 of life.
- **Innovation and job creation**: Transformative technologies can drive innovation and job creation in emerging sectors.
- Improvement of public services: Transformative technologies can improve the delivery of public services, such as medical care, education, transport and the digitalization of all public entities.
- **Enhanced transparency and accountability**: Transformative technologies can enhance public sector transparency and accountability.
- **Citizen empowerment and governance**: Transformative technologies can empower citizens and provide them with new means of participation and access to public information.

In order to maximize the opportunities presented by transformative technologies and mitigate the challenges, policy-makers and regulators must:

• **Invest in training in transformative technologies**: It is essential that policy-makers and regulators have an understanding of transformative technologies, how they work and their potential impacts on sector development.







- Establish clear and coherent regulatory frameworks: Clear and coherent regulatory frameworks are needed in order to provide security and promote investment in transformative technologies.
- **Protect individual rights and freedoms**: Regulatory frameworks must protect individual rights and freedoms, such as privacy of data and freedom of expression.
- Foster multistakeholder collaboration: Collaboration among governments, different economic sectors, academia and civil society is essential in order to maximize the potential of transformative technologies and address the challenges associated with their development and use.
- **Enhance institutional capacity**: It is necessary to enhance the institutional capacity of governments for the regulation and monitoring of transformative technologies.
- What are the key regulatory measures and guiding principles to follow to foster positive and inclusive impact of transformative technologies?

Key regulatory measures

1. Principle-based approach:

• Establish general guiding principles that emphasize transparency, accountability, equity, non-discrimination and protection of human rights.

3. Lifecycle focus:

• Consider the entire lifecycle of transformative technologies, from their development to their use and disposal.

4. International cooperation:

 Foster international collaboration to establish global standards and share and adopt best practices.







5. Compliance and enforcement mechanisms:

Establish robust mechanisms for regulatory compliance and enforcement.

Guiding principles:

1. Transparency and accountability:

- Ensure transparency in the development and use of transformative technologies, including the dissemination of algorithms and data.
- Establish clear accountability mechanisms for the companies and stakeholders involved.

2. Equity and non-discrimination:

- Prevent and mitigate discrimination in the design and use of transformative technologies.
- Promote inclusion and accessibility for all social groups.

3. Data protection and privacy:

- Implement robust policies and measures to protect the privacy of personal data.
- Raise individuals' awareness of appropriate handling of their personal data.

4. Security and protection:

- Ensure the security and protection of transformative technologies against cyberattacks and other threats.
- Take actions that mitigate potential risks to public safety and privacy of personal data.

5. Social and ethical impact:

- Consider carefully the social and ethical impact of transformative technologies before their development and use.
- Promote dialogue and public participation in decision-making in relation to these technologies.







6. Citizen empowerment and participation:

- Provide citizens with the tools and information necessary to understand, and participate in, the development and use of transformative technologies.
- Promote digital literacy and critical skills for better decision-making.

7. Responsible innovation:

- Incentivize responsible innovation that is aligned with ethical principles and social values.
- Support research and development in transformative technologies that benefit society at large.

8. Investment in research and development:

- Invest in research and development in order better to understand the potential impacts of transformative technologies and develop responsible solutions.
- Support the development of transformative technologies that address social and environmental challenges.

9. Education and Training:

- Provide people with education and training on transformative technologies, including the associated benefits, risks and ethical responsibilities.
- Prepare the workforce to adapt to the changes that these technologies will bring.

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

In order to maximize the potential of transformative technologies and minimize the risks associated with their development and use, it is crucial to promote positive behaviour among market players. Some key strategies to achieve this include:







Incentives and stimuli:

- **Creation of economic incentives**: Implement fiscal and subsidy policies that incentivize the adoption of responsible and sustainable transformative technologies.
- **Technical assistance and training**: Provide technical assistance and training to companies to enable them to adopt and use transformative technologies effectively and responsibly.

Regulation and compliance:

- Establishment of clear and coherent regulatory frameworks: Develop regulatory frameworks that define the responsibilities of market players and establish minimum standards for the development and use of transformative technologies.
- Compliance and enforcement mechanisms: Implement robust regulatory compliance and enforcement mechanisms, including sanctions for those not complying with the established standards.
- Monitoring and assessment: Continuously monitor and assess regulatory impact on market behaviour and make adjustments as necessary.

Collaboration and dialogue:

- **Fostering of multistakeholder collaboration**: Promote collaboration among governments, economic sectors, academia, civil society and international organizations to address the challenges and opportunities associated with transformative technologies.
- Open and transparent dialogue: Facilitate open and transparent dialogue among all stakeholders in order to discuss the risks and benefits associated with these technologies and develop common solutions.

Empowerment and accountability:

- **Consumer empowerment**: Provide consumers with clear and accessible information about transformative technologies and their potential risks and benefits.
- **Promote corporate responsibility**: Encourage companies developing and using these technologies to adopt principles of corporate responsibility.
- **Accountability mechanisms**: Establish accountability mechanisms to hold companies and market players accountable for their actions and the consequences of their decisions.







Education and awareness-raising:

- **Education on transformative technologies**: Incorporate education on transformative technologies into the curricula of schools and universities.
- **Public awareness-raising**: Conduct public awareness-raising campaigns to inform the public on the risks and benefits associated with these technologies.
- **Promotion of digital literacy**: Promote digital literacy and critical skills for better decision-making on the use of transformative technologies.

Research and development:

- Financing of research and development: Invest in research and development in order better to understand the potential impacts of transformative technologies and develop responsible solutions.
- **Promotion of ethical research**: Support ethical research that focuses on the social, environmental and ethical aspects of the development and use of these technologies.
- Dissemination of knowledge: Disseminate knowledge derived from research in order to inform decision-making and promote the responsible development of transformative technologies.

In implementing these strategies, it is possible to create an environment that promotes the development and responsible use of transformative technologies, maximizing their benefits to society while minimizing potential risks. It is important to remember, however, that this is an ongoing process that requires the active and collaborative participation of all stakeholders.

