

## GSR-24 Consultation Brief

### Selected area:

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

### Introduction

The rapid advancement of technology transformation is revolutionizing the global business environment, including the operations of international organizations such as UNEP. However, adopting new technologies and business models can be a daunting task. To overcome these challenges and promote the integration of emerging ICT technologies and business models, it is crucial to identify appropriate incentives that can encourage UNEP to invest in and adopt new technologies. This consultation report delves into some of the critical factors that UNEP has applied to incentivize programs to introduce innovative ICT technologies and business models through citizen science, private data, early warning services, and alignment partnerships.

By embracing the ICT technologies and business models, UNEP has dramatically increased its actionability and interoperability. It provides holistic, thematically & technically overarching, and cohesive mechanisms to guide actions from UNEP divisions, member states, stakeholders, and civil society to **jointly deliver One UN Map that keeps the world environment under review, which powered by a demand-driven and federated data eco-system to everyone, everywhere at any time.**

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

The challenge of technology transformation includes:

- Tremendous gaps in access to technology, infrastructure, and services in developing countries and Global South.
- Risk of technology failure.
- lack of technical expertise.
- Ineffective governance and management structure.
- Policies and frameworks are far from being grounded in reality with much volatility in the political system.
- The public lack understanding of science.
- No upscale capability due to very limited partnerships.

The opportunities:

- Resilient to climate change, aiming to minimize losses and damages arising from the triple climate crisis.
- The global trend toward technology transformation is significant, with high levels of investment and technological availability. Conditions are ripe for the implementation of national digital infrastructure.
- Agile regulation utilizes flexible frameworks that adapt to technology, promoting innovation while ensuring safe guards.
- Engaging with stakeholders like the public, industry representatives, and civil society organizations helps policy makers and regulators grasp the opportunities and challenges of transformative technologies, leading to better decisions.

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

- Integrating transformative technology development with national and regional infrastructure, and services, particularly in developing countries and Global South.
- Interdisciplinary collaboration among researchers, policymakers, technologists and related stakeholders are crucial to ensure the gap identification and strategic positioning have synergies across the fields.
- Continuous Monitoring and Adaptation to calibrate the technology driven transformation are integrated with

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

To incentivize the private sector, along with its partnership network, member states to adopt emerging technologies and business models, several measures have been taken. These include:

### Introduce Citizen Science to power the transformation collectively

UNEP harnesses the potent force of citizen science as a dynamic vehicle to galvanize collective endeavors, fostering the systematic cultivation of transformative action plans. By decentralizing decision-making across sectors, this innovative approach matures into a robust and sustainable operational system. This system, in turn, serves as the bedrock for catalyzing a transition towards an inclusive crowd-sourcing funding process, amplifying engagement and empowerment across diverse communities.

### Collective Data Stewardship

UNEP leverages private data obtained from environmental monitoring processes or citizen science initiatives among the many, to better understand the impact of pollution or climate change on a particular community or region. This information can then be used to develop innovative ICT technologies and business models, such as predictive analytics or early warning systems, that can help mitigate or prevent environmental risks.

Furthermore, by demonstrating a commitment to protecting the privacy and security of private data, UNEP can build trust with its stakeholders and attract investment from private sector partners interested in collaborating on innovative ICT initiatives. This, in turn, can lead to additional incentives such as funding or access to cutting-edge technology resources that can support UNEP's adoption of emerging ICT technologies and business models.

### Alignment Partnership

Alignment partnerships involve collaboration with member states, stakeholders, and organizations sharing common objectives and values. Such partnerships can incentivize the adoption of new technologies by fostering public-private sector collaboration. Governments can work with businesses to offer technical expertise, funding, and resources to facilitate technology adoption, mitigating the risk of technological failures and creating a supportive environment for testing new technologies.

In the case of World Environmental Situation Room (WESR), UNEP has adopted a bottom-up collaboration approach with the network of Resident Coordinators and UN country teams, as well as a range of relevant partners in the public and private sectors to achieve the WESR objectives, including four core partnerships.

- With data providers through **One Global Partnership as the foundational architecture**, including GRID - CENTERS, UNEP-WCMC, WRI, space agencies and others;
- Across the UN System, UNEP is partnering with UN Statistics Division, the UN-GGIM, UNDOCO, FAO, and many others.
- Across the private and public sector through leading scientific, technical and medical publishers for the availability of the latest peer-reviewed environmental research and the UN Science Policy Business Forum for bringing science and policy together.
- "Acting as One" technical committee within UNEP which not only supports the WESR but will also provide a link with how the environmental dimension of development is delivered on the ground, including through the GCF and GEF portfolio.

### Cross-cutting Technology Support and Capacity Building

For organizations to embrace technology transformation, they require access to relevant technical expertise. Cross-cutting technology support and capacity building enable the adoption of ICT technology by providing technical expertise, lowering costs, raising awareness, fostering networking opportunities, and promoting innovation.

UNEP's Early Warning Assessment Division includes a specialized unit that delivers impact through several specialized models. These models include implementation with regional offices, GEF cross-cutting capacity development, GCF climate information & early warning systems, and GCF readiness. These models address the core mandate of enhancing the science-policy interface, as set out in UNEP's Mid-term strategy, PoW, Rio+20, and the Bali strategic plan.