Using RBM as an operational framework

Overview of the BDT thematic priorities, including the main challenges to be addressed and the proposed solutions to such challenges

Environment

Creating a circular economy for ICT equipment

The Challenge

- Discarded mobiles, laptops, personal computers, televisions contain harmful substances to the environment and human health.
- 82.6% of WEEE is not properly documented or recycled, meaning its value is lost and its management is likely to be rudimentary.
- 39% of all countries (76/193) covered by WEEE policy/legislation/regulation.
- Mobile cellular telephone subscriptions number greater than global population.
- 21% of all countries (41/193) officially collect WEEE data and estimations.

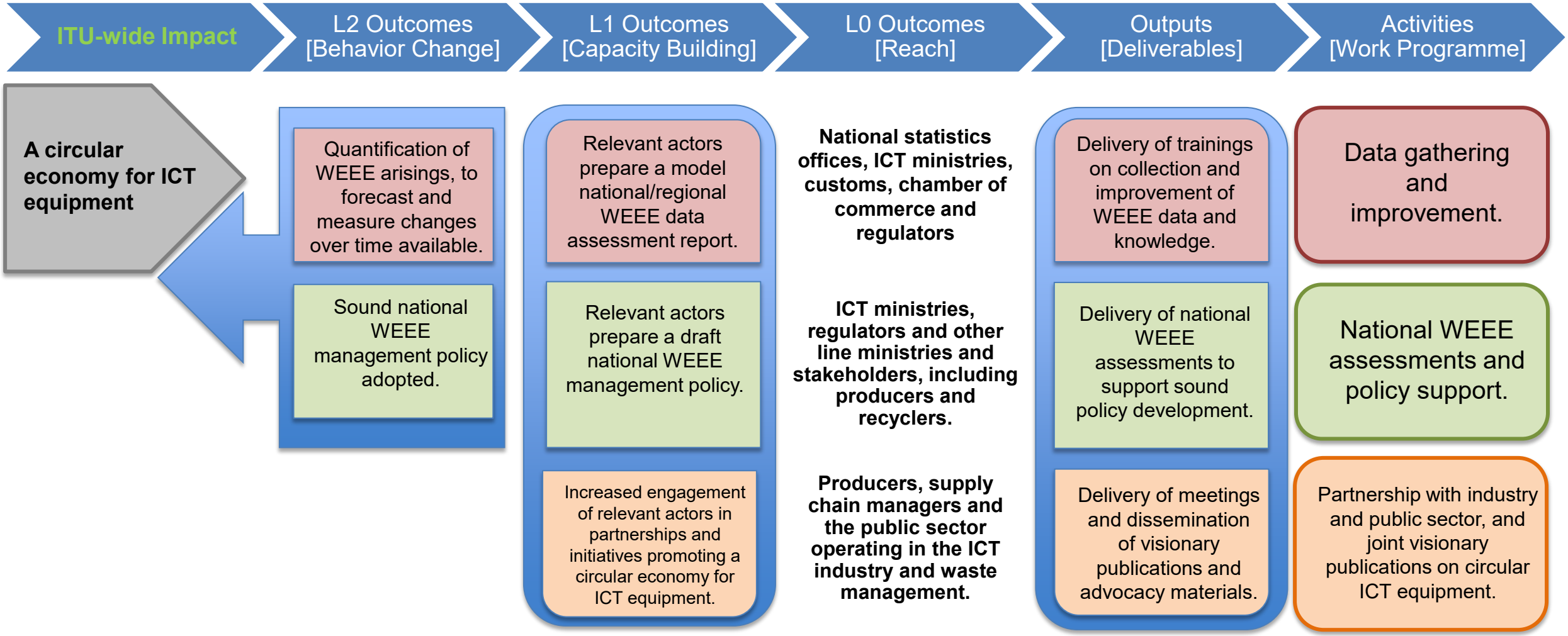
The Solution

Creating a circular economy for ICT equipment

Three Impact Pathways:

1. WEEE DATA & KNOWLEDGE to improve expertise in the collection of WEEE data
2. WEEE POLICY SUPPORT to increase coverage of national WEEE policy
3. ADVOCACY & MEDIA to enhance business circularity of the ICT industry

Impact chain - Environment



Digital Services and Applications

Digitally Enabled Society and Economic Sectors for SDGs

The Challenge

- Fragmented, duplicated, piece meal approach of operating in **siloes** and creating one-off digital solutions.
- Limited reach of **scale** for integrated and interoperable digital services around citizens needs particularly in SDG-related areas of health, agriculture, education and governance.
- Lack or weak government-led sectoral digital transformation that adopts **holistic** and government or sector-wide (whole-of-government) approaches

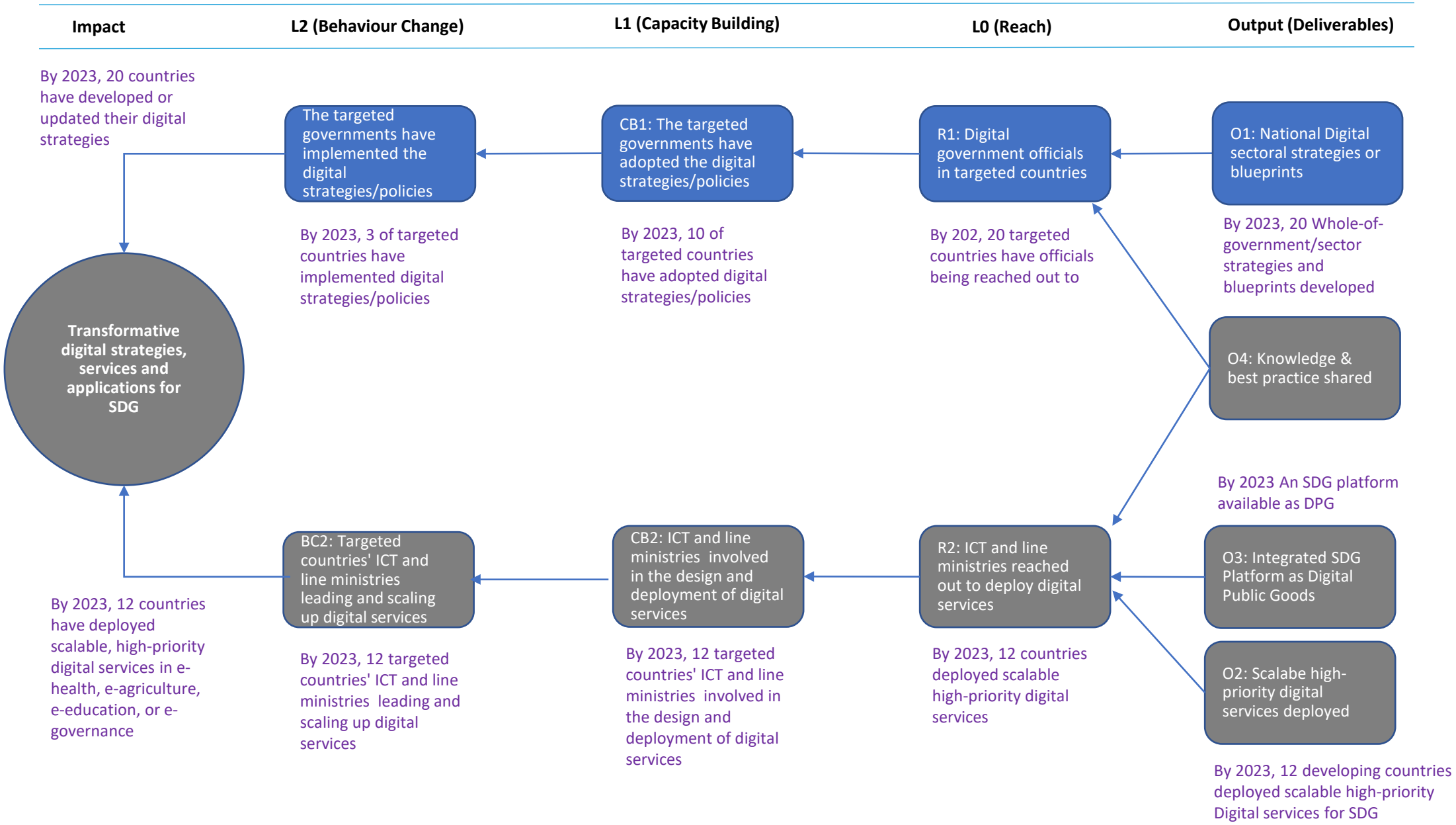
The Solution

Supporting countries seeking to achieve the SDGs to leverage holistic and scalable digital strategies and services to transit to a digital society

Two impact pathways:

1. Develop digital government and sectoral transformation strategies and blueprints that foster an enabling environment to institutionalize large-scale projects at national level.
2. Deploy high-priority portfolio of comprehensive and integrated citizen/user-centric solutions leveraging integrated digital platforms and services and common/shared digital infrastructure
3. Supported by Knowledge Sharing and Capacity Building

Impact Chains: Digital Services and Applications



Digital Inclusion

Inclusive, equal access and use of ICTs for all

The Challenge

ICTs have the potential to improve people's lives. They pose opportunities for individuals and communities alike. ICTs, however, are not always equally accessible to everyone and the opportunities they provide are not evenly distributed.

- Some people with specific needs (i.e. associated to differences of age, gender, ability, socioeconomic status and geography) may have barriers to access and use digital information and services.
- Substantial digital divides persist between countries. Indeed, nearly 87 per cent of people were using the Internet in developed countries in 2019, compared with 47 per cent in developing countries.
- Digital divides are also evident within countries. Men, urban residents and young people are more likely to be online than women, rural dwellers and older persons. The digital gender gap is more pronounced in developing countries and substantial in least developed countries.

The Solution

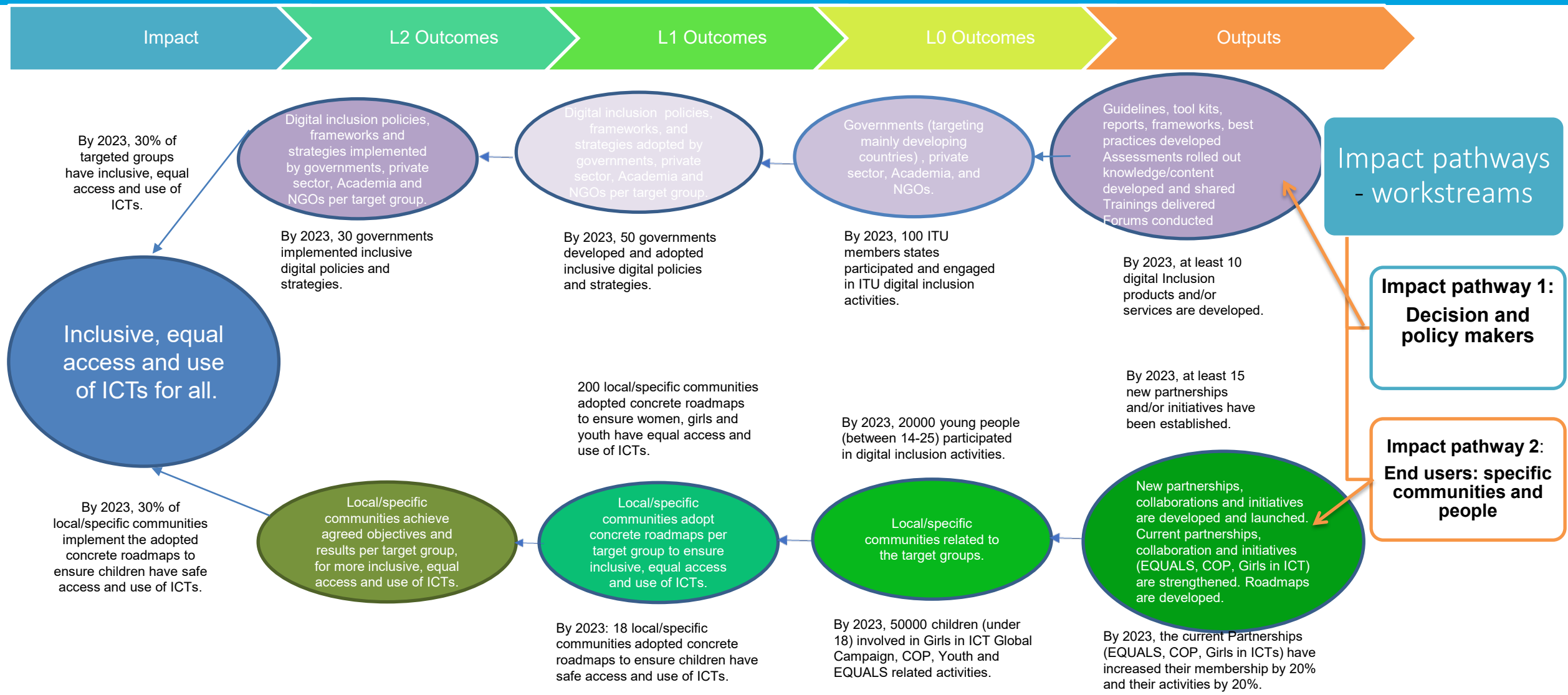
Inclusive, equal access and use of ICTs for all

Two impact pathways:

1. Support Member States, sector members and academia in the formulation and implementation of policies and strategies on digital inclusion, as well as awareness raising and advocacy, sharing good practices and knowledge, building capacity and the development products/services.

2. Support specific local communities (children, youth, older persons, women, persons with disabilities and indigenous people) through multi-stakeholder partnerships, collaborations and initiatives, to implement scalable roadmaps, actions, activities, and projects, to reduce the digital divide and towards more inclusive, equal access and use of ICTs for all

Impact Chain - Digital inclusion



Capacity Development

Developing skills for the digital economy

The Challenge

- Due to the rapid development of technologies and continuous evolution of the ICT landscape, there is a constant need to upgrade the skills needed to handle the technologies and develop appropriate policies
- There are people who are still excluded from participating in the digital economy and society due to lack of basic digital skills
- There is a large research and knowledge gap on the role and impact of these technologies on skills requirements and skills development for future jobs

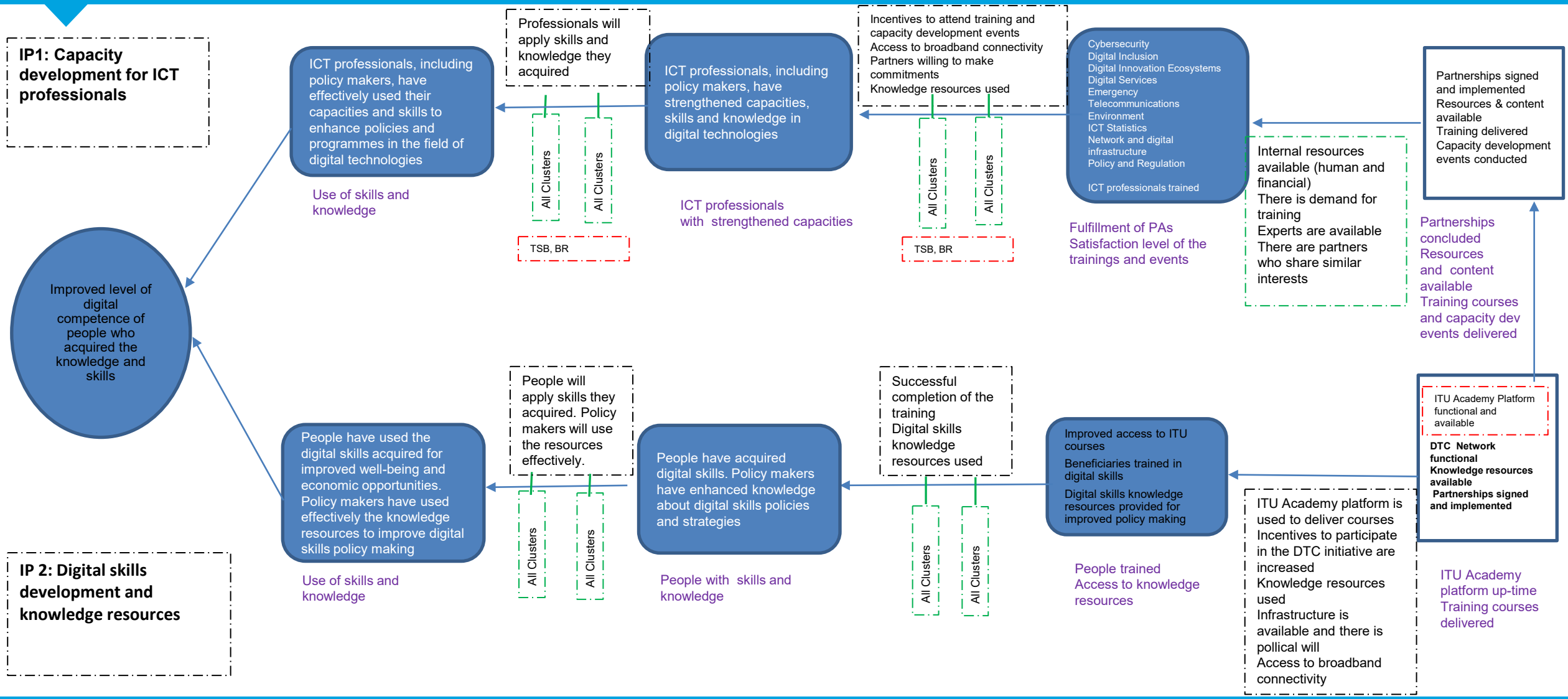
The Solution

Developing skills for the digital economy

Two impact pathways:

1. Development and delivery of specialized training programmes and capacity development workshops for ICT professionals (from the public and private sector) using varied approaches including partnerships with external stakeholders and internal collaborations
2. Development of knowledge resources and delivery of digital skills training at basic and intermediate level, promoting skills development for digital inclusion and producing publications focusing on cross-cutting themes

Impact Chain - Capacity development



Network & Digital Infrastructure

Reliable Connectivity to Everyone

The Challenge

- The ICT sector is characterized by rapid technological change. By convergence of technological platforms for telecommunications, information delivery, broadcasting and computing are key enablers for the digital economy. Infrastructure is central for enabling universal, sustainable, and affordable access to ICTs and services for all.
- The deployment of common broadband, including through fixed and mobile, technology and network infrastructures for multiple telecommunication services and applications and, the evolution to all IP-based wireless and wired future networks (NGNs) and their evolutions imply significant challenges for developing countries.
- Currently there are only 4.1 billion people, or 53.6% of the world's population, with access to the internet. This means 3.6 billion people are without meaningful access to the internet. The LDCs (least developed countries) are the least connected with only 19.1% of the population connected, mostly in Africa and South Asia.

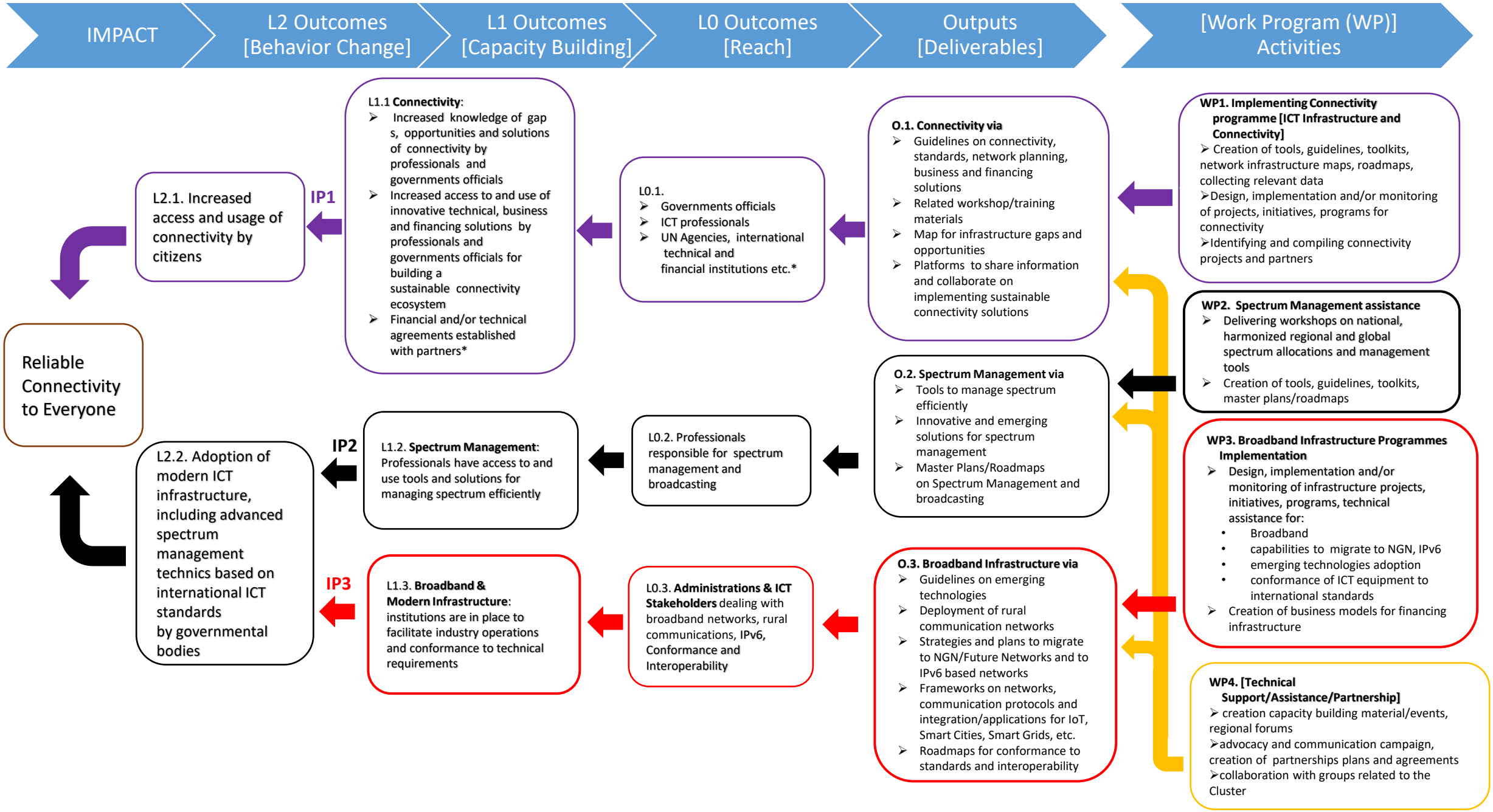
The Solution

Reliable Connectivity to Everyone

Three impact pathways:

1. Increased usage of connectivity by citizens for socio-economic activities
2. Efficient spectrum management by professionals using advanced technics
3. Adoption of modern ICT infrastructure, based on international ICT standards by governmental bodies

Impact Chain - Network & Digital Infrastructure



Policy and Regulation

Supporting Collaborative ICT Policy and Regulation Frameworks for Digital Market Development and User well-being

The Challenge

- ICTs have moved far beyond the realm of simple ‘communications’ and have become the **foundation** for every economic sector and a *sine qua non* of business performance and national and individual growth.
- Regulators and Policy Makers need to focus on driving **inclusive** and **cross-sectoral** approaches and collaboration, so that, ALL players have their voice in decision-making based on current and granular evidence and market data.
- Regulatory process and tools must be adapted to create a virtuous dynamic for investment, innovation and inclusion, leading towards **digital** transformation.

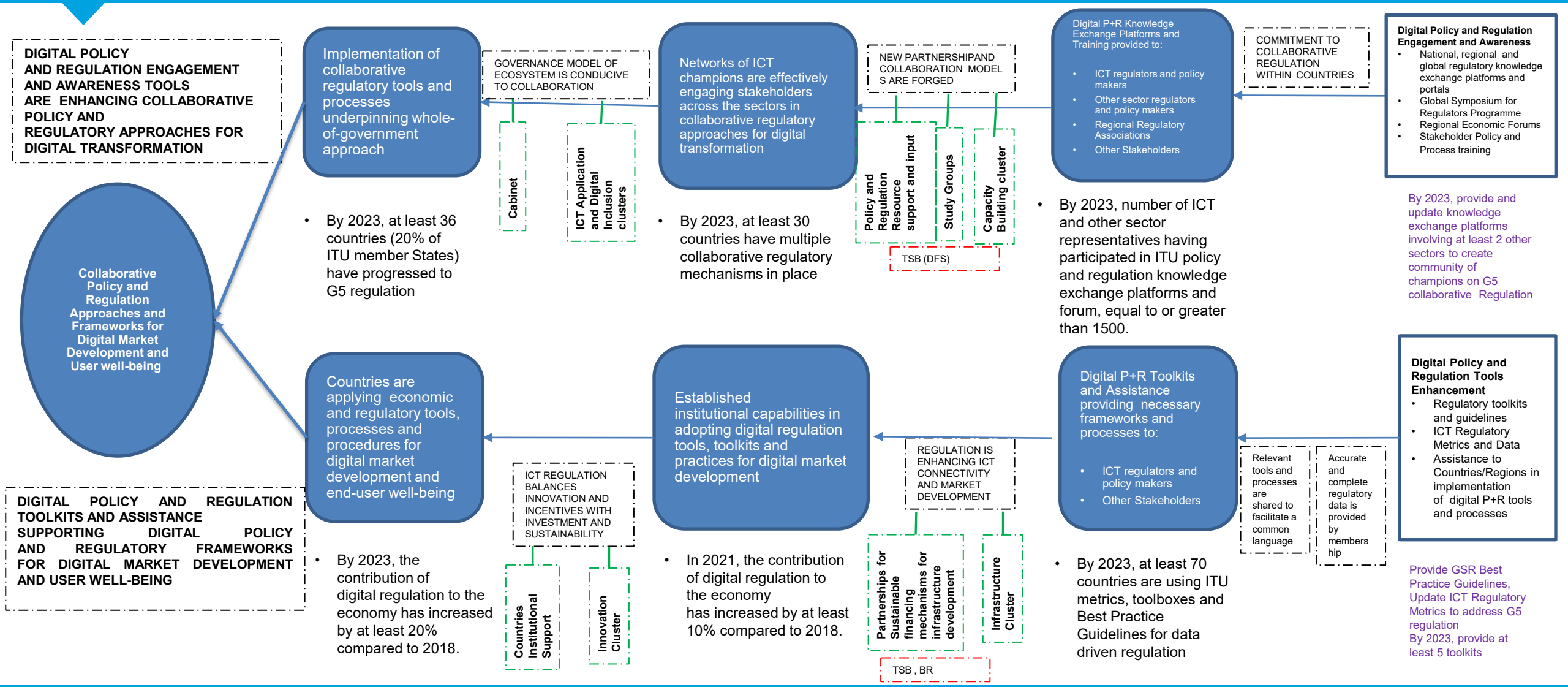
The Solution

Supporting Collaborative ICT Policy and Regulation Frameworks for Digital Market Development and User well-being

Two impact pathways:

1. Digital Policy and Regulation Engagement and Awareness: exchange platforms and training enhancing collaborative policy and regulatory capability for digital transformation.
2. Digital Policy and Regulation Tools Enhancement: tools and processes and implementation support to strengthen agile and inclusive policy and regulatory frameworks and approaches.

Impact Chain - Policy and Regulation Cluster



Emergency Telecommunications

Disaster-resilient ICT infrastructure for reduced loss of lives and damages

The Challenge

- Pandemics, epidemics, like COVID 19, extreme weather events exacerbated by climate change such as strong hurricanes, floods, heat waves, storms, etc. Geological hazards such as earthquakes, volcanic eruptions, landslides and worldwide droughts are posing challenges to communities and all populations.
- Although these type of hazards cannot be fully avoided, we can build capacity to anticipate, to mitigate and to prepare for response, so that hazards do not lead to disasters.
- National stakeholders do not have a multi-stakeholder approach when working in disaster management and are continuously duplicating efforts.
- Many countries lack national strategies for the use of ICTs in disaster management, including National Emergency Telecommunication Plans, as well as regulatory and legal frameworks.
- There is a lack of implementation of international coordination frameworks for the importation of ICT equipment for disaster response.

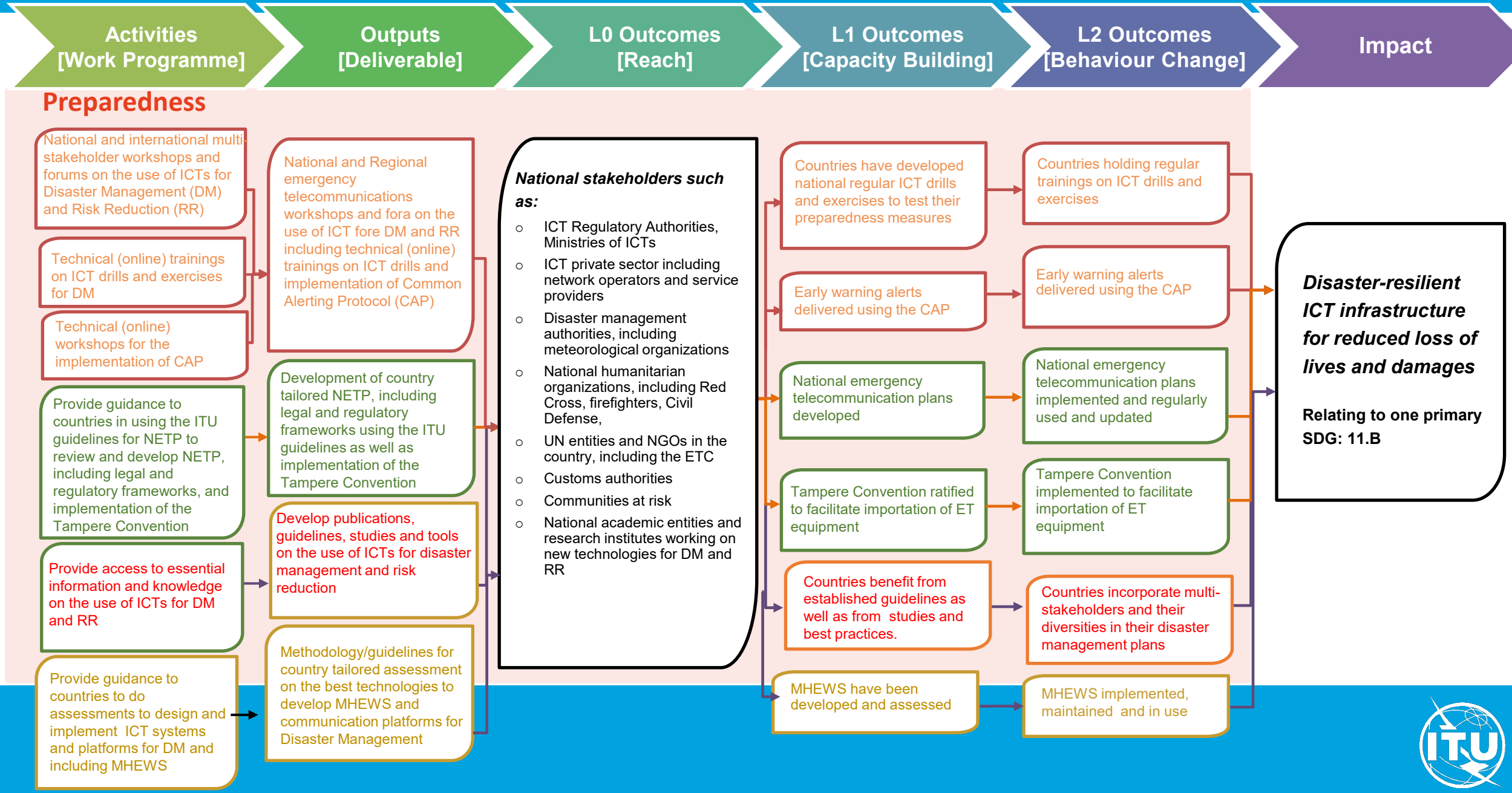
The Solution

Disaster-resilient ICT infrastructure for reduced loss of lives and damages

Two impact pathways

1. Enhancing preparedness through:
    - Development and implementation of National Emergency Telecommunication Plans (NETPs), including the Tampere Convention
    - Development of simulation exercises (TTX)
    - Implementing multi-hazard early warning systems, including Common Alerting Protocol (CAP)
    - Developing publications and best practices on the use of ICTs for disaster management and risk reduction
2. Providing response through:
    - Deployment of emergency telecommunications equipment
    - Providing support to Emergency Telecommunications Cluster (ETC) and Crisis Connectivity Charter (CCC)
    - Building capacity in the ITU Emergency Telecommunications roster
    - Developing and maintaining the Disaster Connectivity Map

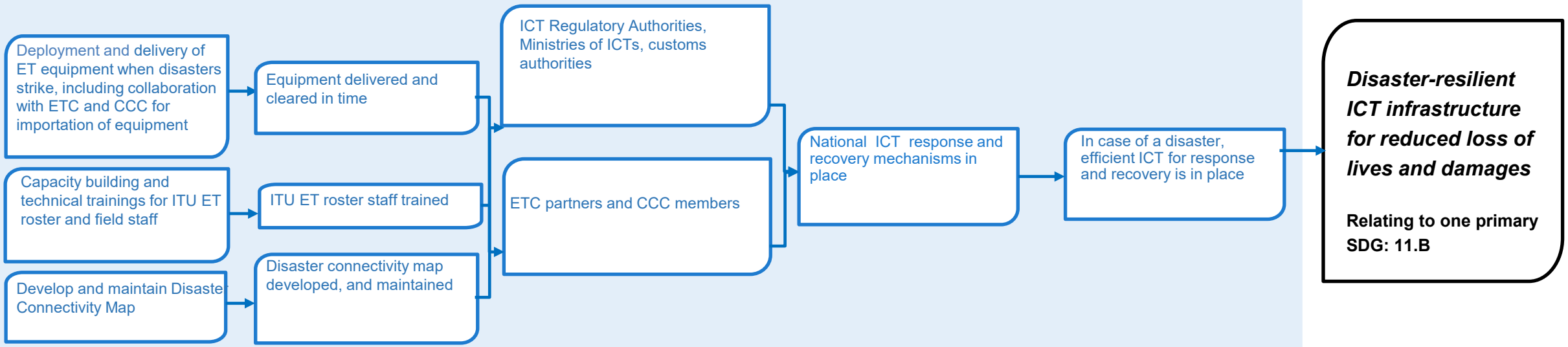
Impact chain - Emergency Telecommunications (Preparedness)



Impact chain - Emergency Telecommunications (Response)

Activities [Work Programme]	Outputs [Deliverable]	L0 Outcomes [Reach]	L1 Outcomes [Capacity Building]	L2 Outcomes [Behaviour Change]	Impact

Response



Statistics

Evidence-based policies for digitally inclusive societies

The Challenge

- Digital divide. Policymakers need to implement policies to increase the uptake and use of ICTs, especially by marginalized population groups
- Data gap. Data is needed to grasp the nature and size of the digital divide, to inform policies and decisions for bridging it, and monitor progress
- Capacity gap. Policymakers need to understand the value of data *and* be capable and willing to use data in the policy- and decision-making process

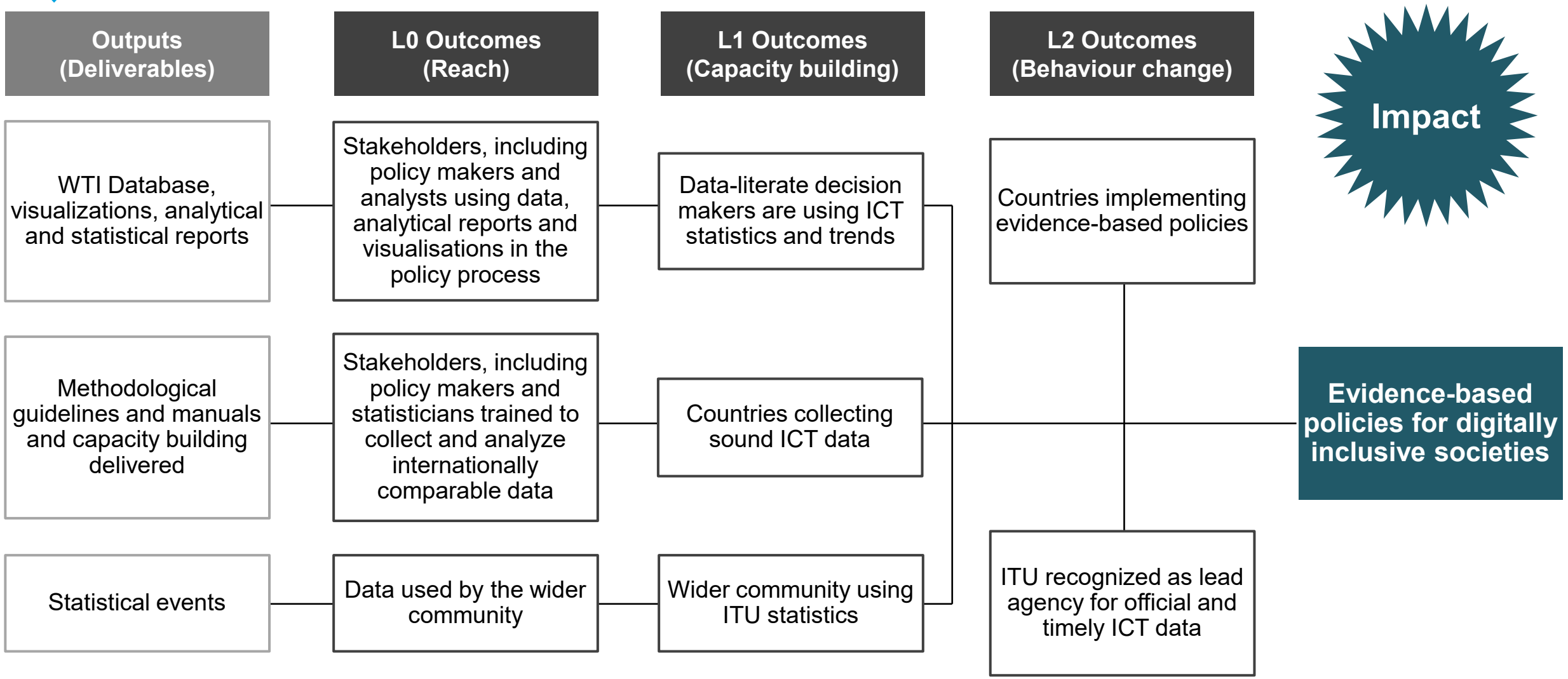
The Solution

Evidence-based policies adopted for digitally inclusive societies

One impact pathway

- Develop and maintain data methodologies
- Collect and disseminate data
- Build capacity for data collection and analysis
- Publish analysis and visualisations to enhance the understanding and use of data

Impact Chain - Statistics



Digital Innovation Ecosystems

Accelerating digital innovation ecosystems for digital transformation

The Challenge

Despite massive investment in digital ecosystems, many countries are unable to adapt to the fast-changing digital environment and technological revolutions. As a result, talent is unfulfilled, SMEs are struggling, and slow digital transformation of communities is affecting social conditions and achievement of national ambitions.

There are three main challenges facing countries and key ecosystem stakeholders (entrepreneurs, entrepreneurial support networks, corporates, financiers, and governments) in integrating ICT/telecommunication innovations in their national development agenda:

- **Scarcity of appropriate policies, programs, resources and knowhow** for innovators and digital change-makers to accelerate digital development in their communities;
- **Lack of proper assessment of** the systemic issues of an ICT-centric innovation ecosystem **(**entrepreneurial ecosystem, technology ecosystem and the innovation ecosystem - three engines of economic growth); and
- **Lack of collaboration between stakeholders of the three engines of growth** to create ICT projects that nurture innovation and entrepreneurship.

The Solution

Accelerating digital innovation ecosystems for digital transformation with three impact pathways

Knowledge sharing and Innovation challenges

Impact pathway 1:

Innovation Challenge

Innovation Forum

Empower

ITU Innovation Challenges' Winners

+

Experts from ITU Innovation Forum(s)

= Champions

Innovation profiles

Impact pathway 2:

Digital Innovation Profile

Innovation Country Review

Champions

Enable

Countries

Develop a nurturing digital environment

Ecosystem project development

Impact pathway 3:

Innovation Project Advisory

Ecosystem Good Practices

Relevant Stakeholders

Transform

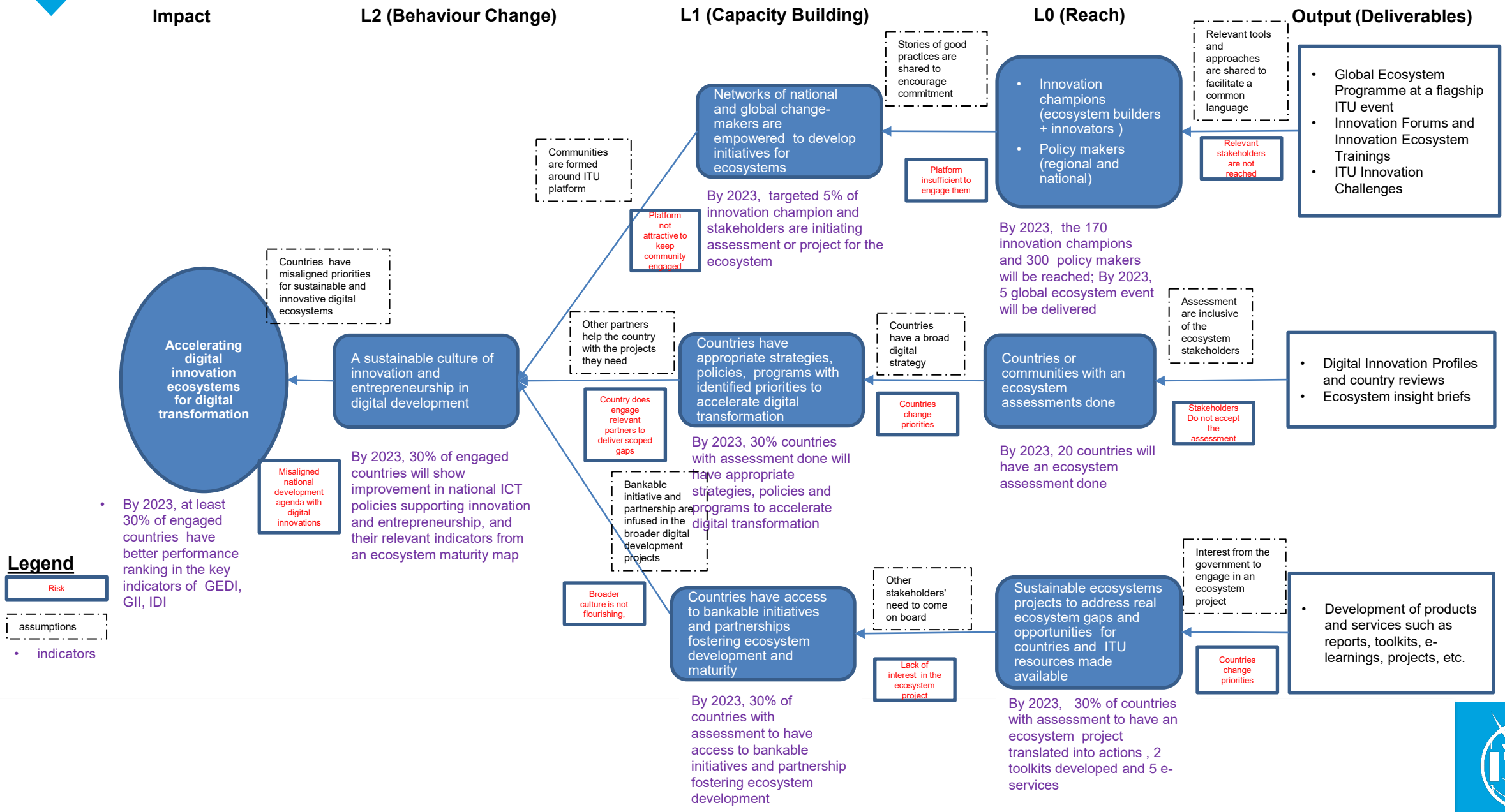
Resources, policies and programs accelerating key sector development

1. Skills and tools to know what they don't know about their ecosystems

2. Understand what they need to fix as a systemic issue in their ecosystems

3. Have bankable projects that engage relevant stakeholders to sustain their ecosystems competitiveness

Impact Chain – Digital Innovation Ecosystems



Cybersecurity

Creating a Trusted Cyberspace for All

The Challenge

RAPID TECHNOLOGICAL DEVELOPMENT

As technology continues to spread and evolve rapidly, the functioning of essential services, security of individual devices, shared networks, individuals, and entire global systems is a challenge

INEFFECTIVE CYBERSECURITY MEASURES

Due to rapid changes in technology and digital economy landscape, Cybersecurity measures become ineffective over time. Continuous improvement is necessary.

LARGER ATTACK SURFACE

Over half of the world's population is online, nearly 4 billion people directly impacted and indirectly impact many more

CYBER THREAT REMAINS TRANSNATIONAL

Threats pose non-discriminating risks across the globe. Any individual and any entity can be the victim of a cyber-attack. The threat is transnational, it is cross-sectoral, and it is growing.

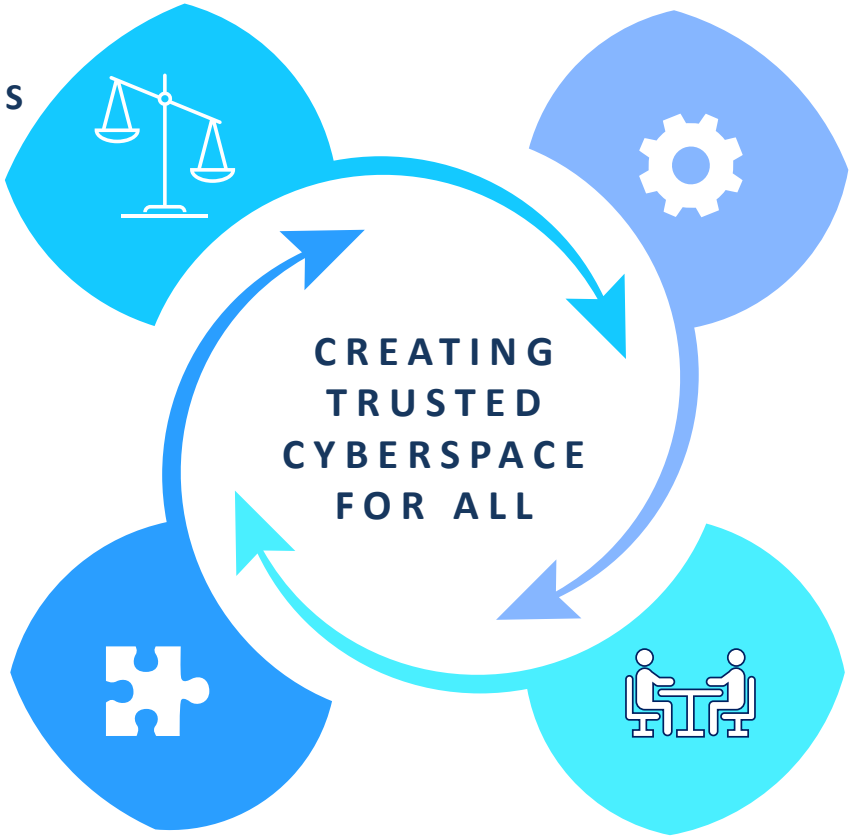
The Solution

TECHNICAL AND POLICY MEASURES

Accelerating the development and adoption of sound national cybersecurity strategies and comprehensive action plans.

ENHANCING ORGANIZATIONAL STRUCTURES

Establishing prepared organizational structures to support national commitment in cybersecurity.



CAPACITY DEVELOPMENT

Improving cybersecurity capacity in the Least Developed and Developing Countries.

COOPERATION AND COORDINATION

Promoting cybersecurity coordination and collaboration as one of enabling areas for the national digital transformation journey and trust building.

Impact Chain – Cybersecurity

Inputs/Activities	Outputs	L0 Outcomes	L1 Outcomes	L2 Outcomes	Impact
Cybersecurity Capacity Development Cybersecurity Exercises - Technical and Technological Training - Awareness Creation	Cybersecurity Exercises and Technical Trainings Delivered Awareness Creation and Information Sharing Workshops Delivered	• Incident responders trained • Policy makers aware of Cybersecurity related capacity development requirements	Sustainable cybersecurity Capacity Development Programs implemented in relevant educational structures	Developing countries establish clear capacity development programs (academic and professional).	A trusted Cyberspace for All
National Cybersecurity Posture: Cybersecurity policy advisory - National Cybersecurity Strategy Guide	Cybersecurity Strategy, Policy and Planning: Transfer of Knowledge, Tools and Direct Assistance	Essential cybersecurity training delivered to policy makers on policy/strategy development and lifecycle management	• Cybersecurity strategy, and policy development • Adoption of good practices	Comprehensive Cybersecurity Strategies, Policies, and Technical Plans are implemented	
COP Guidelines Development and Workshops	COP Guidelines: Transfer of Knowledge, Tools and Direct Assistance Delivered				
Cybersecurity Engagement and Awareness Related Activities: Advocacy - Global Cybersecurity Index (GCI) - Cybersecurity Advisory Committee (CSAC)	Established Cybersecurity Advisory Committee (CSAC)	Engagement of Policy makers and other national stakeholders to contribute to awareness creation, data gathering and submission	Needs are established to engage in bilateral and multilateral cooperation.	Established and implemented bilateral, and multilateral cooperation among Member States	
	GCI Report, Awareness and Info-Sharing Workshops (Including partners).				
Incident Response Capabilities, CIRT Framework: Assessment – Design – Establishment - Improvement	CIRT Related Products and Services	Assessment of needs to build an incident response capability communicated to the national stakeholders	Developing countries make us of established CIRTs as national focal point and catalyst to address cybersecurity related issues	National Cybersecurity Teams established and in a sustainable and scalable manner	