



Connect2Recover



# Connect2Recover

## Research Competition

Best practices and recommendations for digital inclusion  
through resilient infrastructure  
28 November 2022

# Connect2Recover Initiative

## Objective

To reinforce and strengthen the **digital infrastructure and digital ecosystems** of beneficiary countries as they adjust in the wake of COVID-19 and remain resilient in times of natural hazards

## Verticals



**Education:**  
Synergies with [ITU/UNICEF Giga Initiative](#)



**Health:**  
Synergies with [ITU/WHO Be He@lthy, Be Mobile Initiative](#)

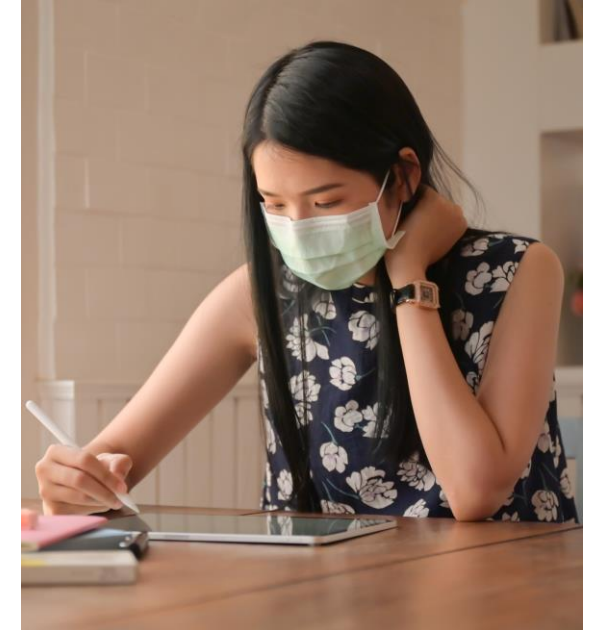


**Employment/Jobs:**  
Synergies with [ITU/ILO/AU Program on Decent Jobs and Digital Skills](#)

## Regions

Africa  
Arab States  
Americas  
Asia-Pacific  
CIS  
Europe

\* Priority to **Least Developed Countries, Landlocked Developing Countries, Small Island Developing States**



# Connect2Recover Partners



مركز الملك سلمان  
للإغاثة والأعمال الإنسانية  
**KING SALMAN**  
HUMANITARIAN AID & RELIEF CENTRE

## Member States



**Australian Government**  
**Department of Infrastructure, Transport,  
Regional Development and Communications**



**MINISTRY OF TRANSPORT  
AND COMMUNICATIONS**  
OF THE REPUBLIC OF LITHUANIA



**Ministry of Foreign Affairs  
of the Czech Republic**

## Sector Members



## Others

**BROADBAND COMMISSION**  
FOR SUSTAINABLE DEVELOPMENT



# Connect2Recover 5 Phase Approach

Phase One

Phase Two

Phase Three

Phase Four

Phase Five

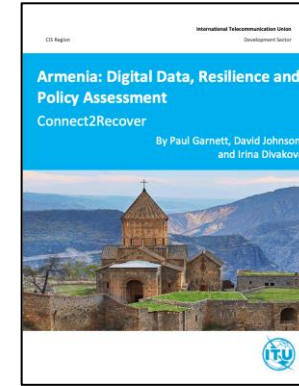
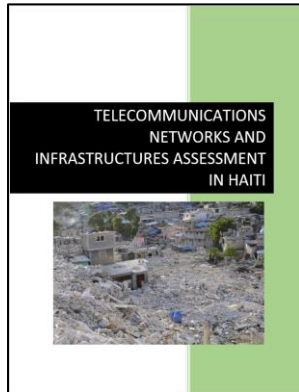
- **Global Methodology:** A methodology to assess gaps and bottlenecks at a country level for the utilization of networks and digital technologies, and identify policies to respond to and mitigate the consequences of COVID-19 pandemic and preparedness for future disasters including those linked to natural hazards.
- **Country Landscape Assessments:** Conduct country-level Digital and Internet resilience assessment.
- **National ICT Strategies:** Based on the Internet resilience assessments, develop and implement comprehensive ICT strategies to ensure that digital infrastructure and ecosystems adequately support recovery efforts as well as the 'new normal', in line with global best practices.
- **Pilot Activities:** Partner with other programs and organizations to implement pilot activities that test specific technological solutions in line with national country strategies and policies, with a particular focus on disaster management, education, health, and job creation. These pilots can also be used to test early warning systems and inform policy making.
- **Deep-Dive Studies:** Undertake deep-dive studies in specific areas of digital policy as prioritized by the countries selected (e.g., in areas such as e-education, e-health and job creation) including to alert and for early warning purposes.

# Connect2Recover: 9 Projects Completed

**CARICOM**  
Assessment for  
Regulatory  
Compliance



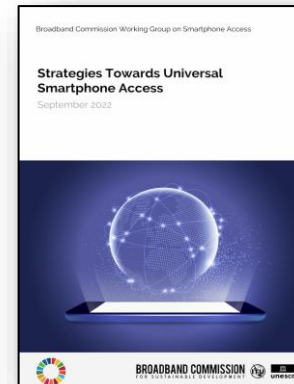
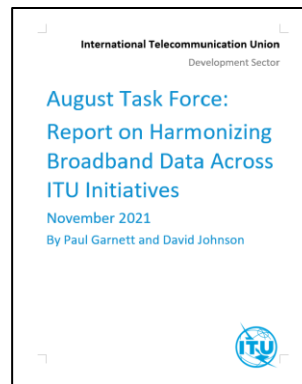
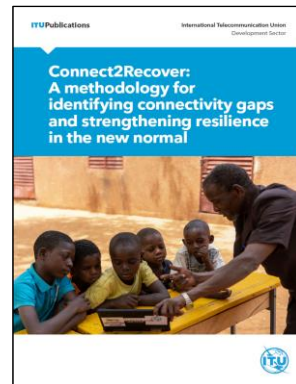
**Haiti**  
Internet Resilience  
Assessment Post  
Disaster



**Armenia  
Kazakhstan**  
Internet Country Assessment



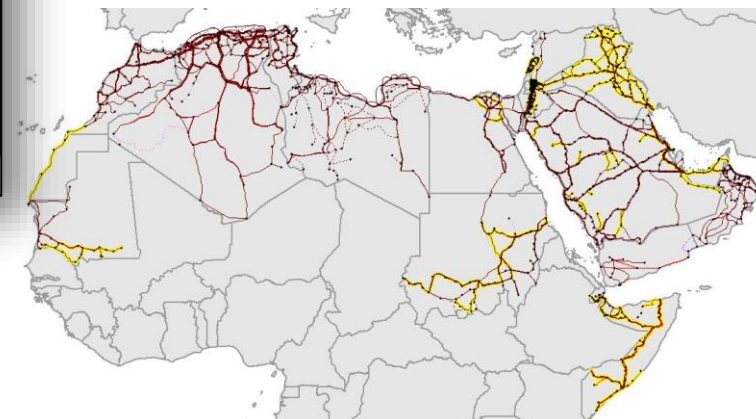
**Rwanda**  
Pilot on  
school  
connectivity  
with Giga



**Global:**

- C2R Global Methodology
- Harmonising Broadband Data Across ITU Initiatives
- Broadband Commission Working Group Report

**Arab Region**  
Update Broadband Transmission Map



# Connect2Recover Research Competition

## Objective

- Improve research focus on digital resiliency and digital inclusion to **build back better with broadband** for pandemic recovery
- **Build a global research community** of think tanks and academic institutions around digital inclusion
- **Promote knowledge sharing** that informs targeted practices to build back better with broadband

## Submission requirement

- How to carry out studies that can assess the **resiliency for digital infrastructure** taking into account relevant data sources and formulate forward-looking, actionable policy measures leading to positive outcomes in education, healthcare, or job creation by fostering digital inclusion as the country enters the COVID-19 recovery period?
- How to build back better with **broadband** along with **digital inclusion** during the COVID-19 recovery efforts resulting in meaningful connectivity?
- Develop key **recommendations** on aspects of **resilient digital infrastructure** supporting education, health, or job creation in the targeted context.

## Support



## Research grants



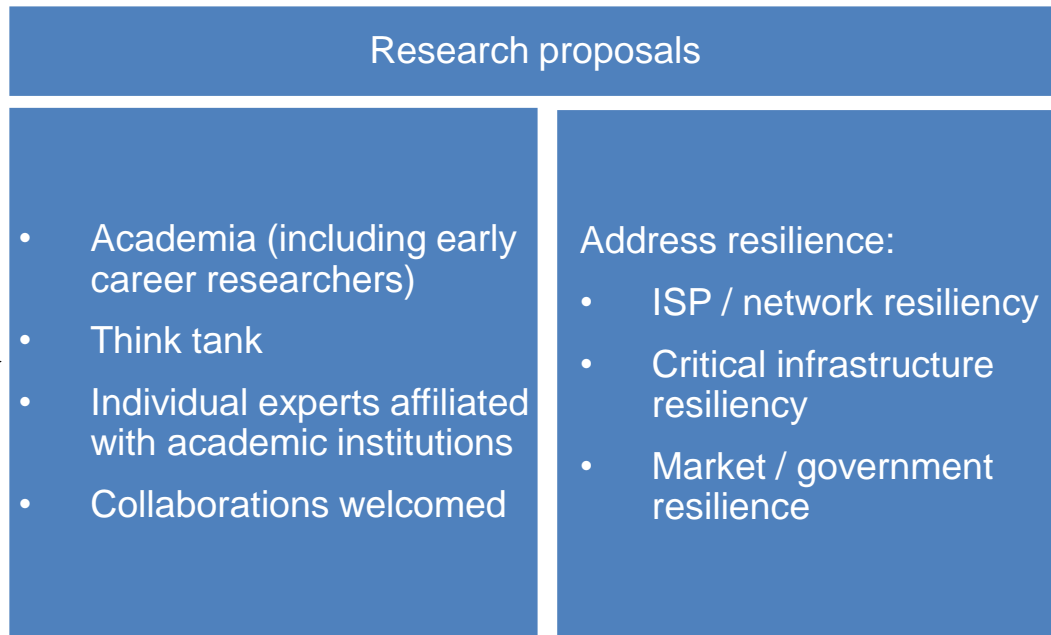
-  **Award 1**  
Research grant  
USD 42,000
-  **Award 2**  
Research grant  
USD 42,000
- ⋮
-  **Award 15**  
Research grant  
USD 42,000

# Research Competition: Aims and Outcome

## BACKGROUND

COVID-19 challenged countries' network resiliency

## AIM OF COMPETITION



## OUTCOME

Education

Healthcare

Employment

Digital inclusion

# Research Competition: Timeline





# Brief Snapshot of Applications Received

## Applicants

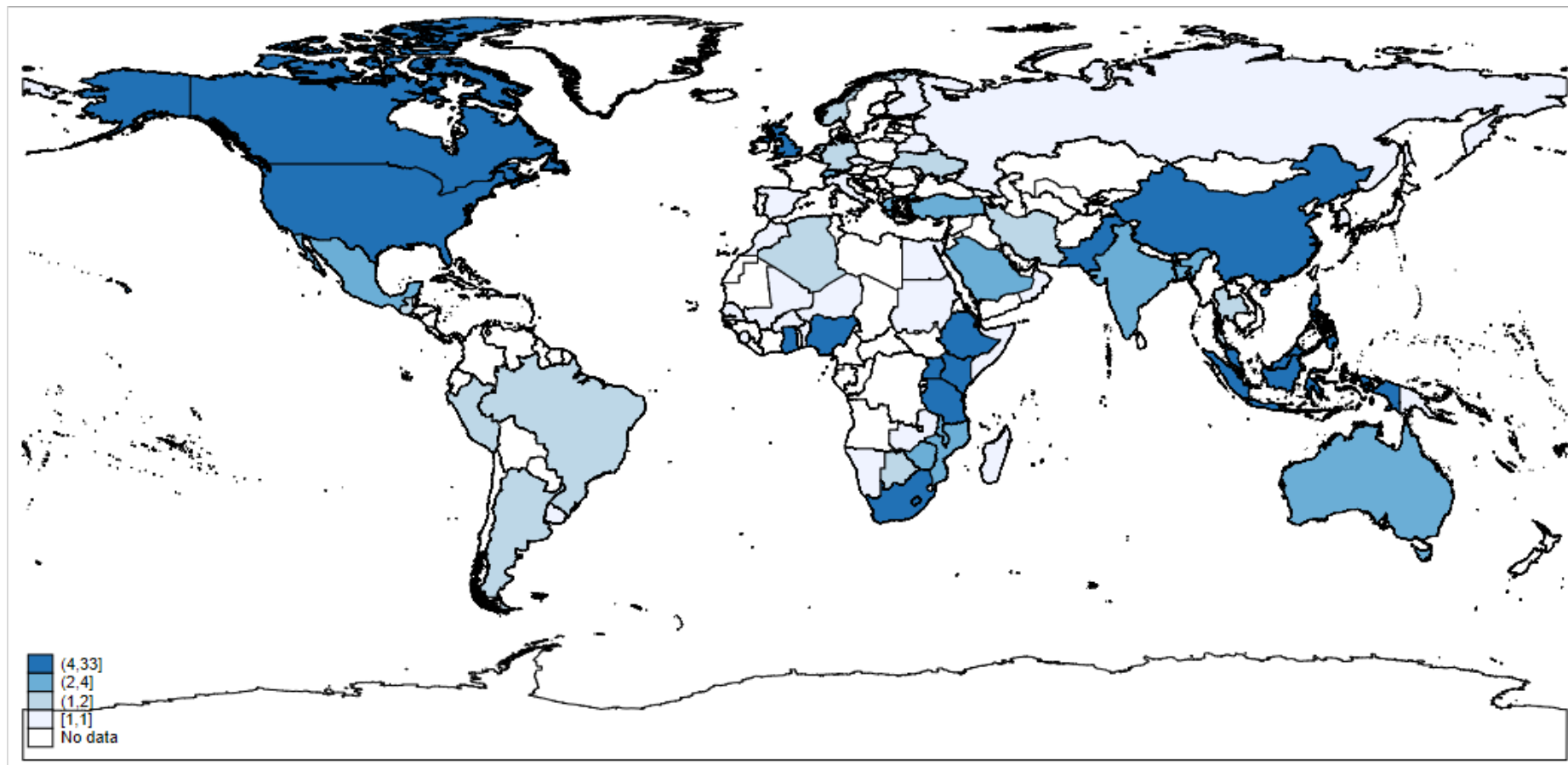
307 Proposals Received  
 Applicants:  
 ● 72 countries (Lead)  
 ● 51 countries (Collaborating)

## Regions

Africa 130  
 Asia Pacific 73  
 Europe 51  
 Americas 47  
 Arab states 14  
 CIS 4

## Selection

148 Eligible  
 15 winners



# Evaluation Process

## 5 Member Jury Committee



**Prof. Dr. Ahmad Reza Sharafat**  
Professor of Electrical and Computer Engineering at Tarbiat Modares University, ITU-D Study Group 2  
Chairman  
**(Chair of Jury Committee)**



**Prof. Ellen Helsper**  
Professor of Digital Inequalities, Department of Media and Communications, London School of Economics and Political Science



**Ms. Ida Nganga**  
Regional Head, Anglophone Countries of UNESCO Emerging Technologies for Development Steering Committee



**Ms. Nur Sulyna Abdullah**  
Chief of DKH Department, ITU



**Dr. Cosmas Zavazava**  
Chief of PDD Department, ITU

## Evaluation Criteria

1. **Collaboration:** Encouraged between developing and developed countries
2. **Relevance:** To foster digital inclusion
3. **Impact:** On vulnerable (currently digitally excluded) groups
4. **Viability:** Research adaptability and replicability
5. **Sustainability:** Financially sustainable taking into consideration of COVID-19
6. **Novelty:** Original research and new knowledge in digital inclusion
7. **Implementation Plan:** Concrete, actionable recommendations

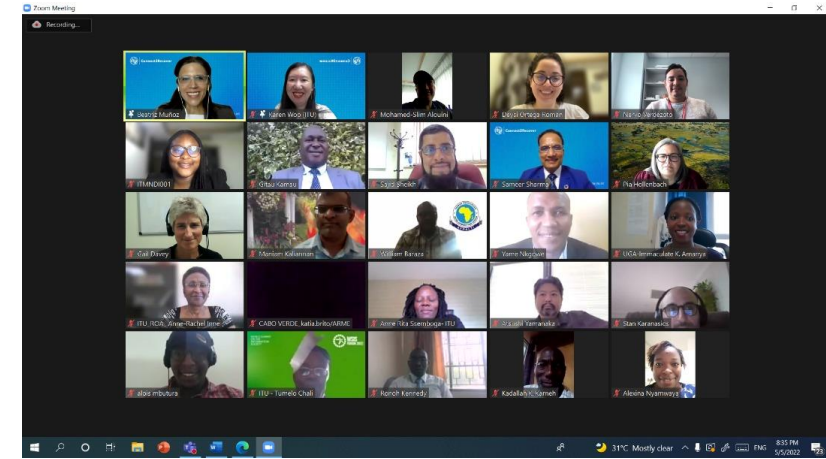
# Three Information Sessions focused on Africa



Session 1: 5 April 2022 with 57 participants



Session 2: 21 April 2022 with 70 participants



Session 3: 5 May 2022 with 70 participants

## Objectives:

- Share the ongoing work with the Member States, Sector Members and Academia from Africa;
- Foster synergies and soliciting support for research work;
- Enhance collaborative approaches and avoid duplication; and
- Build human and institutional capacity

## Discussion on:

- Digital Inclusion (Health, Education, Enterprises and Jobs, Vulnerable Groups)
- Digital Connectivity and Resilience

## Outcomes:

- Created awareness of 'gold' mine of research focusing on Africa
- Provided networking opportunities with African stakeholders
- Fostered connection with Academia
- Built capacity for 197 participants

# Research Competition: Promotional material

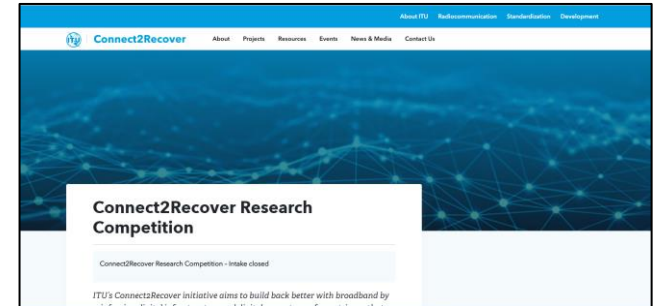
Research Competition  
Winning projects  
booklet:



Research Competition quote cards @ WTDC:



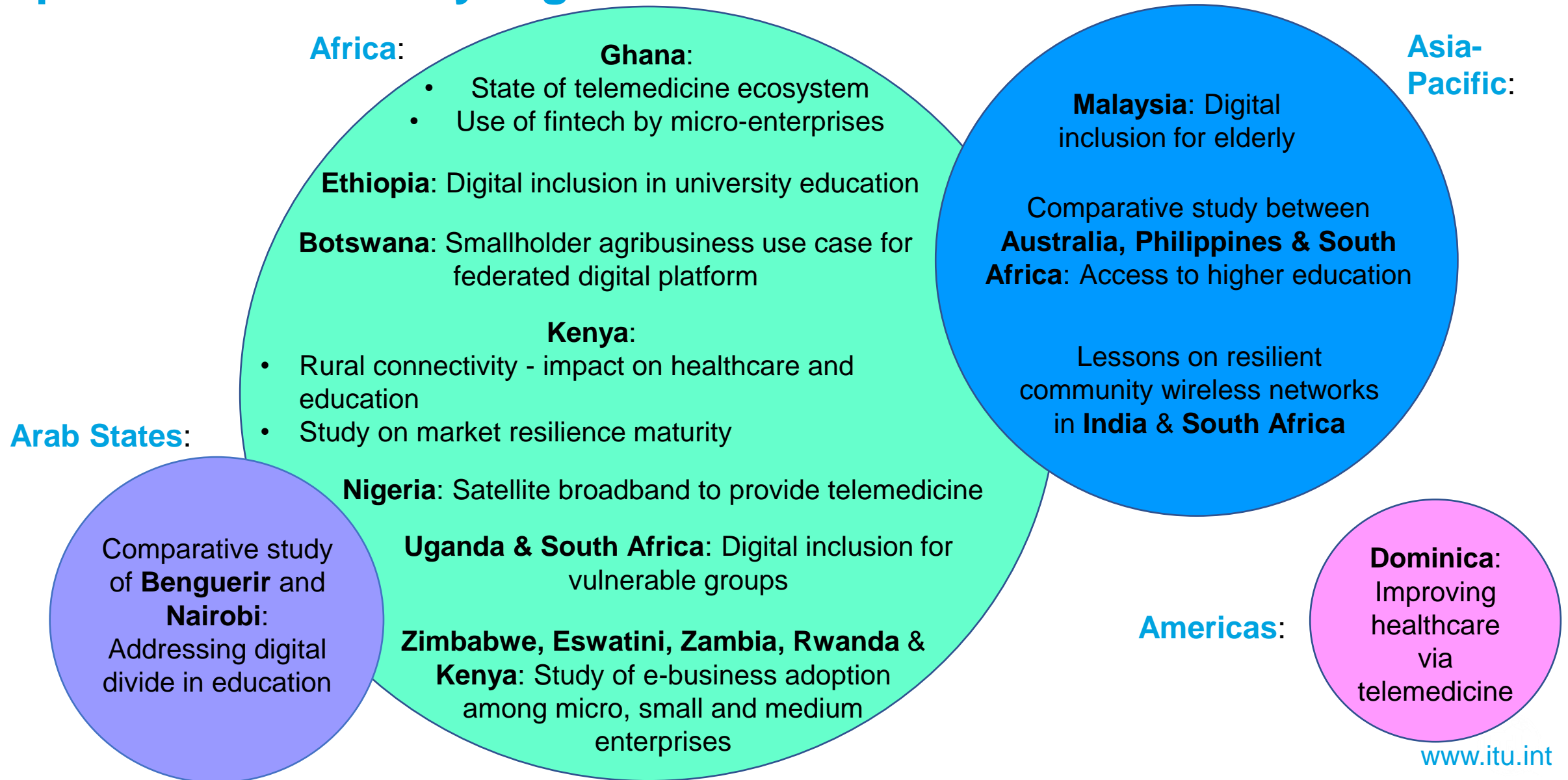
Research Competition website:



Research Competition video:



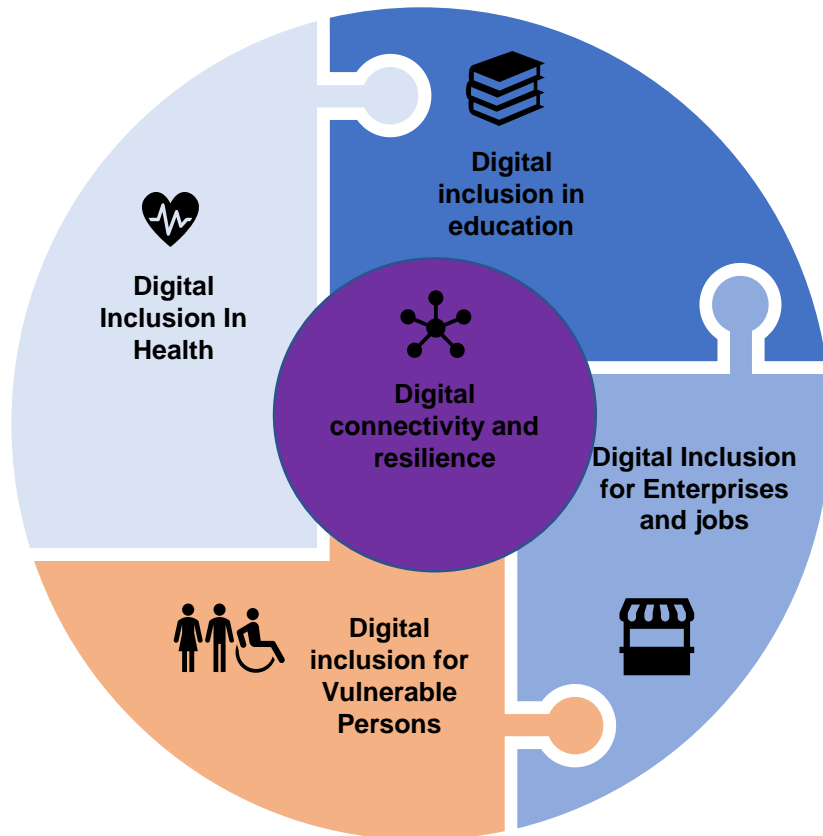
# Impactful research by regions and countries



# Research Competition:

## Build back better with broadband: Research stories from the front line

- Features introduction of 15 research reports based on 5 themes
- Recommendations focus on 4 enablers



### 4 Enablers:

- Resilient digital infrastructure and meaningful connectivity: Digital solutions require ubiquitous and reliable network, and where services are affordable and accessible to all
- Technology and innovative solutions: Digital solutions to enable e-learning, telemedicine, e-business and digital financing
- Revamping of policy and regulations: To facilitate technological developments, to be fit-for-purpose and to be inclusive in nature
- Enhancement of institutional and human capacity: To prioritise digital skills in capacity building

# IGF 2022 @28 November 2022: Launch



**Build back better with broadband:  
Research stories from the front  
line**

<p><b>Research Competition: Digital Inclusion in Health</b></p> <p><b>Network-in-a-box to provide health services in remote areas</b></p>	<p><b>Research Competition: Digital Inclusion in Health</b></p> <p><b>Telemedicine as a panacea to medical tourism in Africa: Exploiting communication satellite technologies</b></p>	<p><b>Research Competition: Digital Inclusion in Health</b></p> <p><b>The use of telemedicine in the management of chronic diseases in Small Island Developing States: Case study - Dominica</b></p>	<p><b>Research Competition: Digital Inclusion in Health</b></p> <p><b>Improving resilience in developing countries: Digital health provision through telemedicine ecosystem against the pandemic, epidemics and natural disasters in sub-Saharan Africa</b></p>	<p><b>Research Competition: Digital Inclusion in Education</b></p> <p><b>Making higher education truly inclusive</b></p>
<p><b>Research Competition: Digital Inclusion in Education</b></p> <p><b>Determinants of digital inclusion in higher education: Exploring the Ethiopian context</b></p>	<p><b>Research Competition: Digital Inclusion in Education</b></p> <p><b>Promoting digital inclusion in African cities and regions: Policy frameworks for digital resiliency in education for a better COVID-19 recovery</b></p>	<p><b>Research Competition: Digital Inclusion for Enterprises and Jobs</b></p> <p><b>Digital transformation of micro-enterprises in Ghana</b></p>	<p><b>Research Competition: Digital Inclusion for Enterprises and Jobs</b></p> <p><b>The digital financial inclusion of micro, small and medium sized enterprises of the COMESA region in electronic business during the COVID-19 pandemic</b></p>	<p><b>Research Competition: Digital Inclusion for Enterprises and Jobs</b></p> <p><b>Advancing smallholder agribusiness in Botswana through smart digital innovation</b></p>
<p><b>Research Competition: Digital Inclusion for Vulnerable Persons</b></p> <p><b>An assessment of digital inclusion among vulnerable persons in developing economies</b></p>	<p><b>Research Competition: Digital Inclusion for Vulnerable Persons</b></p> <p><b>Reinvigorating older populations in the post COVID-19 pandemic era through digital inclusion strategies: A case study of Malaysia</b></p>	<p><b>Research Competition: Digital Connectivity and Resilience</b></p> <p><b>Market resilience in emerging digital economies: Case study of Kenya during the COVID-19 pandemic</b></p>	<p><b>Research Competition: Digital Connectivity and Resilience</b></p> <p><b>Rebuilding digital inclusion for the rural counties of Kenya</b></p>	<p><b>Research Competition: Digital Connectivity and Resilience</b></p> <p><b>CoLRN: A community-based vision for local resilient networks</b></p>

# Research Competition @IGF: Agenda

## Session 1: Digital Inclusion in Health

**Moderator:** Ms. Caroline Gaju, ITU

### Speakers:

- **Network in a Box to Provide Health Services in Remote Areas**  
Dr. Ki-Hong Park, Research Scientist, King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia
- **Tele-medicine as a panacea to medical tourism in Africa exploiting communications satellite technologies**  
Dr. Lasisi Salami Lawal, Senior Research Fellow, Federal University of Technology, Minna, Nigeria
- **The use of Telemedicine in the Management of Chronic Diseases in Small Island Developing States (SIDS): Case Study – Dominica**  
Dr. Benet Henry, Medical Practitioner, A-MEDIC Inc., Dominica
- **Digital health through telemedicine ecosystem against pandemics, epidemics and natural disasters in Sub-Saharan Africa**  
Dr. David Botchie, Senior Lecturer, Brunel University, United Kingdom

Q&A

**Remarks:** Dr. Cosmas Zavazava, Chief Partnerships for Digital Development and (Director Telecommunication Development Bureau-Elect)

## Session 2: Digital Inclusion in Education

**Moderator:** Dr. René Arnold, Huawei

### Speakers:

- **Inclusive higher education post-Covid-19**  
Mr. Michael Canares, Strategi Advisor, Step Up Consulting, Philippines
- **Taking Action towards Digital Inclusion in African cities and regions: policy framework for digital resiliency in education for a better COVID-19 recovery**  
Mr. Hassan Mohammed Yakubu, Architect, School of Architecture, Planning & Design, Mohammed VI Polytechnic University, Morocco
- **Determinants of Digital Inclusion in Higher Education: Exploring the Ethiopian Context**  
Dr. Wondwossen Mulualem Beyene, Freelance Researcher, Hawassa University, Ethiopia

Q&A

[www.itu.int](http://www.itu.int)



# Research Competition @IGF: Agenda (2)

## Session 3: Digital Inclusion in Job Creation

**Moderator:** Ms. Karen Woo, ITU

### Speakers:

- **Building resilient micro-enterprises with digital transformation**  
Mr. PK Senyo, Associate Professor, FinTech & Information Systems, University of Southampton, UK
- **Advancing Smallholder Agribusiness in Botswana through Smart Digital Innovation**  
Dr. Thorsten Jelinek, Director and Senior Fellow, Taihe Institute, China
- **The digital financial inclusion of micro, small and medium enterprises (MSMEs) of the COMESA region into electronic business during and post the COVID 19 pandemic**  
Dr. Reason Masengu, Senior Lecturer, Department of Management Studies, Middle East College, Muscat, Oman

### Q&A

## Session 4: Digital Inclusion for Vulnerable Persons

**Moderator:** Mr. Sameer Sharma, ITU

### Speakers:

- **An Assessment of Digital Inclusion among the Vulnerable Persons in Developing Economies**  
Dr. Fredrick Kanobe, Lecturer, Kyambogo University, Kampala, Uganda
- **Reinvigorating Elderly Population in Post-COVID 19 Pandemic Era through Digital Inclusion Strategies: A Malaysian Case Study**  
Dr. Maniam Kaliannan, Associate Professor, School of Business, University of Nottingham Malaysia

### Q&A

# Research Competition @IGF: Agenda (3)

## Session 5: Digital Connectivity and Resilience

**Moderator:** Mr. Andy Hu, Huawei

### Speakers:

- **Market Resilience in Emerging Digital Economies: Case Study of Kenya During Covid-19 Pandemic**  
Mr. William Baraza, Director and CEO, African Advanced Level Telecommunications Institute (AFRALTI), Kenya
- **Covid-19 Recovery: Rebuilding Digital Inclusion for the Rural Counties of Kenya**  
Mr. Leonard Mabele, Research Fellow, Telecommunications & Manager, Internet of Things (IoT) Research, Strathmore University, Kenya
- **CoLRN: A Community-based Vision for Local Resilient Networks**  
Ms. Ndinelao litumba, Masters Student, Department of Computer Science, University of Cape Town, South Africa

### Q&A

**Closing Remarks: Ms. Doreen Bogdan-Martin**, Director, Telecommunication Development Bureau and ITU Secretary-General elect

## Panel Discussion:

**Moderator:** Ms. Anne-Rachel Inne, ITU

### Panelists:

- Digital Inclusion in Health: Dr. David Botchie, Senior Lecturer, Brunel University, United Kingdom
- Digital Inclusion in Education: Mr. Michael Canares, Advisor, Step Up Consulting, Philippines
- Digital Inclusion in Job Creation: Dr. Thorsten Jelinek, Director and Senior Fellow, Taihe Institute, China
- Digital Inclusion for Vulnerable Persons: Dr. Maniam Kaliannan, Associate Professor, School of Business, University of Nottingham Malaysia
- Digital Connectivity and Resilience: Ms. Ndinelao litumba, Masters Student, Department of Computer Science, University of Cape Town, South Africa

## More information

### Connect2Recover

- Connect2Recover website: <https://www.itu.int/itu-d/sites/connect2recover/>
- Connect2Recover Global Methodology: <https://www.itu.int/hub/publication/d-tnd-04-2021/>
- Armenia: Digital Data, Resilience and Policy Assessment: <https://www.itu.int/en/ITU-D/Documents/connect2recover/Reports/Armenia-Digital-Data-Resilience-and-Policy-Assessment.pdf>
  
- Connect2Recover Research Competition website: <https://www.itu.int/itu-d/sites/connect2recover/about/connect2recover-research-competition/>
- Connect2Recover Research Competition Winning Projects Booklet: <https://www.itu.int/en/ITU-D/Documents/connect2recover/research-competition/Connect2Recover-winning-projects-booklet-final.pdf>
- Information Sessions on Connect2Recover - Research Competition Papers focusing on Africa: <https://www.itu.int/en/ITU-D/Pages/events/connect2recover/infosessions-research-competition-papers-focusing-on-Africa/default.aspx>
- Best practices and recommendations for digital inclusion through resilient infrastructure event: [https://www.itu.int/en/ITU-D/Regional-Presence/Africa/Pages/EVENTS/2022/C2R\\_Addis.aspx](https://www.itu.int/en/ITU-D/Regional-Presence/Africa/Pages/EVENTS/2022/C2R_Addis.aspx)

ITU/UNESCO Broadband Commission on Smartphone Access website:  
<https://broadbandcommission.org/smartphone-access/>



Further information on Connect2Recover, please contact:

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Consultant, ITU

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