



Connect2Recover



Information Session

Connect2Recover: Research Competition

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Consultant, ITU
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Impact of COVID-19

COVID-19 and other devastating natural hazards have caused unprecedented disruption in countries around the world and has highlighted the urgency for universal digital connectivity.



Education: School closure impacts 91% students worldwide – around 1.6 billion children and young people.



Healthcare: Globally surpassed 486 million confirmed cases of COVID-19 with over 6.1 million deaths.



Jobs: Unprecedented global employment losses in 2020 of 114 million jobs, higher for women (5%) than for men, and for young workers (8.7%).



Digital Divide: 37% of world population has never used the internet and 96% of 2.9 billion still offline, live in the developing world.



Fixed broadband: Higher economic impact for developed countries.



Mobile Broadband: Drives economic growth in countries with low fixed penetration.

Aspirational Targets for 2030

- ITU and the Office of the UN Secretary-General's Envoy on Technology established a set of aspirational targets for 2030
- To achieve universal and meaningful digital connectivity
- Consists of:
 - Universality targets
 - Technology targets
 - Affordability targets

Achieving universal and meaningful digital connectivity in the decade of action

Aspirational targets for 2030

Achieving universal and meaningful digital connectivity –the possibility for everyone to enjoy a safe, satisfying, enriching, productive and affordable online experience– is key for enabling digital transformation and meeting the [Sustainable Development Goals](#).

As part of the implementation of the [UN Secretary-General's Roadmap for Digital Cooperation](#), the [International Telecommunication Union](#) and the [Office of the UN Secretary-General's Envoy on Technology](#) have established a set of aspirational targets for 2030 to help prioritize interventions, monitor progress, evaluate policy effectiveness, and galvanize efforts around achieving universal and meaningful connectivity by the end of the decade.

More information:
www.itu.int/umc2030

Notes ¹ Mobile network of the latest technology is the most advanced technology available in the country with at least 40% of the population already covered. | ² Parity is deemed reached when the share of women using the Internet/ owning a mobile phone/using a mobile phone/with specific digital skills, among the female population is equal to the share of men. | ³ Download speed. Mb/s = megabits per second. | ⁴ kb/s = kilobits per second.



Universality targets

- 100% of population aged 15+ uses the Internet
- 100% of households have Internet access
- 100% of businesses use the Internet
- 100% of schools are connected to the Internet
- 100% of population is covered by a mobile network of the latest technology¹
- 100% of population aged 15+ owns a mobile phone

- >70% of population aged 15+ has basic digital skills
- >50% of population aged 15+ has intermediate digital skills

Gender parity is achieved for Internet use, mobile phone ownership and use, and digital skills²



Technology targets

- 100% of fixed-broadband subscriptions are 10 Mb/s or faster³
- 20 Mb/s Minimum download speed at every school
- 50 kb/s Minimum download speed available per student⁴
- 200 GB Minimum data allowance for every school



Affordability targets

- 2% Entry-level broadband subscription costs less than 2% of gross national income per capita
- 2% Entry-level broadband subscription costs less than 2% of average income of the bottom 40% of population



United Nations
Office of the Secretary-General's
Envoy on Technology



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](#)

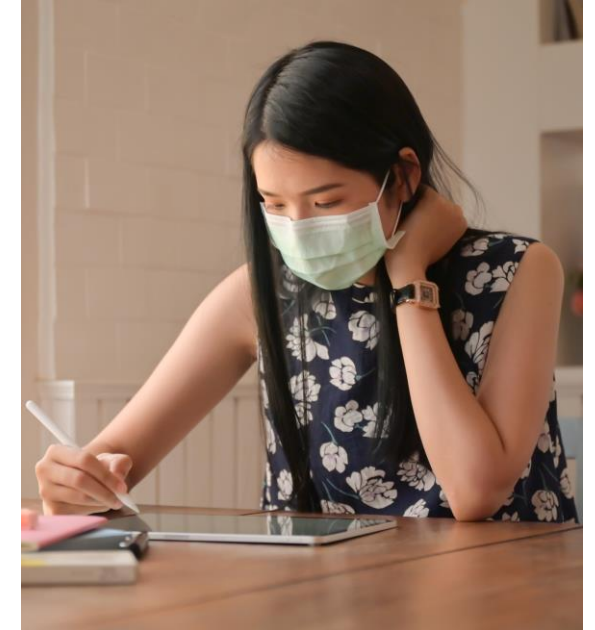


Employment/Jobs:
Synergies with [ITU/ILO/AU Program on Decent Jobs and Digital Skills](#)

Regions

Africa
Arab States
Americas
Asia-Pacific
CIS
Europe

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



Connect2Recover Partners



Member States



Founding Partners



Sector Members



Others



Connect2Recover 5 Phase Approach

Phase One

Phase Two

Phase Three

Phase Four

Phase Five

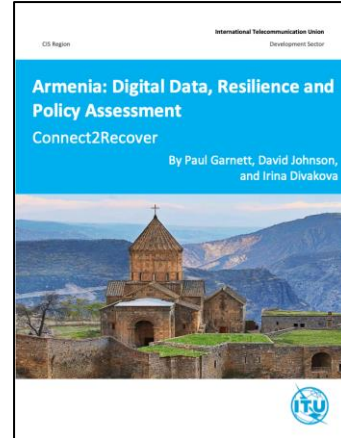
- **Global Methodology:** A methodology to assess gaps and bottlenecks at a country level for the utilization of networks and digital technologies, and identify policies to respond to and mitigate the consequences of COVID-19 pandemic and preparedness for future disasters including those linked to natural 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: Projects Completed in 2021

CARICOM Assessment for Regulatory Compliance



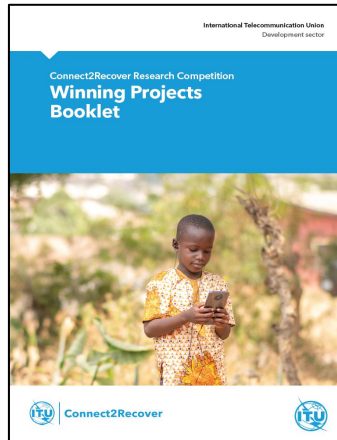
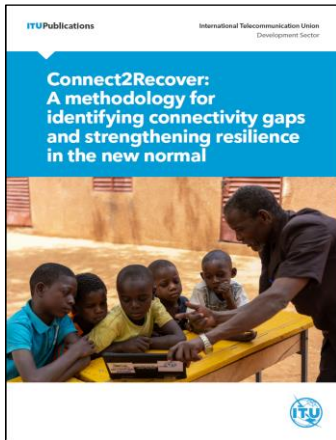
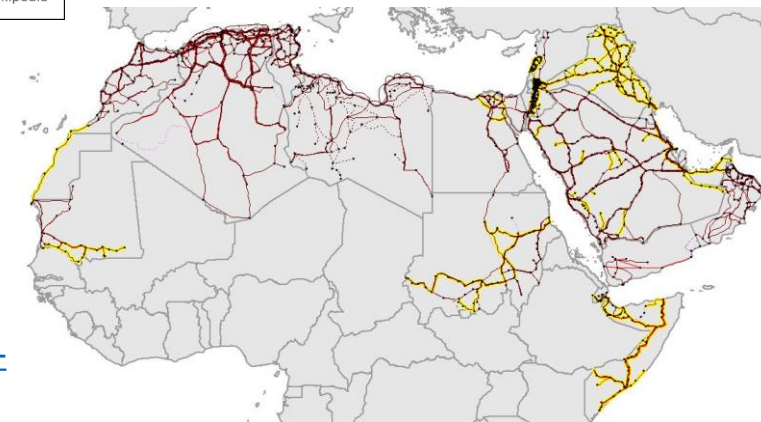
Armenia Internet Country Assessment



Global:

- C2R Global Methodology
- C2R Research Competition

Arab Region Update Broadband Transmission Map



More information:

- <https://www.itu.int/hub/publication/d-tnd-04-2021/>
- <https://www.itu.int/en/ITU-D/Documents/connect2recover/Reports/Armenia-Digital-Data-Resilience-and-Policy-Assessment.pdf>
- <https://www.itu.int/en/ITU-D/Documents/connect2recover/research-competition/Connect2Recover-winning-projects-booklet-final.pdf>

Connect2Recover: Africa

Completed in 2021:



Rwanda



Site visit in March 2021 to all Rwanda Giga connectivity pilot (Rwamanyoni school)

Pilot on school connectivity with Giga (ITU-UNICEF joint initiative)

- Proof of concept for connecting schools through the Giga partnership in Rwanda
- Five schools connected:
 - one school hosting refugees,
 - two nine years-based education schools,
 - one twelve years basic education schools, and
 - one teacher training college.

Upcoming projects:

- Benin
- Democratic Republic of Congo
- Kenya
- Mozambique
- Niger
- Rwanda (Phase 2)
- Sierra Leone
- Zimbabwe
- Regional study (TBC)

Device Affordability: Broadband Commission WG on Smartphone Access

15 Working Group Members: ITU, Vodafone, UN-OHRLLS (Co-Chairs), **Smart Africa, Ghana, Benin**, World Wide Web Foundation, America Movil, Dato Lee Yee Cheong, Intelsat, ITC, FAO, Millicom, and ZTE

Objective: To study barriers to smartphone access (and other devices) and test possible solutions in order to increase usage of mobile broadband to address digital divide and contribute to sustainable economic growth.

Timeline: November 2021 to September 2022.

Expert and Report author: Professor Christopher Yoo, Professor in Law, Communication, and Computer and Information Science at University of Pennsylvania.

4 Workstreams:

1: The Opportunity. Quantify the potential social and economic impact of achieving universal smartphone access by 2030.

2: The Barriers. Identify and analyze the key contributing factors to the smartphone access gap.

3: The Solutions. Design and test solutions to overcome the barriers identified in Workstream

4: The Way Forward. Provide findings and recommendations

More information:

<https://broadbandcommission.org/smartphone-access/>

Opportunity to join Working Group to contribute towards increasing smartphone and device access and addressing digital divide in Africa.

Terrestrial Fibre Open Data: ITU-World Bank (focus on Africa)

Purpose: ITU-World Bank are collaborating on Open Terrestrial Fiber Data Standards and Mapping to improve availability and accessibility of public data on terrestrial fiber infrastructure

Objective:

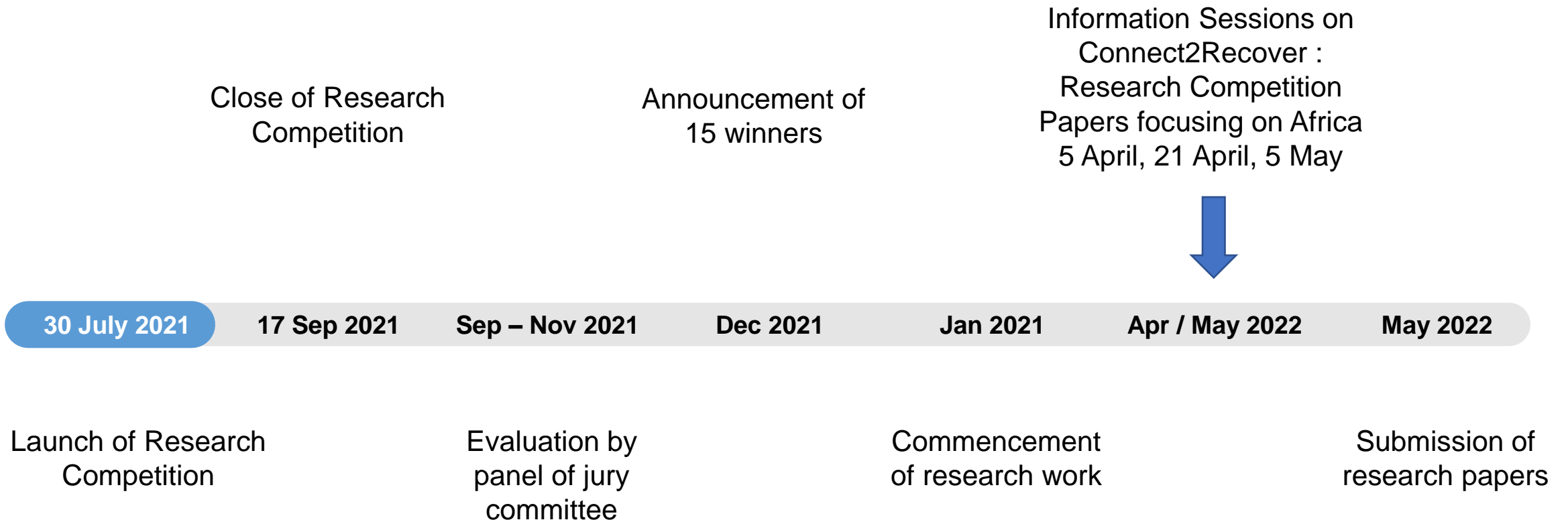
- This helps identify infrastructure gaps, inform investment and policy decisions and facilitate research and innovation.
- This will provide new insights on impact of telecommunications infrastructure on development.

Phased approach:

- Development of Open Data Standard through consultative process
- Publication of Open Data Standard
- Conversion of existing fiber data based on Open Data Standard, focusing initially on Africa, subsequent global expansion
- Establish modular open GIS framework to integrate other infrastructure datasets and socioeconomic datasets

World Bank and partners commitment to undertake pledge at WTDC under Partner2Connect.

Connect2Recover Research Competition: Timeline



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

Submissions Received

Applications

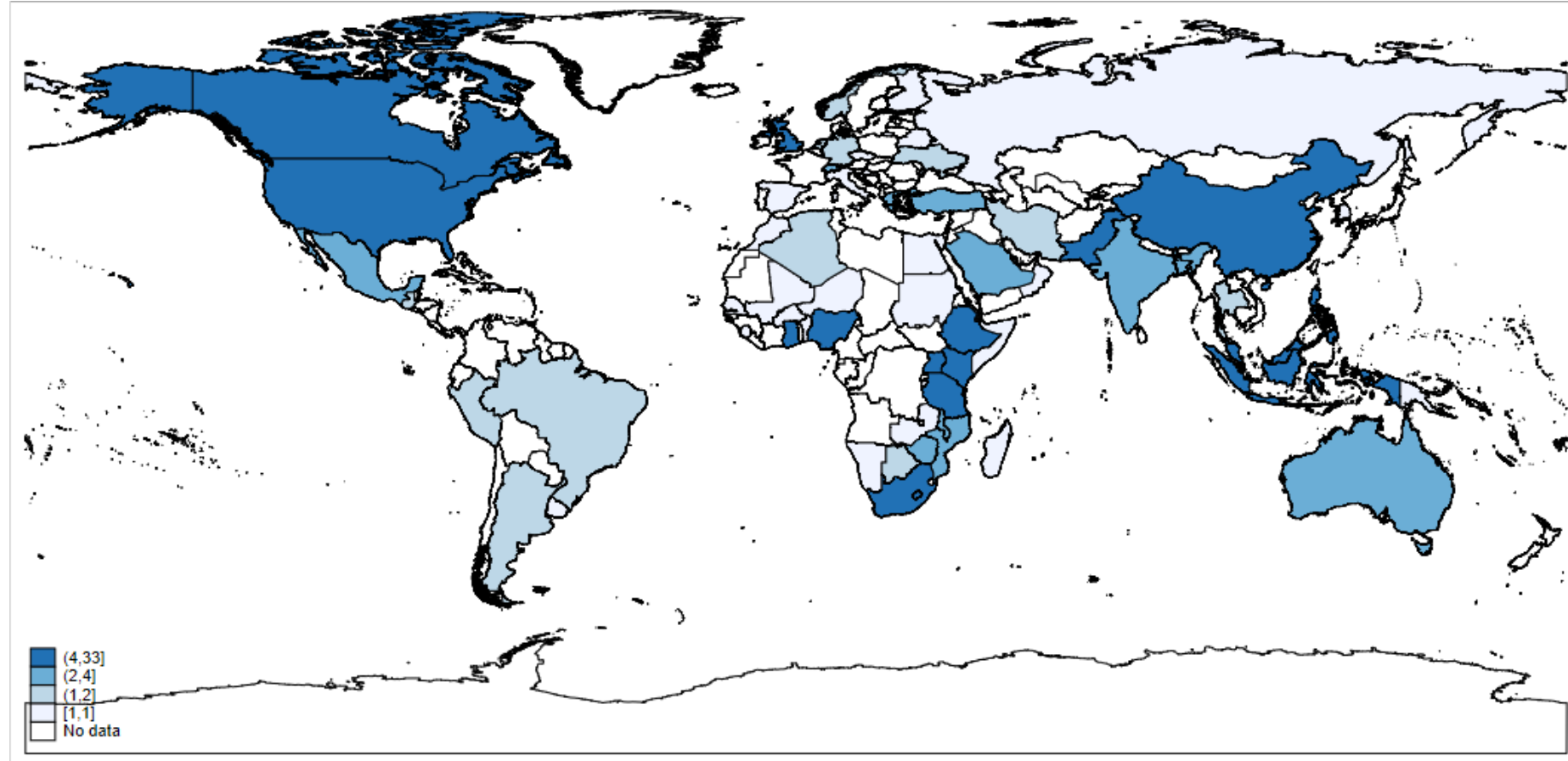
- 307 proposals received
- 80 countries

Regions

- **Africa - 130**
- **America - 47**
- **Arab states - 14**
- **Asia Pacific - 73**
- **CIS - 4**
- **Europe - 51**

Collaboration

- 16 between developed and developing countries



Participating Universities and Institutions

- Total: 259 participated
- Include: 11 of the World's Top 100 Universities



University of Toronto



University of Manchester



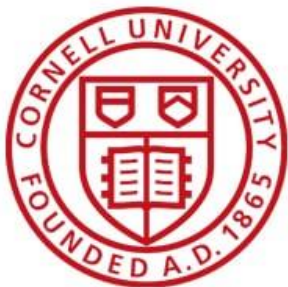
University of Queensland



University of Sheffield



Harvard University



Cornell University



University of Warwick



University of Glasgow



University of British Columbia



University of Southampton



KU Leuven

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

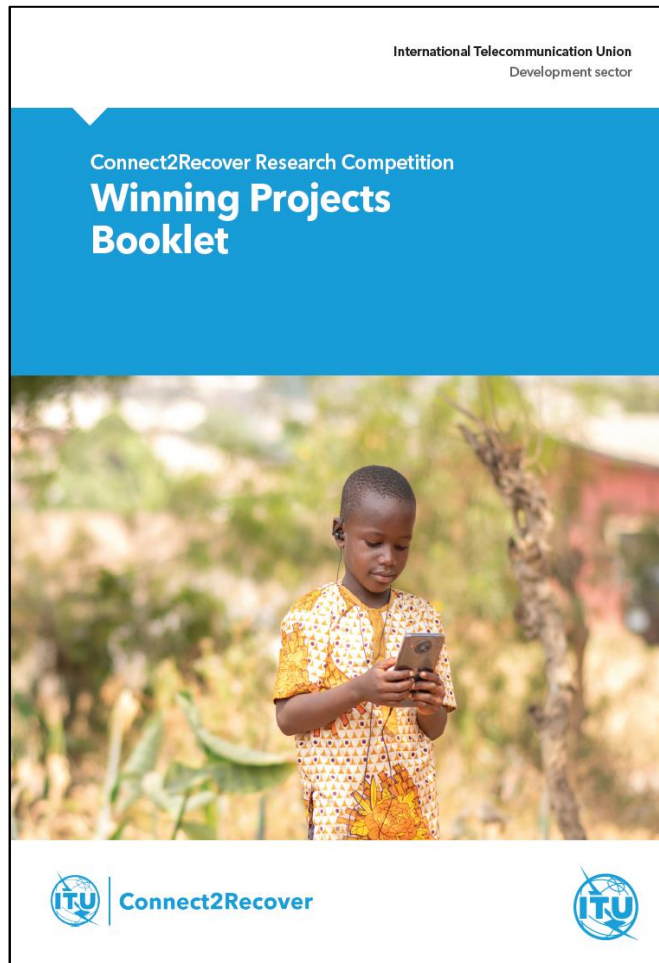


Dr. Cosmas Zavazava
Chief of PDD Department, ITU

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

12 Authoritative proposals for resilience and inclusion in Africa



Digital Inclusion - Education:

- ICT and inclusive higher education in Ethiopia
- Addressing digital divide in Africa through case study of three cities
- Addressing access of marginalized groups to higher education in Australia, Philippines and South Africa

Digital Inclusion – Vulnerable Groups:

- Focusing on vulnerable groups in Uganda and South Africa

Digital Inclusion - Enterprises and Jobs:

- Assess digitalization of micro, small and medium enterprises of COMESA region
- Study on adoption of Fintech to enable micro-enterprises to be more resilient, focusing on Ghana

Digital Inclusion - Health:

- Study on telemedicine ecosystem in Sub-Saharan Africa focusing on Ghana
- Application of communications satellite technology to provide telemedicine services in Nigeria

Digital Connectivity and Resilience:

- Addressing broadband connectivity gaps, based on study on two rural counties in Kenya
- Creating inclusive digital economy through a federated digital platforms for Botswana
- Empowering communities in Africa and India to create resilient local networks
- Assessing market resilience in Kenya


Implementation of the proposals at the country-level with support by host country is required for impact.



14:00 – 14:10	<p>Welcome Remarks: Mr. Sameer Sharma, Senior Advisor, ITU</p> <p>Opening Remarks: Ms. Anne-Rachel Inne, Regional Director, Regional Office for Africa, ITU</p>
14:10 – 14:25	Introduction to Connect2Recover and research competition by Karen Woo, Consultant, ITU
Session 1: Digital Connectivity and Resilience	
14:25 - 14:40	<p>Research Paper 2: Market Resilience in Emerging Digital Economies: Case Study of Kenya During Covid-19 Pandemic Presenter: Dr. Geoffrey Gitau, Principal Investigator, African Advanced Level Telecommunications Institute (AFRALTI), Kenya</p> <p>Q&A</p>
14:40 - 14:55	<p>Research Paper 4: Covid-19 Recovery: Rebuilding Digital Inclusion for the Rural Counties of Kenya Presenter: Mr. Leonard Mabele, Research fellow, Strathmore University, Kenya</p> <p>Q&A</p>
14:55 - 15:10	<p>Research Paper 5: CoLRN: A Community-based Vision for Local Resilient Networks Co-Presenters: Ms. Ndinelao litumba, Masters Student, Department of Computer Science, University of Cape Town, South Africa; and Prof. Melissa Densmore, Associate Professor, Department of Computer Science, University of Cape Town, South Africa</p> <p>Q&A</p>
15:10 - 15:25	<p>Research Paper 8: Federated Digital Platform: Pilot project Botswana</p> <p>A 10-minute fireplace conversation with: Co-Presenters: Dr. Pia Hollenbach, University of Lausanne; Mr. Yame Toto Follett Nkgowe, Project Consultant for SmartBots; and Dr. Sajid Sheikh, Project Consultant for SmartBots</p> <p>Q&A</p>
15:25 - 15:30	Concluding Remarks: Ms. Anne-Rachel Inne, Regional Director, Regional Office for Africa, ITU

PRESENTERS

Introduction to Connect2Recover and research competition




Ms. Karen Woo, Consultant, International Telecommunication Union

[Biography](#)
[Download the presentation](#)

Session 1: Digital Connectivity and Resilience


Research Paper 2: Market Resilience in Emerging Digital Economies: Case Study of Kenya During Covid-19 Pandemic



Dr. Geoffrey Gitau, Principal Investigator, African Advanced Level Telecommunications Institute (AFRALTI), Kenya

[Biography](#)


Research Paper 4: Covid-19 Recovery: Rebuilding Digital Inclusion for the Rural Counties of Kenya



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[Biography](#)


Research Paper 8: Federated Digital Platform: Pilot project Botswana



Mrs. Dr. Pia Hollenbach, University of Lausanne;

[Biography](#)


Research Paper 8: Federated Digital Platform: Pilot project Botswana



Mr. Yame Toto Follett Nkgowe, Project Consultant for SmartBots

[Biography](#)

Research Paper 8: Federated Digital Platform: Pilot project Botswana



Mr. Dr. Sajid Sheikh, Project Consultant for SmartBots

[Biography](#)

More information

ITU

- WTDC Website: <https://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC21/Pages/default.aspx>
- Generational Connect Global Youth Summit Website: <https://www.itu.int/generationconnect/generation-connect-youth-summit-2022/>
- Partner2Connect Website: <https://www.itu.int/itu-d/sites/partner2connect/>
- Membership Application: <https://www.itu.int/hub/membership/become-a-member/>
- Aspirational Targets for 2030: <https://www.itu.int/itu-d/meetings/statistics/umc2030>

Connect2Recover

- Connect2Recover Website: <https://www.itu.int/en/ITU-D/Pages/connect-2-recover.aspx>
- 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/en/ITU-D/Pages/connect2recover/research-competition/default.aspx>
- 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>



Further information on Connect2Recover, please contact:

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