

Towards Universal and Meaningful Connectivity

Future Networks & Spectrum management (Infrastructure team)

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About the division

- Reliable Connectivity to Everyone

Products and services such as assessment studies, publications, workshops, guidelines, and best practices on telecommunication/ICT infrastructure including wireless and fixed broadband, connecting rural and remote areas, conformance and interoperability, spectrum management, transition to digital broadcasting, the effective and efficient management and proper use of telecommunication resources within the mandate of ITU.

- The objective of the Network & Digital Infrastructure program

Is to assist ITU Member States and ITU-D Sector Members and Associates in maximizing the use of new technologies for the development of their information and communication infrastructures and services and building global telecommunication/ICT infrastructure. It will be reached through: Increased usage of connectivity by citizens for socio-economic activities; Efficient spectrum management by professionals using advanced technics and Adoption of modern ICT infrastructure, based on international ICT standards by governmental bodies.



WTDC -22

ITU-D Priorities under Kigali Action Plan:

- **Affordable connectivity**
- **Digital transformation**
- **Enabling policy and regulatory environment**
- **Resource mobilisation and international cooperation**
- **Inclusive and secure telecommunications / ICTs for sustainable development**



Our work in this field

- Spectrum Management and radio monitoring
- Satellite communications
- Rural communications
- Broadband networks: wired and wireless including IMT
- Broadband Mapping
- Connectivity Tools and Analysis for: connectivity of schools, refugee camps,
- Broadcasting: Analogue to Digital transition
- Conformance and Interoperability
- Next Generation Networks: IPv4 to IPv6 transition, etc
- Electromagnetic Fields
- Emerging Technologies



Why broadband mapping?



**SUSTAINABLE
DEVELOPMENT
GOALS**

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Present and future priorities

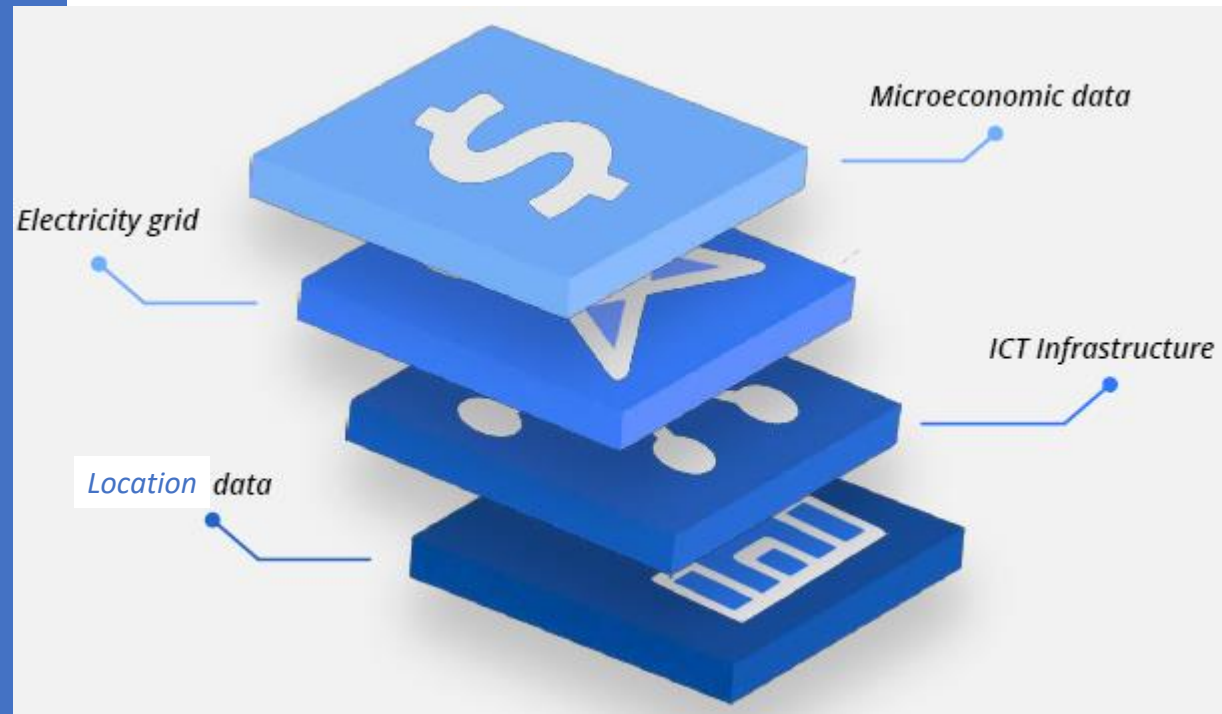
- **Broadband Mapping and Connectivity Analysis**



www.itu.int/go/schoolmap

FNS Catalogue

CONNECTIVITY STACK

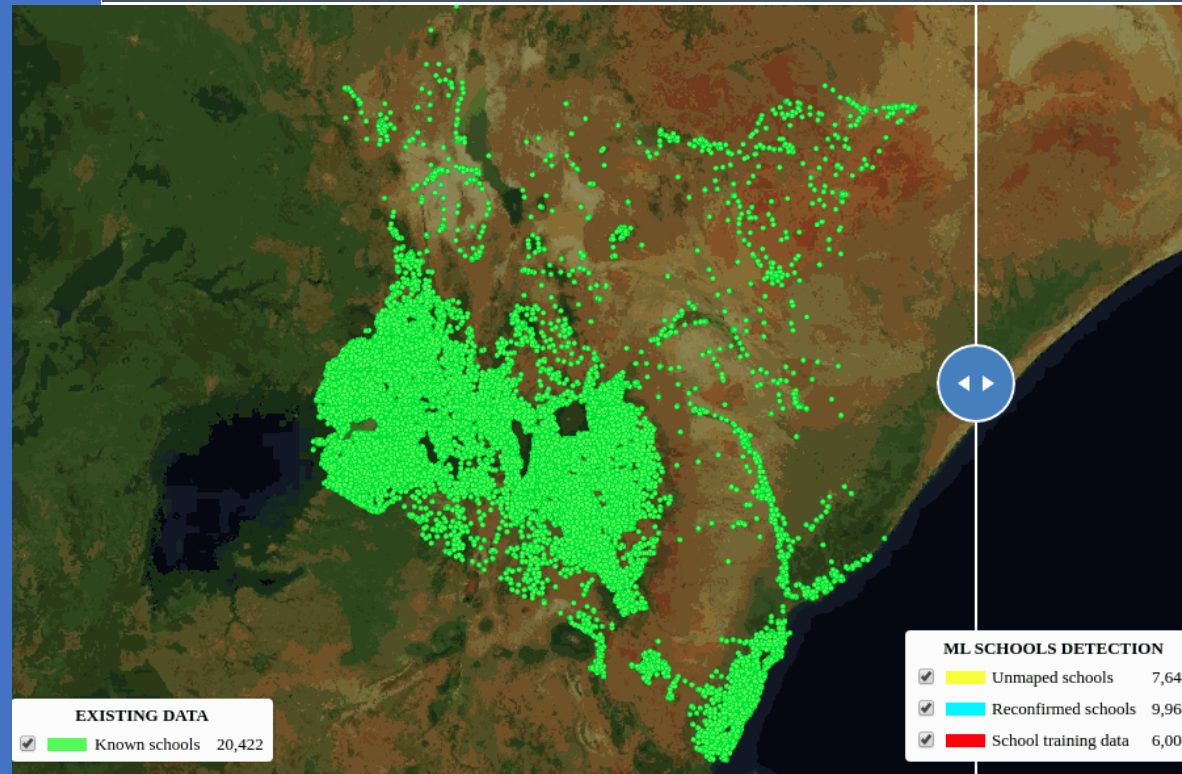


A suite of software tools and digital goods (DPGs) to help connectivity design, planning, deployments and cost estimations

Artificial Intelligence for Infrastructure

AI FOR INFRASTRUCTURE

Using artificial intelligence, we can accelerate Infrastructure Mapping

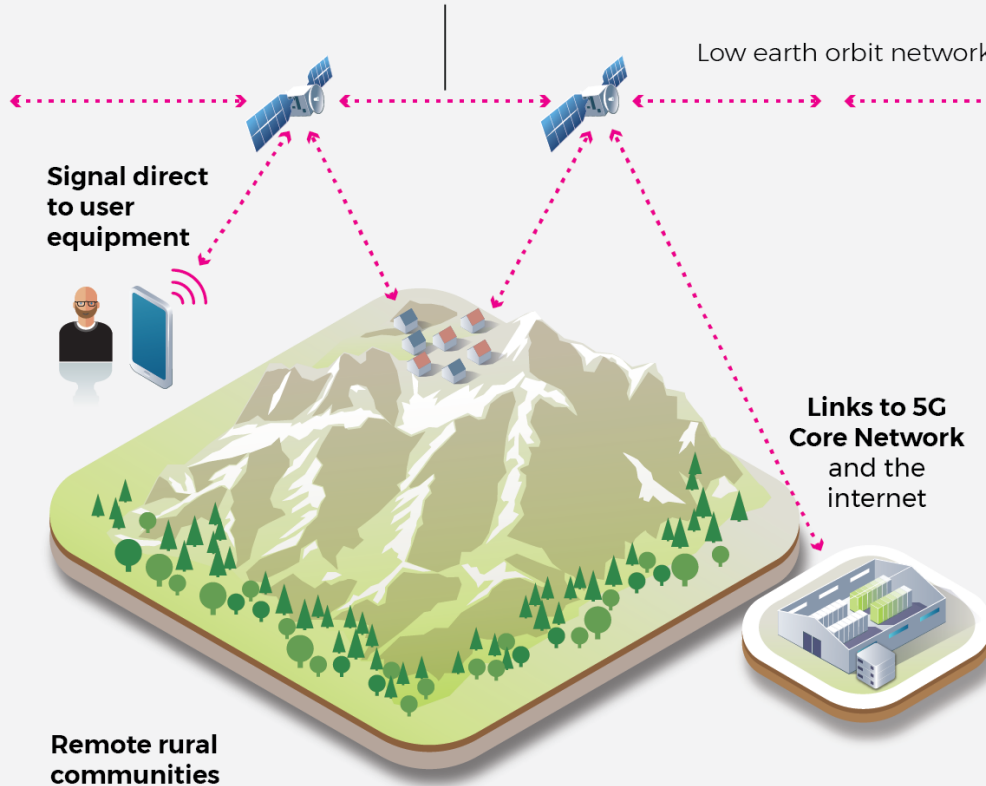


Open-source Tools and DPGs:
Using machine learning algorithms and high-resolution satellite imagery, **more than 23,000 unmapped schools were identified** in Kenya, Rwanda, Sierra Leone, Niger, Honduras, Ghana, Kazakhstan and Uzbekistan

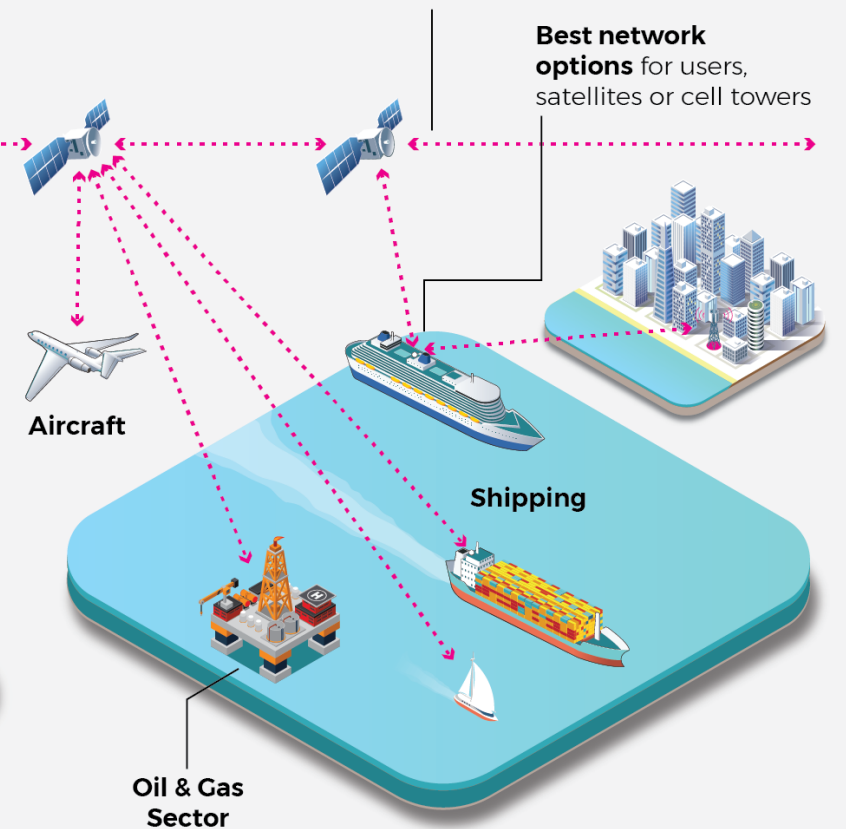
SATELLITE COMMUNICATIONS

The mission of the Non-Terrestrial Connectivity Solutions is to foster the emergence of open-source hardware and software ecosystem that supports emerging standards allowing IMT

RURAL COMMUNITIES / EMERGENCY RESPONSE NETWORKS



ENTERPRISE MOBILITY



FNS Catalogue

SPECTRUM MANAGEMENT FOR DEVELOPING COUNTRIES



Open-source SMS4DC

Our training activities

- Network Design
 - ICT Infrastructure Business Planning Toolkit
 - Broadband Mapping
 - [ITU academy course: Introduction to broadband mapping](#)
 - [Deep dives with ITU Membership in different countries on Connectivity Analysis](#)
 - [Open Fibre Standards](#)
 - Last Mile Connectivity solutions
- Conformance and Interoperability
 - Type Approval procedures, Testing Domains, Regional Technical Collaboration
 - Virtual and On-the-job training in collaboration with partner Testing Laboratories (e.g. CERT/Tunis, NCA/Ghana, CPqD/Brazil)
 - Example: [Conformity and interoperability on test reports analysis and regulatory aspect of electromagnetic compatibility testing \(EMC\)](#)



**Thank you
for your Attention**

