



Gaborone



**Last Mile
Project**



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- **Broadband, IPv6, SD**
 - broadband is critical to the transformation of the end user experience to the digital economy. The introduction of a new broadband technology will be to increase the need for bandwidth and connectivity
- **Last mile**
 - we need providers will need to be evolved with technology, as broadband services, by connecting remote areas to global core network
 - choosing effective, cost effective and fast deployment route to connect whether wire or wireless network, will improve access to fast and reliable connectivity to the last mile service
- **Broadband map**
 - we need a map to target areas where communication links are possible to be deployed to, roads, rail and airway will be effective tool to assess market potential to be done connectivity to all

- **Performance and network scalability (CSC)**
 - Conformity with Internet protocols and standards (e.g., the ability of systems from different vendors to communicate) cannot exist between them, can't avoid costly and cumbersome network configurations and faults
- **Bandwidth**
 - Advantages of T1, T3 and M networks in bandwidth is to enable direct, 100 Mbps to 1 Gbps, smooth migration to and adoption of faster bandwidth
- **Spectrum management**
 - Wireless technology has great potential to improve our quality of life. Thus, FCC and NTIA want to strengthen national radio frequency policy planning and regulatory environment for the use of spectrum

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- Infrastructure is central for enabling universal, sustainable, ubiquitous 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 open up opportunities but also imply significant challenges for developing countries.
- Also notable is the worldwide transition from analogue to digital broadcasting, enabling more efficient use of spectrum and higher quality audio and video delivery.



ITU/BDT activities in infrastructure development/2

- **Conformance and interoperability (C&I)**

- Conformity with international standards and interoperability, i.e. the ability of equipment from different vendors to successfully communicate between them, can help avoid costly and unforeseen network dysfunctions and hazards

- **Broadcasting**

- The objective of ITU BDT and BR work in broadcasting is to enable developing countries to achieve smooth migration to and adoption of digital broadcasting.

- **Spectrum management**

- Wireless technology has great potential to improve our quality of life. Thus, BDT and BR works to strengthen national regulatory bodies in frequency planning and assignment, management and monitoring.



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Last Mile Project

Objectives of the Last Mile Project

- Provide guidelines, solutions and toolkit that will support T3a Sector Members in setting last mile connectivity infrastructure and applications
- Increased access to broadband
- Increased last mile networks
- Interconnection of local, national and regional networks (e.g. using SD-WAN)
- Increased use of T3a services
- Increased development of digital skills
- Increased development of digital solutions and applications

Deliverables

- Compilation of case studies for last mile connectivity solutions and services
- Analysis of the use of different infrastructure and technologies to provide citizens with affordable last mile connectivity
- Guidelines, solutions/toolkits for setting, maintaining and using last mile connectivity solutions
- Capacity building for local applications usage and development as well as innovations

Implementation

- The project will be implemented by ITU and various partners
- The project will be implemented in the following way:
 - It is looking for partners that may contribute to any part of the study
 - Evaluation
 - Last mile connectivity technologies
 - Service to deliver last mile connectivity
 - Design of last mile networks
 - Deployment
 - Maintenance of the last mile connectivity solution
 - Training for project implementation
- The contributors and their organizations will have regular feedback contributions or authors
- Please contact Amanda A. Garbis, a <mailto:amanda.garbis@itu.int> for more information, questions or feedback about the project

Part 2: Guidelines/toolkit for increasing last mile connectivity

- Introduction
- Overview of the project and its objectives
- Objectives
- Scope of the project
- Methodology
- Results and findings
- Conclusions and recommendations
- Appendix

Part 1: Case Studies

1. Overview of existing and potential solutions for last mile connectivity in rural areas
 - Overview of existing solutions
 - Overview of potential solutions
 - Overview of the project and its objectives
2. Overview of existing and potential solutions for last mile connectivity in rural areas
 - Overview of existing solutions
 - Overview of potential solutions
 - Overview of the project and its objectives
3. Overview of existing and potential solutions for last mile connectivity in rural areas
 - Overview of existing solutions
 - Overview of potential solutions
 - Overview of the project and its objectives
4. Overview of existing and potential solutions for last mile connectivity in rural areas
 - Overview of existing solutions
 - Overview of potential solutions
 - Overview of the project and its objectives

Objectives of the Last Mile Project

- Provide guidelines, solutions and toolkit that will support ITU Sector Members in setting last miles connectivity infrastructure and applications
 - Increased access to broadband
 - Increased last mile networks
 - Interconnection of (local, national and regional) networks e.g., using IXP,
 - Reduced cost of access
 - Increased development of digital Skills
 - Enhanced development of digital solutions and applications.

Deliverables

- Compilation of case studies for last mile connectivity solutions and services
- Analysis of the use of different infrastructure and technologies to provide citizens with affordable last mile connectivity
- Guidelines, solutions/toolkits for setting, maintaining and using last mile connectivity solutions
- Capacity building for local applications usage and development as well as innovations

Implementation

- The project will be implemented by ITU and various partners
 - The project will be under the ITU umbrella
 - ITU is looking for partners that may contribute in any part of the study
 - Case studies
 - Last mile connectivity technologies
 - Sustainable business solutions for last mile connectivity
 - Regulations and Policies
 - Applications
 - Implementation of the last mile connectivity solutions
 - Financing the project implementation
- The contributors and their organizations will be recognized (as contributors or authors)
- Please contact Aminata A. Garba, aminata.amadou-garba@itu.int, for more information, questions or interests about the project

Part 1: Case Studies

1. Overview of (existing and potential) solutions for last mile connectivity in rural areas
 - Community networks,
 - Wi-Fi, Mesh network, or other LAN/MAN in unserved areas
 - Others e.g., White spaces
2. Overview of services that could be offered using last mile connectivity in rural areas
 - Local data generation and hosting
 - Local IoT applications using the networks, e.g., e-agriculture, e-healthcare, e-education, water/flood management, energy management,
 - Local E-governance, etc.
 - Distance learning
3. Case studies of deployed solutions for last mile connectivity in rural areas (include but not limited to community networks)
 - Compilation and Analysis of existing deployed solutions (location, size, background, evolution)
 - Tutorials on the technical aspects including the spectrum use
 - Compilation and Analysis of the used business model
 - Proposals of the applications and services
 - Design of a comparative model
4. Data analysis and discussion
 - Collect and analyze existing data on last mile connectivity in different regions

Part 2: Guidelines/Toolkit for increasing last mile connectivity

- Technical solutions:
 - Creating and maintaining the networks (for each solution, a step by step directives)
 - Interconnecting the networks
- Applications
 - Creating local applications
 - Creating and managing local data with e-community
- Regulations and Policy
 - Regulatory environment
 - Accessibility of the network (cost, devices)
- Spectrum considerations
- Business models and financing the last mile connectivity solutions
- Capacity building

Part 3 includes country assistance in implementing the identified solutions



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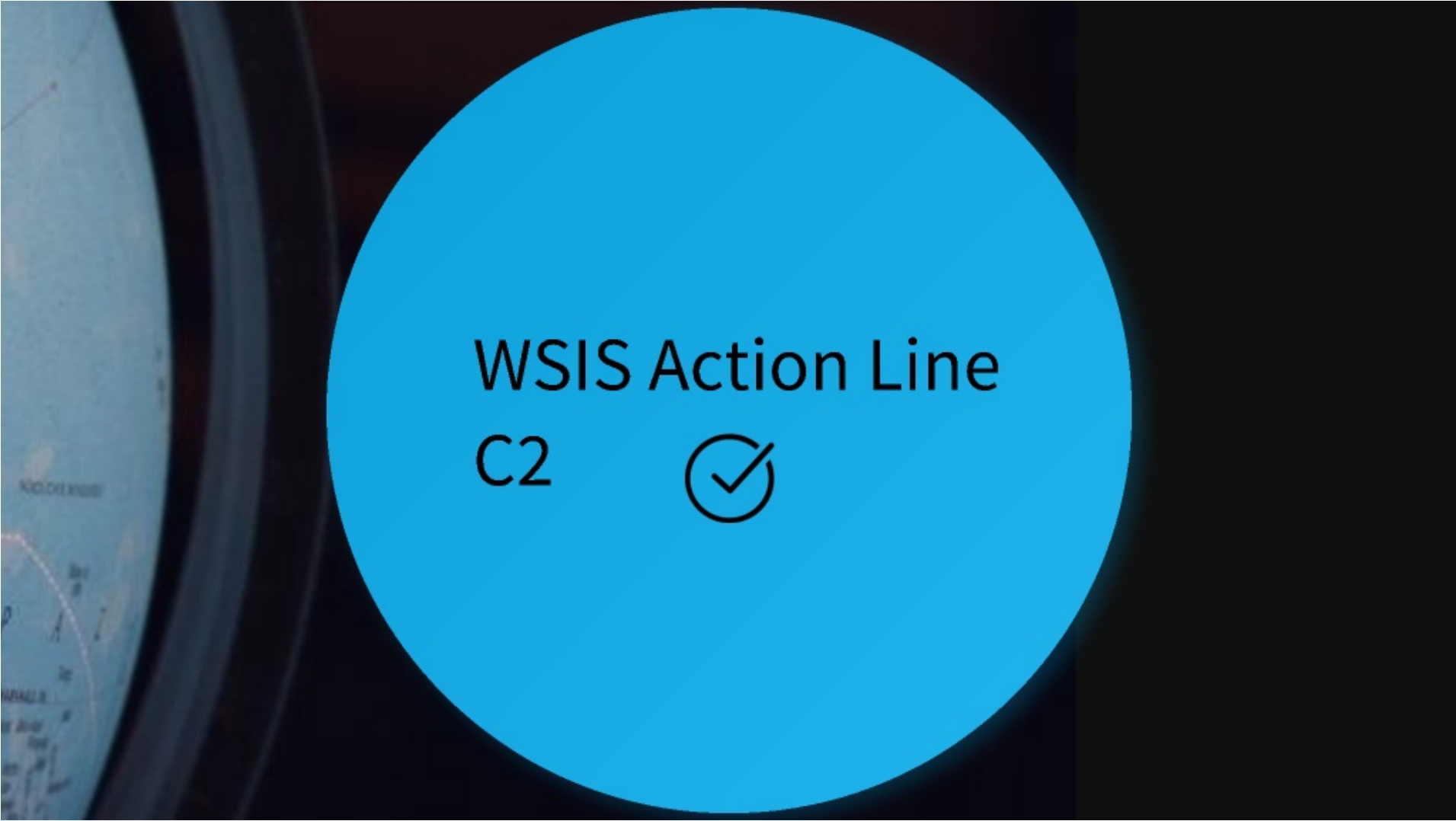


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The background of the slide features a dark, slightly blurred image of a globe on the left side. Overlaid on this is a large, solid blue circle that serves as a container for the main text.

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Thank You !



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