

National Broadband Strategy 2019-2023



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Overview of the Broadband Strategy

- 1. Process of Broadband Strategy Development**
- 2 Key Elements**
 - Objectives
 - Broadband Definition
 - Focus Areas/Initiatives
 - Implementation Roadmap
 - Key Observations
- 3. Way Forward – Institution Arrangements**

Process for Broadband Strategy Development

- The Government under the Digital Malawi Project developed the Broadband Strategy (Target 2019-2023).
 - MACRA under the Ministry
 - Stakeholders consultation meetings
- Technical assistant Consultant – ICC
- *Broadband Strategy*
 - *Implementation Framework*
 - *Targets for 2019 to 2023*

Key Elements of the Broadband Strategy

- **Broadband Strategy Objectives**
- **Broadband Definition**
- **Broadband Targets**
- **Applicable Technologies**
- **Focus Areas**
- **Implementation Roadmap**
- **Institution Arrangements**

Strategic Objective

- **To provide Strategic Direction for the promotion of universal access of Broadband**
- *BB plays a vital role in improving global SDGs*
- *Supports provision of basic needs (education, healthcare, agriculture, trade)*
- *lift people out of poverty through e-commerce and job growth*

Strategy Objectives

- To promote BB deployment,
 - To increase BB adoption and usage and
 - Ensure affordable broadband services
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- *To enable Malawi participate in the global economy and take advantage of emerging digital innovation opportunities*

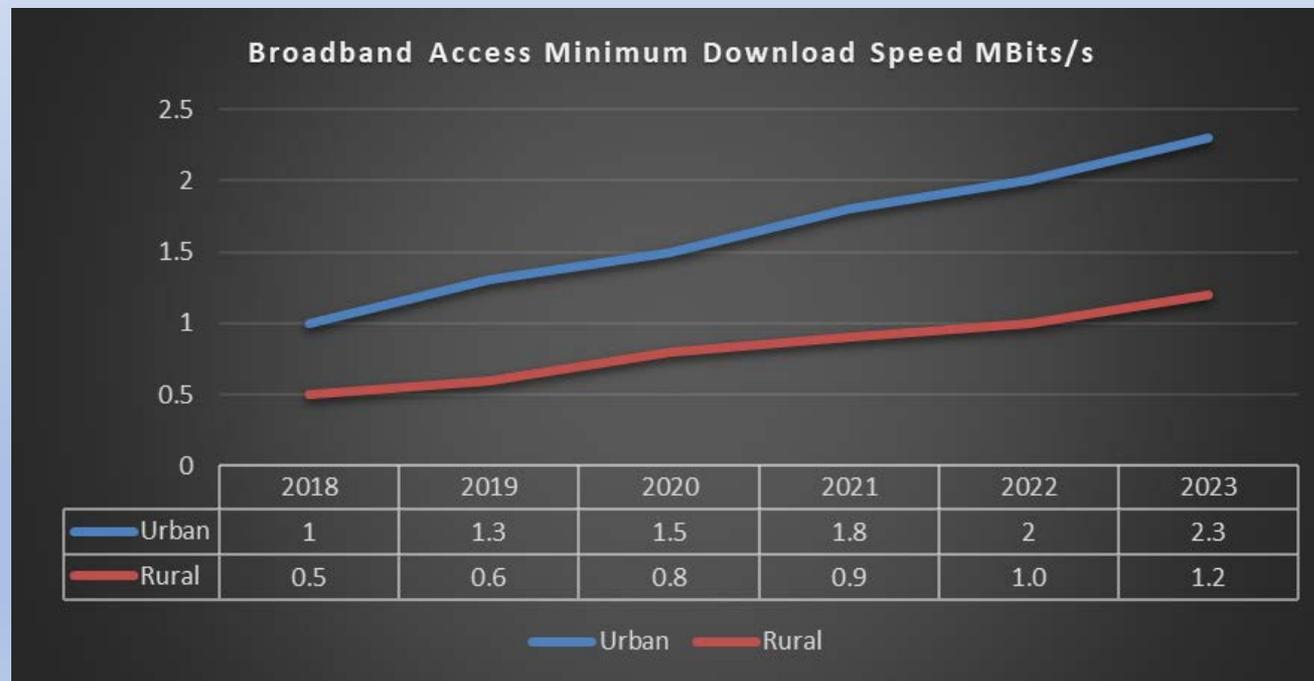
Broadband Definition

- **Broadband Definition**
- *Broadband is an ecosystem of high speed and high quality networks that provides high value information and communications to users*
- **Network definition -**
 - *designed to carry large volume of data in a manner that end-users experience an acceptable QoS –*
 - *A network that transits the data at a high speed.*
 - Always on

Key Elements of the Broadband Strategy

Broadband speed targets

- *In 2023, Broadband access minimum speed projected at*
 - *1.2Mbps (rural)*
 - *2.3Mbps (urban)*

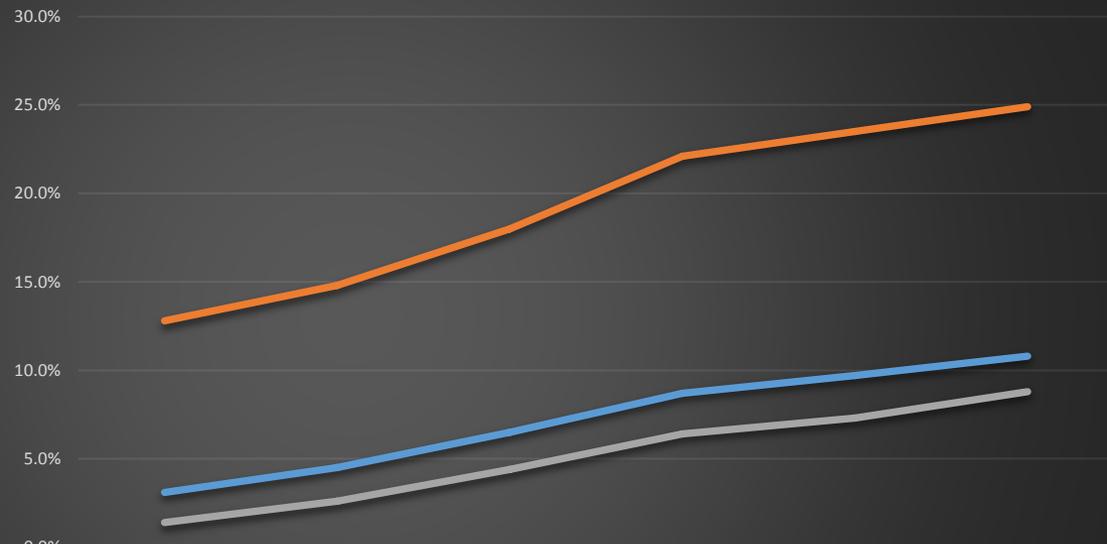


Key Elements of the Broadband Strategy

BB access penetration targets (2023)

- **10.8%** (*entire population*)
- **24.9%** (*urban*)
- **8.8%** (*rural*)

Broadband Access Penetration - percentage

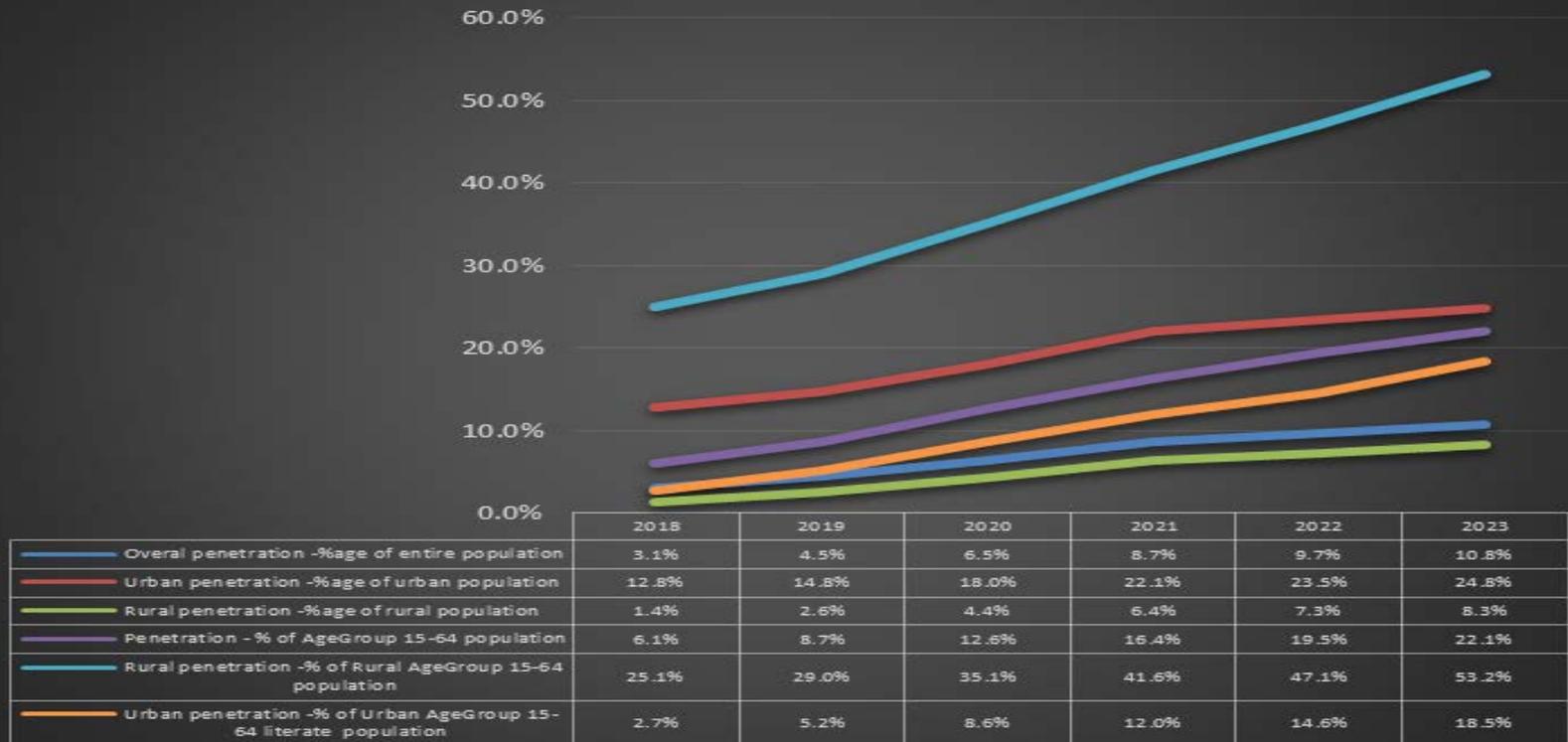


	2018	2019	2020	2021	2022	2023
Overall penetration % of the entire population	3.1%	4.5%	6.5%	8.7%	9.7%	10.8%
Urban population % of the urban population	12.8%	14.8%	18.0%	22.1%	23.5%	24.9%
Rural population % of the Rural population	1.4%	2.6%	4.4%	6.4%	7.3%	8.8%

Key Elements - Targeted age group 15 to 64

- Age group 15-64 is likely to impose the most BB Demand and be the economically active age group on usage.

Broadband Access Penetration - percentage



Broadband User Categories

- **Individual Consumers**
- **Households**
- **Shared Access –**
 - **Type I Small Organisations**
 - **Community Centres**
 - **Small to Medium Businesses**
 - **Local Health Offices**
 - **Education (Schools)**

Applicable Broadband Technologies

- The Strategy presents different BB Technologies which have advantages, disadvantages and sustainability.
 - **Wired technologies** have different technical capacities
 - provides high-speed internet to end users
 - Mostly used for backhaul
 - limitations include investments/deployment costs and are vulnerable to vandalism
 - **Wireless technologies:**
 - capacity and connection speed enjoyed by end users are lower as compared to wired technologies
 - can deliver mobile broadband access (not only to “fixed” locations), but also to the people on the move
 - Terminals are used indoors but also on the move.

Implementation Framework Focus Areas



Broadband Implementation Roadmap

ID	Task Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	1 Increase access speeds and capacity of existing network infrastructure	[Progress bar from Year 1 to Year 6]					
2	1.1 Roll out 3G and 4G to all existing towers	[Progress bar from Year 1 to Year 6]					
3	3G roll out	[Progress bar from Year 1 to Year 3]					
4	4G roll out	[Progress bar from Year 1 to Year 6]					
5	1.2 Migrate FWA from WiMAX to LTE	[Progress bar from Year 1 to Year 4]					
6	1.3 Release more spectrum	[Progress bar from Year 1 to Year 4]					
7	1.4 Promote use of renewable energy sources	[Progress bar from Year 1 to Year 6]					
8	1.5 Network Reliability, Redundancy and Diversity (NRRD)	[Progress bar from Year 1 to Year 6]					
9	2 Increase access network coverage into underserved (unserved) areas	[Progress bar from Year 1 to Year 6]					
10	2.1 Deploy new infrastructure – Mobile, FWA and use of broadband satellite	[Progress bar from Year 1 to Year 6]					
11	2.2 Release sub-1GHz spectrum for wider coverage	[Progress bar from Year 1 to Year 4]					
12	2.3 Incentivise the use of suitable spectrum for backhaul connect	[Progress bar from Year 1 to Year 4]					
13	2.4 Promote infrastructure and/or network sharing through regulatory incentives	[Progress bar from Year 1 to Year 6]					
14	3 National backbone network capacity	[Progress bar from Year 1 to Year 6]					
15	3.1 Policy to ensure new or reconstructed civil works include telecoms duct available to operators	[Progress bar from Year 1 to Year 6]					
16	3.2 Require Reference Wholesale Offers from Network Service Licensees	[Progress bar from Year 1 to Year 4]					
17	3.3 Undertake periodic reviews of wholesale tariffs based on cost models to ensure prices are cost-based	[Progress bar from Year 1 to Year 3]					
18	4 International network capacity	[Progress bar from Year 1 to Year 6]					
19	4.1 Ensure sufficient network availability for needs	[Progress bar from Year 1 to Year 6]					
20	4.2 Promote local content and hosting to minimise costs	[Progress bar from Year 1 to Year 6]					
21	5 Availability of broadband	[Progress bar from Year 1 to Year 6]					
22	5.1 Development of government and education networks	[Progress bar from Year 1 to Year 6]					
23	5.2 Promote and fund Telecentres in rural areas	[Progress bar from Year 1 to Year 4]					
24	5.3 Support development of "Smart Hubs"	[Progress bar from Year 1 to Year 4]					
25	6 Affordability of Broadband	[Progress bar from Year 1 to Year 6]					
26	6.1 Improve affordability of terminals/connection devices	[Progress bar from Year 1 to Year 4]					
27	6.2 Introduce further levels of competition in the market	[Progress bar from Year 1 to Year 6]					
28	6.3 Introduce targeted subsidies - Voucher schemes for businesses/SME users	[Progress bar from Year 1 to Year 4]					
29	6.4 Closely monitor and where necessary regulate retail prices	[Progress bar from Year 1 to Year 3]					
30	6.5 Review impact of taxation levels on broadband services on the industry and user take-up	[Progress bar from Year 1 to Year 6]					
31	7 Promote demand	[Progress bar from Year 1 to Year 6]					
32	7.1 Develop IT skills for teachers, technical professionals and IT	[Progress bar from Year 1 to Year 6]					
33	7.2 Promote government usage	[Progress bar from Year 1 to Year 6]					
34	7.3 Encourage businesses and SMEs to work together	[Progress bar from Year 1 to Year 4]					

Implementation Roadmap

- **The BB Roadmap Targets** calls for a close cooperation between operators and MACRA to plan the roll out in alignment with the broadband roadmap to ensure issues are identified at an early stage and addressed appropriately.

Key Observations - Implementation challenges

- Inadequate ICT skills and training and illiteracy level esp for the rural population
- Affordability limitations due to widespread income insecurity/limitations on cash incomes, including likely with respect to both terminals and service costs;
- The remainder of the population and particularly large segments of the rural population will require subsidized/free access, including provision of terminals through measures like shared access/telecentres.
- Lack of electricity and low dependability of power grid where there is access

Strengths

- Coms Act gives powers to Minister, so control structure is clear
- ICT Policy has been developed along with ICT Masterplan and Wireless Broadband Access Masterplan
- Licensing regime and functioning NRA are in place
- Cost modelling study has recently been completed and wholesale prices will move to be more in line with costs

Weaknesses

- High cost of terminals and low penetration
- Lack of electricity and low dependability of power grid where there is access
- Lack of local content
- Shortage of ICT skills and training
- High taxation levels
- Inadequate infrastructure backbone and access

Key Observations

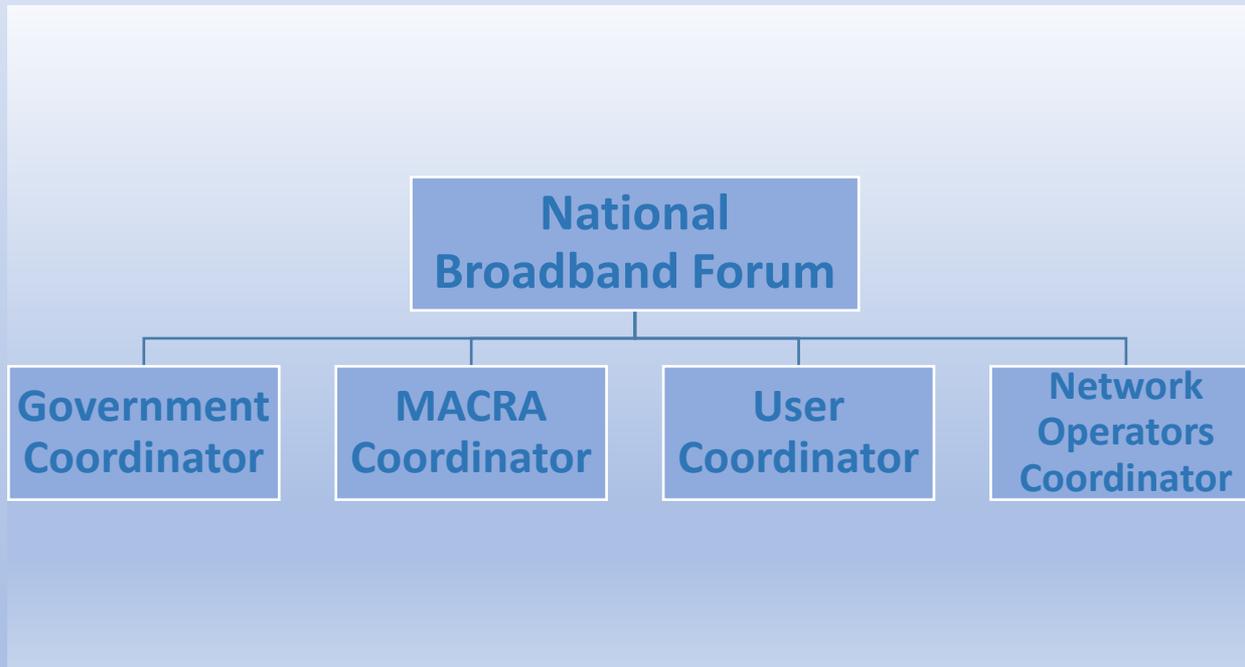
Opportunities (1)

- Mandate infrastructure sharing especially towers in rural areas and new ducts
- Widespread deployment of connectivity specifically aimed at providing Broadband to “shared access” centres/locations
- The MAREN of the higher education network to give more POPs for colleges, education institutions
- Increase power availability in rural areas including using renewable energy
- Develop strategic plan for USF including prioritizations on principles of highest increase in access connectivity at least cost

Threats

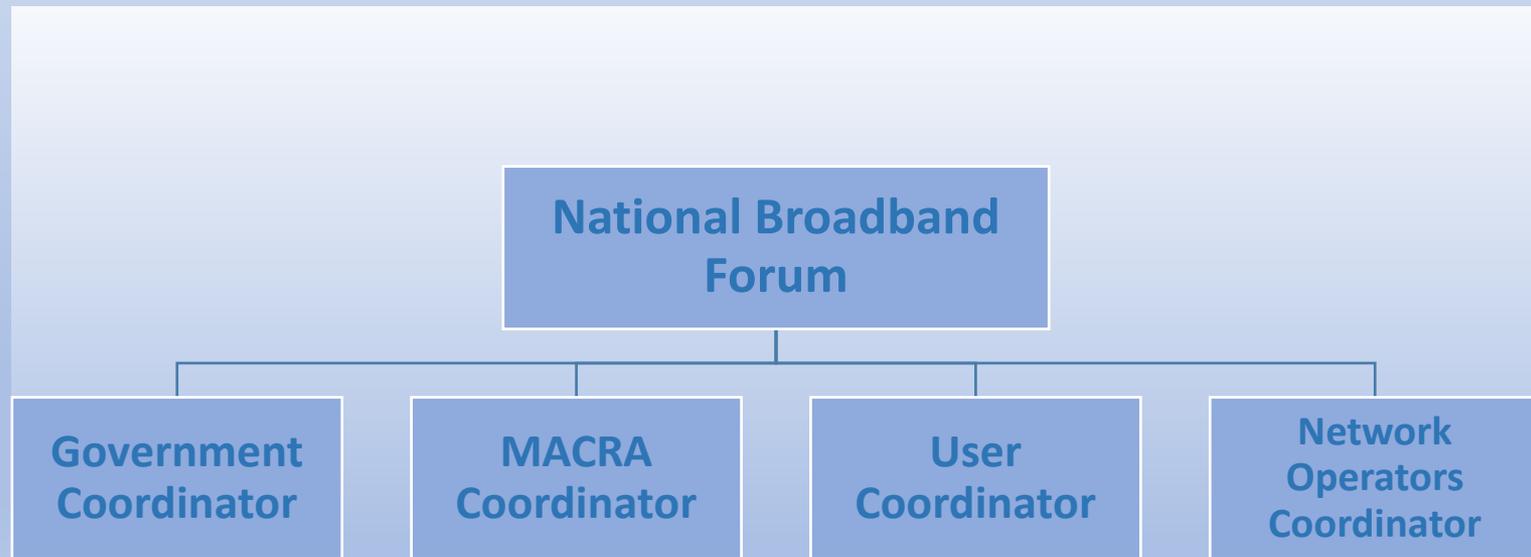
- Difficulty in serving the rural population due to high cost of service access to low-density, poor populations
- No clear prospect for GDP growth supporting significant investment
- Failure of widespread deployment of technologies e.g. fixed wireless access
- Impact of a wider digital divide
- Difficulty in management of and lack of cooperation between stakeholders
- Unstable exchange rates and lack of access to investment finance
- Ongoing dominance of the 2 mobile operators

WAY FORWARD – Institutional Arrangements



National Broadband Forum

- Aimed at ensuring close cooperation among the key stakeholders on Broadband Strategy Implementation
- Ensure that the Roll Out Plan is aligned to the broadband roadmap to ensure issues are identified at an early stage and addressed appropriately.



Comments and Questions