

4th Meeting of the m-Powering Advisory Board

10 September 2018

Durban, South Africa

REPORT 2018

BY THE m-POWERING DEVELOPMENT INITIATIVE ADVISORY BOARD

m-POWERING
DEVELOPMENT
INITIATIVE



Working Group Report on Access (Connectivity) and Affordability Part III

Ram Sewak Sharma

Introduction



**m-POWERING
DEVELOPMENT
INITIATIVE**



- Working Group on” Access(Connectivity) and Affordability is a subgroup of the m-Powering Development Initiative Advisory Board.
- The Working Group focuses on measures to enhance access (connectivity) and affordability through mobile technology and devices so that relevant content, applications and services are made available at low cost to individuals, particularly those living in remote or underdeveloped parts of the world.

Terms of Reference



**m-POWERING
DEVELOPMENT
INITIATIVE**



Terms of reference for the working group were as follows:

1. Identify key stakeholders and new players;
2. Identify existing technologies and mobile devices that could enable affordable access;
3. Identify potential technical, regulatory and commercial barriers for the implementation of these technologies and devices;
4. Research innovative incentive mechanisms to extend access, connectivity and uptake;
5. Carry out a needs analysis by identifying and surfacing use cases (m-health, m-education, m-banking, m-agriculture, m-governance, etc.)

Terms of Reference



**m-POWERING
DEVELOPMENT
INITIATIVE**



Terms of reference for the working group (Contd...):

6. Examine the potential of unified platforms, providing for the integration of databases with application platform and transactional capability, in empowering the poorest and marginalised population;
7. Identify innovative business models for sustainable connectivity taking into consideration affordability within the targeted group;
8. Draft a work plan for concrete actions;
9. Carry out the activities that will support the implementation of the Initiative work plan.

Overview of the Report



**m-POWERING
DEVELOPMENT
INITIATIVE**



1. Introduction.
2. Key stakeholders and new players.
3. Technologies and mobile devices.
4. Technical, regulatory and commercial barriers.
5. Research innovative and incentive mechanisms.
6. Needs Analysis- a range of outstanding opportunities.
7. Potential of Unified Platforms.
8. Innovative Business Models for Sustainable Connectivity.
9. The Way forward-Seven Key Actions

Key stakeholders and new players



m-POWERING
DEVELOPMENT
INITIATIVE



- **Federal Government** – for universal access planning and implementation, incentives to encourage use of digital services (e.g. *National Broadband Network-Australia, Digital India Programme-India*)
- **Local Government** – Better placed to understand and identify obstacles to affordable mobile access and locally feasible solutions.
- **Sector Regulator** – for enabling environment, ease of doing business, and making available spectrum at affordable rates, protect consumers and a channel between consumers and companies.

Key stakeholders and new players



m-POWERING
DEVELOPMENT
INITIATIVE



- **Competition Regulator** – to promote fair and free competition.
- **Private Sector** – for providing lucrative platform for collaboration of technology with financial institutions to promote open competition, investment in infrastructure, and expansion of coverage of services.
- **Local Operators** – They have the capability and expertise to deploy mobile infrastructure and extend reach of services to rural and remote areas.

Key stakeholders and new players



m-POWERING
DEVELOPMENT
INITIATIVE



- **Financial Institutions** – for long term investment in the networks, and credit to low income populace to increase revenue generation potential for them
- **Startups** – for digital applications to generate demand for broadband, and innovative ways to improve affordability of mobile technologies
- **Consumer Advocacy Groups and civil society** – for raising consumer awareness and protecting their rights

Technologies and mobile devices



m-POWERING
DEVELOPMENT
INITIATIVE



- Existing technologies that have the potential to make affordable access a reality:
 - **Wireless Cellular Network:**
 - 3G WCDMA
 - 4G LTE
 - 5G
 - **Wi-Fi:**
 - Unlicensed Spectrum
 - **Satellite and Space-based technologies**
 - **Devices:**
 - Low cost Mobile Devices
 - Low cost Access Points

Technical, Regulatory and Commercial Barriers



m-POWERING
DEVELOPMENT
INITIATIVE



- International Gateway access at affordable prices.
- Lack of reliable and affordable access to backbone networks.
- High cost of investment, operations and compliance.
- Low purchasing power, low usage and seasonal income.
- Taxation Regimes in Telecommunications to address long terms benefits.
- Need to devise innovative methods to secure the networks
- Shortage of Electrical Grids that use sources alternative sources of energy.

Research, innovative and incentive mechanisms



m-POWERING
DEVELOPMENT
INITIATIVE



Working group has identified following innovative schemes that can help in increasing access and connectivity:

- Public Wi-Fi hotspots. (e.g. TRAI's initiative)
- Fixed Broadband. (e.g. National Optical Fibre Plan, India)
- Cable Broadband
- Satellite and other space-based technologies.
- Voice over Wi-Fi.
- Government led Initiatives.
- Incentive Schemes.
 - Digital Transaction Incentive
 - Awards
 - Government Services

Need Analysis



**m-POWERING
DEVELOPMENT
INITIATIVE**



- Significant opportunities to address major social and cultural barriers (digital literacy, easy affordable access to all etc) through affordable internet and online services:
 - Agriculture and Market Applications.(e.g. m Kisan application, India)
 - Weather Conditions.
 - E-governance.(Unified Mobile Application for New-age-Governance, India).
 - Direct Transfer of Benefits.
 - Skill Development Applications.
 - Money Transfer.
 - Increased Access to persons with Disabilities.
 - Electronic Health Facilities.
 - Peer to Peer lending
 - Social Occasions and events.

Potential of Unified Platforms



m-POWERING
DEVELOPMENT
INITIATIVE



- Affordable access may be achieved by leveraging:
 - Unlicensed spectrum and local operators
 - Digital platforms.
 - Use of biometric systems
 - Payment interfaces (e.g. M-PESA in Kenya, Bharat Interface for Money, India).

Innovative Business Models for Sustainable Connectivity



m-POWERING
DEVELOPMENT
INITIATIVE



- The poorest billion of the world's population have a monthly average income of USD 45 (ITU and other analysis).
- They spend approx USD 2.25 per month on affordable communications
- Majority of these people live in Sub-Saharan Africa and the Indian subcontinent.
- Approx 75 % live in rural regions and depend largely on agriculture for their livelihoods.
- An estimated 20-40 % live out of reach of even the most basic mobile networks.

Innovative Business Models for Sustainable Connectivity



m-POWERING
DEVELOPMENT
INITIATIVE



- Governments should take a lead in increasing accessibility through encouraging and incentivizing innovation and engaging with the private sector to develop these much needed innovative business models:
- Infrastructure sharing.
- Aggregation of small Wi-Fi networks.
- De-licensing of spectrum in rural/remote areas.
- Universal Service Obligation funding.

Innovative Business Models for Sustainable Connectivity



m-POWERING
DEVELOPMENT
INITIATIVE



- Ground breaking business models in action:
 - Launch of smartphones in 13 countries by Mozilla and Orange.
 - Grameenphone in Bangladesh.
 - Managed Rural Coverage, a partnership between MTN Benin and Ericsson.
 - USD 25 smartphone and digital services by Rjio in India.
 - Special shopping zones for e-surfing users by Taobao and China Telecom in China.
 - Air Jaldi, India
 - Mawingu providing Wi-Fi hotspots in Kenya.
 - ViRural Wholesale Network for Rural Telephony in Nigeria

Way Forward



m-POWERING
DEVELOPMENT
INITIATIVE



- Working Group has recommended following action plan featuring seven key actions to boost increased access and affordability:
 1. Enable collaboration between key stakeholders and new players.
 2. Identify and invest in technologies and mobile devices.
 3. Remove regulatory, technical and commercial barriers.
 4. Implement innovative incentive mechanisms to increase access and affordability.
 5. Identify real-life examples which are increasing the use of Internet and online services.
 6. Leverage unified platforms to meet the goals of increased access and affordability.
 7. Nurture and fund innovative business model for sustained connectivity



**m-POWERING
DEVELOPMENT
INITIATIVE**



THANK YOU