Broadband Strategies are Essential for Digital Development

A global coalition working to make broadband affordable for all

A4AI

A4AI-Bangladesh Coalition Meeting
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Alliance for Affordable Internet

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Broadband strategies critical for digital development

- A World Bank (Qiang et al, 2009) study concludes that a 10 percentage point increase in fixed broadband penetration would increase GDP growth by **1.21%** in developed economies and **1.38%** in developing ones.

- The A4AI Affordability Report identified a strong relationship between broadband plans and affordability outcomes.

- The UN Broadband Commission argues that broadband is an indispensable driver of economic development and diversification, as well as technological and social transformation at the individual, business and government levels.

- The most recent GSMA report on the status of the mobile industry estimates that 29m jobs will be directly or indirectly supported by the mobile ecosystem and its contribution to the global GDP would be about USD4.6 Trillion (5%)

Evidence from Bangladesh

Rokonozamman suggests that Bangladesh can significantly benefit from broadband as following:

- 20 million subscribers consuming 50GB data per month ➡ 3.6 million online jobs, empower 15 million farming families, increase yields by 10% over 10 years

- Bangladesh can reap USD 21 to 51 billion through investment of USD 7.8 billion over 10 years

- Offering 50 GB data at BDT500/month will open beneficial, video-centric broadband applications such as online health and education services

- By delivering affordable fixed line broadband services, Bangladesh can unlock economic growth in: **1.** Online employment; **2.** Agricultural yield growth

Case studies:
Broadband Development Plans
across regions

Broadband China (2013)

- **Vision**: Broadband China network is a strategic public infrastructure for China's economic and social development in the new era

- **Targets by 2020:**
  - Fixed broadband households reaches 70%;
  - 3G / LTE subscribers reaches 85%;
  - Administrative village broadband ratio exceeds 98%;
  - Urban and rural households have broadband access capabilities of 50Mbps and 12Mbps, respectively, and some home users in developed cities up to 1Gbps

Broadband China

- **Investment strategy**: 204B USD, investment from the state; Private sector invited to pitch in towards developing infrastructure further

- **Gender focus**: Nothing specified in the plan other than implicit ones such as the target of households and home users

- **Pro-poor strategy**: Nothing specific; implicit targets in bringing down overall cost and the plan to bring 70% household into broadband network. There is a pilot project to demonstrate broadband's effectiveness in poor schools and special educational institutions

Broadband China

- **Overall approach:** Specific policy measures to
  a. improve organisational leadership;
  b. improve the system environment;
  c. regulate the order of construction
  d. increase fiscal support;
  e. optimise spectrum planning;
  f. strengthen personnel training
  g. deepening international cooperation

- Key tasks undertaken include: Coordinated development of regional broadband network; improve level of broadband network applications; enhance broadband network security capabilities

Wireless Broadband Master Plan Viet Nam (2016)

- **Vision**: Wireless Broadband is essential to the economy, social fabric of Viet Nam

- **Targets** by 2022:
  - 95% of households covered by 3G or 4G network, offering minimum speed of 4Mbps in urban areas and 2 Mbps in rural areas
  - Fixed broadband penetration to 40% of household and among them at least 60% to have downstream connection speed of 25 Mbps
  - Country's public access internet points to have a download connection speed of 50 Mbps
  - Focus on eGovernance services, ICT digital services, eCommerce and disaster prevention

Wireless Broadband Master Plan Viet Nam (2016)

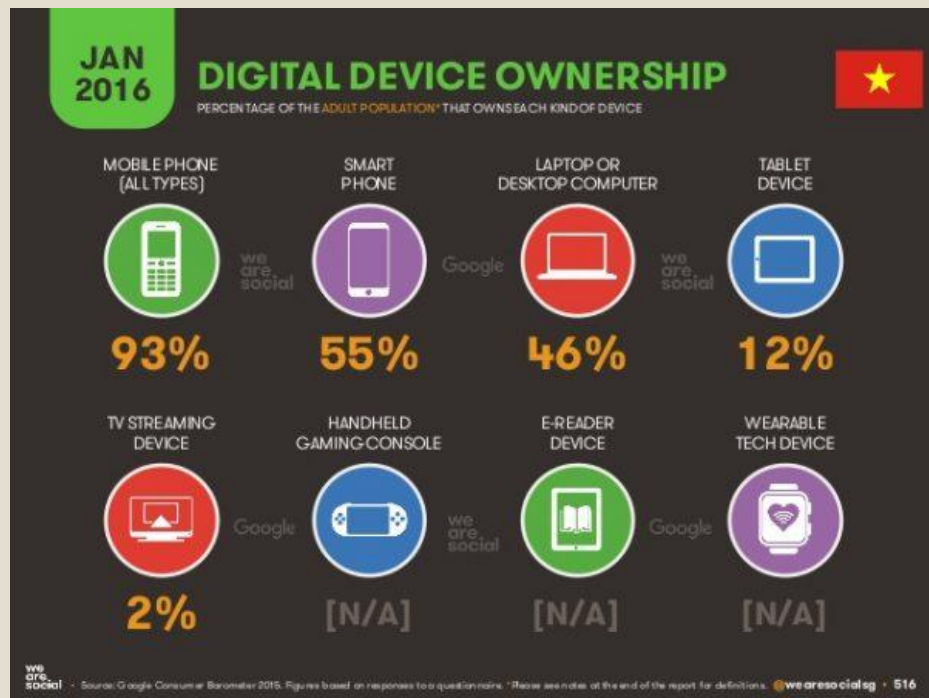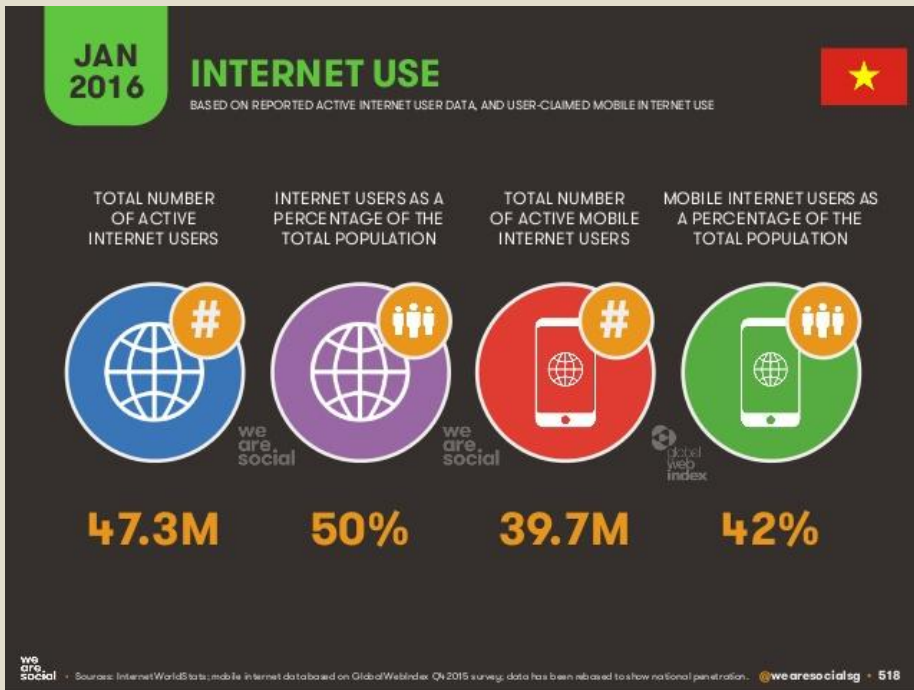- **Actions:**
    - 2.6 GHz spectrum licensing; review of 2.3 GHz band plan;
    - Review implications of W-CDMA @ 900 MHz and LTE @ 1800 MHz(by 2012);
    - 4G (2.6 GHz) Spectrum licensing, mandated MVNO framework promulgated (by 2013);
    - Monitoring government internet adoption for 2015 (by 2015);
    - Release of first digital dividend for LTE/LTE advanced @ 700 MHz (by 2016);
    - Monitoring government internet adoption targets for 2020 (by 2020)
- **Investment strategy**: USD 9.1B by end 2016 and the next 5 years driven by wireless data growth
- **Gender focus**: Nothing specified
- **Pro-poor strategy**: Specified ones such as 95% coverage of households, applying IT effectively in all socio-economic aspects, and national security and defence

Wireless Broadband Master Plan Viet Nam (2016)

- **Overall approach:** Specific policy measures to guarantee
  a. flexible rights of use for key wireless spectrum allocation;
  b. mandated access for MVNOs to promote more dynamic market and reduce entry barriers in 4G market;
  c. planning and execution of digital TV migration to free up spectrum;
  d. minimum guaranteed spectrum allocation for mobile services should be at least 760 MHz in 2020;
  e. developing public access centres to combat issues around affordability and access.

- **Key tasks undertaken** include: developing ICT human resource, ICT industry; improve telecom infrastructure; deploying suitable solution for household access to information, content and knowledge; applying IT effectively in government agencies, enterprises and society; strengthening research capacity in ICT sector; and, mastering and developing technologies for innovation and new products and applications

Wireless Broadband Master Plan Viet Nam (2016)

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JAN 2016 — INTERNET USE

BASED ON REPORTED ACTIVE INTERNET USER DATA, AND USER-CLAIMED MOBILE INTERNET USE

TOTAL NUMBER OF ACTIVE INTERNET USERS	INTERNET USERS AS A PERCENTAGE OF THE TOTAL POPULATION	TOTAL NUMBER OF ACTIVE MOBILE INTERNET USERS	MOBILE INTERNET USERS AS A PERCENTAGE OF THE TOTAL POPULATION
47.3M	50%	39.7M	42%

we are social · Sources: InternetWorldStats; mobile internet data based on GlobalWebIndex Q4 2015 survey; data has been rebased to show national penetration. @wearesocialsg · 518

JAN 2016 — DIGITAL DEVICE OWNERSHIP

PERCENTAGE OF THE ADULT POPULATION* THAT OWNS EACH KIND OF DEVICE

MOBILE PHONE (ALL TYPES)	SMART PHONE	LAPTOP OR DESKTOP COMPUTER	TABLET DEVICE
93%	55%	46%	12%

TV STREAMING DEVICE	HANDHELD GAMING CONSOLE	E-READER DEVICE	WEARABLE TECH DEVICE
2%	[N/A]	[N/A]	[N/A]

we are social · Source: Google Consumer Barometer 2015. Figures based on responses to a questionnaire. *Please see notes at the end of the report for definitions. @wearesocialsg · 516

# National Broadband Plan, Philippines (2017)

- **Purpose:** Establish broadband as a basic right for all consumers, businesses and government entities

- **Targets** by 2022:
    - Increase in network readiness index; Increase in distance to frontier score, dealing with construction permits
    - Average private investment on broadband infostructure, expressed in % of gross revenue; government investment on broadband infostructure expressed in % of annual budget
    - Proportion of government agencies, LGUs, public schools, state universities and colleges, public hospitals connected to broadband internet
    - Number of installed and activated cell sites, operating submarine cables, government fiber laid in KMs, number of sites connected to free wifi
    - Progress in ICT development index, eGovernment development index, eParticipation index, Cost of ICT services, as of % of GNI per capita, fixed and mobile broadband subscription per 100 inhabitants, % of households and individuals with access to internet, and, average broadband speed

National Broadband Plan, Philippines (2017)

- **Investment strategy**: PPP arrangements, government agencies' investment
- **Gender focus**: Nothing specified; governmental programs are geared towards bridging the gender digital divide
- **Pro-poor strategy**: Incentives to broadband users; promise of 10 Mbps to each household by 2020
- **Overall approach:**
    - Amendment of laws, policies and regulatory frameworks related to broadband; policies on open access and local IP peering; Issuance of executive order for permitting fees, permits & processes, harmonisation and NBP adoption; adoption of Philippines electronics code
    - Facilitation of ICT convergence programs; development of Dig-One policy
    - Repurposing/recall of unutilised, allocated spectrum; creation of spectrum co-used framework; deployment of the Philippines integrated infostructure
    - Conduct of capacity building and information outreach program; encouragement of communities of practice and development of rural technology roadmap; introduction of incentives to broadband users

National Broadband Plan, Philippines (2017)
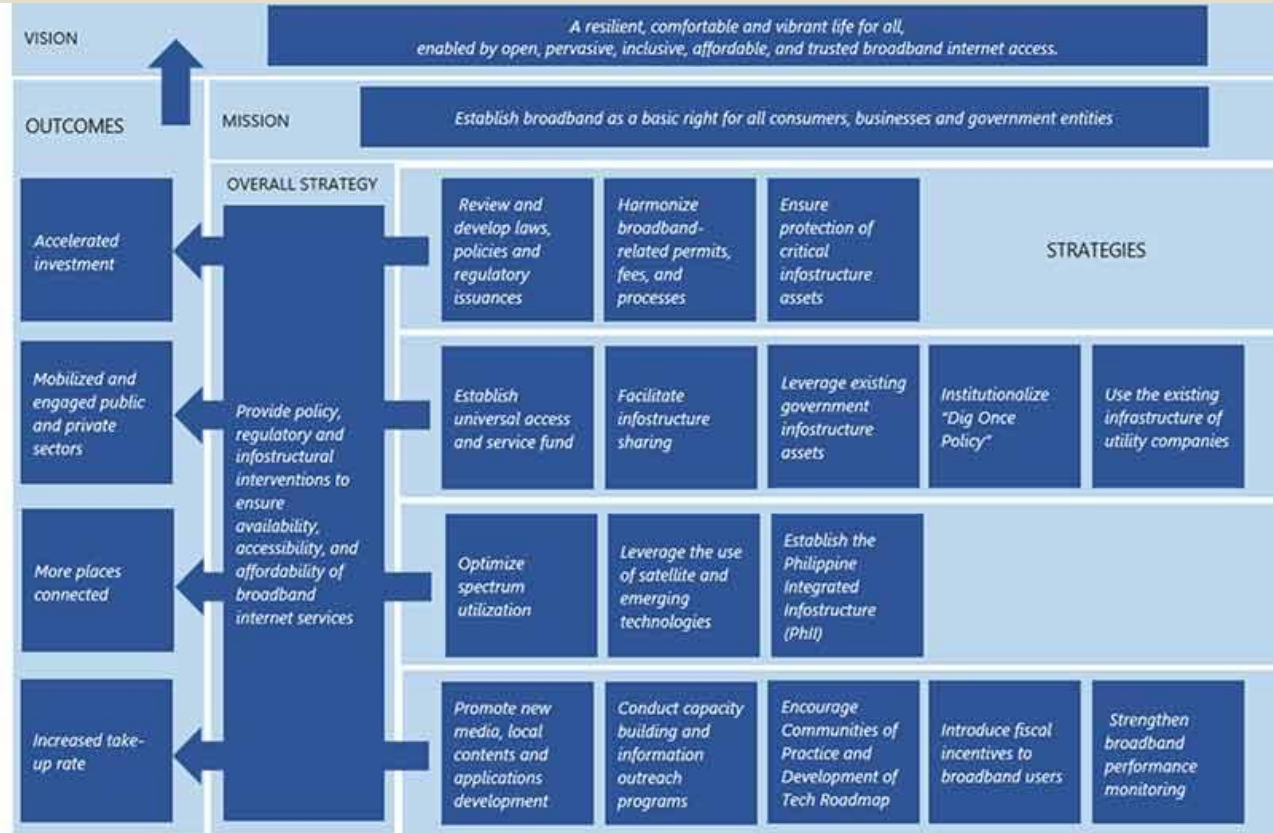
National Broadband Plan, Ireland (2012)

- **Vision**: High speed broadband is core to competitiveness. As a knowledge services oriented economy trading worldwide our workforce needs to be better connected than most in the world. However, ensuring fast connectivity is not only about jobs. It is also increasingly a key conduit of modern society – entertainment, learning, health and citizenship.

- **Targets** by 2022:
    - 70Mbps - 100Mbps available to at least 50% of the population with a majority having access to 100Mbps;
    - At least 40Mbps, and in many cases much faster speeds, to at least a further 20% of the population and potentially as much as 35% around smaller towns and villages
    - A minimum of 30Mbps available to all

National Broadband Plan, Ireland (2012)

- **Investment strategy**: Governmental commitment to accelerate fast broadband roll out in less densely populated areas and to create an environment conducive to private industry investment

  - Total funding involved for any State intervention is estimated at €350 million, €175 million from public funding sources , €175 million from the successful commercial bidder(s) emerging from a public procurement process.

- **Gender focus**: Nothing specified

- **Pro-poor strategy**: State intervention at the 'last mile'

- **Overall approach:**

  - State-led investment and stimulating the private sector to invest; potential contribution from state entities

  - State-led demand stimulation activity; Infrastructure barrier removal

  - Review and update of spectrum policy; Policy and regulatory changes

  - Implementation, monitoring and timely delivery

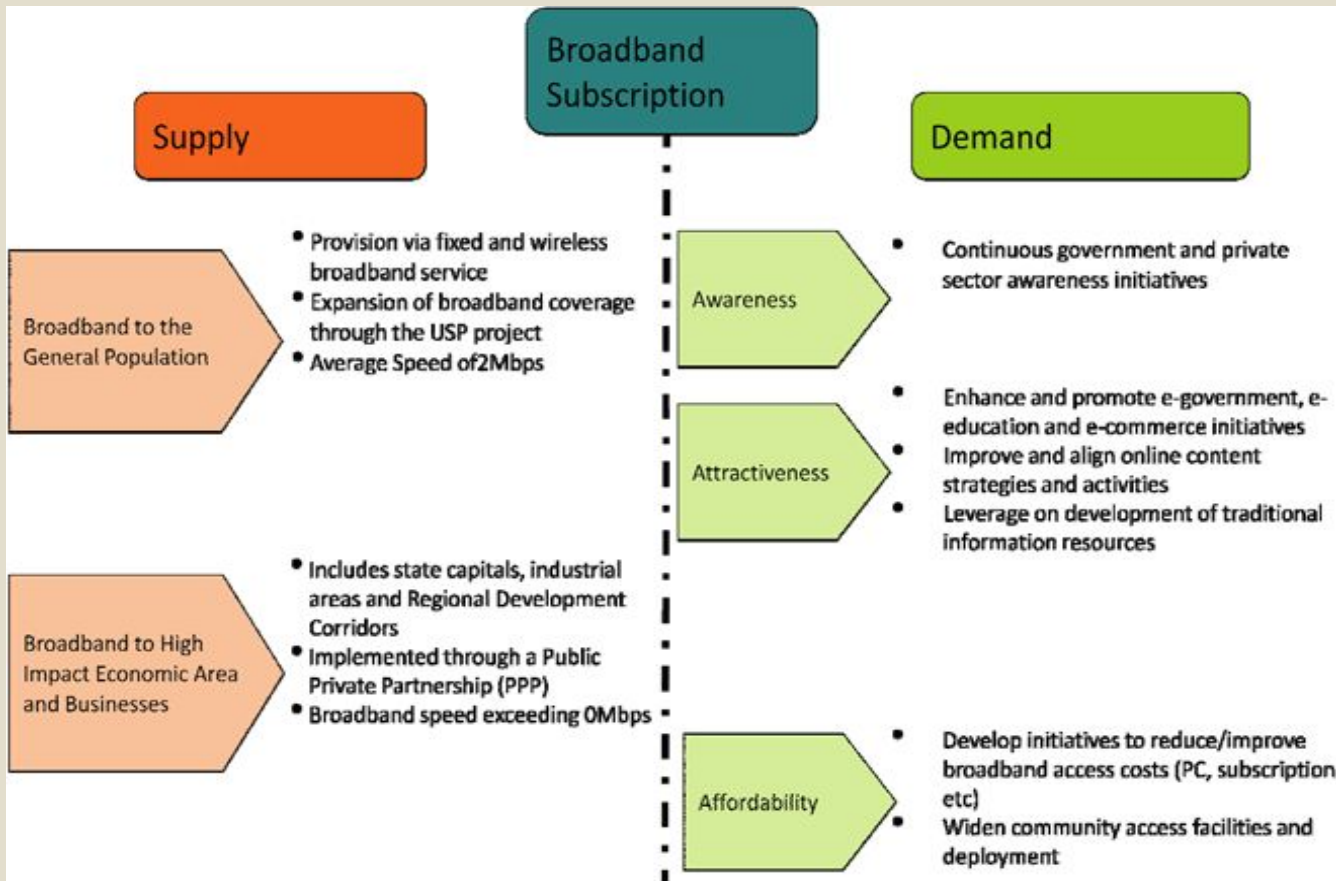# National Broadband Initiative, Malaysia (2010)

- **Vision:** Malaysia's National Broadband Initiative (NBI) aims to bring high-speed, affordable broadband to the whole country.

- **Targets:**
  - Supply: Under the supply side, the broadband service groups are split into two categories:
    - High Speed Broadband (HSBB): selected high impact and industrial areas
    - Broadband for General Population (BBGP): suburban and rural areas.
  - Each initiative has a detailed project scope, with targeted areas, timelines, information on infrastructure, and project status.

National Broadband Initiative, Malaysia (2010)

- The HSBB project is a PPP agreement between the Malaysian government and Telecom Malaysia, Malaysia's largest telecommunications company, to build a network to facilitate broadband penetration

- The first phase of HSBB (2008-2013) surpassed its target of deploying 1.3 million ports (i.e., connection points through which customers can connect their households or businesses to the network, once they subscribe to a broadband service) in Inner Klang Valley, Iskandar Malaysia and other industrial areas, instead providing 1.9 million ports

- The target for the second phase of HSBB (2013-2018) is to install 390,000 ports in capital cities and high impact areas by 2018

National Broadband Initiative, Malaysia (2010)

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Broadband Subscription

Supply

Demand

Broadband to the General Population
- Provision via fixed and wireless broadband service
- Expansion of broadband coverage through the USP project
- Average Speed of 2Mbps

Awareness
- Continuous government and private sector awareness initiatives

Attractiveness
- Enhance and promote e-government, e-education and e-commerce initiatives
- Improve and align online content strategies and activities
- Leverage on development of traditional information resources

Broadband to High Impact Economic Area and Businesses
- Includes state capitals, industrial areas and Regional Development Corridors
- Implemented through a Public Private Partnership (PPP)
- Broadband speed exceeding 0Mbps

Affordability
- Develop initiatives to reduce/improve broadband access costs (PC, subscription etc)
- Widen community access facilities and deployment

The scenario in Bangladesh (NBP, 2009)

- **Vision:** People-centred, development-oriented information society achieved through highly secured and affordable broadband, leading to achieving poverty reduction strategies and the MDGs

- **Objectives**
  - Ensuring availability of broadband to every citizen in an affordable manner
  - Creating enabling environment for access networks and interconnections among these networks
  - Developing technology and service neutral policies for technologies
  - Encouraging Public-private partnerships for broadband development
  - Stimulating local content development with special emphasis on Bangla content, value added services, broadband equipment and accessories
  - Broadband penetration to 30% by 2015

The scenario in Bangladesh (NBP, 2009)

- **Short-term Targets (by 2010)**
  - National-level research and higher and professional educational institutions of public and private entities; District level higher educational institutions to have broadband
  - Ministries, divisions, departments and boards of public sector to have broadband access
  - All public libraries connected to broadband network
  - 50% of secondary schools in district and 25% at the upzilla levels to have broadband
  - All LGUs at district level under broadband connectivity
  - ISPs to be connected to any of the NIXs
  - Creation of Universal Service Fund to incentivising the above

- **Mid-term targets (by 2012)**
  - All higher educational institutions at Upzilla level; 50% education institutes at district and upzilla levels to have broadband
  - 10% of villages under broadband; All LGUs upto upzilla level under broadband network

The scenario in Bangladesh (NBP, 2009)

- **Long-term Targets (by 2015)**
    - All villages to have community access points
    - All higher secondary and secondary institutions as well as MPOs to have broadband
    - Cultural centres, museums, archives to have broadband
    - All Union Parishods to have broadband access
    - All farmers markets to be brought under broadband network

- **Local content development**
    - All government offices and agencies to have their websites in Bangla and English
    - All education content such as textbooks, syllabi and other material online
    - Private sector to develop local hosting facilities
    - Online banking facility from all banking and financial agencies
    - Capacity building of local authorities for content development, translation, adaptation, digitisation, archiving will be developed

Internet use in Bangladesh in 2017

41%
INTERNET
PENETRATION
(A4AI, 2016)

14%
MOBILE
BROADBAND
PENETRATION
(GSMA, 2016)

2.6%
COST OF 1GB OF
MOBILE PREPAID
INTERNET
(AS % OF GNI PC)
(A4AI, 2016)

Is Bangladesh Ready to Secure Internet for all by 2025?

UN Broadband Commission targets for 2025:

- Funded national broadband plan or strategy for all countries
- Affordable entry-level broadband services, "1 for 2" target
- Broadband penetration should reach: 75% worldwide, 65% in developing countries, and 35% in least developed countries
- Digital skills for 60% of youth and adults
- 40% of the world's population should be using digital financial services
- Unconnectedness of Micro-, Small- and Medium-sized Enterprises should be reduced by 50%, by sector
- Gender equality should be achieved across all targets

Making Affordable Internet Access a Reality in Bangladesh

Take-away Lessons for Bangladesh

- Require enabling policy & regulatory environment to implement 'broadband for all'
- Need for roadmap with clear goals and targets
- Policy, regulatory & technical support from the state
- Targets are to be spelt out clearly and agreed upon by all stakeholders
- Gender based targets are essential
- A clear vision for Digital Bangladesh
- A binding legal framework is necessary
- Need for an institutional framework supported by leadership for implementing a cohesive broadband strategy for Bangladesh
- Require full coordination and an institutional owner to monitor and measure progress against targets
- Clarity on the funding aspects

Thank you!

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