The Broadband Opportunity: The Time Is Now

Millennium Development Goals (MDGs)[1]

1. Poverty and Hunger
2. Education
3. Women
4. Child Mortality
5. Maternal Health
6. HIV/AIDS, Malaria, and Other Diseases
7. Environment
8. Global Partnership

Close the Gap: Strategies for Government

How can governments and countries change lives, increase prosperity and growth, and improve a wide range of essential services from education to healthcare? Broadband is the catalyst to transformation when coupled with strategic economic and social development policies. **By connecting people to each other and to vital information and services, broadband can create opportunities that yield social and economic impacts** for communities, businesses, schools, hospitals, and families.

The UN Broadband Commission for Digital Development sees broadband as a key driver in addressing the global challenges depicted in the Millennium Development Goals[1] (MDGs) of the UN Millennium Declaration. The Commission's objectives are striking in their simplicity: making broadband universal and affordable, connecting homes, and getting people online. "We firmly believe that with the strategic and innovative *use* of *broadband* ICTs, the international development community can move beyond 'business as usual' and that *it will be possible to achieve the inherently interlinked MDG agenda* … to address the existing and emerging global challenges of the 21st century."

The socioeconomic benefits of broadband and ICT are significant when integrated into a holistic development strategy. Broadband can significantly increase a country's GDP. The World Bank reports that every 10 percentage point increase in broadband penetration corresponds to an increase in economic growth of 1.38 percentage points in low- and middle-income countries—more
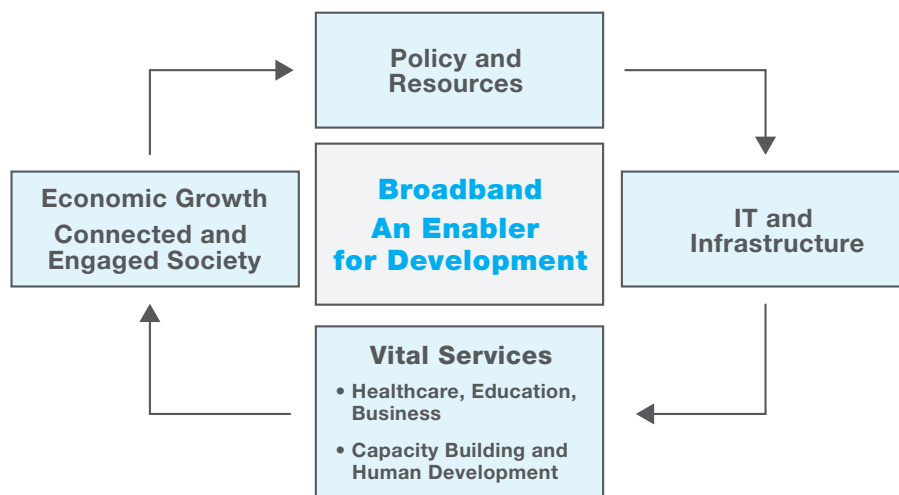
Moving the Ecosystem Forward

Multinational companies and organizations are working more closely to bring a spectrum of capabilities to help countries achieve their broadband goals—including technology expertise; a breadth of secure, scalable, interoperable solutions; and experience creating viable partnerships between governments, policy makers, nongovernmental agencies, and vendors.

Comprehensive National Plans

Many countries have completed comprehensive national plans. Although each plan is unique, they share a broad acknowledgement of the benefits of increased broadband penetration, and of the need to build partnerships to make broadband and ICT more affordable and accessible to all.

Examples include:

National Broadband Policies from the Broadband Commission

Colombia Vive Digital

Mexico: Agenda Digital Sistema Nacional e-Mexico 2.0
(click on "Know e-Mexico")

Egypt National Broadband Plan

United States National Broadband Plan: Connecting America

than for other telecommunications services.[2] For example, in Latin America and the Caribbean, a 10 percent rise in the market penetration of broadband services increased the GDP 3.2 percent on average, and boosted productivity by 2.6 percent.[3]

The social impact is less easily quantified, but there are countless stories of the changes brought by access to the Internet in healthcare, education, agriculture, local entrepreneurship, and service organizations worldwide. Addressing gender inequalities is one vital area where technology access can make a significant difference.[4] "The global economy and its rapid technological innovations create a tremendous opportunity to bridge the gender and technology divide and leverage the benefits of technology to propel the economic advancement of lower- and middle-income women in developing countries."[5,6] The Broadband Commission for Digital Development has set an ambitious new target mandating gender equality for broadband access by the year 2020, designed to spur female access to the power of ICT.[7]

Access to broadband is expected to continue to impact equality in basic services—from healthcare to education. "An essential prerequisite for cutting-edge innovation in the telemedicine industry is the wide availability of advanced broadband infrastructure. Indeed, many current telemedicine services rely on robust broadband connections to be effective. Over the next few years, most of the next-generation telemedicine applications and devices developed will be increasingly intertwined with broadband as the network becomes an ecosystem for more individualized medical care."[8] The connection of education to broadband is similarly compelling: "Broadband-enabled technologies improve the effectiveness of instruction and enhance learning outcomes."[9]

Expertise, best practices, secure technologies, and global success stories are all available to help countries succeed with broadband implementation. When linked to strategic policies and resource planning, broadband can provide a feasible way forward. **It's time to get started and make a difference.**

Make a Difference

There are undoubtedly challenges to extending the reach and potential of broadband, particularly to the most marginalized populations. But these challenges can be addressed by creating adequate overall policies and strategies–such as a broadband plan closely linked to development agendas–and establishing an environment that fosters private sector investment (with a competitive regulatory regime) and is facilitated by public-private partnerships that include leading organizations with expertise and know-how in these areas. This entails the involvement of stakeholders and citizens throughout the process to ensure both supply and demand are optimized, increasing the effectiveness of both public and private investment.

Understanding the big picture of broadband adoption and how it fits into a larger development agenda can help you determine where to take action and where you can make the biggest impact.

> "Because broadband networks have the potential to contribute so much to economic development, they should be widely available at affordable prices and should become an integral part of national development strategies."

World Bank, 2009

KEY ELEMENTS TO BROADBAND ADOPTION		WAYS TO ENGAGE
Area to Address	**End Goal**	**What You Can Do**
Policy	• Create innovative policy and regulatory frameworks that encourage widespread, universal broadband access and use	• **Establish policies** that encourage competition and innovation and promote rapid deployment and use of broadband • **Eliminate** regulatory burdens and barriers which inhibit broadband adoption • **Assign abundant spectrum** (harmonized where possible) for wireless broadband use enabling economies of scale that will lower prices • **Align broadband strategies** with key development goals and priorities
Planning	• Develop national broadband plans and other public policies linked to development goals • Develop inclusive strategies to reach all citizens, including the underserved and most vulnerable groups, such as women and youth	• **Establish national broadband plans** with specific time-bound goals for deployment and adoption
Funding	• Utilize targeted subsidies, such as a universal service funds, to help connect the underserved • Affordability for everyone	• **Utilize targeted subsidies** for broadband adoption for the underserved, such as tax breaks on equipment • **Utilize existing universal service funds** to incentivize private sector investment in priority service gap areas • **Rationalize existing tax systems**, reforming sector taxation and fee levels which inhibit broadband adoption, especially where these affect poorer customers and customers in rural areas • **Encourage public sector broadband capacity** demand aggregation investments that can help make the business case for infrastructure investments
Usage Models	• Provide local capacity building in digital literacy and use	• **Establish digital and information literacy programs** • **Enable ICT** Innovators and entrepreneurs
Market Demand	• Demand creation through e-government services, and innovative education programs	• **Connect and equip schools** with state-of-the-art content and ICT • **Expand e-government services** to enhance public service delivery
Adoption	• Incentives aimed at deploying infrastructure to increase penetration and adoption of services and applications in underserved areas	• **Establish priority programs targeted at marginalized groups** such as women and girls, the elderly, poor communities, and those with disabilities
Economic Vitality	• Create public-private partnerships, including banks and venture capital organizations, business organizations, development agencies and non-governmental organizations (NGOs), educators and teachers; and healthcare organizations	• **Active support** of a broad ecosystem of public and private entities
Innovation	• Capacity building in the public and the private sectors to encourage development of innovative services and applications	• **Encourage the sharing of best practices** worldwide to enable broadband adoption • **Support skills development** within countries, encouraging innovation

Accelerating Broadband Adoption: Best Practices

You can accelerate broadband implementation in many ways. Here is a summary of best practices for achieving planned, beneficial broadband in a timely manner.

1. Encourage competition
Open, competitive markets drive lower delivery costs, affordable consumer pricing, and new services. By incorporating strategies that actively facilitate competition, and by eliminating regulatory burdens and barriers, countries can expand the broadband market, make broadband more affordable, and speed private-sector investments.

> "High-capacity networks are seen as strategic infrastructure, intended to contribute to high and sustainable economic growth and to core aspects of human development."

The Berkman Center for Internet & Society at Harvard University, 2010

2. Lower cost structures

Reducing infrastructure and usage costs can speed deployment and widen access. This can be achieved by voluntary commercial sharing of backbone infrastructures, and streamlining access to public rights of way and tower zoning. Additionally, reducing or eliminating taxes and customs duties on broadband and ICT can help improve adoption.[8]

3. Release spectrum

To accommodate the escalating demand for wireless technologies, abundant spectrum should be assigned in a technology- and service-neutral manner. Spectrum reallocation strategies are also an essential part of any national broadband or ICT plan. Market-based techniques can clear underutilized spectrum for higher-value uses such as wireless broadband, and new policies can be enacted that allow carriers and manufacturers to make market-driven agreements to deploy new and innovative wireless technologies. For example, the "digital dividend" band, harmonized where possible, can be repurposed for licensed wireless broadband use, supporting greater international and rural access.

4. Ensure universal service funds work well

Governments should first and foremost focus on fostering market-based competition and enabling market-based solutions to widen access. Removing sector-specific taxes, stimulating demand, and developing the supporting infrastructure are important first steps.

Countries can correct USF inefficiencies and establish programs to support broadband/ICT adoption for the underserved, including services and equipment, training, and other demand-side initiatives to meet the unique needs of the underserved. USFs should be used as targeted and time-bound instruments to incentivize private sector investment in identified service gap areas, managed in a transparent manner, and reviewed annually. USFs should be allocated in a competitively and technically neutral way in consultation with the industry and civil society.

5. Implement demand-side programs

A combination of demand-side programs utilizing USFs, tax reductions, or other subsidies, can be used to raise awareness of broadband, make broadband services more affordable, and expand networks and services to the widest population in the shortest possible time. Programs may include:

- Low-interest financing and/or subsidies to support ICT and broadband purchases
- ICT skill development and digital literacy programs
- E-Commerce to increase broadband adoption by businesses
- E-Learning programs targeting underserved groups (elderly, disabled, etc.)
- Creation of locally relevant and localized digital content
- National 21st century education programs utilizing broadband and ICT

Act Now

We hope that the information in this brief will allow you to accelerate effective broadband initiatives. Together, we can achieve the vision of a growing national economy supported by widespread broadband deployments.

1. Millennium Development Goals (MDGs): http://www.un.org/millenniumgoals/
2. Building Broadband: Strategies and Policies for the Developing World, World Bank (Jan. 2010), available at http://www.worldbank.org/
3. Inter-American Development Bank (IDB) Technical Note: # IDB-TN- 471, Socio-Economic Impact of Broadband in Latin American and Caribbean Countries, November 2012, http://www.iadb.org/intal/intalcdi/PE/2013/11427.pdf, and The Impact of Broadband on the Economy, April 2012, http://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_Impact-of-Broadband-on-the-Economy.pdf
4. Intel Corporation and Dalberg, 2013. Women and the Web. Bridging the Internet Gap and Creating New Global Opportunities in Low- and Middle-Income Countries. http://www.intel.com/content/www/us/en/technology-in-education/women-in-the-web.html
5. ICRW. Bridging the Gender Divide: How Technologies Can Advance Women Economically, (2010).
6. This is not a given outcome and must be pursued through deliberate measures that target women's needs, and gender barriers, and enable women as producers and decision makers in ICT, not just as consumers of technology.
7. UN Broadband Commission Sets New Gender Target: Getting More Women Connected to ICTs "Critical" to Post-2015 Development Agenda, UN Broadband Commission, 2013. http://www.itu.int/net/pressoffice/press_releases/2013/08.aspx
8. The Impact of Broadband on Telemedicine, 2009, a study commissioned by the U.S. Chamber of Commerce. http://www.nyls.edu/user_files/1/3/4/30/83/BroadbandandTelemedicine.pdf
9. The Impact of Broadband on Education, 2010, a study commissioned by the U.S. Chamber of Commerce, http://www.uschamber.com/sites/default/files/about/US_Chamber_Paper_on_Broadband_and_Education.pdf, and Technology, Broadband, and Education, A report by the Broadband Commission Working group on education, January 2013, http://www.broadbandcommission.org/work/working-groups/education/BD_bbcomm-education_2013.pdf