THE STATE OF BROADBAND 2014: BROADBAND FOR ALL

A Report by the
Broadband Commission for Digital Development
September 2014

Introducing the State of Broadband

High-speed, affordable broadband connectivity to the Internet is a foundation stone of modern society. Broadband connectivity is now underpinning, and permeating, a range of other sectors and services, including power supply, defense, the news, printing and publishing industries, as well as the delivery of healthcare and education services. Ministers of Health and Education can benefit from developing an awareness of key telecom/ICT issues, while telecom Ministers must get to grips with the key issues in healthcare and education.

As happened with the industrial revolution, the digital revolution will create both winners and losers. We stand at a critical moment in the digital revolution – and countries must start planning now to ensure that they are ready to participate in the global digital economy through digital healthcare services and digital education. The ITU/UNESCO Broadband Commission for Digital Development aims to promote the adoption of effective broadband policies and practices for achieving development goals, so everyone can benefit from the advantages offered by broadband. Through its "The State of Broadband 2014: Broadband for All" report, the Broadband Commission seeks to raise awareness and enhance understanding of the importance of broadband networks, services, and applications to guide international broadband policy discussions and support the expansion of broadband in support of education and health services.

RECOMMENDATIONS

Every year, the ITU/UNESCO Broadband Commission for Digital Development makes a number of recommendations through its annual report, "The State of Broadband" report. This section summarizes the key recommendations made by the Commission in 2014, based on the deliberations of Commissioners.

1) Launch a national broadband plan

The importance of national policy leadership is now clearly understood by policy-makers and governments around the world. A clear statement of policy objectives and/or targets can boost understanding and facilitate the national roll-out of broadband. This statement may often (but not always) take the form of a National Broadband Plan. Today, some 140 countries have developed a national plan, strategy, project or policy to promote broadband, while a further 13 countries are planning to introduce such measures in the near future. However, 43 countries still do not have any form of broadband plan, strategy or policy in place (Figure for Target 1).

Countries which have most recently approved a National Plan include Brunei Darussalam in 2014, Nigeria (in July 2013), South Africa (December 2013), Sierra Leone (currently developing its Plan) and Madagascar, which introduced its National Telecoms Law in autumn 2014.

Smart public policies to foster broadband should always take into account both sides of the market – namely, both supply and demand (including expanding ICT education, digital skills, entrepreneurship policies, support for start-ups etc.). Comprehensive policies for broadband should also consider linkages with other sectors.

2) Monitor, review and update ICT regulations, including regulatory approaches to spectrum

Policy-makers and regulators must review and update their ICT regulatory frameworks to take into account the provision of similar services by market players from different industries. They must also help create a supportive environment and encourage investment and ensure sufficient availability of quality spectrum. Governments and regulators and industry should work together to define harmonized approaches to infrastructure-sharing, and ensure that spectrum is released quickly to operators and new entrants. Optimizing approaches to spectrum policy, allocation, and management become an important aspect of governments' overall broadband policy portfolio. Today, policy-makers are also

considering fresh approaches to spectrum management, including Dynamic Spectrum Access (DSA). While exploring fresh approaches to spectrum management, it is essential to take into account the needs of different services (e.g. mobile and satellite services, among others). Including coverage obligations in licenses can help to fulfil universal service goals more efficiently. Depending on the current state of spectrum band assignation, simultaneous auctions of different bands (high and low bands) can also prove helpful, but these are unlikely to be available in many countries.

3) Promote Education for All (EFA), including the use of broadband, as well as the skills and talents necessary for broadband

In crafting their development priorities, countries should:

- Foster digital inclusion by introducing policies and initiatives ensuring that every citizen has access to quality digital education and rich digital content in local languages and accessible formats, including to open educational resources (OER).
- Enable young people to acquire high-level skills and confidence to successfully develop smart mobile applications for achieving sustainable development, and increasing ICT-enabled youth employment
- Access competencies of countries to carry out media and information literacy initiatives and competencies of key professionals such as teachers in service and training for development of evidence-based policies and revision of educational processes.
- Put in place adequate policies to attract, recruit and support quality teachers, who are digitally confident and well prepared to make innovative and effective use of technology and digital resources for learning, teaching and leadership.
- Make girls' and women's access to ICT, and particularly broadband, a key pillar of the post-2015 global development agenda, to narrow the gap in terms of access to and use of technology.
- Encourage PPPs in order to build capacity and ensure equitable access to technology innovations that foster sustainable socio-economic and human development.

The Broadband Commission also advocates the promotion of Science, Technology, Engineering and Mathematics (STEM) in primary/secondary education, as well as open education networks for innovators and entrepreneurs.

4) Reduce taxes and import duties on telecommunication/ ICT equipment and services

Imposing or raising taxes on ICT services and equipment may be counter-productive and can impact broadband deployment and adoption adversely. There is significant evidence to suggest that reducing taxes and import duties on telecommunication/ ICT equipment and services could significantly boost levels of uptake. Tax incentives can also be given by countries with low broadband penetration (such as double depreciation). For example, in 2007, Colombia reduced its VAT rate from 16% to zero for the majority of PCs (both desktops and laptops) to foster consumer demand for PCs and spur national productivity and competitiveness. IDC (2013) found that Colombia's

PC tax reduction facilitated:

- A 110% increase in PC sales revenue from 2006-2008—more than twice the average of five other countries in the region.
- An 83% tax revenue benefit for 2007-2008, due to stimulation of new PC purchases and complementary hardware, software, and Internet service purchases.
- A 466% growth in Internet use from 2005-2008 (compared with 161% growth across the region).
- Since 2007, PC unit sales in Colombia have continued to significantly outpace the regional average. Unsurprisingly, Colombia has extended its VAT elimination.

5) Accelerate investment in broadband infrastructure

There has been a significant change in the level and balance of revenues between different players in the broadband ecosystem (OECD, 2013). Telecommunication and broadband access providers need to explore business arrangements with Internet content providers that will accelerate global investment in broadband infrastructure, to the mutual benefit of all, including end-consumers. Internet companies and Internet content providers need to contribute to investment in broadband infrastructure by debating interconnection issues and agreeing fees/revenue shares with other operators and

broadband access providers to accelerate global investment in broadband infrastructure (including IXPs, CDNs, data centres, backhaul fibre investments and other infrastructure) and contribute to a healthy broadband ecosystem.

At the national level, this may mean authorizing new market entrants, eliminating red-tape, encouraging closer collaboration between the national investment promotion agency (IPA) and the telecom Ministry and/or telecom regulator, and working with potential or existing operators to promote investment to help achieve national targets.

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6) Enhance demand for broadband services through new initiatives and local content

One key consideration for generating demand is to have governments take a more active role in helping to bridge the digital literacy gap through e-gov portals and programs. For example, digital literacy programs in libraries can help to match citizens with the skills and knowledge of e-gov programs to enhance citizen participation and inclusion. Governments should investigate ways to expand the demand for broadband services, as well as the participation of citizens online through, for example, E-Government programmes, digital literacy training and initiatives to stimulate the development of local content.

7) Engage in ongoing monitoring of ICT developments

Policy choices must be informed by reliable data and indicators on ICT developments in countries. Statistical indicators are also essential to assess the impact of broadband policies and to track progress towards national and international broadband goals and targets (including the targets set by the Broadband Commission). Data collected at the national level should be based on internationally agreed standards and definitions, such as those developed by ITU and the Partnership on Measuring ICT for Development. Data should be collected to monitor broadband infrastructure and access, prices and affordability, and broadband usage by individuals, businesses and public organizations such as Governments, schools and hospitals.

8) Utilize universal service funds (USFs) to close the digital divide

USFs have been established in many countries to help connect marginalized populations, however much of the funds remain underutilized. Originally estalished for telephone connectivity, funds are now being transitioned or developed to promote broadband adoption. According to the 2013 ITU report, "Universal Service Fund and Digital Inclusion for All", of the 69 funds surveyed, almost 50% have a low or no level of activity. Additionally, of 23.2 billion dollars in funds potentially available, only 11.4 billion dollars have been dispersed. Many beneficial examples of USF deployments for broadband exist, both for demand and supply side programs. Governments must work more dilligently to use these methods to disperse the funds collected, ensuring that the USFs meet their mandate of enabling marginalized and underserved citizens to get online.

The Commission has published five global advocacy targets, which it tracks annually via its State of Broadband report.

Countries must prioritize both supply- and demand-side policies to develop a full range of broadband infrastructure, applications and services. National strategies to increase broadband adoption and use must take into account the full range of government actions or policies and their impact on the cost to consumers of services, devices and relevant apps.
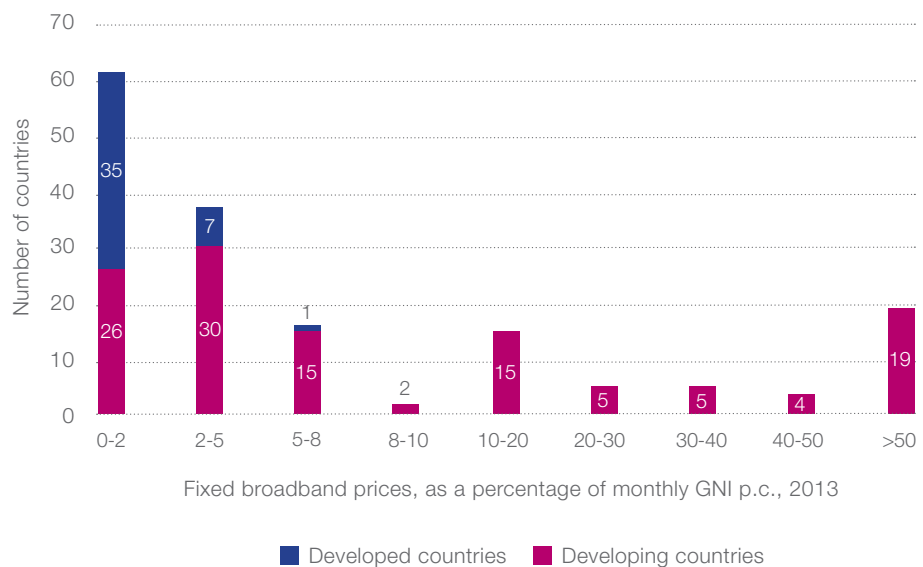
Target 1: Universal Broadband Policy

By 2015, all countries should have a national broadband plan or strategy.
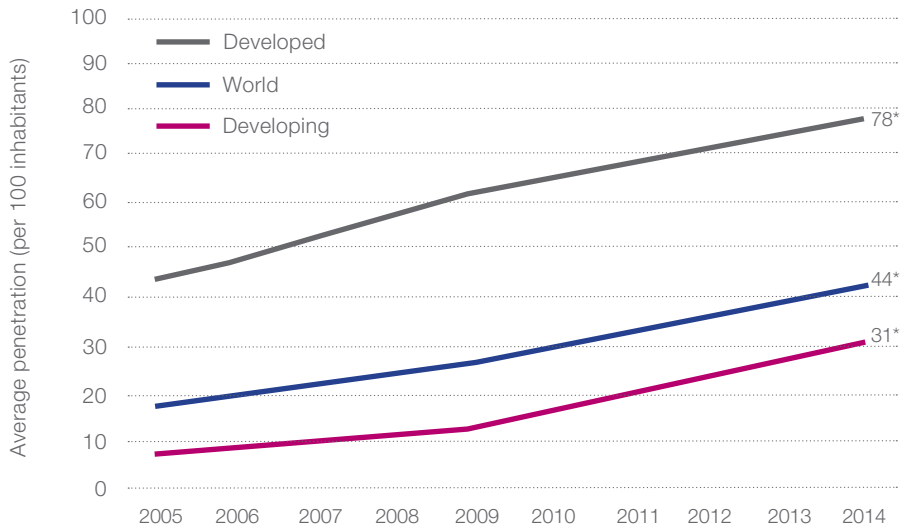
Countries with National Broadband Plans, Strategies or Policies, World, mid-2014

Without a plan, 22% 43 countries

71% Plan in place, 140 countries

Planning to, 7% 13, countries
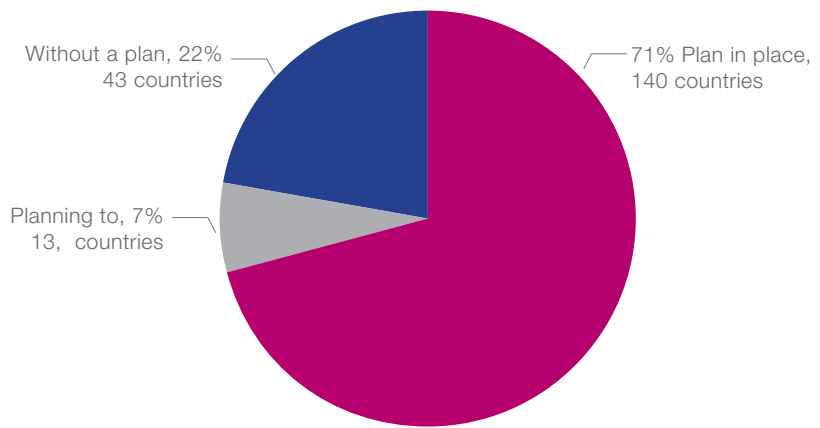
Target 2: Making broadband affordable

By 2015, entry-level broadband services should be affordable (<5% of monthly GNI) in developing countries.

Number of countries

	0-2	2-5	5-8	8-10	10-20	20-30	30-40	40-50	>50
Developed	35	7	1						
Developing	26	30	15	2	15	5	5	4	19

Fixed broadband prices, as a percentage of monthly GNI p.c., 2013

■ Developed countries ■ Developing countries

Chart 1

Y-axis: Average penetration (per 100 inhabitants) — 0 to 100

Legend:
- Developed
- World
- Developing

X-axis: 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014
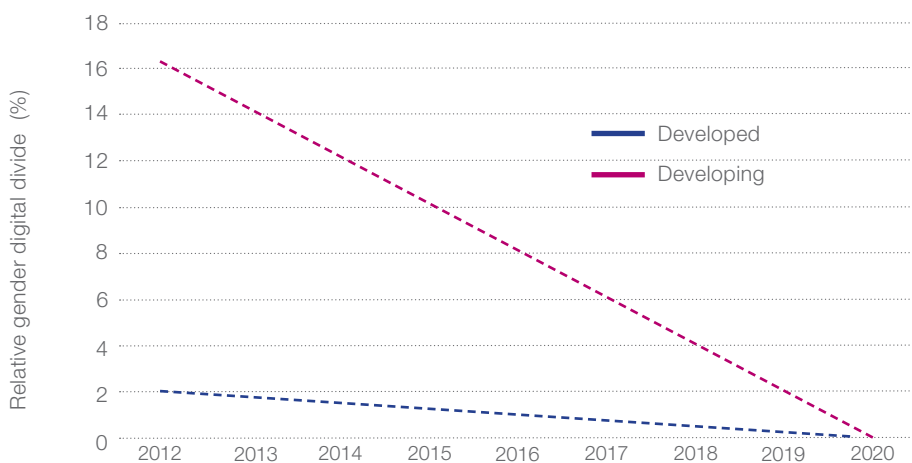
Data labels: 78* (Developed), 44* (World), 31* (Developing)

Target 3: Connecting homes to Internet

By 2015, 40% of households in developing countries should have Internet access.

Chart 2

Y-axis: Average penetration (per 100 inhabitants) — 0 to 100

Legend:
- Developed
- World
- Developing

X-axis: 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

Data labels: 78* (Developed), 40* (World), 32* (Developing)
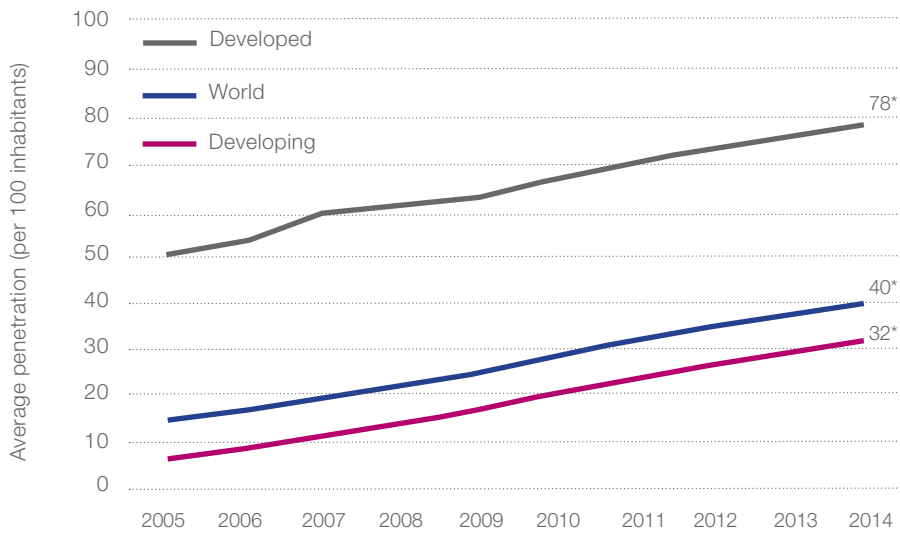
Target 4: Individual Internet Usage

By 2015, Internet user penetration should reach 60% worldwide, 50% in developing countries, 15% in LDCs

Chart 3

Y-axis: Relative gender digital divide (%) — 0 to 18

Legend:
- Developed
- Developing

X-axis: 2012 2013 2014 2015 2016 2017 2018 2019 2020

Target 5: Gender equality in broadband

By 2020, the worldwide gender digital gap should be eliminated

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CONCLUSIONS

High-speed, affordable broadband connectivity to the Internet is a foundation stone of modern society, offering widely recognized economic and social benefits. High-speed broadband is not just cutting-edge technology for an elite few – indeed, the steady march of connectivity among the world's population offers vital opportunities to facilitate development, and is slowly but surely transforming our society with new services and access to information. Broadband does not just comprise infrastructure; today, widespread broadband connectivity offers the prospects of new services and a digital revolution to change – and challenge – our approach to development.

ABOUT THE COMMISSION

The ITU/UNESCO Broadband Commission for Digital Development aims to promote the adoption of effective broadband policies and practices for achieving development goals, so everyone can benefit from the advantages offered by broadband. Through its "The State of Broadband 2014: Broadband for All" report, the Broadband Commission seeks to raise awareness and enhance understanding of the importance of broadband networks, services, and applications to guide international broadband policy discussions and support the expansion of broadband in support of education and health services. As happened with the industrial revolution, the digital revolution will create both winners and losers. We stand at a critical moment in the digital revolution – countries must start planning now to ensure that they are ready to participate in the global digital economy.

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FOR DIGITAL DEVELOPMENT

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