**Intel Broadband White Paper**

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<HEADER> **The Broadband Opportunity: Start Where You Are and Act**

<SUBHEAD> **The time is now.**

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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 a proven path to transformation. It touches communities, businesses, schools, hospitals, and families. By connecting people to each other and to vital information and services, broadband can create economic and social opportunities.

The economic and social benefits of broadband are significant. Broadband can 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 than for other telecommunications services.1 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.2

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.

Expertise, best practices, secure technologies, and global success stories are all available to help countries succeed with broadband implementation. With strategic planning, broadband provides a feasible way forward. **It’s time to accelerate the efforts and make a difference.**

**What Will it Take**

There are challenges to extending the reach and potential of broadband, but they can be addressed through comprehensive planning, and facilitated by partnerships with Intel and other experienced organizations who can help streamline the migration. Here are some of the key elements in making broadband adoption a success:

|  |  |
| --- | --- |
| **Area to Address** | **End-Goal** |
| **Regulations** | * Update regulatory frameworks to encourage competition and innovation, lower prices, and the evolution toward universal broadband access and use
 |
| **Planning and Policy** | * Development of national broadband plans and other public policies
 |
| **Funding** | * Establishing a dedicated, targeted subsidy such as a universal service fund to help connect the underserved
* Affordability for everyone
 |
| **Usage Models** | * Providing training/education in digital literacy
 |
| **Market Demand** | * Demand creation through e-gov services (e.g., UNPAN)
 |
| **Adoption** | * Incentives aimed at deploying infrastructure to increase penetration and adoption of services and applications in underserved areas
 |
| **Economic Vitality** | * Support public private partnerships
 |
| **Innovation** | * Capacity building in the public and the private sectors to encourage development of innovative services and applications
 |

**What You Can Do**

Understanding the big picture of broadband adoption can help you determine where to take action and where you can make the biggest impact. Here are some of the ways to engage:

* **Establish policies** that encourage competition and innovation
* **Establish national broadband plans** for deployment and adoption
* **Create targeted subsidies** for broadband adoption for the underserved
* **Establish digital literacy programs**
* **Establish programs targeted at marginalized groups** such as women and girls, the elderly, the handicapped.
* **Expand e-gov services** to encourage more people to get online
* **Encourage the sharing of best practices** worldwide to enable broadband adoption

**Broadband Adoption Best Practices**

Intel brings 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, non-governmental agencies, and vendors. Here is a summary of best practices for achieving planned, beneficial broadband in a timely manner.

**1. Form public/private partnerships**

Plan success depends on the active support of a broad ecosystem of public and private entities. These may include:

* Banks and venture capital organizations
* Business organizations (small and medium businesses, chambers of commerce)
* Development agencies and non-governmental organizations (NGOs)
* Educators and teachers
* Healthcare organizations
* ICT suppliers
* Intel and other ecosystem partners

**2. Encourage competition**

By incorporating strategies that actively facilitate competi­tion—such as creating a supportive regulatory environment—countries can expand the broadband market, make broadband more affordable and speed private-sector investments.

**3. Release spectrum:**

To accommodate the escalating demand for wireless technologies, spectrum reallocation strategies are 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.

**4. Apply Universal Service Funds**

Establish or expand the pool for USF distributions beyond traditional telecommunications to include broadband/ICT adoption, training and deployment. Countries can also correct USF inefficiencies and establish a USF specifically to support broadband service and equipment.

**5. Implement demand-side programs**

A combination of demand-side programs 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 time possible. Programs may include:

* Low-interest financing and/or subsidies to support ICT and broadband purchases
* Tax reductions
* Loans to build broadband networks in rural and remote areas
* ICT skill development and digital literacy programs
* eCommerce to increase broadband adoption by businesses
* eLearning programs targeting underserved groups (elderly, disabled, etc.)
* ICT infrastructure and broadband access in all schools

**6. Adopt metrics to measure plan success**

Broadband and ICT plans should include SMART metrics (specific, measureable, attainable, relevant, and time-bound), as part of a regular reporting program to track performance.

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**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. Examples include:

ColombiaPlan Nacional de TIC

www.colombiaplantic.org.co/index.php

Costa Rica Plan Nacional de Desarrollo de las Telecommunicaciones 2009–2014

www.mideplan.go.cr/content/view/69/371

EcuadorPlan Nacional de Conectividad (PNC) 2008‒2010

www.conatel.gov.ec/site\_conatel/index.php?option=com\_content&view=article&id=347%3Afodetel-pilar-del-plan-nacional-de-conectividad&Itemid=184

Malaysia The National Broadband Plan: Enabling High-Speed Broadband, Malaysian Communications and Multimedia Division

www.nitc.my/index.cfm?&menuid=31

MexicoAgenda Digital Sistema Nacional e-Mexico 2.0

www.e-mexico.gob.mx (click on “Know e-Mexico”)

SingaporeIT2000: Singapore’s Vision of an Intelligent Island

http://choo.fis.utoronto.ca/fis/respub/IT2000.html

United States National Broadband Plan: Connecting America

www.broadband.gov

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**Broadband Collaboration**

USAID and Intel Corporation are expanding their ongoing collaboration to utilize technology to further economic and social development around the world. The two organizations have launched 20 public-private partnerships over the last five years in Latin America, Asia, Africa, and the Middle East. Their joint activities include projects to train teachers in the effective use of information and communications technologies (ICTs), provide technology support for schools, improve the quality of education, and bring PCs, connectivity and digital content to youth.

<QUOTES FOR USE THROUGHOUT LAYOUT, SPACE PERMITTING>

“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

“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

<RELATED LINKS>

**Learn More**

Broadband Commission for Digital Development

<Link to: <http://www.itu.int/net/broadband/sharehouse/>

Intel World Ahead Program

<Link to: [www.intel.com/intel/worldahead](http://www.intel.com/intel/worldahead)

<CONCLUSION/CTA> <CAN BE MODIFIED FOR CO-BRANDED VERSION WITH PARTNER CONTACT INFO>

**Act Now**

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

To learn more, contact your local Intel representative, or visit us online at [www.intel.com/intel/worldahead](http://www.intel.com/intel/worldahead).

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1. Building Broadband: Strategies and Policies for the Developing World, World Bank, at 2 (Jan. 2010), available at [http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATION­ANDTECHNOLOGIES/Resources/282822-1208273252769/Building\_broadband.pdf 2](http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/282822-1208273252769/Building_broadband.pdf%202)
2. USAID: <http://www.usaid.gov/>

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