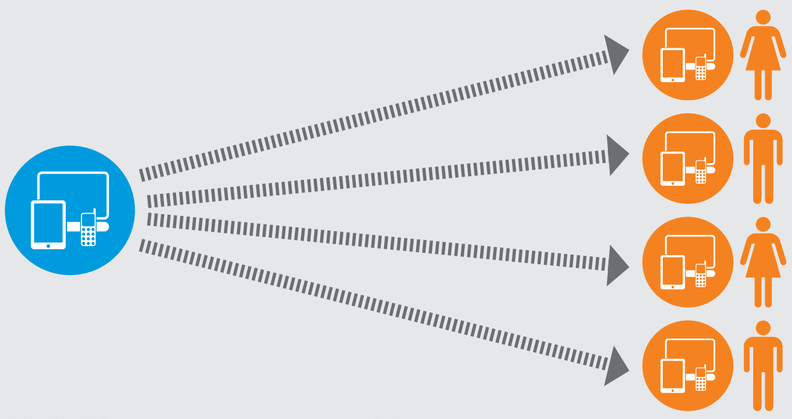
THE BROADBAND EFFECT

Businesses around the world are leveraging broadband connectivity to better include the base of the pyramid (BOP) in economic value chains as clients, producers, or employees. At the national level, a **10% increase in broadband** penetration is associated with an average **3.2% increase in GDP** and **2.6% increase in productivity**. To better understand these trends, the Inter-American Development Bank (IDB)'s Opportunities for the Majority (OMJ) and Broadband Initiative came together to produce a research study: *The Broadband Effect: Enhancing Market-based Solutions for the Base of the Pyramid*. Based on a global survey of over 300 projects that deploy broadband to provide financial, educational, agricultural, and health services to the BOP, the report profiles eight case studies, exemplifying three market-based models for connectivity. Download the report at *www.iadb.org/om/* or scan the QR code below.

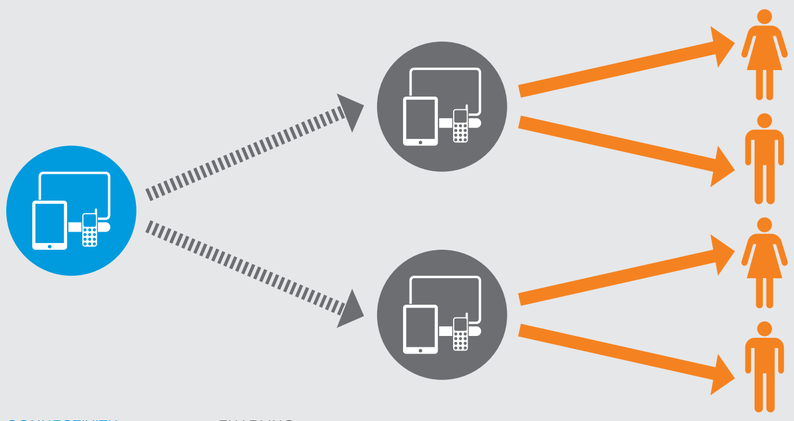
THREE MARKET-BASED BUSINESS MODELS

1. Direct-to-consumer



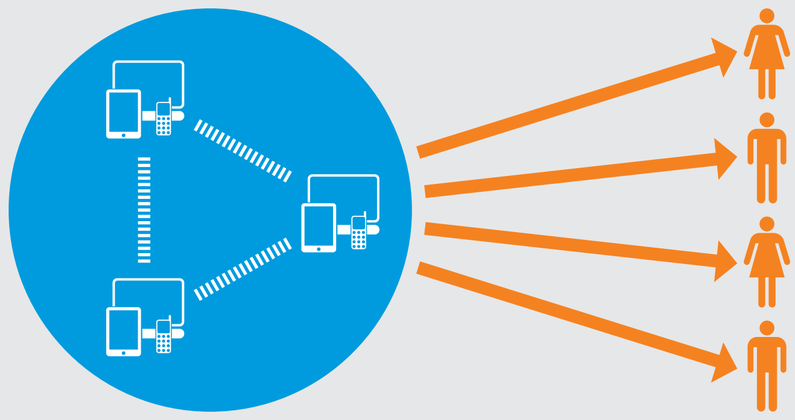
Direct-to-consumer projects provide broadband- or data-enabled services directly on BOP consumers' devices. Many projects are not market-based, but are launched by governments or NGOs to provide information to the BOP. Among market-based projects, most offer a main service that is SMS- or voice-based, operating on the simplest devices, reaching the largest number of people, as well as a premium service that requires more complex devices and better connectivity.

2. Local Agent



Local agent projects offer broadband- or data-enabled services to BOP consumers through local agents who overcome issues of (digital) illiteracy and device affordability for end-users. Using a shared technology point also allows for increased investment in technology, and hence projects in this category tend to use devices with more functionalities and higher-speed broadband than direct-to-consumer projects. This model has a higher proportion of market-based projects.

3. Optimized Internal Processes

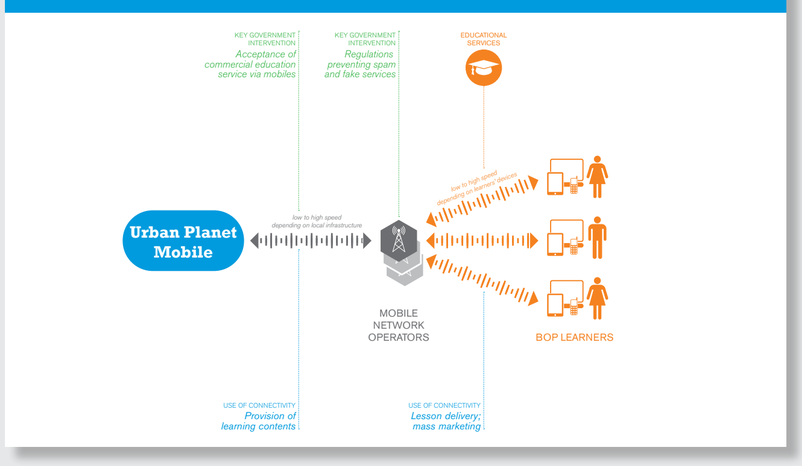


Optimized internal processes projects leverage broadband to re-engineer their business processes and provide better services at lower costs to the BOP, without necessarily putting end-users in contact with technology. This category has few market-based models, but a few cases demonstrate that broadband, in particular, can improve businesses' efficiency, allowing them to serve the BOP sustainably where traditional approaches would otherwise be too costly.

Urban Planet Mobile

Affordable English Courses via Phones and the Internet for Learners from the BOP in 38 Countries

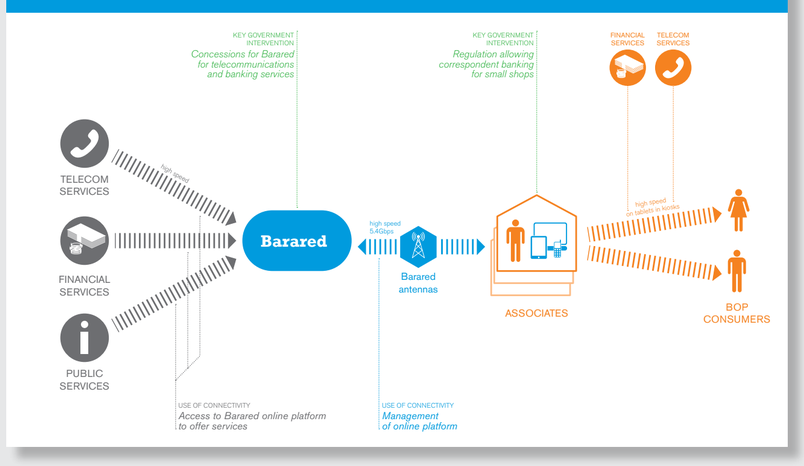
Urban Planet Mobile (UPM) is a for-profit social business founded in Delaware in the United States in 2007 that provides daily learning activities at low cost, making quality educational content more accessible and affordable to poor people. Its main service consists of up to three-minute English lessons delivered once or twice a day on clients' mobile phones. Today, UPM is present in 38 countries and delivers over 250,000 English lessons per day. Its service has delivered over 60 million lessons since its commercial launch in 2010.



Barared

Low-cost Telecommunications and Banking Services in Mexico City Help BOP Customers and Mom-and-Pop Shop Owners

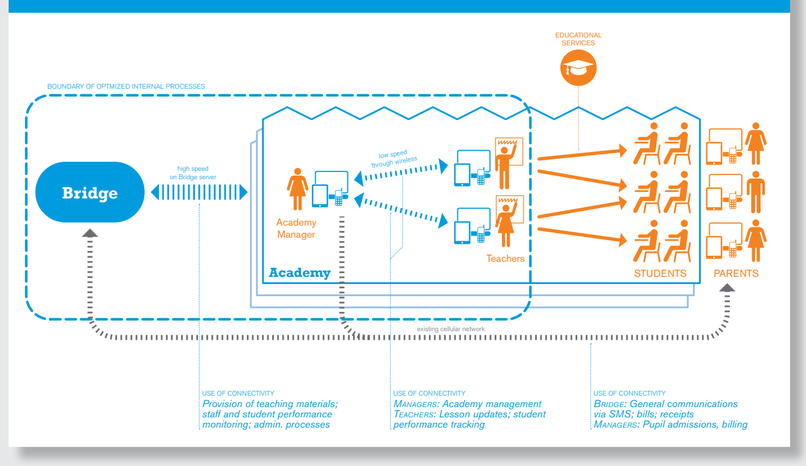
A large share of the population in Mexico lacks access to affordable financial and telecommunications services. Created in 2006, Barared is a private network of service booths, equipped with tablets and located in mom-and-pop shops that provide low-cost telecommunications, financial transactions, and other services to the BOP in Mexico City. Barared partners with the storeowners, who earn commissions on operations, and provides them technical and business support. As of January 2014, Barared had set up 1,000 such kiosks across 35 municipalities in Mexico City, where it offers some 70 different services.



Bridge International Academies

Technology-enabled Low-cost Primary Schools for Kenyan Children from the BOP

Bridge International Academies (Bridge) is a chain of private nursery and primary schools founded in Kenya in 2008. Through a business model that is highly standardized at each point of its service, Bridge delivers high-quality education at low cost. As of January 2014, it became the world's largest chain of nursery and primary schools, serving 80,000 students and employing 2,700 teachers in 259 academies. Bridge aims to break even in 2016 and to operate in at least four countries serving 4.5 million pupils by 2022. Technology and the use of Internet through a second- or third-generation (2G or 3G) network (requiring a minimum of 150 Kbps) are central to the model, both at the management and academic levels. Instructional activities are supported through tablets.



Socio-economic Benefits

Better Information at Lower Cost

Better information. Broadband provides BOP end-users with better information and connection to the world, while minimizing transportation costs.

Lower cost. Broadband enables real-time interactivity between BOP consumers and the rest of the world, bringing remote expertise or key services to their doorsteps. Broadband brings worldwide specialists (otherwise inaccessible) within reach of the BOP.

Market linkages. Data connectivity and broadband also allow for linking market players and aggregate demand and supply to optimize commercial transactions.

Empowerment of Providers

Complex tasks. Data connectivity and broadband can provide support for complex tasks, enabling firms to hire and empower lower-skilled BOP workers. Indeed, data connectivity in general allows for standardizing, simplifying, and monitoring complex tasks, and provides real-time technology support to carry out those tasks.

Competitiveness. Data connectivity and broadband can empower local agents (e.g., franchised entrepreneurs or small shop owners) by enhancing their revenues. Connectivity (even more if it is high-speed broadband) improves the diversity, quality, and competitiveness of small agents' offerings, thus enabling them to increase their revenue.

Lower Prices through Efficiency

Efficiency. Data connectivity and broadband improve organizational efficiency and lower costs through centralized process management. Organizations can make large gains in efficiency and significantly reduce operational costs by automating processes and managing data at the central level.

Quality. Data connectivity and broadband improve service quality through standardization, real-time monitoring, and continuous improvement processes. Organizations can leverage data connectivity to standardize their offerings, closely monitor their results, and continuously improve their model based on this data, ensuring the highest quality of service for end-users.

Macroeconomic Drivers

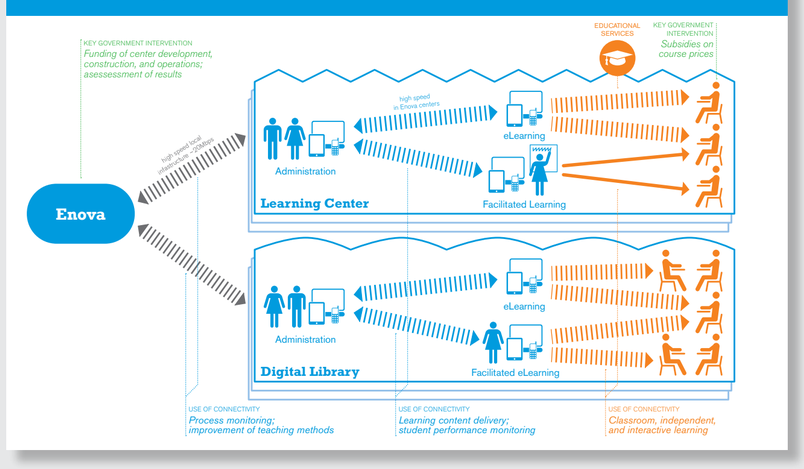
Enterprise growth. Sufficient data connectivity or the right to develop the network allows new businesses to emerge and additional private sector investments to fuel a country's economy.

Employment. Data connectivity and broadband create new employment opportunities and a better match between job supply and demand on the BOP labor market. The case studies in this report provide anecdotal evidence of the economic benefits that data connectivity and broadband can generate at the micro level, which could impact countries at a macro level if scaled up.

Enova

Educational Resources and Internet Access in Learning Centers Impacting BOP Students in Mexico

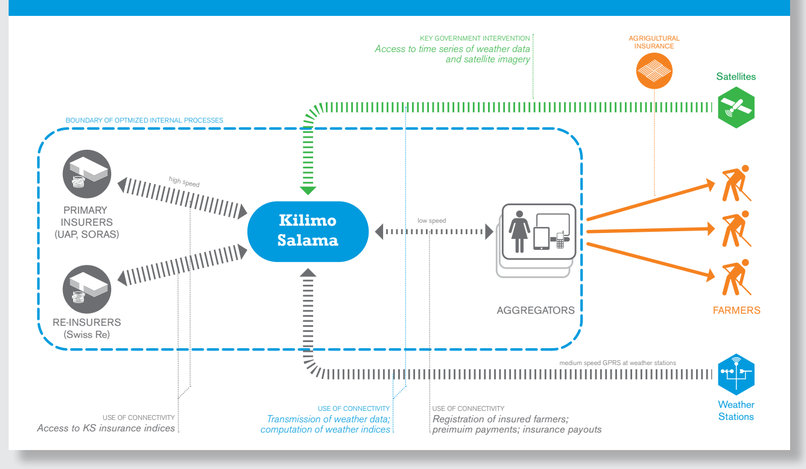
Created in 2007 in Mexico, Enova is a social enterprise that offers technology access and affordable e-learning courses with personalized support in digital centers located in BOP communities. Enova has built an innovative tri-sector partnership between several public agencies that fund and evaluate the project, private companies (e.g., Dell, Microsoft, Google) that provide technical assistance, and the Fundación Proacceso, a non-profit organization with which Enova partnered to create public and private alliances. As of December 2013, Enova had welcomed 478,500 users in its 95 centers across the State of Mexico.



Syngenta Foundation for Sustainable Agriculture / Kilimo Salama

Affordable Insurance Schemes for BOP Farmers in East Africa

Kilimo Salama (KS) is an agricultural social business project in Kenya and Rwanda launched in 2009 by the Syngenta Foundation for Sustainable Agriculture (SFSA). KS insurance schemes cover crop inputs or harvest against extreme weather conditions or certain diseases, cow mortality, agricultural microloans, outstanding credit, and even funeral costs. They are sold mainly via aggregators (e.g., microfinance institutions and farmer cooperatives). As of January 2014, KS was the largest agricultural insurance program in Africa.



Lessons for Policymakers

While broadband can benefit the BOP, innovative projects often struggle to reach scale due to an unsupportive environment. Policymakers could give a significant push to broadband-enabled projects with potential impact through interventions that:

Facilitate Access to Infrastructure

Facilitate access to broadband infrastructure for businesses that serve the BOP. Key actions involve improving "last mile" connectivity (e.g., by encouraging private players' investments or investing directly), and improving broadband affordability (e.g., by fostering competition between broadband providers, or by offering discounted rates – or requesting broadband providers to do so – on broadband access and use for inclusive businesses).

Create an Enabling Environment

Create an enabling environment for BOP businesses that leverage broadband. This includes removing regulatory bottlenecks to innovative business practices with potential impact; reducing taxes and duties on services (and devices) initially considered "for the rich" but that become affordable for all thanks to broadband; and ensuring coherence of connectivity- and broadband-related public policies across ministries and agencies (e.g., by creating inter-ministerial committees to coordinate strategies and interventions).

Support Replication and Scale-up

Provide direct support for the replication and scale-up of broadband-enabled businesses that serve the BOP. This can be done by supporting the sharing of experiences and the dissemination of best practices in leveraging broadband in the provision of social services, or by leveraging government contracts to create business opportunities and catalyze technology investments from inclusive business models.

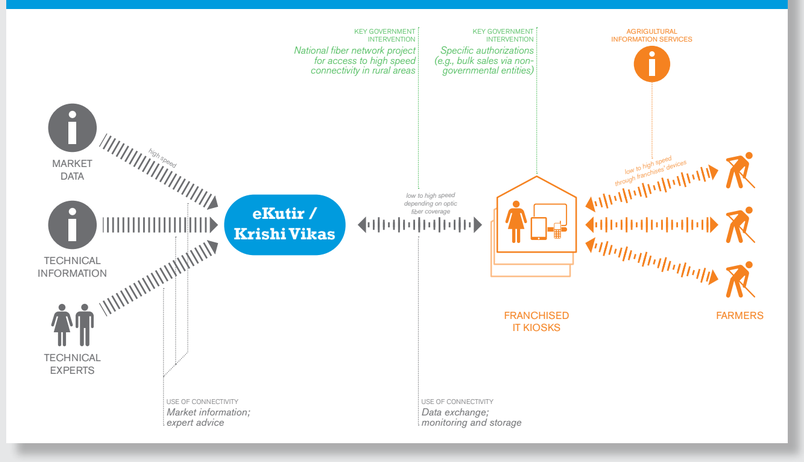
The research undertaken for this report has shed light on new approaches that leverage today's connectivity to build tomorrow's inclusive business models. Connectivity in general and broadband in particular bring new opportunities to the BOP, and are investments well worth considering for policymakers throughout the world and in particular in Latin America and the Caribbean.

More research is still needed to quantify the impact of broadband on poverty at both the macro and micro levels. Yet the authors of *The Broadband Effect* hope that it will inspire political and business leaders to create and support more broadband-enabled businesses to achieve better socio-economic inclusion at the BOP.

eKutir / Krishi Vikas

Improving Small Farmers' Lives through Franchised Agro-kiosks in India

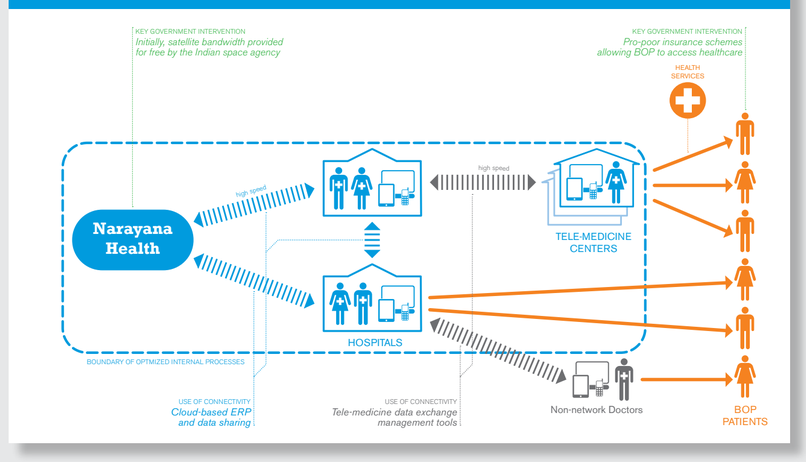
eKutir is an Indian social agro-business launched in 2009. It developed a network of entrepreneurs who run franchised local e-kiosks supporting local farmers. As of December 2013, 106 eKutir e-kiosks had provided individualized advice and trade information to 50,000 small-holder farmers. Connectivity (and broadband when available) is at the very heart of the eKutir business model. It allows entrepreneurs – equipped with a tablet or mobile phone and an Internet data card ensuring wireless medium-speed connection (~140 Kbps) – to directly link small-holding farmers (with 2-3 acres of land) with the market and with agro experts who can advise them. On average, eKutir users have seen their incomes increase by 50 percent and their costs (e.g., of inputs) decrease by 17 percent.



Narayana Health

Affordable Quality Healthcare for the Masses in India

Founded in 2011, Narayana Health (NH) is a private group of hospitals in India that leverages ICT and broadband to increase its efficiency and provide quality healthcare at affordable prices. NH is a profitable social business serving over 80,000 patients per month in one of its 24 hospitals or remotely via tele-medicine. NH has also been active in the promotion of insurance schemes for economically disadvantaged households in order to further contribute to its social mission of "affordable quality healthcare for the masses." It is now scaling up internationally, with new hospitals opening in the Caribbean and Malaysia in 2014. The use of broadband enables remote diagnosis and tele-consultations, real-time access to medical data across the group, and optimization of management.



Challenges & Key Success Factors

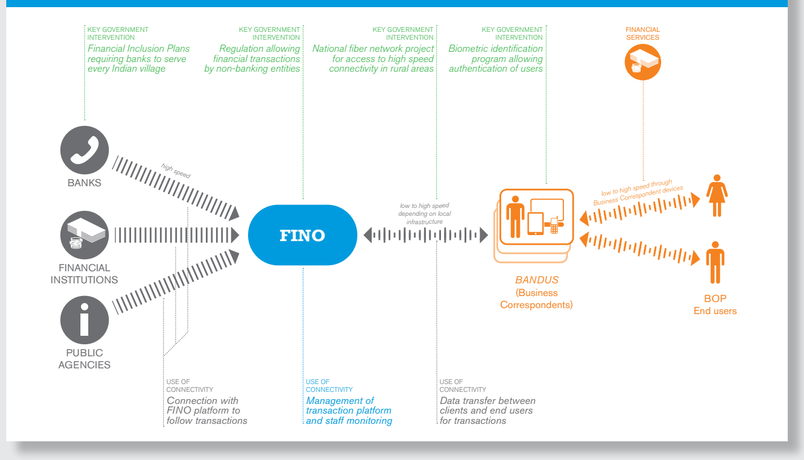
Challenge	*Key Success Factors*		
Value Proposition Offering quality, reliable service at affordable cost with the available infrastructure	**Pre-testing.** Offer a tested, comprehensive, and reliable value proposition to end-users. **Use of technology.** Leverage technology to continuously improve the service. **Adaptation to infrastructure.** Adapt the service to the available infrastructure.		
For the following challenges, key success factors vary by project model, as indicated.	DIRECT-TO-CONSUMER	LOCAL AGENT	OPTIMIZED INTERNAL PROCESS
Marketing Creating trust in technology and service quality	Get endorsements from well-known brands and leverage mass marketing.	Establish trust among consumers via local agents and community endorsement.	Create trust via proximity marketing, quality certifications, and excellent after-sales service.
Distribution Ensuring affordable access to device or point of service	Adapt the service to devices with highest penetration rate.	Build a dense network of agents by offering them an attractive value proposition.	Not applicable.
Scalability Scaling up while paying back high upfront costs	Create replicable service offers and leverage existing client base to quickly reach scale.	Find smart ways to limit or share the investment costs per agent.	Invest frugally and rely on modular growth.

Key to Diagrams

FINO PayTech Ltd.

A Payments Technology Company for the Unbanked and Under-banked in India

FINO PayTech Ltd. (FINO) is a business and banking technology platform created in 2006 in India. It deploys technologies such as biometric devices and transaction systems as well as a network of Business Correspondent called bandhus who provide financial services to remote customers on behalf of banks, insurance companies, and governments. As of January 2014, FINO had served more than 72 million persons at the BOP in rural and semi-urban regions across 26 states of India. The use of second- and third-generation-enabled devices allows for collecting and transferring data on enrollments and financial transactions in real time between customers and the banking system, resulting in higher efficiency for financial institutions and government agencies.



List of Case Studies

Project	*Model*	*Region*	*Sector*	*Device and Network Used*	*Main Service Provided*
Enova	*Local agent*	Latin America (Mexico)	Education technology	PCs and tablets with high-speed broadband	Better and lower-cost classes and Internet services for BOP children and adults
Barared	*Local agent*	Latin America (Mexico)	Financial services	iPads with high-speed broadband through own Wi-Fi antennas	Access to financial and telecommunications services closer to home for urban BOP users
FINO PayTech Ltd.	*Local agent*	Asia (India)	Payments technology; financial services	Broadband or GPRS-enabled POT terminals depending on available networks; offline mode available	Access to lower-cost payments technology and financial services at their doorstep for rural BOP users
eKutir eAgro Initiative	*Local agent*	Asia (India)	Agriculture	Tablets, mobile phones, and Internet data cards with wireless connectivity at various speeds	Increased access to market and agro-expertise for BOP farmers
Narayana Health	*Optimized internal process*	Asia (India)	Health	Cloud-based ERP/ videoconferencing tools with high-speed broadband	Lower cost and better quality of care for BOP patients
Kilimo Salama	*Optimized internal process*	Africa (Kenya, Rwanda)	Agriculture and financial services	Weather stations using GPRS	Micro-insurance for BOP farmers
Bridge International Academies	*Optimized internal process*	Africa (Kenya)	Education	Cloud-based ERP and mobile apps with second/third generation connectivity	High-quality, low-cost pre- and primary schools for BOP children
Urban Planet Mobile	*Direct-to-consumer*	Global	Education	Ringtone-like lessons on mobile phones; web-based apps	Low-cost daily English lessons for BOP learners

Notes: *BOP = base of the pyramid; ERP = enterprise resource planning; GPRS = general packet radio service; POT = point of transaction. See Appendix B for the full case studies.*

Design by TRUTHSTUDIO (www.truthstudio.com)

Inter-American Development Bank
1300 New York Avenue, N.W.
Washington, D.C. 20577
www.iadb.org

The Broadband Effect
Enhancing Market-based Solutions for the Base of the Pyramid
http://bit.ly/omj-pubs

Opportunities for the Majority
The Opportunities for the Majority (OMJ) initiative promotes and finances market-based, commercially viable business models that engage private sector companies, local governments, and communities in the development and delivery of quality goods and services for the base of the pyramid (BOP) in Latin America and the Caribbean.

The Broadband Initiative
Through its Institutional Capacity of the State Division, IDB offers operational instruments and knowledge products to support its clients, with the aim of accelerating broadband access and promoting broadband use.