# Table of Contents

4  FOREWORD | JANAMITRA DEVAN
5  FOREWORD | VALERIE D’COSTA
6  EXECUTIVE SUMMARY
7  PARTNERS IN GROWING INNOVATION
8  INTRODUCTION
9  THE CHALLENGE
9  STRATEGY
10 PRODUCTS AND SERVICES
11 INFODEV’S ADVANTAGE
14 LEARNING CYCLE
15 PARTNERSHIPS
15 CO-INVESTMENT OPPORTUNITIES
15 MONITORING AND EVALUATION
17 MOBILE INNOVATION PROGRAM
29 CLIMATE TECHNOLOGY PROGRAM
39 AGRIBUSINESS PROGRAM
49 ACCESS TO FINANCE PROGRAM
55 WOMEN’S ENTREPRENEURSHIP PROGRAM
62 RESEARCH AND ANALYSIS
69 ANNEX: TARGET PROGRAM SIZE (FY13-15)
Innovation drives competitiveness, and maximizing competitiveness is indispensable to achieving sustainable job creation. Business leaders and policymakers are wisely emphasizing the innovation imperative – a focus on continuously strengthening every economy’s capacity to create new products, processes and techniques – and are putting innovation strategies at the center of their economic agenda. The Financial and Private Sector Development Network of the World Bank Group supports this priority as the only way to prosper in the relentlessly competitive global economy. infoDev is a key part of our effort to contribute to innovation, competitive economies and job creation.

By focusing on access to knowledge, services and finance for technology-enabled startups and high-growth small and medium-sized enterprises in developing countries, infoDev is helping to shore up the cohort of businesses that creates the most jobs worldwide.

Research suggests that a country’s long-term growth rate is driven by increases in productivity due to innovation and technological advancement. The good news is that the world’s knowledge about building economies’ innovation capacity has been steadily growing. Innovation occurs locally, but knowledge is transferable globally. This means that promising pro-growth approaches can be adapted to fit the specific circumstances of a country.

The World Bank Group is helping countries encourage entrepreneurship; promote technology adoption; make R&D more targeted, effective and relevant to what the real economy needs; enhance collaboration among universities and industry; channel investment toward innovative industries; and incubate new technologies. infoDev, with its strong grassroots tradition, supports entrepreneurs on their journey from mind to market, along with offering expert advice to investors and regulators. This approach offers exciting complementarities.

By focusing on mobile innovation, clean technologies, agribusiness and women-led entrepreneurship, infoDev is building capacity for continued growth. Facilitating early-stage investment in innovative firms, while promoting a more entrepreneurial, risk-taking culture, will be critical.

“Green innovation” (which infoDev promotes through its Climate Innovation Centers) and “inclusive innovation” (as infoDev-supported mobile entrepreneurs provide by offering relevant services to the poorest people at the “bottom of the pyramid”) are significant trends that will reshape the world we live in.

The challenges involved in strengthening economies’ innovative capacity and competitiveness are certainly daunting. But infoDev’s role in promoting entrepreneurship and catalyzing technology development is an important part of helping guide countries toward a sustainable, competitive and more future-oriented economy. I am thus pleased to present infoDev’s Work Plan for 2013 – 2015.
This Work Program reflects infoDev’s evolution over the last few years, from a program focused on information and communications technology (ICT) for development to a facilitator and supporter of innovation and technology entrepreneurship for jobs, livelihoods and sustainable economic and social development.

As the world grew more connected and the voice of developing country technology users became more prominent, infoDev began exploring how in areas such as climate technology, agribusiness, mobile innovation, and others, our skills, networks and resources could best support those users, and meaningfully support the World Bank’s Financial and Private Sector Development goals of inclusion, competitiveness, and sustainable growth.

At the same time, the pace of technology has opened so many new development frontiers and new opportunities for us and for those we serve. For infoDev, this is a cornerstone of the new development landscape: our grassroots network of visionaries and entrepreneurs helps and compels us to keep up with new ideas and trends! As our stakeholders grow, we grow with them.

This unique advantage has given us the know-how behind our Mobile Applications Laboratories (mLabs), Climate Innovation Centers (CICs), and Agribusiness Innovation Centers (AICs)—start-up support facilities where entrepreneurs in developing regions can get access to mentoring, equipment, technical assistance, potential partners, and even lifeline early-stage financing—often a first for their communities. These centers and the others in our network have helped create well over 220,000 jobs in developing countries. Our stakeholders are a vibrant global community who, when given the right tools, insights and training, can be a force for grassroots innovation.

Our results continue to inspire people in local communities, our international donors and partners and our counterparts within the World Bank Group. However, the real acid test of our relevance is in the demand our clients have shown for the solutions we have designed and piloted. This demand speaks to infoDev’s unique skill for seizing private sector development opportunities as they emerge, to ourselves innovate in finding and deploying dynamic new solutions, and to consistently explore and understand what lies on that cutting edge nexus of technology and development.

In this Work Program and in the years to come, infoDev will continue to serve the enterprising women, men, and youth who shape their own communities and the world with their ideas, aspirations and ambition.
Entrepreneurs are a powerful engine for development, particularly those who develop innovative, technology-enabled solutions. However, in developing countries, new, growth-oriented ventures frequently operate in environments that lack infrastructure, office space and connectivity; insufficient numbers of mentors; few or inadequate opportunities for training; difficulties in accessing finance; weak policy and regulatory environments; and lack of access to regional and global markets.

infoDev has developed a three-year program to improve employment, competitiveness, and sustainable, inclusive growth for these innovative, technology-enabled ventures. The program takes a localized approach to support growth-oriented entrepreneurs in developing countries, influences the global innovation and entrepreneurship agenda, implements scalable activities for mobile, climate and agribusiness enterprises, and promotes inclusiveness of marginalized groups.

We accomplish these goals through creative and path-breaking venture enablers; assisting entrepreneurs to secure appropriate seed investment or other early-stage financing; convening entrepreneurs, investors, donors, policymakers, private sector partners, mentors and other ecosystem stakeholders for dialogue and action; and producing cutting-edge knowledge that is closely linked to our work on the ground.

infoDev’s decade-long experience in these fields is complemented by its unique position within the World Bank Group. infoDev has the agility to pilot new concepts from the grassroots up and to ensure that solutions are scaled and mainstreamed into larger projects. In doing so, it supports the Bank Group in its commitment to innovation and entrepreneurship. It also bridges operations and knowledge through research, best-practice assessments, publications, and regular and rigorous evaluation of its activities. infoDev supports the Bank Group’s commitment to growth of a strong private sector in developing countries that leverages technology and innovation and feeds overall growth, competitiveness and inclusion.
PARTNERS IN GROWING INNOVATION

infoDev is privileged to work with a range of donors and partners who value our grassroots innovation communities and our cutting-edge approach to piloting new ideas and seeking new knowledge. Some examples of our partnerships include the following:

- In a flagship program funded by the Ministry for Foreign Affairs of Finland (FORMIN), and implemented via a technology partnership with Nokia Corporation, we have delivered a pioneering intervention to invent and deploy mobile applications labs to grow the next generation of apps entrepreneurs. The program has supported over 1,600 developers and entrepreneurs, and helped over 150 small businesses in developing countries. In the first two years, these businesses brought 120 new mobile applications to market, and over 40 of them have secured investments totaling more than USD 13 million.

- With the government of Brazil, infoDev is exploring the environmental issues and the economic potential of processing and using electronic waste (e-waste), a phenomenon affecting developing countries the world over.

- In partnership with the Swedish International Development Cooperation Agency (Sida), the Foreign Ministry of Finland and the UK Department for International Development (DFID), infoDev is delving into the effect that mobile phone use has on the most marginalized segments of the population, as well as on the ways women entrepreneurs can seize the opportunities created by the strong growth in the mobile sector.

- In collaboration with the Canadian International Development Agency (CIDA), we are supporting the growth and market potential of micro-, small- and medium-sized enterprises (MSMEs) via a targeted suite of incubation, financing and skills development services.

- Joining efforts with the Australian Agency for International Development (AusAID), the Danish International Development Agency (DANIDA), DFID and Norway, we have launched another pioneering effort: Climate Innovation Centers (CICs), facilities designed to bolster the clean technology entrepreneur, and to harness the economic opportunities that climate change presents for MSMEs in developing countries.

- In an endeavor championed by the Finnish government, infoDev is identifying how best to grow innovative MSMEs in agriculture, a field that has a vast impact on job creation, competitiveness and productivity in developing countries.

- In close cooperation with World Bank ICT experts and the government of Korea, we have increased understanding of the mechanisms through which broadband connectivity can create and support jobs, competitiveness and productivity. Thanks to the support of the Korean Trust Fund on ICT for Development, in 2010 infoDev and the World Bank Institute launched EVOKE, a unique online game that challenged youth to learn about development problems and come up with creative solutions.

- In partnership with India (2004, 2006), Brazil (2009), Finland (2011) and South Africa (2013), we regularly convene thought leaders, entrepreneurs, innovation activists and other members of our grassroots community at the infoDev Global Forum on Innovation and Entrepreneurship.

- We are engaging, celebrating and mentoring the next generation of talented technology entrepreneurs in developing countries via dynamic partnerships like LIONS@frica with the US State Department. Other partners include USAID, Nokia, Microsoft, Global Innovation through Science and Technology (GIST), DEMO, the African Development Bank and Startup Weekend.
INTRODUCTION

For Ecofiltro CEO Philip Wilson, the tools of private enterprise are inseparable from social change. Guatemala-based Ecofiltro—a supplier of household water filtration systems that use low-cost materials like carbon and clay to supply affordable, clean drinking water with minimal infrastructure needs—opened a new manufacturing plant in 2012. The plant employs more than 110 people, including 73 saleswomen, and is clearing a path for future international expansion. Ecofiltro’s first foray into the global spotlight came at infoDev’s 4th Global Forum in 2011, where the company was chosen from other members of our incubator network as a Top 20 SME winner. Following this international exposure, Ecofiltro’s revenues rose. It closed the year with net revenues greater than $1 million and a sold-out inventory. Mr. Wilson has opened a new plant that will ship 120,000 filters in 2012 and 240,000 in 2013.

Recent research suggests that new and growth-oriented firms like Ecofiltro are likely to contribute disproportionately to economic activity and provide important new sources of high-value employment. Relying on their creativity, resourcefulness, and knowledge of the business environment, growth-oriented entrepreneurs and innovative small and medium enterprises fill important gaps in their countries’ markets.

Providing support to these growth-oriented entrepreneurs and working closely with small and medium enterprises to generate jobs helps promote a stable and inclusive business environment, and increases the competitiveness of the economies in which they operate. This is part of the mission of the World Bank Group’s Financial and Private Sector Development Network (FPD)—a joint group of the World Bank and the International Finance Corporation.

New and growth-oriented firms are likely to contribute disproportionately to economic activity and provide important new sources of high-value jobs.

- The Startup Act, Kauffman Foundation

THE CHALLENGE

Entrepreneurship can be a powerful engine for development, but entrepreneurs in developing countries often face barriers as they shepherd their ideas from mind to market. Notably, new ventures in emerging and frontier markets frequently operate in an environment characterized by the lack of:

- Affordable infrastructure, office space and connectivity;
- An innovation ecosystem;
- Mentors and business coaches;
- Training opportunities;
- Financing, including angel investors and seed funders;
- Institutional support and sound policy and regulatory frameworks;
- Connections with regional and global marketing channels.

THE STRATEGY

In response to the many hurdles faced by entrepreneurs in developing countries, infoDev works to improve competitiveness, employment and sustainable, inclusive growth by helping innovative, technology-enabled ventures succeed. infoDev serves its clients, donors, partners, and the wider development community by:

- Experimenting and pioneering on-the-ground approaches to supporting growth-oriented entrepreneurs in developing countries;
- Influencing the global innovation and technology entrepreneurship agenda;
- Developing and implementing scalable programs specifically targeted for mobile, climate and agribusiness enterprises;
- Promoting inclusive strategies that benefit marginalized groups, women, people living in extreme poverty (i.e., users at the “base of the pyramid”), minorities, youth, and others.

PHOTO: WORLD BANK

Being a startup [in my country] is just like what I imagine a startup in Silicon Valley would be like except you get ALL comforts and advantages stripped away. Besides missing the obvious things like venture capital and angel investors, you are also missing a healthy pool or early adopters or people who support startups, as well as key hires with built-in technical expertise.

- Eric Su, Philippine Entrepreneur
PRODUCTS AND SERVICES

infoDev delivers the following products and services to fulfill this strategy:

**BUSINESS ENABLERS.** Creative and path-breaking new venture enablers, including incubators, co-creation hubs, innovation centers, business acceleration programs, ecosystem development and community strengthening interventions, idea and business plan contests, and mentorship schemes.

**ACCESS TO FINANCE.** Initiatives that assist entrepreneurs to secure the appropriate seed capital or other early-stage financing they need to take their enterprises to the next level.

**NETWORKS AND CAPACITY BUILDING.** Convening entrepreneurs, investors, donors, policymakers, private sector partners, mentors and other ecosystem stakeholders for the purpose of sharing knowledge, building trust, learning from each other’s experiences, as well as for training and capacity development.

**KNOWLEDGE PRODUCTS.** Producing and disseminating cutting edge knowledge through research derived from, and integrated into, our grassroots projects.
INFODEV’s ADVANTAGE

INFODEV’s decade-long experience in these fields is complemented by its unique position within the World Bank Group.

INFODEV has the necessary agility to pilot new concepts at the grassroots, and to ensure that workable solutions are scaled and mainstreamed into larger projects. It supports the World Bank Group’s commitment to innovation and entrepreneurship through these approaches. It also bridges operations and knowledge through best-practice assessments, research, and publications, and through a regular and rigorous evaluation of its activities. INFODEV supports the World Bank Group’s commitment to the growth of a strong private sector in developing countries in a manner that leverages technology and innovation and feeds overall growth, competitiveness and inclusion.

Our work extends around the world, allowing us to leverage the ideas and lessons generated in one country for the benefit of other countries. Our stakeholders in developing countries create and design practical solutions with INFODEV and work with us as partners in ensuring success on the ground. These stakeholders and our networks also request reliable and rigorous research and participate in INFODEV’s research and knowledge agenda. This research, which draws upon grassroots voices, in turn informs effective operations. Further, INFODEV’s analytical products, such as toolkits, best-practice guides, issue briefs and studies, help national and subnational policymakers consider how innovation ecosystems and conducive regulatory environments assist innovators and entrepreneurs to increase productivity and growth.

Over the past few years, INFODEV has built on its success in incubating technology-enabled businesses to launch specialized programs aimed at promoting the growth of new ventures in the mobile, climate and agribusiness sectors. Supporting these strategic sectors contributes to broader growth and competitiveness, and leads to the development of value-adding jobs suited to the new knowledge economy. Each of these interventions is described in detail in this document.

Our mobile, climate and agribusiness programs provide technology testing facilities, formal or informal mentorship, training courses, and regular multi-stakeholder networking opportunities, as well as traditional business incubation services. In cases where the entrepreneurial ecosystem is in the early stages of formation and the demand for a physical incubator does not yet exist, INFODEV has invested in informal communities, or “hubs,” that act as focal points for entrepreneurs. These hubs offer regular events, workshops, mentoring and competitions, promoting further ecosystem development.

In addition to our incubators, labs and innovation centers, INFODEV is piloting acceleration approaches in a number of our areas of focus. These are designed to allow a new venture with particularly high potential for growth to increase its value and investability over a very short period of time. Through intensive mentoring, re-evaluation of business strategy and sometimes, a reconfiguration of its service and product offerings, we can potentially help a startup move from idea to prototype in just a few weeks, and go to market in as little as two months.
infoDev hosts idea, business plan and pitching competitions for startups, often in partnership with other entities. These are not approached as onetime events to generate publicity and attention—although they attract both. Rather, we consider these events part of a holistic, mind-to-market process. These competitions are an effective means to identify those ideas, entrepreneurs, business models and founding teams that have the potential to secure further investment and grow into successful enterprises with local, regional or even international market potential.

Competition winners are linked to the appropriate financing and marketing guidance.

In each case, our program design and implementation approach is one of cultivating local ownership and knowledge, while leveraging global ideas, initiatives and lessons.

Fig. 1. Examples of support offered by our mobile innovation program.

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2 infoDev's financial investment is almost always limited to the early stages of an incubator’s or hub’s life, although we do continue to inform, involve and learn from all incubators and hubs on a long-term basis.
The infoDev Network

Over the past decade, infoDev has created a global network of incubators and new venture enablers—organizations and initiatives designed to promote the startup and growth of innovative enterprises. In the first phase of its work with incubators, infoDev provided seed co-investments to help establish and grow some 100 incubators around the world. Some of these entities have grown and thrived, attracting new investors and launching cutting-edge incubation facilities and services. Others have since changed their missions, merged with other organizations or even closed their doors for various reasons. Meanwhile, a network of individuals and organizations affiliated with infoDev have continued to grow across the developing world, creating a living community of practice that guides and informs our work.

In its next phase, infoDev will continue to leverage and support this network, which today numbers around 240 incubators. These incubators have helped 20,000 enterprises create more than 220,000 jobs. As infoDev establishes specialized new venture enablers, such as mobile labs and hubs, climate innovation centers and agribusiness innovation centers, they will join this global community. infoDev will invest in training programs for leaders of these incubators and venture enablers, further enhancing the power of the network. The network has already proved to be a rich source of data and research on innovation and entrepreneurship in over 93 countries and an important conduit for SME market internationalization, knowledge transfer, peer learning and the convening of all innovation ecosystem stakeholders for collaboration, trust-building and dialogue.
INFODEV’S GLOBAL FORUM ON INNOVATION AND TECHNOLOGY ENTREPRENEURSHIP

Our beneficiaries value the opportunity to connect with one another, to learn, exchange ideas and lessons, and create partnerships across national boundaries. The infoDev Global Forum on Innovation and Technology Entrepreneurship is held every two years to discuss results, celebrate the success of our entrepreneurs, identify lessons from our networks, and launch new initiatives. Over five days, infoDev organizes activities including training and certification of business incubator managers, entrepreneur pitching competitions, policymaker roundtables, business matchmaking, and closed-door strategy sessions. Donor and World Bank colleagues benefit from the exposure to the grassroots realities of entrepreneurs and enterprises. Investors and industry partners value the unique market and investment opportunities. The last Forum brought together more than 600 inspiring people from over 90 countries—including entrepreneurs building innovative businesses in emerging economies. The next Forum, to be held in May 2013 in South Africa, will continue this journey of learning, business matchmaking, strategy and dialogue, with a special focus on the needs of African innovators.

Learning Cycle

Our learning cycle begins at the base of the entrepreneurial pyramid. Feedback from grassroots stakeholders is codified into knowledge products whenever possible. As we have integrated these lessons into our ongoing activities, a cycle of iterative learning and knowledge creation has emerged.

While infoDev serves as a guide and manager of this iterative learning cycle, it is important to emphasize that the knowledge we share is most frequently generated by our clients—local stakeholders who rely on their unique experiences, insights, and needs to co-create solutions with us. These solutions may then be delivered through a Climate Innovation Center, a Mobile Applications Lab, or an Agribusiness Innovation Center. Through the process of gathering experiential learning and making it easily accessible to clients, donors, other development practitioners and industry, our distinctive methodology has become a rich, inclusive, and impactful way of creating and disseminating knowledge, as well as engaging and empowering our clients.
PARTNERSHIPS

infoDev forms close partnerships with World Bank colleagues, donors, industry leaders, development organizations, as well as communities of entrepreneurs, innovative private sector players and investors. These collaborations allow us to leverage others’ work to sustain our programming, develop supply chain linkages with larger firms, and access current market information. We depend on evolving and effective ecosystems to help entrepreneurs grow their businesses. By leveraging expertise and resources of our partners, we aim to ensure the presence of sound infrastructure, effective policies and regulations, access to financing, technology, market information, and training and capacity development. This requires cooperation among public and private sector actors. infoDev therefore engages all ecosystem players during an intensive needs and feasibility assessment process, as well as during the project planning and implementation phases.

CO-INVESTMENT OPPORTUNITIES

In nearly all of our programs, opportunities exist for donors and private sector partners to co-invest in the success of our entrepreneurs and their ventures. Thus, for instance, our Mobile Innovation Program engages regularly with industry leaders such as Nokia, Ericsson, Samsung and others, while our Access to Finance Program works with local networks of angel investors to find promising opportunities in infoDev’s incubators and hubs. Our other incubators have also received co-financing from a range of partners in the public and private sector, strengthening their sustainability and ensuring wider buy-in. As a technology- and brand-neutral program, infoDev is always searching for original ways to partner with new organizations and individuals.

PILOTING AND TESTING

Most of our projects are built on years of testing and piloting of initiatives. In other words, we design new activities by incorporating lessons derived from ongoing work.

FEASIBILITY TESTING & PEER REVIEW

When we encounter new countries, new methodologies or new beneficiary groups, i.e., the base-of-pyramid programming included in our mobile program, a specific assessment exercise is included in the feasibility stage of the project. In addition, a peer-review process that includes regional and thematic specialists from and outside of the World Bank is conducted as part of each Project Implementation Plan development.

DAILY SUPERVISION

Our team leaders and task managers personally supervise all of the activities and frequently liaise with grant recipients. All projects are also visited in person at least once a year by InfoDev staff, or, if this is not possible, by other World Bank Group colleagues.

TRACKING PROGRESS

We produce reports of our progress at regular intervals, outlining interim and final results and lessons of all programs. The following table gives some examples.
MONITORING AND EVALUATION

Beyond the standard evaluation applied to all trust-funded programs of the World Bank Group, and an independent evaluation we commission every five years, infoDev continuously supervises and evaluates all of the programs it implements, both directly and through its grant recipients. The following chapters in this report include descriptions of appropriate monitoring and impact evaluation components by program. However, a common approach ties all of these components together.

<table>
<thead>
<tr>
<th>FEASIBILITY</th>
<th>PROGRESS</th>
<th>IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ecosystem</strong></td>
<td>What is the state of the ecosystem? Is there sufficient infrastructure and is it of adequate quality to facilitate scaling up of benefits?</td>
<td>What activities have been implemented to strengthen the ecosystem? How many beneficiaries have been served and in what ways? Does programming related to ecosystem need to be adjusted?</td>
</tr>
<tr>
<td><strong>Customer Demand</strong></td>
<td>Is there sufficient demand locally, nationally, regionally or internationally for products or services that can be developed by entrepreneurs-beneficiaries?</td>
<td>Have feasibility findings about customer demand been proven or disproven or has new information been discovered? Should programming be adjusted to reflect customer demand?</td>
</tr>
<tr>
<td><strong>Markets</strong></td>
<td>Can markets be identified that are accessible, feasible and viable?</td>
<td>Have beneficiaries been able to support the marketing of services or products as envisioned?</td>
</tr>
<tr>
<td><strong>Entrepreneurial / Venture Capacity</strong></td>
<td>Do sufficient numbers of potential new ventures and/or entrepreneurs exist and/or can they be groomed to ensure growth of beneficiation activities?</td>
<td>Have feasibility findings about entrepreneurial capacity been proven or disproven or has new information been discovered? Do adjustments related to entrepreneurial capacity need to be made mid-course?</td>
</tr>
<tr>
<td><strong>Availability of Funding</strong></td>
<td>Is additional funding available for training, R&amp;D, commercialization and expansion?</td>
<td>Has additional funding been accessed by ventures or entrepreneurs and if so, how much and from which sources?</td>
</tr>
<tr>
<td><strong>Leverage</strong></td>
<td>Are there existing initiatives that can be leveraged to support activities?</td>
<td>Have any activities affected entry into and exit from industry?</td>
</tr>
</tbody>
</table>
MOBILE INNOVATION PROGRAM

PHOTO: JASON FLORIO/IFC
BACKGROUND

Mobile communication devices have created the largest communication and transaction platform in history. Around three-quarters of the world’s population use mobile phones, with six billion subscriptions now active. Mobile access has been linked with economic growth potential, and the industry itself boosts the economy by providing high-value jobs. Mobile software and applications—"apps"—catalyze new activity in other sectors, like healthcare and government.

A World Bank study shows economic growth of 0.8 percentage points for every 10 percentage point increase in the penetration of mobile phones in low- and middle-income countries, 0.2 of a point greater than in high-income nations. Increasingly, developing countries see a unique opportunity to leverage mobile applications for inclusive economic and social development. Recognizing this opportunity, infoDev nurtures and grows innovative, sustainable mobile application enterprises. It does so by convening local and global innovation networks for mobile developers and entrepreneurs, incubating and accelerating app startups, and researching the app economy of developing nations.

CHALLENGE

The mobile industry today stands on the cusp of a content revolution—the provision of a range of freshly imagined mobile software applications that will serve real-world needs. Mobile apps have already gained popularity for sharing music, for sports, and for other entertainment. But they also have the potential to foster inclusive growth by unfurling digital access to parts of the world that have been unreachable through other existing infrastructures. Suddenly, even the most rural farmers have market information at their fingertips. Governments can bring healthcare information and education to the most remote citizens, even if these citizens are unable to reach physical facilities. Small businesses can access supply and delivery information. The “unbanked” segments of the population suddenly have access to mobile banking. With relatively low device and subscription costs, and low technological barriers to entry, the mobile industry offers vast revenue and growth potential for application developers and entrepreneurs.

3 Qiang, Rossotto, and Kimura, “Economic Impacts of Broadband,” IC4D, http://siteresources.worldbank.org/EXTIC4D/Resources/IC4D_Broadband_35_50.pdf. It is not unreasonable to expect this correlation to strengthen further, as the 0.8 figure, derived in 2009, represents an increase from 0.6, the value found in 2005 by Leonard Waverman.
We strive for more robust economies and equitable societies, with citizens empowered to make informed choices and forge meaningful livelihoods. However, in many developing countries, existing markets do not support these outcomes. Creativity and entrepreneurial spirit abound in low- and middle-income countries. But these entrepreneurs often lack professional networks, favorable policy environments, information access, business skills, mentors, spaces for exchange, and access to investors—all necessary for a thriving mobile innovation ecosystem. infoDev identifies and tackles these barriers, unleashing the potential of mobile innovation for inclusive economic development and job creation.

**STRATEGY**

infoDev’s Mobile Innovation Program enables the development of innovative, sustainable mobile application enterprises. We do this by: 1) convening local and global innovation networks of mobile developers and entrepreneurs; 2) enabling entrepreneurship on the ground; 3) researching the economic opportunity for mobile entrepreneurs in the global South.

In 2013-15, we will build on three years of successful pilots that supported entrepreneurs with high-growth potential in the mobile industry, while also engaging people at the base of the pyramid (particularly women) as active citizens, consumers, and entrepreneurs. We will build on these pilots by continuing to support nascent mHubs and mLabs that show significant promise, by expanding our global network of mLabs and mHubs, and through research aimed at improving economic opportunity for mobile entrepreneurs in the global South (see page 20).

The Creating Sustainable Businesses in the Knowledge Economy (CSBKE) program, a partnership between infoDev, Finland, and Nokia, has laid the foundation for infoDev’s mobile innovation work. The program has garnered widespread international interest because of its innovative approach. As the core of CSBKE, infoDev piloted a network of four mLabs and eight mHubs across three continents with full local stakeholder engagement (see below). Hundreds of mobile applications have been developed as a result.
## mHUBs

mHubs are multi-stakeholder networks that organize informal gatherings on topics related to mobile technologies, competitions for entrepreneurs, local businesses, individual users, and peer-learning sessions. They also run training and mentorship programs and conferences. Through these activities, mHubs are able to map communities in the mobile industry ecosystem and help strengthen personal relationships between entrepreneurs, developers, network operators, device manufacturers, investors, marketing specialists, and students. Eight mHubs are in operation, in Azerbaijan, Georgia, Kenya, Moldova, Nepal, Tanzania, Uganda, Vietnam and additional hubs are planned for the Caribbean.

![mHubs](photo: Jason Florio/IFC)

## mLABs

mLABs offer specialized mobile business incubation - in particular, physical workspaces and state-of-the-art equipment, back-office support, testing facilities, and technology-neutral platforms. While they also organize ecosystem-building programs, their focus is on supplying the capital-intensive resources small entrepreneurs need to test their products, and to develop the relevant technical skills and business know-how to turn scalable mobile solutions into thriving businesses. Currently, there are four regional mLABs in operation, in Armenia, Kenya, South Africa, and Vietnam.

![mLABs](photo: mLab Southern Africa)

## SERVICE PORTFOLIO OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>mLab</th>
<th>mHub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networking, e.g., thematic presentations followed by informal discussions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multi-stakeholder, national-level conferences</td>
<td>Option</td>
<td>Yes</td>
</tr>
<tr>
<td>Online learning, collaboration and discussions</td>
<td>Option</td>
<td>Yes</td>
</tr>
<tr>
<td>Mentoship by successful entrepreneurs and investors</td>
<td>Yes</td>
<td>Option</td>
</tr>
<tr>
<td>Technical and business skills training</td>
<td>Yes</td>
<td>Option</td>
</tr>
<tr>
<td>Competitions to identify most promising product ideas and prototypes</td>
<td>Yes</td>
<td>Option</td>
</tr>
<tr>
<td>Office space at subsidized costs for limited periods of time</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Mobile app testing facilities</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Formal incubation program</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Assistance with marketing apps (e.g., advice on pricing, delivery channels)</td>
<td>Yes</td>
<td>Option</td>
</tr>
<tr>
<td>Assistance with access to early-stage finance (investor network)</td>
<td>Yes</td>
<td>Option</td>
</tr>
<tr>
<td>Access to seed funding</td>
<td>Option</td>
<td>Option</td>
</tr>
</tbody>
</table>

NB: in each case, the combination of options varies according to demand, and some options, e.g. provision of seed investment, require additional funding.

* Option: Advanced mHubs can implement this activity, for instance, if assisted by mLABs.
infoDev has learned a number of useful lessons from its work supporting mobile innovators, each of which will inform our work in 2013 to 2015 and beyond. Among them:

- **Location has an enormous impact on the quality and uptake of services delivered by mHubs and mLabs.** If a community of developers, entrepreneurs, industry professionals, and investors are to form around the mLab or mHub, they must find activities readily accessible and affordable, including travel time and cost. If desirable locations and venues are costly in any particular country, this must be factored in to the startup cost of the mLab or mHub.

- **The choice of mLab and mHub managers is critical.** infoDev provides toolkits, materials and supervision, but it is up to the mLab and mHub managers to reach out to local stakeholders and to communicate the value of their services. It is helpful if managers are entrepreneurs themselves and if they have established relationships with investors and industry players. They need to inspire the trust of the communities they serve, be passionate about building successful enterprises, understand social inclusion and development goals, and keep abreast of developments in the fast-changing mobile market.

- **Ensuring appropriate, continued support to the successful mobile labs and hubs over the medium-term is critical.** In infoDev’s estimate, based on previous experience, it takes between five and seven years for a business ‘enabler’ to become fully self-sustaining. Since donor-supported funding often follows shorter cycles, entities assume the risk of losing important resources, such as managerial personnel and office space, if support lapses before self-sufficiency has been reached. Currently, infoDev requires careful sustainability planning of all of the mobile labs and hubs at different stages of the project cycle: at the proposal stage, applicants submit a sustainability and partnerships plan that can help management locate and secure complementary resources. During implementation, information is collected about the amounts of additional funding and in-kind resources leveraged by each client; finally, at the grant expiration stage, grantees calculate and submit their estimates of the minimum necessary resources that can sustain their basic operations for an additional two years. infoDev’s approach is to ensure that the time period available to grantees to achieve sustainability is reasonable; a longer implementation period also allows infoDev to address implementation difficulties more effectively, for example, in cases where changes in management or governance structure require additional time for supervision or changes in the strategy of project delivery.

- **An inclusive governance structure is important** to ensure the participation of a wide variety of mobile ecosystem stakeholders in the mLab and mHub. Whether a consortium of partners or a single organization takes the lead, there must be openness to public, private, and civil society perspectives, as well as flexibility to respond to the mobile community’s evolving needs. An organization or consortium that is well-known and trusted by the community has an excellent chance of success.

- **Adaptation of the mHub/mLab model to the local market conditions is essential.** The choice of countries for mHubs and mLabs is based on market studies. The feasibility assessment process details the needs of local developers and entrepreneurs from “mind-to-market” by reaching consulting a broad range of stakeholders including industry, entrepreneurs, donors, government, financiers and NGOs. infoDev - in collaboration with its local partners – then design a model that addresses gaps from the ideation stage all the way to the successful adoption of innovations by the market to enterprise sustainability and scale-up of operations. The range of tools, thus, spans a wide variety of approaches, from training and hands-on experience, to programming that increases access to financing the establishment of angel networks and seed financing facilities, and ensuring strong partnerships between key ecosystem players on the ground.
LESSONS LEARNED

• **The choice of location for mHubs and mLabs and any other initiative implemented by infoDev need to be based on market studies and scoping assessments.** The assessment process requires a collection of industry players, entrepreneurs, donors, government, financiers and NGOs, whose own learnings are incorporated into infoDev’s analyses. In each instance, infoDev considers opportunities for leveraging expertise and resources to address local needs when choosing a particular location.

• **Sustainability for the mLabs and mHubs can only be realized with adequate time and resources.** infoDev has run a number of mLab and mHub pilots that have achieved great success over just two years, stimulating huge grassroots demand and attracting additional financing from other sources. However, ensuring that the mLabs and mHubs achieve financial self-sufficiency, acquire depth of capacity, and develop sustainable business plans takes time, ideally five to ten years.

• **No one legal form or organizational option for the mLabs and mHubs is clearly preferable.** They can be equally successful housed in or constituted as non-profit organizations, for-profit companies, foundations, or academic institutions. Their ability to operate from the center of the mobile-content value chain, where they need to play the roles of integrator, broker of partnerships, and enterprise enabler, does not seem to relate to the legal form or organizational structure taken.

• **Measuring success involves taking into account the local context and following the project implementation over the medium term.** infoDev keeps track of numbers of startups founded, developers and entrepreneurs reached and trained, jobs created, mobile applications adopted by the market and other metrics that allow for comparison across the mLabs and mHubs. Gender disaggregated data is collected whenever possible.

MOVING BEYOND “PROOF OF CONCEPT”

It is inevitable that some mLabs and mHubs will be more successful than others. infoDev continues to advise all mobile innovation enablers it has seeded, and may at times consider providing additional financial support to those who have proven to be particularly effective without yet achieving full sustainability. The criteria used to decide whether or not a particular mHub or mLab will receive additional support evolve along with the changing ecosystem in which they are located; however, the following questions are generally considered:

• What is the track record of the manager? Does the manager have a visioning capacity, coupled with the ability to lead a team to deliver the mLab/mHub’s goals? Is the manager able to align local interests and goals with the development objectives articulated by infoDev and its partners?

• What is the governance model of the mLab or mHub? In particular, does the governance model ensure ownership by the community? Are there redundancies built in to ensure that the mLab or mHub can operate if one or more of the key people or organizations decide to suspend their involvement?

• What is the feedback about the mHub or mLab provided by the entrepreneurs and other key ecosystem actors to infoDev or evaluators commissioned by infoDev?

• What is the mHub’s or mLab’s sustainability plan?

• What key partnerships has the mLab or mHub been able to secure? Are these partnerships contributing to the quality and range of service offerings or to the sustainability of the mHub or mLab?

• Is the mLab or mHub evolving along with the innovation ecosystem into which it is embedded? In other words, are services and products on offer being regularly evaluated and updated to meet the current needs of entrepreneurs?
**SUSTAINABILITY OF MLABS AND MHUBS**

MLabs and mHubs have not followed a single strategy to ensure their business model sustainability. The largest income streams other than infoDev grants have so far come from sponsorships from technology partners, and at times from public agencies, such as municipal, provincial, or national governments. While these experiences have shown that it is possible to run largely self-sustaining events and ad hoc partnerships with private sector organizations (e.g., hackathons and innovation competitions, trainings, etc.), it is much harder to secure core funding that could help the mHub or mLab cover its overhead expenses or invest in activities that have a long-term benefit for the entrepreneurship ecosystem. Importantly, mHubs and MLabs have learned that they should focus on brand building without requesting large financial contributions from partners in the first years of operation, because an established brand helps to generate larger contributions and provides stronger bargaining power towards startups when negotiating the terms of future “success sharing.” The tension between the expectation of revenue sharing and company stage is worth noting here. Frequently, the earlier the stage of the enterprise, the less likely it is that an mLab can attain sustainability based on a revenue sharing model. And, the greater the emphasis on self-financing, the more incentive there is for the mLab to cater to more mature companies and less to earlier-stage startups and to eco-system building activities. In other words, the public good the mLabs generate in closing a gap the market has not already filled with early-stage companies, comes at a price of support over the medium-term. In other words, while the trend of increasing private sector interest is promising, a time period of one to two years of implementation has proved much too short to set up revenue sharing schemes or income streams from sponsorships and tech partnerships that could cover costs.

Based on experience, we expect MLabs and mHubs to seek bridge funding from public sources (donors and local governments) for up to five to seven years; however, their end goal is to increase revenue generation from their clients — the startups they serve. While most MLabs or mHubs will employ some combination of approaches, three distinct possible paths to sustainability have emerged.

### THREE PATHS TO SUSTAINABILITY

**1) ROYALTIES**: clients pay a percentage of their monthly turnover/turnover growth to the mLab/mHub

**PROS**
- Aligns the incentives of mLab/mHub management and clients.
- Attractive to entrepreneurs because payment is delayed until cash flow increases.

**CONS**
- Deferred payment poses a risk to the mLab/mHub that the client may not pay

**2) MEMBERSHIP FEE**: clients pay a set monthly fee to the mLab/mHub

**PROS**
- Ensures steady cash flow for the mLab/mHub.
- Requires that entrepreneurs have the necessary cash flow to outlay an annual or monthly payment.

**CONS**
- Provides less incentive than royalties and equity for mLab/mHub management to ensure maximum growth of the client.

**3) EQUITY**: the mLab/mHub takes an equity stake in the client.

**PROS**
- Aligns the incentives of mLab/mHub management and clients.
- Attractive to entrepreneurs because payment is delayed until cash flow increases.

**CONS**
- Exits are uncertain and can take too long, posing planning challenges to the mLab/mHub.
- For equity to deliver 100 percent self-sustainability a small number of outlier clients would need to be extremely successful.
infoDev’s Mobile Innovation Program for 2013-15 will convene local and global innovation networks for mobile developers and entrepreneurs, enable mobile startups through incubation and acceleration, and research the app economy of developing nations.

These program components complement and mutually reinforce each other. Initiatives that convene mobile innovation stakeholders draw on the global network of incubation facilities to fuel participation, while efforts to strengthen multi-stakeholder participation in the mobile ecosystem uncover candidates for incubation, generate mentorship opportunities, and identify sources of startup finance. Similarly, research on emerging issues in mobile innovation generates opportunities and best practices for mLab and mHub managers and their clients, and provides an impetus for targeted projects.

It should be noted that all mobile program components are co-designed with local partners and end beneficiaries during an intensive assessment phase that precedes all implementation activities. This ensures that entrepreneurs receive the support they actually need—as opposed to blanket, prescribed solutions—and that a strong sense of local ownership will contribute to the long-term sustainability of each initiative.

**CONVENING LOCAL AND GLOBAL MOBILE INNOVATION NETWORKS**

infoDev convenes mobile entrepreneurs and developers with each other and with other ecosystem actors, providing opportunities for sustained partnerships and goal-oriented collaborations.

The resulting networks create opportunities for entrepreneurs to learn and advance, giving them the chance to follow through on their initial idea, nurturing it on the path from mind to market. infoDev, together with its network of mHubs and mLabs, implements a host of activities to convene innovation networks locally, regionally, and globally (see boxes to the right).
ENABLING MOBILE APP STARTUPS

_infoDev_ assists promising entrepreneurs by bringing their innovations to market. Our 12 mHub and mLab pilots—financed through the CSBKE program—have helped identify talent and launch successful app startups. We see even greater potential and demand for specialized mobile incubation. _infoDev_ is committed to helping existing facilities reach financial self-sufficiency, as well as extending the program to unserved markets. Over the next three years, this will entail:

- Increasing the reach and capacity of the existing network of mLabs and mHubs to incubate startups and connect them to financing sources.
- Scaling up the network by adding up to 20 new mLabs or mHubs, in locations to be decided after appropriate feasibility and market assessments (target locations may include countries in Africa, Asia, Eastern Europe, Latin America, and the Caribbean).
- Developing and implementing acceleration programs, including boot camps for startups with high-growth potential.
- Piloting a co-financing scheme for successful, early-stage mobile startups.

SUSTAINABILITY OF mHUBS AND mLABS

It is anticipated that mHubs and mLabs will be financially self-sufficient and sustainable within five to ten years.

RESEARCHING THE APP ECONOMY IN DEVELOPING COUNTRIES

_infoDev_ publishes research on a range of topics related to mobile innovation, aimed at benefiting mobile entrepreneurs, businesses, policymakers, and investors in developing nations. In the coming years, our mobile research will focus on:

- Focus papers and case studies addressing new trends and pressing issues. These will explore base-of-the-pyramid business models for mobile apps, intellectual property topics, and impact assessments of incubators, among others.

DESIGN a locally relevant business model prior to implementation, including a long-term Financial Sustainability strategy.

REQUIRE co-investments from local consortia or organizations to establish and implement each mLab and mHub.

AGGREGATE and ANALYZE lessons learned from operations, so they can be implemented in evolving strategies for each mHub and mLab.
IMPACT, MONITORING, AND EVALUATION

The primary development objective of the program will be to increase the growth of innovative mobile entrepreneurs, thereby creating and supporting jobs, increasing incomes, and launching new products and services that improve the citizen’s overall quality of life.

The success of the 2013-2015 work program will be measured by the following:

- Amount of revenue generated by entrepreneurs
- Investment secured by entrepreneurs.
- Number of jobs created directly by the incubated businesses
- Number of jobs supported indirectly by the incubated businesses
- Number and types of mobile applications brought to market
- Number of startups supported through mLabs and mHubs
- Number of women entrepreneurs benefiting from incubation and technical training
- Number of women benefiting from services provided by incubated companies
- Number of entrepreneurs benefiting from the program
- Number of mobile users benefiting from the program

Targets will be set and revised throughout the implementation period in order to take account of dynamic market conditions. As with all infoDev programs, we will build in a significant monitoring and evaluation component so that lessons learned can inform future projects. We will also test various approaches to sustainability during the project implementation phase, including sponsorships, government support, and various approaches to revenue generation.

Our experience in mobile programming to date indicates that a three-year period is likely to prove too short for these initiatives to give rise to fully sustainable incubators and startups. Successfully supporting startups, SMEs, and multi-stakeholder communities in the mobile ecosystem requires a longer-term approach. In addition to encouraging beneficiary organizations to leverage infoDev’s contributions to obtain additional funds, infoDev will, at regular intervals, report on the state of play in the countries concerned, with a view to assessing when sustainability can be achieved. We anticipate full sustainability for non-research activities cited above to take between five and ten years, depending on the market.

EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS

infoDev is exploring innovative approaches for co-financing incubation and helping entrepreneurs achieve access to markets and the appropriate finance. In the dynamic mobile sector, local stakeholders are often willing to fund projects enabling entrepreneurship, but investors view start-ups as too risky or in need of too much capital. infoDev’s Access to Finance program can provide co-investment and technical assistance to mobile startups, building their capacity while lowering the burden for local entities.
## RISK AND MITIGATORS

<table>
<thead>
<tr>
<th>RISK</th>
<th>DESCRIPTION</th>
<th>MITIGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dated research findings</td>
<td>The mobile innovation field is changing quickly and findings that are relevant today can be superfluous tomorrow.</td>
<td>Our research component combines case studies and focus papers as quick research approaches (less than 6 months) with in-depth flagship reports (6 months or more). Flagship reports will be written in such a way as to give answers of lasting relevance.</td>
</tr>
<tr>
<td>Weak innovation ecosystems</td>
<td>The policy environment and mobile innovation ecosystem do not support mobile entrepreneurs.</td>
<td>The project preparation phase will ensure that activities are implemented in locations where the ecosystem is relatively favorable. Additionally, the program will facilitate entrepreneurs’ access to regional and international markets to help them overcome domestic market challenges. infoDev will also link up to World Bank/IFC programs that focus on strengthening the local policy environments and ecosystem.</td>
</tr>
<tr>
<td>Ineffectively run mLab/mHub</td>
<td>Governance models, location, and management structure of the mLabs/mHubs impact the success of the program.</td>
<td>The feasibility and scoping phase will be critical to identifying potential issues, and setting up mitigation methods by working closely with local stakeholders.</td>
</tr>
<tr>
<td>Overwhelming local demand</td>
<td>Local demand grows beyond the scope of the Mobile Innovation program.</td>
<td>Throughout the life of the program, potential new partners will be identified, who can complement and help scale activities, if demand exceeds what can be meaningfully delivered during the timeframe of the program.</td>
</tr>
<tr>
<td>Redundancy</td>
<td>Activities “crowd out” the private sector.</td>
<td>infoDev will carefully calibrate an exit strategy when it assesses that the mobile content market is functioning effectively.</td>
</tr>
<tr>
<td>Lack of deal flow</td>
<td>Lack of “investible” mobile companies in selected countries</td>
<td>Feasibility study will be completed by infoDev, in close collaboration with in-country Bank offices, technology partners, and other stakeholders of the innovation ecosystem. Seek out strategic links with other stakeholders to build capacity in the companies.</td>
</tr>
</tbody>
</table>

*PHOTO: WB/IFC*
EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS

Many of the services outlined above will be delivered in partnership with external organizations. Following our success in collaborating with Finland and Nokia, we will leverage strategic cooperation with the business sector, particularly those in the mobile-technology space, along with NGOs, universities, development programs, and governments. These could include the GSMA Development Fund, the Cherie Blair Foundation for Entrepreneurship, and the Indigo Trust, among many others.

The World Bank’s ICT Sector Unit, Innovation and Technology Entrepreneurship Practice, and other subject matter experts from fields such as agriculture or climate innovation will play an important role in research activities.

World Bank country offices will provide ties to local policymakers, associations, and entrepreneurs during scoping and feasibility analyses.

The mLabs and mHubs will also act as local brokers between entrepreneurs and established companies in the mobile industry. For instance, these entities have collaborated successfully with mobile handset manufacturers like Nokia and Samsung, local banks, international organizations and government departments implementing public programs through mobile technology.

With more than 5 billion subscribers worldwide, the mobile phone network is the world’s largest distribution and communications platform.
BACKGROUND

infoDev’s Climate Technology Program accelerates climate technology innovation and entrepreneurship in developing countries. The CTP operates Climate Innovation Centers in a number of countries, which directly support innovative start-up enterprises with a targeted suite of financing and other services. At the global level, the CTP offers evidence-based analysis, cutting-edge research, market development, business linkages, and global financing. By helping the private sector seize opportunities in the rapidly expanding clean-tech sector, the CTP reduces emissions, increases climate resiliency, and creates jobs—driving sustainable economic development.

CHALLENGE

Climate change is affecting ecosystems around the world. Every year since 2000 has ranked among the National Climatic Data Center’s top 20 warmest years on record. Average global carbon dioxide concentrations in 2009 were 38 percent higher than pre-industrial levels, an increase that is almost entirely attributable to human activities.

Unfortunately, some of the world’s poorest nations face some of the worst effects. Changing climates have already had irreversible effects on agriculture, water resources, forestry, industry, and society. A report by the United Nations Intergovernmental Panel on Climate Change (IPCC) estimated economic losses from weather and climate-related disasters exceeded $200 billion in 2010. Net forest area losses from 2000-2005 are estimated at 7.3 million hectares per year—roughly equivalent to the size of Sierra Leone or Panama.

Consequently, global economic growth will be increasingly constrained by issues of access, security, and price volatility of energy and natural resources.

- An examination of year-to-year variations in temperature (relative to a country’s average) shows that anomalously warm years reduce both the current level and subsequent growth rate of GDP in developing countries.
- The agricultural sector needs to provide food for almost 50 percent more people globally by mid-century, most of them in developing countries, even as arable land continues to shrink.
- Developing countries absorbed 98 percent of natural disasters and accounted for nine out of ten disaster-related deaths in the period of 1991–2005.

Although climate change is a global issue, it will not manifest consistently across the planet. Developing countries are disproportionately burdened by climate change and its ancillary effects on health, food security, productivity, and quality of life.

A World Bank study, Economics of Adaptation to Climate Change, estimates that it will cost an estimated $70 to $100 billion per year through 2050 for developing countries to adapt. Key affected sectors include health, water supply and sanitation, energy, transport, industry, mining, construction, trade, tourism, agriculture, forestry, fisheries, environmental protection, and disaster management.

STRATEGY

The rapid development and large-scale adoption of new technologies will be essential to achieving economic growth while minimizing negative environmental impact. The CTP will tackle global and local barriers to innovation, thereby enabling innovators in developing countries to profitably address local climate and energy challenges, create employment and improve lives for future generations.

6 World Bank Global Facility for Disaster Reduction and Recovery (http://imagebank.worldbank.org/servlet/WDSContentServer/
The CTP’s flagship initiative is the network of Climate Innovation Centers, or CICs. CICs will address critical market gaps and enable developing countries to achieve their green-growth objectives. The CTP has presently completed business plans for CICs in Kenya, Ethiopia, India, Ghana, and South Africa. The first CIC was launched in Kenya in 2012; the other countries are now progressing steadily towards implementation. Key lessons to date include:

- **CICs must provide holistic support beyond traditional incubation.** In addition to financing, facilities, and business training, climate innovators often require specialized policy interventions and scientific linkages. As focal points for climate technology SMEs, CICs can aggregate issues, disseminate knowledge, and promote a favorable market environment. This draws on infoDev’s expertise in bringing together the public and private sectors to achieve its objectives.

- **CICs must be responsive to country-specific development challenges.** Engaging stakeholders to pinpoint these issues instills a sense of local ownership and involvement in the CIC’s success. For example, the CTP is leveraging infoDev’s experience in agribusiness in Ethiopia, inclusive growth in Africa, and women’s entrepreneurship in the Caribbean.

This valuable knowledge and experience will enhance the planning and implementation of additional centers in Vietnam, Morocco and the Caribbean, as well as the integration of the CIC network through activities at the global level.

**CLIMATE CHANGE: A GLOBAL CHALLENGE**

Although climate change is a global issue, it will not manifest consistently across the planet. Developing countries are disproportionately burdened by climate change and its ancillary effects on health, food security, productivity, and quality of life.
Over the next five years, the CTP seeks to fund, scale up, and integrate a number of local and global activities.

### LOCAL ACTIVITIES

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>STATUS</th>
<th>BACKGROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>Launch September 2012</td>
<td>• Part of “Greening Kenya” initiative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Seed capital fund with VC investors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hub for East Africa Climate Innovation Network (EACIN)</td>
</tr>
<tr>
<td>South Africa</td>
<td>Launch Q4 2012</td>
<td>• Government and donor financed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Part of The Innovation Hub (TIH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One of Top 10 National projects at COP 17</td>
</tr>
<tr>
<td>India</td>
<td>Launch 2013</td>
<td>• Government and donor financed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Seed capital fund with VC investors</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Launch Q2 2013</td>
<td>• Specializing in agribusiness and women’s empowerment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Multiple donor support</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Launch Q4 2013</td>
<td>• Very strong government support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Multiple donor funding being negotiated</td>
</tr>
<tr>
<td>Morocco</td>
<td>Business Plan Development</td>
<td>• Hub for Middle East &amp; North Africa Climate Innovation Network</td>
</tr>
<tr>
<td>Caribbean</td>
<td>Business Plan Development</td>
<td>• Very strong donor interest secured and negotiated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hub for Caribbean Climate Innovation Network (CCIN)</td>
</tr>
</tbody>
</table>

The business plan for each CIC covers a five-year period and tailors the center’s services according to the country’s specific needs, taking into account extensive feedback from about 150 stakeholders.

Broadly, these services can be categorized as follows:

- Grants, seed financing, and investment facilitation
- Business advice and training
- Government advice and outreach
- Market intelligence
- Access to facilities.

Localizing CICs according to each country’s priorities, capabilities and resources delivers business activity and socioeconomic impact where it is most needed. It also engages local stakeholders and engenders a sense of local ownership and accountability for each Center’s success.
GLOBAL ACTIVITIES

In tandem with the planning and roll-out of individual CICs, the CTP is launching five global business lines. This program component will ensure that country-level operations are integrated, facilitate the creation and application of knowledge, and engage countries outside of the CIC network.

**CIC Lab**

Business plan development, fundraising and launch of CICs in developing countries. Beyond the initial seven identified in the preceding section, infoDev has received requests for CIC feasibility studies from the governments of Algeria, Argentina, Colombia, Egypt, Ghana, Kazakhstan, Mexico, Nepal, the Philippines, Rwanda, Senegal and Tanzania.

**IGNITE Fund**

Strategically applied R&D grants, innovation prizes and seed investments for technology demonstration.

**Climate TRACK**

Practical research and evidence-based learning on a range of climate innovation topics.

**Market CONNECT**

Internationalization of climate tech SMEs through market linkages and three regional networks.

**Impact XCHANGE**

Monitoring, evaluation, and reporting of results.
IMPACT, MONITORING, AND EVALUATION

The CTP is currently developing a monitoring and evaluation system for country-level CICs in coordination with program donors and external M&E experts. An Innovation Management System (IMS) will be designed by the Impact Xchange team, primarily based on the M&E framework established for the CICs. The CTP will partner with World Bank country office staff to incorporate the IMS and results-based financing methodologies into innovation projects with client country governments. In parallel, the CTP will organize regular training and exchange opportunities, coordinated by the CIC staff.

The table below indicates the CTP’s three-year development outcomes and targets:

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>TARGETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater deal flow and enterprise creation</td>
<td>• Over 800 companies financed</td>
</tr>
<tr>
<td></td>
<td>• At least 75% 3-year survival rate</td>
</tr>
<tr>
<td>Increased climate resiliency and adaptive capacity</td>
<td>• Mitigating 15-20 million tons of CO2</td>
</tr>
<tr>
<td></td>
<td>• Providing 450-500 MW of off-grid clean energy</td>
</tr>
<tr>
<td></td>
<td>• Enabling 1 million people to reduce vulnerability to climate change</td>
</tr>
<tr>
<td>Generation of sustainable jobs</td>
<td>• 65,000 long term jobs created, both directly and indirectly</td>
</tr>
</tbody>
</table>

The CTP will use data from country-level M&E systems to benchmark and share results globally. This will include annual reports on the state of country level activities and lessons learned from companies and projects that have been supported by CIC operations. Information from the IMS will also be used to generate important recommendations for inclusion in Climate TRACK’s policy toolkits and analytical products.

7 A draft scorecard for the Vietnam CIC is available on request as a reference.
<table>
<thead>
<tr>
<th>RISK CATEGORY</th>
<th>RISK DESCRIPTION</th>
<th>PROPOSED MITIGATION MEASURES</th>
</tr>
</thead>
</table>
| Poor Governance & Capacity | • Turnover, unavailability or lack of capacity among infoDev and CTP staff affects program continuity  
• Staff performance risks, i.e. PMIT lacks adequate staffing, processes and/or systems | • CTP staffing, training/development and project management plan will be regularly assessed in view of current and future program needs  
• Selection of management and staff will follow WBG procurement guidelines and competitive selection procedures  
• Performance metrics and targets will be clearly communicated and monitored |
| Inadequate Performance | • CTP does not achieve adequate performance results as specified in the grant agreement(s)  
• Global financing investments do not generate required returns to achieve sustainability objectives  
• Impact projections and modeling are based on statistics in a rapidly changing field. Industry research, and therefore program performance expectations, can be quickly outdated  
• Governance model, location, and management structure of the global program does not meet the needs of country level operations | • Impact modeling is based on realistic yet conservative assumptions  
• infoDev/CTP will establish a thorough M&E framework, ensure grant agreement milestones are met and report results  
• Impact Xchange and ClimateTRACK are designed to continually refresh knowledge base of climate sectors with external data as well as experience from implementation  
• In coordination with Steering Committee, infoDev will retain flexibility to reallocate budgets based on performance of specific global activities. Grant agreements can be canceled/reissued if warranted  
• Expectations for ROI will only be used as long-term evaluation criteria, and will be monitored regularly to evaluate progress and determine future funding requirements.  
• In addition to milestone reports (e.g. annual results), interim updates will be disseminated through CTP social media and online channels  
• As more CICs become operational, local partners will be able to evaluate and provide feedback on the global activities |
# RISK AND MITIGATORS

<table>
<thead>
<tr>
<th>RISK CATEGORY</th>
<th>RISK DESCRIPTION</th>
<th>PROPOSED MITIGATION MEASURES</th>
</tr>
</thead>
</table>
| CTP financing and/or donor support not secured | • Full initial financing for global activities’ implementation is not secured on time  
• Budget outlined in business plan is insufficient to execute current model  
• Financing beyond 2018 may not be secured  
• Focus and/or priorities in global climate change—response strategies shift away from technology innovation  
• Donors prefer to focus on country CICs at the expense of the global activities | • Multiplicity / diversification of support; return on investment and fee for services  
• Program appeals to donors focusing on private sector development as well as those addressing climate change and targeted sectors e.g. energy  
• Ongoing active expansion and increased engagement of CTP and infoDev donor/investor community  
• Scenario planning establishes lower levels at which global programs are still viable, though impact and value for money is compromised  
• Financial sustainability and revenue generation are explicit long-term goals of CICs, and can supplement global activities  
• infoDev/CTP maintains flexibility to restructure financing decisions  
• Regular dissemination of results to CTP stakeholder database of 1,000+ contacts (and growing), official infoDev/World Bank channels, and relevant media outlets  
• Linkages and support from global activities are inputs in CIC modeling |
| Lack of political and social attention to climate issues | • Political support for the CTP weakens / opposition arises  
• Introduction of perverse subsidies and/or decrease of conducive policies to support climate technologies  
• Unwillingness to support global program and prefer to focus on own country CICs | • CICs have been designed in close coordination with multiple national government agencies, who also have minority roles on the CIC boards  
• CTP will not be contingent on government funding  
• CTP investments will not be made based on speculative or short-term policy measures  
• Impact Xchange will conduct active outreach to policymakers at global forums and conferences  
• Countries that do not qualify for CIC launch on their own will be directed to global business lines, particularly for financing |
<table>
<thead>
<tr>
<th>RISK CATEGORY</th>
<th>RISK DESCRIPTION</th>
<th>PROPOSED MITIGATION MEASURES</th>
</tr>
</thead>
</table>
| Weak entrepreneurs and private sector | • Poor demand for global services  
• Weak or insufficient capabilities of climate technology entrepreneurs or ecosystems to justify and deliver expected impacts of global program  
• Lack of quality deal-flow for CTP’s investments  
• CTP inadvertently crowds out private sector investment in clean climate technologies | • IGNITE Facility provides multiple channels and flexible funding instruments to match a range of SME needs/characteristics  
• Program continually adapts to market gaps and reallocates budgets  
• Emphasis on customer feedback, quality control and M&E  
• Program will actively expand interest and strengthen ecosystem for climate technology entrepreneurship. This includes partnerships with universities / research institutes and targeted activities towards underserved communities e.g. youth, women and rural areas  
• Private sector stakeholders are well represented in feasibility and scoping of CTP activities; exiting investments is a key component of program sustainability model |
| Competition | • Overlap with other initiatives  
• Other donor/development program/company plans to replicate CTP | • Close coordination with existing initiatives  
• Intensive marketing efforts to establish program leadership  
• Demonstrable, established support from in-country stakeholders gives CTP a distinct competitive advantage/ability to deliver |

New technologies are essential to reduce the long-term cost of climate change and achieve Green Growth.

Our vision is to create a global network of CICs that promote business-to-business linkages, enhance knowledge sharing and facilitate trade and export opportunities.
EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS

As previously discussed, the CTP will tap infDev’s expertise in other development areas, most notably agribusiness (Ethiopia), women’s entrepreneurship (Ethiopia and Caribbean) and inclusive growth (South Africa), and Access to Markets and Finance.

EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS

Involvement of WBG country offices in the planning and launch of CICs Coordination with climate-related programs, e.g.. IFC’s Sustainable Energy Finance, UN Climate Technology Center & Network, Climate and Development Knowledge Network Partnerships with industry/private sector, research and academic institutions, trade associations, and others.

Climate Innovation Centers support innovation and entrepreneurship by offering a full suite of financing and capacity building services.

The network is expected to create over 2,400 enterprises, generate 240,000 direct and indirect jobs, install 3000 MW of off-grid energy capacity, and provide energy access to over 28 million people.
AGRBUSINESS PROGRAM
infoDev’s Agribusiness Program aims to accelerate the growth of an indigenous agro-processing sector in countries that have a comparative advantage in agriculture. By enabling the start-up and growth of value-adding agribusinesses, these countries will move up the agricultural value chain, capturing a larger share of income for local businesses and smallholder farmers, and creating more jobs. Given the predominance of women in agri-processing, the program is also expected to have a significant impact on women’s economic empowerment.

The Agribusiness Program was created in response to significant interest expressed by infoDev’s growing global innovation and entrepreneurship community. Others, too, have expressed the need for alternative approaches to acceleration of agribusiness development. The African Agribusiness and Agro-Industries Development Initiative, or 3ADI, finds that most existing agribusiness initiatives are focused on supporting producers and production systems while few provide effective support to related agribusinesses and agro-industries. 3ADI and others understand the need to “validate, upscale, and replicate these innovations through pilots and prototypes, combined with evaluation and capacity building.”

infoDev’s objective is to test and validate exactly this sort of approach—to enable agribusiness innovation that can then be replicated and mainstreamed in development programming.

BACKGROUND

According to the 2008 World Development Report, Agriculture for Development, “Agriculture alone cannot relieve rural poverty; rural nonfarm employment is also important.” The report also found that in countries like India and Indonesia, nonfarm services—such as trading, transport, and processing—“contribute at least as much as growth in agriculture toward reducing poverty.”

This is because investment in agribusiness produces a significant multiplier effect along the supply chain. Investment in agro-processing generates demand for agricultural products, but also for associated inputs and services, which in turn creates employment both on and off the farm. A feasibility assessment conducted by infoDev in Senegal indicates that for every job created in processing, an additional 2.8 jobs are created in the economy. It also turns out that employment in food processing is dominated by women. By accelerating this sector, we hope to have that much more of an impact on women’s economic empowerment.

Unfortunately, many developing countries with a competitive advantage in primary production have not leveraged this advantage to climb the value chain. Important income generation and job creation potential is therefore lost. The infoDev agribusiness model can help.

CHALLENGE

The future of African development depends on the ability to accelerate innovation by capitalizing on the creativity of African farmers and agribusiness entrepreneurs [...]. Innovation is underway in African value chains. It is not driven by research, but by entrepreneurs, networks and supportive policies.

— Andy Hall, Ph.D., M.Sc.
LINK Coordinator, UN University
THE CHALLENGE OF GROWING AGRIBUSINESS: EXAMPLES FROM THE FIELD

Kirèmè, a company in Senegal has developed the trademark Presséa brand to commercialize Tetra Park fruit juices. The firm would be willing to source mango pulp locally, but instead they import mango pulp from Egypt and Australia. Unfortunately, the local fruit processing companies cannot supply them with the proper quality and quantity of pulp, because their technology is insufficient to the task. In Ethiopia, Rut & Hirut Dairy Company is a dynamic firm that works with small-scale farmers to produce high-quality pasteurized milk, yogurt, butter, and cheese. The firm has been work with the donor community to improve processing, find better inputs, and streamline sourcing—all of which has improved the company’s level of production and competitiveness. Yet, limitations of the domestic market and weak distribution services have stalled the firm’s expansion plans.

In Mozambique, Elephant Pepper produced a range of high-quality hot sauces and spice grinders for the export market, and achieved reasonable success. With markets in the United States and South Africa, Elephant Pepper grew its brand and market presence. Unfortunately, the company lacked many of the basic business skills needed to grow effectively; eventually, its supply chain and production cycles became too complex and challenging for the founders, who had little business experience. With limited support from donors or government agencies, Elephant Pepper closed its doors in late 2009.

STRATEGY

The Agribusiness Program proposes a new model for promoting the growth of a competitive, value-adding agribusiness sector in developing countries by targeting local entrepreneurs with the potential for high growth.

The strategy of InfoDev’s Agribusiness Program is to complement existing agribusiness-development efforts, which are focused on farm-level improvement and foreign investment facilitation, by creating locally owned and operated Agribusiness Innovation Centers, or AICs, that deliver financial and non-financial services to growth-oriented agribusiness entrepreneurs in a holistic, market-driven way.


The AICs will accelerate the growth of small enterprises, while simultaneously demonstrating product innovations, process improvements, and new business models across agricultural sub-sectors.

The Centers will form close partnerships with those businesses, donors, and organizations focused on farm-level improvements, as well as those that develop supply chain linkages with larger firms. AICs—like mLabs, mHubs, and CICs—will form close partnerships with the private sector, financial sector, academia, and government.

AICs must operate within an effective ecosystem that enables the startup and growth of innovative enterprises. Critical enablers include good infrastructure, effective policies and regulations, and access to financing, technology, market information, and skilled labor.

This requires cooperation across the value chain and among public and private sector actors. infoDev therefore engages all of these players during an intensive needs and feasibility assessment process, as well as during the project planning and implementation phases. The participatory approach to developing the business model for the AIC ensures that local capacity and ownership are built into the process.

A recent infoDev study, Growing Food, Products, and Businesses: Applying Business Incubation to Agribusiness SMEs, identified and illustrated the potential impact for AICs; it also provided valuable lessons on models for agribusiness acceleration, and key success factors for ensuring cost-effective implementation.

### EXAMPLES OF MAJOR IMPACTS OF AGRIBUSINESS INCUBATORS

<table>
<thead>
<tr>
<th>INCUBATOR</th>
<th>IMPACT</th>
</tr>
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<tbody>
<tr>
<td>Fundación Jalisco de Innovación y Desarrollo, A.C - Guadalajara, México</td>
<td>Began a blueberry program in 2008; by 2011, had more than 220 producers growing 1.4 million blueberry plants on over 300 hectares. Exports blueberries to U.S. and U.K. markets.</td>
</tr>
<tr>
<td>Incubator for Agroindustry and Agribusiness, Bogor Agriculture University - Bogor, Indonesia</td>
<td>Tricoro, a coconut-based drink company in Indonesia, started here with a loan of about $1,200 in 1999. Currently it runs a successful, growing business with sales of more than $2 million a year.</td>
</tr>
<tr>
<td>Agribusiness Incubator ICRISAT Hyderabad, India</td>
<td>Helped the fledgling biofuel industry pioneer a method for converting sorghum into ethanol, without affecting food security.</td>
</tr>
<tr>
<td>Villgro Innovations Foundation Chennai, India</td>
<td>Facilitated the growth of a Wondergrass, a company that designs and prefabricates low-cost rural housing units from bamboo, responding to the chronic housing shortage in rural India.</td>
</tr>
<tr>
<td>Timbali Technology Incubator Nelspruit, South Africa</td>
<td>Helped underemployed and unemployed women produce flowers as part of a franchising operation, which allowed them each to sell more than $30,000 in flowers per year.</td>
</tr>
</tbody>
</table>
The graphic below depicts service offerings at a typical AIC. The implementation model for service delivery is partnership based. Existing initiatives and institutions are mapped as part of a detailed feasibility and business planning process to develop a partnership base that can be leveraged, while AIC resources are utilized to create service offerings where none exist.

The design of each AIC is tailored to the specific market it serves. In some markets infoDev has assessed, two major problems recur among agribusiness entrepreneurs: limited knowledge in all aspects of marketing for both domestic and international sales, and significant problems with accessing growth capital. Therefore, AICs in these markets will focus more heavily on access to markets and financing. Typically, we engage more than 150 local stakeholders—farmers, enterprises, academia, the public and financial sectors—to ensure that local needs are met.
WORK TO DATE

With support from the Government of Finland under the Creating Sustainable Business In the Knowledge Economy program, we have laid the foundation for a new agribusiness program by:

- Carrying out an international study on lessons from agribusiness incubation
- Developing an agribusiness incubation course
- Conducting feasibility assessments in four African markets as well as Nepal
- Initiating technical assistance to local stakeholders in Kazakhstan.

Numerous developing countries have a comparative advantage in an agricultural sub-sector or value chain. In fiscal year 2013, infoDev will complete the business models for five new AICs in Ethiopia, Kazakhstan, Mozambique, Nepal, and Tanzania. For the period covered in this work program, fiscal 2013-2015, we aim to implement AICs in Ethiopia, Senegal, Tanzania, and one additional country. Over the next five years, we plan help create a total of eight new AICs.

Thus, over the next five years infoDev will continue to assess the opportunity and feasibility of developing AICs to accelerate the development of a value-adding agribusiness sector in additional countries. We aim to conduct feasibility assessments in two or three other markets in Africa (such as Ghana and Zambia), Central Asia, Central and South America, or the Asia Pacific region. Implementation of an AIC is a five- to six-year process comprising continuous local capacity and partnership building, project supervision, monitoring and evaluation.

Over time, infoDev envisions that the Agribusiness Program will resemble the Climate Technology Program in form, comprising the following four core components:

- AIC development
- AIC implementation
- M&E, knowledge creation, and capacity-building
- Agribusiness internationalization
In addition to the planning and implementation of AICs, infoDev aims to provide four complementary agribusiness services: the Agribusiness Acceleration Program, the Agribusiness Incubation Training Program, the Agribusiness Capacity Building Initiative, and the Agribusiness Internationalization Initiative. Each will develop in tandem with the AICs and eventually be merged into standard service offerings.

Once funding is secured, infoDev will formally launch the Agribusiness Acceleration Program at the 5th Global Forum on Innovation and Technology Entrepreneurship in South Africa in May 2013. The Global Forum is a biennial event that draws more than 500 people from the global innovation and entrepreneurship community.

The Agribusiness Incubation Training Program represents the newest module of our twelve-part Business Incubation Training Program. The module outlines the challenges associated with incubation in the agricultural sector; provides an overview of various types of agribusiness incubator models; and engages participants in a discussion on critical success factors for the success of agribusiness incubators.

infoDev will also implement an Agribusiness Capacity Building Initiative, targeting local stakeholders likely involved in the eventual project. As local stakeholders begin the process of AIC development, we will work with them to:

- Develop a tactical implementation plan for a local AIC
- Efficiently manage relationships with key stakeholders
- Regularly adapt and review the AIC business plan so it seizes market opportunities
- Market the AIC to attract the adequate deal flow of target companies
- Design support services that efficiently address the needs of client entrepreneurs
- Build a robust management team and reliable board.

infoDev’s approach to capacity building is participant-centric and peer-to-peer. We constantly harness the knowledge and engagement of peers from our global network of business incubators. AICs will likewise benefit from this process. The Agribusiness Capacity Building Program can be provided to stakeholders on projects implemented by infoDev, or simply to others who seek to learn from this approach. infoDev has already partnered with the Forum for Agricultural Research in Africa to deliver a short training program to their constituents.

In the medium term, infoDev will also explore the feasibility of creating an Agribusiness Internationalization Initiative, which will aim to enable the international transfer and adaptation of innovative agribusiness technologies, and also international market access for agribusiness entrepreneurs. We will explore the feasibility of such a program in fiscal 2013-2015.
IMPACT, MONITORING AND EVALUATION

Specific targets will be set for the implementation of each AIC, measuring:

- The number of enterprises benefiting from the center
- The number of direct and indirect jobs created (disaggregated by gender and age)
- The increase in turnover of growth-oriented agribusinesses
- The increase in operational profit of growth-oriented agribusinesses
- The increase in the incomes of smallholder farmers
- Reduced or mitigated climate impact.

As an added component, infoDev will seek to measure the amount of additional tax revenue generated by the beneficiaries of the AICs. Showing the gain in tax revenues will illustrate to local governments the financial return on investment in an AIC, hopefully stimulating further interest in the concept.

Qualitative outcomes to be measured over time include:

- The level of adoption of innovative technologies and practices beyond those entrepreneurs directly served by the AIC, thereby increasing the competitiveness of the indigenous agribusiness sector on a wider scale
- The availability of new financial products for agribusiness SMEs
- The modification of regulation to encourage business growth
- Changes in the regional business environment, employment, and wage rates.

On the basis of these projections, implementing four AICs will create approximately 8,000 jobs, raise smallholder farmer and SME incomes by more than $54 million, and benefit more than 6,000 women—all within six years.

We will harness our decade of experience in setting up business incubators and innovation centers, our Agri-business Incubation Training Program, and our international network of innovation and entrepreneurship professionals to guide the board and the AIC manager through such important milestones as developing a governance framework, selecting clients, and designing services, as well as execution, marketing, and monitoring and evaluation. infoDev typically remains engaged as a technical advisor for three to five years, gradually scaling down support as the capacity of the local team and partners increases.

The AICs can achieve full financial sustainability through a range of funding models, combining success-sharing mechanisms (e.g., equity or royalty-based), a fee-for-service model, or flat fees. It is important to note that 100 percent financial sustainability is not always possible in the near- to medium-term. infoDev’s analysis in Senegal indicates that financial sustainability will be achieved there after six years. In Mozambique, however, the projection is for only 40 percent sustainability to be achieved over the same period, due to a more nascent stage of value-adding enterprises.

As the AICs foster a new generation of agri-enterprises, infoDev will invest significantly in a robust monitoring and evaluation framework to track performance, measure outcomes, and derive lessons.

On the next page are illustrative examples of the core M&E targets for the planned AICs in Senegal and Tanzania.
<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>SENEGAL</th>
<th>TANZANIA</th>
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</thead>
<tbody>
<tr>
<td>At 6 years</td>
<td>At 10 years</td>
<td>At 6 years</td>
</tr>
<tr>
<td>Public/Donor Funding Required</td>
<td>$7.5 million total for the first 6 years and $150,000 annually thereafter</td>
<td>$7.7 million total for the first 6 years</td>
</tr>
<tr>
<td>Jobs Created</td>
<td>5,072</td>
<td>10,765</td>
</tr>
<tr>
<td>Direct Increase in Farmer and SME incomes (aggregated)</td>
<td>$30 million</td>
<td>$45.6 million</td>
</tr>
<tr>
<td>Women Beneficiaries</td>
<td>4,057</td>
<td>8,612</td>
</tr>
</tbody>
</table>

The insights gained from this M&E framework will be used to generate data and research for use by all stakeholders interested in exploring alternative approaches to accelerating agribusiness development. The World Bank and the International Fund for Agricultural Development have already expressed interest in the AIC approach, and could be significant partners in mainstreaming these new approaches.

**RISKS AND MITIGATORS**

Agribusiness incubation introduces additional risk, due to inherent uncertainties associated with agriculture: adverse weather conditions, pests, poor harvests, etc. These risks and corresponding mitigators are outlined in the next page.

**EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS**

In the design of the AICs, infoDev leverages its know-how in agribusiness incubation, but also integrates elements from its Climate Technology and Mobile Innovation Programs.

A nascent agro-processing industry is an opportunity to introduce green growth and climate-smart practices to developing markets. In Ethiopia, infoDev’s Climate Technology and Agribusiness programs have already been seamlessly integrated into one innovation center that provides both AIC and CIC service offerings.

Similarly, mobile innovations can be leveraged to reduce information asymmetries in rural farming, which often inhibit the efficiency and competitiveness of the agricultural sector. One of the most important applications to come out of the mLab in Kenya is M-Farm, which provides market information, pricing data, and customized services by cell phone to farmers across the country.

infoDev’s overall emphasis on enabling women’s entrepreneurship also manifests itself in the Agribusiness Acceleration program. The majority of people involved in agribusiness activities, particularly food processing, are women. In Senegal, an estimated 85 percent of the agro-processing workforce is female. The Agribusiness Acceleration program is thus by its very nature focusing on enhancing women’s economic empowerment.
<table>
<thead>
<tr>
<th>RISKS</th>
<th>MITIGATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to reach growth targets, resulting in under-performance of the financial model and reputational damage</td>
<td>Realistic modeling, good phasing, extensive linkages, high-caliber management, good selection procedures, presence of growing markets.</td>
</tr>
<tr>
<td>Delays in implementing the AIC model because:</td>
<td>Improved communication with and between stakeholders; agreement with all funders on timing of financial contributions and application; support of key government officials.</td>
</tr>
<tr>
<td>• The expected funding is not received</td>
<td></td>
</tr>
<tr>
<td>• The political context changes</td>
<td></td>
</tr>
<tr>
<td>• The right manager can’t be hired</td>
<td></td>
</tr>
<tr>
<td>• Partners do not fulfill their duties</td>
<td></td>
</tr>
<tr>
<td>Market assessment failure, resulting in market saturation and mispricing</td>
<td>Further examination of market opportunities when developing the AIC’s business plan, broadening the scope of the AIC’s intervention areas.</td>
</tr>
<tr>
<td>Failure to attract sufficient clients</td>
<td>Excellent marketing activities, demonstration of benefits to companies, accurate market assessment</td>
</tr>
<tr>
<td>Management failure, resulting in inadequate service provision</td>
<td>Adequate funding for high-caliber management; good board to attract high-caliber management; selection of high caliber management; infoDev’s technical assistance.</td>
</tr>
<tr>
<td>Model flaws, resulting failure to reach targets</td>
<td>Ongoing model review annually as part of business planning, board assistance in review and refinement.</td>
</tr>
<tr>
<td>Board failure, resulting in inadequate leadership and governance</td>
<td>Board selection, board training, high caliber incubator management</td>
</tr>
<tr>
<td>Inadequate funding, i.e., to support the full cycle of incubation</td>
<td>Coordination via a donor consortium, securing pre-implementation funding agreements</td>
</tr>
</tbody>
</table>

**EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS**

The Agribusiness Acceleration Program has a partnership-based implementation strategy. In each implementation country, as part of the feasibility assessment process, infoDev actively seeks and identifies local private and public sector partners to drive the AIC forward at the local level. Throughout this process, infoDev also ensures that World Bank and other donor initiatives are leveraged.

infoDev intends to develop a strategic advisory panel for the Agribusiness Acceleration program. The Panel will be comprised of experienced agribusiness development leaders that can provide infoDev with guidance on its future strategic development. We intend to approach the International Fund for Agricultural Development, the Forum for Agricultural Research in Africa, and the United Nations Development Program, among others.

Within the World Bank Group, the Agribusiness Acceleration Program continuously harnesses the experience and knowledge gathered by colleagues from Agriculture and Rural Development, Financial and Private Sector Development, and regional departments. There is already interest to incorporate AICs into pipeline projects. infoDev will continue to support that engagement.
BACKGROUND

In developing countries, the lack of appropriate seed financing for entrepreneurs and new ventures is a major impediment to growth. infodev’s Access to Finance program (A2F) helps to bridge this gap between innovative entrepreneurs in the developing world and appropriate finance.

The program seeks to experiment, create and catalyze new financing and market mechanisms, which provide early-stage funding to innovative and growth-oriented small and medium businesses. It pilots interesting approaches to supporting these enterprises; shares lessons and experiences globally, and encourages their mainstream adoption by others.

The A2F program works through infodev’s other thematic programs, leveraging incubators, mLabs and mHubs, and Innovation Centers to find and support promising, growth-oriented entrepreneurs. It innovates by working with both traditional and new financing sources, to test new solutions that can be deployed via, or in close connection to labs, hubs, incubators and centers. It crowds in unique actors in the financing, impact investing, angel investing and mentorship space to support our thematic work.

CHALLENGE

In high-income countries, the small and medium enterprise sector has been estimated to contribute more than 50 percent to gross GDP, adding significantly to new job creation10. In low-income countries, however, the contribution of the SME sector to gross GDP has been estimated at just 16 percent; in most African countries, it is less than 10 percent11. With the right sort of support, there is an enormous opportunity for innovative SMEs to contribute meaningfully to their countries’ economic development.

At the same time, SMEs in developing countries have unique financing needs and challenges. They face multiple hurdles to launch and scale a business: few angel investors, high transaction costs, risk-averse SME banks, and their own capacity to understand and articulate a business plan and their associated financing needs, which often are in the range of $50,000 to $1 million. For traditional investors, the potential returns from investing in an innovative new venture are often not sufficient to match the risk.

As a result, these businesses stall in the so-called “valley of death,” stuck between the ceiling of their initial fundraising efforts and the floor of most investors. With nowhere to turn for alternative funding, promising enterprises frequently face stagnation or failure. These findings were confirmed in 2008 with the publication of infodev’s flagship report Financing Technology Entrepreneurs and SMEs in Developing Countries: Challenges and Opportunities.

STRATEGY

infodev’s A2F program designs and pilots novel early-stage financing facilities that increase the availability of new sources of private capital on the supply side and increase the capacity and investability of early-stage entrepreneurs on the demand side. This is done by focusing on public-private partnerships with non-traditional financial actors such as business angels, crowdfunders, incubators, accelerators, etc. The program will therefore twin its financing facilities with targeted technical assistance activities which increase the capacity of these actors.

The program will also conduct targeted research to understand better the financing needs of innovative entrepreneurs in developing countries, disseminate knowledge about interesting new financing models that support the entrepreneurial journey, and encourage the mainstreaming of innovative financing and technical assistance programs that work best for this unique class of enterprises.

This document discusses various financing facilities aimed at supporting innovative startups and small and medium-sized enterprises (MSMEs). Here are the details:

**Angel Co-Investment and Technical Assistance: the Early Stage Innovation Financing (ESIF) Facility.** infoDev’s Early Stage Innovation Financing (ESIF) facility will be piloted initially in the Middle East and North Africa (MENA), and therefore launched in partnership with the World Bank’s Finance and Private Sector Development department for MENA. ESIF will create a $50 million co-investment financing facility to help innovative startups with strong growth potential. It will be executed by a competitively selected facility manager and will match investments by both angel networks and individual seed-stage local investors. An additional $20 million will be used to bolster the entrepreneurial ecosystem with targeted technical assistance programs for a range of ecosystem players. This second component will be executed directly by infoDev and the World Bank MENA FPD department, to assist incubators, accelerators, and investors, so as to strengthen their support to the enterprises, and create a steady deal flow. The initial ESIF pilot will run over a five-year period in MENA. During that time, it will also be steadily rolled out to other regions of the world. Given the size of the fund, it is anticipated that approximately 200 firms will receive financing of between $50,000 and $1 million. infoDev will launch ESIF in 2013, with Egypt, Jordan, Lebanon, Morocco, and Tunisia as potential first markets.

**Incubator-attached Seed Financing Facility.** infoDev will pilot the structuring and implementation of seed stage investment facilities which will serve entrepreneurs and innovators housed in the infoDev Climate Innovation Centers, mobile labs and other incubation and acceleration centers we launch. The purpose of these facilities will be to find and support firms within these business enablers, affording a closer connection between the entrepreneurs receiving incubation and early stage investment.

**Innovative MSME Finance Facility for the Caribbean.** In the Caribbean, where markets are small and fragmented, infoDev will pilot a diaspora-driven, co-investment finance facility to assist promising small and medium-sized enterprises in the region. Via its Entrepreneurship Program for Innovation in the Caribbean (EPIC), initial investment in this facility has been provided by the government of Canada (CIDA). infoDev will leverage this support from CIDA to raise a total of $10M to connect entrepreneurs from the Caribbean with diaspora and local angel investors who will provide both mentorship and investment capital, using technology platform tools. The program will increase the growth potential of the entrepreneurs in the program, demonstrate the viability of Caribbean entrepreneurs and crowd in a number of sources of capital.
RESEARCH ACTIVITIES

.getInfoDev will add to the store of information and knowledge available globally in this fast moving field, so as to guide thinking and share good practice with other practitioners:

East Africa Gaps Analysis. This East Africa Gaps Analysis will explore where financing for early stage entrepreneurs in Ethiopia, Rwanda, Tanzania, and Uganda is falling short, and set out recommendations for closing this funding gap. The study will place the greatest focus on seed- and early-stage financing gaps in the ICT, climate technology, and innovative agribusiness sectors and will add to what is currently understood about access to growth capital in East Africa.

Online Marketplace and Crowd-Funding. infoDev will develop an analytical study on how online marketplaces can serve as useful matchmaking platforms to connect aspiring entrepreneurs and financiers in markets that are often marked by fragmentation and information gaps. infoDev will also undertake research on crowd funding, a phenomenon which uses online communities and social media to expose entrepreneurs to large and small investors from across the world. infoDev’s research will analyze the opportunities and challenges posed by crowdfunding, and its applicability in the developing world.
IMPACT, MONITORING, AND EVALUATION

There will be enormous learning from each experience, as well as iterative adjustments made along the way in each project to account for conditions on the ground, the expectations of the partners, the realities of the markets concerned, and the feedback of the entrepreneurs and SMEs. As such, monitoring and evaluation will be integral in assessing the success of each project and in codifying assessment, design and implementation methodology to roll out similar initiatives in other countries. Monitoring and impact evaluation activities will specifically target the following:

- Growth in investment volume by angel investors;
- Formation and effectiveness of angel networks;
- Number of firms receiving investment;
- Revenue growth of SMEs that receive investment or technical assistance;
- Jobs created by SMEs that receive investment or technical assistance;
- Inclusion of youth and women in supported SMEs;
- Survival rate of SMEs that receive investment or technical assistance.

EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS

infoDev’s A2F program supports and links to the rest of infoDev’s work to support and grow the innovative entrepreneur. ESIF will reach out to and engage the wider infoDev incubator network to find and source deal flow for the facility. The Climate Technology Investment Fund in Kenya will focus specifically on investments in green technologies. infoDev’s EPIC program for the Caribbean will create a regional MSME seed fund for women entrepreneurs, mobile entrepreneurs and climate entrepreneurs from across the region.

EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS

There are a number of interesting actors within this dynamic field, which infoDev will reach out to and constantly engage. In addition to early stage financing programs that the World Bank Group is involved in, such as FPD colleagues in the MENA region, infoDev will also forge links with other innovative public-private consortia who are interested in the early stage and impact investment space, such as the US State Department’s LIONS@FRICA initiative, the Inter-American Development Bank, Compete Caribbean, and angel investor networks.
<table>
<thead>
<tr>
<th>RISKS</th>
<th>DESCRIPTION</th>
<th>MITIGATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Deal flow</td>
<td>Lack of investable companies will undermine relationships between angel networks and incubators and undermine viability of financing facilities</td>
<td>Technical assistance will increase competitiveness and value of start-ups as well as angels and incubators. Competitions will identify high-growth potential start-ups from outside infoDev incubator networks.</td>
</tr>
<tr>
<td>Lack of tax/legal framework</td>
<td>Often, developing world nations lack tax incentives and legal frameworks that encourage angel activity in the US and Europe.</td>
<td>Activities employ strategies for increasing the investability of companies risk mitigation, increasing the likelihood of participation of angel investors.</td>
</tr>
<tr>
<td>Political uncertainty</td>
<td>Local political contexts create uncertainties which impact the ability to grow entrepreneurs’ businesses.</td>
<td>infoDev is unable to directly mitigate political risk, but will roll out its A2F activities in environments where relatively stable environment exists.</td>
</tr>
<tr>
<td>No exits</td>
<td>In order to effectively crowd-in private sector actors, infoDev will need to secure exits for companies involved. Corporate partnerships, IPOs, buybacks, etc. are unproven for this asset class in developing countries.</td>
<td>Mentorship and angel networks will expose entrepreneurs to a global supply chains. Technical services, especially via mentorship, increase competitiveness and value of companies and thus, the likelihood of public offering in regional and international exchanges.</td>
</tr>
<tr>
<td>Angels’ role poorly understood</td>
<td>Successful angels actively mentor the companies in which they invest. This trusted relationship between angel and entrepreneur is proven in the developed world context, but may be impacted in unforeseen ways by unique cultural realities of each locality.</td>
<td>Technical assistance programs will provide clear best practices for angel-entrepreneur relationships. Standardized investment procedures will serve to establish trust between entrepreneur and angel.</td>
</tr>
<tr>
<td>Structures lacking</td>
<td>The A2F program assumes a complex web of relationships between entrepreneurs, incubators, mentors, angels, and financing facility managers. Incentive structures remain undefined and must be clarified.</td>
<td>A2F program activities target the operating costs and lack of knowledge which often stymie the interaction between mentors, angels, incubators and entrepreneurs. These technical assistance measures will build trust and help clarify incentive structures for all.</td>
</tr>
<tr>
<td>Ecosystem enablers poorly informed</td>
<td>Ecosystem enablers (angels, incubators, etc.) may not accurately understand or articulate the technical assistance needs of investee firms.</td>
<td>Independent continuous assessment of needs of projects by infoDev will ensure timely and relevant supply of TA. An M&amp;E specialist will conduct periodic information dissemination and reviews. Training will be provided to the ecosystem enablers.</td>
</tr>
<tr>
<td>Investment focus misplaced</td>
<td>Angel co-partners, rather than playing their true role of seeking out and structuring promising start-ups, could focus on private equity in existing firms with an established track record that need to be turned around and restructured.</td>
<td>The financing facilities would preclude certain investment categories, and will have strict provisions to ensure that investments focus on firms that are in the valley of death.</td>
</tr>
</tbody>
</table>
WOMEN’S ENTREPRENEURSHIP PROGRAM
BACKGROUND

Women-led companies in developed countries have been growing faster than male-led firms for almost 30 years. In the United States, for instance, they contribute nearly $3 trillion to the economy per year, creating or maintaining 23 million direct jobs. Studies also show that as women scale up their businesses, the wider community benefits. Women earners re-invest money in their family’s health, nutrition, and education. This points to an enormous opportunity to deliver development results by supporting women entrepreneurs who run growth-oriented companies in emerging and frontier markets.

CHALLENGE

Between 8 million and 10 million formal SMEs in the developing world, or 31 to 38 percent, are run by women. Yet, their average growth rates as businesses are significantly lower than those of SMEs led by men. Women entrepreneurs face a number of challenges in scaling their businesses, including, among others:

- Cultural attitudes and legal conditions that inhibit women’s autonomy and prevent them from accessing financing or obtaining skills to operate and scale their businesses
- A lack of business skills, knowledge, and professional work experience
- The difficulty of balancing professional and domestic obligations.

As a result, women business owners across the developing world are far more likely to operate informally or at the micro-business scale than among established small and medium enterprises.

infoDev has experienced the challenge of properly including women in its programs and activities. At the Top 50 SME competition hosted at the 4th Global Forum on Innovation Technology and Entrepreneurship in Helsinki in 2011, just five of the winners were women.

STRATEGY

In our mobile innovation activities in Nepal, only a single woman entrepreneur has participated. About 30 percent of participants at business plan workshops for our Climate Innovation Centers have been women—a good showing, but we want to make that percentage even higher. Our goal is therefore to ensure that infoDev’s programs reach more women entrepreneurs.

The objective of the infoDev Women’s Entrepreneurship Program is to support growth-oriented, women-led SMEs to scale up their businesses by addressing the barriers that impede expansion. The strategy is founded on four pillars:

- Supporting women entrepreneurs throughout the infoDev Global Incubator Network by integrating gender-sensitive approaches to our programs;
- Improving access to finance for women-led, growth-oriented ventures;
- Showcasing Successful Women Entrepreneurs: WE;
- Piloting regional programs.

The women’s entrepreneurship program can be best understood as a mainstreaming initiative: a sum of customized gender-related activities across infoDev’s program. The need for this approach has arisen from our experiences to date, and we are in the process of designing the methodology for diagnosing the gender-related needs related to each infoDev activity; this includes consultations with our partners, grantees and end-beneficiaries (women entrepreneurs from our network) as well as collaboration with the World Bank Group’s Gender Unit. In terms of gender equality results, our emphasis is on poverty reduction and economic growth. Collecting and analyzing sex-disaggregated data will form an integral part of the evaluation framework and the data collection tools used to compile results.

13 Center for Women’s Business Research, 2009
SUPPORTING WOMEN ENTREPRENEURS THROUGHOUT THE INFODEV GLOBAL INCUBATOR NETWORK BY INTEGRATING GENDER-SENSITIVE APPROACHES TO OUR PROGRAMS

Since women often lack formal business or technical skills, professional work experience, and mentorship networks, infoDev will help them get the tools they need to scale up their businesses, by adopting gender-sensitive practices into the services provided to our Global Incubator Network, and by adapting existing training and services to better suit the needs of women.

As a first step, infoDev will carry out an extensive survey of our network, to map the needs of women members and to identify opportunities for intervention that will result in maximum gains to growth of women-led businesses. infoDev will then develop best practice guidelines and deliver training to these members.

To accomplish this goal, the Women’s Entrepreneurship Program will:

Encourage gender-disaggregated reporting for members in its incubator network to provide baseline data against which we can conduct monitoring and evaluation, and examine whether gender-sensitive approaches to business support are effective in enabling women entrepreneurs to grow their companies.

Develop best practice guidelines for incubator network members to incorporate into their programs to facilitate the growth of women-led businesses and provide services with a gender-sensitive lens. The guidance will include:

- A training module for incubator managers devoted to gender issues;
- Strategic partnerships and networking opportunities for regional and local organizations that work in areas related to women’s business support, such as World Bank and other partner programs, organizations supporting women and girls’ achievement in science, technology and entrepreneurship, chambers of commerce, and advocacy agencies;
- Access to mentorship and internship programs to pursue opportunities in technology and business, engaging local universities, international mentor networks, incubators and incubated companies.

infoDev also will regularly convene women entrepreneurs via our network to showcase success stories and highlight lessons learned in implementing best-practice guidance. The 5th Global Forum on Innovation and Technology Entrepreneurship—to be held in South Africa in 2013—will include a track devoted to women’s entrepreneurship, and will serve as the launch event for the whole Women’s Entrepreneurship Program.

IMPROVING ACCESS TO FINANCE FOR WOMEN-LED, GROWTH-ORIENTED VENTURES

A 2011 study by the International Finance Corporation found that across Africa, Asia, and Latin America, an average of 35 to 43 percent of women-owned SMEs are underserved (i.e. do not have a loan, but need one), while 20 to 24 percent are underserved (i.e. have a loan, but face financing constraints). As a result, these women entrepreneurs often finance their businesses through savings and the aid of friends and family.

Women entrepreneurs often cite difficulty in obtaining financing as a major obstacle to scaling up their businesses. Women are less likely to obtain commercial financing than men and often pay higher interest rates, especially at the seed stage of investment.
There are many potential causes—a lack of collateral or proof of credit-worthiness, a sense of discouragement or mistrust of financing institutions, among others. Micro-finance institutions have made headway in supporting women-led businesses, but this is often at the level of informal and micro-enterprises, and the loans are often too small to grow the business.

To address financing gaps facing women in our incubator network, infoDev will develop programs to bolster both the supply and demand side of funding women entrepreneurs who are focused on growing their businesses through its Access to Finance Program. We intend to:

- **Establish a community of practice** for women entrepreneurs, investors, and mentors. This global community will develop a women-focused angel network, with members sharing the common goal of investing in women-led businesses with high growth potential. Day-to-day management will be carried out primarily through an online platform. Members will have opportunities to attend workshops, training events and forums, including the Women 4 Women competition (described below).

- Partner with foundations that **provide funding specifically for women entrepreneurs**. By expanding our community of practice through linking members with other organizations that fund women entrepreneurs, the reach of both infoDev and these external programs can be multiplied. Ashoka Changemakers and the Cherie Blair Foundation for Women are examples of initiatives infoDev may work with to spearhead this effort.

- **Create a women’s co-creation cooperative**, to bring women with complementary skill sets together in such a format that each individual would start or grow her own company while benefiting from others within the group.

- From a financing perspective, this novel cooperative would minimize investment risk by leveraging the pooled innovation collateral of each participant. We will further design this innovative program to explore accessing funds in larger amounts and through different mechanisms, and investigate new forms of accessing capital in otherwise risk averse investor communities.

### SHOWCASING SUCCESSFUL WOMEN ENTREPRENEURS (WE)

infoDev will launch the Women Entrepreneurs initiative, or WE, to increase the visibility of highly successful women entrepreneurs from around the world and to demonstrate to other women that establishing a successful company is achievable. Telling the inspiring stories of women who have overcome barriers and developed their businesses encourages other growth-oriented businesswomen to push ahead, demonstrates investability to potential financiers, and creates a readymade mentor network.

To promote and support the WE initiative, we will:

- **Hold an annual global competition** for women entrepreneurs who have successfully grown their businesses. Over time, the program will create and publicize a compendium of success stories for global dissemination, facilitate interaction with investors, and inspire young female entrepreneurs to follow in their footsteps. The competition will launch during infoDev’s 5th Global Forum in May 2013.

- **Identify and publicize** successful, inspiring women entrepreneurs, with the objective of encouraging more growth-oriented women businesses, and highlighting these possibilities for girls in higher education.

### PILOTING REGIONAL PROGRAMS

infoDev already provides assistance to women business owners through its initiatives in the Caribbean, Ethiopia, and the Mekong. Learning from these initiatives will give valuable lessons on workable business models, strategies, and access to finance opportunities for women-led enterprises.

The Women’s Entrepreneurship Program will continue to support and learn from the following regional initiatives:
WINC AND EPIC

As part of its Entrepreneurship Program for Innovation in the Caribbean, and in partnership with Canada, infoDev will launch a Women Innovators Network in the Caribbean, or WINC. The network will support growth-oriented, women-led enterprises, and create products, services, jobs, and tax revenue for the Caribbean—a region hard hit by the financial crisis, with stubbornly high rates of unemployment.

Our consultations in Antigua, Barbados, Jamaica, and St. Vincent showed that women face considerable challenges in scaling their business, such as little access to finance, high costs to transport goods between islands, a lack of business knowledge and skills, and no trustworthy networks of entrepreneurs and mentors to learn from.

WINC will begin by providing guidance on: (i) business knowledge of the product, the market, and the importance of differentiation for sustainability; (ii) positioning for differentiation; (iii) branding, packaging, and labeling products; (iv) facilitating access to new markets and reaching compliance with international standards for export; (v) attracting and accessing funding for growth. Depending on availability of additional resources, WINC can be expanded during the lifetime of EPIC (until 2018) to include additional Caribbean islands.

MEKONG WOMEN’S ENTREPRENEURSHIP CHALLENGE

In 2013, we will run the Mekong Women’s Entrepreneurship Challenge. MWEC competitively selected women-led businesses to participate in Competitiveness and Creativity workshops in Laos and Cambodia, focused on innovation development, entrepreneurship, and business-proposal training. Following the workshop, women will be selected to receive targeted coaching, and financing. These women will attend the infoDev 5th Global Forum on Innovation and Technology Entrepreneurship to meet other entrepreneurs, financiers, and partners.

MWEC will work as a complementary program to the World Bank-led STEPS program (Supporting Talent, Entrepreneurial Potential and Success), a two-year initiative supporting young female entrepreneurs and start-ups.

The MWEC pilot program will test the effectiveness of this form of support for women entrepreneurs. If it proves effective, infoDev will replicate the Challenge in other parts of the world.

CLIMATE INNOVATION CENTERS

Gender is a critical component of the climate innovation agenda. The Women’s Entrepreneurship Program will work alongside infoDev’s Climate Innovation Center in Ethiopia to support women climate technologists—with access to finance, policy support, informational campaigns, mentoring, and regional partnerships. Lessons learned will inform similar services in other CICs, and infoDev’s Labs, centers, and incubators.
IMPACT, MONITORING, AND EVALUATION

infoDev’s programs to support women entrepreneurs have the following intended development outcomes and initial targets:

<table>
<thead>
<tr>
<th>DEVELOPMENT OUTCOME</th>
<th>TARGETS</th>
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</table>
| Grow innovative, women-led SMEs working in the field of technology | • Train and grow 10-12 women-led businesses through MWEC  
• Train and grow 30-50 women-led businesses through WINC  
• Train and grow 5-7 women-led climate-technology businesses through the Ethiopia CIC in the first five years of operation  
• Provide financing to 15 women entrepreneurs per year across infoDev’s various fund programs |

| Increase visibility of inspirational, successful women entrepreneurs | Hold annual W4W competitions and select one winner and five runners-up per year |
| Mainstream gender-sensitive practice into the services provided by incubators in infoDev’s network | Train 50 incubator managers on gender-related issues of business support  
50 incubators across infoDev Global Incubator Network adopt the best-practice guidelines on gender |

RISK AND MITIGATORS

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<thead>
<tr>
<th>RISKS</th>
<th>MITIGATORS</th>
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<tbody>
<tr>
<td>Activities aimed at integrating gender-sensitive practices into the operations of members in infoDev’s incubator network may not be easily replicable across regions</td>
<td>Best practice materials will be developed through a regional research approach and will include geographically specific recommendations.</td>
</tr>
<tr>
<td>There may be a lack of demand by women entrepreneurs for infoDev’s incubation and other support services</td>
<td>Should this be the case, programs offered will be adapted to link with universities and other institutions of higher learning to support engagement of women in this field upon graduation. Partnerships will be made with organizations devoted to creating enabling environments for women to work as entrepreneurs in the field of technology.</td>
</tr>
<tr>
<td>The regional implementing partners for the Women Innovators Network in the Caribbean program may lack the capacity to deliver the program across intended countries</td>
<td>This risk will be mitigated by: a) working with the chosen partner to identify how the implementation activities can best be carried out in each island, and b) providing technical assistance and resources as necessary to build the capacity of the partner.</td>
</tr>
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</table>

EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS

infoDev’s Women’s Entrepreneurship Program cuts across and is directly relevant to all of infoDev’s work. For example, under the Agribusiness Acceleration Program, it is expected that the Agribusiness Innovation Center in Senegal will create 5,000 jobs, 80 percent of which will be for women horticulture processors.

EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS

There are many potential linkages with World Bank and IFC departments. These include, among others, the World Bank’s Gender and Development Department, the Women in Business Department of IFC, and the World Bank’s Enterprise Survey and Gender Data team. We intend to approach a number of external foundations, including the Cherie Blair Foundation for Women Entrepreneurs, the GSMA Development Fund’s mWomen Program, and the Nike Foundation, regarding areas of common interest.

Female entrepreneurs in developing countries are currently hailed as the new rising stars of the economies and different stakeholders have commended them as an important source of economic growth and development.
RESEARCH AND ANALYSIS
**BACKGROUND**

*infoDev’s* research and knowledge products ensure timely and incisive insights for our clients, stakeholders, and donors. Our past research on ICT, for example, the ICT Regulation Toolkit, the Telecommunication Regulation Handbook, and EduTechDebate were successful products that left a measurable mark—72 percent of respondents in a 2010 survey rated *infoDev’s* ICT Regulation Toolkit as “important,” “highly important,” or “essential” to their work. These products have been popular because they provide practical and ready tools for decision makers who are developing connectivity policies and strategies from scratch.

With this rich legacy behind us, *infoDev’s* new directions in research are focused on cutting edge issues in the innovation and technology entrepreneurship space, bringing to light issues that developing country stakeholders are only now starting to consider—such as the jobs potential of the virtual economy, or the role ICTs can play in post-conflict reconstruction.

**CHALLENGE**

Information infrastructure, particularly mobile networks, have amassed an unprecedented reach16. More and more people in emerging economies are using new technologies to meet longstanding needs, harnessing their own inventiveness and creativity. Authors have even identified an emerging trend of “reverse innovation,” whereby new technologies appear in developing nations and flow to developed ones17. Meanwhile, technology entrepreneurs are crafting novel applications and tools that tackle longstanding issues. Hackathons and innovation challenges yield many exciting and interesting ideas. Accelerators and incubators are struggling to keep pace with this rush of innovation. As a result, they are constantly searching for the best configuration of services for entrepreneurs whose platforms, networks, and tools are evolving by the day.

This presents a fascinating challenge for *infoDev*, and for the development community. Going forward, our research must address these new realities and harness *infoDev’s* own competitive advantage in this new, already-connected world.

**STRATEGY**

*infoDev’s* research strategy is to continually provide practical and user-friendly research tools for the developing countries we serve. Content wise, *infoDev’s* goal is to innovate by finding issues that are nascent and evolving, studying them and putting that knowledge out as a global public good. *infoDev’s* research will also be guided and influenced by its field-based work, so that knowledge of “what works” is captured and readily shared.

In addition to traditional dissemination outlets such as print media and online PDF files, *infoDev’s* strategy is to use an array of dissemination tools that not only multiply our knowledge dissemination, but also allow us to keep precise track of impact metrics. Our Information and Communication for Development 2012 report is available online as a widget, through which visitors can choose which sections they want to view and revisit—while the widget registers every interaction. Moreover, using social media, visitors can easily share links with like-minded contacts. The combination of shares, re-tweets and stats forms a powerful engine, and gives us the ability to track the most interesting or viral parts of each product and the individuals and groups that can help us amplify similar messages in the future.

Beyond shaping our intelligent, data-driven dissemination strategies, community-based uptake resources such as social media, aggregators, entrepreneurship forums, and development blogs also present an added benefit: they give our beneficiaries another way to share their knowledge with us and with each other. In short, they provide an inclusive, always-on venue for the dialogue that is the lifeblood of our iterative learning cycle.

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16 It took the fixed-line telephone 88 years from its first unveiling to 1 billion users; mobile phones reached that milestone in just 18 years, in 2001. Today, 75 percent of the world has access to a mobile phone.

17 Govindarajan and Timble, Reverse Innovation: Create Far from Home, Win Everywhere.
infoDev’s past policy work has included the Broadband Strategies Handbook, the ICT Regulation Toolkit, and the Telecommunications Regulation Handbook (prepared with the International Telecommunication Union), all of which have helped regulators in emerging economies create competitive markets and wider ICT access and use. In Egypt our tools were used to train the regulatory agency to set up a national broadband plan. In Kenya, reforms based on the ICT Regulation Toolkit resulted in a reduction of 80 percent in wholesale bandwidth costs. infoDev’s role was to start and seed these innovative knowledge tools, which have now become cornerstones in the international community. Now that these products have reached a certain level of maturity, they will be spun off to other partners to continue to maintain and disseminate. In fiscal 2013-2015, infoDev will engage these partners, including the World Bank’s ICT Sector Unit, to put this into effect.

We will also continue to distill best practices from across our network and share them widely. For example, our report Growing Food, Products, and Businesses will extract agribusiness incubator best practices using ten case studies around the world. Our Lessons on Virtual Business Incubation Services provides similar insights into the potential of virtual incubation services and tools by showing how they are effectively used in different countries.

Best practice lessons are always integrated into our capacity-building programs and tools, so that South-South learning can be shared. The lesson we take from an incubator in Kenya now might later become applicable in Sierra Leone; processes developed in the MENA region might be the key to solving new challenges faced by companies in South Asia. These have always been among infoDev’s most popular products, as there is a constant thirst to know how other developing countries face the same or similar challenges. This methodology also guides future pilot programs, allowing us to take a flexible research focus to the areas where client countries see the most benefit and specifically request our help. infoDev’s monitoring and evaluation measures throughout this work program will facilitate this dynamic approach to shared learning.
Proposed new research and analytical products for fiscal 2013-2015, in addition to the ones already identified in the specific thematic chapters of this Work Program, include:

- **ICT and Jobs Report.** With the World Bank's latest World Development Report focused on jobs, this topic will be a continued high priority area for Bank research in future years. ICTs pose unique problems for the job market: automation makes some jobs superfluous, and relocates others. This report, prepared in collaboration with the World Bank's ICT Sector Unit, will look at the net effect of ICTs on employment, building on infoDev’s pioneering work on mobile microwork and technology-based entrepreneurship.

- **Broadband Strategies Toolkit.** Broadband is critical to economic competitiveness and the growth of higher value jobs. With support from the Korean Trust Fund for ICT for Development, infoDev and the World Bank's ICT Sector Unit have developed the Broadband Strategies Handbook to assist policymakers and regulators in the developing world. Over the next two years, this will be followed by a Broadband Strategies Toolkit, which will be a self-assessment toolkit for countries to map their progress in broadband roll out.

- **Virtual Incubation.** Different techniques prevail for virtual incubation, a method of incubating promising startups and enterprises without a physical incubator infrastructure. After developing a number of pilots to test how these virtual incubation systems can work in Vietnam and East Africa, and after incorporating good practice into our incubation efforts in the Caribbean, infoDev will evaluate these pilots and bring together best practices in virtual incubation techniques to share with the rest of infoDev’s network of business incubators, mLabs, and climate innovation centers.
COMMUNITY-GENERATED PROMPTS

As infoDev launches new mLabs, mHubs, A2F initiatives, AICs, and CICs, and incorporates women- and youth-driven agendas into its broader work, the communities we support will actively generate new lessons—many of which will apply across borders and industries and which could influence the way future development projects are designed and deployed. With strong monitoring and evaluation systems, a platform where network members can share their stories and reach out to others, and dedicated community management, infoDev aims to create ground-level access to emergent knowledge—straight from the people we serve.

In the past, we mined our community for such emerging development opportunities as mobile microwork. Once we learned more, we condensed our findings into products such as the Knowledge Map of the Virtual Economy, and then used them to shape activist challenges, such as the m2Work Challenge—a global search for the best ideas on inclusive job creation using mobile phones.

Many of the several hundred challenge participants have engaged our mLabs, and some have developed working prototypes, drawn private interest, hired full-time staff, signed Letters of Commitment with aid agencies, and even secured funding from angel networks. They showed their continued engagement months later, at infoDev’s m2Work Hackathon, where they offered invaluable feedback on the program. Time and time again, we see this process: our community grows knowledge, and the knowledge grows our community. The next wave of insights—whether in mobile, climate, or women’s entrepreneurship—is of course impossible to guess now, but the method of unearthing them is time-tested and has produced rich results.

For fiscal 2013-2015, in addition to the research and analysis set out in the specific thematic chapters of this Work Program, infoDev’s community-centric research program will include investigations on mobile usage at the base of the pyramid (BOP).

**Mobile usage at BOP:** In 2012, infoDev initiated two studies of mobile use in the base of the pyramid populations in Kenya and South Africa. Moving forward, this work will be expanded to at least two other countries, and repeated in the original countries to understand changing trends. The aim is to use this research to develop new types of business models for use in infoDev’s mLabs and business incubators on how best to serve consumers at the base of the pyramid, as well as influence and assist entrepreneurs who seek to serve this burgeoning market.
**IMPACT, MONITORING, AND EVALUATION**

<table>
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<tr>
<th>OUTCOMES</th>
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<td><strong>REACH</strong></td>
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</table>
| Increase inbound traffic to knowledge products | • 100% increase in average number of downloads per publication over three years (measuring increased traffic)  
• 100% increase in average number of visits for publication pages over three years |
| Leverage knowledge products into expanding presence online and offline | • Increase frequency of social media virality (aggregate of shares, likes, and retweets) by 100% each year over 3 years  
• Increase online mentions of publications (e.g. on blogs, aggregation websites) by 50% each year over 3 years  
• Expand our network of personal media contacts to 120 specialized technology bloggers and reporters who can be approached about new releases. |
| **IMPACT** |        |
| Measure knowledge adoption among stakeholders | • Increase average number of repeat visitors across publications by 100% (measuring relevance)  
• Increase number of flagship product citations in trade and scholarly works by 15% per year over 3 years  
• Achieve consistent 85% “useful,” “highly useful” or “essential” rating for our knowledge products on stakeholder surveys |
| Increase engagement with knowledge-producing community | • Attract 1.25% response rate (vs. number of downloads) from feedback cards and contact information included in the knowledge products.  
• 75% increase in publication-related direct interactions from beneficiaries to infoDev (including on email, social media, and our website) per year over three years |
| Measure internal operational impacts of research | • Achieve clear savings in pilot costs per program as a result of operational research, including needs assessments, feasibility studies, and best practices |

To carry out in-depth monitoring and evaluation of our research program, we track our performance along the two dimensions of reach and impact. The results inform revisions of our dissemination strategies and help us discover emerging areas of emphasis in our work. The table below indicates infoDevs three-year research outcomes and targets:

**RISKS AND MITIGATORS**

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<th>RISKS</th>
<th>MITIGATORS</th>
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<tr>
<td>The work is carried out at too small a scale, with limited sample sizes for original research, to be meaningful</td>
<td>Where possible, original research will be integrated with other international research programs. For instance, the Mobile Use @ BOP research built on IDRC-funded work in South Asia and a household survey in Africa, while the virtual incubation work represents a continuation of earlier research on the virtual economy.</td>
</tr>
<tr>
<td>Too broad a scope for the ICT and Jobs study</td>
<td>Define boundaries closely and tie scope into existing research to ensure there is a focus on the early stage startup and new venture entrepreneur, which is infoDev’s expert specialization.</td>
</tr>
<tr>
<td>Failure to define relevant regional/global problems demanding solutions, for instance in the work on broadband competitiveness</td>
<td>User focus groups, conference presentation, Global Forum, workshops and interactive websites to gain feedback on research priorities to understand what questions need answers, and to ensure that research remains client-focused.</td>
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</table>
EXISTING AND POTENTIAL LINKS WITH OTHER INFODEV WORK AREAS

infoDev’s analytical work on ICT4D will be carried out jointly with a range of actors, including the World Bank’s ICT Sector Unit, FPD Units, and the World Bank Institute to ensure economies of scale, and to provide an entry point into the World Bank’s operations. Commissioned research will seek to build relationships with universities and other research partners (notably the London School of Economics, Korean Information Society Development Institute, University of Cape Town, Research ICT Africa, etc.) and will be presented at reputable practitioner meetings and conferences.

A summary of our cross-cutting research work program that is set out in this fiscal 2013-2015 Work Program is shown below:

<table>
<thead>
<tr>
<th>INFODEV WORK STREAM</th>
<th>RESEARCH PROGRAM</th>
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<tbody>
<tr>
<td>Mobile Innovation</td>
<td>We will launch a flagship report series on the Mobile App Economy in Developing Countries, which will follow on the heels of our 2011 Knowledge Map of the Virtual Economy and uncover new opportunities for mobile innovation in emerging markets. We will complement our mobile research with focus papers and case studies.</td>
</tr>
<tr>
<td>Climate Technology</td>
<td>Climate TRACK will package lessons from individual CICs into cutting-edge analytical products and policy toolkits. Climate TRACK will spread a wealth of practical research on a range of climate innovation topics, putting the knowledge generated from our activities at the services of multiple countries, organizations, and entrepreneurs.</td>
</tr>
<tr>
<td>Agribusiness Acceleration</td>
<td>Building on the multiple agribusiness incubation case studies in our toolbox, we will conduct “deeper dive” research on existing incubators to crystallize direct and indirect impacts, quantify the effects of our investment, and identify new challenges and opportunities for entrepreneurs.</td>
</tr>
<tr>
<td>Access to Finance</td>
<td>Our Access to Finance Program will produce actionable research, such as an East Africa Gaps Analysis, to pinpoint regional funding needs. We will also share insights across our programs and throughout our global network, including analyses on the legal, regulatory, economic, and logistical challenges for crowd-funding.</td>
</tr>
<tr>
<td>Women’s Entrepreneurship</td>
<td>Our research will expand to cover new areas of focus for infoDev, such as ways to empower women entrepreneurs. We will develop women-centric best practices for our network members to foster woman-led businesses.</td>
</tr>
<tr>
<td>ICT and Innovation</td>
<td>We will create practical research covering ICT and Jobs, Broadband Strategies Toolkit, Virtual Business Incubation and the use of Mobile at the Base of the Pyramid. An important focus of all this research will be how ICT works to support the creation of sustainable economic development, jobs and overall competitiveness.</td>
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EXISTING AND POTENTIAL LINKS WITH FPD, WBG, AND EXTERNAL PARTNERS

infoDev will continue to forge active links with like-minded organizations. World Bank and IFC departments, including the ICT Sector Unit, the Agriculture and Rural Development Department, the Climate Change team, and the Financial and Private Sector Development’s Innovation and Technology Entrepreneurship Practice will all be valued partners in jointly undertaking and co-financing important work.

In the field, infoDev regularly encounters other programs and actors who will be valued, if perhaps unexpected, partners for our knowledge and research agenda. For example, in our mobile innovation work, we can engage partners such as Peruvian startup WaWaRed, which provides timely text-based, health-related messages to pregnant women; or m-Farm, which created an app to help small farmers in Kenya gain transparent market data. Learning from and working alongside such efforts, we can perform rich and relevant work.
TARGET PROGRAM SIZE
(FY2013-15)

Mobile Innovation  43.0  USD million
Climate Technology  38.0  USD million
Agribusiness Acceleration  37.8  USD million
Access to Finance  77.0  USD million
Women’s Entrepreneurship  5.5  USD million
ICT Research  3.5  USD million

Program costs include activity implementation, monitoring and evaluation, knowledge dissemination and communication, program administration and trust fund fees.