

# Growing Innovation, Fostering Entrepreneurship

infoDev Annual Report

2014 - 2015







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### **Abbreviations and Acronyms**

Agribusiness Entrepreneurship Program	AEP
Agribusiness Innovation Center	AIC
Climate Innovation Center	CIC
Caribbean Climate Innovation Center	CCIC
Caribbean Mobile Innovation Project	CMIP
Creating Sustainable Businesses in the Knowledge Economy	CSBKE
Climate Technology Program	CTP
Digital Entrepreneurship Program	DEP
Entrepreneurship Program for Innovation in the Caribbean	EPIC
Ethiopia Climate Innovation Center	ECIC
Ghana Climate Innovation Center	GCIC
Information and communication technologies	ICT
Kenya Climate Innovation Center	KCIC
Mobile Social Networking Hub	mHub
Mobile Application Laboratory	mLab
Morocco Climate Innovation Center	MCIC
South Africa Climate Innovation Center	SACIC
Small and medium enterprises	SME
Short message service	SMS
Women Innovators Network in the Caribbean	WINC

All dollar amounts in U.S. dollars unless otherwise indicated.

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### **Forewords**

### **Anabel Gonzalez. Senior Director**

# Global Practice on Trade and Competitiveness, World Bank Group



Innovation and entrepreneurship are drivers of economic growth. Recent studies show that young, growth-oriented companies contribute to national competitiveness and job creation—the primary pathways through which the poor can escape poverty—by introducing new products, developing new business models, and reaching

new markets at home and abroad.

At the World Bank Group, we recognize that innovation and entrepreneurship are essential for addressing development challenges, such as sustainability, poverty reduction, and inclusive growth. That is why I have made innovation and entrepreneurship one of the four pillars of the Global Practice on Trade and Competitiveness strategy, together with trade, investment climate, and competitive sectors.

As part of the Global Practice on Trade and Competitiveness, infoDev boosts the success of promising entrepreneurs and helps create an enabling environment for innovation to flourish. Through its global programs in climate technology, digital entrepreneurship, and agribusiness entrepreneurship, infoDev supports entrepreneurs at each step of their journey with early-stage financing, business and

technical training, and market intelligence, as well as access to regional and global networks. In turn, many infoDev clients create products and services—as well as better-paying, knowledge-based jobs—that benefit local underserved populations.

More than 270 clean technology enterprises are growing and refining their businesses with the support of our Climate Innovation Centers. We're working with 10 business enablers in the Caribbean to improve their services for early-stage, growth-oriented entrepreneurs. Last year, we concluded a pilot program to establish incubation and acceleration facilities for digital businesses in Kenya, South Africa, Armenia, and Senegal.

When World Bank Group President Jim Yong Kim visited the infoDev-supported Kenya Climate Innovation Center in 2014, he was impressed by the passion and creativity of innovators working on solutions that could have a transformative impact on the country. The Kenya Climate Innovation Center has been recognized as the most promising business incubator in Africa, and it leads the way for our growing programs in Africa, East Asia, Eastern Europe and Central Asia, and the Caribbean.

Looking ahead, the infoDev program will continue to play a critical role in testing and piloting innovative approaches for directly supporting growth-oriented, technology-enabled entrepreneurs. The knowledge and lessons learned from these projects will inform the design of World Bank Group initiatives on a greater scale.

### **Ganesh Rasagam, Practice Manager**

# Innovation and Entrepreneurship Practice, World Bank Group



In this report, we look back on an exciting two years of learning and change at infoDev. Between 2014 and 2015, infoDev supported growth-oriented entrepreneurs in more than 70 countries and saw the conclusion of pilot projects that will lay the foundation for expanded programs in Sub-Saharan Africa, Eastern Europe, Asia, and the Caribbean.

This year, infoDev became an integral part of the Innovation and Entrepreneurship Unit within the World Bank Group's Global Practice on Trade and Competitiveness. The Innovation and Entrepreneurship Unit helps client countries develop supportive ecosystems for innovation and entrepreneurship through analytics, knowledge sharing, and partnerships. infoDev, as a specialized global trust fund, contributes to this goal by supporting business incubators and innovation hubs for growth-oriented entrepreneurs and publishing knowledge products, drawing upon our considerable experience on the ground.

We identified promising new solutions for boosting the success of growth-oriented entrepreneurs. In 2014, infoDev concluded its Creating Sustainable Businesses in the Knowledge Economy (CSBKE) Program, a three-year program funded by Finland's Ministry of Foreign Affairs that aimed to accelerate the growth of innovative

small and medium enterprises in the agribusiness and ICT sectors. Between 2010 and 2014, more than 500 entrepreneurs participated in incubation programs—150 of which secured \$51.5 million in external investments—and these startup clients created 2,463 jobs.

In particular, the CSBKE program oversaw the launch of four Mobile Application Laboratories (mLabs) and eight Mobile Social Networking Hubs (mHubs) in 10 countries, as well as preparatory work toward Agribusiness Innovation Centers in Tanzania and Nepal.

infoDev's Climate Technology Program experienced a particularly busy two years, including the launches of several new Climate Innovation Centers. At the end of FY15, the global network of Climate Innovation Centers supported 271 clean technology enterprises with grants, facilities, or business advisory services and training.

infoDev published more than 30 knowledge products, ranging from educational toolkits and data-rich studies to assessments of infoDev programs. For example, a landmark infoDev/World Bank Group report, *Building Competitive Green Industries* (2014), quantified for the first time the significant economic opportunity for clean technology companies in developing countries.

As the incoming Practice Manager, I am looking forward to leading the infoDev program toward even greater results. I would like to close with a note of thanks to our donors, stakeholders, clients, and colleagues in the World Bank Group whose support and guidance are invaluable to what we do

### Introduction

# "It has been a worthwhile journey. But it has also been a trying journey."

Judith Owigar is a cofounder of AkiraChix, an innovation hub in Nairobi, Kenya, that seeks to increase the number of skilled women in technology. With the help of a grant from infoDev, AkiraChix was able to build a thriving community of women technologists. Judith was invited to share her inspiring story at a panel discussion with U.S. President Barack Obama at the Global Entrepreneurship Summit in Kenya in July 2015.

"In Kenya, it is hard to juggle trying to start a business and struggling to survive," she said. In countries with widespread poverty and outdated infrastructure, many aspiring entrepreneurs have neither the resources nor training required to grow an innovative business.

With the support of a community of donor countries and private sector partners, infoDev, as part of the World Bank Group, is helping to build ecosystems where promising entrepreneurs like Judith can flourish. The program focuses on high-growth sectors with the power to create profound social change: climate technology, digital entrepreneurship, and agribusiness.

infoDev provides entrepreneurs with early-stage grant financing, business and technical training, and market intelligence, which helps them to overcome common barriers to innovation. From business workshops for women entrepreneurs in the Caribbean to crowdfunding campaigns for clean technology startups in Kenya, infoDev supports a range of initiatives that boost the success of startups, and promotes the development of innovative technologies and business models.

In addition to providing hands-on support to entrepreneurs, infoDev has published an extensive collection of knowledge products. These reports share research on the market for clean energy, innovative financing mechanisms, mobile technologies, and other lessons learned from the field.

Innovation and entrepreneurship are building blocks of inclusive and sustainable economic development. In this report, infoDev reflects on a productive two years (2014 – 2015) in support of this mission, including the highlights below:

- Global Impact: infoDev has supported growth-oriented entrepreneurs in more than 70 countries through its Climate Innovation Centers, Agribusiness Innovation Centers, Mobile Application Laboratories (mLabs), Mobile Social Networking Hubs (mHubs), and other business enablers. More than 270 clean technology businesses are receiving funding or training from Climate Innovation Centers. Ten business incubators in the Caribbean are improving their services for early-stage, high-growth entrepreneurs through infoDev's Accelerate Caribbean. Nearly 2,500 jobs were created through the Creating Sustainable Businesses in the Knowledge Economy Program, which concluded in 2014.
- Expanding Knowledge: infoDev published more than 35 knowledge products with practical guidance for clients, private and public sector partners, and World Bank Group colleagues. The footprint of most reports was global: For example, Creating Your Own Angel Investor Group: A Guide for Emerging and Frontier Markets has been downloaded nearly 13,000 times since its publication in May 2014. Another notable report, Building Competitive Green Industries (2014), quantified for the first time the market for clean technology in developing countries. The report has been viewed nearly 5,000 times and was reported on by global news outlets.
- High-Level Recognition: World Bank Group
   President Jim Yong Kim visited the Kenya Climate
   Innovation Center in October 2014, where he spoke
   at length with entrepreneurs who are bringing
   sustainable energy and water solutions to East
   Africa. That month, United Nations Secretary-General Ban-ki Moon visited the infoDev-supported
   mLab and AkiraChix, stating the latter was "the



best idea he had never heard about." In the first half of 2015, President Uhuru Kenyatta visited Kenya's mLab and Climate Innovation Center in preparation for the Global Entrepreneurship Summit in Nairobi.

- Innovative Partnerships: In 2014, infoDev successfully concluded the \$19.5 million Creating Sustainable Businesses in the Knowledge Economy Program, funded by the government of Finland and supported by Nokia. The program, which lasted for 3.5 years, mobilized \$60 million in private capital for early-stage enterprises, engaged more than 90 partner organizations, including industry players and academia, and piloted new models in areas such as seed capital for early-stage growth entrepreneurs, mobile innovation, and agribusiness innovation.
- **Financial Support:** In FY14 and FY15, infoDev disbursed \$18.5 million and \$10.9 million respectively for World Bank Group- and recipient-executed projects.

The annex covers the financial overview from July 1, 2013, until June 30, 2015.

### **Highlights in Communications**

In 2014, infoDev redesigned its website (www.infodev.org) and experienced strong growth in its newsletter and social media followings:



MORE THAN **16,000** FOLLOWERS ON TWITTER AND FACEBOOK



**OVER 23,000 NEWSLETTER SUBSCRIBERS** 



212,000 VISITS AND 366,000 PAGE VIEWS ON WWW.INFODEV.ORG

# Climate Technology Program



limate change is impacting ecosystems around the world, and the poorest populations are often the hardest hit.

Developing countries are especially vulnerable to climate-related hazards, such as droughts, agricultural losses, and resource scarcity. For that reason, climate change is a threat to economic

development and poverty reduction efforts.

At the same time, the development of clean technology and related investments presents an historic opportunity to drive economic growth and create jobs. Through the development and deployment of climate-smart technologies and business models, developing countries can increase their resilience to climate change while profiting from global demand for clean technology.

The global network of Climate Innovation Centers is supporting 271 clean technology enterprises. The Climate Technology
Program (CTP) uses
private sector development approaches to help
countries develop effective
and profitable solutions to
climate challenges. The
program helps entrepreneurs, startups, and other

enterprises overcome barriers to innovation through access to finance, technical and business advisory services, and government advocacy. From a global perspective, the program fosters a pipeline of growth-oriented clean technology companies that provide clean energy and water, reduce greenhouse gas emissions, and increase climate resilience.

### **Climate Innovation Centers**

Climate Innovation Centers (CICs) provide promising clean technology entrepreneurs with the knowledge, capital, and access to markets required to launch and grow their businesses. The global network of Climate Innovation Centers is supporting 271 clean technology

enterprises. Each center is locally-owned and designed to meet the needs of local populations.

- **Grants and seed investments:** Entrepreneurs are eligible for proof of concept grants up to \$50,000 and seed investments up to \$1 million.
- Business advisory and training: The centers offer business and technical training, mentoring, and other professional development services.
- Market intelligence: The centers provide information on markets, competitors, and potential partners to facilitate market entry.
- Access to facilities: Entrepreneurs have access to office space and technical facilities for testing and demonstrating products.
- **Government advisory:** The centers conduct research on sector policy trends and engage with governments on small and medium enterprise policy issues.

Climate Innovation Centers share knowledge and data, create international business-to-business linkages, and facilitate partnership and trade across regions through the CIC Network, launched in March 2015. By combining locally-tailored services with access to international partners—such as the U.S. Clean Energy Incubator Network and the Washington, D.C.-based incubator 1776—the CIC Network is helping innovative enterprises become more competitive in local and international clean technology markets.

The Climate Technology Program is designing the next generation of Climate Innovation Centers through a two-year accelerator program, Launchpad. In 2014-15, more than 100 World Bank Group staff submitted proposals for Climate Innovation Centers in 28 countries. Eight teams were selected to further develop their proposals, and the most promising projects will be provided greater budgets and technical support—an approach based on the corporate accelerator model.

# Water Management Resource Use Efficiency Energy Efficiency and Clean Energy Solar Energy Sustainable and Climate-Smart Agriculture Renewable Technology (Solar and Wind)

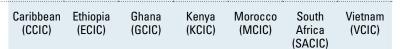
Micro-Hydro Power

Transportation Technology Biofuels and Biomass

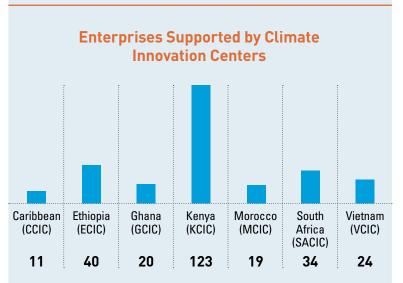
Waste Management and Recycling Efficient Cookstoves Adaptation Technology



Peter Chege received a grant from the Kenya Climate Innovation Center to develop hydroponic farming systems, a method of growing plants without soil. With the center's support, he began exporting his products to other countries in Africa in 2013.



**Sectors Supported by Climate Innovation Centers** 



This data reflects the number of enterprises receiving grants, training, or advisory services from Climate Innovation Centers in June 2015.



### **CARIBBEAN**

Est. 2014

Highlights: In July 2014, the center received 300 applications from 14 Caribbean nations for its first Proof of Concept competition, a contest to support local entrepreneurs in prototyping and testing innovative products, services, and business models. Eleven competition winners. including four women, received mentorship and \$427,000 in grants.

### **MOROCCO**

Est. 2015
PRE-LAUNCH ACTIVITIES

Highlights: The Climate Technology Program hosted North Africa's first Climate Technology Forum in December 2014. Over 300 entrepreneurs, policymakers, and international climate experts gathered to discuss green business opportunities in the region.

### **GHANA**

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Est. 2015
PRE-LAUNCH ACTIVITIES

Highlights: In March 2015, the Climate Technology Program held a two-day Green Innovators Bootcamp, which offered 20 promising green startups the opportunity to refine and pitch their business concepts. Seven of these businesses were selected to participate in a venture acceleration program, which will provide each business services valued at \$10,000.

### **SOUTH AFRICA**

Est. 2012

**Highlights:** The South Africa center expanded from a local government program to a nationally-operating center in March 2015. That month, the center hosted a two-day "Green Technologies and Innovations for Inclusive Growth" conference, where delegates from all seven Climate Innovation Centers met to launch the CIC Network. showcase clean technologies, and exchange strategies for amplifying the network's collective impact.

### **ETHIOPIA**

Est. 2014

**Highlights:** Out of 75 applicants to the center's second Proof of Concept competition, 25 companies were selected to become clients, and 10 were awarded startup grants up to \$50,000. The center hosted a roundtable in August 2014 to identify approaches for boosting the involvement of women in clean technology. The center also established two regional outreach centers at universities outside the capital city.

### **KENYA**

Est. 2012

**Highlights:** The center was named "Most Promising Business Incubator in Africa" in the 2014 University Business Incubators Index. The center launched a pilot program for crowdfunding in August 2014 and a Kenya Climate Venture Fund is projected to launch in early 2016. In 2014-15, the center received visits from World Bank Group President Jim Yong Kim and Kenyan President Uhuru Kenyatta.

### **VIETNAM**

Est. 2015
PRE-LAUNCH ACTIVITIES

Highlights: The Climate Technology Program received nearly 160 applications to its first Proof of Concept competition in Vietnam. Of these applicants, a panel of experts selected 24 companies to participate in a clean technology bootcamp in October 2014 to accelerate the growth of their ventures.

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### Kenya Climate Innovation Center

### PILOTING INNOVATIVE FINANCING MECHANISMS

Since its establishment in 2012, the Kenya Climate Innovation Center has become the go-to source for entrepreneurs, investors, and policymakers seeking to navigate Kenya's climate technology market. In the 2014 University Business Incubators Index, the center was named "Most Promising Business Incubator in Africa," based on its high-quality services and the post-incubation success of startup clients.



In August 2014, the center launched a pilot program for crowdfunding, in partnership with Crowdfund Capital Advisors. More than 20 companies participated in a two-day training, and seven ventures were selected to receive further support as they design and launch their own crowdfunding campaigns. One of the startups, iCoal Concept Ltd., was named one of "Five African Cleantech Startups You Need to Watch" by Forbes.

The center is also developing a Kenya Climate Venture Facility that will use a range of instruments—equity, debt, and grants—to provide financing to early-stage, high-growth clean technology enterprises. The facility, which is expected to launch in 2016, will leverage \$5 million from the Climate Technology Program and up to \$15 million from private investors.

World Bank Group President Jim Yong Kim visited the Kenya Climate Innovation Center in October 2014. He met with entrepreneurs like Mohamad Kahdi, who developed a molasses-based bio-ethanol gel to reduce his country's dependence on kerosene for cooking fuel. (Photo Credit: Kenya Climate Innovation Center)

### **Expanding Knowledge**

The Climate Technology Program promotes research on accelerating the growth of clean technology ventures, and shares lessons learned from Climate Innovation Center experiences.

 Building Competitive Green Industries: The Climate and Clean Technology Opportunity for Developing Countries (2014)

This infoDev/World Bank Group report quantifies for the first time the significant economic opportunity for clean technology companies in developing countries. In the next decade, an estimated \$6.4 trillion will be invested in clean technologies in developing countries, with roughly \$1.6 trillion accessible to small and medium enterprises.

By investing in clean technologies, countries at different levels of development can achieve stronger economic growth, advance development goals, and reduce climate risk. The report provides practical recommendations for supporting small

and medium clean technology enterprises, illustrated by case studies from South Korea, India, Thailand, and Kenya. The report was covered by global news outlets, economic forums, and financial management firms, and has been viewed nearly 5,000 times.

### • Energy Technology Perspectives (2015)

This 2015 report by the International Energy Agency argues that proven, cost-effective clean technologies must be rapidly deployed in order to meet global climate goals. The report calls for tripling public spending on low-carbon technology re-

search and development. Climate Innovation Centers are featured in the report as models for clean energy innovation in emerging markets.

The Kenya Climate
Innovation Center was
named "Most Promising
Business Incubator
in Africa" by the 2014
University Business
Incubators Index.

### Meet the Entrepreneurs

### KENYAN CLEAN TECH ENTREPRENEURS IMPRESS AT GLOBAL STARTUP FESTIVAL



Siblings Charity Wanjiku and Tony Nyagah founded Strauss Energy to make solar power more accessible and affordable for consumers at the bottom of the pyramid. With support from the Kenya Climate Innovation Center, Charity and Tony developed solar cells that can be easily integrated into walls, windows, and roofs. Unlike traditional installations, their system can feed unused

electricity back to the national grid, generating much-needed income for poor households.

Their idea has the potential to change the way millions of people meet their energy needs. In Africa alone, about \$17 billion is spent each year on fuel-based lighting sources like kerosene, consuming a large share of the average household income. Fuel-based lighting also has severe consequences for the environment and public health because of its toxic fumes.



In May 2015, Charity was invited to Washington, D.C., to compete with more than 70 entrepreneurs from around the world in a startup competition. She pitched Strauss Energy to a room full of investors, entrepreneurs, and clean technology experts.

While Charity and Tony are currently focused on Kenya, they have their sights set on interna-

tional expansion. "The word is out and people are interested," Charity said. "We have already received a few calls and emails [from investors]."



Read an interview with Charity and Tony: infodev.org/articles/kenyan-clean-tech-entrepreneurs-impress-renowned-dc-startup-festival

Charity Wanjiku traveled from Kenya to participate in the Challenge Festival, a global startup competition organized by CIC Network partner 1776. (Photo Credit: 1776)

# SOLARBOX GENERATOR HARNESSES WIND AND SOLAR POWER

Air pollution and unreliable access to energy negatively impact quality of life in Vietnam. As an alternative to diesel-powered generators, Andy Nguyen developed the SolarBox, a generator that provides an uninterrupted supply of clean energy to homes and businesses without emitting noise or pollution. To scale his company, Andy needed access to financing, mentoring, and training.

In October 2014, Andy participated in the Vietnam Climate Innovation Center's Green Bootcamp, a four-day program of lectures and workshops designed to help clean

technology entrepreneurs refine their product strategies, sharpen their negotiating skills, and connect with investors and potential partners.



Nearly a year after the bootcamp, Andy has hired five engineers to grow the SolarBox, and he is investing in marketing to increase sales. With millions of people living off the power grid, Andy's idea has the potential to revolutionize the local energy market, while helping Vietnam reduce emissions and its dependence on fossil fuels.



Read an interview with Andy: infodev.org/articles/ vietnam-goes-greentapping-its-most-reliableenergy-source-sun

Andy Nguyen showcases his clean energy generator at the Vietnam Climate Innovation Center's Green Bootcamp in October 2014. (Photo Credit: Vietnam Climate Innovation Center)

# Agribusiness Entrepreneurship Program



lobal market trends in the food and beverage sector offer tremendous opportunities for business creation and economic growth. These trends are shaped by rising incomes and changing diets, particularly in the developing world. The advancement of agro-processing—the transformation of

perishable produce into shelf-stable, value-added products—also offers development potential. Every new job in agro-processing adds another 2.8 jobs to the wider economy, often benefitting smallholder farmers (World Bank Group 2008).

- The World Bank Group estimates that Africa's food market will be worth \$1 trillion by 2030.
- Activities such as freezing or packaging fresh produce are estimated to have increased Kenya's export value in the fresh vegetables sector by as much as 250 percent.

The growth of agribusinesses will disproportionately benefit women, as women perform 60 to 80 percent of agroprocessing activities.

The Agribusiness Entrepreneurship Program helps local entrepreneurs enter national, regional, and potentially global value chains by enhancing firm-level competitiveness and facilitating access to finance and markets. Initiated in 2014 with funding from Finland's

Ministry of Foreign Affairs, the program promotes job creation and inclusive growth in the agriculture sector by supporting local entrepreneurs with high growth potential. The program has three focus areas:

 Develop and test new approaches for connecting innovative, growth-oriented entrepreneurs to the knowledge, markets, and capital needed to advance their enterprises

- Build local capacity and public-private partnerships to ensure the delivery of these approaches
- Deliver proven methodologies to the development community for planning, supporting, monitoring, and evaluating initiatives that advance the growth of innovative agribusiness enterprises

### **Agribusiness Innovation Centers**

Agribusiness Innovation Centers (AICs) will increase the competitiveness and growth of agro-processing enterprises by advancing innovation in products, processes, and business models. The centers will provide facilities, early-stage financing, business and technical training, and market research and linkages. They will generate revenue through a combination of royalties, incubation fees, and equity—a business model that encourages both clients and managers to succeed.

Public-private dialogue and value chain participation are fundamental to the design of Agribusiness Innovation Centers. Each center will be implemented by a private entity, while engaging stakeholders from governments, farmers associations, companies, investors, and academia to create a supportive ecosystem for entrepreneurs. infoDev's role is to support the startup phase of these Agribusiness Innovation Centers.

While activities have already begun in Tanzania and Nepal, the Agribusiness Innovation Centers are scheduled to formally open in 2015 and 2016, respectively.

The potential of agricultural growth to reduce poverty is four times greater than the potential of growth from other sectors.



#### **TANZANIA**

Agriculture employs 80 percent of Tanzania's population and contributes to about 28 percent of gross domestic product. However, the growth of the agricultural sector has been slower than the growth of the economy as a whole—and only 4 percent of produce is processed, despite post-harvest losses of 40 percent. Cashew nuts, tropical fruits, cassava, beef, and sunflower oil have scalable production potential.

The Agribusiness Entrepreneurship Program launched its first learning pilot in 2014 to inform the service offerings and staffing requirements of the Tanzania Agribusiness Innovation Center. During the pilot, nine agro-processing entrepreneurs, selected from a pool of 50, received six months of personalized services. The enterprises—whose annual sales at the start of the pilot ranged from \$5,000 to \$300,000—experienced improvements in sales, production, and access to finance.

For example, one company doubled its sales from \$85,000 to \$170,000 in six months. Two companies began selling to large supermarkets, a more reliable source of income than informal sales channels. Through assistance with packaging and production flow charts, two companies reduced their operating costs by 20

percent. Another company secured a \$75,000 working capital loan to purchase raw materials for a full year of production.

The learning pilot demonstrated the entrepreneurs' acceptance of a royalty-based business model, in which entrepreneurs pay a percentage of their increased sales as a service fee. The pilot also identified several barriers to overcome, including electricity disruptions, limited capacity of regulatory agencies, limited capacity in marketing and financial management, and the lack of reliable temperature-controlled supply chains. With these insights, the Tanzania Agribusiness Innovation Center is scheduled to begin full operations in late 2015.

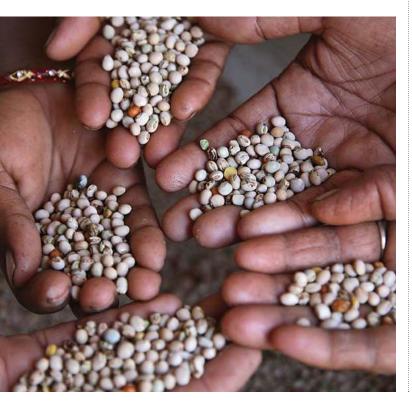
### **NEPAL**

Agricultural production—including coffee and tea, honey, ginger, cardamom, potatoes, essential oils, medicinal herbs, meats, and dairy—accounts for about one-quarter of Nepal's exports. According to an Asian Development Bank study, Nepal is ranked second in South Asia with respect to its opportunity for product upgrading and growth.

### **AGRIBUSINESS ENTREPRENEURSHIP PROGRAM**

infoDev carried out a Nepal Agribusiness Innovation Center feasibility study in 2012. Upon the request of Nepal's Ministry of Agriculture, the implementation of the center was incorporated into an International Development Association (IDA) credit, which included components to help farmers engage in profitable market-oriented production. The project also seeks to strengthen industrywide partnerships along the value chain, reduce obstacles to agriculture and food trade, and enhance technology services and critical public infrastructure that benefit agribusiness.

The Ministry of Agriculture and infoDev are working to identify a private firm that will lead the implementation of the Nepal Agribusiness Innovation Center. A learning pilot, similar to that of Tanzania's, will begin in October 2015. While the center's development was delayed by the country's historic earthquake, progress is underway for a formal launch in 2016.



#### **Expanding Knowledge**

The Agribusiness Incubation Training Program helps business incubator managers to develop an ecosystem where agribusiness entrepreneurs can flourish. The program builds upon a 12-module business incubation training, introduced by infoDev in 2011, which provided an overview of business incubator models and management, as well as advanced lessons on access to finance, technology commercialization, virtual incubation services, and agribusiness value chains.

### Strengthening Capacities for Innovation Through Agribusiness Incubation Training (2014)

This infoDev report studied the impact of an agribusiness incubation training module that was delivered to 149 people from 25 countries in Africa, Asia, Eastern Europe, and Latin America between June 2011 and November 2013. Forty training module participants (representing 27 percent of participants) provided input for the analysis.

- More than 80 percent of participants increased their knowledge of agribusiness incubation
- 75 percent of participants transferred their knowledge to colleagues
- 64 percent applied the acquired knowledge through new training materials, improved business plans, or new services

The training module also inspired networks and peer-topeer learning: An online group was created for knowledge exchange in Mozambique, and a memorandum of understanding was signed between Thailand, Malaysia, and Indonesia to provide crosscountry support for agribusiness entrepreneurs.

### Meet the Entrepreneurs

# AGRIBUSINESS INNOVATION CENTER KICK-STARTS GROWTH OF TANZANIAN SPICE BUSINESS



Business was slow for Rocky's Products, a small spice blend company founded by Tanzanian woman entrepreneur Zahrock Ahmed in 1999. Like many entrepreneurs in Tanzania, Zahrock had no formal training in business management: Her company had neither a dedicated sales team nor accounting system, and its production process often resulted in significant losses.





The Agribusiness Innovation Center conducted a financial review of Rocky's Products, identified strategies to streamline its production process, and provided one-on-one coaching and group sales training. As a result, Rocky's Products increased its customer base by 25 percent and purchased efficient new production equipment. Finally, Zahrock applied for a loan that allowed her to buy black

pepper during the high season—a decision that the Agribusiness Innovation Center estimates could result in a 20 percent increase in net profits.

"The Agribusiness Innovation Center has strength-

"The Agribusiness Innovation Center has strengthened my business acumen so I understand my company more clearly than before," Zahrock said. Rocky's Products now sells 14 spice blends in markets around Dar es Salaam, and Zahrock is working with the Agribusiness Innovation Center to reach a national network of distributors.

Before Rocky's Products could take on a loan to boost growth, Zahrock needed to improve her management skills. Rocky's Products was a volume business, which meant that Zahrock's ability to buy raw materials at competitive prices and to sell large volumes of product could transform her modest business into a highly profitable venture. After interviews with Zahrock, the Agribusiness Innovation Center was ready to help Rocky's Products reach its potential.

# TANZANIAN SUNFLOWER OIL COMPANY STRIVES FOR NATIONAL EXPANSION

Veki General Supplies, a sunflower oil and animal feed company, was founded by Tanzanian entrepreneurs Henry John Kinyunyu and Vedasto Joseph Nganilevanu in 2005. Despite its strong customer base, Veki General Supplies was missing out on opportunities for growth.

The company lacked certification from the Tanzania Bureau of Standards, a necessary qualification for access to the lucrative food retail industry. The company also often purchased raw materials at expensive low season prices, due to difficulties in procuring loans that would allow the business to buy during the high season.

The Agribusiness Innovation Center provided Henry and Vedasto with comprehensive training in sales and financial management, and partnered with

Tanzania's Small Industries
Development Organisation to guide
the company through the process
of certification. The Agribusiness
Innovation Center also facilitated a
commercial loan to fund an additional three months of production,
an important step toward expanding Veki General Supplies' production calendar from six to 12 months
by 2016.



"The Agribusiness Innovation Center transformed our vision of the business," Henry said. In coming years, Henry and Vedasto hope to increase their market presence with certified products, and reach as many as 10,000 small-scale farmers through contract farming initiatives.

# Digital Entrepreneurship Program

nternet and mobile technologies are powerful tools for creating high-value jobs and strengthening social inclusion. Digital products can expand access to services and inspire innovation in existing sectors: For example, those without access to traditional banks can manage their money with mobile banking applications, while those who live far from health clinics and schools can receive medical advice and training remotely.

The Digital Entrepreneurship Program is promoting the growth of competitive mobile applications industries in emerging and frontier markets. Through a network of digital entrepreneurship enablers in Sub-Saharan Africa, East Asia, Eastern Europe and Central Asia, and the Caribbean, the program provides entrepreneurs with the knowledge, capital, and markets they need to enhance their competitiveness and grow their businesses.

- Mobile Application Laboratories (mLabs) are regional incubation facilities for mobile software entrepreneurs that offer physical workspaces, state-of-the-art equipment and testing facilities, business skills training, and access to early-stage finance through investor networks.
- Mobile Social Networking Hubs (mHubs) build communities of digital entrepreneurs by hosting informal peer-to-peer learning sessions, events and training programs, and competitions for entrepreneurs, such as hackathons.

The Digital Entrepreneurship Program is an evolution of the Mobile Innovation Program, which operated from 2010 to 2014. The Mobile Innovation Program was part of the three-year Creating Sustainable Businesses in the Knowledge Economy (CSBKE) Program, a \$19.5 million program funded by Finland's Ministry of Foreign Affairs and implemented in partnership with Nokia.

# CREATING SUSTAINABLE BUSINESSES IN THE KNOWLEDGE ECONOMY

The Creating Sustainable
Businesses in the Knowledge
Economy (CSBKE) Program,
funded by the Government of
Finland, sought to accelerate the
growth of innovative small and
medium enterprises—primarily
in the ICT and agribusiness
sectors—to create jobs, increase
incomes, improve gender
inclusion, and launch new
products and services that
improve quality of life.

Between March 2010 and June 2014, the program achieved the following results:

- Established four Mobile Application Laboratories (mLabs) in Armenia, Kenya, South Africa, and Vietnam
- Established eight Mobile Social Networking Hubs (mHubs) in Azerbaijan, Georgia, Kenya, Moldova, Nepal, Tanzania, Uganda, and Vietnam
- Engaged with more than 90 industry and private sector partners, including Nokia, Google, Microsoft, and Samsung
- 150 entrepreneurs (28 percent of clients) secured \$51.5 million in external investments
- 2,463 jobs were created



Entrepreneurs attend an event at Nairobi's iHub, home to mLab East Africa and AkiraChix. (Photo Credit: mLab East Africa)

### Mobile Application Laboratories (mLabs)

A 2014 infoDev report, *Do mLabs Make a Difference*?, found that Mobile Application Laboratories (mLabs) had great promise for enhancing entrepreneurial ecosystems. Between 2011 and 2013, mLabs East Africa, Southern Africa, East Asia, and Eastern Europe and Central Asia made the following impact:

- Supported and incentivized the launch of 97 startups
- Startup clients directly created 280 jobs and raised \$5.2 million in investments
- More than 290 mobile applications were created through the program

In Sub-Saharan Africa, the mobile industry is expected to reach \$119 billion in 2020.

With insight from these mLab pilots, the Digital Entrepreneurship Program is focusing on the scale-up of programs in East Africa, Southern Africa, and West Africa:

#### **MLAB EAST AFRICA**

Established in Kenya in 2010, mLab East Africa was the first mLab piloted by infoDev. The mLab has collaborated with leading private sector companies—including Qualcomm, Samsung, Nokia, Microsoft, Seacom, and Facebook—to offer state-of-the-art services to its entrepreneurs. The mLab also organizes PIVOT East, an annual mobile startup competition and conference.

In 2014, mLab East Africa received a grant from the Rockefeller Foundation and Tony Elumelu Foundation to launch its Mobile Impact Ventures Program, which will identify and support mobile enterprises that improve the well-being of people and communities. In October 2014 and March 2015, respectively, United Nations Secretary-General Ban Ki-moon and Kenyan President Uhuru Kenyatta visited the mLab and AkiraChix.

### **DIGITAL ENTREPRENEURSHIP PROGRAM**

#### **MLAB SOUTHERN AFRICA**

Since its August 2011 launch, mLab Southern Africa has become an instrumental partner of local and national government agencies to promote digital entrepreneurship in South Africa. The mLab focuses on supporting entrepreneurs who develop applications for government service delivery.

mLab Southern Africa regularly hosts competitions and trainings, including a Random Hacks of Kindness hackathon in May 2015, and CodeTribe Academy, a program launched in September 2014 for developing the next generation of software engineers. It directly sup-

ports 50 entrepreneurs every year, and indirectly—through short-term training and events—supports a community of up to 400.

### CTIC DAKAR IN SENEGAL AND PAN-AFRICAN ACCELERATION PILOT

Established in 2011 with support from infoDev, CTIC Dakar is the first incubator for information technology entrepreneurs in francophone West Africa. CTIC Dakar will participate in Digital Entrepreneurship Program activities, including a pan-African acceleration pilot to be held in 2016-17 in collaboration with hubs in Kenya and South Africa.



mLab Southern Africa, located at the Innovation Hub in Tshwane, South Africa, reaches 400 people annually through its short-term training programs and events. (Photo Credit: mLab Southern Africa)



### **Building an Innovative Ecosystem**

The Digital Entrepreneurship Program has partnered with business enablers and influencers around the world to share insights and build a supportive environment for digital entrepreneurs.

#### Global Entrepreneurship Summit

Several infoDev-supported digital entrepreneurs were under the spotlight at the Global Entrepreneurship Summit in Kenya in July 2015. Judith Owigar, cofounder of AkiraChix, participated in a panel session with U.S. President Barack Obama and Kenyan President Uhuru Kenyatta. She was joined by Josipa Majic, founder of a digital startup supported by infoDev's 2013 VentureOut Challenge. The panel was covered by the *New York Times, All Africa, Forbes*, the *Guardian*, and other international media outlets

At the Global Entrepreneurship Summit in July 2015, AkiraChix cofounder Judith Owigar shared the stage with U.S. President Barack Obama and Kenyan President Uhuru Kenyatta. AkiraChix is an infoDev-supported innovation hub that provides technology training for young women. (Photo Credit: Pete Souza / U.S. White House)

#### SXSW 2015

infoDev hosted two panels at South by Southwest, a world-renowned festival in Austin, Texas, for innovative art and emerging technologies. Panelists from Accion, Afrilabs, Cross Valley Capital, Teranga Capital, and the World Bank Group discussed the risk and return of African technology startups and the innovation ecosystem in emerging markets. infoDev's contribution to the festival was covered by France's *Le Monde* and several international online media outlets.

In 2010-14, infoDev supported the establishment of four Mobile Application Laboratories (mLabs) and eight Mobile Social Networking Hubs (mHubs) in 10 countries.

### Meet the Entrepreneur

# MOBILE STARTUP CAMP ALUMNUS BRINGS HANDCRAFTED JEWELRY TO THE WORLD



infoDev's Mobile Startup Camp was designed to accelerate the growth of early-stage mobile entrepreneurs from emerging and frontier markets. The fiveday program of lectures and hands-on workshops provided participants with an opportunity to refine their business models and marketing pitches, sharpen their negotiating skills, and network with investors and peers.

Catherine Mahugu, cofounder of Soko, is a graduate of the 2013 Mobile Startup Camp. Soko allows artisans in the developing world to upload and sell their

jewelry online—without a computer or bank account. Within two months of joining Soko, on average, artisans quadruple their incomes. Since participating in the Mobile Startup Camp, Catherine was named one of "30 Most Promising Young Entrepreneurs in Africa 2015" by Forbes.

The Mobile Startup Camp was part of Mobile Entrepreneurship for Inclusive Development, an initiative delivered in partnership with Sweden, which aims to bolster inclusive development by



helping mobile technology entrepreneurs to create and grow sustainable enterprises that meet local market needs.



Watch a video about Soko: infodev.org/ highlights/mobile-startup-campalumna-makes-her-debut-world-bank

Catherine Mahugu (center, in red) with members of Soko, a technology platform that connects consumers with handcrafted jewelry from developing countries. (Photo Credit: Soko)



Since 2011, mLab East Africa has organized PIVOT East, a mobile startup competition and conference. (Photo Credit: mLab East Africa)

#### PIVOT East 2014

For the fourth consecutive year, infoDev was a sponsor of PIVOT East, a mobile startup competition and conference organized by mLab East Africa. PIVOT East's goal is to improve the quality of mobile startups in East Africa and to make mobile innovation a priority for regional governments, corporations, and development agencies. The past 15 winners of the competition have received a total of \$120,000 in investments from mLab East Africa.

### Meet the Entrepreneur

# ENEZA EDUCATION PLACES HIGH-QUALITY EDUCATION IN THE HANDS OF RURAL STUDENTS

In Kenya, 65 percent of students drop out after failing their primary school exit exams. With an average of 50 students per class in rural and slum schools, teachers are unable to deliver meaningful feedback. Furthermore, textbooks are often unavailable or too expensive.

Chris Asego, a native Kenyan, grew up in a slum and understood the struggle of children who yearn for an education. He teamed up with Toni Maraviglia and Kago Kagichiri to develop Eneza Education, a mobile education platform that allows students to take quizzes and receive feedback from teachers on their phones. mLab East Africa provided Eneza Education with office space and training as they developed their business model.

With Eneza Education's SMS- or web-based products, students have access to a year of lessons for about \$5 or \$25 per year, respectively. High potential, high-need students are eligible for full scholarships. In a 2014 controlled study of 153 students over seven months, Eneza Education users scored an average of 9.5 points greater on



their exams—a 22 percent improvement. Eneza Education is now used in over 700 schools, reaching more than 30,000 students.



Watch a video about Eneza Education: infodev.org/node/97219

Eneza Education, supported by mLab East Africa, provides mobile-based study tools to improve the performance of students and primary schools in Kenya. (Photo Credit: PIVOT East)

### **Expanding Knowledge**

The Digital Entrepreneurship Program published eight reports on regional mobile application ecosystems and incubator business models in 2014-15. Summaries of the publications are available in the "Knowledge Products" section of this report.

- Business Analytics Toolkit for Tech Hubs (2015)
- Developing a Mobile Applications Sector in Afghanistan: A Feasibility Assessment (2014)
- Do mLabs Make a Difference? A Holistic Outcome Assessment of infoDev's Mobile Entrepreneurship Enablers (2014)

- Enhancing Access to Finance for Technology
   Entrepreneurs: Analysis of Highly Innovative, High
   Growth Start-ups in Vietnam, Cambodia and Nepal
   (2014)
- Enhancing Access to Finance for Technology Entrepreneurs in Southern Africa (2014)
- Mobile at the Base of the Pyramid: Case Studies from Ghana, Mozambique, Nigeria, and Zambia (2014)
- Promoting Innovation in the Mobile Sector: A Step-by-Step Methodology to Implement a Mobile Innovation Roadshow (2014)
- The Business Models of mLabs and mHubs: An Evaluation of infoDev's Mobile Innovation Support Pilots (2014)

# **Entrepreneurship Program for Innovation in the Caribbean**



aribbean nations have experienced low economic growth and high unemployment for several decades. The region is highly exposed to economic shocks and natural disasters, and many nations are dependent on tourism and natural resources, rather than high-growth, knowledge-based sectors. Underlying the

growth gaps are low levels of productivity and competitiveness across the region, which call for a boost of private sector capacity to drive economic growth.

Eleven clean technology entrepreneurs received \$427,000 in grants to grow their early-stage businesses. The Entrepreneurship
Program for Innovation in
the Caribbean (EPIC)
promotes sustainable
economic development by
creating an enabling
ecosystem for innovative,
technology-enabled
enterprises, whose

growth has a multiplier effect across participating countries. Established in partnership with the government of Canada, the CAD\$20 million program supports digital innovation, climate technology, and women-led entrepreneurship, and promotes an environment where innovation can flourish through the following strategies:

- Growing the talent pool of growth-oriented entrepreneurs in the Caribbean
- Expanding access to innovative financing mechanisms
- Strengthening the capacity of business enablers and local angel investors

### **Caribbean Climate Innovation Center**

The Caribbean is vulnerable to rising sea levels, degradation of natural ecosystems, extreme weather events, and water supply constraints as a result of climate change. Furthermore, many Caribbean nations depend almost entirely on imported oil to fuel their energy needs, and the average cost of energy in the region is four times higher than in wealthier nations.

The Caribbean Climate Innovation Center (CCIC) supports small and medium enterprises engaged in developing locally-appropriate solutions for energy efficiency and climate change mitigation. Established in 2014, the center provides entrepreneurs with proof of concept grants, business training, and connections with potential investors.

- In August 2014, the center selected 11 winners from more than 300 applications to its first Proof of Concept competition. The winners received a total of \$427,000 in grants to grow their businesses, as well as mentorship. Their projects represented the solar energy, water management, sustainable agribusiness, resource use efficiency, and energy efficiency sectors.
- The center finalized partnership agreements to establish training hubs in 12 Caribbean countries, which will provide services to entrepreneurs outside the Jamaica- and Trinidad and Tobago-based headquarters. Hub coordinators received a two-day training in July 2014.



Antigua and Barbuda



The Bahamas



**Barbados** 



Belize



Dominica





Grenada



### **Caribbean Mobile Innovation Project**

With an increasing number of smartphone users and mobile network expansions, the Caribbean has the potential to become a vibrant hub for mobile innovation. Yet mobile entrepreneurs often face challenges in turning their ideas into profitable ventures because they lack mentorship and seed financing.

The Caribbean Mobile Innovation Project (CMIP) supports the growth of competitive mobile enterprises through competitions, workshops, and peer-to-peer learning. The program's services for entrepreneurs include mobile startup training courses, bootcamps and hackathons co-hosted with regional partners, and

CrimeBot, a mobile app for mapping crime hotspots, won the grand prize at the Digital Jam 3.0 competition held in Kingston, Jamaica. The competition was sponsored by the World Bank Group and the Jamaican and Canadian governments. [Photo Credit: infoDev / World Bank Group]

informal gatherings at six Mobile Social Networking Hubs (mHubs), which are currently under development.

- In May 2015, the CMIP co-hosted CodeSprint, a hackathon that gathered 60 entrepreneurs from across the region to collaborate intensively on software projects, particularly for the energy, tourism, and agriculture sectors.
- Between June 2014 and February 2015, the CMIP co-hosted a mobile startup training course and



Jamaica



Montserrat



Saint Lucia



Saint Kitts and Nevis



Saint Vincent and the Grenadines



Suriname



Trinidad and Tobago

# ENTREPRENEURSHIP PROGRAM FOR INNOVATION IN THE CARIBBEAN

bootcamps to teach 50 Caribbean entrepreneurs the principles of technology entrepreneurship, product management, and technical development.

 In March 2014, the CMIP sponsored a "Digital Jam," a prize competition in which 160 Caribbean mobile developers pitched their prototypes to international judges. The top prize was awarded to CrimeBot, a mobile app for community mapping of high-crime locations.



Jamaican students Avryl Francis, Che-Andre Gordon, and Rasheed Andrews developed the winning mobile application at CodeSprint, an initiative of the Caribbean Mobile Innovation Project. Their app, iTech Hotel, would allow guests to check in to hotels and order services with their phone. (Photo Credit: infoDev / World Bank Group)

#### **Accelerate Caribbean**

The Accelerate Caribbean program helps business incubation centers deliver high-quality services to early-stage, growth-oriented entrepreneurs. Business enablers, such as incubators, can boost the success of startups through business training and mentorship, networking opportunities, and access to finance.

- In March 2015, Accelerate Caribbean launched a 12-month Business Incubation Clinic for 10 business enablers in Jamaica, Barbados, Trinidad, Grenada, Guyana, St. Vincent and the Grenadines, and Suriname. The business enablers—which were competitively selected from 45 applicants—will be paired with an international business mentor who will serve as a coach throughout the program. The business enablers will be exposed to best practices for accelerating early-stage enterprises and participate in peer learning sessions, networking opportunities, and an international study tour.
- Accelerate Caribbean kicked off with a two-day
   "Business Incubation Management" training for 30
   participants in June 2015. In conjunction with the
   training, EPIC held an "Entrepreneurship Ecosystem Development" workshop to share lessons
   learned from successful startup cultures around
   the world. Four training sessions on accelerating
   early-stage enterprises will be held across the
   region during the 12-month program.

Accelerate Caribbean is helping 10 business incubation centers improve their services for entrepreneurs.



## Women Innovators Network in the Caribbean (WINC)

The Women Innovators Network in the Caribbean (WINC) helps women entrepreneurs scale their businesses through workshops, webinars, and acceleration programs. Since its establishment in 2013, the network has reached over 350 women entrepreneurs through its online and in-person programs.

- In 2015, WINC launched its Acceleration Program, an eight-month program that will provide comprehensive services to help women entrepreneurs grow their businesses. The program began with a training for 14 facilitators who will lead the program in their respective countries.
- WINC hosted the third round of its "Grow Your Business" workshop series in 2015. The three-day workshop—which has been held in Antigua, Barbados, Jamaica, St. Lucia, and Trinidad—has helped more than 100 women strengthen their business skills and expand their networks. The Trinidad and Tobago workshop, organized by local stakeholders in March 2015, piloted a self-financed operational model for the workshops.

Jamaican entrepreneur Shirley Lindo received a grant from the Caribbean Climate Innovation Center to develop a sustainable cooking briquette made from agricultural waste. (Photo Credit: Caribbean Climate Innovation Center)

- WINC conducted a series of webinars on "Building Your Digital Presence" and "Greening Your Business" in response to needs identified during the "Grow Your Business" workshops.
- In 2015, infoDev published a study on growth-oriented Caribbean women entrepreneurs in technology-enabled businesses: Profiling Caribbean Women Entrepreneurs: Business Environment, Sectoral Constraints and Programming Lessons.

#### **Access to Finance**

Angel investor networks and crowdfunding have emerged as promising sources of financing in the Caribbean. Angel investors are high-net-worth individuals who invest in early-stage businesses, filling the funding gap between startup grants and commercial-scale venture capital, while crowdfunding is the practice of raising capital through online donations from a large network of investors.

# ENTREPRENEURSHIP PROGRAM FOR INNOVATION IN THE CARIBBEAN

- EPIC supported the launch and development of the Caribbean's first three organized angel investor groups, helping them to develop operational structures and investment models. As of March 2015, 37 angel investors are participating in the groups and 20 entrepreneurs have pitched their business concepts.
- First Angels Jamaica closed an investment in an early-stage Jamaican company in April 2015, representing the first known organized angel group investment in the Caribbean. First Angels Jamaica is setting a standard for professionally managed Caribbean angel investor groups: Members pay annual dues of \$2,500 and the group has secured corporate associate members who also pay yearly fees.

More than 35 angel investors are participating in the Caribbean's first angel investor networks. • EPIC conducted the forthcoming *Caribbean Crowdfunding Ecosystem Analysis* to assess the regulatory, technological, and cultural conditions that shape access to crowdfunding for

Caribbean entrepreneurs. The findings of the report have informed pilot projects to address gaps in the Caribbean crowdfunding ecosystem that will begin in 2015-16.

• A 2013 infoDev report, Diaspora Investing: The Business and Investment Interests of the Caribbean Diaspora, found that the Caribbean diaspora is a sizeable, well-educated, and affluent demographic whose large majority is interested in investing in its countries of origin. A follow-up study by the World Bank Group's Latin America and Caribbean region is currently under development.



Investment readiness and investor engagement have been identified as skills gaps among Caribbean entrepreneurs. EPIC has developed curriculum and delivered trainings to selected entrepreneurs to foster the growth of a pipeline of investment-ready Caribbean businesses.

- More than 20 entrepreneurs participated in a two-month "Investment Readiness and Investor Engagement" online training to make their businesses more marketable to potential investors.
- EPIC partnered with local business enablers to offer "After the Pitch" and "Angel Investor Engagement" workshops for more than 50 participants.

### Meet the Entrepreneurs

### MATCHING FARMERS WITH LOCAL BUYERS





Farmers in Jamaica lose much of their fruit and vegetable crop to spoilage because they lack direct access to the market. To solve this challenge, Jermaine Henry and Janice McLeod developed Agrocentral, a mobile application that matches farmers with buyers.

With Agrocentral, hotels and restaurants can purchase large quantities of produce directly from farmers, eliminating the markups and delays associated with middlemen. The app will allow for competitive pricing for buyers and higher revenue for producers, while minimizing produce waste.

Jermaine and Janice first presented their app idea at Startup Weekend Jamaica in October 2013. The Caribbean Mobile Innovation Program provided feasibility and financial modeling to help transform the idea into an investment-ready prototype. Following the app's launch in Jamaica in 2015, the Agrocentral team plans to expand throughout the Caribbean, and eventually to Africa and South America.



Watch a video about Agrocentral: infodev.org/articles/matchmakingfarmers-agrocentral-brings-innovationjamaicas-agriculture-sector

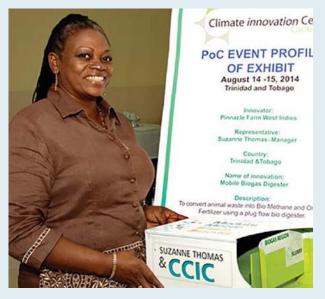
Jermaine Henry and Janice McLeod developed a mobile application that matches farmers with buyers, reducing produce waste while boosting incomes. (Photo Credit: Silicon Caribe)

### PROCESSING ANIMAL WASTE INTO CLEAN ENERGY

In Trinidad and Tobago, the pork industry produces more than 35,000 metric tons of animal waste every year. Many farms are ill-equipped to handle the waste, which impacts local water quality and levels of methane in the atmosphere, and heightens the risk of spreading disease.

Suzanne Thomas developed a prototype for a mobile bio-digester, a portable device that can convert animal waste to biogas energy or organic fertilizer. As one of 11 winners of the Caribbean Climate Innovation Center's first Proof of Concept competition in July 2014, Suzanne and her team received a grant to grow their business, as well as mentorship and technical support.

When operational, the device will allow small and medium-sized farms to profit from the production of organic fertilizer, while reducing the amount of waste that enters the water system.

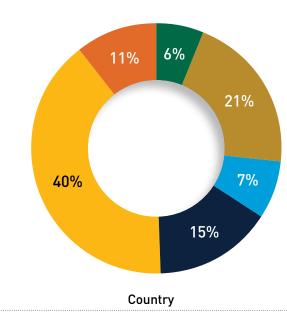


Suzanne Thomas showcases her mobile bio-digester prototype, which could reduce the amount of waste entering the water system. (Photo Credit: Caribbean Climate Innovation Center)

### **APPENDIX 1:**

### **TOTAL CONTRIBUTIONS TO infoDEV BY DONORS**

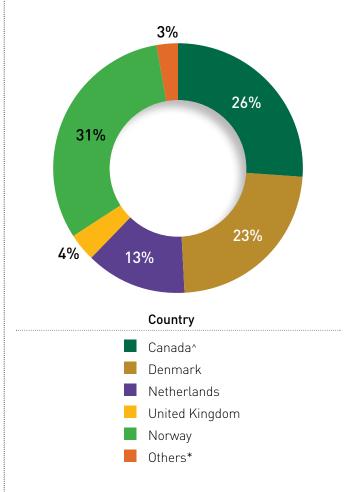
### **Cash Contributions by Donor in FY14**





<sup>\*</sup> Development Grant Facility (World Bank) for contribution to Climate Innovation Centers in the Caribbean and Morocco

### **Cash Contributions by Donor in FY15**



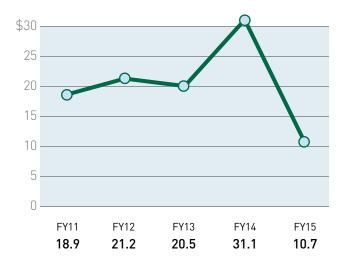
- ^ Excludes Canada's contribution and disbursements to OECS countries, managed by the World Bank Group LAC region
- \* Includes Reimbursable Advisory Service (RAS) for Tanzania Agribusiness Innovation Center

### **APPENDIX 2:**

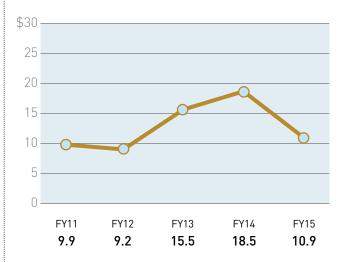
### **CASH CONTRIBUTIONS AND DISBURSEMENTS**

By Fiscal Year, in \$Millions

### **Cash Contributions by Donors**



### **Disbursements**





### **APPENDIX 3:**

### **OVERVIEW OF TRUST FUND ACCOUNT BALANCES**

### infoDev's Account Balances as of June 30, 2014 (in \$Thousands)

Account	FY14 Beginning Balance	Contribution Received	Fees and Income	Disbursement <sup>1</sup>	FY14 Ending Balance
Multi-Donor for InfoDev	1,445		2	1,309	139
Creating Sustainable Businesses in the Knowledge Economy	3,160		7	2,931	236
Entrepreneurship Program for Innovation in the Caribbean	11,057	1,939	46	2,695	10,346
Climate Technology Program	22,327	21,140	118	4,123	39,462
Korean Trust Fund on ICT for Development <sup>2</sup>	5,083		14	4,029	1,068
New Multi-Donor for infoDev	-	4,737	7	107	4,637
Development Grant Facility <sup>3</sup>		3,000		3,000	
EFO <sup>4</sup>		187		187	-
World Bank		96		96	-
Total	43,072	31,099	193	18,476	55,888

<sup>&</sup>lt;sup>1</sup> Disbursements include World Bank administrative fee

### infoDev's Account Balances as of June 30, 2015 (in \$Thousands)

Account	FY15 Beginning Balance	Contribution Received	Fees and Income	Disbursement <sup>1</sup>	FY15 Ending Balance
Entrepreneurship Program for Innovation in the Caribbean <sup>2</sup>	10,346	2,797	44	3,412	9,775
Climate Technology Program	39,462	4,269	140	6,239	37,633
New Multi-Donor for infoDev	4,637	3,358	24	989	7,030
World Bank		150		150	-
Others <sup>3</sup>		118		118	-
Total	54,446	10,692	207	10,908	54,437

<sup>&</sup>lt;sup>1</sup> Disbursements include World Bank administrative fee

<sup>&</sup>lt;sup>2</sup> Closed in FY14; ending balances refunded or to be refunded to donors

<sup>&</sup>lt;sup>3</sup> Development Grant Facility to support Climate Innovation Centers in Morocco and the Caribbean

<sup>&</sup>lt;sup>4</sup> Externally Financed Output (to support Global Forum on Innovation and Entrepreneurship 2013)

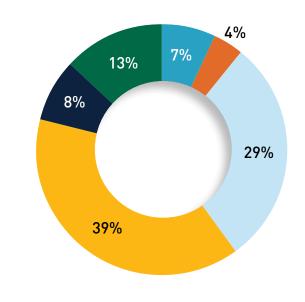
<sup>&</sup>lt;sup>2</sup> Excludes Canada's contribution and disbursements to OECS countries, implemented by the World Bank Group LAC region

<sup>&</sup>lt;sup>3</sup> Reimbursable Advisory Service (RAS) to Tanzania Agribusiness Innovation Center

### **APPENDIX 4:**

### FY14 - 15 DISBURSEMENTS BY THEME AND REGION

### infoDev's FY14 - 15 Disbursements by Theme\*



#### Theme

Access to Finance

Agribusiness

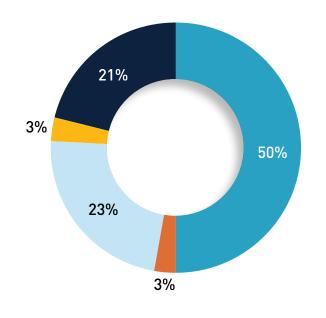
Business Incubation
Models and Support\*\*

Climate Technology and Innovation

Communications,
Networking Events and
Knowledge Dissemination

Digital Entrepreneurship and ICT

# infoDev's FY14 - 15 Disbursements by Region\*



### Theme

Africa

Asia

Cross-Regional

ECA & MNA

LAC

<sup>\*</sup> Reflects only programs directly executed by infoDev

<sup>\*\*</sup> Includes women's entrepreneurship support programs

### **APPENDIX 5:**

### **KNOWLEDGE PRODUCTS AND PUBLICATIONS**

#### **Access to Finance**

### Creating Your Own Angel Investor Group: A Guide for Emerging and Frontier Markets (2014)

This guide aims to educate newcomers to angel investing, particularly in emerging and frontier markets, with hands-on resources, such as financial worksheets, application forms, term sheets, contracts, and checklists.

### Analysis of Highly Innovative, High Growth Start-ups in Vietnam, Cambodia and Nepal (2014)

This study on the state of financing for highly innovative, high-growth startups in Vietnam, Cambodia, and Nepal provides critical information on major gaps and barriers faced by enterprises in accessing finance, and offers recommendations to overcome these challenges.

### Enhancing Access to Finance for Technology Entrepreneurs in Southern Africa (2014)

This report examines the financing gaps that highgrowth technology entrepreneurs are facing in the information and communication technologies, climate technology, and innovative agribusiness sectors in Zambia and Mozambique, with a regional overview of Namibia and Botswana.

### **Agribusiness**

#### Agribusiness Incubator Case Studies (2014)

infoDev's Agribusiness Entrepreneurship Program presents lessons learned from 10 case studies of agribusiness incubators in low and middle income countries, including Brazil, Chile, India, Malaysia, Mexico, Mozambique, Timbali, Uganda, India, and Indonesia

### Strengthening Capacities for Innovation Through Agribusiness Incubation Training (2014)

This report analyzes the effects of infoDev's agribusiness incubation training module on a total of 149 people from 25 countries in Africa, Asia, Eastern Europe, and Latin America. The training proved successful in conveying the fundamentals of agribusiness innovation, as well as exposing trainees to a variety of business models.

### **Climate Technology**

# Building Competitive Green Industries: The Climate and Clean Technology Opportunity for Developing Countries (2014)

This report frames climate change as an economic opportunity rather than a threat: In the next decade, an estimated \$6.4 trillion will be invested in clean technologies in developing countries, with roughly \$1.6 trillion representing opportunities for small and medium enterprises.

### **Digital Innovation**

### Business Analytics Toolkit for Tech Hubs (2015)

This toolkit for tech hub managers shares lessons from infoDev's pilot Mobile Application Labs (mLabs) and Mobile Social Networking Hubs (mHubs). The toolkit introduces several tech hub business models and provides guidelines for performance measurement.

# The Business Models of mLabs and mHubs: An Evaluation of infoDev's Mobile Innovation Support Pilots (2014)

infoDev conducted seven in-depth case studies to better understand how to improve the business model design of Mobile Application Laboratories (mLabs) and Mobile Social Networking Hubs (mHubs), as well as similar technology innovation hubs.



Participants of the Kenya Climate Innovation Center's pilot program for crowdfunding, carried out in partnership with Crowdfund Capital Advisors. (Photo Credit: Kenya Climate Innovation Center)

### Developing a Mobile Applications Sector in Afghanistan: A Feasibility Assessment (2014)

This study assesses the mobile applications sector in Afghanistan, a country that has witnessed extraordinary growth in the ICT and mobile sectors, with increasing private sector investments, a growing user population in terms of devices and services, and a government that actively supports and promotes the industry.

### Do mLabs Make a Difference? A Holistic Outcome Assessment of infoDev's Mobile Entrepreneurship Enablers (2014)

This report is an assessment of the overall effects of infoDev's Mobile Application Laboratories (mLabs), specialized mobile business incubation and acceleration facilities offering physical workspace, mentoring and training, devices for mobile application testing, and startup competitions.

### Mobile at the Base of the Pyramid: Case Studies from Ghana, Mozambique, Nigeria, Zambia (2014)

This set of reports addresses mobile application business models for people living at the base of the pyramid, and offers practical advice for reaching consumers in Ghana, Mozambique, Nigeria, and Zambia.

### Promoting Innovation in the Mobile Sector: A Step-by-Step Methodology to Implement a Mobile Innovation Roadshow (2014)

This report is a practical guide for planning, organizing, implementing, and evaluating a Mobile Innovation Roadshow, and shares lessons and best practices based on experiences in Mozambique, Botswana, Namibia, and Zambia.

### **Women's Entrepreneurship**

### Growing Women-led Enterprises in the Mekong: Testing a Methodology for Accelerating Growth (2014)

The report discusses the design, outcomes, and lessons of the Mekong Women's Entrepreneurship Program, an infoDev pilot program to facilitate the expansion of women-owned businesses in the Lao People's Democratic Republic, Cambodia, and Vietnam.

# Profiling Caribbean Women Entrepreneurs: Business Environment, Sectoral Constraints and Programming Lessons (2015)

This study detailed the characteristics of growthoriented women entrepreneurs in technology-enabled businesses in the Caribbean. It found that women entrepreneurs in the Caribbean lack access to financing, training, networks, and equipment, which constrains their potential for growth.

#### **APPENDIX 6:**

# CREATING SUSTAINABLE BUSINESSES IN THE KNOWLEDGE ECONOMY PROGRAM

In June 2014, infoDev concluded the three-year Creating Sustainable Businesses in the Knowledge Economy (CSBKE) Program, a \$19.5 million program funded by Finland's Ministry of Foreign Affairs and implemented in partnership with Nokia.

The CSBKE program's objective was to accelerate the growth of innovative small and medium enterprises—primarily in the agribusiness and ICT sectors—to create jobs, increase incomes, improve gender inclusion, and launch new products and services that improve quality of life.

To achieve this goal, the program would derive and test new solutions, create knowledge products, and strengthen local and regional innovation ecosystems. Between March 2010 and June 2014, the program completed the following outputs:

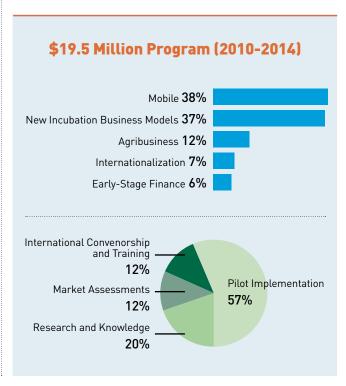
- Established four Mobile Application Laboratories (mLabs) in Armenia, Kenya, South Africa, and Vietnam
- Established eight Mobile Social Networking Hubs (mHubs) in Azerbaijan, Georgia, Kenya, Moldova, Nepal, Tanzania, Uganda, and Vietnam
- Launched two new business incubators in Tanzania and Cambodia, supported two existing incubators in Belarus and Moldova, and designed one incubator for a World Bank Group project in Nepal
- Completed three pilot projects on small and medium enterprise internationalization, women-led businesses, and virtual incubation
- Published 30 knowledge products—which have been downloaded more than one million times available at infodev.org/csbke-publications
- Held two international conferences for nearly 1,500 participants, trained more than 300 professionals, and offered numerous workshops that garnered more than 700 media mentions

Demand for the CSBKE program's services exceeded expectations, reflecting the program's strong reputation. By January 2014, nearly 4,000 aspiring entrepreneurs had applied to benefit from local programs, with 504

entrepreneurs accepted to incubation programs—surpassing the program's target of 300 entrepreneurs receiving in-depth incubation services.

- 150 entrepreneurs (28 percent) secured \$51.5 million in external investments
- 2,463 jobs were created
- 25 percent of businesses in ICT and mobile incubation programs were women-led

The CSBKE program—which included 29 projects in 19 countries—made great progress toward identifying new solutions for accelerating the growth of innovative enterprises, with mLabs and Agribusiness Innovation Centers receiving considerable media coverage. Through its collaboration with Nokia and 90 other organizations, the program proved the power of public-private partnerships in achieving development goals. Finally, lessons from the program have been incorporated into 18 World Bank Group initiatives.





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