



# 2015 THE LAB YEAR IN REVIEW

ACCELERATING DEVELOPMENT THROUGH SCIENCE, TECHNOLOGY,  
INNOVATION AND PARTNERSHIP



Matthieu Young



\*Front cover photo:  
Merchant Belleus Pierre with mobile phone, 2010 post earthquake Haiti. Mobile Money (wallet) Program. Photo: Mercy Corps

▲ d.light design  
Affordable Access to Energy for All:  
Innovative Financing for Solar Systems

\*Back cover photo:  
Students of Sdei Kraom School in Battambang province, Cambodia, prepare to plant moringa and papaya seedlings at their school's vegetable garden. Photo: USAID | Cambodia HARVEST

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# INTRODUCTION

## FROM EXECUTIVE DIRECTOR

### ANN MEI CHANG

For more than 50 years, USAID and its partners have tackled many of the world's most difficult development challenges. Seeking sustainable solutions, we have long invested in science, technology, and innovation to achieve bold progress with landmark initiatives, such as Feed the Future, Ending Preventable Child and Maternal Deaths, the President's Emergency Plan for AIDS Relief (PEPFAR), and the President's Malaria Initiative, that have saved hundreds of millions of lives.

Today, the global development landscape is facing unprecedented, accelerated change. Driven by technological breakthroughs, information, and connectivity, this change presents tremendous opportunity to help the one billion people who still live on less than \$1.25 a day lift themselves out of poverty.

In 2010, former USAID Administrator Rajiv Shah, then Secretary of State Hillary Clinton, and USAID leaders recognized this opportunity and looked for ways to channel developments in science, technology, innovation, and transformative partnerships toward a new model of development. The USAID Office of Innovation and Development Alliances and the Office of Science and Technology were established to open up solutions to development issues to people anywhere, foster scientific inquiry, and embrace an environment of entrepreneurship and ingenuity. In April 2014, the two offices evolved into the U.S. Global Development Lab (the Lab).

The Lab casts a wide net to find ideas that disrupt traditional development solutions; uses hard evidence and quick iteration to develop those that are most promising; and works across the Agency and with implementing partners to mainstream proven solutions to do the work to bring an end to extreme poverty. In the Lab, we work across four areas — science, technology, innovation, and partnership — what we call STIP.

In 2014, we received over 3,700 applications and invested in 362 new solutions to food security, health, climate change, energy, and economic growth challenges that improved the lives of 13.7 million people. USAID's six Grand Challenges for

Development received 2,058 applications and funded 86 solutions — a third coming from developing countries. During this same period, Grand Challenges leveraged nearly 5:1 in funding from non-USAID sources, a cost-effective investment for the U.S. taxpayer. The Fighting Ebola Grand Challenge was launched last November with the USAID Global Health Bureau and the White House, the Centers for Disease Control and Prevention, and the Department of Defense. In just two months, innovators from around the world submitted over 1,500 ideas to help front line healthcare workers provide better, more timely care to contain the devastating virus. One of the winning innovations, a personal protection suit that allows for greater wearer comfort and quicker, safer removal, was designed by Johns Hopkins University's Center for Bioengineering Innovation and Design and Jhpiego, a non-profit international health organization, with the help of a wedding dress seamstress.



To combat the global challenge of water scarcity, our Desal Prize challenged innovators throughout the world to create cost-effective, energy efficient, and environmentally sustainable desalination technologies that can provide potable water for humans as well as water that can be used for crops in developing countries. Last spring, five finalist teams competed for \$200,000 in prize funds in head-to-head demonstrations at the Bureau of Reclamation's Brackish Groundwater National Desalination Research Facility in Alamogordo, N.M. The two winning teams, one from MIT and Jain Irrigation Systems and the other from the University of Texas at El Paso Center for Inland Desalination Systems, will be eligible to receive grant funds totaling \$400,000 to implement pilot projects later this year with small-holder rural farmers. With recent reports of widespread drought and increasing water scarcity in the American Southwest and Great Plains, this competition may be as relevant to the United States as it will be to parts of the developing world.

Our Development Innovation Ventures (DIV) program received 1,659 applications and has invested in 22 promising technologies including Chlorine Dispensers, which provide safe water to three million people in East Africa. These easy to use dispensers, located at widely accessible water distribution points, will prevent 3.3 million cases of diarrhea and 3,200 child deaths — at just 2% of the traditional cost. Another DIV grantee, Off-Grid:Electric, successfully raised \$16 million in equity financing and an additional \$7 million from the International Finance Corporation and its partners earlier this year. Off-Grid:Electric is working with the government of Tanzania to bring affordable electricity to one million Tanzanian homes by 2017. And last fall, the United Kingdom, Sweden, Australia, the Omidyar Network, along with USAID, committed \$200 million to a new Global Innovation Fund modeled after our own DIV program.

Our Higher Education Solutions Network (HESN) of seven universities and over 400 partners in academia, civil society, the private sector and government has leveraged \$28.5 million from partners, placed 194 fellows in developing countries, evaluated 27 innovations, invested in 163 innovations, and made data and data-related tools available to over 200,000 users. One innovation supported by two of HESN's Development Labs — Duke's Social Entrepreneurship Accelerator and MIT's International Development Innovation Network — is a simple \$2 birth kit that contains six essential tools required to ensure safe and sterile conditions during childbirth. This for-profit social venture, Ayzh, is currently in its fourth year of distribution, and at half the price of comparable birth kits, it has reached over 120,000 mothers and infants in 11 countries. Their proposed growth has the potential to prevent deadly or debilitating infections in six million women over the next five years.

The Lab is building scientific and technical expertise in developing countries. Last year, our Partnerships for Enhanced Engagement in Research (PEER) program provided grants to 68 local researchers in 23 countries, of whom approximately one-third are female. Since the beginning of the PEER program in 2011, PEER researchers have worked with and trained over 1,500 students and research assistants and 40 have secured follow-on funding to continue their transformational research.

The Lab has also led the effort to reap the cost savings and operational efficiency of electronic payments (e-payments) within USAID programs. USAID made e-payments the method of payment we direct our implementing partners to use wherever possible. Results demonstrate that this shift away from cash is already saving thousands of personnel hours that can be re-invested into development assistance, while saving hundreds of thousands of dollars per program. In Bangladesh, maternal and child health care provider Dnet estimates they have saved 40,000 hours of staff time and \$60,000 per year since switching from cash to mobile payments.

The Lab supports the Agency as it continues to build a broad array of partnerships through the Global Development Alliance and other partnering models. The Agency had more than 250 active partnerships in 2014 alone, with an estimated value of more than \$3 billion in public and private funds. The Lab is the primary interlocutor for USAID's relationship with Sweden and the Swedish International Development Agency (SIDA). Last year, SIDA and USAID committed over \$300 million to joint programs, and SIDA is a partner in three of our six Grand Challenges for Development.

In 2014, the Lab leveraged \$1 in private funds for every taxpayer dollar spent. Under the Partnering to Accelerate Entrepreneurship (PACE) program, we leveraged over \$48 million in six partnerships — including from impact investors, high net-worth individuals, and other donors — against a USAID investment of \$8.7 million to support the growth and acceleration of early stage enterprises in developing countries. The Digital Development programs have mobilized over 50 partners, including Google, Facebook, MasterCard, and the Gates Foundation, to bring digital and financial access to the forefront of development, with a leverage ratio of approximately 4:1.

In our first year, the Lab has learned, iterated, grown, and changed. We are applying this knowledge to hone a Lab that can better serve USAID and transform and modernize the development industry. The United States, United Nations, and the World Bank have set an audacious target to end extreme poverty by 2030. We believe this is possible, but to make it happen, we need to change how we implement development. We need to bend the curve on development solutions by applying the best modern tools, approaches, and innovations to tackle the toughest and most intractable challenges around the world. I am proud to say the Lab is making significant progress towards achieving these goals.

The following report reflects our first year successes around the Lab's core mission: increasing the use of science, technology, innovation, and partnership in USAID and throughout the development community in order to accelerate impact. By building a rigorous evidence base, learning from our mistakes and driving fast iterations, and designing for scale and sustainability, we are creating a new model of development in action.

I am very pleased to share it with you.

— Ann Mei Chang  
*Executive Director*

## A NEW MODEL FOR DEVELOPMENT

“ Across the State Department and USAID, we have emphasized the importance of better linking together diplomacy and development and are fostering innovation, including through the new U.S. Global Development Lab. We are better synchronizing investments with partner nations and the private sector, and we are deploying the full range of development tools to enable partners to succeed. ”

— John Kerry  
Secretary of State  
September 16, 2014



# THE LAB BY THE NUMBERS

## SCIENCE

### PARTNERSHIP FOR ENHANCED ENGAGEMENT IN RESEARCH (PEER)

**68**  
LOCAL RESEARCHERS

**23**  
COUNTRIES

**1/3**  
FEMALE

### HIGHER EDUCATION SOLUTIONS NETWORK (HESN)

**400**  
PARTNERS WITH  
**7**  
UNIVERSITIES

**8**  
DEV LABS LEVERAGED  
**\$28.5M**

INVESTED IN  
**163**  
INNOVATIONS

## TECHNOLOGY

### E-PAYMENTS



E-PAYMENTS ARE NOW THE AGENCY'S DEFAULT PAYMENT METHOD

CONNECTED WOMEN

OVER **14M**

BETTER THAN CASH ALLIANCE

**13**  
GOVERNMENTS

ALLIANCE FOR AFFORDABLE INTERNET

**75**  
MEMBERS

## INNOVATION

RECEIVED

**3700**

APPLICATIONS



SOLUTIONS

IMPROVED

**13.7M**

LIVES

### DEVELOPMENT INNOVATION VENTURES (DIV)

INVESTED IN

**22**

TECHNOLOGIES

SPAN

**9**

SECTORS

IN

**22**

COUNTRIES

### GRAND CHALLENGES

FUNDED

**86**

SOLUTIONS

OVER

**1/3**

APPLICATIONS ARE FROM THE DEVELOPING WORLD

**16**

PARTNERS

## PARTNERSHIP

**+250**

ACTIVE AGENCY PARTNERSHIPS WORTH

**\$3**  
BILLION

LEVERAGED **\$1** →

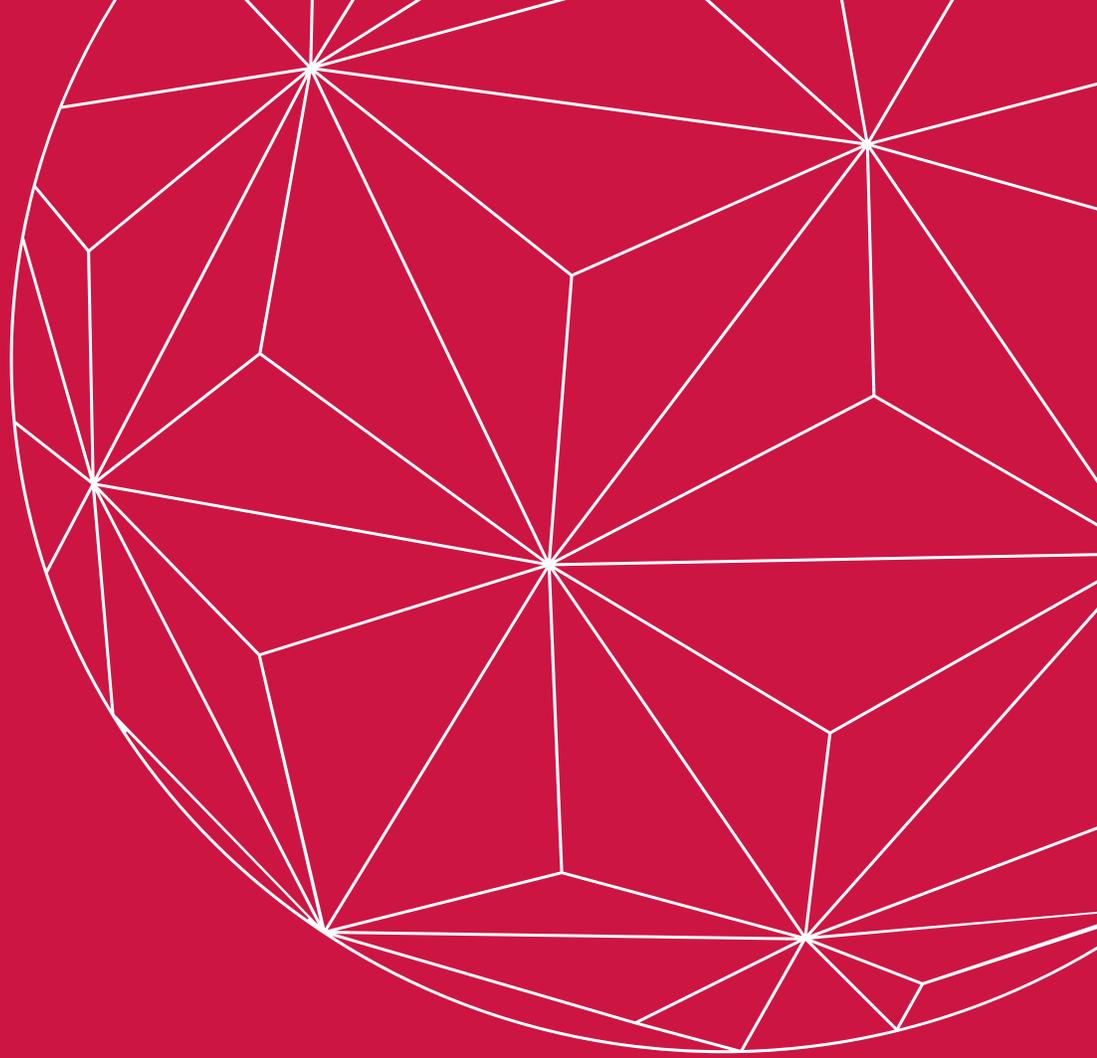
IN PRIVATE FUNDS FOR EVERY TAXPAYER DOLLAR

## AGENCY ENGAGEMENT

**47**

USAID MISSIONS AND BUREAUS USED LAB TOOLS, APPROACHES, AND MECHANISMS, VALUED AT

**\$54M**



I.

## WHAT WE DO: SCIENCE

THE LAB WORKS TO INCREASE  
THE USE OF RIGOROUS EVIDENCE  
TO DESIGN BETTER DEVELOPMENT  
SOLUTIONS THROUGH RESEARCH,  
SCIENTIFIC TOOLS, AND ANALYSES.



Erin Pierce, a research student from Olin College of Engineering, assists Thabiso Mashaba at MIT's International Development Design Summit in Botswana in building an LED-powered flashlight. Photo: Elizabeth Hoffecker Moreno

To solve some of the world's most complex development challenges, the Lab brought together developing country scientists and their U.S. counterparts, sent American university students to local organizations in seven countries to provide research and technical expertise, and through the Higher Education Solutions Network worked with eight "Development Labs" and a network that extends to 400 partner institutions in academia, civil society, and government across 38 countries.

# HOW WE ARE ACCOMPLISHING OUR SCIENCE GOAL:



## THE PARTNERSHIPS FOR ENHANCED ENGAGEMENT IN RESEARCH (PEER)

PEER is a grants program that funds scientists and engineers in developing countries to partner with U.S. government-funded researchers to address global development challenges. PEER both catalyzes collaborative research and establishes enduring relationships that build scientific capacity, strengthens the research ecosystem in developing countries, and enables collaborators to become better partners in development. Last year, our program provided grants to 51 local researchers in 23 countries, of whom approximately one-fourth are female. Since the beginning of the PEER program in 2011, PEER researchers have worked with and trained over 4,000 students and research assistants. In the last year, 54 PEER researchers have secured follow-on funding to continue their transformational research.

Udayana University student Asa picks through coral rubble looking for marine invertebrates. Photo: USAID



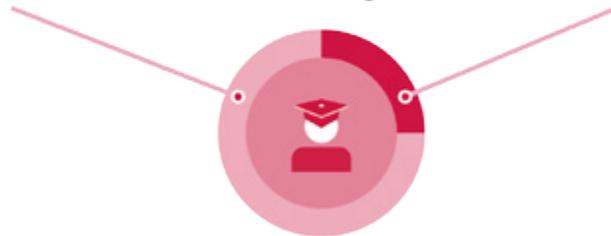


## PEER by the numbers



Approximately **1/4** of the lead scientists on PEER grants are female

Over 4,000 students have been training, 50% of who are female



For the 2014/15 solicitation includes 9 “buy-ins”

for a total investment of: **\$10.5million**

## PEER IN ACTION

In Eastern Sierra Leone, PEER is supporting Dr. Donald Grant, a Lassa Fever Virus researcher. Sierra Leone has the world’s highest incidence of Lassa Fever, a severe viral hemorrhagic illness closely related to Ebola that disproportionately affects pregnant women and children. While case fatality rates for Lassa can reach 70 percent in children under age 5 and 90 percent for both the mother and fetus in the third trimester of pregnancy, the prevalence and true impact of the disease is not well understood. Dr. Grant’s research team, made up of local nurses and hospital staff, had been studying key gaps in the knowledge of the epidemiology and natural history of Lassa Fever and were working in districts at the heart of the Ebola outbreak in 2014.

His staff was able to immediately pivot their work to treat Ebola-infected patients while monitoring the epidemic in real time. Their PEER Partner from Tulane University added additional capacity by tracking gene mutations and reporting the evolution of the virus in real time. Having locally trained and technically proficient researchers with access to global research networks on the ground helped turn the tide in Dr. Grant’s districts. His team has returned to their critical work on the Lassa Fever Virus but continues monitoring for future Ebola outbreaks.

Through this partnership, Dr. Grant and his Tulane University partners have also developed the first of its kind rapid diagnostic dip-stick test for the Ebola virus.



## MEET A PEER RESEARCHER

Dr. Antoine Ghauch at his Lab in Lebanon. Photo: PEER

# ANTOINE GHAUCH



*His Ideas Could Be the Answer to Lebanon's Looming Water Crisis...and counterfeiting in the United States!*

Over the past few decades, availability and access to potable water in Lebanon has continued to decline. Droughts, pollution, and international border crises threaten the country's water security, even as public demand for domestic water use already exceeds supply. Dr. Antoine Ghauch, an analytical chemist at the American University of Beirut, wanted to be part of the solution by developing an innovative wastewater treatment process to address the crisis, but found his efforts stymied by a lack of access to research funds and resources.

Ghauch submitted a proposal to PEER to develop a tool for detecting and treating pollutants in water. PEER requires applicants to work in partnership with U.S. Government-funded researchers and so Ghauch proposed a collaboration with a researcher at Stanford University.

Ghauch was awarded a \$167,000 grant, which he has since used to develop multiple courses in chemistry and train ten students in his lab, including seven women. Ghauch has also leveraged PEER funding to develop new uses for his water quality tool. In addition to developing an advanced technique for detecting pollutants in water samples, he applied the same technique to invent a system that detects counterfeit ink in currencies and passports.

The PEER program connected him with Austin, Texas based National Instruments' Planet NI program, which provided him with access to its cutting-edge scientific equipment, training, and support. Ghauch's ability to leverage PEER's relationship with National Instruments allowed him to file a patent application in the United States for his anti-counterfeiting system.



## HIGHER EDUCATION SOLUTIONS NETWORK (HESN)

**THE HIGHER EDUCATION SOLUTIONS NETWORK (HESN)** is a partnership between USAID and seven top universities — the College of William and Mary, Duke University, Makerere University (Uganda), Massachusetts Institute of Technology (MIT), Michigan State University, Texas A&M, and the University of California, Berkeley — designed to harness the ingenuity and passion of university students, researchers, and faculty to find and apply new science and technology-based solutions to the world’s most challenging development problems. With equal investments from USAID and partner institutions, these universities have established eight “Development Labs” (two at MIT) and are collaborating with a network that extends to 400 partner institutions in academia, civil society, and government across 66 countries.

These Development Labs allow researchers, innovators, and institutions to directly engage in discovering solutions to specific challenges, ranging from health and food security to chronic conflict. HESN has leveraged \$28.5 million from partners, evaluated 27 innovations, made data and data related tools available to over 200,000 users, placed 194 fellows in developing countries, and is supporting the testing and use of 163 innovations.

University of Texas student and researcher Caroline Thomas laughs with a group of children from a village in Rwanda’s Muhanga District. ACDP researchers spent a day in the village, which houses a strong women’s cooperative. While working alongside the women of the co-op (plowing fields, fetching water, cutting grass, and preparing a meal), researchers learned about daily life in the region, heard many stories of the 1994 genocide, and discussed the progress made in the village during the last decade. Photo: Raymond Weyandt





## HESN IN ACTION

Ayzh products are carefully adapted to local cultures, catering to the community's preferences, to overcome barriers in usage. All products are assembled and packaged by local women thereby creating economic opportunities in the community. So far, the JANMA birth kits have reached over 100,000 babies and mothers in 11 countries. Photo: Ayzh

## TWO INNOVATIONS:

### Ayzh Clean Birth Kit:

Approximately one million mothers and newborns die annually from infections linked to unhygienic birth practices. The \$2.00 Ayzh Clean Birth Kit helps medical workers, hospitals, and nonprofit organizations prevent infection at the time of birth. Started by innovator Zubaida Bai, an electrical engineer from South India, Ayzh is a for-profit social venture that develops technology to meet the unique needs of women in resource-poor settings. The simple kit contains all the essential tools required to ensure safe and sterile conditions during childbirth. Now in its fourth year, the Ayzh Clean Birth Kit has successfully reached 120,000 mothers and babies in over 11 countries through funding from two HESN Development Labs — the MIT International Development Innovation Network (MIT IDIN) and the Social Entrepreneurship Accelerator at Duke University (Duke SEAD).

### CellScope:

In emerging regions, where health care infrastructure is limited, there is an urgent need for greater access to reliable diagnostic testing, particularly for infectious diseases. One of the most basic and powerful tools in all of science and medicine is the microscope. The Fletcher Lab at the University of California, Berkeley has designed specialized equipment which, when attached to the camera of a standard cell phone, becomes a diagnostic-quality microscope known as CellScope. An innovation in the HESN Development Impact Lab (DIL) at UC Berkeley's portfolio of projects, CellScope's objective

is to establish mobile digital microscopy as a platform for disease diagnosis that can be used by non-expert health workers in remote settings. Different versions of the easy-to-use device can rapidly capture images of blood, sputum, or other patient samples and perform diagnostic analysis on the phone or wirelessly transmit the data to clinical centers, allowing the patient to be evaluated remotely and for treatment to be administered at the point of care. By using existing communication infrastructure and the computational power of consumer electronics, CellScope is a major step forward in taking clinical microscopy out of specialized laboratories and into field settings for disease screening and diagnosis. In Cameroon, CellScope is saving lives by detecting Loa Loa parasite as part of an effort to eradicate diseases transmitted by the filarial worm. Since 2012, the CellScope team has completed 300 screenings for Loa Loa during device development and is conducting a pilot study involving up to 30,000 patients with a second-generation device in 2015. In Vietnam, the CellScope team is working with the Vietnam National Tuberculosis Program to test for tuberculosis in 15 community health clinics. Community health workers in Hanoi who had no prior experience in microscopy have used CellScopes to screen over 2,000 patients. A fully automated device is being rolled out later this year.



## MEET HESN STUDENTS

Kendall and Mikayla teaching the club members how to solder at WISER NGO's all-girls secondary school in Muhuru Bay, Kenya. Photo: Mikayla Wickman.

# KENDALL COVINGTON AND MIKAYLA WICKMAN



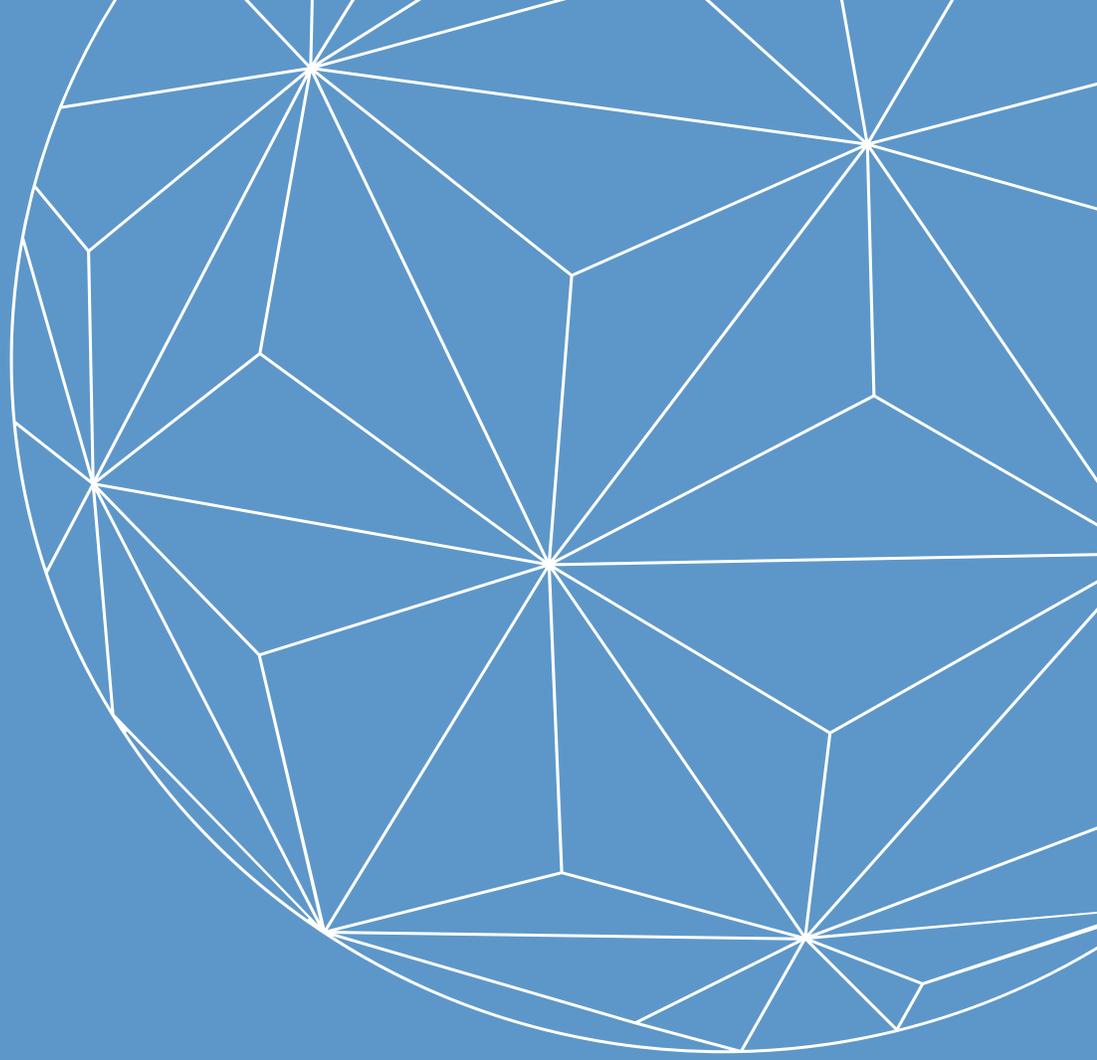
Kendall Covington and Mikayla Wickman are two engineering students at Duke University who spent last summer working to start an engineering club at the Women's Institute of Secondary Education and Research, an all-girls secondary school in Muhuru Bay, Kenya.

Covington and Wickman spent the summer teaching the young engineers how to make their own flashlights so they'd always have access to light, a limited resource in the area. Education for girls isn't considered a priority in Muhuru Bay, and in an area with limited electricity, the girls often find themselves in the dark. Without light the girls cannot complete homework, increasing the likelihood that they might fall behind in school and ultimately drop out.

After their summer in Kenya, Covington and Wickman founded the Worldwide Empowerment of Women Engineers

(WEWE), as a way to continue supporting and empowering young girls through engineering. The WEWE founders partnered with the Social Entrepreneurship Accelerator at Duke University (SEAD), one of eight university-led development labs within USAID U.S. Global Development Lab's Higher Education Solutions Network (HESN).

Through SEAD's mentorship and technical support, Covington and Wickman launched a successful Indiegogo campaign, the proceeds of which will be used to buy materials for the girls in Muhuru Bay. The girls will make flashlights for everyone at their school, ensuring that the girls will never be without light again and plans are already in place to expand the flashlight project to an orphanage in Calcutta, India this year.



# 2.

## **WHAT WE DO: TECHNOLOGY**

WE ADVANCE THE USE OF ENABLING TECHNOLOGIES AND DATA-DRIVEN APPROACHES TO EMPOWER UNDERSERVED COMMUNITIES AND IMPROVE THE EFFECTIVENESS OF THE DEVELOPMENT ENTERPRISE.



When governments and citizens cannot engage effectively, political representation is fractured and progress is stunted. Photo: Panos

**Information and communication technologies, including the Internet and mobile phones, represent a tremendous opportunity to accelerate social and economic development. The rapid explosion of mobile phone penetration across the developing world has paved the way for such growth, led by market forces that are responding to the wants and needs of local citizens.**

The result has been the birth of a digital economy that is outpacing other, more traditional economic forces. Yet this digital economy is not yet inclusive to the point where the most underserved can integrate into it to meet their livelihood needs. At the Lab, we have aligned our technology work around a vision of Digital Development that recognizes this gap and addresses it through policy reform, market diagnosis and catalysts, data analysis and visualization, demand aggregation, and collective action.

Real access to digital and enabling technologies requires affordable and intuitive services that are easy for everyone to use. This includes both individual end users and development practitioners. To that end, the Lab invests in building the enabling environment to facilitate inclusive access and promoting business models and technology innovations to reach communities in need. The Lab's Digital Development partnerships have mobilized over 100 partners, including Google, Facebook, Citi Bank, and the Bill and Melinda Gates Foundation, to bring affordable Internet access and digital financial services to the forefront of development.

This work extends beyond efforts to empower local communities. In 2014, for example, the Lab led an outreach campaign that reached 100 organizations in the development community around a set of nine principles outlining the best practices for designing and implementing technology-enabled programs. These Principles for Digital Development have been endorsed by the UNICEF, FHI360, the World Food Program, the World Health Organization, and the United Nations Development Program, among many others. By moving in lock-step with many large development donors and non-governmental organizations around how such programs are designed, funded and carried out, the Lab is fostering collective action to advance the way the development industry operates as a whole.

Data is another critical tool for modern development. Real-time data gives us near-immediate insights into what is working and what is not in our programs, with the back-end analysis necessary to adopt programmatic changes that respond to such insights and feedback. Data analysis can reveal trends that might otherwise not be obvious. Geospatial analysis provides visualization that helps focus our efforts where they are most needed and futures analysis helps USAID operate effectively in a changing world, by investigating and modeling long-term trends while anticipating alternative development scenarios. These tools enable us to use data for our decision-making and help us increase our overall impact by adjusting more nimbly, and often more inexpensively, based on the results.

Sylvia Awuni, a mobile money agent in Northern Ghana, records mobile money transactions in a paper ledger. Seven days a week, Awuni helps families send and receive money from relatives across the country, facilitates transfers for small business owners paying their suppliers and assists villagers in paying their water and utility bills—all with just her phone and a paper ledger. Photo: Casey Dlott



# HOW WE ARE ACCOMPLISHING OUR TECHNOLOGY GOAL:



## DIGITAL INCLUSION

Two billion people are priced out of Internet access, and a consistent rural-urban divide limits the reach of broadband even as smartphones become more ubiquitous. Even within urban communities, gaps remain between Internet users and non-users. And though some form of mobile connection exists in 93 percent of the inhabited world, quality and strength of connection limit uptake. Gender barriers also impact ownership and maximum use of mobile and Internet tools for women. For instance, women are 14 percent less likely to own a mobile phone and 23 percent less likely to be online than their male counterparts, across the developing world. Yet recent estimates suggest that 99 percent of present-day jobs require some form of information and communication technology (ICT) comprehension.

These challenges require deliberate action on the part of public and private sector actors, including governments and donor institutions to put the right policies in place to fully connect underserved populations. Such an enabling environment begins with reliable, affordable access and continues with sufficient digital skills and locally relevant content that allow such populations to be creators across the digital economy, not just consumers. Several governments have embraced the fundamental role digital technology plays in economic growth and socio-economic development, and they have done so by connecting many pieces of the puzzle. Kenya, for example, has launched forward-leaning regulatory frameworks and policies; made ICTs a central

## TECHNOLOGY IN ACTION

**In Bangladesh, USAID implementing partners are switching to e-payments and seeing results that demonstrate the power of this shift:**

- Since switching from cash to e-payments, maternal and child health care provider Dnet estimates that they have saved more than 40,000 hours/year in staff time due to more efficient processes and around \$60,000 per year.
- WorldFish's preliminary estimates show savings of \$20,000 plus 600 days of technical staff time per year.
- As a result of a community health care project switching from cash to mobile money, the average wait for laboratory examinations dropped from 20 days to 5–6 days, staff are now meeting 100% of their patient targets, up from 80–85% previously, and health workers are now able to spend 25–30% of their time combatting tuberculosis, up from around 5–10%.



A woman uses her phone in the market in Tongo, Ghana. On average women are 14% less likely to own a mobile phone than men. Photo: John O'Bryan

part of its national Vision 2030 development plan; embraced the momentum and popularity of mobile money services such as mPESA; facilitated the expansion of broadband across much of the country; opened much of its government services to the general public online; and paved the way for new entrepreneurial opportunities on the shoulders of digital financial services. As such, ICTs now make up 14 percent of Kenya's GDP, a number that is continuing to rise. Other countries are following suit, but not at the rate necessary to lift underserved populations out of poverty.

The Alliance for Affordable Internet (A4AI) was formed by a mixture of leading technology companies and development donors that embraced a common set of principles and collective push to create more affordable internet services through policy and regulatory reform. As a co-creator of A4AI, which has grown to more than 75 members in just over one year, the Lab has supported engagements in Nigeria, Ghana, Mozambique, Liberia, Burma and the Dominican Republic. In each country, stakeholders have rallied around regulatory reforms that seek to drive down the cost of broadband to levels within five percent of household monthly income. In late 2014, through A4AI's direct work, Ghana agreed to abolish the 20 percent import duties that comprise 35 percent of the cost of smartphones in-country. In time, the Alliance envisions these cheaper costs leading to greater uptake amongst newer mobile users — one important component of the broader enabling environment that if strengthened will bring hundreds of millions more people online.

The Lab has also been working with GSMA — the global mobile industry association — and Australia's Agency for International Development (DFAT) for the past four years, to decrease the mobile phone gender gap in the developing world. Through a mixture of business case development, innovation grants to mobile network operators and NGOs, new research, support to policy reform, and advocacy, the partnership has supported 14 million more women to own mobile

handsets. New services now exist in Bangladesh, Uganda, Mali and several other countries that provide health insurance, savings products, English literacy training, gender-based violence information, and other useful services designed especially for women. Research performed in 11 markets in 2014 has identified remarkable strides since 2010; the mobile gender gap has decreased from 300 million to 200 million women.

On the connectivity front, with support from the Lab's Global Broadband and Innovations Program, the Government of Indonesia released a new national broadband plan in September 2014. This plan will unlock an estimated \$23 billion in investments in affordable, low-cost technologies to deliver Internet to underserved schools, local governments, rural health clinics, and citizens at commercially viable prices. By enacting policy reforms and unlocking a small amount of government funding, the plan is expected to catalyze funding from the private sector for 90 percent of the investment in building out Indonesia's broadband coverage. The broadband plan has the potential to connect 100 million Indonesians within the next five years.



## DIGITAL FINANCE

The dearth of basic financial services undermines efforts to improve agriculture, strengthen health systems, expand access to education, help governments become more transparent and efficient, and respond quickly and effectively to humanitarian crises. Strong evidence demonstrates that financial inclusion underpins development and paves the way to lift populations out of extreme poverty. More and more, digital financial services are recognized as the primary avenue for such progress, given their low costs and easy access. This is coupled with the fact that while two billion people have no access to more traditional financial services, 1.5 billion of them do have mobile phones.

One of the ways in which USAID, through the Lab, supports greater access to financial services is by clearly signaling demand for electronic payment ("e-payment") systems to the market, and by encouraging forward-leaning policies and regulations that level the playing field for several digital financial services to flourish in any given market. This year, the Lab launched a partnership with the Government of India and over twenty public, private, and multilateral actors (including Coca Cola, Procter and Gamble, Citibank, and the International Finance Corporation) to expand merchant acceptance networks for a new Government-issued account card targeting over 100 million poor customers. This effort is tied to the Government of India's ambitious effort to provide financial account access to every Indian household, largely through digital means. USAID made e-payments the method of payment we direct our implementing partners to use wherever possible and reconfirming our commitment to the Better than Cash Alliance (BTCA), which advocates for and facilitates the transition from cash to e-payments for governments, the private sector and the development community. Co-founded by the Lab, BTCA, which currently has 40 members, added many new organizations in 2014, including the governments of India, Ghana, Rwanda, Sierra Leone and Senegal, the Coca-Cola Company, Catholic Relief Services, and Women's World Banking. The Lab also released a set of Digital Finance resources, including a handbook for USAID staff and an E-Payments Toolkit for implementing partners. Initial results are demonstrating that this shift away from cash is already saving thousands of personnel hours and program dollars that are re-invested into development assistance.



# GEOSPATIAL ANALYSIS

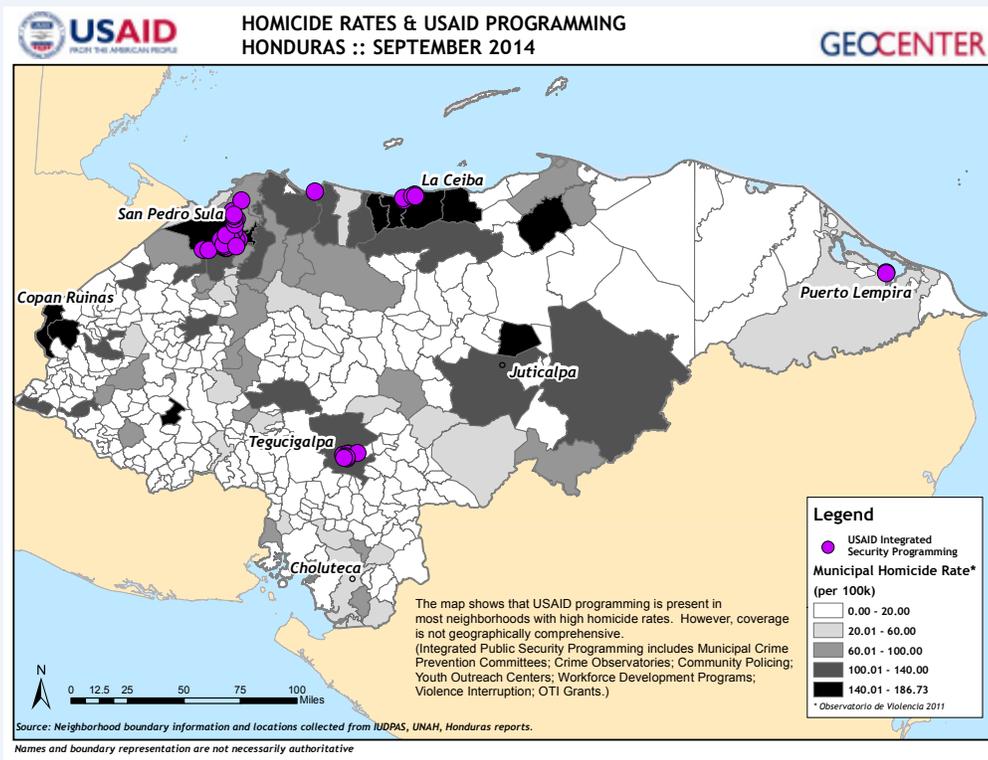
The Lab’s GeoCenter applies geospatial data and analytics to provide an evidence-base for strategic planning, designing, monitoring, and evaluating USAID development programs around the world. It provides specific services, including mapping and analysis, high-resolution satellite imagery, technical assistance to USAID missions and Washington-based offices, geospatial training, and a global Community of Practice for Agency Geographic Information Systems (GIS) Specialists, including those in 24 USAID Missions. The GeoCenter has trained more than 600 staff in geographic analysis for development and leveraged \$32 million in high resolution satellite imagery from existing imagery resources for USAID programming at immense savings to the taxpayer.

## GEOSPATIAL ANALYSIS IN ACTION

### USING MAPPING DATA FOR DECISION MAKING

#### CENTRAL AMERICAN IMMIGRATION

The GeoCenter collected, analyzed, and mapped geospatial data on unaccompanied children from Central America entering the United States without legal documentation. Custom maps created helped decision makers formulate policy and determine additional resources needed to address the issue.





The USAID Disaster Assistance Response Team (DART) rescues a teen in Nepal five days after a magnitude 7.8 earthquake struck central Nepal, affecting more than 8 million people and causing widespread damage and destruction. Photo: USAID

## GEOCENTER IN ACTION

In an effort to improve earthquake disaster preparedness, in 2013 the Lab's GeoCenter partnered with the World Bank's Disaster Risk Reduction division, USAID's Office of Foreign Disaster Assistance (OFDA), and State Department's Humanitarian Information Unit to embark on an ambitious project to map infrastructure in Kathmandu. Using high-resolution satellite imagery from the National Geospatial Intelligence Agency as a backdrop, the GeoCenter worked with George Washington University students in Washington, DC to map buildings, roads and other features on the ground. These map datasets were made available publicly on OpenStreetMap and were validated by Kathmandu Living Labs (KLL), a local NGO that university students in Nepal formed to map their city. In addition to validating the data, KLL enhanced the maps by adding key attributes (building types and materials, height estimates, number of students in schools, location of open space areas). As soon as the earthquake hit, the GeoCenter made sure USAID's Office of Foreign Disaster Assistance (OFDA) Disaster Assistance Response team had the latest versions of the mapping data pre-loaded onto their GPS units for search and rescue efforts throughout the damaged areas. Specifically, the GeoCenter helped with the management of the web map created by the Nepal Response Management Team, which enabled key decision makers to interact with relevant spatial data-sets, adding context to their understanding of the disaster.

## TECHNOLOGY SPOTLIGHT

### THE GEOCENTER IS BRINGING MAPPING TO COLLEGE CAMPUSES — HERE AND IN DEVELOPING COUNTRIES

**THE GEOCENTER** recently established the “Mapping for Resilience” program, which engages university students in the United States and in developing countries to jointly participate in mapping unmapped areas of the world. Using high resolution satellite imagery, the GeoCenter trains students to identify and trace geographic features. The newly created geographic data is then openly shared in near-real time on the OpenStreetMap platform. Students in the developing country validate and edit based on their local knowledge of the area and field visits to the actual sites.

Through “mapathons” involving students at George Washington University, Texas Tech University, and Khulna University, Bangladesh, new geodata is being created for rural farming areas in Bangladesh. The resulting maps inform decisions about where USAID implements food security activities. The data created through the Mapping for Resilience Program can be used for establishing baselines and monitoring changes in land use over time. Or, when combined with household survey data, it can help development experts to understand specific areas of vulnerability within a country and, in turn, plan better interventions.

In Khulna, Bangladesh students validate the data that the George Washington University students mapped. Photo: Chad Blevins, USAID GeoCenter.





## REAL-TIME DATA

Thanks to the wide availability of cheap mobile devices, plummeting computing costs, and simple open-source tools, it is now easier than ever to capture data on development effectiveness in real time.

Driven by a desire to identify and support innovators seeking to leverage this opportunity within USAID, the Lab held an internal Turning Data Into Action competition in April 2014. Forty-five Missions and Bureaus submitted 147 ideas, showcasing the enthusiasm within the agency for using data and technology in programs. The award had two parts: eight ideas received a Recognition Prize, which celebrates activities that have incorporated data innovations for increased impact, and four ideas received a Support Award, which provides funding and technical assistance to implement new, data-focused activities.





**3.**

**WHAT WE DO:  
INNOVATION**

INCREASE THE ADOPTION  
OF HIGH-IMPACT  
DEVELOPMENT INNOVATIONS.



A woman uses a light purchased through Angaza Design's Pay-As-You-Go platform. Photo: Angaza Design

## **The Lab brings new people, technologies, ideas, and ways of solving to some of the biggest challenges facing humanity, like maternal and child health, education, and access to water and electricity.**

Anyone can participate in our open innovation grants programs and prize competitions. We support innovations and innovators at all stages, from the very early stages of research and development (R&D), to mid-stage projects with evidence of effectiveness that are seeking to expand their capacity and broaden their market reach, to projects that have been tested, refined, and evaluated and can have global impact. Our funding is tiered to match the innovation's stage and evidence base.

The Lab programs have attracted over 15,000 applicants, and we funded the testing and implementation of 362 innovations since the program began. Winners of our innovation awards have come from all over the world and have included established research organizations, graduate and undergraduate students, entrepreneurs, local NGOs, world-class scientists, and new solvers such as an Argentinian car mechanic and a Baltimore, Maryland wedding dress designer. Seventy-six percent of applicants to the Lab's Development Innovation Ventures program have never previously received funding from USAID.

# HOW WE ARE ACCOMPLISHING OUR INNOVATION GOAL:

We use two approaches to identify promising innovations, which we then rigorously test, iterate, and mainstream for global impact.

**Open Innovation:** The Lab runs an open, year-round competition for ideas, *Development Innovation Ventures*, which is open to nearly any organization for any sector in any country in which USAID operates.

**Directed Innovation:** The Lab and Agency partners use tools like *Grand Challenges for Development* and *Prizes* to find solutions to **specific challenges** like improving childhood literacy, providing energy for agriculture, and addressing the Ebola Epidemic.

Providing Electricity to Rural India through Renewable Micro Grids. Photo: A Bright Answer



# TOOLS FOR OPEN INNOVATION

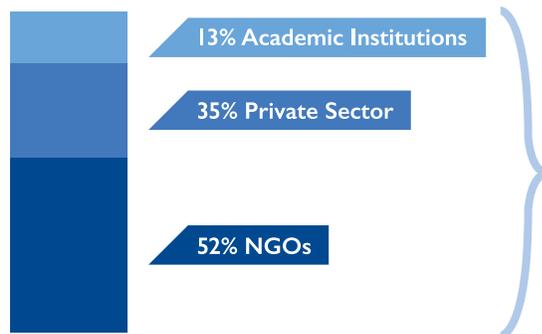


## DEVELOPMENT INNOVATION VENTURES (DIV)

**DIV** is a year-round, open innovation fund model inspired by venture capitalists. DIV uses a staged funding approach which invests comparatively small amounts in relatively unproven concepts. DIV has funded both failures and successes but the model allows the Lab to quickly learn when ideas fail and at relatively low expense. When ideas succeed, the Lab finds out how to reach millions of people. Selection criteria for funding include the the potential for significant cost reduction vs. current practice, evidence of impact or the plan to provide it, and a pathway to scaled impact. To-date, about half of DIV grants have included a randomized control trial to provide the evidence we seek.



### DIV by the Numbers



**DIV'S PORTFOLIO**  
SPANS **9 SECTORS**  
& **35 COUNTRIES**



**76%** of applicants  
are **new** to USAID  
(Since July 2011)

**1,176**  
APPLICATIONS

submitted since April 2014  
22 new grants started since April 2014

*"DIV funding has allowed Babajob to rapidly scale up our operations, while at the same time expanding our reach at the Bottom of the Pyramid. With support from the DIV team, we have given millions more job seekers across India access to better jobs and significantly grown our impact."*

— Vir Kashyap, Co-Founder and COO

The average DIV grantee brings \$0.78 in cost-share for every \$1 from USAID. One grantee, Off-Grid:Electric, successfully raised \$16 million in equity financing and an additional \$7 million from the International Finance Corporation (IFC) and its partners earlier this year. Another, Babajob, a company aimed at bringing better jobs to informal sector workers in India, recently secured \$10 million in funding from SEEK Limited.

2014 was especially exciting as the global community embraced the DIV model with a consortium of international donors joining forces to create a new \$200 million Global Innovation Fund (GIF). And in May 2015, DIV was recognized by The Ash Center for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government as a "Top 25 Innovation in Government." DIV received the award as part of the Ash Center's Innovations in American Government awards competition, which recognizes city, state and federal government efforts to address policy issues, such as economic development, public health, and emergency preparedness.

## DIV IN ACTION

### ***OFF-GRID:ELECTRIC: A disruptive idea, rigorously tested, and brought to thousands of people***

"Why is it that over a century after Thomas Edison powered his first light bulb, there are more people off the grid than on the grid?" asked California native Erica Mackey and co-founder of Off-Grid:Electric, an off-grid solar startup, after spending time working in rural Tanzania and learning from community members that their biggest challenge to development was access to electricity. This got Mackey thinking. It seemed unfathomable to her that 1.6 billion people across the globe currently live without access to modern electricity. What was worse was that the world's poorest people pay the most for the dirtiest energy—kerosene.

Now her company solves the same problems for customers that kerosene does, but in a way that gives them 50 times more light for less money and less risk. They also offer customers the ability to charge phones and power radios, TVs, and other accessories. Off-Grid:Electric uses mobile money, a local sales force, and prepaid hardware to make solar affordable to everyone, everywhere. The company approaches solar lights as services, not products, just as telecom companies do with mobile phone services.

DIV provided a \$100,000 seed grant to Off-Grid:Electric in 2013 to pilot its operations in Arusha, Tanzania.

After the company demonstrated both financial success and social impact, with another \$16 million in equity financing from Solar City, Zouk Capital and Vulcan Capital as well as \$7 million from the World Bank's International Finance Corporation, Off-Grid:Electric expects to expand its current reach to connect 200,000 homes to affordable off-grid energy by the end of 2015.

**"Because of USAID's Development Innovation Ventures' catalytic support, we were able to get here. We have raised millions in venture capital, putting our mission to light millions of African homes in the next decade into our sights," said Mackey.**

# TOOLS FOR DIRECTED INNOVATION

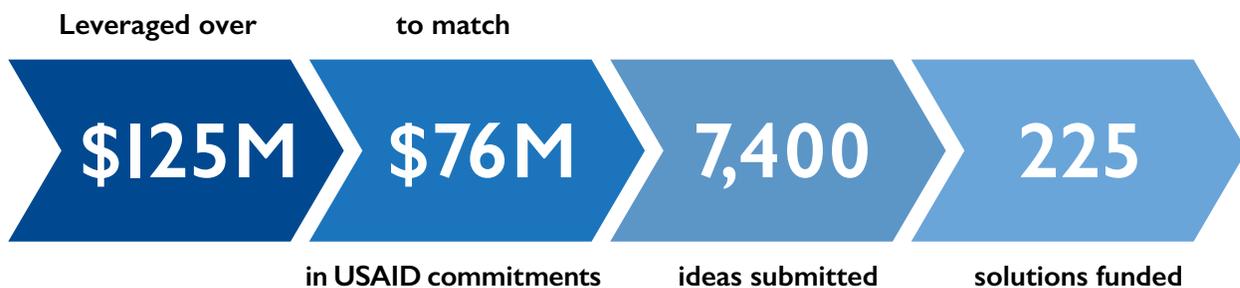


## GRAND CHALLENGES FOR DEVELOPMENT (GCD)

**GCDs** define a problem and call upon a global community of solvers to propose solutions. Together with partners from outside of USAID who have provided \$125 million in funding since the GCD program began, the Lab selects the most promising solutions to test and, once proven, expand. Over 30 percent of Grand Challenge awardees come from developing countries. In 2014, the Lab supported six GCDs: Fighting Ebola; Securing Water for Food; Saving Lives at Birth; Powering Agriculture; All Children Reading; and Making All Voices Count.



### GCD by the Numbers





## GCD IN ACTION

SWFF Round I innovator Practical Action has used water efficient sandbar cropping to turn over 30h of barren lands into pumpkin patches in Bangladesh, benefitting over 300 female farmers. Photo: Nazmul Chowdhury, Practical Action

**Securing Water for Food (SWFF): A Grand Challenge for Development** was launched at the 2013 World Water Week in Stockholm, Sweden. This challenge aims to source and accelerate innovations that will enable the production of more food with less water and/or make more water available for food production, processing, and distribution. Partners include: the Swedish International Development Cooperation Agency (Sida), and the Ministry of Foreign Affairs of the Kingdom of The Netherlands (MFA-NL). From 520 applications from over 90 countries, sixteen innovations stood out as having high potential for transformative impact. Awardees will receive between \$100,000 and \$3 million in funding and acceleration support from Securing Water for Food.

One awardee, Reel Gardening, founded in 2009 by 16-year old South African gardener Claire Reid, provides a convenient,

water-saving way for families, schools, and community co-ops to grow their own vegetables. The company produces biodegradable, color-coded paper tape that encases organic fertilizer and seeds at the correct depth and distance for optimal, water-saving results. A core motivation in the creation of Reel Gardening was to create a sustainable business model that would integrate women into the company through employment and management opportunities. Reel Gardening has already shown great success in selling seed tapes to a hundred thousand households while simultaneously helping many women escape poverty by employing them as sales agents. With the Securing Water for Food grant, the company will be able to scale to 300,000 households this year.



## INNOVATION SPOTLIGHT

Felicia, a 29 year old Liberian nurse, prepares to go inside the Ebola patient ward to draw blood from confirmed patients for testing  
Photo: Morgana Wingard

## FIGHTING EBOLA: A GRAND CHALLENGE FOR DEVELOPMENT

The response to the Ebola crisis has been a defining moment for the Agency and the Lab. It has been an opportunity to apply expert knowledge, flexible, innovative and open-source approaches, strong relationships with external groups, and leadership within the international community. In early October, USAID's Global Health Bureau and the Lab, in partnership with the the White House, the Centers for Disease Control and Prevention, and the Department of Defense, launched Fighting Ebola: A Grand Challenge for Development to identify better tools to help tackle Ebola. Through this Grand Challenge we:

- Crowdsourced over 1,500 ideas supported by an open innovation platform hosted by OpenIDEO — anyone could post an idea and seek feedback from a wide variety of creative thinkers and experts.
- Provided 14 Challenge Grants of dollars for ideas that needed funding to be rapidly developed and tested, including two awardees focused on real-time data solutions (mHero, an SMS-based mHealth platform, and CommCare, an open source mobile data platform).
- Developed partnerships that will be critical to bringing some of the best ideas to the field in months, not years.
- One of the winning innovations, a personal protection suit that allows for more wearer comfort and quicker, safer removal, was designed by Johns Hopkins University's Center for Bioengineering Innovation and Design and Jhpiego, a non-profit international health organization, with the help of a wedding dress seamstress.
- One Grand Challenge winner's innovation, mHero, helped the Liberian Ministry of Health to rapidly send critical information to health care workers, enabling better response coordination and resource allocation during the Ebola crisis.
- In Guinea, Grand Challenge winner CommCare helped health care workers, via a mobile phone application, ensure consistent follow-up with Ebola contacts, manage patient records and analyze patient information across communities during the crisis.
- In Sierra Leone, the government approved the use of MultiSense Memory patch, or "smart Band aid," which is a wearable patient sensor created by Grand Challenge winner Rhythm Diagnostic Systems. International Medical Corps will use the "smart Band aid" at the Makeni Ebola Treatment Center, located in one of the country's largest cities.



## PRIZES: PAY FOR PERFORMANCE

The Lab uses innovative competition mechanisms such as prizes to address water desalination, wildlife trafficking, childhood literacy, atrocity prevention, and the Ebola crisis, among other issues. Because prizes pay only for results, they can deliver greater financial value than traditional mechanisms.



### PRIZES IN ACTION

The Desal Prize finalist competition was held in Alamogordo, NM in April 2015. Innovators ran their desalination technology using only renewable energy from the sun, creating clean water in a low-cost and sustainable way. Photo: Glenn Graham, Production Outfitters Inc.

*A prize for environmentally sustainable ways to desalinate water that is relevant in developing countries — and could be equally useful here in the United States.*

In April 2015, five teams of engineers, innovators, and water experts convened at the Bureau of Reclamation's Brackish Groundwater National Desalination Research Facility in New Mexico to compete in the Desal (Desalination) Prize.

The Desal Prize is the second call for innovations under Securing Water for Food: a Grand Challenge for Development. The prize was designed to harness innovative technologies to create environmentally sustainable small-scale brackish water

desalination systems that can provide potable water for humans, as well as water appropriate for agriculture in developing countries.

Through this head-to-head competition, two winners emerged: MIT and Jain Irrigation Systems designed a photovoltaic-powered electro dialysis reversal (EDR) system that desalinates water by using electricity to pull charged particles out of the water and further disinfects using ultraviolet rays. In addition, the team from the University of Texas at El Paso (UTEP) Center for Inland Desalination Systems designed a Zero Discharge Desalination (ZDD) technology that reduces water waste in the desalination of groundwater by conventional processes.



## Desal Prizes by the numbers

**68**

applications  
received from

**29**

different countries  
(18 developing countries)

**88%**  
of applicants  
had NEVER before applied  
to a USAID program

  
The winning teams  
were both led by  
**WOMEN**

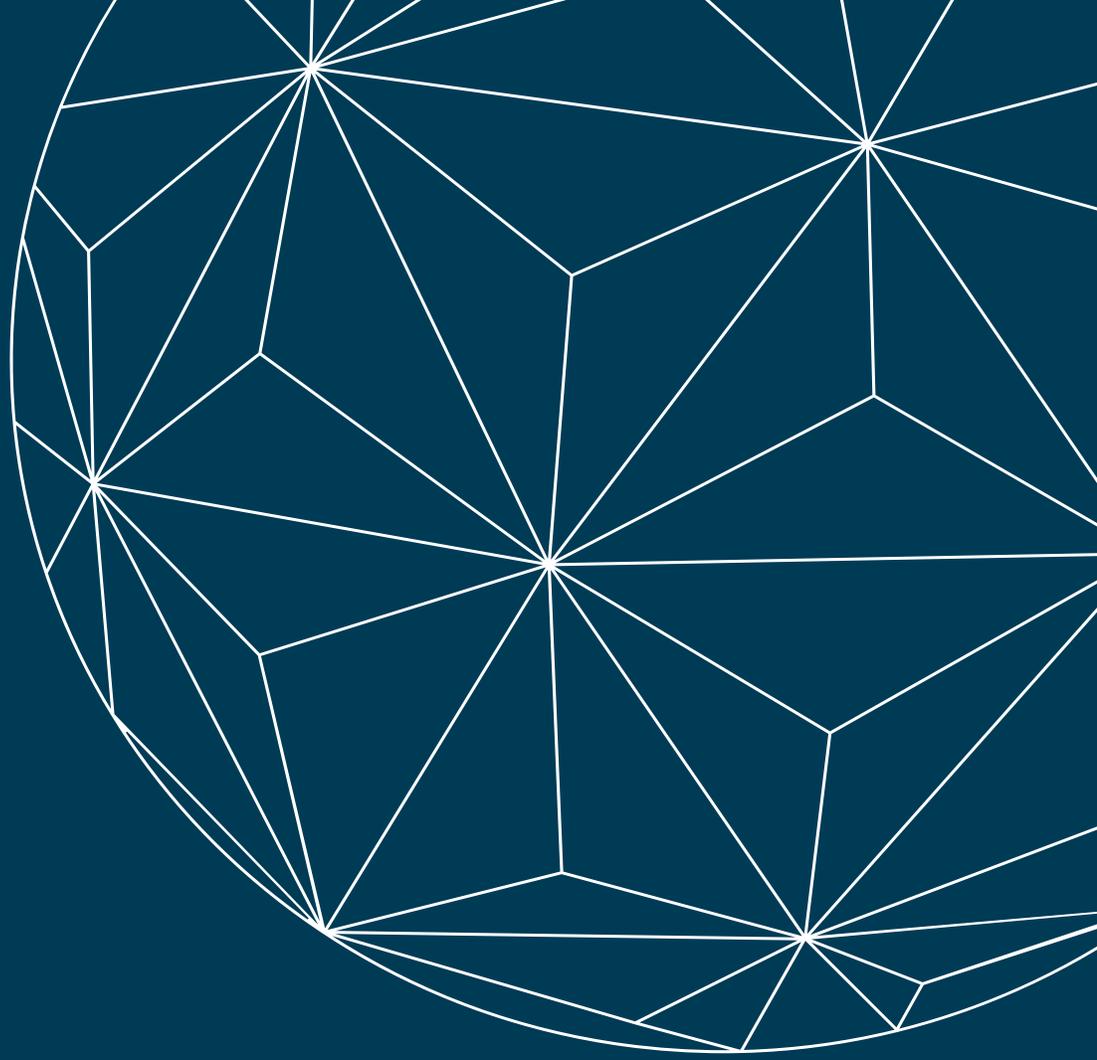
**USAID invested \$955,000  
and leveraged \$550,000**

in support from the United States Bureau of Reclamation to run the competition



Get pumped for innovation! The Desal Prize finalists were required to pump dirty, brackish water from one tank, through their desal systems, and into a new tank. The goal: to make clean, usable water for crops, livestock and human consumption. Photo: Glenn Graham, Production Outfitters Inc.





# 4.

## **WHAT WE DO: PARTNERSHIP**

GREATER IMPACT THROUGH  
COLLABORATION, COLLECTIVE ACTION,  
AND SYSTEMS CHANGE WITH A BROAD  
RANGE OF PARTNERS.



In emerging markets, eight of out of ten small businesses cannot access the loans they need to grow. USAID works with the private sector to unlock capital, facilitate investment opportunities, and provide financing to achieve sustainable development impact. Photo: Bobby Neptune | USAID

**While government aid was once the primary source of assistance to developing countries, a 2013 report from the Center for Strategic and International Studies showed that 91 percent of financial flows for development assistance from the United States are now from private sources.**

The private sector is a critical contributor to development progress and a key partner for USAID. Working with the private sector — including local businesses, global corporations, investors and financial institutions — enables mobilization of their resources, expertise, and market-based solutions to improve social and economic conditions in developing countries.

The Lab leads and coordinates the Agency's efforts to build impact-driven partnerships with the private sector. In 2014 alone, USAID had more than 250 active partnerships, with an estimated value of more than \$3 billion in public and private funds. These partnerships have advanced core U.S. development and foreign policy priorities, such as increasing food security, ending preventable child deaths, providing access to power for millions of people in Africa, and advancing literacy in developing countries.

# HOW WE ARE ACCOMPLISHING OUR PARTNERSHIP GOAL:



## ALLIANCES:

The Lab supports partnership-building across the Agency by providing advisory services, relationship management, technical assistance, trainings, and knowledge and learning products to Missions and Bureaus. The Lab uses Relationship Managers to facilitate USAID's relationships with key corporate partners and coordinate and complement partner engagement across other key industries — including information communications technology, consumer goods and services, and the extractives sector (mining, oil, and gas companies) — with USAID's Bureaus for Global Health; Food Security; and Energy, Education and Environment.

In the past year, the Lab provided nine private sector engagement trainings reaching over 200 people, working with Washington and Mission staff from around the world — as well as our colleagues from similar agencies, including the State Department, Japan International Cooperation Agency, and the African Union — to integrate partnerships into core strategies and programs, design new partnerships, and leverage the Global Development Alliance model (GDA), USAID's premiere model for public-private partnerships, as a tool for co-creation. GDAs are co-designed, co-funded, and co-managed by all partners involved, so that the risks, responsibilities, and rewards of partnership are shared. GDAs combine the assets and experiences of the private sector — corporations, foundations, non-governmental organizations (NGOs), universities, local businesses and diaspora groups — leveraging their capital and investments, creativity and access to markets to solve complex problems facing governments, businesses, and communities. When successful, the resulting alliances are both sustainable and have greater impact.



## Partnerships by the numbers

**+250** ACTIVE AGENCY PARTNERSHIPS WORTH **\$3** BILLION

THE LAB LEVERAGED **\$1** → IN PRIVATE FUNDS FOR EVERY TAXPAYER DOLLAR



## ENTREPRENEURSHIP:

Entrepreneurs play a vital role in driving economic growth, creating jobs and improving lives through market-based solutions. The Lab seeks to stimulate entrepreneurship ecosystems that can test and expand solutions to reach hundreds of millions of people and bridge the “pioneer gap” by partnering with impact investors and others to provide capital to entrepreneurs.

Through **PARTNERING TO ACCELERATE ENTREPRENEURSHIP (PACE) INITIATIVE**, the Lab partners to increase investment in early-stage enterprises and test financially sustainable approaches. Through six public-private partnerships, the Lab’s partners are already reaching more than 200 enterprises and mobilizing more than \$80 million in private capital in the first year, nearly 10 times the amount invested by USAID.

It is estimated that uncorrected vision results in \$202 billion in lost productivity to the global economy. Yet, 544 million people around the world could have their vision restored with a simple pair of reading glasses. VisionSpring reaches base of the income pyramid (BoP) customers in rural and peri-urban areas through outreach efforts that provide vision screenings and access to affordable glasses. Its unique business model supports the sale of glasses to the poorest customers (a target 70 percent of all customers) with revenue from higher-priced products sold to wealthier customers. Photo: Vision Spring





## PACE IN ACTION

Through our Partnering to Accelerate Entrepreneurship (PACE) Initiative, we are catalyzing private-sector investment into early-stage enterprises. In Bangalore, India, Unitus invested in Hippocampus Learning Centers (HLC), which provides supplemental education to children so they can succeed in school. Photo: Unitus Seed Fund

In collaboration with the Sorenson Impact Fund and Chilton Capital, we are supporting Village Capital to invest \$2 million in 41 companies. These companies have raised nearly \$40 million in follow-on capital, have served nearly 600,000 customers, and created more than 5,500 jobs.

Through **PACE**, we are also working with Unitus Seed Fund, a venture fund in India. Unitus has made 13 investments to date, making it the most active

early stage impact investor in India. Through our partnership, Unitus is expanding beyond major Indian urban centers, and strengthening its advisory and support services to help grow businesses that enhance economic self-reliance, improve health and education, optimize agriculture, and provide basic necessities.



## INCLUSIVE DEVELOPMENT:

The Lab is also leading engagement with nontraditional partners to improve development outcomes in the following ways:

Diaspora communities are playing an increasingly important role in development. Through **THE INDIAN DIASPORA INVESTMENT INITIATIVE** — a new, pioneering partnership announced by President Obama on his visit to India in January 2015 — USAID is working with the Calvert Foundation and five financial institutions in India to facilitate diaspora investment in India's future. Under this partnership, the Calvert Foundation offers retail investors a Community Investment Note while USAID provides a loan guarantee to spur lending by Indian banks to social entrepreneurs. This combination of a transparent investment vehicle and loan guarantee is expected to unlock at least \$50 million from U.S.-based retail investors. The Lab leads this initiative in partnership with USAID's Asia Bureau and India Mission along with the Development Credit Authority.

The transformational \$18 million **LESBIAN, GAY, BISEXUAL AND TRANSGENDER (LGBT) GLOBAL DEVELOPMENT PARTNERSHIP** supports LGBT human rights and equality with 28 resource partners — including the Swedish International Development Cooperation Agency (Sida); the Astraea Lesbian Foundation for Justice; the Gay and Lesbian Victory Institute; the Williams Institute; Swedish Federation for LGBT Rights; the National Gay and Lesbian Chamber of Commerce; Olivia Companies and other corporate, nonprofit and NGO resource partners. This four-year public-private partnership spans 15 countries and represents the largest investment to increase human rights, accountability, economic development, sustainability and protections for LGBT persons worldwide. The partnership empowers LGBT communities to build and contribute to inclusive societies by strengthening LGBT leadership and civil society organizations; training LGBT leaders to effectively participate in democratic processes; conducting research to inform national, regional and global policy and programs; and enabling economic empowerment for LGBT-owned businesses through enhanced entrepreneurship and small- and medium-sized enterprise development.

In the last year, the partnership has helped establish an LGBT Chamber of Commerce in Mexico while also providing ongoing support for the Colombian LGBT Chamber of Commerce and building the foundation for the launch of the Peruvian LGBT Chamber of Commerce. The partnership has also delivered \$650,000 in grants to more than 30 civil society organizations in 10 countries working to advance LGBT rights and equality; trained more than 300 LGBT leaders in national and regional convenings; and hosted more than 50 LGBT activists for the first Communications Lab in Bogota where they were trained in developing media strategies and using digital advocacy tools.



Coffee Leaf Rust

Photo credit: Root Capital

The Coffee Farmer Resilience Initiative, a USAID partnership with Root Capital, a nonprofit agricultural lender, and leading coffee companies, supports more than 40,000 coffee farmers in Latin America by providing loans to farmer cooperatives so that their members can rehabilitate or renovate fields destroyed by a fungal disease known as coffee leaf rust.



## ENABLING COLLECTIVE ACTION:

The Lab convenes stakeholders to help tackle complex, systemic challenges that affect societies and businesses through collective action. As one example, in February, the Lab and USAID's Bureau for Food Security convened more than 30 corporations, non-profit organizations, universities, and other organizations to focus on increasing the adoption of climate resistant maize in sub-Saharan Africa. The workshop allowed important stakeholders to come together to develop a comprehensive climate resistant maize system-mapping, diagnose and troubleshoot feedback loops, and identify ways to strengthen the overall system. Convenings such as these bring together diverse stakeholders from across industries and sectors to help solve broad challenges and harness the strengths and capabilities of multiple actors.

# CONCLUSION

Over the last year, the Global Development Lab has worked closely with our Agency partners to deliver the kind of game changing results that we have been so proud of throughout USAID's 50 year history. In 2014, 47 USAID Missions and Bureaus used the Lab's tools, approaches, and mechanisms to drive results, investing \$54 million. In addition, 18 Missions and Bureaus actively collaborated with the Lab on the Agency's priority STIP efforts, including integrating e-payments into Agency operations, scaling climate resilient maize, and supporting biodiversity conservation in the Brazilian Amazon. These partnerships will deepen in the coming year.

The Lab also seeks to lead the development community on evidence-based decision making. In this first year, the Lab's Office of Evaluation and Impact Assessment has ensured monitoring, evaluation, and learning practices reflect the Lab's high expectations for the production and use of quality evidence for decision-making. The Lab has set evidence standards in consultation with experts from academia, industry, and other actors in the development community to determine which innovations are 'best bets' for continued investment. Finally, the Lab is leading a collaboration with external partners to develop, and drive adoption of, innovative tools and methodologies in monitoring, evaluation, and learning that enable the Agency to rapidly and responsibly iterate and improve programming, and make the use of data and evidence in decision-making more feasible.

As the Lab does its work to produce breakthrough development innovations, we look to work with all our partners to transform the U.S. development enterprise — all to reach the goal of accelerating an end to extreme poverty.



# **APPENDIX**

- LAB PROGRAM BUDGET: BY OBJECTIVE
- PROGRAMS SUPPORTED BY THE LAB  
SINCE OCTOBER 1, 2013

# LAB PROGRAM BUDGET: BY OBJECTIVE

Budget Program	The U.S. Global Development Lab (The Lab), USAID		
Appropriations account: FY 2014/2015 Obligation	Development Assistance (DA) \$108,000,000		
Appropriations account: FY 2014/2015 Obligation	Global Health Programs-USAID (GHP-USAID) \$7,000,000		
New Obligation Authority (\$000 in thousands)	FY 2013 Actual	FY 2014 Actual	FY 2015 Estimate
Total	102,655	115,000	126,000
Development Assistance	95,042	108,000	120,000
Global Health Programs-USAID	7,613	7,000	6,000

Note: For FY 2015 The Lab has received an additional \$31,000,000 in Ebola ESF funding to support agency Ebola Initiatives

# PROGRAMS SUPPORTED BY THE LAB SINCE OCTOBER 1, 2013

## SCIENCE:

### **PEER & RESEARCH ECOSYSTEMS:**

The Partnerships for Enhanced Engagement in Research (PEER) is a competitive grants program supporting applied research and training on topics with strong potential development impacts. The program is implemented in partnership with the U.S. National Academy of Sciences (NAS), and specifically engages scientists in developing countries.

### **RESEARCH & INNOVATION**

**(RI) FELLOWS:** This fellowship program creates opportunities for American university and graduate students to provide critical research and technical expertise to development projects and initiatives driven by demand in emerging economies. Partners include the U.S. National Science Foundation (NSF), Arizona State University, University of Chicago, University of Notre Dame, University of California-Davis, University of California-Berkeley, and Rutgers University.

### **AAAS FELLOWS:**

The Lab manages USAID's participation in the American Association for the Advancement of Science (AAAS). AAAS provides opportunities for scientists and engineers to learn first-hand about policymaking while contributing their knowledge and analytical skills in the federal policy realm. Currently the Agency hosts 70 AAAS scientists in Washington and Missions overseas, strengthening the Agency's science and technology capacity.

### **HIGHER EDUCATION SOLUTIONS NETWORK (HESN):**

HESN is a partnership between USAID and seven top universities designed to harness the ingenuity and passion of university students, researchers, and faculty to develop innovative solutions to global development challenges and deliver the greatest impact. University partners include The College of William and Mary, Duke University, Michigan State University, the Massachusetts Institute of Technology, Texas A&M University, the University of California at Berkeley, and Makerere University in Uganda.

# TECHNOLOGY:

## **DIGITAL FINANCE:**

Digital technologies are a comparatively cheap, fast, safe, auditable, and increasingly ubiquitous vehicle for achieving greater financial inclusion. New “branchless” banking models (such as those delivered over mobile phones) are reinventing financial services and offer the 2 billion unbanked adults worldwide the opportunity to take control of their finances. The Lab works to scale the provision of these services and make them more accessible for all.

**GEOCENTER:** The goal of the GeoCenter is to improve the effectiveness and efficiency of USAID’s development programs by geographically prioritizing resources where they will maximize development impact. The Lab works directly with field missions and Washington-based bureaus to integrate a geographic approach into the strategic planning, design, monitoring, and evaluation of USAID’s development programs.

**DATA & ANALYTICS:** The role of the Data and Analytics team is to improve development through the innovative use of data. We aim to strengthen USAID’s evidence base and build its capacity to apply cutting-edge analysis to improving and measuring development impacts. We will do this by improving access to data, testing and applying new analytical approaches to develop useful insights,

and building capacity within the Agency to ensure that those insights drive decision-making at the strategic and programmatic levels.

## **REAL-TIME DATA (RTD):**

Cheap mobile devices, plummeting computing costs and simple open-source tools enable governments, donors, and NGOs to capture performance metrics and engage in “adaptive management” — the ability to test different interventions, monitor and evaluate the ongoing progress, adapt to the dynamic circumstances, and iterate for overall improved development outcomes. The Lab is working to ensure that these real-time data systems reach scale, and that USAID and other development actors use them to improve program planning and implementation.

## **DIGITAL INCLUSION:**

The ubiquity of the mobile phone offers a profound opportunity to connect people around the world. This connection is incredibly powerful — it means that even in the most rural location anyone with a phone who gets sick can look up their symptoms, get in touch with a doctor, and if needed find out how to get to the closest medical facility that can treat them. But access is more than just a phone connection, and it is far from universal. In fact, unique subscriber rates are at only 45% in the developing world, emphasizing the need for connectivity, locally relevant content and digital skills-building so people can access mobile and Internet services and also derive value from these services to improve their lives. Many barriers persist, particularly for women and the rural poor, that prevent underserved communities from effectively using digital technology. The Lab’s Digital Inclusion program aims to promote access to affordable digital services and content to enable local communities to improve livelihoods, income, and quality of life for their residents and businesses through strengthened social and economic inclusion.

# INNOVATION

## **GRAND CHALLENGES FOR DEVELOPMENT (GCDS)**

**and PRIZES:** GCD's remove critical barriers to international development progress by calling on the global community to discover, test, and accelerate innovative science and technology solutions around specific global challenges. Over the last five years, in cooperation with a range of partners such as The Bill & Melinda Gates Foundation, Sida, Grand Challenges Canada, Duke Energy, and World Vision, USAID has launched six Grand Challenges: Saving Lives at Birth; All Children Reading; Powering Agriculture; Making All Voices Count; Securing Water for Food; and Fighting Ebola. Another form of directed innovation we are testing is a Prize model that pays for achieving a specific target. Prizes are a powerful tool to engage global communities of solvers to achieve specific, well-defined objectives that address a broader development challenge. In FY2014, the Lab launched a number of new prizes including the Wildlife Crime Tech Challenge and the Desalinization Prize.

## **DEVELOPMENT INNOVATION VENTURES (DIV):**

DIV is an open innovation fund that sources, tests, and scales breakthrough solutions to any global development challenge. Through a year-round grant competition for innovative ideas, with evidence of impact, in any sector and nearly any country, DIV provides funding and hands-on support to invest in solutions with the potential to deliver greater impact, less expensively, and at sustainable scale.

## **COLLECTIVE ACCELERATION:**

The Collective Acceleration program works to accelerate innovation by helping innovators address organizational, financial, and market barriers to catalyze the systems change needed for scale. The Lab works to provide specialized acceleration services to enable high-potential innovators improve their capacity to scale-up, access growth capital, build credibility in the market and build connections to new partners. Through our convening power we leverage our networks in-country and across public and private

sectors to build an ecosystem to enable the scale up of critical innovations for global development. For example, LAUNCH is an open innovation platform founded by NASA, NIKE, USAID, and the U.S. Department of State to identify and foster breakthrough ideas for a more sustainable world. LAUNCH has issued a series of global challenges to address key barriers and leverages a high impact network of system change agents to mentor and adopt disruptive innovations.

## **GLOBAL INNOVATION EXCHANGE**

### **(“THE EXCHANGE”):**

The Exchange aims to further democratize modern development by creating a global platform to connect innovators with resources, funding, experts, organizations, programs, and information needed to grow, test, and scale an innovation.

# PARTNERSHIP

## GLOBAL DEVELOPMENT

**ALLIANCE (GDA):** GDAs combine the assets and experiences of the private sector to leverage capital, investments, creativity, and access to markets to solve the complex problems facing governments, businesses, and communities. More than just philanthropy or corporate social responsibility, GDAs leverage market-based solutions to advance broader development objectives. GDAs are co-designed, co-funded, and co-managed by all partners involved so that the risks, responsibilities, and rewards of partnership are shared.

## PARTNERING TO ACCELERATE ENTREPRENEURSHIP (PACE)

**INITIATIVE:** PACE aims to catalyze private-sector investment into early-stage enterprises and identify innovations that help entrepreneurs bridge the “pioneer gap” — to unlock the potential of thousands of promising enterprises around the world. Working in partnership with over 20 incubators, accelerators, and seed-stage impact investors, PACE has created 6 public-private partnerships which will leverage \$56 million in combined public and private investments over the next five years to test innovations that will foster entrepreneurship.

## INCLUSIVE DEVELOPMENT:

The Lab plays a significant role in pioneering innovative partnerships with private sector partners and USAID Missions to engage key constituencies such as Women, Diaspora, and LGBT communities. These high impact partnerships develop and implement programming that advance development outcomes and result in the improvement of the lives of women, girls, men and boys around the world

# AGENCY ENGAGEMENT

## **STRATEGIC ENGAGEMENT AND CAPACITY BUILDING:**

The Lab collaborates intensively with a wide range of USAID missions and pillar bureaus to increase impact and cost effectiveness through the application of science, technology, innovation and partnership to the Agency's sustainable development programs. In addition, the Lab provides training and advisory services to build the capacity of all Agency staff to conceptualize and operationalize STIP tools into their work. To date, 1,087 USAID development professionals have been trained through Lab workshops, webinars, and trainings on topics such as: Private Sector Engagement, Futures Analysis, Geographic Analysis, Mobile Data, and Digital Finance.

## **URBAN SANITATION:**

In support of the USAID Water Strategy and the USAID Urban Policy, the Lab is focused on finding and developing cost-effective new solutions that improve access to and sustained usage of improved sanitation among low-income populations in urban and highly populated peri-urban areas. Sanitation improvements are critical to individual, community, and environmental health, economic development, and personal dignity and security, especially for women and children.

## **EBOLA RESPONSE, RECOVERY AND RESILIENCE:**

The Ebola crisis exposed significant weaknesses in digital infrastructure and health information management. Building on our work in real-time data and digital development, the Lab is focused on improving our ability to prevent, detect, and respond to future public health threats by filling these technical gaps in West Africa, as well as increasing engagement with private sector partners and facilitating the use of geospatial information systems and open innovation approaches in response, recovery, and resilience planning.

## **EVALUATION AND IMPACT**

**ASSESSMENT (EIA):** The Lab adheres to standards for monitoring and evaluation to find out what works and what doesn't; how we can learn from our failures; and where and when to best replicate our successes. Data is used, along with a set of evidence standards developed in partnership with experts from academia and industry, to determine which innovations are 'best bets' for our investment and where evidence gaps remain. With the support of Lab teams and partners across the Agency, the Lab leads a research agenda to articulate and test our new model of development: one in which — through increased investments in STIP to effectively address development challenges — the Agency ultimately realizes its mission more cost-effective, more sustainable, and much faster than ever before.



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