HIGHER EDUCATION SOLUTIONS NETWORK - ANNUAL REPORT (FY 2014)

UNIVERSITY OF CALIFORNIA, BERKELEY
DEVELOPMENT IMPACT LAB
AGREEMENT NO. AID-OAA-A-13-00002

SUBMITTED: OCTOBER 30, 2014
REPORTING PERIOD: FY 2014

This publication was produced for review by the United States Agency for International Development.
It was prepared by the Development Impact Lab.

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I. Executive Summary

The Development Impact Lab (DIL) is an international consortium of universities and research institutes, NGOs, and industry partners addressing global poverty through advances in science and engineering. DIL is headquartered at the University of California, Berkeley (UCB) and was launched in 2012 with support from the US Agency for International Development (USAID). The Lab leverages the innovation capacity of world-class universities to design "development solutions," which couple new technologies with creative economic and behavioral interventions. These solutions are rigorously evaluated in the real world and then iteratively redesigned based on field results. Ultimately, proven solutions are transitioned to partners for scale-up and dissemination.

The Lab is led by two physical centers at UCB: the Blum Center for Developing Economies and the Center for Effective Global Action (CEGA). Together, these units have generated a coordinated portfolio of solutions sourced through internal competitions. Five contests were launched in the period covered by this report, attracting 150+ applications from researchers within the DIL consortium. The portfolio has now expanded to 36 solutions that span the innovation pipeline—from early-stage design and piloting, to evaluation and iterative redesign. These projects cover multiple sectors, from energy and water to public health and housing. A subset of the portfolio, managed by the Policy Design and Evaluation Lab (PDEL) at UC San Diego (UCSD), focuses on Information and Communication Technologies (ICTs) to enhance citizen action and government accountability.

To guide future research investment, DIL has supported a landmark report, launched this year by the LBNL Institute for Globally Transformative Technology (LIGTT). The report identifies 50 technological breakthroughs that, if achieved, could transform economic development.

DIL is also developing a cloud-based computing platform, Mezuri, intended for real-time monitoring of development projects in rural and urban settings. Led by UCB's Technology and Infrastructure for Emerging Regions (TIER) group, with collaborators at University of Washington, University of Michigan, and Portland State University, this initiative integrates data from wireless sensors, mobile devices, and other ICTs to track the performance of solutions in the field.

2. Major Milestones and Events Completed

The projects supported by DIL are unique—they involve engineers and scientists working alongside experts in marketing, psychology, and development economics. They use wireless, distributed measurement technologies to track product performance, use, and consumer satisfaction. This inter-disciplinary, iterative approach is articulating a new field of research, Development Engineering (Dev Eng), which formally links technological innovation with the economic and social interventions needed to achieve scale. Across all of its partners, the Lab is supporting 36 Dev Eng solutions. These projects, in beta version, are reaching nearly 4.4 million beneficiaries in South Asia, Southeast Asia, and Sub-Saharan Africa. DIL has also seeded 18 early-stage exploratory projects, which will help feed the pipeline in future years.

To accelerate the research and development process, DIL is cultivating an "ecosystem" for Dev Eng—including courses, events, an academic journal, and other activities that support our researchers and partner organizations. In the current period, DIL sponsored a large-scale conference on research methods, hosted several seminars and workshops, and supported an HESN-wide student contest. The Lab also helped establish a new Designated Emphasis in Dev Eng, akin to a PhD-level "minor." This program launched in Fall 2014. These and other activities have connected the Lab with more than 400 students, researchers and practitioners.

3. Key Activities

The Lab's primary activity is a series of research projects that collectively form a portfolio of innovations. The projects integrate new technologies—in areas as diverse as energy, water, health, and housing—with novel understandings of markets, social behavior, and organization. A sub-portfolio of demonstration projects is managed by PDEL, which is DIL's hub at UCSD. This set of projects focuses on ICT for Accountability (ICT-A), exploring ways to activate mobile networks to promote accountability in elections and public sector service delivery. This set of projects leverages the rapid expansion of ICT in the developing world, which has great promise to reduce poverty and accelerate citizen empowerment.

The Lab's portfolio is sourced through competitions. Each selected project receives up to three years of funding (with awards ranging from $5,000 for early-stage exploration to $450,000 for mature demonstration projects). The aim of the Lab is to de-risk and develop these projects, so that they can be picked up by other partners for scale up. Many of the projects build on decades of fundamental science and engineering research, leveraging investments by other research sponsors.

Two rounds of the Lab's "DIL Innovate" competition were administered during the current period. The Fall 2013 call yielded 48 applications, of which 13 were funded in the planning ($40,000), piloting ($70,000) and development ($200,000) stages. The Spring 2014 competition, managed by PDEL and focusing on ICT solutions, yielded 40 applications, of which 6 were selected for piloting ($35,000 - $50,000) and development ($150,000 - $175,000). These, along with earlier awardees, form the Lab's portfolio of 36 solutions.

The review process for these competitions involves a diverse group of experts, from the social sciences, engineering, and the industry/practitioner sector. In total, 21 reviewers contributed to the Fall 2013 review process, and another 19 experts refereed the Spring 2014 competition.

In addition to sourcing new solutions, the Lab solicits and funds a small set of high-risk ideas through the "DIL Explore" travel grant competition. Awards of $5,000 are made available to validate research

opportunities, test out new ideas, and establish international collaborations. These awards are intended to seed the pipeline with several early-stage ideas. Over the last year, nearly 70 proposals were submitted and 16 awards made. Applicants came from a range of disciplines, with most awards made to UC Berkeley PhD students and postdoctoral fellows.

To drive innovation in the measurement of development impact, DIL is supporting one central project: the Mezuri data platform. Mezuri is a collaborative effort led by Eric Brewer and the Technology and Infrastructure for Emerging Regions (TIER) group at UCB plus research groups led by Evan Thomas (Portland State University), Prabal Dutta (University of Michigan), and Gaetano Borriello (University of Washington).

The team's goal is to enable the secure collection and analysis of data from development interventions, including high frequency field measurements gathered by constituent Mezuri technologies. These include UW's Open Data Kit, a suite of software for Android phone- and tablet-based survey data collection, and sensor platforms from UM and PSU. Mezuri will also provide cloud-based tools for the storage, analysis, visualization, and sharing of the collected data.

In the current period, Mezuri supported 5 test deployments across 3 countries. For each deployment, the researchers have instrumented products and services—from electricity grids to cookstoves and water pumps—with sensors and mobile devices, to capture information about household use, field performance, and reliability. The resulting data are being used to refine Mezuri's architecture. TIER has also performed user requirements research, conducting 16 interviews with data scientists and researchers in the field to better understand required Mezuri features.

One of DIL's final objectives is to foster a community of "development engineers" – researchers who can solve real-world challenges in the context of market failures, corruption, poverty, and weak institutions. Toward this end, the Lab hosts seminars and visiting practitioners, creates hands-on learning opportunities, and provides mentoring to facilitate the translation and scale-up of new technologies.

To foster academic recognition for faculty and students engaging in high-impact development innovation, DIL has been working with academic publisher Elsevier to launch a new peer-reviewed journal, Development Engineering. The open access journal will be launched in 2015. Learn more about the Development Engineering Open Access Journal here: http://www.journals.elsevier.com/development-engineering/

The Lab also hosts a postdoctoral fellows program, providing junior researchers with a career path in development engineering. In the current year, two fellows were appointed and are being supported by DIL/SDS: a development economist studying the impacts of ICTs in Ghana, and an environmental engineer developing standards for water quality in refugee camps.

To engage students in social innovation and entrepreneurship, DIL has sponsored several idea contests through the Big Ideas@Berkeley program. Big Ideas is a platform for identifying promising student ideas for improving society and the environment. In the current year, DIL sponsored prizes in three categories: Global Poverty Alleviation, Promoting Human Rights and Open Data. With support from USAID and partner universities, these contests were opened to teams of students across the world. The 56 finalists, selected from 186 applicants, represented UCB, Makerere University, Texas A&M University, William & Mary, Duke University, and a number of other campuses. In all, 40 projects were selected to receive Big Ideas awards ranging from $1,000 to $10,000.

4. Engagement of Partners and Other Actors

4.1.1 Interdisciplinary collaboration

At DIL's core is a new way of innovating for international development. DIL seeks to change the way universities design solutions for the challenges of poverty. Our approach, Dev Eng, integrates insights from development economics with world-class science and engineering.

This fall semester, DIL successfully launched a graduate program in Dev Eng at UCB. This concluded a 17-month, collective planning process that formally commenced at the DIL launch in 2013. This program is intended to train the next generation of social scientists and engineers to work together on innovations for poverty alleviation. The inaugural course quickly filled to capacity, with 31 graduate students from engineering, economics, business administration, and other disciplines.

"Previous research has made it clear that second-hand solutions do not work in resource-limited settings… it's of utmost importance to consider how to design elegant and novel solutions in highly constrained environments." -Julia Kramer, PhD graduate student, Mechanical Engineering

4.1.2 Partner Engagement

DIL has developed a deep partnership with the Inter-American Development Bank, co-hosting a conference titled "Demand Solutions: Ideas for Improving Quality of Life" in November 2013. At the event, several DIL researchers presented solutions being developed with Lab support. Members of MIT's International Development Innovation Network (IDIN) were also in attendance.

In the current period, the Lab has also forged partnerships with the Global Development Lab and the Bureau for Economic Growth, Education, and Environment's (E3) All Children Reading Grand Challenge for Development. Through these links, DIL established the Blind Spots in Development Essay Competition and expanded the Big Ideas@Berkeley program to focus on "Mobiles for Reading." The Blind Spots contest solicited ideas from HESN students and USAID mission staff as well as researchers in the RI Fellows and PEER grant programs. Participants were invited to identify the "hidden" challenges that too often plague development programs.

Other partners engaged over the year include Microsoft Research India, the Grameen Foundation, BRAC, and Ideo.org. A primary mechanism for engagement has been DIL's Practitioner in Residence program, which connects UCB innovators with experts from industry, non-profits, government, and social enterprises for one-on-one consultation and mentorship. Practitioners visiting Berkeley in the last year include representatives from Sanku Fortification, USAID India, WE CARE Solar, Medicines360, Captricity, PublicWorks@Stanford, ReAllocate, FSG, CARE, Dalberg, Global Viral/Metabiota, Ushahidi, Pitch Interactive, and the Global Social Benefit Institute.

4.2 Summary of Collaboration across HESN

DIL has connected with other HESN labs to provide best practices for research competitions and idea contests. In 2013-14, the Lab partnered with USAID and the "All Children Reading" Grand Challenge for Development to create a new HESN-wide category for the Big Ideas contest. A second contest, in Open Data, was launched in collaboration with William & Mary's AidData program. Applications for Big Ideas were solicited from students throughout the HESN. In addition, more than 40 judges and mentors participating in this year's Big Ideas Contest were affiliated with HESN universities or USAID.

Big Ideas continues to collaborate closely with other HESN campuses and the Global Development Lab to expand opportunities for students. The 2014-2015 competition includes 5 categories open to HESN students, including Food Systems Innovation, Global Health, Open Data for Development (co-sponsored by AidData), Conflict and Development (co-sponsored by ConDev), and Mobiles for Reading (with support from USAID's All Children Reading Grand Challenge for Development).

Finally, with support from USAID and the Development Impact Lab, the Big Ideas@Berkeley team created the Big Ideas Toolkit, which describes proven organizational strategies, lessons learned, best practices, and useful reflections on managing an idea competition specifically aimed at students. Between June and August 2014, DIL actively shared the toolkit with over 100 universities who may be interested in launching a student innovation competition or applying the Big Ideas approach to existing competitions.

In addition to supporting the Big Ideas contest, DIL provides HESN labs with lessons learned on running competitions, providing grantee support, and managing sub-awards. Representatives from the DIL management team have spoken with colleagues at MSU, William & Mary and MIT's IDIN to provide lessons learned and best practice suggestions.

4.2.1. Data

Two members of the DIL team have been regular participants in the monthly Data Working Group calls and activities. In addition, two staff members are participants in the M&E Working Group.

4.2.2. Solutions

Several solutions in the Lab's portfolio are implemented in partnership with DIL consortium partners or HESN partners. IIT-Bombay, a DIL consortium partner, is leading a project in chicken rearing. This study is studying the use of different heating and cooling practices and ambient conditions for poultry production in India. A second project (Voltage Monitoring in Rural Areas) has designed, prototyped, and deployed a low-cost monitoring device to monitor voltage and harmonic content of grid supply. The team studied the effectiveness of the device in five initial locations in preparation of scaling the system across a few districts.

Projects with Jadavpur University, another DIL consortium member, include a study of social drivers for, and barriers to, the purchase and consumption of safe water in a targeted community in West Bengal.

Another project will explore a safe and sustainable disposal method for the arsenic-laden sludge. The team will embed arsenic bearing sludge in variable proportions in concrete, sand-cement mortar, brick and rigid pavement followed by measurement of arsenic and other toxic constituents.

Researchers at Makerere University, which is both a DIL consortium member and an HESN partner, have been piloting an Automated Pothole Detection App. The exploratory project, funded through DIL Explore, has studied the existing practices of identifying potholes and road damages in Kampala city. The aim is to explore the potential for sensor technology to automatically detect and report potholes and road damages that need repair.

4.2.3. Student Engagement

The DIL Idea Team is an interdisciplinary group of 10 graduate students selected to help design and implement creative ways to engage the UC Berkeley community in global development challenges. In the fall, they hosted an interactive mapping exercise, sketching a footprint for development research at UCB. In April 2014, they hosted a DIL Innovation Crawl, a campus-wide tour of labs and incubator spaces supporting research in the area of international development.

From October to November 2013, DIL supported USAID in recruiting 5 UCB students to serve as e-Interns for the Securing Water for Food Grand Challenge for Development. E-Interns reviewed incoming concept notes from water innovators across the world.

4. USAID Engagement

5.1. USAID/Washington Interactions

In the current period, DIL faculty and staff liaised with more than 15 USAID bureaus, country missions and regional missions. Stakeholders from each unit commented on the viability, relevance and quality of development solutions in the Lab portfolio. This provided DIL with an opportunity to communicate its overall goal with a variety of important USAID stakeholders; it also enabled the Lab to obtain important guidance on specific research projects and priorities, from on-the-ground agency staff. In some cases, USAID staff provided concrete feedback that was relayed to DIL research teams and integrated to improve the implementation or scale-up of a project.

In addition to feedback during competitions, DIL has hosted and engaged with a wide range of USAID staff on campus at UC Berkeley and in Washington, D.C.

In December 2013, DIL hosted Eric King, Innovation Specialist for USAID, for a three-day visit. Dr. King's meetings focused on Berkeley researchers' use of novel measurement techniques and devices (e.g. sensors, mobile, big data, etc.) to help governments, NGOs, and utilities make better decisions about service delivery. He sought insights to better understand data for use in decision-making by USAID, and also held meetings on platform technologies-- including algorithms or devices that could be used in low-income countries. While in Berkeley, he met with DIL researchers and leadership including Prof. Eric Brewer.

Tara Hill (Program Specialist), Genevieve Croft (AAAS Science and Technology Policy Fellow) and Ashley Heiber (Jr. Research and Policy Analyst) performed a site visit from February 5-7, 2014. The team participated in 18+ meetings and represented USAID at the DIL Open House, attended by 100+ members of the UCB Dev Eng ecosystem. The Lab hosted Dr. Ticora Jones, Senior Advisor and Program Director, on March 19 and 21, 2014. Ticora participated in multiple meetings, including speaking at the Dev Eng Seminar, moderating a career discussion titled, "From Weapons Labs to Development Lab: A Discussion on Careers in Science & Tech with Dr. Ticora V. Jones," and presenting at the NCIIA conference in a panel titled, "USAID and Universities: Catalyzing Novel Solutions to Development Challenges," as secured by DIL.

In April 2014, Tony Bloome, USAID's Senior Education Technology Specialist & All Children Reading Grand Challenge for Development Director, USAID/E3/Education visited the Development Impact Lab. Tony met with DIL leadership to learn more about DIL's specific projects and overall vision, and to discuss a Big Ideas collaboration.

In April 2014, Temina Madon (DIL's Managing Director), Heather Lofthouse (DIL's Associate Director, Partnerships) and Phillip Denny (DIL's Big Ideas Coordinator) attended the April 2014 HESN Annual Lab Directors' Meeting. In addition to many impromptu meetings, pre-scheduled meetings took place with a range of HESN sister campuses - including William & Mary, MIT's CITE and MIT's IDIN - and a multitude of USAID bureaus - from E3 and the DIV team to Global Health and the Office of Afghanistan and Pakistan Affairs.

In May 5-6 2014, Christian Holmes, USAID's Deputy Assistant Administrator and Global Water Coordinator, Bureau for Economic Growth, Education and Environment, visited the Development Impact Lab. Chris conducted numerous in-depth meetings with DIL leadership, over 10 DIL faculty researchers and postdocs and over 10 DIL students. Meetings resulted in concrete connections with new USAID bureaus and missions. Chris also served as a judge at the 2013-14 Big Ideas Pitch Day.

In June, as part of its preparation work for the 2014 HESN Technical Convening (TechCon), DIL toured UC Berkeley's California Memorial Stadium with Kate Gage, Advisor to the Executive Director, U.S. Global Development Lab.

On July 18, DIL hosted a visit from USAID which included Kate Gage, Advisor to the Executive Director, U.S. Global Development Lab, Andy Sisson, Acting Executive Director, U.S. Global Development Lab, Lona Stoll, Director, Center for Global Solutions, U.S. Global Development Lab, and Margie Sullivan, Chief of Staff. DIL Leadership and researchers presented on projects including CellScope and the Village Base Station.

On September 18-19, Dr. Kurtis Heimerl attended "Frontiers in Development" on behalf of DIL. Kurtis presented on his research on enabling rural cellular access through empowering local entrepreneurs to set up and manage their own community cellular networks, for which he was named to this year's list of TR35 Innovators.

5.2. USAID Mission Interactions

DIL has met with multiple USAID missions. To inaugurate the DIL USAID Fellow program, the Lab hosted Dr. Sheila Desai, Senior Science and Technology Advisor for the USAID India Mission's Center for Innovation and Partnerships, on October 28-December 6, 2013. A reciprocal visit of DIL researchers in India took place in April 2014.

From January 6 to 9, DIL hosted Dr. David Roberts, Regional Strategic Advisor, Director's Office, USAID Regional Development Mission for Asia. David participated in 16+ meetings to explore partnership possibilities between DIL and RDMA. DIL also hosted Dr. Teresa Leonardo, Regional Science & Technology Advisor, RDMA on February 4, 2014. Meetings focused on DIL projects with relevance to urban futures and urban resilience, including a Fall 2013 DIL Innovate project on sustainable roof tiles.

In June 2014, DIL Managing Director Temina Madon visited the Rwanda Mission to present DIL and research results from the Rural Electrification Power Project in Kenya. In addition, DIL researchers held project-specific meetings with Mission staff in Kenya, Rwanda, India, and other countries.

6. Monitoring & Evaluation

6.1. M&E Updates

DIL is on track to meet its FY 2014 monitoring and evaluation (M&E) targets. The Lab's staff has been actively working to integrate M&E into calls for grant applications, award letters, and onboarding activities for affiliated researchers. This has helped to train DIL's very decentralized research teams in reporting on outcomes. In Spring 2014, with encouragement from the Lab's HESN program advisors, DIL hired an M&E specialist consultant. The consultant has been integral in streamlining M&E data collection and reporting processes. DIL has experienced minor disruptions to its existing M&E collection tools with the introduction of DevResults. However, Lab staff look forward to continuing to adapting to the new reporting platform.

7. Lessons Learned / Best Practices

DIL is committed to evaluating and improving its support for research teams on an ongoing basis. The Lab's staff is learning to actively seek candid feedback and suggestions from the community of researchers, practitioners, and partners. This is done through formal office hours, bi-annual meetings of grantees, individual meetings with project scientists, and periodic phone calls with consortium partners. Regularly soliciting candid feedback enables the Lab to adapt accordingly and continually improve its programming and research support systems. Suggestions have ranged from new event formats and speaker ideas, to workshop topics and networking requests.

In addition to effective programming, the Lab also prioritizes effective communication of outside research, training, funding, and networking opportunities. The biweekly e-newsletter, State of the Lab updates, and twitter feed all provide avenues to make researchers aware of upcoming events, consulting hours, grant competitions, and conferences hosted by DIL or by the larger development ecosystem, including relevant USAID programs.

Having implemented multiple rounds of grant-making, the DIL team now has a much better sense of how to implement requests for applications—both on the Berkeley campus, and throughout the consortium. Lessons learned from the first three rounds of DIL Explore and first two rounds of DIL Innovate have been communicated to USAID and were also communicated to other HESN labs at the April 2014 Annual DIL Directors Meeting.

A more technical effort is underway to document lessons learned from DIL demonstration projects, in the form of published case studies. The case studies will evaluate the process of research and solution development, and will also serve as education materials within the Dev Eng designated emphasis.

8. Future Activities

The Lab's portfolio of demonstration projects is intended to incrementally develop innovations with strong potential to impact millions of lives. Each project builds on an existing body of research, providing the additional partners, resources, and talent needed to translate technology into sustainable social impact. These projects, each at a different stage in the research and development (R&D) pipeline, will also articulate the concept of Development Engineering, which has emerged as a new approach for designing, evaluating, and scaling novel solutions for development problems. In Year 3, DIL's demonstration projects will continue with USAID funding, although investigators and Lab staff will increasingly focus on obtaining outside sponsorship and support to sustain the projects. To advance the portfolio, DIL will also introduce partners as needed, to ensure that projects reflect an appropriate balance of engineering and social science expertise.

In its initial two years, DIL offered a series of competitions to source and advance additional innovations for global development. In Year 3, staff will analyze this portfolio and identify both strengths and areas for future investment. However, full funding for Year 3 has not yet been received from USAID. If additional funds are provided, DIL will run competitions to further feed the R&D pipeline.

To make quality M&E data and evaluation outcomes more readily available to researchers and policy-makers, DIL's Mezuri initiative is developing a suite of hardware, software, and analytic methods enabling the low-cost capture and real-time analysis of heterogeneous data from deployments of novel development solutions. In Year 3, Mezuri's major goal is to deploy the Mezuri prototype platform for development data analytics. As part of this goal, we will feed data from different projects into this prototype.

Drawing on experience from Year 1 and Year 2, DIL will continue to develop and foster an ecosystem for development engineering at UC Berkeley and beyond. To do this, we will continue to provide student research opportunities, training programs, and events to foster engagement with USAID, the

Lab's consortium institutions and other universities across the HESN. These activities will target the Berkeley campus but can be replicated at other universities as materials are developed.

APPENDIX

APPENDIX I. HESN Monitoring & Evaluation (M&E) Indicators - FY 14

Code	M&E Code Description	Target Value	Reached Value	%
HESN_0in01	$ Total dollar value of outside (non-USAID) resources utilized	2,400,000	13,492,343	562.2%
HESN_0in02	# transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN Development Labs	15	9	60.0%
HESN_0in03	# transformative innovations, technologies, or approaches that were initially piloted with human, financial, or institutional resources contributed by HESN Development Labs	12	2	16.7%
HESN_0in04	# transformative innovations, technologies, or approaches that achieved early adoption with human, financial, or institutional resources contributed by HESN Development Labs	0	1	---
HESN_0in05	# transformative innovations, technologies, or approaches that transitioned to scale with human, financial, or institutional resources contributed by HESN Development Labs	0		---
HESN_0in06	# transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN Development Labs	4	10	250.0%
HESN_0in07_ Masters_F	# US Female MASTERS students serving as fellows		6	---
HESN_0in07_ Masters_M	# US Male MASTERS students serving as fellows		5	---
HESN_0in07_ Other_F	# US Female students (other or unknown degree program) serving as fellows		0	---
HESN_0in07_ Other_M	# US Male students (other or unknown degree program) serving as fellows		0	---
HESN_0in07_ PhD_F	# US Female PhD students serving as fellows		10	---
HESN_0in07_ PhD_M	# US Male PhD students serving as fellows		14	---

Code	M&E Code Description	Target Value	Reached Value	%
HESN_0in07_Undergrad_F	# US Female UNDERGRADUATE students serving as fellows		12	---
HESN_0in07_Undergrad_M	# US Male UNDERGRADUATE students serving as fellows		9	---
HESN_0in08	# innovations, technologies or approaches in the innovation pipeline		47	---
HESN_0in09	# innovations, technologies or approaches that completed at least one of the five stages in the innovation pipeline		10	---
HESN_0in10	# beneficiaries reached		1,570,295	---
HESN_1.0in2	# data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	2	14	700.0%
HESN_1.0in3	# data-related analyses, mapping activities, and expert consultations provided for USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	8	45	562.5%
HESN_1.1in1_NPR	# citations in targeted non-peer reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_PD	# citations in targeted project documents of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.1in1_PR	# citations in targeted peer-reviewed fora/publications/projects of data collected or made available through human, financial, or institutional resources contributed by HESN Development Labs		0	---
HESN_1.2in1	# users who access data and tools made available with support from human, financial, or institutional resources contributed by HESN Development Labs	20	80,000	400000.0%
HESN_1.3in2	# development professionals proficient in data management and use due to human, financial, or institutional resources contributed by HESN Development Labs	5	27	540.0%

Code	M&E Code Description	Target Value	Reached Value	%
HESN_2.0in1	# months required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by HESN Development Labs	96	96	100.0%
HESN_2.0zDIL-in1	# transformative ideas directly sourced by DIL	100	251	251.0%
HESN_2.2in2_NPR	# citations in targeted non-peer reviewed fora/publications of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		3	---
HESN_2.2in2_PD	# citations in targeted peer-reviewed project documents of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		0	---
HESN_2.2in2_PR	# citations in peer-reviewed fora/publications of white papers, articles, assessments, analyses, and evaluations (drafted with human, financial, or institutional resources contributed by HESN Developments Labs) on development challenges, innovations, technologies, approaches, and contexts		5	---
HESN_2.2in3	# targeted communities who participated in assessment, analysis, and evaluation of innovations, technologies, and approaches supported with HESN Development Lab	100	188	188.0%
HESN_2.3in1	# MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN Development Lab	0	36	---
HESN_2.3in2	# stakeholders engaged in problem solving with one HESN Development Lab	150	98	65.3%
HESN_2.4zDIL-in1	# projects undertaken by USAID and other major stakeholders due to DIL	1	11	1100.0%
HESN_3.0in2	# MOUs or other agreements signed with public sector, private sector, and local community partners and more than one HESN Development Lab	1		0.0%
HESN_3.0in3	# new development related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN Development Labs	2	5	250.0%
HESN_3.1in1	# development programs/projects/efforts undertaken collaboratively by Network members	10	13	130.0%

Code	M&E Code Description	Target Value	Reached Value	%
HESN_3.2in1	# visitors to Network knowledge-sharing platforms	42,000	57,059	135.9%
HESN_3.2in3	# successes and failures circulated on Network knowledge-sharing platforms	2	5	250.0%
HESN_3.3in1	# classes supported by HESN Development Labs with human, financial, or institutional resources contributed by HESN Development Labs	4		0.0%
HESN_3.3in2	# collaborative platforms created by the HESN or with human, financial, or institutional resources contributed by HESN Development Labs	4	4	100.0%
HESN_3.4in1_ Masters_F	# Female MASTERS students participating in short term practica		10	---
HESN_3.4in1_ Masters_M	# Male MASTERS students participating in short term practica		11	---
HESN_3.4in1_ Other_F	# Female students (other or unknown degree program) participating in short term practica		0	---
HESN_3.4in1_ Other_M	# Male students (other or unknown degree program) participating in short term practica		0	---
HESN_3.4in1_ PhD_F	# Female PhD students participating in short term practica		21	---
HESN_3.4in1_ PhD_M	# Male PhD students participating in short term practica		40	---
HESN_3.4in1_ Undergrad_F	# Female UNDERGRAD students participating in short term practica		11	---
HESN_3.4in1_ Undergrad_M	# Male UNDERGRAD students participating in short term practica		19	---
HESN_3.4in3	# participants in Hubs, summits, and other problem-solving institutions created with human, financial, or institutional resources contributed by HESN Development Labs	350	470	134.3%

Code	M&E Code Description	Target Value	Reached Value	%
HESN_3.4zDIL-in1	# students engaged in programming created or supported by DIL, including the new development related classes/courses	15	289	1926.7%

APPENDIX II.A. Innovations: Technologies and Approaches - FY 2014

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Collective Assessment & Feedback Engine (CAFÉ)	Development of algorithm for CAFÉ that aids in the collection and ranking of participant feedback and co-assessment (Began in June 2013 with initial testing through the California Report Card from February 2014).	Uganda	Stage 1: Development	0	No	No
Approach	Collective Assessment & Feedback Engine (CAFÉ)	Collaboration with Volunteer Efforts for Development Concerns (VEDCO) to design CAFÉ interface for use in rural Uganda (Began in March 2014)	Uganda	Stage 1: Development	0	No	No
Approach	Collective Assessment & Feedback Engine (CAFÉ)	CAFÉ tested as an assessment tool for evaluating family planning and reproductive health trainings at three VEDCO-operated "Nutrition Education Centers" in rural Uganda	Uganda	Stage 2: Initial Piloting	300	No	No
Approach	Collective Assessment & Feedback Engine (CAFÉ)	Meetings were held with researchers at Tecnologico de Monterrey in Mexico to develop three versions of CAFE: (1) a version to assess maternal and infant healthcare needs in rural areas, (2) a version that will allow individuals in Mexico City to advise the government on timely policy issues, and (3) a version that will identify barriers faced by small- to medium-size enterprises in the informal economy.	Brazil	Stage 1: Development	0	No	No
Approach	Electrochemical Arsenic Remediation (ECAR)	Large-scale ECAR demonstration in India	India	Stage 2: Initial Piloting	0	No	No
Technology	Electrochemical Arsenic Remediation (ECAR)	Arsenic removal technology for drinking water	India	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	CellScope	Refining hardware and software for automated Loa loa quantification, field testing in Cameroon	Cameroon	Stage 2: Initial Piloting	220	No	No
Approach	CellScope	Developing a radically new approach to quantifying Loa loa (via video processing to identify worm motion) that improves speed, reduces requirements for sample prep and user training	Cameroon	Stage 1: Development	0	No	No
Technology	Rural Electric Power Project (REPP)	DC Microgrid Prototype	India	Stage 1: Development	0	No	No
Technology	Rural Electric Power Project (REPP)	Smartphone grid monitor (Grid Watch)	Kenya	Stage 1: Development	0	No	No
Technology	Rural Electric Power Project (REPP)	DC smart meter	Kenya	Stage 1: Development	0	No	No
Approach	Rural Electric Power Project (REPP)	Novel use of Android tablets to map out electrification rates for 150 transformer communities in W Kenya	Kenya	Stage 1: Development	0	No	No
Approach	Rural Electric Power Project (REPP)	Used smart meter technology in microgrid deployments in Kenya	Kenya	Stage 2: Initial Piloting	6750	No	Yes
Approach	Village Base Station (VBTS): Community Cellular Network	GSM White Spaces	South Africa	Stage 1: Development	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Village Base Station (VBTS): Community Cellular Network	Community Cellular Network	Indonesia	Stage 3: Early Adoption	1000	No	No
Approach	Village Base Station: Commercialization	Endaga directly commercializing VBTS research	Indonesia	Stage 3: Early Adoption	0	No	No
Approach	WE CARE Solar	Piloting We Care Solar Suitcase program in Tanzania, Nepal, Philippines, Ethiopia	Nepal	Stage 2: Initial Piloting	30857	No	No
Approach	WE CARE Solar	Piloting We Care Solar Suitcase program in Tanzania, Nepal, Philippines, Ethiopia	Philippines	Stage 2: Initial Piloting	30857	No	No
Approach	WE CARE Solar	Piloting We Care Solar Suitcase program in Tanzania, Nepal, Philippines, Ethiopia	Tanzania	Stage 2: Initial Piloting	30857	No	No
Approach	WE CARE Solar	Piloting We Care Solar Suitcase program in Tanzania, Nepal, Philippines, Ethiopia	Ethiopia	Stage 2: Initial Piloting	30857	No	No
Approach	WE CARE Solar	Scale-up of We Care Solar Suitcase programs in Uganda, Sierra Leone and Malawi	Uganda	Stage 4: Transition to Scale	30857	No	No
Approach	WE CARE Solar	Scale-up of We Care Solar Suitcase programs in Uganda, Sierra Leone and Malawi	Sierra Leone	Stage 4: Transition to Scale	30857	No	No
Approach	WE CARE Solar	Scale-up of We Care Solar Suitcase programs in Uganda, Sierra Leone and Malawi	Malawi	Stage 4: Transition to Scale	30857	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Nepal	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Philippines	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Tanzania	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Ethiopia	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Uganda	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Sierra Leone	Stage 4: Transition to Scale	0	No	Yes
Approach	WE CARE Solar	Evaluation of We Care Solar Suitcase programs	Malawi	Stage 4: Transition to Scale	0	No	Yes
Approach	The Southeast Asia - Renewable and Adaptive Energy (SEA RAE) Demonstratin g solar PV minigrid	Demonstrating solar PV minigrid	Viet Nam	Stage 2: Initial Piloting	1500	Yes	Yes

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	The Southeast Asia - Renewable and Adaptive Energy (SEA RAE) Project	Novel algorithm to optimize user demand to predicted solar resource	Viet Nam	Stage 1: Development	0	Yes	No
Approach	The Southeast Asia - Renewable and Adaptive Energy (SEA RAE) Project	Novel microgrid deployment mechanism	Viet Nam	Stage 1: Development	0	Yes	No
Technology	Self-disinfecting toilets	Electrochemical Stripping Technology	Kenya	Stage 1: Development	0	Yes	No
Approach	Self-disinfecting toilets	New three-chamber design for reactor isolating nitrogen from urine	Kenya	Stage 1: Development	200	Yes	No
Technology	Early Infant Rapid HIV Diagnosis	In the process of further developing Herr lab microfluidic protein detection technologies to detect HIV viral antigens	Kenya	Stage 1: Development	0	Yes	Yes
Technology	Electrochemical Arsenic Remediation Explore Project	Water treatment technology (to remove arsenic and microbes from groundwater) Uses iron electrocoagulation to produce iron precitates with a high affinity for arsenic and microbes, that are subsequently removed by settling	India	Stage 1: Development	0	Yes	Yes
Approach	Fluoride Remediation	Development of Aluminum Electrocoagulation for defluoridation in UCB labs	India	Stage 1: Development	0	Yes	No
Technology	Frugal Plasma Sterilizer	Lab-scale development of a low-cost plasma device for disinfection and seeking clinician feedback on prototype design	South Africa	Stage 1: Development	0	Yes	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Affordable Recycled Modular Roofs	Classifying and analyzing material properties of modular roofing tile with UC Berkeley and LBNL experts in order to optimize design	India	Stage 1: Development	10	No	No
Approach	Community Based Air Pollution Informatics	The public survey we have designed can be considered a novel approach to understanding a community's awareness of air pollution as well as the best practices for disseminating air quality reports.	United States	Stage 1: Development	0	No	No
Approach	Energy Efficiency and Rural Electrification	Selecting sites for energy efficiency study, developing protocols for intervention delivery	India	Stage 2: Initial Piloting	0	No	Yes
Approach	Energy Efficiency and Rural Electrification	Implementation of Gram Power microgrids in selected sites	India	Stage 3: Early Adoption	116	No	Yes
Approach	Energy Efficiency and Rural Electrification	Algorithm to disaggregate real-time energy use data (from smart meters) by appliance	India	Stage 2: Initial Piloting	0	No	No
Technology	Field Portable Computational Microscopy	Build LED array CellScope attachment and develop software	United States	Stage 1: Development	0	No	No
Approach	Field Portable Computational Microscopy	algorithms for super-resolution developed	United States	Stage 1: Development	0	No	No
Approach	High-Resolution Development Indicators	Beginning to pilot the face-to-face instrument in a small number of villages	Afghanistan	Stage 2: Initial Piloting	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Technology	Ocular Cellscope	We have developed a novel compact optical system for imaging the retina and a novel approach for integrating fixation lights into this imaging system	Thailand	Stage 2: Initial Piloting	0	No	No
Approach	Does Scarcity Improve Adoption	Design of lab experiment and running pilots as well as analyzing the first pilot data and running new pilots in India.	India	Stage 2: Initial Piloting	0	No	No
Approach	E-warehousing for Smallholder Farmers	Evaluation of novel us of e-Warehousing system to promote deepening of agricultural market	Uganda	Stage 2: Initial Piloting	44000	No	Yes
Approach	Information and Intermittent Water	Crowd-sourced data on water intermittency; evaluating efforts of Nextdrop to collect and send household notifications based on this data rather than collecting this data ourselves	India	Stage 1: Development	0	No	Yes
Approach	Mezuri Portland State University: SweetSense	Remotely reporting sensors on rural hand pumps	Rwanda	Stage 3: Early Adoption	66000	No	No
Approach	Mezuri Portland State University: SweetSense	Remotely reporting sensors on household water filters and cookstoves	Rwanda	Stage 3: Early Adoption	0	No	No
Approach	Mezuri Portland State University: SweetSense	Remotely reporting motion detectors in latrines	India	Stage 3: Early Adoption	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Mezuri Portland State University: SweetSense	Remotely reporting sensors on water collection backpacks	Kenya	Stage 3: Early Adoption	0	No	No
Technology	Automated smear-positive tuberculosis diagnosis	CellScope hardware and software is being developed as well as automated imaging and analysis platform.	Viet Nam	Stage 1: Development	0	No	No
Technology	Automated smear-positive tuberculosis diagnosis	CellScope TB: Automated imaging and analysis platform	Viet Nam	Stage 1: Development	0	No	No
Approach	Mezuri Technology and Infrastructure for Emerging Regions (TIER)	Under active development: prototype end-to-end data collection, storage, processing, analysis, visualization, and sharing platform.	India	Stage 1: Development	0	No	No
Approach	Somatic Embryogenesis	Piloting method to evaluate new biotechnologies in the cacao sector	Indonesia	Stage 2: Initial Piloting	0	Yes	No
Approach	Somatic Embryogenesis	Google Earth Engine (for land cover change analyses)	Indonesia	Stage 1: Development	0	Yes	No
Approach	Somatic Embryogenesis	Mixed methods: combining extensive quantitative data-sets with interviews and oral histories to evaluate project success	Indonesia	Stage 1: Development	0	Yes	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Somatic Embryogenesis	Used research results to inform their development activities in Sulawesi Tenggara	Indonesia	Stage 3: Early Adoption	0	Yes	No
Approach	Treating Brackish Drinking Water	Affordable (IER) electrode fabrication	India	Stage 1: Development	0	No	No
Approach	Treating Brackish Drinking Water	Pulsed voltage capacitized deionization	India	Stage 1: Development	0	No	No
Technology	Mezuri University of Michigan (UM)	Novel breath CO sensing to determine smoking activity	Kenya	Stage 1: Development	0	No	No
Technology	Mezuri UM	Novel non-invasive grid monitoring technology to determine blackouts	Kenya	Stage 2: Initial Piloting	0	No	No
Technology	Mezuri UM	Novel sensors to capture face-to-face interactions, including distance, angle, temp, humidity	Kenya	Stage 2: Initial Piloting	0	No	No
Approach	Sensory Reactivity Study	Sensors installed on household water filters and cookstoves in public health program Rwanda	Rwanda	Stage 1: Development	600000	No	No
Technology	Automated Pothole Detection	Software artificat for automatic pothole detection	Uganda	Stage 1: Development	0	Yes	No
Approach	Automated Pothole Detection	Using technology to empower motorists to actively participate in road infrastructure monitoring	Uganda	Stage 1: Development	0	Yes	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Arsenic Bearing Sludge Management	Development of Methodologies of Sustainable Arsenic-Bearing Sludge Utilization		Stage 1: Development	0	Yes	No
Approach	Mezuri U of Washington (UW)	ODK Survey is being piloted in Ghana and India with PATH to develop a mHealth that includes a digitized WHO's Integrated Management of Childhood Illness (IMCI) protocol and USB pulse-ox	Ghana	Stage 2: Initial Piloting	0	No	No
Approach	Mezuri U of Washington	ODK Survey is being piloted in Ghana and India with PATH to develop a mHealth that includes a digitized WHO's Integrated Management of Childhood Illness (IMCI) protocol and USB pulse-ox	India	Stage 2: Initial Piloting	0	No	No
Approach	Mezuri U of Washington	ODK Tables are being used as part of the HOPE Study, which is a study of HIV discordant couples in Kenya that are visited repeatedly by a health care worker.	Kenya	Stage 2: Initial Piloting	0	No	No
Technology	Mezuri U of Washington	ODK Sensors are being used in South Africa to create a low cost human milk bank pasteurization process	South Africa	Stage 2: Initial Piloting	0	No	No
Approach	Mezuri U of Washington	Developing the Mezuri Cloud Infrastructure to aggregate sensing data from various sources to share, analyze, and evaluate development deployments	United States	Stage 1: Development	0	No	No
Approach	Mezuri U of Washington	Piloted ODK Diagnostics in Zimbabwe to verify ODK Diagnostics accuracy	Zimbabwe	Stage 2: Initial Piloting	0	No	No
Approach	Mezuri U of Washington	South Africa RSA/Bill and Melinda Gates Foundation/PATH -- Decided to scale up human milkbanking project that is built on top of ODK sensors	United States	Stage 3: Early Adoption	0	No	No
Approach	Mezuri U of Washington	Village Reach: ODK Scan paper to digital conversion of vaccine registries	United States	Stage 3: Early Adoption	0	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Mezuri U of Washington	Int'l Red Cross: Use of ODK 2.0 tool suite	United States	Stage 3: Early Adoption	0	No	No
Approach	Digital Mapping for Transparency	Working to get access to satellite images; finalizing the exact location to pilot	India	Stage 1: Development	0	No	No
Approach	Improving job search efficiency	Planning for data collection and expand access to web portal	India	Stage 1: Development	0	No	No
Technology	Empowering Homegrown Environmental Monitors	Designing an ICT monitoring system to connect grassroots community monitors to government authorities and the public	Philippines	Stage 1: Development	0	No	No
Approach	Reducing Corruption Through Crowdsourcing	Development and eventual pilot an application to anonymously crowdsource information on the performance of Indian government offices, with the goal of improving the overall quality of service delivery.	India	Stage 1: Development	0	No	No
Technology	Cookstove Measurement Adopted Innovation	Low-cost (~$20 at scale) temperature sensors with long-life batteries and large data capacity, ability to accommodate alternate coosktove usage measures (such as pressure) (Still in development)	Ethiopia	Stage 1: Development	2000	No	No
Approach	Cookstove Measurement Adopted Innovation	DIL use cookstove usage visualization demo generate from the Darfur pilot data to demonstrate how the measurement + visualization tools can be used to monitor and better understand technology adoption	Sudan	Stage 3: Early Adoption	0	No	No
Approach	M Pasandaaz Technology	Novel mobile-based and salary-linked savings product. This provides a means of retirement savings where the brick and mortar facilities to support such products are absent	Afghanistan	Stage 1: Development	1200	No	No

Output Type	Name of Output	Description/Abstract	Country	Phase	# Bene.	Phase Compl.?	Evaluation Cond.?
Approach	Lowering Barriers Technology	Using the extent of SMS referrals to measure village social networks	Philippines	Stage 2: Initial Piloting	500000	No	Yes
Approach	Somalia Distance Mobile Savings Project	Still assessing viability/representativeness of telephone sample.	Somalia	Stage 1: Development	0	No	No
Approach	Voter Turnout Approach	Having thousands of South Africans acting as citizen monitors; Over 127,000 South Africans responded to our original pushed messages. Dozens of thousands provided data on election related activities	South Africa	Stage 4: Transition to Scale	127000	No	No
Approach	Voter Turnout Approach	Side by side comparison of the effective rate of uptake on different mobile platforms; push and pull of information during an election period in Africa	South Africa	Stage 2: Initial Piloting	0	No	Yes
Approach	Remote Monitoring of Gov't Service Providers	Building customized call center for scalable real-time push and pull communication with project participants	India	Stage 2: Initial Piloting	4000	Error	Error
Approach	Income for Information: Estimating the Value of Time	Testing mobile phones and base stations to detect mobile payment transactions.	Bangladesh	Stage 2: Initial Piloting	0	No	No

APPENDIX III. Partners - FY 2014

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Adam Lesniewski (CITE)	Low	Higher Education Institution/ Research Organizatio n	United States	Meeting to discuss CITE, TIER, Mezuri, DIL, and ways for CITE and DIL labs to work together	
AGA KHAN Development Network	Low	Multi-lateral institution	United States	Advisory group	
Agrinet	Low	Commercial Enterprise	Uganda	Initial meetings, in person - Sept 2014. Contractor who will be implementing the intervention (a large, randomized expansion of their market linkage services through their Trader Alert system)	
Amref Health Africa	Low	NGO	Uganda	Advisory group	
An Giang Department of Industry and trade	High	Multi-lateral institution	Viet Nam	Advisory group	
Andblack Studio	High	Commercial Enterprise	India	Research implementing partner	
Andy Sisson (USAID)	High	USAID operating unit or program	United States	Met with Andy to discuss scaling up in Indonesia	
Arsenic Task Force	Low	Other developmen t actor	India	Advisory group	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Bangalore Water Supply and Sewerage Board (BWSSB)	Low	Other developmen t actor	India	Implementing partner	
Berkeley Energy and Climate Initiative		Other developmen t actor	United States	Research implementing partner	
Bill and Melinda Gates Foundation	High	Private Philanthrop y/Foundatio n	United States		
Brac	High	NGO	Bangladesh	Advisory group	
Center for Disease Control (CDC)	Low	US government (other than USAID)	Kenya	Research implementing partner	
CDC lab	Low	US government (other than USAID)	Kenya	Provided interviews and tour of lab facility. Potential collaborator on the project moving forward.	
Chiang Mai University	Low	Higher Education Institution/ Research Organizatio n	Thailand	Research implementing partner	
Council for Scientific and Industrial Research	High	NGO	South Africa	Advisory group	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Council on Science and Technology in Rio de Janeiro, Brazil		US government (other than USAID)	Brazil	Gave input on applications of CAFÉ in Rio de Janeiro, including potential locations where CAFÉ can be accessed by the public.	
CUAMM (Medici Con L'Africa)		NGO	Uganda		
Dalberg	Low	Commercial Enterprise	United States	Advisory group	
Defense Advanced Research Projects Agency (DARPA)		US government (other than USAID)	United States		
David Levine (UC Berkeley Haas School of Business)	High	Other developmen t actor	United States	Gave input into sales and marketing strategies, study priorities	
David Roberts (USAID)	High	USAID operating unit or program	United States	Discussed possible collaborations with USAID's Southeast Asia Mission	
De La Salle University	High	Higher Education Institution/ Research Organizatio n	Philippines	Implementing partner	
DelAgua	Low	Commercial Enterprise	Rwanda	Implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
MiniSante Rwanda	Low	Commercial Enterprise	Rwanda	Implementing partner	
Ministry of Health, Rwanda	Low	Other developmen t actor	Rwanda	Implementing partner	
Democracy International	High	NGO	South Africa	Input to research design, management and training of election day data gatherers and monitors	
Derek Brine (CITE)	High	Higher Education Institution/ Research Organizatio n	United States	Discussions between REPP members and Derek Brine about collaborations and feedback for product design reviews.	
Desmund Tutu Foundation	High	Private Philanthrop y/Foundatio n	South Africa		
Development Innovation Ventures	Low	USAID operating unit or program	United States		
Dhapdhapi High School	Low	Other developmen t actor	India	Hosting field trial and coordinating with community	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Dr. Craig Cohen (UCSF)		Higher Education Institution/ Research Organizatio n	Kenya	Faculty member at UCSF, provided guidance on project and proposal review and mentoring	
BUREAU FOR ECONOMIC GROWTH, EDUCATION AND ENVIRONMENT (E3)	Low	USAID operating unit or program	United States	Advisory group	
Elsevier	Low	Commercial Enterprise	Netherlands	Research implementing partner	
ENERTEAM	High	Non-US government	Viet Nam	Email exchange several times a week on technical development, project planning, and government process; met in person in Vietnam in June and January 2014	
Engender Health	Low	NGO	Philippines	Implementing partner	
Eric King, OST	High	USAID operating unit or program	United States	In person meeting with entire REPP team, and follow-up discussion of REPP-Kenya evaluation and Power Africa. Meeting with Eric Brewer and Matt Podolsky to discus Mezuri architecture, features, and relevance to USAID Data Team.	
Ethio Resources Group	Low	NGO	Ethiopia	Implementing Partner: Review cookstove manufacturing progress; advise of evaluation implementation, distribution strategy; Support mission for making arrangements with local Ethiopian manufacture facilities; documenting baseline cooking methods, pilot baseline survey design	
Facebook/Internet.org	High	Commercial Enterprise	United States	Met with Internet.org to discuss potential future collaborations	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Family Aids Care & Educational Services	High	Other developmen t actor	Kenya	Provided guidance on pilot study in Kenya and access to medical personnel for shadowing/interviewing	
Federal Communications Commission (FCC)		US government (other than USAID)	United States	Met with FCC to investigate international spectrum policy	
Filariasis and Other Tropical Diseases Research Center, (CRFiMT)		Private Philanthrop y/Foundatio n	Cameroon		
FlashCast		NGO	Kenya	Gave input to Matatu monitoring system	
Floating Doctors		NGO	United States	Met to discuss and plan future deployments in rural Panama	
GiveDirectly	High	NGO	United States	Research implementing partner	
Global Broadband Initiative	High	USAID operating unit or program	United States	Advisory group	
Global Change Programme at Jadavpur University	Low	NGO	India	Leading social and political strategy, providing local logistical support	
Global Development Lab	Low	USAID operating unit or program	United States	Advisory group	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Global Health	Low	USAID operating unit or program	United States	Implementing partner	
Google.org	Low	Private Philanthropy/Foundation	United States	Funding partner	Leverage (other than cost-share)
Government of Bihar		Non-US government	India	Issue permissions to conduct study and communicate with FPS dealers	
Gram Power (India)	Low	Commercial Enterprise	India	Implementing partner	Leverage (other than cost-share)
Global Solutions for Infectious Diseases (GSID)		Non-US government	United States		
GSM Association (GSMA)	High	Non-US government	United States	Funding partner	
Hamlin College of Midwives		Higher Education Institution/ Research Organization	Ethiopia	Implementing partner	
Hanoi Lung Hospital	Low	Other development actor	Viet Nam	Implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
HESN Data Working Group	High	USAID operating unit or program	India	Monthly working group conference call	
IBM		Commercial Enterprise	Kenya	GridWatch support for KPL	
World Agroforectry Centre (ICRAF)		NGO	Indonesia	Input to field plan and data analysis	
IDEO.ORG	Low	Commercial Enterprise	United States		Leverage (other than cost-share)
IIT-Bombay	Low	Higher Education Institution/ Research Organizatio n	India	Research implementing partner	
Independent Communications Authority of South Africa		Non-US government	South Africa		
Indo-US Science and Technology Forum	High	Multi-lateral institution	India	Funding partner	
Indo-US Science and Technology Forum	Low	Multi-lateral institution	India	Receiving advice and monetary support	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Innovations for Poverty Action	Low	NGO	Uganda	Initial meetings, in person - Sept 2014. IPA will implement the data collection efforts for the evaluation	Leverage (other than cost-share)
Innovations for Poverty Action	Low	NGO	United States	Implementing partner	
Institut Bouisson-Bertrand	Low	Higher Education Institution/ Research Organizatio n	France	Research implementing partner	
Intel	Low	Commercial Enterprise	United States		Leverage (other than cost-share)
International Red Cross		Non-US government	United States		
InVenture	Low	Commercial Enterprise	United States	Research implementing partner	
Investment Promotion Agency of Rio de Janeiro		US government (other than USAID)	Brazil		
Jadavpur University	Low	Higher Education Institution/ Research Organizatio n	India	Implementing partner	Leverage (other than cost-share)

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Jane Goodall Institute	High	Non-US government	United States		
Jhpiego (Support for Service Delivery Integration Program)	Low	NGO	United States	Contractor	
Job Shikari	Low	Commercial Enterprise	India	Implementing partner	
Abdul Latif Jameel Poverty Action Lab (J-PAL)	Low	NGO	India	Implementing partner	
JPAL South Asia	Low	NGO	India	Implementing partner	
Kampala City Council Authority (KCCA)		Other developmen t actor	Uganda	Provided input about the possible starting points in deploying and evaluation of the technology	
Katherine Darling		Other developmen t actor	Kenya	Provided review of proposal and guidance on social science aspects of project. (Currently PhD student in sociology at UCSF)	
Kenya Lighting and Power Company		Commercial Enterprise	Kenya	Implementing partner	
Kenya Mission	Low	USAID operating unit or program	Kenya	Research implementing partner	
Kenya Rural Electrification Authority	Low	Non-US government	Kenya	Research implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Kissito Healthcare International		NGO	Ethiopia		
Knowledge Pele	High	Commercial Enterprise	South Africa	Advice on training and management of election day data gatherers and monitors	
Kyriacos Koupparis, Middle East Bureau		USAID operating unit or program	Kenya	Call to give an overview of DIL, TIER, and the Mezuri team, and get information on the ME Bureau's and Technical Office's priorities (including infrastructure and water conservation).	
Lawrence Berkeley National Laboratory	Low	US government (other than USAID)	United States	Research implementing partner	
Lemelson Foundation	Low	Private Philanthropy/Foundation	United States	Advisory group	
LBNL Institute for Globally Transformative Technologies (LIGTT)	Low	NGO	India	Receiving advice, administrative, and monetary support	Leverage (other than cost-share)
Living Water International	Low	NGO	Rwanda		
Livity	High	NGO	South Africa	Advice on creation of mobile platforms and design of advertising campaigns for them	
Local government bodies		Non-US government	Viet Nam	Met in January in Vietnam to discuss project and sign MOU. Ongoing consultation through ENERTEAM	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Long Xuyen City People's Committee	High	Non-US government	Viet Nam	Long Xuyen City People's Committee	
Luminous Water Technologies Ltd	Low	Commercial Enterprise	India	Licensee of ECAR, scaling up and commercializing technology	Leverage (other than cost-share)
Maasai Wilderness Conservation Trust (MWCT)	High	NGO	United States		
Makerere University	Low	Commercial Enterprise	Uganda		
Makerere University	High	Higher Education Institution/ Research Organizatio n	Uganda	Research implementing partner	
Makerere University	Low	Higher Education Institution/ Research Organizatio n	Uganda		
Microsoft Research	High	Commercial Enterprise	United States		
Minh Tran, Inc (Vietnam)	High	Commercial Enterprise	Viet Nam	Joint Venture/Research partnership	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
MiniSante Rwanda	Low	Non-US government	Rwanda	Implementing partner	
Ministry of Health, Vietnam	Low	Non-US government	Viet Nam	Involved in development and evaluation	
Ministry of New and Renewable Energy	Low	Non-US government	India		
Misionaris Sekolahin		NGO	Indonesia		
Mass Institute of Tech (MIT) D-Lab/IDIN		Other developmen t actor	United States	Carson Christiano presented at a pre-NCIIA conference session on failures in development innovation.	
Mobile Solutions	High	USAID operating unit or program	United States	Advisory group	
Ministry of Health (MOH)	Low	Non-US government	Rwanda		
Michigan State University (MS)	Low	Higher Education Institution/ Research Organizatio n	United States	Implementing partner	
National Environmental Engineering Research Institute (NEERI)	Low	Multi-lateral institution	India	Gave input regarding PSIPW prize application, Shared knowledge about fluoride problem in India and attempted to understand advantages and disadvantages of different treatment technologies	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
National Institute of Allergy and Infectious Diseases (NIAID-NIH)	Low	US government (other than USAID)	United States		
Nextdrop	Low	Commercial Enterprise	India	We have been meeting weekly with Nextdrop to design the evaluation of their services during their upcoming rollout in Bangalore. We have been finalizing plans regarding the area they will set aside for the evaluation, our sampling strategy, and the timing of the survey.	Leverage (other than cost-share)
National Institutes of Health (NIH)	High	Higher Education Institution/ Research Organizatio n	United States		
Omidyar Network	High	USAID operating unit or program	United States		
One Heart Worldwide		NGO	Nepal		
Pakistan Telecommunications Authority		Non-US government	Pakistan		
PATH		Non-US government	United States		
Pathfinder International	Low	NGO	Uganda		

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Philippines Commission on Elections	High	Non-US government	Philippines	Implementing partner	
Policy Design & Evaluation Lab (PDEL) at University of San Diego	Low	Higher Education Institution/ Research Organizatio n	United States		Cost-share.
Policy Design & Evaluation Lab (PDEL) at University of San Diego	Low	Higher Education Institution/ Research Organizatio n	United States	consortium member	Leverage (other than cost-share)
Portland State University	Low	Higher Education Institution/ Research Organizatio n	United States		Cost-share.
Portland State University	Low	Higher Education Institution/ Research Organizatio n	United States	Mezuri team	Leverage (other than cost-share)
Potential Energy	Low	NGO	United States	Implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Power Africa (Kenya)	High	USAID operating unit or program	Kenya		
Praekelt Foundation South Africa	High	Private Philanthropy/Foundation	South Africa	Advice on creation of platforms, database structure.	
Princeton	Low	Higher Education Institution/ Research Organization	United States	Research implementing partner	
Living Water International	Low	NGO	United States		
Raphael Ondondo		Other development actor	Kenya	Lab manager at FACES, provided guidance and mentoring on project and proposal review	
Re-Materials	Low	Commercial Enterprise	India	Main commercial partner	
Research Foundation for Tropical Diseases and the Environment (REFOTDE)	Low	Private Philanthropy/Foundation	Cameroon		
Rhizomatica		NGO	Mexico		

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Rich Fletcher (CITE)		Non-US government	United States	Meeting to discuss CITE, TIER, Mezuri, DIL, and ways for CITE and DIL labs to work together	
Roshan Telecommunications	Low	Commercial Enterprise	Afghanistan	Providing access to call detail records	
Roshan Telecommunications	High	Commercial Enterprise	Afghanistan	Research is being conducted with their staff.	
Rural Electrification Authority (Kenya)	Low	Non-US government	Kenya		
Rwanda School of Public Health	Low	Higher Education Institution/ Research Organizatio n	Rwanda	Seminar presentation to solicit faculty/student participation	
Safe Mothers Safe Babies		NGO	Uganda		
San Joaquin Valley Air Pollution Control District	Low	US government (other than USAID)	United States	Advisory group	
Sanergy	Low	Commercial Enterprise	Kenya	Applied for and won Big Ideas @ Berkeley Grant	
Save the Children		NGO	Uganda		
Sickle Cell Foundation of Ghana	High	NGO	Ghana	Unknown	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Siemens-Stiftung Foundation		Private Philanthropy/Foundation	India		
Society for Social Audits and Transparency (SSAAT)	Low	NGO	India	Implementing partner	
Society for the Advancement of Village Economy (SAVE)	High	Non-US government	India	Jointly develop technology to reconcile cash transactions, conduct account opening drive with beneficiaries, submit reports for monthly reconciliation of cash transfers	
Somali Youth League of San Diego	Low	NGO	United States	Research implementing partner	
Stanford University	Low	Higher Education Institution/ Research Organization	United States	Research implementing partner	
Stiftung Solarenergie		NGO	Philippines		
Stop TB Partnership (Vietnam)	Low	Multi-lateral institution	Viet Nam	Advisory group	
TanzSolar		NGO	Tanzania		
Technology and Infrastructure in Emerging Regions	Low	Private Philanthropy/Foundation	United States		

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Tecnologico de Monterrey		Other developmen t actor	Mexico	Gave input on application of CAFÉ in Mexico, including potential applications where CAFÉ can be accessed by the public.	
Texas A&M	Low	Higher Education Institution/ Research Organizatio n	United States	Implementing partner, Big Ideas Judge	
The Energy & Resources Group (TERI), India	Low	Higher Education Institution/ Research Organizatio n	India	Research implementing partner	
The Program for Appropriate Technology in Health (PATH)	High	USAID operating unit or program	United States		
Treatment Action Group (TB Community Research Advisors Group CRAG)	High	NGO	United States	Advisory group	
UC Los Angeles	Low	Higher Education Institution/ Research Organizatio n	United States	Research implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
UC Merced	Low	Higher Education Institution/ Research Organization	United States		
UC San Francisco	Low	Higher Education Institution/ Research Organization	United States	consortium member	
UC San Francisco	Low	Higher Education Institution/ Research Organization	United States	consortium member	
Uganda National Tuberculosis Reference Laboratory	High	Higher Education Institution/ Research Organization	Uganda		
Ugandan Private Midwives Association	Low	Other development actor	Uganda		

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
UK Department for International Development	High	Non-US government	United Kingdom	Funding partner	
UN Population Fund (UNFPA)		Multi-lateral institution	Sierra Leone		
UN Refugee Agency (UNHCR)	Low	Multi-lateral institution	Switzerland	Unknown	
UN Children's Rights & Emergency Relief Org (UNICEF)		Multi-lateral institution	Uganda		
United Nations/SEED program		Multi-lateral institution	Viet Nam		
Universitas Brawijaya		Other developmen t actor	Indonesia	Provide support for proposals and research permits within Indonesia	
University of Adelaide		Higher Education Institution/ Research Organizatio n	Australia	Collaborated on all aspects of project from application to results reporting	
University of British Columbia	Low	Higher Education Institution/ Research Organizatio n	Canada	Research implementing partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
University of California Berkeley	Low	Higher Education Institution/ Research Organization	United States	host university	Cost-share.
University of California Berkeley	Low	Higher Education Institution/ Research Organization	United States	host university	Leverage (other than cost-share)
Policy Design & Evaluation Lab (PDEL) at University of San Diego	Low	Higher Education Institution/ Research Organization	United States	consortium member	
University of California, San Diego	Low	Higher Education Institution/ Research Organization	United States	consortium member	
University of California, San Diego	Low	Higher Education Institution/ Research Organization	United States	consortium member	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
University of Michigan	Low	Higher Education Institution/ Research Organizatio n	United States	consortium member	Cost-share.
University of Ottawa	Low	Higher Education Institution/ Research Organizatio n	Canada	Research implementing partner	
University of the Philippines - Diliman	High	Other developmen t actor	Philippines	Research implementing partner	
University of the Witwatersrand	High	Higher Education Institution/ Research Organizatio n	South Africa	Research implementing partner	
University of Washington	Low	Higher Education Institution/ Research Organizatio n	United States	Mezuri team member	Cost-share.

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
University of Washington	Low	Higher Education Institution/ Research Organizatio n	United States	Mezuri team member	
Urja Trust	High	NGO	India		
USAID - South Africa		USAID operating unit or program	South Africa	Gave input on the project design: Voter Turnout in S. Africa	
USAID Regional Development Mission of Asia (RMDA)	High	USAID operating unit or program	United States	Advisory group	
USAID Uganda office		USAID operating unit or program	Uganda	Initial meetings, in person - Sept 2014. USAID Uganda will be provided with regular reports on project progress and will provide advice/mentoring to the project	
USAID Vietnam	High	USAID operating unit or program	United States	Advisory group	
USAID's SSDI Program (Jhpiego, CARE, Save the Children)		USAID operating unit or program	Malawi		
VEDCO (Uganda)		NGO	Uganda	Gave input on how CAFÉ should be designed for use in rural Uganda.	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Vietnam Eco-Solutions Co Ltd (VES)	High	Commercial Enterprise	Viet Nam	Strategic/technical development partnership	
Vietnam National Tuberculosis Programme	Low	Non-US government	Viet Nam	Implementing partner	
Volunteer Efforts for Development Concerns (VEDCO)	High	NGO	Uganda		
Wadah Foundation	Low	Private Philanthropy/Foundation	Philippines		
WamenaCom	Low	Commercial Enterprise	Indonesia		
WaterLife-India	Low	NGO	India		
We Care Solar	Low	NGO	United States	Research implementing partner	
WEEMA International		NGO	Ethiopia		
West Bengal Government (Arsenic Task Force)	High	Non-US government	India	Advisory group	
White Ribbon Alliance	Low	NGO	Uganda		

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
William & Mary	Low	Higher Education Institution/ Research Organizatio n	United States	Implementing partner	
World Bank		Multi-lateral institution	Viet Nam		
World Bank DIME Group		NGO	United States	Meeting to discuss possible collaboration with MIT on Mezuri and sensor projects.	
World Vision	Low	NGO	United States	Implementing partner	
Zuelig Family Foundation	Low	Private Philanthrop y/Foundatio n	Philippines		
Kenya Medical Research Institute/Center for Disease Control and Prevention	Low	Non-US government	Kenya	Big Ideas partner	
Maseno University in Kisumu	Low	Higher Education Institution/ Research Organizatio n	United States	Big Ideas partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
United States Army Medical Research Unit - Kenya	Low	US government (other than USAID)	United States	Big Ideas partner	
Research Inputs and Development Action (RIDA)	Low	Other developmen t actor	United States	Big Ideas partner	
Water for People	Low	NGO	United States	Big Ideas partner	
Secretariat of Social Development in Mexico (SEDESOL)	Low	Non-US government	Mexico	Big Ideas partner	
Instituto Mexicano de la Juventud	Low	Higher Education Institution/ Research Organizatio n	Mexico	Big Ideas partner	
Alphatech Ventures	Low	Commercial Enterprise	United States	Innovate Peer Reviewer	
International Rescue Committee (IRC)	Low	NGO	United States	Innovate Peer Reviewer	
Volo Broadband	Low	Commercial Enterprise	United States	Innovate Peer Reviewer	
Inveneo	Low	NGO	United States	Innovate Peer Reviewer & DIL Ecosystem partner	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Capricorn LLC	Low	Other development actor	United States	Innovate Peer Reviewer	
Blum Capital	Low	Other development actor	United States	Innovate Peer Reviewer	
Energy Innovation	Low	Other development actor	United States	Innovate Peer Reviewer	
UC Santa Cruz	Low	Higher Education Institution/ Research Organization	United States	Innovate Peer Reviewer	
Sanku Foundation	Low	Private Philanthropy/Foundation	United States	DIL Ecosystem support	
Pitch Interactive	Low	Commercial Enterprise	United States	DIL Ecosystem support	
Ushakidi	Low	NGO	United States	DIL Ecosystem support	
FSG	Low	Other development actor	United States	DIL Ecosystem support	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
ReAllocate	Low	Other developmen t actor	United States	DIL Ecosystem support	
Captricity	Low	NGO	United States	DIL Ecosystem support	
Public Works @ Stanford	Low	Higher Education Institution/ Research Organizatio n	United States	DIL Ecosystem support	
Medicines 360	Low	NGO	United States	DIL Ecosystem support	
Darfur Stoves	Low	NGO	United States	Big Ideas Judge	
Kaiser	Low	Commercial Enterprise	United States	Big Ideas Judge	
Microclinic International	Low	Commercial Enterprise	United States	Big Ideas Judge	
P4 International LLC	Low	Commercial Enterprise	United States	Big Ideas Judge	
Santa Clara University	Low	Higher Education Institution/ Research Organizatio n	United States	Big Ideas Judge	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Asante	Low		United States	Big Ideas Judge	
Natural Innovation	Low		United States	Big Ideas Judge	
BIO Ventures for Global Health	Low		United States	Big Ideas Judge	
Center for Global Development	Low	NGO	United States	Big Ideas Judge	
Active Engredient	Low		United States	Big Ideas Judge	
AidData	Low	Higher Education Institution/ Research Organizatio n	United States	Big Ideas Judge	
Water.org	Low	NGO	United States	Big Ideas Judge	
Ashoka	Low	NGO	United States	Big Ideas Judge	
Merck	Low	Commercial Enterprise	United States	Big Ideas Judge	
Luminary Labs	Low	Commercial Enterprise	United States	Big Ideas Judge	
D8A	Low		United States	Big Ideas Judge	

Partner Name	Level of Engagement	Partner Type	Partner Location Country	Partner Description	Support Type
Intuitive Surgical	Low	Commercial Enterprise	United States	Big Ideas Judge	
Rudd Family Foundation	Low	Private Philanthropy/Foundation	United States	Big Ideas Judge	
McArthur Foundation		Private Philanthropy/Foundation	United States		Leverage (other than cost-share)
Every Mother Counts		NGO	United States		Leverage (other than cost-share)
We Care Solar		NGO	United States		Leverage (other than cost-share)

APPENDIX IV. Classes & Disciplines - FY 2014

Name	Description	Institution Where Taught	Status
Innovation OnRamp	The purpose of the OnRamp is provide resources and support to undergraduate students who have new ideas or early-stage social impact initiatives. Taught by DIL Associate Managing Director Lina Nilsson, the OnRamp class introduces students to a scaffold of theory, best practices, and tools necessary to design and implement social change initiatives, social enterprises and start-ups. Throughout the class, students further shape, evaluate and grow their own early-stage projects and ideas with support from OnRamp instructors and invited experts.	UC Berkeley	Ongoing
Development Engineering	A new interdisciplinary training program for UC Berkeley doctoral students whose dissertation research includes topics related to the application of technology to address the needs of people living in poverty. The Dev Eng in particular serves students across engineering disciplines, quantitative social science disciplines, business programs, information sciences, and natural sciences.	UC Berkeley	Ongoing
Dev Eng Seminar Series (Spring 2014)	The Development Engineering Lecture Series explores and examines innovation in the sustainable development of agriculture, public health, education, and engineering in emerging regions.	UC Berkeley	Complete
Development Technologies: Design & Evaluation	Co-taught by technologist and social scientist and core requirement of the Designated Emphasis in Development Engineering. The course is organized around the analysis and application of case studies by multidisciplinary student teams according to three thematic modules.	UC Berkeley	Ongoing
Dev Eng Research and Practice Seminar	This seminar, to be offered in alternate terms, will focus on work-in-progress presentations by students enrolled in the designated emphasis, as well as faculty and guest lecturers. Students are required to take at least one semester of the seminar.	UC Berkeley	Planned

Name	Description	Institution Where Taught	Status
Engineering, The Environment, and Society	This course engages students at the intersection of environmental justice, social justice, and engineering to explore how problems that are commonly defined in technical terms are at their roots deeply socially embedded. Through partnerships with community-based organizations, students are trained to recognize the socio-political nature of technical problems so that they may approach solutions in ways that prioritize social justice. Topics covered include environmental engineering as it relates to air, water, and soil contamination; race, class, and privilege; expertise; ethics; and engaged citizenship. This course cannot be used to complete any engineering technical or unit requirements.	UC Berkeley	Complete
CE 209 Design for Sustainable Communities	This course provides conceptual and hands-on experience in design and implementation of innovative products or processes for improving the sustainability of resource-constrained communities (mostly poor ones in the developing countries). Teams of students will take on practical projects, with guidance from subject experts.	UC Berkeley	Complete
Social Movements, Urban Histories, and the Politics of Memory.	This course examines the history of progressive social movements in the San Francisco Bay Area. Combining history, sociology, urban geography, and ethnic studies, we ask: why and how these movements emerged? What cultural, racial, ethnic and political identities were drawn from, reconfigured, and created in these movements? What kinds of knowledge and institutions were created by these movements, and how have these legacies shaped the culture and politics of the area. As part of the American Cultures Engaged Scholarship (ACES) program, this course engages students in creating social movement documentation in collaboration with community partners.	UC Berkeley	Complete
Behavioral Sensing Series	Behavioral Sensing Fall 2013 Series	UC Berkeley	Complete

APPENDIX V. Fellowships & Practica - FY 2014

Name	Short Description	Host Organization	Total # Students	Status
Demo Collective Assessment & Feedback Engine (CAFÉ)			9	Ongoing
Demo CellScope			1	Ongoing
Demo Electrochemical Arsenic Remediation (ECAR)			1	Ongoing
Demo ECAR			3	Complete
Demo ECAR			2	Ongoing
Demo Rural Electrification Power Project (REPP)			2	Complete
Demo REPP			1	Complete
Demo REPP			5	Ongoing
Demo Village Base Station (VBTS)			1	Ongoing
Demo VBTS			2	Ongoing
FA13 Explore Frugal Plasma Sterilizer			2	Complete
FA13 Explore Southeast Asia - Renewable and Adaptive Energy (SEA RAE)			1	Complete
FA13 Explore SEA RAE			1	Complete
FA13 Explore Self-disinfecting toilets			2	Complete
FA13 Explore Somatic Embryogenesis			1	Complete
FA13 Innovate Community-based Air Pollution			1	Ongoing
FA13 Innovate Does Scarcity Improve Adoption			1	Ongoing

Name	Short Description	Host Organization	Total # Students	Status
FA13 Innovate Energy Efficiency			1	Complete
FA13 Innovate Energy Efficiency			1	Complete
FA13 Innovate e-Warehousing			1	Ongoing
FA13 Innovate Field Portable Computational Microscopy			4	Ongoing
FA13 Innovate High Resolution Development Indicators (HRDI)			1	Ongoing
FA13 Innovate Information and Intermittent Water			2	Complete
FA13 Innovate Information and Intermittent Water			1	Ongoing
FA13 Innovate Modular Roof			2	Complete
FA13 Innovate Modular Roof			10	Ongoing
FA13 Innovate Sensor Reactivity			2	Complete
FA13 Innovate Treating Brackish Drinking Water			1	Ongoing
Mezuri Portland State University (PSU)			2	Complete
Mezuri PSU			2	Ongoing
Mezuri PSU			1	Ongoing
DIL Graduate Student Fellow		DIL	1	Complete
DIL Idea Team 2013 - 2014		DIL	10	Complete
DIL Idea Team 2014 - 2015		DIL	9	Ongoing
Big Ideas Graduate Student Fellow		DIL	1	Complete

Name	Short Description	Host Organization	Total # Students	Status
Mezuri Technology & Infrastructure for Emerging Regions (TIER)			1	Complete
Mezuri TIER			1	Complete
Mezuri TIER			1	Ongoing
Mezuri University of Michigan(UM)			6	Ongoing
SP14 Explore Early Infant Rapid HIV Diagnosis			1	Complete
SP14 Innovate Digital Mapping for Transparency			1	Ongoing
SU13 Explore ECAR			1	Complete
SU13 Fluoride Remediation			1	Complete
M-Pasandaaz - Information & Communication Technology for Accountability (ICT-A)			1	Ongoing
Lowering Barriers to Elections (ICT-A)			1	Complete
e-Warehousing for Smallholder Farmers (ICT-A)			1	Ongoing
Somalia Distance Mobile Savings Project (ICT-A)			1	Ongoing
Voter Turnout in South Africa (ICT-A)			1	Complete
Voter Turnout in South Africa (ICT-A)			1	Complete
Remote Monitoring of Competition between Government Service Providers (ICT-A)			1	Ongoing
FA13 Innovate Cookstove			1	Complete
FA13 Innovate Cookstove			1	Ongoing
FA13 Innovate Cookstove			2	Ongoing

Name	Short Description	Host Organization	Total # Students	Status
SP14 Innovate Income for Information: Estimating the Value of Time			2	Ongoing
FA13 Explore Causal Software Systems for Mobile Cash Transfers			1	Complete
SU13 Explore Innovative use of combustion diagnostic techniques to assist in advanced biomass stoves designs			1	Complete
Mezuri University of Washington (UW)			1	Ongoing
Mezuri UW			3	Ongoing
Mezuri UW			1	Ongoing
Mezuri UW			1	Ongoing
Mezuri UW			1	Ongoing
Mezuri UW			0	Ongoing
Mezuri UW			2	Ongoing
SP14 Innovate Empowering Homegrown Environmental Monitors			1	Ongoing
SP14 Digital Mapping for Transparency			1	Ongoing
FA13 Explore Fecal Sludge Reuse			1	Complete
FA13 Explore PV in Thailand			1	Complete
FA13 Explore Global Brigades			3	Complete
Big Ideas Mosquitos Suck			8	Complete
Big Ideas Power Tower			1	Complete

Name	Short Description	Host Organization	Total # Students	Status
Big Ideas Spot It			3	Complete
Big Ideas Electro San			2	Complete
Big Ideas Agromarket Day			2	Complete
Big Ideas Promoting Yogurt			4	Complete
Big Ideas Uniting Mother and Child			1	Complete
Big Ideas Open Data for Developing Communities			3	Complete
Sight 4 Everyone			3	Complete
Big Ideas Recreation House			3	Complete
Big Ideas Maji Yaja Kwanza			2	Complete
Big Ideas Youth Empowerment			3	Complete
Big Ideas Reach! Leadership Camp			1	Complete
DIL USAID/HESN Intern			1	Complete

APPENDIX VII. Travel - FY 2014

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
India	1	Nalgonda District	Create a network of connections to educational institutions and government officials for future field pilot studies, collected quantitative and qualitative data on water quality and levels of endemic fluorosis, and researched potential for scale-up.	Identified in-country partners	
Bangladesh	1	SNV World	Exploratory research and advanced collaboration re: Fecal Sludge reuse.		
Viet Nam	3	Energy Conservation Research and Development Center	Initiated microgrid research and collaboration with local project partners.	Local input for R&D	
Kenya	2	Sanergy, Ltd.	Met with stakeholders, tested self-disinfecting toilet prototypes, researched business resources, and developed business model.	Local input for R&D	
Thailand	1	Energy Research Institute, Chulalongkorn University	Exploratory research re: Solar PV Roadmap Process.	Local input for R&D	
Panama	4	Global Brigades	Advanced collaboration and exploratory research of ongoing project.		

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Uganda	3	UCSD, Grameen Foundation, IPA	Initial planning of research design, conducted randomization, piloted surveys, and oversaw implementation of baseline surveys.	Completed initial planning of research design, conducted randomization, piloted surveys, and oversaw implementation of baseline surveys.	
United States	1	IIT Bombay	Advanced collaboration between IIT Bombay and Berkeley re: voltage monitoring on national grids.	Local input for R&D	
India	1	IIM Ahmedabad, TERI University	Advanced collaboration with USAID India Mission.		
South Africa	2	Atiri Clinic	Interviewed clinicians and other potential users of frugal disinfection technology to determine clinical, resource, and practical requirements for the technology.	Local input for R&D	
United States	2	Sanergy, Ltd., Flashcast	Attendance at Revealing Demand Conference.	Conference attendance	
United States	2	Jadavpur University, IIT-Kharagpur	Advanced collaboration with visiting scholars in association with DIL Demonstration projects.		
Kenya	2	Innovations for Poverty Action, REA	Implementation of REPP research by PhD students in computer science and economics (UCB).		
United States	1	Makerere University	Met with DIL collaborators re: research competitions, joint capacity building initiatives, & potential research collaborations.	Local input for R&D	

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
United Kingdom	1	Skoll Foundation	Represented DIL at Skoll World Forum.		
Australia	1	University of Adelaide	Conducted exploratory tests in the laser lab at the University of Adelaide for the application of laser diagnostic techniques to biomass cookstoves.		
United States	1	Jadavpur University	Visited overseas laboratories and testing facilities related to immobilization of toxic constituents from concrete, bricks etc. and to meet relevant overseas experts to share the preliminary data and experience of the project and enrich knowledge regarding arsenic-bearing ECAR sludge.		
Ghana	1		Spoke at a panel at the Dynamic Spectrum Alliance summit.	Spoke at a panel at the Dynamic Spectrum Alliance summit. This was in support of the GSM whitespace work that is part of the Village Base Station project.	
India	1	Jadavpur University	Selected field site, trained enumerators, surveyed 300 households.	Selected field site, trained enumerators, surveyed 300 households.	
Rwanda	1	Portland State, Rwanda Ministry of Health, Agua Health	To implement sensor reactivity study in Rwanda.	Implemented study.	
Switzerland	3		Represented DIL at a session on "Development Engineering" at Tech4Dev conference.		

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
India	1		Visited possible sites for ECAR field trial, helped with prototype design for ECAR, and met with stakeholders.	Local input for R&D	
India	4		Conducted qualitative research to inform baseline survey.		
Jordan	1	UNHCR, MSF	DIL Postdoctoral field research.		
Ghana	1		DIL Postdoctoral field research.		
Thailand	1	UCSF, Chiang Mai University	Validate the CellScope 2.0 on patients at Chiang Mai University, field test the device in remote healthcare settings, and collect usability feedback from clinical collaborators.	Local input for R&D	
India	2	Re-Materials, Andblack Studio	Prepared for and commissioned the field trial of modular roofing tiles.		
Uganda	3		Collective visit of PIs to field to oversee launching of full scale intervention.		
Kenya	1		Visited HIV clinics and central testing labs in Kenya as part of a pilot study to gain a better understanding of workflows and resources in the care of infants with HIV positive mothers. This aided in our lab's development of an appropriate tool for advancing rapid point of care infant HIV diagnostics and to understand factors that could help or hinder future device adoption.	Local input for R&D	

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
Indonesia	1		Visited 6 villages in Southeast Sulawesi for the purposes of household enumeration, enumerator training and survey piloting.		
Indonesia	1		Conduct interviews about the design and use of the Community Cellular Network, including the credit transfer system, installed in Papua in February of 2013.	Local input for R&D	
Rwanda	2	PSU	Deployed and serviced sensors in support of the DIL / Mezuri platform and in support of the DIL "sensor reactivity" grant.	TBD	TBD
Rwanda	1	PSU	Will work with our Mezuri collaborators from Portland State University to install and configure water pump sensors as well as collect demographic data in order to better understand the process and needs of development impact analysis on the ground.	TBD	TBD
India	1		Discuss issues of behavior change with ECAR stakeholders and potential consumers and incorporate this feedback into the ECAR field trial. Evaluate and advise on ECAR field trial science.	TBD	TBD
Philippines	1	UCSD, Grameen Foundation, IPA	Met with national officials and local partners.	TBD	TBD

Country	# Travelers	Partner(s) Engaged	Purpose	Outcome(s)	Next Steps
India	3	UCSD	PI & research team to conduct field research and record trip in both written and video form.	TBD	TBD