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HIGHER EDUCATION SOLUTIONS NETWORK - ANNUAL REPORT (FY 2013)

Massachusetts Institute of Technology
International Development Innovation Network
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Acronyms

3IE	International Initiative for Impact Evaluation
ADE	Affordable Design and Entrepreneurship
AOR	Agreement Officer’s Representative
CAMARTEC	Center for Agricultural Mechanization and Rural Technology
CASE	Center for the Advancement of Sustainable Enterprise
CCB	Creative Capacity Building
CITE	Comprehensive Initiative on Technology Evaluation
CSU	Colorado State University
ECHO	Educational Concerns for Hunger Organization
ECSA-HC	East, Central and Southern African Health Community
EWH	Engineering World Health
GSSE MBA	Global Social and Sustainable Enterprise MBA
HESN	Higher Education Solutions Network
HortCRSP	Horticulture Collaborative Research Support Program
IDDS	International Development Design Summit
IDE	International Development Enterprises
IDIN	International Development Innovation Network
IFPRI	International Food Policy Research Institute
ICS	Innovation Center Sub-committee
IC-LOC	Innovation Center – Local Organizing Committee
ISTT	In-Service Training Trust
ITTU	Intermediate Technology Transfer Unit
KNUST	Kwame Nkrumah University of Science and Technology
MIT	Massachusetts Institute of Technology
NEVA	New Economy Venture Accelerator
NCIIA	National Collegiate Inventors and Innovators Alliance
NM-AIST	The Nelson Mandela African Institute of Science and Technology

NTBC	National Technology Business Centre
NRDC	Natural Resources Development College
PI	Principle Investigator
PIET	Program for International Energy Technologies D-Lab
RAD	Regional Analysis in Development
SAIS	Southern African Innovation Support
SATIC	Sustainable Agri-Tech Innovation Center
SEMBAA	Sustainable Enterprise MBA's for Africa
ToT	Training of Trainers
Twende -AISE	Accelerating Innovative Solutions and Enterprise
UC Davis	University of California at Davis
USIU	United States International University (Nairobi)
USP	University of Sao Paolo

Executive Summary

This year has focused on two main goals: getting the different composite pieces in place to build the network, and simultaneously developing the activities of the network. A significant amount of time was invested in setting up the IDIN infrastructure: signing the contract, developing the work plan, bringing the PIs together to coordinate work on IDIN, hiring staff, developing the sub-awards agreements, and developing the results framework. The international sub-award contracts have proved particularly difficult, absorbing a great deal of time and effort with little tangible success in terms of signed contracts with academic institutions in Ghana and Brazil. As a result, the program coordinators used purchase orders to move ahead with activities such as Innovation Centers and Summit preparation in order to keep the project moving forward.

This has led to developing two different types of partners in order to implement the full range of IDIN's work: consortium members and long-term funded partners. Consortium members are the university partners with implementing capacity for IDIN, They run the programs to engage students in international development work, have expertise in a particular area of the innovation pipeline and provide an intellectual contribution to both IDIN and HESN. They are responsible for bringing resources to the network and assume significant cost-sharing. Long-term funded partners are the mechanisms through which the network grows and becomes strong internationally. They are funded through purchase orders, not sub-awards and play a range of roles in implementation, from establishing Innovation Centers to providing resources for project development. They provide key continuity after summits and work with the consortium members as a link to the field.

In the first few months as the PIs, particularly Director Amy Smith, were setting up the overall infrastructure, MIT hired interim coordinators for the different program areas to begin implementation. As permanent staff was hired, they took over from the interim coordinators and began working with PIs as the organizational structure evolved to implement program activities. The Zambia IDDS Summit was extremely successful and resulted in 8 new prototypes and 46 people trained in design. The Network coordinator has been able to link IDDS alumni together through social media programs and individual communication to match up people with resources and skills they need. The IDIN external website is scheduled to go online in Quarter 2 of Year 2. This will greatly facilitate keeping a multi-lingual, multi-continent program connected across geography and vastly different situations. Another successful aspect of project implementation by all consortium partners in this year has been student engagement through courses, fieldwork, internships, engagement with IDIN projects and the IDDS Summit. Finally, this has been a year of intense work in preparation for establishing Innovation Centers. Although the delays in the sub-awards have been a challenge, IDIN has established long-term funded partner relationships in order to move the Innovation Centers forward in early Year 2.

Year 1 has been a time to lay the groundwork, adapt to challenges and make necessary modifications to the course of the project. Now, at the beginning of Year 2, the project is almost fully staffed by a motivated and competent team. The activities have all demonstrated that there is great energy, dedication and enthusiasm from innovators and partner organizations. In order for the implementation to keep functioning smoothly and build on that, the important task at this juncture is to ensure the undercarriage of support is built up to allow this process to move forward efficiently and effectively.

Part 1: Major Milestones and Events Completed

1.1. Milestones

1. In November 2012, the Massachusetts Institute of Technology, (MIT) and the United States Agency for International Development, (USAID) signed Cooperative Agreement AID-OAA-A-12-00095.
2. The International Development Innovation Network (IDIN) administrative and programmatic team is now in place at MIT except for the Lead Researcher and there is dedicated IDIN staff at Colorado State University, (CSU), and the University of California at Davis, (UC Davis).
3. Three sub-awards were signed by Olin College, The University of California at Davis and Colorado State University.
4. There is now a full time Agreement Officer's Representative (AOR) for IDIN at USAID.
5. The IDIN consortium held its first annual consortium meeting in March in Washington DC where representatives from each of the consortium members and international partners met to define the organization infrastructure and the overall vision, discuss the work to date, and the plan for moving forward.
6. CSU launched the New Economy Venture Accelerator (NEVA) in Nairobi, Kenya putting in place a comprehensive venture incubation service for student start-ups from CSU, the United States International University, (USIU) and the IDIN network.
7. New partnerships were forged with the National Business and Technology Center in Zambia, (NTBC), the Nelson Mandela African Institute of Science and Technology, (NM-AIST) in Tanzania, and Makerere University in Uganda for innovation centers, summits and research.
8. CSU launched the Sustainable Enterprise Masters in Business Administration for Africa (SEMBAA) at the United States International University (USIU) in Nairobi and enrolled 18 students in the first year.
9. IDIN carried out a month-long International Development Design Summit (IDDS) in July in Zambia. This regional summit completed the process of transition to a model of locally organized summits supported by the central IDDS committee. This summit brought 70 participants, students, instructors, consortium members and organizers from 23 countries together for a month, trained 46 participants in the design process and produced eight prototypes in collaboration with four local communities.
10. The consortium launched its first Call to Action on developing fire-starting materials for an environmental charcoal producer in Kampala. The Call to Action received 4 design responses.
11. Local IDDS Alumni Chapters were begun in Zambia, Tanzania, the San Francisco area and the Ft. Collins area to expand the network activities. The chapters provide opportunities for innovators to collaborate, help support summit organization where possible, move design projects forward after summits, and help participants spread what they have learned through IDDS.
12. MIT trained 7 IDDS alumni from Ghana, Tanzania, Uganda and Zambia to become future IDDS instructors, another step towards transferring more responsibility of delivering curriculum to local actors. Kenny Mubuyaeta, one of the seven, debuted as an instructor in the IDDS Zambia Summit in July.

1.2. Events

1. In November 2012, the Higher Education Solutions Network, (HESN), held their formal launch in Washington DC. Senior delegates from MIT administration included the Dean of Undergraduate Education, Daniel Hastings, Provost Chris Kaiser, and Bill Bonvillian, the Director of MIT's Washington DC office. All IDIN Consortium members were present and participated in meetings that included senior AID officials, Rajiv Shah, the USAID Administrator, and Hillary Clinton, the Secretary of State. IDIN and the Comprehensive Initiative on Technology Evaluation (CITE) introduced their work at the public HESN event held at the National Academy of Sciences. Students from each consortium university were also present and participated in the events.
2. IDIN and CITE hosted a USAID delegation on December 17th and 18th to discuss project work plans, learn about HESN and how to work with USAID, and explore the ways the USAID cooperative agreements can be leveraged to focus international development research at MIT.
3. Olin held an IDIN student launch event that drew 60 students from Wellesley, Babson and Olin to inform them about opportunities to get involved with IDIN and HESN.
4. Dr. Ben Linder from Olin led a team of 6 students and 2 teachers from the Affordable Design and Entrepreneurship Program (ADE) to visit the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana in January in order to do joint research on scaling innovations.
5. Rakesh Pandey led a 5 person Olin-ADE team to visit India for fieldwork with IDIN partner ZIMBA on chlorination technologies.
6. Amy Smith organized D-Lab staff and IDDS alumni to lead field work for 39 MIT students to travel in teams to Zambia, Ghana, Tanzania, India and Brazil to work with IDIN partners on 19 different projects in January 2013.
7. Student-teacher teams from these MIT and Olin fieldwork projects met with USAID staff in Ghana, India and Zambia.
8. In February 2013, CSU's New Economy Venture Accelerator (NEVA) hosted a social entrepreneur networking event with over 150 people in attendance in Nairobi, Kenya.
9. MIT hosted the first annual IDIN Consortium meeting in March 19-21, 2013. All the participating PIs met together in DC to discuss the work to date, define the organization infrastructure and the overall vision. They worked out coordination mechanisms, and next steps for the project. (see Milestone 5 above)
10. Amy Smith, Carl Hammerdorfer, and Ben Linder attended the 2013 "Helping to Disseminate Technology at Scale with University Program Support." at the 2013 National Collegiate Inventors and Innovators Alliance (NCIIA) Annual Meeting. Carl Hammerdorfer and Ben Linder both participated in a panel on NCIIA Annual Meeting. MIT, CSU and Olin all led "un-panels" sessions for the associated Sustainable Vision Connect event to give advice to other universities trying to develop similar programs.
11. During the March 2013 Case Board Meeting, CSU hosted Dr. Frieda Brown, Chancellor of the United States International University, (USIU) in Nairobi Kenya, at the Center for the Advancement of Sustainable Enterprise (CASE) at CSU.
12. In March 2013, George Obeng and Crossman Hormenoo from KNUST visited MIT to meet with Amy Smith and Ben Linder to discuss Summit planning and collaboration through IDIN.
13. In addition to attending the March 2013 IDIN consortium meeting, Dr. Tereza Carvalho from the University of Sao Paulo (USP) and Miguel Chavez from Caos Focado visited MIT to discuss collaboration and the innovation center in Brazil with Amy Smith and the IDIN staff.
14. Amy Smith, Kofi Taha and Elizabeth Moreno Hoffecker from MIT IDIN attended the HESN Lab Directors meeting in Washington DC in April 2013. They worked on developing the IDIN Results Framework and monitoring and evaluation plan.
15. A high-level USAID delegation visited MIT for a two day meeting with senior MIT officials in May 2013. The USAID delegates, Dr. Alex Dehgan from the Office of Science and Technology,

Dr. Ticora Jones from HESN, and Dr. Amit Mistry the IDIN AOR, met with MIT President Rafael Reif and other high-level MIT faculty. While at MIT, Dr. Alex Dehgan, the Science and Technology Advisor to the Administrator and Director at USAID gave a keynote speech on May 13th on “The Future of Science and Technology in International Development”.

16. Amy Smith, Kofi Taha and Benjamen Monciviaz from MIT traveled to East Africa in June to conduct two trainings on Creative Capacity Building (CCB) in Mongoro, Tanzania and Uganda, This included training of trainers for IDDS instructors (see above in Milestone 13).
17. The IDDS Summit in July 2013 in Zambia was both an event and a milestone (see Milestone 10 above). It brought together 46 participants from 23 different countries as well as 24 IDDS presenters, organizers and IDIN consortium members for one month of intensive training in the design process. The summit theme was “Better Living through Collaborative Innovation”. The 46 participants increased their capacity to develop technologies which address problems in their communities and produced or refined eight prototypes in: menstrual hygiene, aluminum recycling and processing, post-harvest storage, solid waste management, palm leaf processing, child nutrition, health ICT and charcoal processing.
18. The IDIN Network Coordinator, Jona Repishti, and IDIN staff from CSU, Shelby Sack and Jessica Rawley, visited the USAID missions for East Africa and Kenya in Nairobi in July 2013 to present IDIN’s work and explore future collaboration.
19. UC Davis designed a four-week D-Lab course with curriculum on product design and prototyping that was delivered at the Zamorano University in Honduras in the summer.
20. The IDIN consortium PIs held their second 2013 meeting in Zambia during the July 2013 Summit to discuss their work to date and next steps.

1.3. Publications

The case study “*AYZH at a Crossroads: Maternal Health for Whom*”, written by Zubaida Bai and Asad Aziz from CSU, won third place in the Next Billion Case Writing Competition. A link to the case can be found at: <http://www.globalens.com/casedetail.aspx?cid=1429329>

The article “*Innovation and Stagnation among Ghana’s Technical Artisans*” written by Anna Waldman-Brown, George Obeng (the IDIN PI from KNUST) and Yaw Adu-Gyamfi was submitted to and was accepted for presentation at the 2013 International Association of Management of Technology conference on Science, Technology and Innovation in the Emerging Market Economies.

1.4. Communications

Date	Source	Media	Title/Link
11/8/2012	The Boston Business Journal	eNews	“MIT anti-poverty initiative lands \$25 million grant” on November 8, 2012” http://www.bizjournals.com/boston/news/2012/11/08/mit-gets-25m-grant.html
11/8/2012	Boston Herald	Print	“MIT wins USAID award to help developing countries”
11/8/2012	The MIT News	eNews	“Bringing the world to Innovation” http://web.mit.edu/newsoffice/2012/going-inside-d-lab-at-mit-1108.html
11/8/2012	The MIT News	eNews	“MIT a linchpin of major new USAID program: http://web.mit.edu/newsoffice/2012/usaid-grant-technology-for-the-poor-1108.html
11/8/2012	e! Science News	eNews	“MIT a linchpin of major new USAID program” http://esciencenews.com/sources/mit.reserach/2012/11/0

			8 mit.a.linchpin.major.news.usaid.program
11/8/2012	Science Magazine	eNews	“A ‘DARPA’ approach to U.S. foreign aid” http://news.sciencemag.org/scienceinsider/2012/11/a-darpa-approach-to-us-foreign-a.html#.UKPMmNketxc.email
11/9/2012	The Boston Globe	Print and eNews	“MIT wins USAID award to help developing countries” http://www.boston.com/politicalintelligence/2012/11/09/mit-wins-usaid-award-help-developing-countries/iszwXIHqWbShp8cBmtnb1L/story.html
3/21/2013	Zambia Daily Main	Print media	“Hosting of IDDS will help increase skills development in Youth” http://daily-mail.co.zm/blog/2013/03/21/hosting-of-idds-will-help-increase-skills-development-among-youths/
3/27/13	CSU Business school blog	Enews Blog Press release	“Colorado Sustainable Enterprise now offered in Kenya” https://blog.biz.colstate.edu/2013/03/27/wow-kenya
3/30/2013	Engineering Echo	Print	“Hosting of IDDS will help increase skills development among Youth” Article in the publication of the Engineering Institution of Zambia; Issue 29
7/3/2013	Muvi TV Zambia	television	“Zambia Hosts International Design Summit” http://www.muivitv.com/zambia-hosts-international-development-design-summit/
7/3/2013	Time of Africa	Print media	“Zambia; State urges science innovation in economic sectors” http://allafrica.com/stories/201307040294.html
7/3/2013	Lusaka Voice	enews	“Zambia’s rural, peri-urban challenges need Urgent Solutions – Dr Phiri” http://lusakavoice.com/2013/07/03/zambias-rural-peri-urban-challenges-need-urgent-solutions-phiri/
7/5/2013	You tube	You tube video	“Welcome to IDDS 2013” http://www.youtube.com/watch?v=uitu9Rc0WYM
7/30/2013	QFM radio Zambia	radio	“IDDS, a suitable manner for encouraging co-creation – Dr. Phiri” http://www.qfmzambia.com/blog_details.php?id=13790
9/17/2013	CSU Business school blog	enews blog	“Collaborating with new friends to tackle Zambia’s challenges” http://blog.biz.colostate.edu/2013/09/17/tackle-zambias-challenges/
10/15/2013	CSU Business school blog	Enews blog	“Tackling Zambia’s Challenge; getting to know the village of Mwavi” blog.biz.colostate.edu/2013/10/.../getting-to-know-the-village-of-mwavi/
10/21/2013	Times of Zambia	Print media	“Zambia, Toyota donates aluminum scraps” http://allafrica.com/stories/201310230389.html
10/21/2013	Lusaka Voice	enews	“Zambia, Toyota donates aluminum scraps” http://allafrica.com/stories/201310230389.html
11/13/2013	The Tech	eNews	“\$25 million for international development initiatives” http://tech.mit.edu/V132/N53/dlab.html
11/13/2013	MIT Spotlight	eNews	http://web.mit.edu/newsoffice/2013/student-profile-jonathan-tebes-1113.html

Part 2: Description of Key Activities

2.1. Annual Objectives

The annual work plan for the first year of the International Development Innovation Network, (IDIN) was developed as a guide to integrate and coordinate project activities during the first twelve months. This was an approved implementation plan but given the multiple layers of the project and the multi-country nature of the work, the work plan needed to be flexible enough in its activities to allow shifts in emphasis and prioritization as challenges and opportunities arise. It has been crucial to be able to adapt activities as needed in different contexts in order to carry out the objectives and the goals.

The overall four main goals for the International Development Innovation Network are:

Objective 1: Build a global network of innovators that create solutions addressing issues of poverty.

Year one focused on setting up the basic components to build the global network, infrastructure, capacity and communication. The outcomes for year 1 in the work plan are:

1. IDIN consortium members have the necessary infrastructure to implement the cooperative agreement so that they can begin to build the global network.
2. IDIN develops the collaboration and capacity to organize and run an expanded number of Summits in Year 2.
3. IDIN implements a four-week International Development Design Summit (IDDS) summit in Zambia in July 2013 and prepares and organizes a themed summit on Maternal Health in East Africa to be held October/November 2013 in year 2. At least 40 innovators will be trained in the design process
4. A database of innovators and innovations allows people to collaborate, matching skills, materials and needs across the broad network and at least 100 innovators upload information
5. A system for communications and collaboration allows members to communicate across the international network. Network members will meet Calls to Action and develop at least 10 project framing briefs.

Objective 2: Create a network of Innovation Centers and venture accelerators that promote and support local innovation and entrepreneurship to develop and bring technologies to scale.

The work in Year 1 focused on setting up the first innovation centers and venture accelerators and developing a grants program. The outcomes for year 1 in the work plan are:

1. Three regional innovation centers will provide IDIN network members with tools, materials and technical support for innovators to use to create design solutions.
2. A grants program is in operation and at least five grants will be given out so participants will further their projects
3. The New Venture Accelerator (NEVA) established in Nairobi so that network members will have access to support to create enterprises.

Objective 3: Better understand the role of local innovation in the broader development context.

The outcomes for year one in the work plan are:

1. A full research team staffed and composed of Senior Research Scientist and a Monitoring and Evaluation Coordinator and three graduate students.
2. A set of assessment tools including:
 - a. logical frameworks for summits, the tools that come out of the summits, and the impact of local innovation on the communities where IDIN works
 - b. assessment of the impact of IDDS on participants
 - c. baseline surveys for area where Innovation Centers will be developed
3. Monitoring and Evaluation tools in place to effectively measure the impact of the innovation centers, including a baseline and six month follow-up.
4. Monitoring and evaluation tools in place to effectively measure the impact of IDIN technologies and ventures, including a framework for selecting a set of technologies and ventures to evaluate.

Objective 4: Engage students in development and prepare them to be the next generation of leaders in international development.

The Consortium universities engage students in development through IDIN in four ways:

1. Prepare students to engage with the network
2. Engage students to work on IDIN projects
3. Bring students into the IDIN network
4. Engage students with USAID field missions

In order to avoid duplication, given the format of the annual report, the activities around the IDIN objective on student engagement are found in Section 4

2.2. Summary of Key Activities and Outcomes

Objective 1: Build a global network of innovators that create solutions addressing issues of poverty:

Summary of progress made in Year 1 for this Objective:

The formal structures to implement the agreement have been set up; the contract was signed, the year 1 work plan was approved, and a results framework was developed and submitted. Most of the sub-awards have been signed; the three universities in the US received sub-awards but the sub-awards for the Kwame Nkrumah University of Science and Technology, (KNUST) and the University of Sao Paulo (USP) are still in negotiation. The Massachusetts Institute of Technology (MIT) hired a team of coordinators to lead the program areas of Summits, Network Development and Innovation Centers. The other universities in the consortium who received sub-awards either designated and/or hired staff for the project. Although they have not received sub-awards, the partners in Ghana, Zambia and Brazil continue to discuss, plan and coordinate with the rest of the consortium around specific issues; for example the IDDS 2013 Zambia Summit and the Innovation Centers in Ghana and Sao Paulo. The consortium developed mechanisms for collaboration, particularly around summits, curriculum, networks and student engagement. IDIN organized and ran the month-long design summit in Zambia in July 2013, organized the maternal health themed summit to be held in Arusha, Tanzania in Year 2 (October 2013) and is working on the organization of two more summits in Year 2. Work on developing the data base and the website is under way. In the meantime, the Network Coordinator has used social media platforms and emails to keep IDDS alumni connected and involved.

Outcome 1 for Objective 1: IDIN consortium members have the necessary infrastructure to implement the cooperative agreement so that they can begin to build the global network

Activity 1.1. Develop the infrastructure to implement the cooperative agreement

Main participants: D-Lab Administrative Officer, MIT Office of Sponsored Programs, IDIN Fiscal and Program Administrator, IDIN Administrative Assistant, Consortium Principal Investigators (PIs), USAID Agreements Office.

1.1.a Sign the contract and sub-awards

In November 2012, MIT and USAID signed Cooperative Agreement AID-OAA-A-12-00095 bringing the Comprehensive Initiative on Technology Evaluation (CITE) and IDIN proposals into a single award which maintains the autonomy of each. Three sub-awards were completed in March 2013 and then signed in the third quarter for the three other US universities in the consortium; Franklin W Olin College of Engineering, Colorado State University (CSU) and University of California at Davis (UC Davis). Those three universities have now put into place the necessary administrative and accounting systems to handle grant monies and hired or designated staff for the IDIN program.

Sub-awards with the international universities have been much more difficult to navigate. Negotiations for sub-awards continued throughout the first year with University of Sao Paulo (USP) in Brazil and Kwame Nkrumah University of Science and Technology (KNUST) in Ghana. The sub-award process with USP has been exceptionally difficult. The IDIN contact there, Dr. Tereza Carvalho, has subsequently withdrawn from the project. Her replacement, Dr. Marcos Barretos, has had serious health issues, which have delayed his ability to shepherd the sub-award through the university process in USP. Although these organizations have not yet received sub-awards; they have staff with dedicated time to IDIN as does the National Technology Business Center (NTBC) in Zambia. These are:

- Dr. George Obeng and Crossman Hormenoo. KNUST in Ghana
- Dr. Tambatamba and Yvonne Mulambwa from NTBC in Zambia
- Dr. Marcos Barretos from USP in Brazil.

The original idea in the initial stages of the project was that project expansion through membership would happen through the consortium. Additional universities would be brought into the consortium as partners to take leading roles in innovation centers and summit leadership. In this first year, two things have modified that outlook. IDIN has found out that it is preferable to have a wider range of institutions as partners to implement innovation centers and lead summits and it has been very difficult to negotiate the sub-awards with the universities in Africa and South America, which has delayed implementation

Given those conditions, Lab Director Amy Smith has refined the definitions of partnership within IDIN to better reflect the needs of the program in the following terms:

Consortium members are the university partners of the network funded through sub-awards. They are required to contribute to the work plan and quarterly reports and provide detailed financial reporting. Consortium partners run programs that engage students in international development work and have expertise in particular areas of the innovation pipeline or in specific sectors. They are expected to bring resources and significant cost-sharing to the network and have to seek funding from other sources and leverage their on-campus resources. They take the lead on interacting and collaborating with other members of the Higher Education Solutions Network (HESN) and are expected to write articles, present at conferences and publish the work that they do as part of IDIN. They both contribute intellectually to HESN and IDIN and develop the implementation capacity of IDIN. New consortium members will be

identified for strategic gap filling (such as innovation research, or environmental impact), rather than for growth.

Long-term funded partners are the mechanism through which the network grows and becomes strong. These are organizations that help to implement the vision and the work of IDIN. They are funded through purchase orders and are required to keep accurate financial records and reconcile all expenditures. Different funded partners will take on different roles, for example, a funded partner might take on the establishment and operation of an innovation center, or they might provide resources to network members to move their projects forward. Long-term funded partners provide cost-sharing through in-kind contributions and leveraging staff salaries. They are not required to seek funding from external resources to support IDIN activities. However, they are welcome to do so if they wish. They are responsible for reporting results internally to the IDIN monitoring and evaluation coordinator and making some contributions to the quarterly reports and work plan. Funded partners are important for providing project continuity after Summits and for working with consortium members as a link to the field. These funded partners are not expected to produce publications, although they may do so in collaboration with consortium members. Funded partners may be invited to attend selected HESN events or IDIN meetings.

1.1.b Staffing IDIN

At MIT D-Lab, all the key staff has been hired with the one exception of the Lead Researcher. In the second quarter, MIT hired:

- Nai Kalema was hired as the IDIN administrative assistant in January 2013; and
- Sharmarke Osman was hired as the IDIN Financial and Program Administrator in February 2013.

They both work closely with the D-Lab Administrative Officer, Sue St Croix, the Office of Sponsored Programs at MIT, and the appropriate IDIN designated staff and PIs at each of the consortium universities.

- Elizabeth Hoffecker Moreno was hired as Interim coordinator for Monitoring and Evaluation and Learning from January to August 2013. She then transitioned into coordinating IDIN's overall research and impact assessment work and began to recruit for the Lead Researcher position.
- Kofi Taha was hired as Innovation Center Coordinator at 50% time.

In the third quarter, MIT hired the following dedicated program staff:

- Jona Repishti was hired as the IDIN Network Coordinator in May 2013.
- Sher Vogel was hired as the IDN Summit Coordinator in May 2013 in time to work on the Zambia and Tanzanian Summits.
- Shivi Chandra was hired as the Monitoring and Evaluation Coordinator in August 2013

Within the Consortium; the three universities who have received sub-awards have hired program staff to coordinate their activities in support of IDIN.

- **Olin** hired Rakesh Pandey as the placement officer to facilitate interactions between Olin students and IDIN network members. They have now completed preparations to hire a project officer who will be hired in the beginning of Year 2.
- **University of California at Davis** employed Carl Jensen in March 2013 to focus on curriculum delivery, IDIN network development and coordinate other Program for International Energy Technologies (PIET) lab activities at UC Davis. Erin McGuire was hired as a monitoring and evaluation specialist in July 2013. Daniel Mokrauer-Madden was hired in September 2013 to focus on IDDS in Tanzania, IDIN curricular development and delivery of PIET lab courses at UC Davis.

- **Colorado State University** hired Shelby Sack as Project Coordinator for IDIN work and Jessica Rawley for financial reporting and NEVA activities. Both are working at the Center for Advancement of Sustainable Enterprise, (CASE), at CSU.

(please see Appendix 1 IDIN organization table)

1.1.c Work plans and monitoring and evaluation

IDIN's –Year 1 Work plan was submitted on January 8, 2013, revised in July 2013, and approved under agreement AID-OAA-A-12-00095.

Elizabeth Hoffecker Moreno, the Interim Coordinator for Monitoring, Evaluation and Learning, developed and submitted the IDIN Results Framework and the Monitoring and Evaluation Plan including the development of a set of standard and custom performance indicators, on June 30th 2013.

1.1.d Consolidating the organization of the Consortium

The members of the Consortium met for the first annual IDIN Consortium meeting in March 2013 to:

- Form a draft of the organizational structure of IDIN
- Brainstorm and consolidate the 5-year vision, goals and objectives
- Develop and prototype a planning tool for determining roles and responsibilities.

This meeting was a chance to discuss preparation for IDDS Zambia 2013, innovation center strategies, curriculum, and IDIN communication strategies. Consortium members began the strategic planning for future summits, including mechanisms for running Summits, participant selection, project identification, community identification, curriculum development, site logistics and event management as well as scaling the models. They reviewed areas of responsibility for each consortium member. (Please see Appendix 2 for the notes of the first annual consortium meeting)

***Results for Outcome 1:** IDIN consortium members have the necessary infrastructure to implement the cooperative agreement so that they can begin to build the global network.*

This outcome has been achieved in large part. The key staff at IDIN central is all in place, except for the Lead Researcher. The contract was signed with AID, the work plan approved for Year 1 and the project results framework developed. The sub-award process is the most problematic part of this outcome: only three sub-awards within the US have been finalized, in Year 1, the other two (international) sub-awards are behind schedule. The levels of bureaucracy between MIT and the international universities are extremely difficult to navigate. IDIN Central staff has found it much more expedient to work with international partners through purchase orders rather than through sub-awards. Therefore IDIN has developed two categories for partnership, consortium members funded through sub-awards and long-term funded partners funded through purchase orders.

Outcome 2 for Objective 1: IDIN develops the collaborations and capacity to organize and run an expanded number of Summits in Year 2.

Activity 1.2 Building capacity to increase the number of Summits offered each year

IDDS Summits have traditionally been built on a strong volunteer ethos, with many people contributing time, energy, skills, and enthusiasm. Since IDIN is continuing the IDDS goal to build local leadership in organizing summits, IDIN Central wants to keep this strong volunteer base while they expand their activities. This moves IDIN towards the vision of expanding the number of summits through regional organizing teams that increasingly do more coordination and organization. A main focus of Year 2 will be to support regional organizing teams to build strong capacity on the ground.

1.2.a Staffing for coordination of the summits

IDIN formed a summit sub-committee in Quarter 1 to work on developing the vision and strategic plans for the upcoming summit offerings. Daniel Mokrauer-Madden was hired as the interim Summit Coordinator to keep the planning on track for the month-long Zambia IDDS Summit in July 2013 and the two-week themed summit in Tanzania on Maternal Health in November 2013. The permanent Summit Coordinator, Sher Vogel, was hired in May of 2013 and began work in June. After Sher Vogel took on the position as permanent Summit Coordinator, Daniel was later hired by UC Davis to work on IDIN curriculum and help prepare for the IDDS Tanzania Summit in 2014, given his long experience in Summit preparation.

1.2.b Building capacity at the local level

Sher Vogel came on to the team at the end of May and immediately began working on the IDDS Zambia Summit and the preparation for the October/November 2013 Tanzania Maternal Neo-Natal Health Summit. Her priorities, however, are working with the Summit sub-committee to develop the strategic plan for expanded summits, and developing the tools necessary to build capacity with partners for local summit organization and instruction. She has identified three necessary components to set this in motion: First, she is working to set in place guidelines for IDIN criteria to determine the selection of summit sites and local organizing partners. This set of guidelines will be completed and submitted to the steering committee in Year 2 and once approved, will serve as a guide for charting summits over the remaining years of the project. Each new summit will have a lead organizing committee on site and a lead instructor/curriculum organizer on or off site, depending on the circumstances.

The second component of building local capacity for summit expansion is to broaden the curriculum offering and curriculum leadership. For IDDS Zambia 2013, Ben Linder from Olin and Amy Smith from MIT led development of the curriculum, working closely with Yvonne Mulambwa from NTBC who played a large role in curriculum development. Miguel Chavez from Caos Focado and Kenneth Mubuyaeta also contributed significantly to curriculum development for the Zambia Summit. Amy Smith, and Ben Linder, took the lead on curriculum delivery along with Yvonne Mulambwa, and Kenny Mubuyaeta with the help of Henry Chilufya from Peace Corps Zambia. Amy Smith is now leading curriculum development for the two-week themed summit in Tanzania. In the coming years, it will be necessary to expand responsibility among the PIs for summit curriculum development and delivery.

Towards this goal, UC Davis is preparing to take the lead on curriculum for the IDDS Tanzania Summit in 2014. UC Davis worked with NTBC to prepare and deliver the Build-It day curriculum for the 2013 Zambia summit to get more experience in summit curriculum preparation. UC Davis hired a graduate researcher in 2012-2013 to work on the summit curriculum development. He attended IDDS Zambia to learn about it first-hand, and then hired an additional student (Daniel Mokrauer-Madden, an experienced IDDS organizer who was the IDIN interim Summit Coordinator in Year 1). UC Davis is completing an organizational plan for summit preparation for IDDS Tanzania in 2014.

The third component for increasing local organization of summits is building capacity on the ground for the local organizing teams. After the Zambia Summit, NTBC emphasized the need for more preparation and training for local organizing teams. Sher Vogel has begun work to develop training tools in September 2013, including a IDDS planning and implementation guide for organizers and regional hosts to use when coordinating a summit. This will provide substantial guidance for national organizers and allow the Summit Coordinator to play more of a coordination and backstop role, granting more agency and opportunity to local partners.

Sher Vogel and IDIN PIs are beginning to identify those subjects, e.g. project continuity, and some degree of market analysis or business planning which need to be integrated into summits. They are refining what

needs to be integrated into all summits and what might require separate training mechanisms such as a themed summit on scaling up ventures.

Preparation for themed summits will be slightly different as they require input on specific content and experienced practitioners for those particular themes. The preparation for IDDS Zambia 2013 and the two-week themed Tanzania Summit provided useful lessons for overall summit development including the need for strategic criteria for partner and site selection, training and preparation needs including a manual for local organizers, the necessity for policy on compensation, and the different planning requirements for themed summits and IDDS summits.

Results for Outcome 2: *IDIN develops the collaboration and capacity to organize and run an expanded number of Summits in Year 2.*

This outcome is under way; the new Summit Coordinator is focusing on putting together the strategic and organizational pieces to implement an expanded number of summits with increasing leadership from regional organizing groups on the ground, using the learning from IDDS Brazil 2012, IDDS Zambia 2013 and the preparations for the 2013 Maternal Neo-Natal Health Summit and 2014 IDDS in Tanzania.

Outcome 3 for Objective 1: IDIN implements a month-long IDDS Summit in Zambia in July 2013 and prepares and organizes a themed Summit: Maternal Health in East Africa in October/November 2013. At least 40 innovators will be trained in the design process

1.3.1. Activity 1: Organizing and running an expanded offering of Summits

Main participants: IDIN Summit Coordinator, Summit Committee, Consortium members, IDIN network members, USAID

The Summit sub-committee and the interim Summit coordinator Daniel Mokrauer-Madden led this work until this work until Sher Vogel was hired as Summit Coordinator in May 2013. Three key activities in this area for Year 1 were:

- Organize and hold a full length month-long design summit in Zambia in July 2013.
- Carry out preparations for a Maternal Health themed summit in October 2013, Year 2.
- Put the organizing structure into place for the IDDS 2014 design summit in Tanzania to be held in Year 2.

1.3.1.a Preparation for the Summit:

The 2013 IDDS Summit, held in Lusaka, Zambia in July, completed the transition towards local organizations taking more responsibility for organizing the summits, a goal of the project. Dr. Tambatamba, Director of the NTBC, and Yvonne Mulambwa from NBTC led the organizing team in Zambia for the four-week summit with the theme “Better Living through Collaborative Design”. All the PIs worked together with former IDDS organizers such as Daniel Mokrauer-Madden to give Dr. Tambatamba and Yvonne Mulambwa a day and a half training on organizing the IDDS Zambia 2013 Summit. George Obeng and Crossman Hormenoo from KNUST in Ghana were able to share local organizing experience and IDIN staff from CSU and UC Davis, also present at the meeting, participated in the training. The Zambia organizing team included IDDS alumni and the Technology Development Advisory Unit at the University of Zambia and worked closely with the IDIN interim network coordinator and Summit coordinators, the Summit sub-committee and IDIN central at MIT. Volunteer support was impressive: the team selected five international organizers from Latin America and Africa, all IDDS alumni, who then helped in spreading the word, reviewing applications, advising on curriculum and giving feedback on improving the experience. The international organizers also did a lot of the logistical work for the summit and served as design facilitators.

There was good coordination among the summit committee in the US, the organizing team in Zambia and the international volunteers. For example, Dr. Ben Linder prepared the on-line application form for the

summit and facilitated the application process. The volunteer organizers broadcast the application forms through their networks. Finally, the organizing team in Zambia, IDIN Central, some of the PIs and the summit subcommittee worked to select 50 candidates from a pool of 183 applicants. Olin and MIT PIs helped the local organizing team to develop the project challenges for the summit teams. As in previous IDDS summits, the Zambian summit continued to demonstrate the capacity to bring in an extremely diverse applicant pool with a wide range of talents.

1.3.1. b Delivering the Summit

The IDDS Zambia Summit brought together 46 participants from 23 different countries, as well as 24 IDDS organizers, trainers and facilitators with a range of backgrounds, education and experiences for an month-long intense, hands-on capacity building experience in design and innovation. It included many of Zambia's IDDS alumni as organizers, and approximately one quarter of the participants were Zambian, bringing the total of IDDS alumni in Zambia up to 42, a critical mass of people who understand co-creation. This summit was significant because:

- it continued to expand IDDS's reach, broadening the foundation for the network by bringing in students from all the consortium universities who can then continue work on the projects from the summit, supported by IDIN and the PIs.
- IDDS Zambia was the first design Summit presented and implemented within the overall strategic project of building a global network of innovators, and therefore incorporated these ideals into the curriculum.
- IDIN program coordinators were able to begin laying the groundwork for the global network by introducing the opportunities now offered through the IDIN network, i.e. micro-grants and mentoring, training on project continuity, communication linkages for building the network, and scholarships and webinars for moving prototypes towards business ventures.

Students from the consortium universities brought additional dimensions to the summits. Olin research students provided hands-on opportunities for participants to learn electronics. Although CSU students formerly participated in IDDS summits to support the integration of the entrepreneurial aspect into IDDS, IDIN has made it possible to offer significant new resources and opportunities for entrepreneurship to IDDS alumni through CSU. CSU now offers scholarships to Sustainable Enterprise Masters of Business Administration in Africa (SEMBAA) and Global Social and Sustainable Enterprise (GSSE) Masters of Business Administration programs as well as the possibility of faculty mentorship from both CSU in Colorado and the United States International University (USIU) in Nairobi and opportunities for project collaborations with students in this program.

The participants began the Zambia summit in Lusaka learning the design process and then were divided into mixed sector teams to go out four villages in rural areas to get a clear understanding of the development challenges faced by those communities in particular, pre-assigned sectors. Two design teams were assigned to each of four villages where the design challenges had been posed:

1. The teams assigned to Kamphelo Village in Petauke District in Eastern Province worked on menstrual hygiene and agricultural charcoal production.
2. In Chiambala village in Mumbwa district in Central Province, the design teams worked on post-harvest processing and child nutrition.
3. Those going to Mwavi village in Luangwa District in Lusaka province focused on palm leaf processing and ICT for health,
4. The team working in Chizanga compound in Lusaka province worked on waste management and aluminum recycling.

They came back to Lusaka work on the prototypes and then returned to the villagers to pilot the prototypes before finally presenting them in the closing ceremony in Lusaka. The Permanent Secretary of the Zambian Ministry of Education, Science Vocational Training and Early Education, the USAID AOR

for IDIN, Dr Amit Mistry, and representatives from the USAID Mission in Zambia and Peace Corps Zambia participated in the closing ceremonies of the Summit.

1.3.1.c Curriculum;

Amy Smith from MIT and Ben Linder from Olin led delivery and development of the curriculum for IDDS 2013, along with Yvonne Mulambwa and Kenny Mubuyaeta. Miguel Chavez from Caos Focado also worked on curriculum development and Henry Chilufya, from Peace Corps Zambia also delivered several sessions.

There was one day of Build-it modules at the beginning of the summit. Amy Smith and the D-Lab staff at MIT had originally developed the majority of the Build-it kits for the D-Lab design class and Creative Capacity Building (CCB) trainings sessions with some being developed by Ben Linder at Olin. UC Davis worked with NTBC to select and coordinate 5 of these original Build-its and prepared curriculum to present them for the Build-it day of the Summit. NTBC and UC Davis created evaluation forms, facilitated sourcing with aggregated tool and supply inventory and identified facilitator teams of Zambians and international organizers. Crossman Hormenoo of KNUST served as the workshop coordinator and oversaw the logistics for the modules along with Carl Jensen of UC Davis and organizers Wilfredo Albuquerque and Fabio Fajardo Tolosa.

Dr. Oscar Mur-Miranda from Olin and Erin Pierce, an Olin student, developed a sixth, new Build-it module on micro-processor circuits for IDDS and prepared teaching materials for a module on joule thief circuit creation, which enables additional energy to be extracted from “dead” batteries. The Olin PIs developed the curriculum content around the design of smart systems that incorporate microcontrollers to evaluate impact and appropriateness in different contexts.

Since the organizers identified the need to integrate training on project continuity into the curriculum, Jona Repishti, the Network Coordinator, developed and piloted a new half-day program at the Zambia Summit to help guide participants on project continuity post-Summit. Participants broke into small teams to make plans for continuity, identify challenges, establish the roles and responsibilities of each participant, prepare implementation timelines and action items. The Network Coordinator also introduced the range of projects and opportunities offered through IDIN including micro-grants, mentorship services and calls to action. Scott Bellows and Kefah Njenga of the NEVA and SEMBAA programs at USIU also did a one-day workshop to introduce ideas for business models for the projects. (Please see Appendix 3 the Zambia Summit Newsletter by Sher Vogel for an overview of the summit)

1.3.1.d Design projects at the Zambia summit

The summit produced and/or refined 8 prototypes for the following projects, which have been continued by members of IDIN, the current state of the projects are as follows:

d. 1. Menstrual hygiene: There has been a lot of progress after the group developed a low cost DIY prototype for a disposable sanitary pad using local cotton and other materials. One of the group members has now established an organization of 15 rural women to produce the disposable sanitary pads that his team developed. Three other group members are working with 10 women in the non-governmental organization (NGO), Fiwanima Abantu, to make sanitary pads and are in contact with four other women’s groups. A group of SEMBAA students in Nairobi are developing a business plan for cheap safe sanitary pads. Amy Smith at MIT is organizing a group of D-Lab students to go to Zambia in January 2014 and continue work on prototype development, venture design and educational outreach.

d. 2. Aluminum recycling: The Protek team sought to improve the safety and efficiency of aluminum smelting and casting for making utensils in local foundries. They developed two prototypes with

improvements to chimneys, lids and walls, improving mobility, protection from weather, safety and efficiency. The prototypes are being piloted in two locations so the team can collect user feedback. The team also received an IDIN micro-grant to build two more prototypes for testing, one in South Korea and one in Nairobi. The local Toyota Company in Zambia donated aluminum scrap to this project which has encouraged the local group toward economic development in aluminum casting.

d. 3. Post-harvest: The team developed an air tight container made of local materials called Pohatek for maize storage to prevent post-harvest losses, a major issue for the farmers here. A six-month trial of this prototype is currently underway in the community in Zambia who are very involved in the project and closely keeping to the trial schedule for different harvest bins. The results of this trial will be available in Year 2.

d. 4. Charcoal production: The team came up with a low cost design for a kiln made out of mud bricks to carbonize maize cobs to make charcoal, eliminating the need to purchase an oil drum to make the kiln. They also produced a wooden charcoal press, and the local team is continuing to make improvements to it. The team is very interested in developing a mud-brick brazier as most people in the community cannot afford metal braziers. Amy Smith from MIT is bringing a team to Kampelo in January 2014 to continue work on this project.

d. 5. Palm Leaf processing, The team developed ergonomically improved designs for the weavers' looms and other tools to process palm fronds to make a variety of crafts such as hats, mats and baskets. GSSE students at CSU have worked on this project and tried to connect the weavers with international markets for their products.

d. 6. Health ICT: Team Umoyo leveraged telephone penetration and a rapid SMS framework developed by UNICEF to develop a model for preventative care through information dissemination and knowledge about child development, hygiene and nutrition. They developed a mobile platform for mothers of children under 5 to receive information and share tips. Two team members received an IDIN grant to further develop the text messaging service.

d. 7. Child Nutrition: This group worked to design a systems approach to address child nutrition issues at the school in Mumbwa, utilizing local resources to improve the variety of the diet of the students.

d. 8. Solid waste management: The IDDS team came up with a two tiered approach to deal with solid waste management in Chizanga: designing an affordable brazier for dry organic waste to produce heat for cooking, and designing a method to bind milk and beer tetra-pak cartons into sheets of durable paper that can be used as a structural and construction material. One of the Zambian participants from this team is working with a Peace Corps Volunteer and has taught 60 people from 4-5 communities to make mats and other items from tetra-packs and successfully sold them to government officials. He has registered his own business, Kamabuta Recycling Design Enterprise Limited. One of the students from Korea on the team, took the prototype back to Korea to work on with other students and came up with tetra-pak roofing sheets.

At the end of the month-long training experience, community members and participants showcased their prototypes in a gala event open to the general public and attended by 300 people and organizations. Dr. Patrick Nkanza, the Permanent Secretary of the Zambian Ministry of Education, Science, Vocational Training and Early Education, and Dr. Amit Mistry, the IDIN AOR from USAID, gave closing remarks along with Amy Smith from MIT and Dr. Tambatamba from NBTC. The participants and communities will continue to work together long distance on project continuity. (Please see Appendix 4 for a visual overview of the 8 projects created at the Summit.)

1.3.2. Activity 2. Prepare the implementation of the Themed Summit: Maternal Health in Arusha, Tanzania in October 2013:

This will be a two-week summit in October 2013 that brings together past IDDS participants, maternal health practitioners and mothers to design technologies that improve maternal and neo-natal health and address the Saving Lives at Birth Grand Challenge. This summit is organized differently than the traditional IDDS summits. IDDS alumni who work in maternal child health formed an international committee to plan the summit, working with Amy Smith and Sher Vogel. Key members include Zubaida Bai, founder of AYZH (AYZH Health and Livelihood Private Ltd.), Paulina Quinones, one of the chief designers of the Mama Natalie birthing simulator at Laerdal, David Sokal, a pediatrician, Lisa Tacoronte, who works with the World Childhood Foundation, Aparna Ramanathan a gynecology resident at Parkland Hospital in Dallas, Fort Worth and Debora Leal, one of the lead organizers of the Rethink Relief 2013 Summit. The curriculum for the Maternal Neo-Natal Health Summit was developed by Amy Smith at MIT, building off the Rethink Relief curriculum, with assistance from Ben Linder of Olin College and the Maternal Health international committee mentioned above.

When Sher Vogel, IDIN Summit Coordinator, was hired, she and Daniel Mokrauer-Madden, the interim coordinator, visited Arusha Tanzania to meet the local stakeholders for both the Maternal Health October 2013 Summit and the IDDS July 2014 Summit. They selected the Nelson Mandela African institute of Science and Technology, (NM-AIST) as the host for the Maternal Neo-Natal Health Summit based on the shared vision between the institute and IDIN and the logistic benefits of the campus as a summit site, with the possibility of hosting the 2014 summit depending on the outcome.

1.3.3 Activity 3. Planning for IDDS 2014 Tanzania

The planning and organizing work for the Summit has begun in Year 1, with a strong local organizing committee in place. Key members of the committee include IDDS alums Jodie Wu, CEO of Global Cycle Solutions, Bernard Kiwia, manager of the Twende-AISE (Accelerating Innovative Solutions Enterprise) workshop, Noela Byabachwezi of the Center for Agricultural Mechanization and Rural Technology (CAMARTEC), and Jim Elsworth, founder of Twende-AISE. Several other IDDS alums are part of the team, as well as support staff from CAMARTEC. The local organizing team is coordinating with the summit coordinator at IDIN Central and working closely with the curriculum team at UC Davis.

Results for Outcome 3: *IDIN implements a month-long IDDS summit in Zambia in July 2013 and prepares and organizes a themed summit on maternal health in East Africa in October/November 2013. At least 40 innovators will be trained in the design process.*

Outcome 3 was achieved; a successful month-long IDDS summit was held in Zambia in July 2013. 46 participants from 23 different countries were trained in the design and innovation process, surpassing the original goal of 40. The planning and organization is in place for a two-week Maternal Neo-Natal Health Summit in Tanzania in October 2013. Amy Smith is leading the curriculum development for that summit. IDIN has begun the process of planning for IDDS 2014 in Tanzania; a local organizing committee is already in place on the ground.

Objective 1 Outcome 4: A database of innovators and innovations allows people to collaborate, matching skills, materials and needs across the broad network and at least 100 innovators upload information

1.4.1 Activity 1. Building a database of innovators and innovations

Main participants: IDIN Network Coordinator, IDIN Summit Coordinator, Consortium members, IDIN network members.

In order for the network to function effectively, it's necessary to facilitate communications and match needs with skills and experiences across the broad network of innovators spread across the globe with varying levels of internet connectivity. IDIN needs to develop a website with the following two tools to implement this.

- a. An IDDS alumni database – a platform that contains information about individuals within the network including: appropriate skills and experiences, sectors of interest, areas of expertise, current projects and innovations and the communities that the individual has access to so members can search for the individual or group whose skills/resources they seek.
- b. A repository of innovator and technology stories and case studies that allows users to glance through a slideshow of stories and pictures and get an immediate sense of what type of connections that are possible, and capture lessons learned and experience gained that are difficult to present in a database.

1.4.1.a. The IDDS Alumni database

An interim network coordinator was in place until the permanent IDIN Network coordinator, Jona Repishti, joined the team on May 1st 2013. To get a preliminary road map for the kind of support IDDS alumni need, she contacted over 20 alumni to find out how they were involved in IDDS activities. Using this information, she prepared a survey to gather the following information from all IDDS alumni for the data base; their location, profession, connectivity capabilities, projects, interests; how they have been connecting and collaborating to date and what kind of support they need from IDIN. The survey is being reviewed by IDIN consortium members, partners and IDDS peers to be ready to launch with the alumni in the first quarter of Year 2. The data collected on alumni demographics, current projects, areas of expertise, skills and interests, will be used to develop a comprehensive and searchable database of network members.

Since joining the team in May 2013, The Network Coordinator has maintained a continual process of connecting alumni to each other and resources while setting up the database which will multiply the possibilities of connection. In order to do so, the Network Coordinator is in constant email connection with alumni who contact her directly or post on Facebook. She links people with each other around projects, connects them to resources and opportunities, alerts them to innovations and opportunities and refers them to information sources. On a daily basis, she is in contact with between 10 to 12 people and has helped them acquire funding, enter competitions, find technical support and information and connect with others who are doing similar work. The database will eventually multiply the possibilities for members to connect with each other but in the meantime, the network coordinator has continued to build and support the network through this consistent information sharing.

1.4.1.b. The project repository

The Network Coordinator has gathered information about on-going projects and prototypes to create a project repository for the website. This repository will provide a means for people to easily access information about projects at any stage of design and production. It lists the projects, the year they began, contact information for the point person, the current status of activities and notes on the development of the project.

This repository is an excellent means of connection between innovators and design students, between innovators and venture specialists, and connects innovators with each other. It will also allow innovators to showcase their projects. It will use an easily accessible slide show and story format so that people can easily grasp the essential information they need. The Network Coordinator is in the process of gathering and organizing different projects for the project repository which will be put on line on the website.

Through this repository, people in one country interested in bicycle powered technologies will be able to search for similar projects in other countries, read about the developments and contact the key people. It will provide an extremely helpful tool for IDDS participants after a summit to connect to the network and easily be able to follow up on prototype development and existing opportunities for continued work.

In the meantime, the Network Coordinator began work on forming alumni chapters in places where there was a sufficient concentration of IDDS alumni. IDIN envisions the chapters as the grassroots mechanism for IDDS alumni to form their own local innovation and social enterprise networks, link with innovation centers where possible, and engage in pre- and post-Summit activities. The Network Coordinator held meetings in the fourth quarter of Year 1 in Kenya, Zambia and Tanzania to establish the first IDDS Africa alumni chapters in Lusaka, Nairobi, and Arusha. The Lusaka chapter was formed in collaboration with NTBC as part of the joint work on the July summit. A task force has been formed in Zambia to formalize the development of the IDIN chapter so that it can provide direction to the establishment of the innovation center and help with project continuity among other things. She also travelled to San Francisco and Fort Collins and met with alumni groups there.

Jona Repishti is now working with partners and the IDIN steering committee to formulate the guidelines for establishing alumni chapters. Each chapter will be adapted to fit local demand but in general they will work to provide pre-IDDS support (i.e. help advertise and recruit for IDDS summits, provide support to participants before they go to a summit, etc.) and post-IDDS support (engage with local communities and like-minded partners, build fundraising capacity, organize events, including summits, etc.)

Results for Outcome: *A database of innovators and innovations allows people to collaborate, matching skills, materials and needs across the broad network and at least 100 innovators upload information*

This outcome is still in process. The Network Coordinator has developed the survey to gather information for the data base, it will be ready to launch in Quarter 1 of Year 2. In the meantime, the Network Coordinator has developed an ad-hoc mechanism to connect network members and promote collaboration. She has also moved ahead to help form three alumni chapters in Africa and two in the US which will serve some of the need for connection, collaboration and support. Simultaneously, she has begun to develop a guide that will help local groups organize alumni chapters all along the same lines in different countries. She is in the process of collecting the projects for the project repository.

Objective 1, Outcome 5: A system for communications and collaboration allows members to communicate across the international network. Network members will meet calls to action and develop at least 10 framing project briefs.

1.5.1 Activity 1. Develop a system for collaboration and communication

Main participants: IDIN Network Coordinator, Brazilian IDIN Program Coordinator, PIs,

The IDIN communication system needs to connect people in the network across a diverse range of connectivity, language, access to technology, and culture. Once the system is in place, it will be used to engage the network in four key areas of design:

- Problem framing
- Prototyping
- Piloting
- Assessment

At the present time, the first two steps, problem framing and prototyping, are mainly done through the Summits. However, the goal is that they will eventually be done both through the Summits and outside of the Summits.

There are considerable challenges for communication platforms. Within the IDIN network, there are multiple languages used by members. The basic languages that IDIN communications platforms will need to include now, in one way or the other to reach the majority of members are: Spanish, English, Portuguese and Swahili. The Network Coordinator is taking that into account in planning the website so that information is truly accessible, but what will be translated and how needs careful thought. Apart from the language issue, many participants have limited access to internet, so the Network Coordinator is looking to incorporate access to information through cell phone.

Aside from his work as interim Summit coordinator, Daniel Mokrauer-Madden volunteered on the IDIN communications committee with Amit Ghandi. In this capacity, they worked with the Olin PIs for several months to evaluate near term communications platforms for use of the network. In the March IDIN Consortium meeting, Daniel also worked with each of the PIs to familiarize them with the Google Drive systems. This provided a basic communication mechanism for the PIs, provided updates, fostered discussion across the team and prevented duplication of effort at the beginning of the project.

When the Network Coordinator, Jona Repishti began work in May 2013, she simultaneously began the processes of exploring the best ways to meet these challenges in communication, setting up the website and creating social network platforms to immediately facilitate communication among network members. These have mainly been Facebook, LinkedIn and an email list of 300 alumni. She set up an IDIN Facebook page to provide information and opportunities, give updates and enable members to share experiences. She continued the close working relationship with the Olin PIs on development of strategies for network communications and they have continued to work with her developing the externally facing website.

1.5.1. a Communication platforms

When the LinkedIn group for IDDS alumni was set up, it jumped to over 108 members in just three weeks, representing more than a third of the total IDDS alumni. It is now at 139 members. LinkedIn is proving to be a good way to share project updates, grants, scholarships, training, and work from different alumni. There is also a Facebook group page for each Summit, to help people keep connected to the process after the Summit is over.

Through LinkedIn, IDIN has been able to broadcast opportunities such as the loan program launch from Higher Circle, Global Innovation through Science and Technology (GIST), Tech-I Competition, IDEO.org and Acumen free Human-Centered Design online course. Through social media, IDIN has also been able to disseminate applications for Impact Engine's second accelerator program, Partnering for Innovation Challenge, and the MIT Climate Change Co-Lab challenge.

The work on website design is progressing well. The website committee has contracted an organization called NIMBLE to do the wire frame which should be complete by the end of the first quarter of year 2. The Network coordinator is working on integrating mechanisms such as peer to peer information and mobile technology into the website to increase outreach and connect alumni who do not have consistent or easy access to the internet.

1.5.1.b Calls to Action

Calls to Action are challenges that call upon the whole network to take on a particular task; it could be a design challenge, a needed innovation, a way of collecting information. The Calls to Action are developed

in collaboration with partners and the IDIN consortium to engage the IDDS alumni network in a series of design related activities. In the third quarter, the Network Coordinator established a repository on Facebook so that partners could submit potential design challenges. In May, the IDIN working committee, headed by the Network Coordinator, launched their first monthly “Call to Action”. The May challenge invited all past IDDS participants to create or collect ideas for an alternative, cheap, and eco-friendly fire starter technology to accompany charcoal briquette distribution in Uganda, at the request of partner Green Bio Energy (GBE) a social enterprise in Kampala.

The committee and the Ugandan partner prepared a flyer on the challenge (please see Appendix 5) and distributed it via LinkedIn, Facebook and email to the network of over 300 innovators. The challenge ran from June 30th to July 31, 2013. There were four responses, a GBE committee reviewed the submissions and selected two of the best proposals selected for testing. The IDIN Network coordinator worked with the D-Lab Harvest Fuel Initiative (HFI) and the New York based NGO called the Charcoal Project (TCP) to make the solutions open source to their numerous partners and stakeholders who may be interested in the results. Next year, Calls to Action will be implemented throughout the programmatic year. Once the website is up, it will greatly facilitate spreading the word about the Calls to Action.

Results for Outcome 5: *A system for communications and collaboration allows members to communicate across the international network. Network members will meet calls to action and develop at least 10 framing project briefs.*

Substantial progress has been made on this outcome. There are social networking platforms established (Facebook and LinkedIn) which engage a high number of alumni and link them to opportunities, information and each other to a fair extent. There are now 221 members in the IDDS All Facebook group. There are 7 separate Facebook groups, one for each Summit. There are 139 people on the LinkedIn page, almost 50% of the total alumni. The website, which will be up and operating in year 2, will improve communication systems. However social networks, peer to peer information and mobile technologies will all continue to be important factors given the complexities of language and internet access problems.

Objective 1, Outcome 6: Productive relationships are forged between IDIN and USAID field missions and programs

1.6.1 Activity 1. Engaging with USAID field missions and programs

IDIN staff, IDIN PIs and students and teachers from different consortium universities met with USAID field missions and programs in four countries. Please see section 5.2 for a detailed account of this interaction.

Objective 2: Supporting the network

IDIN aims to support local innovation and entrepreneurship among its members and in places where IDDS has already established a community of alumni innovators with an array of mechanisms including innovation centers, micro-grants and support to move prototypes to market.

Summary of progress made in Year 1 for this objective:

While the difficulties in obtaining sub-awards for the international university partners continued to delay implementation, the Innovation Coordinator, and the Innovation Center Committee have focused on site selection, setting up local structures in innovation center sites, developing guidelines on establishing innovation centers and working on curriculum. They changed their strategy because of the difficulties in

the sub-awards and focused on identifying highly motivated partners as the key component for establishing innovation centers. They have identified three partners, TWENDE-AISE in Tanzania, Caritas Gulu Archdiocese in Uganda and Caos Focado in Brazil, and are moving ahead with purchase orders to enable these groups to set up innovation centers. These should go ahead in these sites at the beginning of Year 2.

Objective 2, Outcome 1: Three regional Innovation Centers will provide IDIN network members with tools, materials and technical support for innovators to use to create design solutions.

2.1.1 Activity 1. Developing the innovation center model

Main participants: IDIN Innovation Center Coordinator, Innovation Center Committee

In the first quarter, Kofi Taha, the Innovation Center Coordinator, convened representatives from all consortium partners to set up an organizational structure for the process of building local innovation centers. This structure consists of the IDIN Innovation Center Coordinator, the Innovation Center Committee, ICC, chaired by Kofi Taha, the Local Organizing Committees, IC-LOC, in each site where an innovation center will be set up and the Innovation Center Directors. The members worked on the Year 1 innovation center plan, and began initial site selection. Based on this, the ICC was finishing the final draft of its by-laws at the end the year, as well as a document that clearly delineates their responsibilities versus those of the IC-LOCs. ICS is investing considerable time to draft these two documents in order to guarantee real participation by the multiple international IC-LOCs involved.

The Innovation Center Coordinator, UC Davis and Olin College PIs have developed some basic curriculum components for the innovation center; including gathering a complete set of Learn-It and Build-Its modules from D-Lab, Davis and Olin. IDIN has also begun to develop a new curriculum on electricity and electronics for the centers. The ICC has decided that it is key to monitor the summits to see what types of curriculum people will want in the innovation centers, however, curricula have to be adapted to different sites.

There are five IC-LOCs, in Zambia, Brazil, Uganda and Tanzania and Ghana. The ICS has put together a manual to guide IC-LOCs in preparing for and establishing an Innovation Center. This provides guidelines and advice on characteristics needed in a site, what kinds of financial support is needed, who can be trained there, whether or not to charge for services and training, the possibilities of corporate sponsorship, the role of visiting students, possibilities of income generation from technology etc. In addition, one of the Olin PIs provided a half-day teaching session on innovation center development to the Zambian and Brazilian innovation center site leadership on topics such as site selection, community creation and revenue generation. The Olin PI also worked closely with Miguel Chaves of Caos Focado during the second half of year two on the start-up strategies for the innovation center in Sao Paolo, Brazil.

To contribute to thinking around the development of an innovation center model, Benjamin Linder from Olin led a tour of the Artisan's Asylum in Somerville, MA, the largest maker space in the world for consortium members to learn lessons from the creation of this particular innovation space.

2.1.2 Activity 2. Creating the innovation center

The original plan was for two of the overseas sub-awardees, KNUST and USP to establish Innovation Centers in Ghana and Brazil. However, the sub-award process as a vehicle to move implementation forward has been problematic and frustrating. Competing institutional dynamics have delayed the sub-awards for both universities through the end of Year 1. Without the sub-awards, there is no corresponding designated institution receiving resources on site which made it almost impossible to move forward. Changes in personnel at USP and the illness of the new PI there have made things even more difficult

with the sub-award. On the other hand, the third actor, the Brazilian NGO, Caos Focado, headed by an IDDS alum and volunteer, Miguel Chaves, has working closely with the Innovation Center Coordinator since the beginning. Miguel was instrumental in selecting the site for the innovation center, which will be in the community of Vila Nova Esperança in Sao Paolo.

Without existing sub-awards, it is not possible to transfer resources to the original partners to establish the innovation centers or hire staff to begin the work. As the year progressed without the sub-awards being realized, the Innovation Coordinator and the ICC decided that in order to begin to establish the innovation centers, they could not depend on the original strategy. Through this process they also learned that the most essential element for starting an innovation center is a highly motivated team that wants it to happen above all else. Using this analysis, they identified three highly motivated partners, Twende and Accelerating Innovations and Social Entrepreneurship (AISE) in Tanzania, Caritas Gulu Archdiocese in Uganda and Caos Focado in Brazil who were ready to move ahead on the innovation centers. IDIN Central decided to begin the innovation centers with these three groups, using purchase orders as the funding mechanism in place of the sub-awards. The agreements are now in place for these partners and they will use the resources to scale up the small existing centers. The center in Brazil should be established in the first quarter of Year 2 and the center in Ghana, delayed through the sub-award process, has been rescheduled to the third quarter of Year 2. In Zambia, the IC-LOC is still working with the Innovation Coordinator on organizing the innovation center there.

This learning process in Year 1 has made it clear that a strongly motivated local organizing committee should be a key determinant of the location of the innovation centers. This realization changed how ICC visualizes the process of selecting sites for community-based innovation centers. They are now working on drafting an application process for local network members to apply to establish a center as well as criteria for selecting which sites are chosen. Currently, the strongest IC-LOC is led by Caos Focado in Sao Paulo, Brazil, where the center will be in the community Vila Nova Esperanca. The Business Model Canvas used at CSU has provided the ICC with a useful process for IC-LOCs to complete their work plan, budget and business approach. This has helped inform both the manual and inspire the newer innovation center committees in Zambia and Ghana.

***Results for Outcome 1:** Three regional Innovation Centers will provide IDIN network members with tools, materials and technical support for innovators to use to create design solutions.*

The organizational structure for setting up the centers has been put in place and the supporting tools such as a manual for local organizing committees, curriculum elements are almost complete. However, since difficulties of the sub-award process have made it impossible to establish the three centers as originally planned, the Innovation Center Committee have been able to come up with an alternate plan. IDIN has made agreements with three centers in Uganda, Tanzania and Brazil and developed purchase orders to enable these centers to proceed in the first quarter of year 2.

Objective 2, Outcome 2: A grants program is in operation and at least five grants will be given out for participants to further their projects

2.2.1. Activity 1. Establishing a micro-grants program

Main participants: IDIN Network Coordinator, IDIN Grants Committee

In the 4th quarter of Year 1, MIT and CSU launched a bi-annual IDIN micro-grants program at the Zambia IDDS summit; each budgeting \$10,000 to provide former IDDS participants with small grants to fund critical steps that move their projects forward (the projects need not be projects that were developed at the summit). The Network Coordinator prepared both the micro-grant procedures and mentoring procedures for the micro-grants for use by alumni and consortium members. Information for applications

went out over the different communication platforms and applications closed in early September 2013. There were 16 applications and 9 micro-grants were awarded to alumni, ranging from \$500 to \$2,000 each. MIT's grants focused more on funding project development and CSU's grants focused on venture development. The mechanics of transferring relatively small amounts of money to individuals overseas posed real administrative difficulties as the systems to do that were not in place. These mechanisms have been developed but still function very slowly.

Both universities realized quickly that very few existing prototypes were market ready yet for venture funding and that product development had not been accompanied by market analysis. Both CSU and MIT agreed that supporting the market side of the innovation process was essential so they made an adjustment to the micro-grant program. Some awardees were also granted a \$500 award to conduct market research through NEON, a consulting firm in Colorado, as a next step in venture development. IDIN worked out a contract with NEON to provide support for market analysis in three ways: coach 6 micro-grant awardees, give webinars for IDDS alum on conducting market studies and create an easy to use tool for conducting market studies for alumni. As an additional support to the micro-grant process, CSU and MIT are pairing each micro-grant awardee with a mentor. IDIN Central is collaborating with CSU to create a database of mentors with qualification in business, design techniques, and prototype development to pair mentors with micro-grant winners.

Finally, given the need for substantive resources in this area; the Network Coordinator and the MIT PI created a partnership with the Scale-Ups program at D Lab that will start in year 2. IDDS alumni can apply to this already established program and in the coming year, two alumni will be accepted as fellows. This is a much more substantial assistance program that provides \$5,000 for the prototype creation phase, and then \$20,000 for dissemination as well as support and mentorship throughout the process. The micro-grant program can be a first step and technologies with high potential can move into the Scale-Ups program as a second step.

Results for Outcome 2: A grants program is in operation and at least five grants will be given out so participants will further their projects

This outcome has been achieved, the grants program is in place and 9 grants have been awarded, four more than the goal of 5 grants. In addition, a more substantial support process through Scale Ups has been identified and realized.

Objective 2, Outcome 3: The New Venture Accelerator (NEVA) is established in Nairobi so that network members will have access to support to create enterprises.

2.3.1 Activity 1. Establishing a model for connecting IDDS and IDIN with SEMBAA and the New Economy Venture Accelerator in Nairobi

Main participants: CSU Program Coordinator, IDIN Network Coordinator, IDIN Innovation Center Coordinator, Innovation Center Committee

CSU launched the New Economy Venture Accelerator (NEVA) in Nairobi in the first and second quarter with their partners at United States International University, (USIU). This provides an effective mechanism to integrate SEMBAA students from USIU into the IDIN network, particularly around IDDS projects. NEVA provides comprehensive venture incubation services to start-ups from CSU, USIU and the IDIN network.

Scott Bellows, the NEVA director, has developed educational content and guidelines for coaching venture teams within IDIN and SEMBAA. Students at SEMBAA can link through NEVA to work on IDIN projects. The Network Coordinator made two visits to Nairobi to visit NEVA and facilitate linkages. She currently sends project write-ups to NEVA for students to consider working on until the data base and

project repository are up and running. SEMBAA students are now working on three ventures, including the disposable menstrual pad project from IDDS Zambia. An additional way to link SEMBAA and NEVA to innovators is through summits. NEVA did a presentation at the Zambia IDDS summit and students from GSSE at CSU attended the Zambia summit.

CSU has developed entrepreneurial educational content for use in the IDIN network. By the end of Year 1, CSU completed eight short films about a range of successful entrepreneurs who share lessons learned and provide invaluable advice on scaling up businesses. These files are in post-production and in Year 2 will debut on the IDIN website for use across the network.

CSU has provided a major contribution by facilitating acceptance into two formal academic programs, SEMBAA in Nairobi and GSSE in Colorado for IDDS Alumni and members of the IDIN network. Two IDDS alumni are now enrolled in the GSSE MBA program for the fall. IDIN is funding two scholarships available for IDDS members accepted into the CSU/USIU entrepreneurship education and venture acceleration programs.

Results for Outcome 3: *The New Venture Accelerator (NEVA) is established in Nairobi so that network members will have access to support to create enterprises.*

In Year 1, the structure was set in place for this linkage. NEVA was launched and CSU has begun developing training programs through webinars for use of students and IDDS alumni. CSU's scholarship program provides cross-fertilization between GSSE and SEMBAA students and IDDS alumni as the latter enroll in the two business programs. In Year One, the IDDS summit in Zambia was a key link to involve GSSE students with concrete projects. The online communication platforms launched by the Network Coordinator have also been an important way to link students from the two CSU programs to innovators.

Objective 3: To better understand the role of local innovation in the broader development context.

Summary of progress made in Year 1 for this objective

IDIN was able to grow the research team to 6 people, and is currently seeking to hire the Lead Researcher. The team created a framework for understanding and measuring IDIN's impact; this includes a high-level logic model and results chain (included as an Appendix in IDIN's final M&E Plan, IDIN's Results Framework and Monitoring and Evaluation Plan, and IDIN's first program assessment tool. This was a pre/post evaluation survey for IDDS participants administered during IDDS Zambia (July-August 2013). Given that IDIN's overall impact assessment framework and M&E plan needed to be created prior to the development of specific M&E instruments, baseline studies for Innovation Centers were not developed during Year 1 as initially planned. Monitoring and evaluation tools for IDIN technologies have been put on hold during Year 1, as IDIN was developing its overall M&E framework.

Objective 3, Outcome 1: A full research team staffed and composed of a Lead Researcher, a Monitoring and Evaluation Coordinator and three graduate students.

3.1.1 Activity 1. Building the research team

As planned, IDIN hired a graduate student, Elizabeth Hoeffcker Moreno, from MIT's Department of Urban Studies and Planning in the spring 2013 semester as the first member of the IDIN Research team. Given the need to develop required Monitoring and Evaluation frameworks and documents, Ms. Hoeffcker Moreno took on the role of Interim Coordinator for Monitoring, Evaluation and Learning from January-August 2013. She coordinated the recruitment and hiring of a full-time Monitoring, Evaluation, and Learning (MEL) Coordinator, who joined IDIN in August 2013. With the hiring of the MEL

Coordinator, Shiva Chandra, Ms. Hoffecker Moreno transitioned into the role of coordinating IDIN's overall research and impact assessment efforts. She began the recruitment process to hire a Lead Researcher (the position that IDIN was previously calling "Senior Research Scientist, see below for details). In the fourth quarter, IDIN hired 4 graduate research assistants to join the research and impact assessment team, bringing the size of the MIT-based research team to 6 members. This research team also worked intermittently in quarter 3 and 4 with two student researchers based at partner universities (a PhD student from UC Berkeley and an undergraduate student from the University of Sao Paulo, Brazil).

After a 3-month long recruitment period for the Lead Researcher during which no qualified applicants were identified (from a pool of over 40 applications), IDIN decided to develop a new strategy for identifying potential candidates for this position. This strategy involves using the existing research team (the current Research Coordinator and the four graduate students working with her) to first define and narrow the scope of the research agenda. Once that is established, they will develop working relationships with researchers both within and outside MIT doing the most rigorous and relevant work in these specific research areas. IDIN will engage these researchers as needed in specific research projects. The current research team will work with these researchers to identify potential candidates for Lead Researcher when IDIN's research efforts are at the stage where having a Lead Researcher on staff is necessary.

Within the consortium; UC Davis hired an M&E specialist, UC Davis Graduate Student, Erin McGuire. Her work this year has included:

- An evaluation of the new D-lab course at Zamorano, which was highly positive
- Drafting a Monitoring and Evaluation plan for the UC Davis PIET Lab's IDIN participation

She also prepared and administered a participant survey for the Build-It curriculum to encourage feedback and iterative improvement of modules

Results Outcome 1: A full research team staffed and composed of Senior Research Scientist and a Monitoring and Evaluation Coordinator and three graduate students;

This outcome is 75% completed. The MEL Coordinator, Shiva Chandra was hired in August 2013. The MIT-based IDIN research and impact assessment team was grown from 0 members to 6 members, 1 member hired in the spring of 2013; 2 members in the summer of 2013, and 6 members in fall 2013, which include 3 graduate students. The affiliated off-campus research team grew from 0 to 2 members in the 4th quarter. Four MIT faculty members conducting research in areas related to the IDIN research agenda were identified and relationships began. IDIN Central will seek and identify a Lead Researcher at the appropriate time for the IDIN research agenda.

Objective 3, Outcome 2: A set of assessment tools is developed, including:

1. logical frameworks for summits, the tools that come out of the summits, and the impact of local innovation on the communities where IDIN works,
2. assessment of the impact of IDDS on participants and
3. baseline surveys for areas where innovation centers will be developed.

3.2.1 Activity 1. Developing logical framework for the summits, and assessment tools:

In Year 1, IDIN developed a logic model and framework for understanding and measuring IDIN's impact, both at the level of specific programs and at the level of the network as a whole. Key activities included the creation of IDIN's logic model, results framework, and M&E plans, the development of performance indicators, and the creation of an assessment tool for summits, which was piloted at the 2013 IDDS in Zambia. This consisted of a pre-survey that participants filled out online a week before the summit and a

post-survey given out on the last day of the summit as well as the design for survey to be administered six or twelve months after the Summit. (Please refer to Appendix 6 for the Results framework)

In August and September 2013, the research team began work on the development of a draft framework for assessing the impact of IDIN's activities in communities that IDIN partners with during IDDS. This framework will also assess the impact of the IDIN network on network members. This work will lead to the creation of several custom outcome and impact indicators which IDIN will add to its M&E plan in Year 2 (specifically, indicators for network performance and for the creation of local capacity for innovation). This framework will also inform the development of specific assessment tools in Year 2, such as baseline assessments of communities IDDS will partner with, six and twelve month follow-up assessments after initial engagement with IDIN, and surveys of IDIN network members. However the assessment tools for measuring the impact of IDDS on participants is still in the pilot stage.

Results Outcome 2: *A Set of Assessment tools including:*

- a. *logical frameworks for Summits, the tools that come out of the Summits, and the impact of local innovation on the communities where IDIN works*
- b. *assessment of the impact of IDDS on participants,*
- c. *baseline surveys for areas where Innovation Centers are developed*

A framework was created for understanding and measuring IDIN's impact; this includes a high-level logic model and results chain (included as an Appendix in IDIN's final M&E Plan). IDIN's Results Framework and Monitoring and Evaluation Plan was created and submitted to USAID, including the development of a set of standard and custom performance indicators. IDIN planned to create three program assessment tools for the Summits. They have created a draft of the first one, a tool to measure the impact of IDDS on participants, a pre/post evaluation survey for all participants, and piloted it during IDDS Zambia (July-August 2013).

Objective 3, Outcome 3: Monitoring and Evaluation tools in place to effectively measure the impact of the Innovation Centers including a baseline and six month follow-up

3.3.1 Activity 1. Monitoring and Evaluating the Innovation Centers

As part of the development of an impact assessment framework, in the summer and fall of 2013, IDIN began development of a framework for evaluating the impact of IDIN's activities in communities where IDDS has engaged and where Innovation Centers may be established. This framework, which is currently in draft form, identifies key outcome and impact areas that IDIN intends to measure as part of baseline and follow-up studies that are conducted, as well as identifying potential methods for crafting specific assessment instruments.

Given that IDIN's overall impact assessment framework and M&E plan needed to be created prior to the development of specific M&E instruments, baseline studies for innovation centers were not developed during Year 1 as initially planned. This activity is therefore currently planned for Year 2, as well as the development of instruments for conducting 6-month and 1-year follow-up studies of communities IDIN engaged with in the context of IDDS 2013.

Results for Outcome 3: *Monitoring and Evaluation tools in place to effectively measure the impact of the Innovation Centers, including a baseline and six month follow-up*

This activity has been rescheduled for Year 2 since the innovation centers were not established in Year 1.

Objective 3, Outcome 4: Monitoring and evaluation tools in place to effectively measure the impact of IDIN technologies and ventures, including a framework for selecting a set of technologies and ventures to evaluate.

3.4.1. Activity 1. Monitoring and evaluating IDIN technologies and ventures.

This activity was put on hold during Year 1, as IDIN's major focus in this area was developing its overall M&E framework. In Year 2, IDIN will focus first on developing assessment tools for key program areas, such as summits, the network, and innovation centers, so this activity is not currently part of the Year 2 work plan and will be delayed until Year 3. What will be developed during Year 2 related to this objective is the creation of an M&E system and database that will enable IDIN to track the technologies and ventures that emerge from IDDS and that are created by network members, and monitor key elements of their development over time. This system will not be designed to assess the effectiveness of these technologies and ventures, but will enable IDIN to assess the extent to which they are progressing through the innovation and venture development pipeline.

Results for Outcome 4: *Monitoring and evaluation tools are set in place to effectively measure the impact of IDIN technologies and ventures, including a framework for selecting a set of technologies and ventures to evaluate.*

This activity has been adapted and rescheduled to be carried out over Years 2 and 3.

Part 3: High Value Areas of Collaboration [HVAC] (Lab-to-Lab)

In Year 1, IDIN's principal focus has been to build the work of the consortium itself. All the members of the consortium have done significant work on design projects for development solutions this year and there has been a tremendous amount of student involvement with the network. During this year, IDIN's work on development solutions and student engagement was intended to build both collaboration among IDIN Labs and collaboration with IDIN partners in order to strengthen and expand the network. Since Section 3 is only about Lab-to Lab collaboration within HESN, the tables on IDIN's work on Project design for development solutions and student engagement are attached to this document as Appendices 7 and 8.

The HESN Lab Directors' meeting in April 2013 provided Amy Smith, Kofi Taha and Elizabeth Hoffecker Moreno with an initial opportunity to identify potential areas of collaboration with other HESN Labs. During the year, some members of IDIN Central and the consortium have identified opportunities to begin relationships with other HESN partners. UC Davis will engage both Michigan State University and University of California, Berkeley (UC Berkeley) during year 2. UC Berkeley's Development Innovations Lab - also an HESN institution - is a natural partner for its work within the other PIET Lab specialization as well as geographic proximity. MIT will engage with Texas A & M and Makerere University, particularly focusing on designs for resilience and post-conflict transitions through collaborations with the Rethink Relief Conference. Olin College will engage William and Mary and their Aid Data program to augment their course on regional gap analysis. CSU will reach out to the Sustainable Enterprise Accelerator Program at Duke to identify points of collaboration in scaling up development solutions. MIT-IDIN will also be the lead on the collaboration with the other MIT program, the Comprehensive Initiative on Technology Evaluation (CITE).

When the IDIN Summit Coordinator was in Arusha Tanzania in mid-June of 2013, she met Ashgiri Chapfuwa, the Engineering World Health (EWH), Training Coordinator who expressed interest in exchanging ideas and lessons learned on Summit logistics in the context of rural Tanzania. EWH is a HESN partner organization based out of Duke's D-Lab. IDIN PIs expects to develop many more opportunities through the HESN meeting in November 2013. In Years 2 and 3, IDIN Labs will seek to expand coordination with other HESN Labs around common points of interest.

3.1. Data

There were no collaborations with other HESN labs in this area in Year 1.

3.2. Solutions (Creation, Testing, Scaling)

There were no collaborations with other HESN labs in this area in Year 1.

(Please see appendix 7 for project work on solutions, including creation, testing and scaling developed by IDIN members with their partners in Year 1)

3.3 Student Engagement

There were no collaborations with other HESN labs in this area in Year 1.

Please see appendix 8 for a table of student engagement with IDIN during Year 1)

3.4. Co-Location of Resources

At the Lab Directors meeting, there were several discussions about sharing on the ground resources and collaborating on work with innovation hubs in the field, however no concrete actions came out of these

discussions in Year 1. Amy Smith volunteered to lead a session at the Technical Convening to form working groups around these areas.

Part 4: Intra-Development Lab/ University Engagement

4.1 Interdisciplinary Collaboration

4.1.a Collaboration with non-IDIN faculty or between HESN Labs in the same University

Colorado State University, CSU

The GSSE MBA program at CSU collaborates with many departments on campus to source projects for GSSE team to turn into enterprises. In order to improve communication across the IDIN network, CSU began an IDIN database of its key innovators, featuring those who have participated in the IDDS program and/or graduated from the GSSE MBA program. CASE develops partnerships with a range of organizations overseas each year which host their students for the two month summer internship all GSSE students must complete, an example of one of these organizations is International Development Enterprise in East Africa.

Massachusetts Institute of Technology, MIT

Within MIT, The Aeronautics and Astronautics Department approached D-Lab about collaborating on a project they are working on with the Instituto Tecnologia de Aeronautica (ITA) in Brazil, to start a D-Lab program at ITA and to become a partner in IDIN activities. Faculty and graduate students from MIT's Department of Urban Studies have collaborated with IDIN in the development of the framework for the IDIN research program, including the current head of the International Development Group, (IDG) Professor Zergas. Amy Smith and Professor Bish Sanyal (Principal Investigator for the CITE program) are working together to develop a competitive grant process to identify the appropriate MIT faculty to join the IDIN research team.

IDIN and CITE cooperated together to prepare a joint presentation at the HESN launch in November 2012. They collaborated with MIT's Academic Media Production Services, (AMPS) to develop a 5 minute video about CITE and IDIN used to introduce Amy Smith (IDIN) and Bish Sanyal's presentations at the launch. Apart from their cooperation as co-recipients of the USAID grant to MIT, both Labs have identified possible areas of collaboration. The Scale Ups program at D-Lab has agreed to accept two IDDS alumni a year for their program which provides three stages of substantial support to innovators. (Please see Part 2 Description of Activities Completed, Objective 2 Supporting the Network under Activity 2.4)

Olin College

An interdisciplinary approach is central to the educational ethos at Olin College. The Affordable Design and Entrepreneurship, (ADE) program through which Olin engages students in IDIN project is a joint program between an engineering college Olin, a business school, Babson College, and a liberal arts school, Wellesley College. An interdisciplinary team from all three colleges participated in the teacher and student ADE teams that travelled to Ghana and India to work on IDIN connected projects to do with water purification, rickshaws and cassava processing.

University of California at Davis, UC Davis

PIET LAB holds interdisciplinary collaboration as a central tenant to its operation and evolution. All PIET Lab courses are designed for and delivered to students across a wide variety of disciplines, including agriculture, engineering, design, business, health, mathematics, community development, and veterinary sciences. Faculty mentors for PIET Lab students are recruited from a variety of departments including the graduate school of management. There is a strong on-going relationship with the International Agricultural Development graduate group and approximately 10 students from that group engage in PIET Lab courses and/or are hired as PIET Lab employees every year. The Sustainable Technology Agricultural Innovation Center also provided PIET lab with \$25,000 for their work on the prototype for motorcycle based irrigation with Ugandan partner Agriworks in Uganda. The Graduate School of Management, UC Davis Blum Center for Developing Economies, has been a consistent partner for both grant/project work and delivery of courses that cut across disciplines.

UC Davis identified several early stage potential partnerships while engaging in curriculum development. Courses at PIET Lab are always delivered with international partners seeking assistance or guidance on a specific project. This creates approximately five new international partnerships every year across multiple disciplines.

4.1.b Engagement among consortium labs to move the development of IDIN forward

There have been four main modalities of engagement among consortium members and IDIN central to keep the development of the project moving forward.

1. Project updates which have identified areas of collaboration. There have been weekly phone calls among IDIN Central, USAID and consortium members. These have been complemented by monthly consortium phone calls. In September 2013, it was decided that it would be more practical and useful to change those to monthly PI calls.
2. There have been two consortium face to face meetings. MIT organized the first IDIN Consortium meeting in Washington, DC from March 19 to 21, 2013, to continue strategic planning around innovation centers, research, monitoring and evaluation, summits and student involvement. These discussions moved forward again when the consortium met in Zambia during the July 2013 IDDS Summit.
3. Bi-lateral visits between different consortium members to move cooperation forward on building the network. In March, 2013, George Obeng and Crossman Hormenoo from KNUST in Ghana partner went to meet with Amy Smith and Ben Linder to discuss summit planning and research collaborations. When they were in the US for the IDIN consortium meeting, Theresa Carvalho from USP and Miguel Chaves from Caos Focado also went to MIT to meet with Amy Smith and IDIN Central about the planned innovation center in Brazil. Ben Linder led a student and teacher team from Olin to visit KNUST Ghana in order to do joint research on scaling innovations. MIT fielded student teams for fieldwork to three IDIN members in January, USP in Brazil, KNUST in Ghana and NTBC in Zambia to work on design projects. The Network Coordinator and CSU IDIN staff visited USIU and the NEVA Center in Nairobi to work out points of collaboration between NEVA, SEMBAA students and IDDS alumni. CSU and MIT worked closely together to develop and jointly administer the micro-grants program. The Summit Coordinator, the Network Coordinator and the M & E Coordinator visited the UC Davis campus and the CSU campus to further build the relationships between IDIN Central and the consortium schools.
4. Finally, the design summits serve as points of meeting and collaboration for the participating members in the consortium. They serve as vehicles to jointly develop and deliver curriculum, conduct research, develop solutions and engage students.

4.2. Partner Engagement

Colorado State University, CSU

CSU's principal partnerships for IDIN are with the United States International University, USIU in Nairobi and the New Economy Venture Accelerator (NEVA) that both institutions helped launch. CSU has developed an applied entrepreneurship program, Sustainable Enterprise MBAs for Africa (SEMBAA) with their partner, USIU in Nairobi. It's a post-graduate certificate program that empowers students to build and incubate profitable ventures for social change. In Year 1 of IDIN, SEMBAA enrolled 3 cohorts of students into the program. In September 2013, 31 enrolling students received AID scholarships called IDIN fellowships, which requires them to engage with the IDIN network, multiplying opportunities for intersection between venture developers and designers and innovators.

CSU worked with their partners at USIU this year to launch the New Economy Venture Accelerator, NEVA, in Nairobi, Kenya which provides comprehensive venture incubation services to student start-ups from CSU, USIU and IDIN networks. This will provide a key resource for IDDS alums to move prototypes into venture incubation.

GSSE staff at CSU is working with the SEMBAA staff in USIU in Nairobi in order to develop a plan for consistently bringing projects from Summits and Innovation Centers into the sustainable enterprise certificate program at USIU and later into NEVA.

In year 1 CSU IDIN staff identified a new partner, NEON, a consulting firm in Colorado as a next step in venture development. IDIN worked out a contract with NEON to provide support for market analysis for micro-grantees who need this support. NEON will coach 6 micro-grant awardees, give webinars and create an easy market analysis tool (Please see Part 2, Description of Activities Completed, Objective 2 Supporting the Network under Activity 2.2.1. for more details)

Massachusetts Institute of Technology, MIT

MIT works with a range of partners in Zambia, India, Uganda, Ghana, Tanzania and Brazil on IDIN projects. This year they also partnered with Makerere University and the International Food Policy Research Institute (IFPRI) in Uganda to design and implement a randomized control trial to evaluate the impact of creative capacity building in 3-4 sites in Uganda, funded by the United States African Development Foundation (USADF) and the International Initiative. The development of a baseline survey began this year and will continue into Year 2. As part of this study, Amy Smith, Kofi Taha and Benjamin Monciviaz designed and delivered a 2-week Training of Trainers in order to meet the staffing needs for implementing the research project. As part of this ToT session, they trained 7 IDDS alumni from Tanzania, Ghana and Zambia as trainers of trainers with the goal of enabling them to be IDDS instructors.

Also in Uganda this year, D-Lab staff carried out Creative Capacity Building (CCB) trainings with four villages in Pader to strengthen the work of the Pader innovation center through MIT partner, Caritas Gulu. The D-Lab team also visited two of the villages in the technology project where there are 6-10 small businesses which have grown out of the development of different prototypes such as maize shellers and cell phone chargers. They carried out a second CCB training in Mongoro, Tanzania in partnership with a USAID-funded program on Innovation and Gender Equity in Mongoro, Tanzania. The first two training sessions were conducted jointly with IDDS alumni Bernard Kiwia and Noela Byabachwezi who then took over the program and completed the next three trainings on their own, and then provided project support in the following months.

MIT *D-Lab: Development* students worked with IDIN partners in Zambia, Brazil, Ghana, India and Tanzania on a range of technologies for development solutions. Both KNUST and USP hosted student teams from MIT in January 2013. In Brazil, MIT students worked in the Dois Palitos community, which was a field site for the 2012 design summit in São Paulo. The students worked on urban agriculture, mobile financial management tools, rainwater collection and low cost flooring projects in Dois Palitos and plastic bottle recycling in São Paulo. In Ghana, MIT students worked with KNUST students in the villager of New Longoro on developing several technologies; solar lighting, mushroom farming, beeswax processing, mango drying, community sanitation and education. They also worked on refining a prototype for a moringa sheller and a moringa oil press and formed partnerships with the Ghana Permaculture Institute, as well as many farmer cooperatives. In India, students worked with the national NGO, Avani to develop solar lantern testing equipment, test pine needle stoves and develop crayons and pastels. In Tanzania, MIT students worked with the Center for Agricultural Mechanization and Rural Technology, (CAMARTEC), introducing the moringa sheller prototype from Ghana and working to refine and improve it. They also worked with AISE to develop promotional materials for commercializing pedal powered juice makers and worked on a multi-crop thresher at Global Cycle Solutions. Finally a group of students went to Zambia to work with the NTBC and other NGOs on several projects including a static auto-chlorination device, cell phone based public health project and a health education radio station. They worked on a nutrition project in Lusaka as well as an outreach and programming project for the NTBC. (This work is also explained in Section 4.3 on student engagement)

Olin College

Olin College's major work with IDIN partners has been their engagement around Innovation Centers with Caos Focado in Brazil, their student field collaborations with KNUST in Ghana and Zimba in India, as well as individualized support to IDDS alumni now working in other organizations.

Students did fieldwork with IDIN partners with Zimba, and KNUST through ADE, a multi-disciplinary program that links Olin, Babson College and Wellesley College. Ben Linder and Abigail Mechtenberg led a group of students on prototype development and field testing of cassava graters in collaboration with KNUST in Ghana. Together, both organizations collaboratively researched techniques for scaling innovations, particularly standardization of key components to enable horizontal scaling opportunities. They focused on innovating and disseminating improved cassava grater teeth in order to significantly improve post-harvest agricultural processing. (See section 4.3 below on student engagement for more details) While there, Professor Mechtenberg one of the team leaders met with representatives of the Ministry of Agriculture in Ghana, the Finance Minister and with the Ghanaian regional office for the Food and Agriculture Organization (FAO) to discuss cassava processing.

Rakesh Pandey led the Olin ADE student trip to India to work with IDIN partner Zimba on water chlorination, redesigning Zimba water filters to fit under hand pumps. They also worked on improving gear ratios on pedal powered rickshaws with other Indian NGOs. The team produced manufacturing jigs with a collaborating manufacturer and three initial prototypes of a new design for use in national parks. They carried out numerous co-design sessions with the manufacturer, rickshaw pullers from Kaledeo, a national park near Delhi and park officials.

Olin PIs have provided support to IDDS alumni within the IDIN network, now working in other organizations. For example, Prof. Jose Oscar Mur-Miranda provided Ashley Thomas, an IDDS 2007 organizer working with Innovations for Poverty Action, significant guidance regarding the design of a low-cost RFID system to track chlorination at water points in Kenya for hundreds of people. He also provided Laura Stupin, a long-term IDDS organizer and participant since 2007, working with Waste Enterprises in Ghana, with support to design a power backup system for a computer using existing chargers designed for solar panel applications. Finally, Olin PIs have worked very closely with Miguel

Chavez, director of IDIN partner Caos Focado in Brazil around the development of an Innovation Center in the favelas around Sao Paolo.

University of California at Davis, UC Davis

UC Davis's PIET-Lab has partners in Thailand, Honduras, Ecuador and Zambia and collaborates on both design projects as well as and curriculum development with academic institutions in these locations. In Year 1, UC Davis worked with Zamorano University, to design a condensed 4-week D-Lab course in Honduras which received excellent course feedback from participants. This work included a visit from Zamorano's course facilitator Jorge Espinoza, to UC Davis and a site visit from UC Davis to Honduras during the course. This course will be repeated each year of the IDIN grant period, training between 20-40 international students annually. UC Davis has worked with Kasetsart University in Thailand to develop a similar course for Thailand but it will not be delivered until Year 2.

In the third quarter of 2013, UC Davis D-Lab utilized D-Lab courses and Horticulture Collaborative Research Support Program, (HortCRSP Innovation Centers) to work with partners on continuing projects from the previous quarter's feasibility studies. Four prototypes were developed in collaboration with three partners to address energy and technology issues of small-scale farmers.

- **Ecuador:** High-velocity solar food dehydration with KIWA Vegetable Chip Producers
- **Nepal:** Zeolite beads for seed and herb drying;
- **Thailand:** farmer seed saving group study with the Educational Concerns for Hunger Organization (ECHO) and Kasetsart University, Advanced rubber harvesting knife with Kasetsart University
- **Uganda:** Motorcycle-based portable irrigation system with Agriworks

Finally, PIET Labs signed a new partnership agreement with the Technology, Development and Advisory Unit of the University of Zambia, to begin in January 2014. The University of Zambia will be an advisor to a PIET Lab student group focused on post-harvest storage technologies, with the potential to for collaborative technology development

IDIN Partnerships:

There are also a number of partner organizations which work on implementing specific IDIN activities such as Innovation Centers and Summits.

There are three partners which are all in the process of establishing or scaling up Innovation Centers in coordination with IDIN, Accelerating Innovative Solutions and Enterprise (AISE) in partnership with Global Cycle Solutions and Twende, in Arusha Tanzania, Caritas Gulu Archdiocese in Pader and Caos Focado in Sao Paolo Brazil. Two other partners have contributed significantly to developing summits with IDIN, the NTBC in Zambia and the NM-AIST in Tanzania.

Partner Engagement

Partner	Partner Type (Funded/ Unfunded)	Location (City and Country)	Outcome(s)
NTBC	Government/funded	Lusaka, Zambia	Partner across the whole consortium; plans innovation center, helped organize 2013 IDDS Summit.
KNUST	Government/not yet funded	Accra Ghana	Consortium partner across the whole consortium. Collaborated on sub-award, planning of innovation center, and hosted student teams from Olin and MIT for fieldwork.
USP	Government/ funded	Sao Paulo Brazil	Consortium partner across the whole Consortium. Collaborated on sub-award, planning of innovation center, hosted student teams for design projects with Dois Palitos community.
NTBC	Academic/ not yet funded	Lusaka Zambia	Collaborated on 2013 Summit and planning of innovation center. Worked with students from MIT doing fieldwork on IDIN design projects.
Caos Focado	Private/ funded	Sao Paulo, Brazil	Long term funded partner Working on the establishment of an innovation center (Y2Q1)
Caritas Gulu	NGO/funded	Pader, Uganda	Participate in Creative Capacity building; and are scaling up their small existing innovation center.
Twende-AISE	NGO/ funded	Arusha, Tanzania	Scaling up their small existing innovation center.
NM-AISE	NGO/funded	Arusha, Tanzania	Helped organize Maternal Child Health Summit.
Peace Corps	Government/non-funded	Zambia	Provide follow up on IDDS projects.
USIU	Private/ funded	Nairobi Kenya	Established SEMBAA program and established a venture incubation center, NEVA.
Zimba	NGO non-funded	Kolkata	Worked with Olin teacher student team on water chlorination project.

Avani	NGO-non-funded	India	Worked with MIT students on a range of technologies for fieldwork.
Kiwa	NGO-non-funded	Ecuador	Worked with UC Davis students on design projects.
Zamorano University	Private university/ non funded	Honduras	Delivered a 4 week course on development laboratory designed by UC Davis.
Kasetsart University	University/non funded	Thailand	Developed a curriculum on development labs; linked UC Davis students to communities for design projects.
Agriworks	NGO non-funded	Kampala, Uganda	Worked with UC Davis students on design projects.
Kulika	NGO/funded	Kampala, Uganda	Participated in Creative Capacity Building courses.
Makerere University; Institute for International Food Research	Government/ non funded	Kampala, Uganda	Designed and began implementation of a randomized control trial to evaluate the impact of CCB.

(Please also see appendix 7 for a summary table on project work, including creation, testing and scaling developed by IDIN members with their partners in Year 1

4.3. Student Engagement

All of the IDIN programs at the consortium universities are academic programs which share the main objective of broadly engaging students in development. IDIN engages students in development through curriculum, involvement in design or entrepreneurial projects, engagement with other students from other universities, research, employment, engagement with USAID, fieldwork, design challenges, and attendance at summits or other IDIN activities. The consortium universities organize these different modalities of engagement in IDIN through four different stages of activities:

- a. Preparing students to engage with the network
- b. Engaging students to work on IDIN Projects
- c. Bringing students into the network
- d. Engaging students with USAID field offices

Olin and MIT held events at their universities to engage students' interest in IDIN. CSU and UC Davis have hired students to work on the project which has enabled them to attend events and engage with students from other labs.

4.3. a Preparing students to engage with the network

Curriculum is the fundamental way in which students in the consortium universities prepare to engage with the network. In Year 1, IDIN Central has used Google Drive to share curricular materials within the network including curricular materials from past design summits. This socialization of curriculum will

increase and become available to other actors in Year 2. The individual curriculum work with students from different universities is detailed below.

CSU launched the Sustainable Enterprise Masters in Business Administration for Africa (SEMBA) at the United States International University (USIU) in Nairobi and enrolled 18 students in the first year. CSU is also in the process of developing entrepreneurial educational content for all students in all of the consortium schools. They have filmed a speaker series of 8 presentations by key entrepreneurial experts such as Tim Presterio of Design that Matters and Ross Baird of Village Capital. The 8 films now in post-production phase, offer expert advice and guidance on scaling up businesses and will be posted on the IDIN website in year 2.

MIT D-lab offers 12 courses throughout the spring and fall, including a central core of three consecutive development and design courses. The courses range from cross-cultural investigation to project-based, hands-on courses. All courses are focused on work in the global south that address development issues from water and sanitation, to health technologies to mobility and education.

At Olin, besides the engineering courses they offer, the PI team developed and launched a new course in Regional Development Analysis in the final quarter of Year one.

At UC Davis, PIET Lab offers two courses every year; first an extensive feasibility study and a second course, which builds on the first, focusing on project design and prototyping. UC Davis is developing also curriculum to deliver condensed 4-week D-Lab courses for universities in Honduras and Thailand. The first one was successfully piloted in Zamorano University in Honduras between June and August 2013. The second will be held at Kasetsart University in Thailand.

4.3. b Engaging students to work on IDIN projects

Overall, there was rich experience of student engagement on IDIN projects in the first year of this program through all the consortium members via the respective programs and classes offered by each university.

Colorado State University, CSU

Four GSSE MBA students are working on a project with International Development Enterprises (IDE) in Lusaka; two students brought this project to present at the 2013 IDDS-Zambia. Another group of six GSSE students is working on a new maternal health product line for Ayzh, the company that was launched by Zubaida Bai, an IDDS alumni and GSSE MBA graduate.

Massachusetts Institute of Technology, MIT

Students in the *D-Lab: Development and Cycle Ventures* class worked with IDIN partners on the following projects in 5 different countries and 43 students travelled to those countries to do fieldwork projects in January 2013. The projects by country were:

- **Brazil:** 9 students and staff travelled to Brazil to work with the Dois Palitos community on urban agriculture, mobile financial management tools and low cost flooring projects. They also worked on plastic bottle recycling in Sao Paulo. An additional four students worked on a solar water heater. Both groups were hosted by USP. USP also coordinated with MIT D-Lab students to work with the Dois Palitos community on rainwater catchment during the spring semester.
- **Ghana:** 10 students and staff travelled to Ghana and were hosted by KNUST. They worked on improving a prototype for a moringa sheller and moringa oil press. The students also worked on venture development in solar lighting, mushroom farming, beeswax processing and mango drying with IDDS alumni and participated in a sanitation project in New Longoro. The team also developed and delivered lessons at the primary, junior secondary and senior secondary schools.

- **India:** 4 students travelled to India to work with Avani, an NGO which has been involved in IDDS for many years. They worked on developing testing equipment for solar lanterns, testing pine needle stoves, and developing natural crayons and pastels.
- **Tanzania:** 13 Students travelled to Tanzania to work with three different partners. They introduced the moringa sheller from Ghana to CAMARTEC and worked with them to improve and refine it. They developed promotional materials for a pedal-powered juice maker developed at Twende-AISE, and worked on a multi-crop thresher at Global Cycle Solutions.
- **Zambia:** 7 students and travelled to Zambia and worked with NTBC and other organizations. They developed a static auto-chlorination device, developed a cell phone-based public health project and worked on a health education radio station in Linda Compound.

Students from MIT and the University of Sao Paulo continued to work on projects in the communities that were part of last year's design summit during January 2013. During the spring semester, students from the *D-Lab: Design* class worked on two IDIN projects; a rainwater collection project in collaboration with the Dois Palitos community in Brazil and a project to help a young girl in Ghana who had her arm amputated. An additional 7 students from the D-Lab: Energy class worked on IDIN projects in Brazil. Two students spent spring semester 2013 working with IDIN partners in Brazil as part of the pilot of the D-Lab Study Abroad program.

Olin College,

A total of 11 students in the Affordable Design and Entrepreneurship (ADE) Program, from Olin, Babson and Wellesley students were engaged in two IDIN-connected projects, developing prototypes for cassava graters for Ghana and working on water purification and rickshaw pedal improvement in India.

The students brought three cassava grater prototypes to Ghana to demonstrate and brought one out to a community. The students worked with the community in co-design sessions to evaluate the new grater design and develop a new design for a cassava press. As a result, additional community members asked to participate in the pilot program to try the new graters. The team also collected gari samples and performed preliminary cyanide tests to assess the safety of the different press designs and strategies. Two students continued to research the performance of the grater teeth after the field tests.

The students accompanied Professor Mechtenberg to meet with representatives of the Ministry of Agriculture in Ghana about cassava processing equipment. They also participated with her in a meeting with the WHO Ghana office on cyanide poisoning from cassava. Finally at his request, the Olin-ADE team met with the Ghanaian Finance Minister of Finance to discuss the grater project.

Olin-ADE Students also travelled to India to work with IDIN partner ZIMBA on water purification, redesigning the chlorine filters from Zimba to fit under existing hand pumps in India. They also worked with a group of stakeholders to modify gear ratios for pedal powered rickshaws in order to reduce the amount of effort for the rickshaw pullers in national parks

As part of this work Olin carried out research with 3 students in Zambia during the first two weeks of the IDDS Zambia 2013 Summit. Two students worked on innovation dissemination research, carrying out interview and site visits with agricultural equipment producers. The third student worked on electrical systems for development by running interviews and training workshops with IDDS participation and rural community members on making smart electrical devices such as energy harvesters and energy saving solar lanterns. All three students presented their research at IDDS Zambia.

A key research project at Olin looks at technologies within electrical engineering that have the potential to enable new products or ventures. It includes the development of a framework to evaluate and compare the benefits of electrical engineering technology across a complexity spectrum, in particular in developing contexts. The current case study focuses on microcontroller circuits in order to explore the tradeoff between cost, complexity and energy efficiency.

IDIN has enabled the Olin PI's to pursue long-term research that transcends specific projects and supports of the network. The main goal of this research is to expand the variety of techniques and technologies available to innovators and facilitate their use. In order to guarantee that the investigations are relevant and have direct impact on the network, all researchers regularly engage members of the network in a variety of ways such as through projects or build-its. These projects engage undergraduate students

University of California at Davis, UC Davis

Students at US Davis worked on several IDIN projects through the Program in International Energy Technologies (PIET). Program partners, PIET-Lab students, and UC Davis faculty collaboratively developed problem framing briefs, performed feasibility studies and outlined technical specifications for projects with the following partners:

- Solar-enhanced Food Dehydration with KIWA Vegetable Chips producer in Ecuador to Design, build, and testing of various solar preheaters for chip drying
- Zeolite Beads for Seed and Herb Drying with: Kasetsart University and EHCO, Thailand; developing off-grid zeolite bead regeneration prototype and evaluation utilizing locally source-able materials
- Advanced Rubber Harvesting Knife with Kasetsart University Thailand; evaluating existing models and defining effective designs specifications, then prototyping and testing new models center on user ergonomics.
- Motorcycle-based Portable Irrigation System with Agriworks Uganda Ltd, Uganda; prototyping a frame and delivery package to improve efficiency with \$25,000 in funding from UC Davis Sustainable Agriculture Technical Innovation center, STATIC

4.3. c Bringing students into the IDIN network

There are many activities in IDIN that provide exciting opportunities to bring students into the network. IDIN consortium members encouraged students from member universities to apply to attend 2013 IDDS Zambia and at least one student from each university attended. In addition, many students from universities outside of the consortium also attended the summit. These students were then able to bring back projects from their IDDS team to engage other students at their university in continuing work and to continue to communicate with other participants in the 2013 IDDS through the network. Students were nominated to attend the HESN TechCon and will be invited to future HESN events. A final way to bring students into the network is through employment to support IDIN projects and programs. Each consortium also has specific mechanisms for bringing students into the network.

CSU established two full scholarships for IDDS alumni and will begin recruiting for them. In the meantime, two IDDS alumni have enrolled in the GSSE MBA program for the fall of 2013. CSU is increasingly focusing on bringing IDDS alumni into their GSSE and SEMBAA programs and bringing GSSE and SEMBAA students to the IDDS Summits.

MIT brings students into the network through design class projects, fieldwork opportunities, internships and involvement in both HESN meetings and IDDS Summits. In Year 1, MIT took 43 students to five countries to work with IDIN partners on design projects in January 2013 and continued project work with partners during the spring semester. Six students from USP worked collaboratively with MIT D-Lab students in Cambridge, communicating electronically. Two students spent the spring semester in Brazil as part of the pilot for study abroad. MIT brought three students to the HESN launch where they were able to network and participate in specially designed activities. MIT has also hired four students to form part of the IDIN research team.

Olin College brought students into the network by launching an IDIN student forum in the fall, bringing together 60 students from across Olin, Wellesley, and Babson colleges to learn about opportunities to get involved in IDIN and HESN. Students were then selected from this group to be part of the Olin team for

the IDDS Summit. Finally, Olin offered a scholarship to one student to participate in the IDDS Zambia Summit, and brought two others to the Summit as part of a research project. (see section 4.2 for more details). Olin also hired three graduate students to work on IDIN activities.

UC Davis created the position of IDIN Fellows, who are Graduate Student Researchers working for its D-Lab. UC Davis selected one IDIN fellow to participate in the IDDS summit who is working on developing curricular materials for upcoming Summits, particularly around Build-its; and follow up on design projects after the 2012 IDDS Summit held in São Paulo. UC Davis hired a total of 6 students over the year to work on IDIN related projects.

4.3. Engaging students with USAID field missions

(Please see detailed information on this in Section 5.2)

USAID will be developing a plan for engagement with HESN students. In the meantime, when students have gone overseas on IDIN project work, they have met with USAID field staff. In Year 1, primarily students from Olin and MIT engaged with USAID field missions when working on projects in Ghana, Zambia and India

(Please see appendix 8 for a table of student engagement with IDIN during Year 1)

4.4. Student Highlights

Andy Kumar Colorado State University graduating in December 2013

Andy Kumar is a GSSE student from CSU who attended the IDDS Zambia 2013. He was eager to participate in IDDS because he really wanted to be part of an international development experience that would connect him to other stakeholders, rather than just entrepreneurs and see how he could bring his skills to work with them. He brought a strong set of entrepreneurial skills to his team at IDDS that went to the village of Mwavi to work on the palm leaf production process. He found the experience of living in a rural Zambian village and getting to know the people to be transformative. He participated enthusiastically in the design process but his real contribution was looking at commercial side of the palm leaf processing. He saw that the gaps were not just in product design but in the lack of a market strategy. He brought a business perspective to work with the producers. He helped the different craftspeople analyze the value chain, looking to see where they could reduce production costs and increase profit, mainly by developing marketing strategy and bringing production to scale. He bought a series of products to use as samples and once he returned to Colorado, he began trying to connect the producers with international vendors. He has sent the earning from the samples he has been able to sell back to the village. Since his return, he has continued to try to connect the producers with the international market.

Jungmin (Jamie) Youn (윤정민) IDDS participant and student from the Korea Advanced Institute of Science and Technology

Jungmin (Jamie) Youn is a female grad student from the Korea Advanced Institute of Science and Technology in the Department of Civil and Environment Engineering who participated in IDDS 2013 Zambia, working on the waste management (tetra-pak recycling) team. She struggled at first with being the only woman on the team, but in the end, was able to make herself heard and together, her team developed some excellent prototypes for using used tetra-pak cartons to make different items. She took her experience back to her university in Korea and with fellow students, developed a prototype for tetra pak roofing. The team submitted their tetra-pak roofing for the Hyundai-hysco global technology and design award and won second prize including funds to continue their research. Through connections she

made at IDDS, Jungmin was invited by the social venture “These Hands” to bring this new technology Chennai India in February 2014.

Jonathan Tebes MIT student

Jonathan is an economics major who took a course at D-lab last year to get hands on experience in development work. Through D-Lab, he was able to go to Tanzania in 2012 where he met Bernard Kiwia, a Tanzanian an IDDS alumni and Tanzanian who has spent time at D-Lab as Designer in Residence. Jonathan and Bernard made a strong connection and Jonathan was able to get an MIT Public Service Center Fellowship to return to Tanzania to work with Kiwia for the summer of 2013, helping him create a small innovation center called Accelerating Innovation and Social Entrepreneurship, for community youth to participate in creation of low-cost technologies. His research project focused on one of Kiwia’s innovations, a motorcycle-powered multi-crop thresher “His thresher attaches to the back of a motorcycle and threshes rice close to industrial throughput, which is really exciting,” Tebes says. “I collaborated with other D-Lab students to conduct a quasi-economic analysis of whether this could benefit farmers. We discovered that it will cost a small farm about one season’s profit to pay for the device, but the device will last for many seasons. Overall, it would cost farmers less than what many already paid casual laborers to thresh their rice and allow them to compete with medium- and large-scale farms.” He also worked with Bernard Kiwia on developing a market strategy for his pedal-powered juice maker, and in so doing, realized that crowd-funding resources are a real opportunity for like innovators like Bernard. Tebes and a fellow student created a website that publicizes the work of innovators like Bernard and provides a mechanism for people to fund their projects.

Tebes’s experience in Tanzania has inspired him look at how to help people improve their lives through harnessing the power of community. His experience is highlighted at:

<http://web.mit.edu/newsoffice/2013/student-profile-jonathan-tebes-1113.htm>

Nicole Rifkin (IDDS 2013 Participant) Olin student

Nicole Rifkin is an undergraduate Engineering student from Olin who participated in the IDDS Zambia 2013 and worked on the Heartbeat 5 team there. She has always been interested in health but the IDDS experience really galvanized her desire to use her engineering skills to develop medical and health care devices for the developing world in the field of health and medicine. Once back continuing her studies at Olin this fall, she seized the opportunity to enter “How to Hack Healthcare, an Undergraduate Hackathon” hosted by MIT Hacking Medicine, the Harvard Innovation Lab and MGH Medical Device Plug and Play Inoperability Program, as a member of the Olin team. The Hackathon teams had to develop prototypes for medical devices for the developing world, building on the experience she had at IDDS. Nicole’s team built a prototype and programmed an [Arduino](#) (an open-source electronics prototyping platform), and won first prize for the Hackathon. There are more details at: <http://medtechboston.com/the-h3-how-to-hack-healthcare-undergraduate-hackathon-was-our-invitation-to-the-world-of-innovation/>

Edward Silva UC Davis graduate

Edward Silva worked on the SMART Light team at the UC Davis D-Lab in 2011 and travelled to Zambia to work with IDIN partner Disacare to help with the product roll-out. A year or so later, Edward was attending a Business development workshop where he and his team explored other uses for the product. Using the core SMART light technology his team created the Henlight, a solar powered light that stimulates egg production in chickens. The team attended the Thought for Food (TFF) summit in Berlin in October 2013 where they joined entrepreneurial teams from across the globe to present their idea to a

panel of judges on how to tackle the questions, “How to feed nine billion people by 2050?” Edward and his team won the pitch

Part 5: USAID Engagement and Travel

5.1 USAID/Washington Interactions

First Quarter: October to December 2012

The major event for USAID engagement in this quarter was the formal launch of HESN in Washington DC. All PIs for IDIN, attended the 2-day launch on November 8 and 9th along with high level members of the MIT administration: the MIT Provost, Chris Kaiser, the Dean of Undergraduate Education at MIT, Daniel Hastings, the Director of the MIT Washington Office, Bill Bonvillian. IDIN staff members, Nadia Elkordy, Daniel Mokrauer-Madden, Kofi Taha and MIT graduate student, Amit Ghandi, also attended the HESN launch as well as the students from all the other IDIN consortium universities. The launch was an opportunity to meet all of the Lab Directors from HESN, leadership from other universities and nominated students, The launch provided CITE and IDIN with an effective opportunity to engage senior MIT administration with senior staff at AID, including AID Administrator Rajiv Shah, as well as Secretary of State Hillary Clinton and Dr. John P Holdren, Advisor to the President for Science and Technology. On the second day, CITE and IDIN did a joint presentation on the work of their labs at the public event at the National Academy of Science. They introduced their presentation with a 5-minute video on their labs which they had prepared with the MIT media center.

On December 17th and 18th, three USAID staff from Washington DC, Dr. Ticora Jones from HESN, Michele Schimpp, the COO from the Office of Science and Technology, and Jessica Rosen, the Agreement Officer’s Representative, visited MIT to meet with IDIN and CITE. They discussed both teams’ respective work-plans and monitoring and evaluation frameworks. The MIT lab teams were able to learn about HESN and how to engage effectively with USAID. Finally, USAID, CITE and IDIN representatives explored ways in which USAID cooperative agreements can be leveraged to create a more focused international development research agenda at MIT.

Second Quarter: January through March 2013

Dr. Ticora Jones from USAID attended the first annual IDIN Consortium meeting in March 2013 in Washington, DC. The two-day meeting brought all the consortium members to work together for the first time, including representative from the academic institutions in Ghana, Zambia and Brazil, which have not yet received sub-awards. The PIs and IDIN staff met, reviewed the project, discussed the work to date, refined initial roles and responsibilities and developed the organizational infrastructure for the implementation of IDIN. Dr. Ticora Jones presented a session for all the PIs on how to interact with USAID. Sharmarke Osman, the Financial and Program Administrator, and Sue St Croix, the D-Lab Administrative Officer, also attended the meeting and at the same time met with Roderick Watson, a contract specialist, in order to review USAID administration procedures.

Third quarter: April through June 2013

Amy Smith, Elizabeth Hoffecker Moreno and Kofi Taha from MIT attended the HESN Lab Directors meeting in Washington in April, 2013. Along with other HESN participating universities, they formally presented the project and its work, met other participating labs and began identifying potential collaboration with other participating Labs. All participating Labs worked with HESN on the results frameworks and monitoring and evaluation plans.

On May 13 and 14th, a delegation from USAID visited MIT for two days of high level meetings between the two organizations in Cambridge MA. The USAID delegates, Dr. Alex Dehgan, head of USAID's Office of Science and Technology, Dr. Ticora Jones, head of the HESN, and Dr. Amit Mistry, the IDIN AOR, had meetings with MIT President Rafael Reif, Chancellor Eric Grimson, Provost Chris Kaiser, Vice President of Resource Development, Jeff Newton and the Dean of the School of Engineering, Ian Waitz, as well as with CITE and IDIN members. These meetings helped strengthen the relationship between USAID and MIT around the HESN initiative and IDIN's and CITE's respective work. Dr. Alex Dehgan, the Science and Technology Adviser to the Administrator and Director at USAID gave a keynote speech in the evening of May 13th with over 300 people from MIT and the community in attendance. (Please see Appendices 9 and 10 for posters advertising Dr. Dehgan's speaking event at MIT)

Karen Clune, the Innovation Advisor in the Center for Accelerating Innovation and Impact in the Bureau for Global Health at USAID visited the IDIN team in Cambridge and became a key participant in the IDIN planning meetings for the Maternal Neo-Natal Health Summit in October in Tanzania.

Fourth Quarter, July through September 2013

Dr. Amit Mistry, the AOR from USAID Headquarters in Washington DC attended the closing week of the IDDS Summit in Zambia. This allowed him to see the 8 prototypes produced at the summit in their final stages of development, travel to the field sites, discuss the work with participants, attend final presentations of all 8 prototypes, and speak at the closing ceremonies. He also met with the IDIN team to discuss steps to maintain continuity and sustainability of the efforts. In his blog on the USAID website about the event, Dr. Mistry reflected that, "in every case, impoverished Zambian communities benefited from the technology itself as well as the sense of empowerment they gained by engaging with the IDDS participants. The participants also came away from the experience with a new perspective on international development and a powerful new capacity to find solutions to the problems affecting people living in poverty." Dr. Mistry delivered the opening remarks for the formal closing ceremony of about 300 people along with Dr. Jonathan Tambatamba, director of the National Technology Business Centre in Zambia, and a representative from the Southern Africa Innovation Support (SAIS).

Sher Vogel, Nai Kalema, Sharmarke Osman and Sue St Croix from IDIN Central attended the USAID training on the visa procurement system for overseas visitors in USAID funded projects, and on the TraiNet program. They also met with Amit Mistry in DC to discuss IDIN project activities.

5.2. USAID Mission Interactions

India;

- The leader of the Olin ADE student-teacher team, Rakesh Pandey, met with Nilesh Shah, the Science and Technology Officer in the US Embassy of India. The team was in India to work on water purification with ZIMBA in Kolkata and rickshaw pedal modifications. They introduced themselves, the IDIN network, and presented their work.

East Africa and Kenya Missions:

- The IDIN Network Coordinator, Jona Repishti and IDIN staff from CSU, Shelby Sack and Jessica Rawley, visited the USAID missions for East Africa and Kenya in Nairobi in July 2013. They discussed IDIN's work, including NEVA and the SEMBAA program at the United States

International University in Nairobi. Both missions were very interested in possible collaboration with IDIN and agreed to send representatives to the Maternal and Neo-Natal Health Summit in Tanzania during the first quarter of Year 1.

- In early June 2013, Dr. Karen Clune facilitated a phone conference with MIT and the East African Mission in which both parties expressed interest in working more closely together, particularly on the topic of Maternal Health in East Africa. The Mission recommended meeting with East, Central, Southern African Health Community, ECSA-HC, as another strategic partner for advertising the Summit as well as facilitating continuity of activities that may arise from the Maternal Neo-Natal Health Summit.

Zambia:

- Kurt Kornbluth from UC Davis, Amy Smith and Jona Repishti from IDIN MIT, Dr. Tambatamba from NTBC and Dr. Amit Mistry from USAID Washington visited the USAID Zambia Mission in July 2013 after the IDDS Summit. They met with Acting Mission Director Ryan Washburn, Acting Deputy Mission Director Joseph McGee, and Chris Foley from the Program Office to talk about possible links between IDDS innovation work and the Mission's programming. The discussion did not result in any direct links but the USAID mission offered to share information about their programs and their Country Development Cooperation Strategy (CDCS) to help IDIN explore future linkages.
- Dr. Tambatamba, IDIN partner and head of the NTBC in Zambia, visited the USAID mission in Zambia to request funding for the Zambia IDDS Summit in July 2013. He developed an excellent working relationship with them and the USAID field mission in Zambia provided funds for housing for all participants during the IDDS Summit.
- The Acting USAID Deputy Mission Director Joseph McGee, was invited by Dr. Tambatamba from NTBC to deliver a keynote speech at the official opening of the IDDS Summit on July 30th. Representatives from the Zambia USAID field mission attended the closing ceremony of the IDDS Summit.
- Peace Corps Zambia played a very active role in the IDDS Zambia Summit which added considerably to its success. Henry Chilufya, an IDDS alumnus and Zambian national is on the staff of Peace Corps in Zambia and was one of the local organizers for IDDS Zambia. As Peace Corp staff, he helped establish Appropriate Technology Centres which provide resources and training for Peace Corps Volunteers and their counterparts. A Peace Corps volunteer, Jordan Blekking, and Zambia's volunteer coordinator, Tony Tseng attended portions of the summit, and two Peace Corps counterparts attended IDDS as full time participants. Senior Peace Corps administrators from the Zambia office attended opening and closing events, including the Peace Corps Director for Zambia, Thomas Kennedy. The Peace Corps participants have been very proactive in taking what they learned at the IDDS Summits and using it in their communities. The host country nationals have played a particularly key role in following up project development from the IDDS Summits.
- The D-Lab Development team from MIT led by Eric Reynolds and Nadia Elkordy met with USAID staff at the field mission in Zambia while they were working on class projects with community partners in Lusaka, during the month of January 2013. They introduced themselves and explained their work on prototypes for static auto-chlorination devices, a health education radio station project, and a cell phone based public health program at Linda Compound.

Ghana

- The D-Lab Development team from MIT led by Amy Smith and Kwami Williams working with KNUST on prototypes during the month of January 2013, met with staff at the field missions in Ghana. They introduced themselves and explained their work on prototypes for moringa shellers and oil presses as well as a solar lighting venture and a sanitation project.

5.3. Travel

The following travel (domestic and international) using HESN funding occurred during the past fiscal year:

Location (City and Country)	Institution	Names of travelers	Partner(s) Engaged (If applicable)	USAID Engagement (If applicable)	Outcome(s) & Next Steps
Sao Paulo, Brazil	MIT January	Amit Gandhi Karine Yuki Cheetiri Smith Kelly Wang Laura Stilwell Lynn yu Soojin Kim Soomi Kim Yujie Zeng	USP - Community of Dois Palitos		Worked on urban agriculture; mobile financial management, a solar water heater and plastic bottle recycling.
Kumasi, New Longoro, Ghana	MIT January	Amy Smith Kwami Williams Amanda Jui Ekateri Parmonova Bahar Shah Breanna Rossman Hana Kalil Franco Montalvo Kristina Johnson Modupeda Fadugbah Prakriti Paul, Rachel Aptowitz	KNUST		Worked on prototypes for moringa shellers and oil presses; a solar lighting venture, beeswax processing, mushroom farming, mango drying and a sanitation project with IDDS alumni from New Longoro.
Lusaka, Zambia	MIT	Eric Reynolds Nadia Elkordy Diana Iskovitch Ishwarya Ananthabhotia Nursen Ogutveren Simmy Willeman Tiantian Zhou Elizabeth Exil Nathan Landman	NBTC		Worked on static auto-chlorination device, health education radio station project, cell phone based public health and the outreach and programming project at Light of Hope in Lusaka Zambia.
Arusha, Tanzania	MIT	Gynn Jones Rebecca Smith Elliot Avila Candace Chen Luis Hong Sanchez Dana Yuan-Chin Lee	Global Cycle Solutions, Twende-AISE, CAMARTEC		Introduced the moringa sheller from Ghana to CAMARTEC and worked to improve it. Developed

		Jahnvi Kalpathy Melvin Salinas Chrystelle Kiang Pearl Bhatnagar SaeBom Choi Tachmajal Corrales Sanchez Tejas Inamdar Jonathan Tebes Krista Nordin			promotional materials for a pedal powered juice maker and worked on a multi-crop thresher.
Uttarakhand, India	MIT	Nathan Cooke Lise Capet Abby Rice Evelyn Tio Helen Yang Matt Yari	Avani		Tested pine needle stoves, developed testing equipment for solar lanterns and developed natural crayons and pastels.
Kumasi, Ghana	Olin	Irene Hwang Yeawon Park Caroline Condon Katherine Maschan Gabrielle Waldman-Fried Yoon Kyung Shin, Ben Linder Abigail Mechtenberg	KNUST		Developed three prototypes for cassava grater teeth and tested them in a rural community. They also conducted user studies of women gari producers and vetted the supply chain for production.
New Delhi, India	Olin	Kathryn Brookshier Joshua Furnish Celeste Maisel Hanmin Tam Alexandra Ariza	ZIMBA, NGOs and government partners	The team leader, Rakesh Pandey met with Nilesh Shah from USAID New Delhi Mission	Performed field work with NGOs, suppliers and government partners on rickshaw pulling, and performing user studies of rickshaw pullers along with testing of pedal rickshaw prototypes prototype for Kaladeo National Park.
Bangkok, Thailand	UC Davis	Kurt Kornbluth	Kasetsart University		Developed D-Lab curriculum classes in partnership with Kasetsart University.
Tegucigalpa, Honduras	UC Davis	Kurt Kornbluth	Zamorano University		Developed 4-week D-Lab curriculum and participated in a section of the delivery at the University of Zamorano.
Morogoro, Tanzania	MIT	Amy Smith Kofi Taha	Partnership with another US AID Funded project		Worked with IDDS alumni to conduct a CCB training to

					another USAID partner in Tanzania.
Kampala, Uganda	MIT	Amy Smith Kofi Taha Benjamin Monciviaz	Caritas Gulu		Completed a training of trainers in Creative Capacity Building (CCB) and trained 7 IDDS alumni to be IDDS instructors.
Nairobi, Kenya	CSU, IDIN Central	Jona Repishti Jessica Rawley Shelby Sack	USIU and NEVA	Met with USAID mission for Kenya and USAID Mission for East Africa	The IDIN Network Coordinator and staff from CSU worked with USIU staff on integrating SEMBA students into IDIN and developing NEVA as a resource for IDIN.
Lusaka, Zambia	Colorado State University – GSSE program	Judy Baker and Andrew Kumar	International Development Enterprises (IDE)		Joint work between IDE and GSSE students.
Washington DC, USA	Olin, MIT, CSU, UC Davis,	Amy Smith, Daniel Mokrauer-Madden, Elizabeth Hoffecker Moreno, Nadia Elkordy, Sharmarke Osman, Sue St Croix, Ben Linder, J. Oscar Mur-Miranda, Shelby Sack, Jessica Rowley, Kurt Kornbluth , Car Jensen, Carl Hammerdorfer		Met with Dr. Ticora Jones of HESN	Participated in the first annual consortium meeting in DC to set coordination and strategy.
Washington DC, and Cambridge MA, USA	University of Sao Paulo, USP	Tereza Carvalho, Miguel Chaves	AID, IDIN	Met with Dr, Ticora Jones of HESN	Participated in the first annual consortium meeting in DC to set coordination and strategy and met with Amy Smith, Ben Linder and IDDS staff at MIT about the innovation center.
Washington DC and Cambridge, MA, USA	Kwami Nkrumah University of Science and Technology, KNUST	George Obeng Crossman Hormenoo	AID, IDIN, MIT, Olin	Met with Dr. Ticora Jones of HESN	Meeting with Amy Smith, Ben Olin, Oscar Mur-Miranda and IDDS staff at MIT to identify resources and partners in Ghana for a future Summit. Participated in the first annual consortium meeting in DC to set

					coordination and strategy.
Washington DC, USA	National Technology and Business Center, NTBC	Jonathon Tambatamba, Yvonne Mulambwa	AID, IDIN,	Met with Dr. Ticora Jones of HESN	Participated in the first annual consortium meeting in DC to set coordination and strategy.
Arusha, Tanzania	IDIN Central	Sher Vogel Daniel Mokrauder-Madden	NM-AIST	Met with AID mission in Tanzania to present work and introduce 2013 and 2104 Summits	Interviewed potential hosts for two Tanzania Summits, chose NM-AIST, and began preparations for the summits.
Lusaka, Zambia	IDIN Central, consortium, partners and students	Amy Smith, Daniel Mokrauder-Madden, Elizabeth Hoffecker Moreno, Nadia Elkordy, Ben Linder, J. Oscar Mur-Miranda, Shelby Sack, Crossman, Hormenoo, Jessica Rowley, Kurt Kornbluth, Car Jensen, Carl Hammerdorfer	NTBC, KNUST, USP, Caos Focado, Caritas Gulu, CSU, UC Davis, Olin	AID mission representatives attended opening and closing ceremonies; AOR Amit Mistry attended the last week.	Carried out the month-long IDDS Summit, expanded the reach of the network, developed 7 new technologies and brought students from each sub-awardee.
Nairobi, Kenya	IDIN Central CSU	Jona Repisti Jessica Rawley Shelby Sack	NEVA, USIS	East Africa Mission and Kenya Missio	Worked on coordination between CSU SEMBAA program and IDDS alumni on venture development.
Washington DC, USA	IDIN Central	Amy Smith, Kofi Taha, Elizabeth Moreno	HESN Lab Directors	USAID HESN	Developed HESN results framework, indicators, and mapping exercises.
Washington DC, USA	IDIN Central	Sharmarke Osman, Sue St. Croix, Nai Kalema, and Sher Vogel		Met with USAID Training Office	Learned about USAID's VCS system and Trainet.
Sacramento, California	IDIN Central	Shivi Chandra, Sher Vogel, Jona Repishti	CSU, UC Davis		Met with IDIN Consortium staff at UC Davis and CSU and with IDDS alums.

Part 6: Monitoring & Evaluation

6.1. Progress Narrative

During the latter part of Year 1, IDIN developed the monitoring and evaluation indicators and targets for the five-year program. Since these were not completed before the Year 1 Work Plan was submitted, the Monitoring and Evaluation staff at IDIN Central has developed retrospective targets for Year 1 which were submitted to the AOR and approved in order to measure progress in the first year. Developing the targets and indicators in the first year has been a helpful way to hone them against actual practice. These M&E indicators will be reviewed in November 2013 with the Consortium members to check for effectiveness and then put in place for Year 2.

6.2. Monitoring & Evaluation Issues

The IDIN network is a multi-faceted, multi country project with a range of actors that present a challenge for consistent monitoring. It is essential to establish an effective monitoring and evaluation process in order to understand how IDIN activities can be effectively measured across different realities to establish progress towards program goals. The staffing component is key to this. IDIN hired an interim part-time M&E coordinator in January, Elizabeth Hoffecker Moreno, in order to begin the development of indicators and targets. This position was scaled up to full time in the third quarter and she developed the Results Framework for IDIN which was submitted to USAID in June 2014. A full time M&E coordinator, Shivi Chandra was hired in August 2013. For the remainder of the year she focused on finalizing the M&E indicators for the overall project.

The difficulty of coordinating data collection and compliance with monitoring progress among all the sub-awardees, consortium partners and volunteers emerged as a key challenge in Year 1. It is necessary to invest time and energy in improving communications about M&E between IDIN Central and the consortium members and long-term partners in order to improve both data collection and their compliance. Now that the indicators and targets have been finalized and accepted by all consortium members, the next step in Year 2 will be to work with consortium members and long term partners to standardize data collection and improve their overall compliance in monitoring progress towards the M&E targets.

6.3 Update on Performance Indicators

Below are the updates on the performance indicators for Year 1.

Lab Ref.	Performance Indicator	FY13 Target	FY 13 Actual
Gin1	Ratio of total value of outside (non-USAID) resources utilized to dollar value of USAID investments	\$1,449,073	\$1,408,953

Gin2	# of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN development labs	11	12
Gin3	# of transformative innovations, technologies, or approaches that were piloted with human, financial, or institutional resources contributed by HESN development labs	12	7
Gin4	# of transformative innovations, technologies, or approaches that were adopted with human, financial, or institutional resources contributed by HESN development labs	8	4
Gin5	# of transformative innovations, technologies, or approaches that achieved wide-scale adoption with human, financial, or institutional resources contributed by HESN development labs	1	0
Gin6	# of transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by HESN development labs	0	2
Gin7	# of US students via HESN partners serving as fellows in developing countries	4	6
IR2.2in1	# of white papers, articles, assessments, analyses, and evaluations published in targeted fora or publications	13	3
IR2.3in1	# of MOUs or other agreements signed with public sector, private sector, local community partners, and one HESN development lab	3	1
IR2.3in2	# of stakeholders engaged in problem-solving with one HESN development lab	17	12
O3in3	# of new development-related classes or disciplines created by university departments with human, financial, or institutional resources contributed by HESN development labs	0	10
IR3.3in2	# of collaborative platforms created by the HESN or with resources contributed by HESN development labs	1	3
IR3.4in1	# of students participating in short-term practicums or other field experiences through resources contributed by HESN development labs	23	92
IR3.4in2	# of hubs created with resources contributed by	2	3

	HESN development labs		
IR3.4in3	# of participants in hubs, Summits, and other problem-solving institutions created with resources contributed by HESN development labs	150	157
Cust4	# of requests from USAID operating units, HESN partners, and other development agencies	0	0
Cust5	# of students, staff, and faculty conducting research with IDIN's research team	4	6

The progress reflected in the narrative of this report mirrors the indicators progress against the targets. In the first year, the project has performed significantly above the targets in areas of student involvement in IDIN, academic course development, and student and faculty involvement in research around design. For 11 out of 17 indicators, progress in Year 1 has surpassed the targets. The areas where the progress is not meeting projected targets largely reflect the more uneven pace of getting the structures and mechanisms into place, i.e., the delays with the sub-awards have slowed down the development of more infrastructures on the ground.

While the program is pretty much on target with developing innovative and transformative technologies and approaches, (Gin 2) the piloting and adoption of those technologies has been slower than originally planned because of the delays with the sub-awards. This has meant that the consortium partners overseas in Ghana, Brazil and Zambia have not received the resources they need to build their own infrastructure in order to implement activities within the original timeframe.

Given the difficulties of the sub-awards, IDIN Central is moving towards using purchasing orders instead of sub-awards and developing partnerships with a wider variety of organizations in order to facilitate transfer and use of resources for implementing activities overseas.

Part 7: Lessons Learned / Good Practices

IDIN is a complex project that works across countries and cultures to develop effective linkages for design, development, training, research and entrepreneurship with a range of actors that includes universities, design labs, NGOs, USAID missions, Innovation Centers, villages, communities and individuals. It seeks to be truly participatory, build agency and capacity on the ground and facilitate communication and ideas back and forth among these different entities. The complexity of the program and the diversity of the stakeholders have sometimes been challenging to manage. This section about lessons learned from the first year of activity focus heavily on the process, structure and organization of the program, rather than the content of the activities.

7.1 Organizational infrastructure

IDIN made significant progress in creating an organizational infrastructure by hiring the IDIN administrative and programmatic team at MIT as well as dedicated IDIN administrative staff at CSU and UC Davis. The scope and multiple facets of the program demands on-going strategic prioritization, a multi-stakeholder decision-making process and a need for overall program management. In order to meet these needs, the following actions will be taken;

- a. *Strategic prioritization:* The PIs need to develop mechanisms to set strategic priorities based on their interpretation of the mission in response to the dynamic rhythm of the program.
- b. *Decision making:* Develop a mechanism which is representative of the different stakeholders in IDIN and that can make or inform the overall decisions to move the strategy forward and maintain fiscal responsibility

- c. *Management:* Hire a program manager to oversee the implementation of all the different parts of the project, facilitating decisions and processes in the MIT team and among the consortium.

7.2 Administrative demands

USAID is a relatively new funder to MIT, D-Lab has had to adjust to the fact that both organizations have their own set of demanding administrative requirements, which is further complicated when combined with the administrative requirements of the consortium members and funded partners. USAID has demanding reporting requirements and MIT has had to retool accounting and administrative procedures to meet these demands. Furthermore, the reporting load has fallen disproportionately onto the MIT Lab Director, which hinders operations of IDIN at a higher strategic level. To alleviate this problem, IDIN will:

- Hire a full-time program manager to take the lead on the reporting responsibilities
- Hire a part-time communications coordinator
- Develop mechanisms for more effective integration of information from consortium members into the reporting process

MIT's administrative and accounting systems are designed to handle mostly domestic payments and are not geared towards project implementation with small groups or individuals overseas. The program needs mechanisms to transfer money to those kinds of vendors and to participants through micro-grants. Some of these mechanisms have now been put in place to transfer smaller amounts of money through micro-grants, but they have been slow. However, the following can improve efficiency in the program:

- As IDIN moves towards more program implementation on the ground, more efficient mechanisms to do micro-grants, transfer money to individuals or small organizations will need to be developed and approved by both MIT and USAID if the program activities are to progress as planned overseas.
- Some administrative procedures within IDIN, particularly D-Lab have been set up, but this process needs to be completed so that all administrative procedure are clear, understood by all and streamlined as much as possible.

7.3. Building capacity and agency on the ground

A positive lesson is that the project has real resonance with innovators and local groups on the ground; there is a great deal of agency, energy, enthusiasm and contribution from local groups of IDDS alumni, local innovators and organizations. This strong response is a confirmation that the program is on target with its mission and approach and is filling a niche.

For both the innovation centers and the summits, the IDIN team has learned that *the* key ingredient for success is a few people who are very energized and committed and willing to make it happen. The original idea was that the sub-awardees overseas would be universities and they would be the main partners for innovation centers or summits with understanding that the sub-award grants and the agreed upon cost share would support those activities. The IDIN program coordinators have learned that it makes much more sense to consider a wider range of organizations as candidates to start innovation centers or lead summits. However, since these groups do not have the same resources that universities enjoy in terms of infrastructure and cost share potential, it has become a real priority to build support and provide capacity for them. This means rather than rely solely on the universities for leading summits or innovation centers, IDIN will work with different organizations whose key criteria will be their vision, energy, determination and potential for capacity building.

The sub-award process is extremely cumbersome and has led the team to look elsewhere for engaging other partners on the ground to move work forward. For example, development of the innovation center in Brazil was severely hindered by the inability of USP and MIT to come to terms on a sub-award agreement

that conformed with MIT's cooperative agreement with USAID. Nonetheless, through a purchase order, the innovation center committee in Sao Paulo continued to scout communities for a suitable location, to identify potential spaces, to hold community meetings, and to gather quotations for tools and materials.

To move forward more effectively with partners overseas:

- IDIN will need to develop different guidelines for sub-award partnerships with universities and for long term funded partners and identify effective funding mechanisms to support the partnerships.
- The Summits will need more human resources on the ground to maximize effectiveness. There has been a long tradition of volunteer labor but now that activities are scaled up, it is important to decide how to keep the volunteer ethos of commitment and energy but expand activities in a sustainable fashion.
- The IDIN consortium and groups on the ground are in agreement that the latter take on real responsibility to lead Summits and start up Innovation Centers. However, a genuine transfer of agency requires creating training; manuals, guides and tools. All the program coordinators have put the development of training tools in their work plans for year 2.

7.4 Communication

Particularly for the Network Coordinator, the multiple needs for different communication mechanisms created a real challenge for prioritization. It was necessary to keep people connected through ad hoc communication, email and social media while simultaneously working on the externally facing website. Despite the fact that the website is not yet completed, it has been possible to keep a large number of people connected to each other and to draw in a wide pool of applicants for the Summits.

There is a need to improve communication among consortium members and the IDIN team. However, putting into place the organizational structures outlined in point 1 of this section should improve communication by:

- Clarifying overall strategy around summits, networks, innovation centers and research.
- Having a clear representative decision making structure
- Having a program manager who job is to oversee all the component parts
- Having clear administrative procedures
- Generating training tools and manuals for organizing summits, establishing innovation centers and running local chapters

Year 1 has produced a richness of materials, case studies, insights activities and lessons which are designed to help familiarize others with the design process but are not yet in shareable form. In Year 2 UC Davis will be working with other consortium members to organize teaching materials in a number of formats to better allow for rapid dissemination of ideas.

7.5 Moving from Prototype to business model

IDIN's objective to help innovators move their inventions into a marketable product and from there scale up to a business venture is an integral part of the overall vision. The IDIN team has learned that for prototypes to be market ready there are several intermediate steps, the essential first one being a market analysis. A group called NEON has been contracted to provide training in conducting market studies to micro-grant holders and IDDS alumni.

7.6 Cost Share

The amount of the cost share to be assumed by partners has been a challenge especially with IDIN partners/collaborators in the global south. The leading Zambian organizing institution for IDDS Zambia 2013, the NTBC, found it difficult to raise the amount of cost share stipulated. They were successful in finding leveraging opportunities and raising modest amounts of cost share but not at the proposed target

amount. Other institutions such as Nelson Mandela African Institution of Science and Technology (NM-AIST) were more receptive to leveraging opportunities rather than cost sharing. This was due to limited resources being available to public institutions that are already struggling to receive adequate budgetary support to run their operations. However, public institutions were quite receptive and supportive of providing nonmonetary support such as free use of university space and equipment. If summits and innovation centers continue to be led by organizations other than university sub-awardees, IDIN and USAID will have to figure out a strategy to address the challenges of meeting the cost share.

7.7 Conclusion

Given that the administration and reporting requirements are quite comprehensive, the program has been very deadline driven. Now, at the beginning of Year 2, the project is almost fully staffed by a motivated and competent team. Student engagement is wide-ranging across all the universities. When the component elements in the overall vision come together:

- a group of people from many different disciplines gather together to work with a local partner in the IDDS Summit to solve a problem;
- someone is able to bring an aspect of product development to the design;
- students then take the project home to help work on it, and communication on design improvement goes back and forth between students and innovators;
- the prototype is used by the community with follow up support provided by network members and improved life in the community and/or
- the group is able to access a resource such as micro-grant and links up to the NEVA center and SSEMBA students to figure out how to move it forward as a small business venture...

Then, it is clear that this project creates a web of support at the intersection of different disciplines that enhances and multiplies the effects of the work and moves it to the next level.

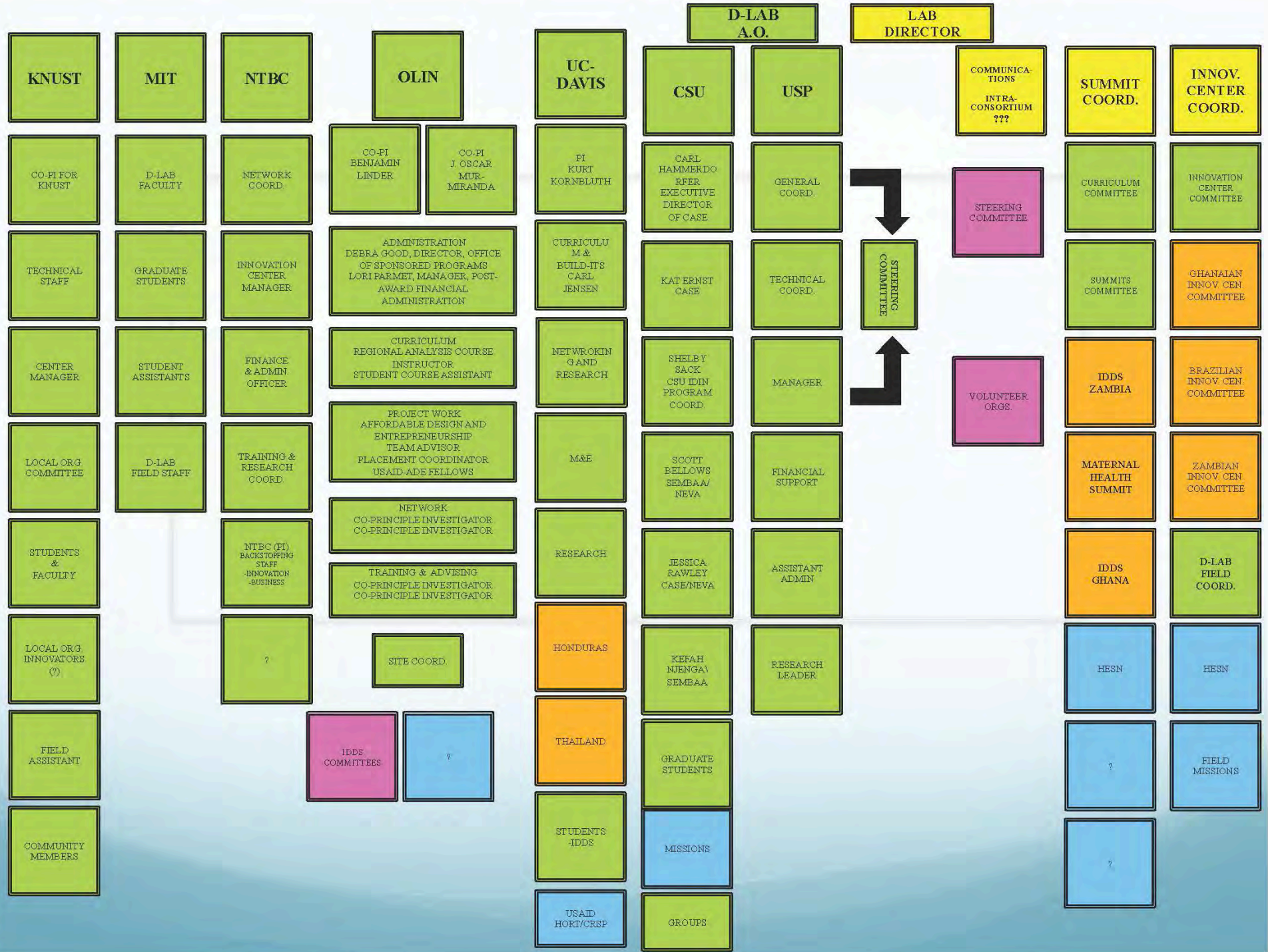
The real worth of the IDIN is demonstrated in the changes in the participants themselves. One of the IDDS alumni, Robert Shimaingo in Zambia, who had worked as an innovator before coming to the summit, went on to begin a community workshop in Kafue, and now is planning to come to MIT as a designer in residence said "before I came to IDDS, I was like a dull knife-- you sharpened me". The IDDS participants are changed by the experience and they go on to make change in the world. This is the goal and vision of the project.

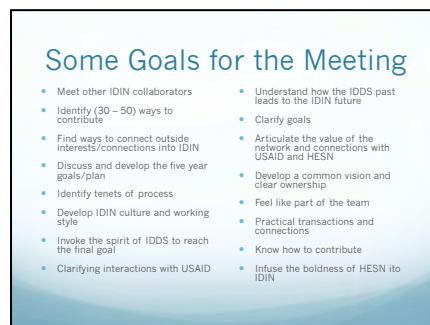
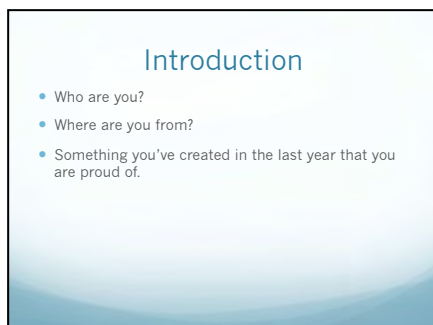
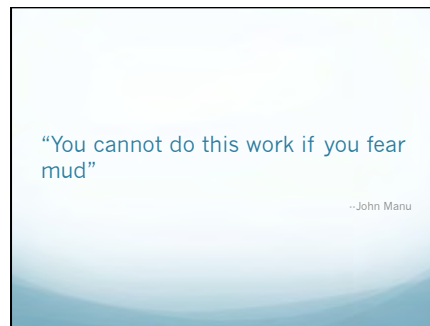
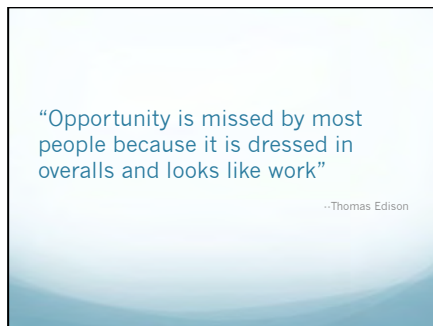
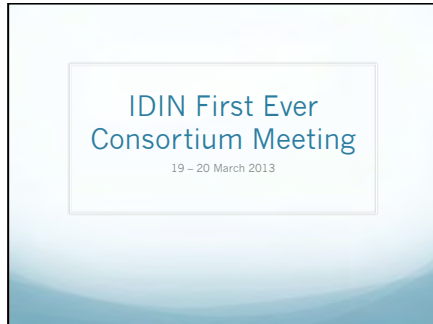
The results of project activities this year reveal great energy, dedication and enthusiasm from innovators and partner organizations. In order for the implementation to keep functioning smoothly and build on that, the important element at this juncture is to make sure the undercarriage of support is developed to allow this process to move forward efficiently and effectively.

Part 8. Appendices (please see attached)

1. Organization Chart IDIN Central
2. First annual IDIN consortium meeting notes
3. IDDS Zambia Project Update
4. IDDS Zambia Newsletter
5. IDIN Call to Action flyer
6. IDIN Results Framework
7. Table of IDIN Projects and Solutions devised by IDIN participants in Year 1
8. Table of consortium students involvement in IDIN during Year 1
9. Poster from the May 13th talk by Dr. Alex Dehgan at MIT
10. 2nd Poster from the May 13th talk by Dr. Alex Dehgan at MIT

Appendix 1





Welcome and Introduction: Goals and Deliverables

- Goals
 - Get to know each other
 - Understand the plan for the meeting
 - Understand the structure of IDIN and where you fit in
- Deliverables
 - List of goals for the meeting
 - Complete Organizational Chart of the current IDIN structure

Today's Agenda

9:00 – 9:45	Welcome and Introductions
9:45 – 10:45	The IDIN Vision: Goals, Results & Impacts
10:45 – 11:05	Break
11:05 – 11:45	Goal Prioritization
11:45 – 12:45	Finance and Administration
12:45 – 2:00	Lunch and Logistics
2:00 – 3:00	USAID Engagement, HESN Collaborations New Consortium Members
3:00 – 4:00	Refining Goals and Defining Objectives
4:00 – 4:15	Break
4:15 – 5:30	Roles and Responsibilities
5:30 – 6:00	Questions and Answers
6:00 – 8:30	Dinner

What really happened

9:00 – 9:45	Welcome and Introductions
9:45 – 10:30	The IDIN Structure:
10:30 – 11:40	IDIN Goals and Objectives
11:40 – 12:45	USAID / HESN Structure
12:45 – 2:40	Lunch and Logistics
2:40 – 3:30	Goals Report Back
3:30 – 5:00	Administration and Compliance
5:00 – 5:30	Questions and Answers
6:00 – 8:30	Dinner

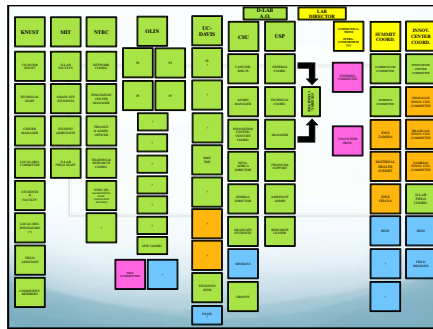
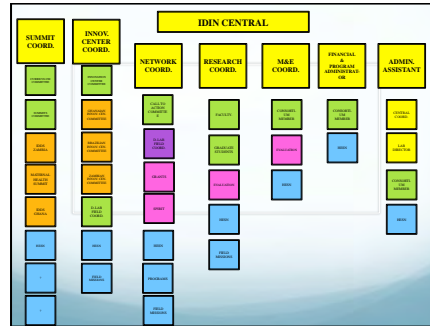
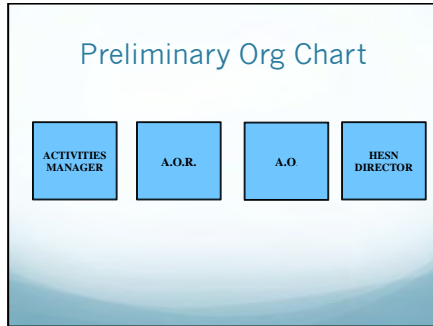
Tomorrow's Agenda

9:00 – 10:30	Work Plan Working Groups
10:30 – 11:30	Overall Timeline and Pipeline
11:30 – 12:30	IDDS Zambia
12:30 – 1:15	Lunch
1:15 – 2:00	Wrap-Up, Next Steps and Action Items
2:00 – 3:30	NCIIA "Un-panels"

The Evolving IDIN Structure

Color-Coding

	USAID		Local Organizing Committees
	Consortium Members		IDDS Committees
	IDIN Central		"The Network"



The IDIN Vision: Goals, Results and Impacts

- ### The IDIN Vision: Goals and Deliverables
- Goals
 - Share our individual/institutional visions
 - Create a common vision for the program
 - Clarify and decide high level goals for the five year collaborations
 - Deliverables
 - Mind Map of Vision
 - Prioritized list of goals for IDIN

- ### The IDIN Vision: Goals, Results and Impacts
- Part 1: Generating Ideas
 - Introduction (5 minutes)
 - Small Group Discussion (30 minutes)
 - Report Back (20 minutes)
 - Cloud formation
 - Mind mapping
 - Part 2: Prioritization
 - Group discussion (20 minutes)
 - Prioritization (15 minutes)
 - Wrap Up (5 minutes)

The IDIN Vision: Goals, Results and Impacts

- Part 3: Refining and Defining
 - This afternoon!

Finance & Administration

Sharmarke Osman
Sue St Croix

Objectives

- Introduction
- Overview of Finance and Administration requirements in this IDIN award
- Cost sharing requirements

Introduction

- Who are we and what do we do
 - Team consists of:
 - D-Lab Administrative Officer – Sue St. Croix
 - IDIN Financial and Program Administrator – Sharmarke Osman
 - IDIN Administrative Assistant – Nai Kalema

Overview of USAID Requirements

- IDIN is funded by the United States Agency for International Development.
- USAID being part of the US Federal Government has rules and regulations that must be complied with.
- Overview will be on:
 - Financial and Administrative requirements
 - Please note that there are technical, programmatic requirements too.

Overview of Requirements

- Three groups of requirements:
 - Financial
 - Procurement
 - Compliance

Financial Requirements

- Your institution will need to submit invoices on a monthly basis with the appropriate supporting documentation.
 - Critical for MIT to receive invoices in timely manner
- Projected expenditures to determine burn rate
- Host Government taxes every April 1st
- Cost share reporting – report it on a monthly basis and submit it with your invoice.

Procurement Requirement

- Comply with procurement regulations:
 - Approval from USAID through MIT for equipment purchases over \$5,000
 - Adhering to Source, Origin and Nationality Requirements
 - Competitive bidding (three quotations)
 - Ensuring compliance with your own internal procurement regulations.
 - Be cognizant of USAID's restricted items.
 - When in doubt, ASK !

Procurement Requirements - Continued

- Inventory of equipment
 - All IDIN assets purchased with USAID funds belong to USAID unless told otherwise.
 - Keep an inventory of equipment list and update regularly.
 - End of the award, there will be a disposition plan and instructions will be given on how to dispose of the equipment

Compliance

- Occasionally, there are instances when USAID approval will need to be sought:
 - Change in your key personnel or their level of effort
 - Procurement of Restricted Items
 - International Travel
 - Branding and Marking
 - Communication with media
 - Construction activities

Compliance –Continued

- Change in your PI or PI's level of effort
- Please inform the IDIN Financial and Program Administrator if the PI or any other key staff member's level of effort changes.
- Changes in PI or PI level of effort need to be reported to USAID in a timely manner and require approval.

Compliance - Continued

- Procurement – There are certain items that cannot be purchased without formal approval of the USAID Administrative Officer:
 - Vehicles
 - Pharmaceutical Commodities
 - Agricultural commodities
 - Equipment over \$5,000 not previously approved in the budget
 - Pesticides and Fertilizers
 - USED** equipment

Compliance - Continued

- International Travel
 - USAID/Washington requires that they are notified 30 days prior to any international travel to a participating country so that they can notify the local USAID mission.
- All travel not included in the USAID approved work plan must be approved by USAID.
- The "Fly America" provision applies to all international travel. You must fly using US carriers where ever possible.

Compliance - Continued

- Branding and Marking
 - All IDIN recipients must adhere to the USAID approved branding and marking plan: size of logos, color, or visibility.
 - Any public displays and branding must be preapproved by USAID.
- Communication with Media
 - USAID requires that approval is given before the IDIN participants conduct any kind of media interviews or press conferences.
- Construction Activities
 - Environmental assessments
 - Must be approved by USAID

How to get USAID approvals

- Give plenty of lead time for approvals!
 - Internal lead time – for your school's lead time
 - MIT's lead time – for IDIN team to send it to the MIT Office of Sponsored Program who then will send it to USAID
 - USAID's lead time – to review and process requests

Working with the MIT IDIN Finance and Administrative Team

- Ask questions BEFORE making a decision
 - More difficult to undo an error than to prevent it
- Seek all USAID approvals through the MIT IDIN:
 - Programmatic – Amy (for now)
 - Financial/Administrative – Sharmarke
- We are willing to share our policies and assist you in getting the resources to ensure you are successful in complying with USAID's requirements.

Cost Sharing

- **Cost sharing** is the portion of a project or program costs not borne by the funding agency for IDIN, USAID. Cost sharing expenses must be auditable and must be for allowable costs which directly support the IDIN program.
 - What is eligible cost share ?
 - Third party cost share
 - Reporting cost share

Eligible Cost Share

- Verifiable from your University's records
- Not included as contribution for any other US federally assisted program
- Necessary and reasonable for proper and efficient accomplishment of the project or program objectives
- Allowable as a direct cost under applicable cost principles

Eligible Cost Share - Continued

- University's tuition subsidies for graduate students' research effort.
- Equipment – University funding of costs for all or a portion of new equipment that directly benefits the project.
- Faculty Effort/Fringe Benefits/Overhead – explicit commitment to cost sharing percent of compensated effort for the project.
- All of these must be:
 - Properly documented
 - Captured in the accounting system
 - If payroll related - captured in the payroll distribution and/or effort distribution system

Third Party Cost Share

- Third parties may contribute cost sharing to an award. Because this is not an expenditure made by MIT/or the IDIN Partner University, documentation that includes the value of the donated supplies, materials, and/or volunteer services from the third party must be provided.
- In addition to meeting the same requirements for internal cost sharing, **all documentation should include a brief statement describing the basis for determining the valuation of materials, supplies, or volunteer services.** When assessing the value of services or goods for cost share, the valuations must be specific to where the work is being performed and must be compared against costs for similar services or goods in the local market.

Third Party Cost Share

- **In-kind Contributions – Non-cash Contributions include:**
 - Services
 - Equipment from third parties
 - Supplies
 - Property

Third Party Cost Share - Continued

- Third party cost share must still meet the same requirements as other forms of cost share:
 - Reasonable
 - Has to be accounted for using the same methods as with USAID funded costs/activities
 - Must include supporting documentation
 - Needs to be reported promptly

Cost Share Reporting

- To be submitted monthly with your invoice
- Must have supporting documentation that describe cost share: what it is, source and valuation
- USAID closely monitors cost share

Summary

- Please read your subaward carefully !
- Ask questions !
- Place all USAID related requests through MIT IDIN
- Submit your cost sharing, invoices and other reports in a timely manner.
- Need your support and looking forward to working with your Finance/Admin teams

Lunch and Logistics

Today's Agenda

9:00 – 10:00	Report Back and Synthesis on Goals Discussion
10:00 – 10:45	Pathways for moving forward
10:45 – 11:45	Roles and Responsibilities
11:45 – 12:30	IDDS and IDDS Zambia
12:30 – 1:15	Lunch
1:15 – 2:00	Wrap-Up, Next Steps and Action Items
2:00 – 3:30	NCIIA "Un-panels"

What Really Happened

9:00 – 10:00	Report Back and Synthesis on Goals Discussion
10:00 – 10:45	Pathways for moving forward
10:45 – 12:00	Roles and Responsibilities
12:30 – 1:30	Working Lunch: IDDS and IDDS Zambia
1:30 – 2:00	Wrap-Up, Next Steps and Action Items
2:00 – 3:30	NCIIA "Un-panels"

Report Back and Synthesis

Report Back and Synthesis

- Summary of yesterday's discussions

Report Back and Synthesis: Goals and Deliverables

- Goals
 - Present summary of yesterday's discussion
 - Gather feedback on goal statements
 - Select goals for further development
- Deliverables
 - Revised list of goal statements for further development
 - Clear plan for moving forward

Success looks like:

- Proliferation of the **IDDS approach**
- More **effective and efficient solutions** (innovations/ inventions/technologies)
- Having better proof/demonstration of our **theory of change**
- A larger number of successful and **thriving ventures**
- There is greater access to **sustainable livelihood** options in the communities where we have a presence.
- We have created a network that has **value** to all IDIN stakeholder.
- In the communities participants are connected to, individuals and groups have **increased capacity** (are better equipped/ more prepared/ more able) to develop innovative solutions to problems they're facing..

- Proliferation of the **IDDS approach**
 - Many more people are now approaching development using a creative capacity-building, local innovation-focused approach
 - We are able to articulate method, process, export that to other places. (both to other countries where we work and to other agencies/groups outside our network).
 - Participants who want to proliferate the model have the support and guidance they need to do so.
 - This is starting to influence how USAID and other agencies think about and approach their work.

- More **effective and efficient solutions** (innovations/ inventions/technologies)
 - We can demonstrate that our process and network is generating solutions and inventions that are better than those being developed using other approaches.
 - The network is generating interventions that are meeting real needs in effective, innovative, efficient ways (like Zubaida's birthing kit).

- Having better proof/demonstration of our **theory of change**
 - To what extent does it work? Under what conditions? Does it work the way we think it does? etc...
 - 5 years from now, we have a much better understanding of this and can demonstrate and articulate it to others.
 - Proof that is convincing to USAID/ US Government, academia, and development organizations.

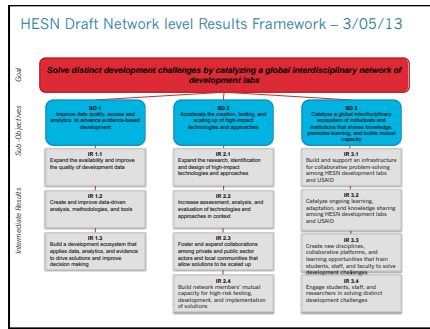
- A larger number of successful and **thriving ventures**:
 - A larger number of ventures that are on a path to sustainability/self-sufficiency
 - And/or ventures that are showing potential for regional scale/more widespread impact
 - Local ventures are launching and growing without being overly reliant on us, yet we can point to the benefits they receive from

- There is greater access to **sustainable livelihood** options in the communities where we have a presence.
 - Livelihoods of people in communities where we have a presence have been improved from a certain baseline compared to when we started. Not sure that this is the only term we should use... an improved water filter might have health outcomes, but not livelihood options...

- We have created a thriving network that has value to all IDIN stakeholder.
- There are many more individuals and groups who now have the capacity to develop innovative solutions to development problems.
- The network contains more members, who are well-connected to each other and committed to participating in the network's further development.
- Members are enthused and committed to participating in this community; as a result it is beginning to take on a life of its own.
- Innovation centers, summits, etc... are becoming more self-sustaining and relying less on central staff/funding because of high levels of member involvement.

- In the communities we have worked in, individuals and groups have **increased capacity** (are better equipped/ more prepared/ more able) to develop innovative solutions to problems they're facing.
- Whether or not their ventures succeed, they have greater skills, know-how, ability to develop creative responses and solutions to development problems
- Increased capacity at the individual and group level for creative problem-solving.
- Hard-to find global talent and potential that was going unrecognized and untapped before is now being expressed and channeled productively.

- ### Next Steps
- Agree on goals to develop further (today)
 - Revise goal statements (this week)
 - Generate objectives (this month)
 - Develop overall work plan (this month?)



International Development Innovation Network (IDIN), MIT Draft Results Framework

Goal	Transform the development paradigm by incorporating bottom-up design principles for more effective and efficient development solutions		
Program Objectives	Demonstrate and build capacity for a network of local design-centered innovators	Understand the impact of and refine the bottom-up design process for development solutions	Build the next generation of bottom-up design problem solvers for development challenges
Intermediate Results	Demonstrate effective bottom-up design principles for local innovators to solve development challenges	Identify bottom-up design innovations focused on development challenges	Engage MIT students in learning bottom-up design approaches to development challenges
	Build capacity for a network of local innovators using bottom-up design principles to solve development challenges	Analyze the efficacy of bottom-up design innovations on development challenges	Engage global students in learning bottom-up design approaches to development challenges
		Refine the bottom-up design process to more effectively address development challenges	Engage students in solving development challenges through bottom-up design opportunities

Roles and Responsibilities

Roles and Responsibilities: Goals and Deliverables

- Goals
 - Clarify the roles and responsibilities of consortium members
 - Understand how the members and structure implement the programs
- Deliverables
 - Map of program coverage with areas of under and over coverage identified
 - Roles and responsibility expectations for each consortium member
 - Connections and points of contact

The _____ is responsible for _____ the _____ for a _____.

The **Site committee** is responsible for **leading**, the **evaluation** for a **summit**.

Roles = **Lead/Perform, Approve, Support, Consult***

Responsibilities = **functions and tasks to be completed**

For summits: **Define, Train, Admission, Site selection, Spirit, Communities, Projects, Curriculum, Evaluation, Delivery, Travel, Fundraising**

* These are common roles, there is no unique or official set, we should look at adding Develop and separating Lead and Perform.

		Programs			
		Summits	Innovation Centers	Network	Research
Functions	Coordinate				
	Monitor & Evaluate				
	Develop				
	Execute				
	USAID-ate				
	Report				

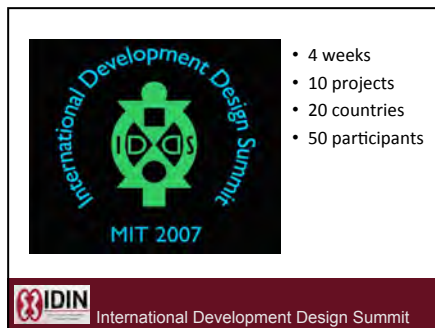
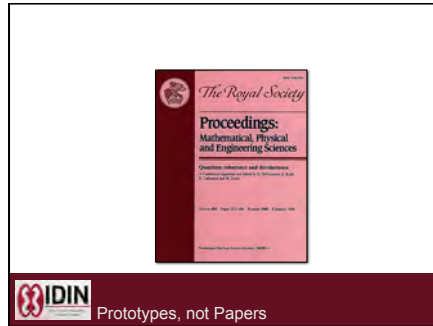
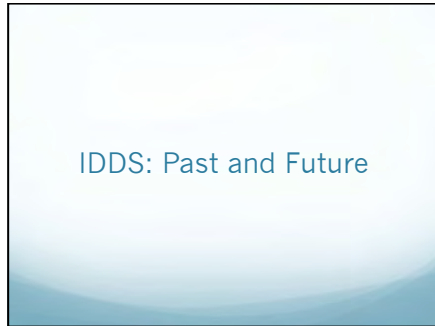
		Members							
		Summits	MIT	OLIN	CSU	UCD	KN UST	USP	NBDC
Functions	Coordinate								
	Monitor & Evaluate								
	Develop								
	Execute								
	USAID-ate								
	Report								

		Groups Responsible					
		Summit Committee	ICDS Coord	Site Committee	Consortium Member	Consortium Member	Consortium Member
Tasks Performed	Define model	LA	L	C			S
	Train	S	L	S	C	S	S
	Admission	C	L	LA	S	S	S
	Site selection	CA	S	L			C
	Spirit	L	S	L	S	S	S
	Communities	C	S	LA		S	
	Projects	C	S	LA			S
	Curriculum	LA		L	S		S
	Build-it modules	C	S	S		L	
	Communication		SA	LA	S	C	
	Evaluation	C	L	L		S	
	Travel		LA	S			
	Fundraising	C	S	L	C	S	

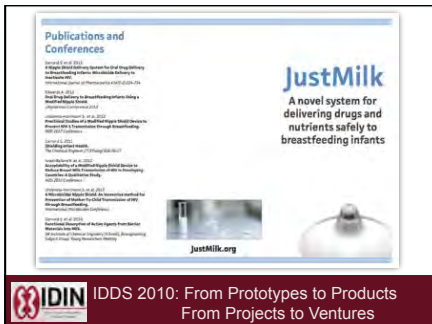
Roles: L = Lead/Perform, A = Approve, S = Support, C = Consult

		Programs				
		Summits	Innovation Centers	Network	Research	Member Program(s)
Functions	Coordinate					
	Monitor & Evaluate					
	Design / Develop					
	Execute					
	USAID-ate					
	Report					

L = Lead/Perform, A = Approve, S = Support, C = Consult










 IDDS Stories: AYZH




 IDDS Stories: AYZH




 IDDS Stories: Zimba




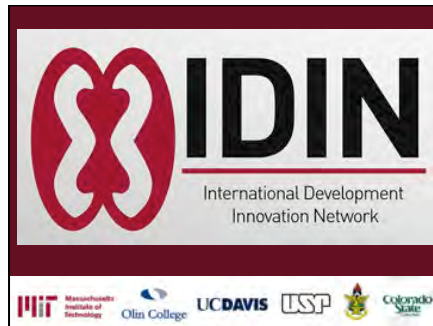
 IDDS Stories: Zimba



 IDDS Stories: Zimba



 IDDS Stories: Zimba



Summit period

- 22nd to 30th July- Organising team
- July 1 to 30th – Summit hosting
- 1st to 4th August – Review of Summit

Objectives

- Enhancing the organisation model
 - To build capacity and enhance the participation within Peri-urban and rural communities in the generation of innovations and technologies for social change and improvement.
 - To strengthen linkages for collaboration and knowledge sharing amongst actors in the national and supranational innovation systems.
 - To develop a local knowledge-sharing platform that will drive the generation of other rural based technologies in future.
 - To replicate the IDDS model at national level and replicate it at regional level to strengthen the mechanism for social innovation development.

Organising team

- Varying skills, resource but people and organisations passionate about the cause for IDDS.
- Unlike most IDDS, not every organiser is a past participant.

Expected outcomes for Zambia

- Replication of the Model in regional countries (SADC)
- Annual Regional IDDS
- A working practical model for rural development
- Build local capacity in the design process
- Development of Prototypes for demand driven challenges



*Launched IDDS 2013 on January 30th
 *Launched was officiated by Permanent Sec. Min. of Education
 Science, Vocational, Training and Early childhood training
 *Radio features @ Phoenix, 12 PM, Radio Christian Voice
 *Using existing innovation networks to spread the good news!
 *Word of Mouth (Interactions with clients)

Where we are

- **Summit Base:** Identified (in house Service Training Trust)
- **Closed applications for International Participants** – pending a selection process
- **Some Project site visits** have been under taken
- **Possible projects** outlined from the sites
- **Some key stakeholders have been engaged** for resource mobilizations such include among others the Southern African innovation support programme

22/3/13

A rectangular slide with a light blue background and a darker blue gradient at the bottom. The title "Next Steps" is centered at the top in a blue font. Below the title is a bulleted list of seven items, each preceded by a small blue dot.

Next Steps

- Action Items
- Communication Straegies
- Next Meeting
- NCIIA Panels
- Summit Planning
- Dinner tonight at 6
- Interview tonight at 8

IDDS Zambia 2013 projects, where are they now?

Overview:





IDDS Zambia 2013

Better Living through Collaborative Innovations



Communities + Projects

- Chazanga** Waste Management and Aluminum Recycling
- Mumbwa** Post-Harvest Storage and Child Nutrition
- Mwavi** Palm Leaf Processing and Health ICT
- Kamphelo** Charcoal Processing and Menstrual Hygiene

Collaborative Innovations

The International Development Design Summit (IDDS) has been convening for the past seven years with the mission and vision to bring together people from all walks of life to co-create low-cost technological solutions to improve livelihoods of people living in poverty. This year's summit, organized by the National Technology Business Center (NTBC) in July, was the first to be hosted in Zambia.

The month-long program featured design curriculum and intense hands-on activities in five phases: introductions, establishing direction, developing an approach, implementing and testing, and refining and sharing.

As participants were learning about the design process, they had the opportunity to live and work in groups with four rural and peri-urban Zambian communities to think through problem definition and developing co-created solutions.

At the end of the 5-week experience, community members and participants showcased their prototypes to the general public, where over 300 people and a variety of organizations showed up to support the pinnacle event. Though now dispersed, participants and communities are working together on project continuity through various International Development Innovation Network (IDIN) opportunities like scale-ups and micro-grants.

“At most conferences I dread sitting through the sessions and cannot wait until the day is over. But at IDDS, the day is full of so many activities, it's as if you wake up and, in the blink of an eye, the day is already over.”

*-Martin, Fish Farmer from Northern Zambia
working on the Menstrual Hygiene team*



Co-Created Solutions that Improve Livelihoods

IDDS Zambia was part of the vision for improving design approaches in southern Africa, where country-to-country collaborations are weak and rarely used as platforms for developing lasting solutions to common social challenges.



Aluminum Recycling

The Aluminum Recycling Project in Chazanga involved the participation and evaluation of the Aluminum casting process. The casting of Aluminum as found, involved a tedious process that had very little safety, this being the biggest problem. Hitherto, the Aluminum team has redesigned the furnace to enhance its utmost safety and efficiency in production. The new furnace is made from the conventional co-creational ideas as found in Chazanga with the material and innovations from workable principles.



Waste Management

Chawama Township in Lusaka generates large quantities of garbage. This presents a number of opportunities for the youth through the process of adding value to the waste. Currently there is no waste

management system that presents sustainable employment opportunities for the youth especially. Although there are many systems for adding value to the waste itself, the community lacks an effective way of collecting and sorting the waste so that they can take up these income-generating activities.

The Waste Recycling Project Team designed an efficient and affordable Stove that uses less Charcoal and can generate heat from solid waste materials. The Stove has a drier component which acts as storage for excess heat that can be used to dry vegetables and fruits, and also keep food warm. The team also designed various products including Bins, Bags and Cover Sheets made entirely from recycled materials such as disposable containers of alcohol, juice and milk.



Post-Harvest Storage

Pohatek is an air tight Maize storage container developed in collaboration with community members from Chitambala Village in Mumbwa District using locally available materials. Pohatek was built using clay bricks and sticks that cut off air supply and also keep away pests such as rats and grain borers. The Team will be monitoring the performance of the new design using feedback from the people of Chitambala Village and further community visits.



Child Nutrition

The Child Nutrition Project Team designed a prototype that combines direct and indirect heating methods in one device to make the drying faster, as moist fruit left for days in warm humid conditions presents food safety concerns about micro-organisms and mould growth, highlighting the need for the process to be as fast as possible without cooking the fruit.

The Team found that there are a lot of established technologies in drying, and even in Lusaka where IDDS 2013 was hosted there is the Light of Hope model co-created by D-Lab from MIT. It is therefore recommended that rather than building new devices and processes for drying, research into how and if these existing practices fit to the conditions of Chitambala in meaning of scale, manufacture, environment and price.

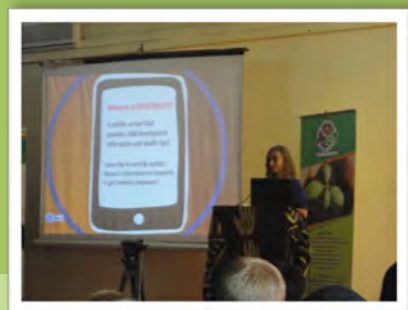
Check us out on the web!
iddsummit.org

FB: IDDS Zambia 2013
YouTube: International Development Design Summit
Twitter: #IDDS2013



Palm Leaf Processing

The Palms Project Team aimed to improve product quality and diversity through introduction of new technology and techniques, and also to improve weaving experience through technologies addressing ergonomics and production efficiency. The Team designed a Ring Stripper that decreases stripping time and increases palm uniformity through ergonomically inspired appropriate technology. The Team also created a Stick and Nail looms that will make it possible to make new products for luxury and foreign markets through novel weaving technology. Additionally, the team designed a Weaving Stand that improves positioning, ergonomics, and reduces production time. The Team also designed the «Vita Form» Weaving Chair that improves the posture and comfort of weavers using locally sourced materials at an appropriate price point.



Health ICT

Heart Beat 5 is a simple SMS service that provides health information to mothers with children under 5, in collaboration with the women and local clinic in Mwavi. Heart Beat 5 allows mothers to give and receive advice from other mothers and the

local clinic on the best practices in breastfeeding, preparation of fermented porridge, First Aid, disease prevention, hygiene, etc. Heart Beat 5 will also give mothers personal updates and reminders on important dates for their child. The Team intends to include multiple language options, a Voice and Video component, and also build local and professional content.



Menstrual Hygiene

Lack of affordable, menstrual hygiene options is a challenge for rural school girls and often leads to extended absences from school. This is further exacerbated by poor sanitary conditions at the schools which they attend, limited availability of water in the community and cultural taboos regarding menstruation.

The IDDSZambia2013 Menstrual Hygiene Project Team worked with the community in to develop a safe and effective solution to enable school girls to continue with their daily lives during menstruation. And the result-affordable and comfortable pads made from locally accessible cotton stuffing and cloth. The pads are disposable and do not need to be washed or reused-reducing the risk of infection and keeping more girls in school

during their periods. The new pads now offer a business opportunity to local cotton farmers and the women and girls who have been trained in how to make the pads themselves. By providing a low-cost disposable pad, women and girls will no longer be using dirty and damp cloths.



Charcoal Processing

The Charcoal Processing Project Team created a low cost Kiln using locally available material to improve the burning process of dry Agricultural waste to produce charcoal. The new design improves briquetting through the use of biomass (agricultural waste), requires minimal man power, has a short cycle duration process (hours) and releases less smoke compared to the traditional charcoal making process. The Team also discovered a natural binder (made from roots of a special tree) and developed a briquette press out a tree trunk.

For more information, email idders-info@mit.edu.



Call to Action 1.0 The Firestarter Challenge

Dear IDDS global network of alums:

You are invited to create or collect ideas for alternative, cheap, eco-friendly firestarter technology to accompany charcoal briquette distribution in Uganda. We hope this will be the first of many such exciting challenges!

Challenge deadline: July 31st, 2013

Design or Identify an Alternative Firestarter that is Smokeless Long-lasting (8-10 minutes) Eco-friendly

Challenge Partner

Green Bio Energy (GBE) is a social enterprise in Kampala, Uganda. GBE designs, produces, and distributes eco-friendly energy solutions including solar lamps, cookstoves, as well as charcoal briquettes accompanied by firestarters.

Background

In Kampala more than 80% of the population uses charcoal for cooking. This contributes to the destruction of Ugandan forests. Charcoal briquettes made from waste are an alternative to traditional charcoal, but they have different burning characteristics. They are more difficult to light than traditional charcoal, which can be a deterrent for potential customers.

GBE's current firestarter technology consists of mixing wax with fine sawdust, pressed in the shape of small cubes. Two problems are linked to this technology: 1) It produces a lot of smoke 2) It is expensive.

IDDS-ers: Can you find an alternative that is cheap, makes less smoke, burns between 8-10 minutes, and with few chemicals?

Process

Deadline for submissions is July 31, 2013. A GBE appointed committee will review all submissions. Two to three of the best proposals will be selected for testing. IDIN will also put up an online "gallery of solutions".



Help GBE find a better FIRESTARTER!

Submit to: calls_to_action@mit.edu with the following information

If you DESIGN an alternative firestarter include:

1. How do you use it? How long does it burn? How much smoke does it produce?
2. What is it made from? How is it made? How much does it cost to make?
3. Why you think your solution is a good alternative to the existing GBE firestarter?
4. Send us pictures and videos (if you have them)

If you IDENTIFY an alternative firestarter used somewhere else, submit all of the above (1-4) and add the following 2 additional items (5 & 6):

5. Who makes it? (Specify traditional method, manufacturer, etc.)
6. Where is it made? (Name of country and region where the product can be found)

The IDIN Network

IDIN hopes to harness its expansive network of innovators and entrepreneurs to define challenges, gather market data, create solutions, test prototypes and conduct pilot studies to further its work and the work of its partners.

Calls to Action

We will put forth monthly design and innovation challenges that will be developed in collaboration with partners and the IDIN consortium to engage the IDDS alumni network in a series of design related activities.

Get Involved

Submit one or more entries, as an individual or as a team.

Share a challenge you would like to see in the next round of "Calls to Action" email: calls_to_action@mit.edu

1.2. IDIN Results Framework:

GOAL

To create and build a global network of changemakers that enables the design, development and dissemination of innovations that address key development challenges associated with poverty, while building capacity in communities for local innovation and creative problem-solving.

OBJECTIVE

Objective 1: Co-create Effective Solutions

Develop and disseminate technologies, products, and approaches that address key development challenges and improve the lives and livelihoods of people living in poverty

Objective 2: Build Local Capacity for Innovation and Design

Empower, train and support more people from communities facing development challenges to engage in design, innovation, product and venture development

Objective 3: Generate Knowledge and Spread the Approach

Increase knowledge about and adoption of a creative capacity building approach to addressing development challenges

INTERMEDIATE RESULT

IR 1.1

Create and build an **active network of diverse innovators** from around the world that participates in and informs the development and scaling of innovations and ventures that address key development challenges

IR 2.1

Engage more people living in communities facing development challenges in technology/product creation and venture development.

IR 3.1

Document and disseminate the development impacts of both the products and the process of IDIN’s approach to addressing development challenges

IR 1.2

Develop new resources, and increase access to existing resources (intellectual, financial, human, institutional) to support the success of innovations and ventures launched by network members

IR 2.2

Establish innovation centers and venture accelerators to provide ongoing support to local innovators

IR 3.2

Increase awareness about and use of a collaborative design approach within the development community

IR 3.3

Build a vibrant research group of students and faculty conducting research on a collaborative and capacity-building approach to development

I.3. Summary table of performance indicators to be measured

Goal:	To create and build a global network of changemakers that enables the design, development and dissemination of innovations that address key development challenges associated with poverty, while building capacity in communities for local innovation and creative problem-solving.
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Reference #	Indicators:	Source:
1	# of transformative innovations, technologies, or approaches that were adopted with human, financial, or institutional resources contributed by IDIN development labs	HESNGoal Indicator #4
2	# of transformative innovations, technologies, or approaches that achieved wide-scale adoption with human, financial, or institutional resources contributed by IDIN development labs	HESNGoal Indicator #5
3	Ratio of total value of outside (non-USAID) resources utilized to the dollar value of USAID investments	HESNGoal Indicator #1
4	# of white papers, articles, assessments, analyses, and evaluations on development challenges, innovations, technologies, approaches, and contexts by Labs published in targeted fora and publications OR provided to USAID operating units, IDIN partners, and the broader development community	HESNIR 2.2 Indicator #1
5	Number of stakeholders engaged in problem-solving with one IDIN development lab	HESNIR 2.3 Indicator #2
Objective 1:	Co-create Effective Solutions: Develop and disseminate technologies, products, and approaches that address key development challenges and improve the lives and livelihoods of people living in poverty.	
1	# of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by IDIN development labs	HESNGoal Indicator #2
2	# of transformative innovations, technologies, or approaches that were piloted with human, financial, or institutional resources contributed by IDIN development labs	HESNGoal Indicator #3
3	Possible additional custom outcome indicator to be added subsequently that captures accelerating/facilitating the process of moving innovations through the stages of the development pipeline	IDINCustom Indicator
IR 1.1	Create and build an active network of diverse innovators from around the world that participates in and informs the development and scaling of innovations and ventures that address key development challenges.	
1	# of participants in the IDINnetwork.	IDIN Custom Indicator
2	custom outcome indicator to be developed that measures strength/performance of the network (e.g. total # or % of network members that report receiving support (resources, information, input, etc.) from the network through annual network member survey)	IDIN Custom Indicator

IR 1.2	Develop new resources, and increase access to existing resources (intellectual, financial, human, institutional) to support the success of innovations and ventures launched by network members	
1	# of students participating in short-term practica or other field experiences through human, financial, or other institutional resources contributed by IDIN Development labs	HESNIR3.4 Indicator #1
2	# of US students via IDIN partners serving as fellows in developing countries	HESNGoal Indicator #7
3	# of collaborative platforms created by IDIN with human, financial, or institutional resources contributed by IDIN development labs	HESNIR 3.3 Indicator #2
Objective 2:	Build local capacity for innovation and design in communities facing development challenges	
1	# of participants in Hubs, summits, and other problem-solving institutions created by IDIN development labs	HESNIR3.4 Indicator #4
2	(Custom outcome indicator(s) under development to track increases in individual and group capacity for innovation and problem-solving)	IDIN Custom Indicator
I.R. 2.1	Engage more people living in communities facing development challenges in technology/product creation and venture development.	
1	# of people from communities that IDIN has targeted for capacity building engaged in developing products, innovations and/or ventures that were introduced during or inspired by IDDS or other summits.	IDIN Custom Indicator
2	# of products/innovations being developed in communities IDIN has targeted for capacity-building that were introduced during or inspired by summits and have continued to progress after the summits' conclusion.	IDIN Custom Indicator
I.R. 2.2	Establish innovation centers and venture accelerators to provide ongoing support to local innovators	
1	# of hubs created with human, financial, or institutional resources contributed by IDIN development labs	HESNIR3.4 Indicator #3
2	Custom indicator to be developed that speaks to the results of having created innovation centers (this could be: # of participants disaggregated by type using innovation centers as well as frequency of use; and/or # of innovations (ideas, prototypes, projects, businesses, etc.) receiving support from innovation centers)	IDIN Custom Indicator
Objective 3:	Generate Knowledge and Disseminate the Approach: Increase knowledge about and adoption of a creative capacity building approach to addressing development challenges.	
1	# of MOUs or other agreements signed with public sector, private sector, and local community partners and one IDIN development lab	HESNIR 2.3 Indicator #1
2	# of classes supported by IDIN Development Labs with human, financial, or institutional resources contributed by IDIN development labs	IDINIR 3.3 in #1
I.R. 3.1	Investigate, document and disseminate the development impacts of both the products and the process of IDIN's approach to addressing development challenges.	
1	# of white papers, articles, assessments, and analyses on the development impacts of IDIN's approach published, presented, and/or provided to the academic and development community	IDIN Custom Indicator
I.R. 3.2	Increase awareness about and use of a collaborative design approach within the development community	
1	# of requests from USAID operating units, IDIN partners, and other development agencies for data, tools, methods, or approaches generated by IDIN that are fulfilled by IDIN staff.	IDIN Custom Indicator
I.R. 3.3	Build a vibrant research group of students and faculty conducting research on a collaborative and capacity-building approach to development	
1	# of students, staff, and faculty conducting research with IDIN's research team	IDIN Custom Indicator

Appendix 7

Table of IDIN Table of IDIN Projects and Solutions (creating, testing and scaling) that IDIN participants worked on in Year 1

Partner	Completed / Ongoing Activity [Indicate tie to activity number]	Outcome(s)
OLIN and KNUST Ghana	On-going	Developed three cassava grater prototypes and tested them in a rural community. They also conducted user studies of women gari producers and vetted the supply chain for production
OLIN	On-going	Continuing to explore the trade-offs among, costs, complexity and energy efficiency for micro-controller systems in developing contexts
OLIN- ADE India	On-going	Worked with the NGO Zimba to re-design water purifiers to fit under existing hand pumps.
IDIN Consortium at Zambia IDDS	On-going	Produced 8 prototypes in agricultural charcoal, menstrual hygiene, post-harvest storage, child nutrition, health ICT, palm leaf processing, waste management, and aluminum recycling
UC Davis - KIWA Ecuador	on-going	Designed built and tested various solar pre-heaters for vegetable chip drying with KIWA.
UC Davis -Thailand	On-going	Developed off-grid zeolite bead regeneration prototype and an evaluation tool in Thailand for seed and herb drying.
UC Davis -Thailand	On-going	Evaluating and improving rubber harvesting knife design in Thailand, then prototyping and testing new models centered on user ergonomics
UC Davis-Uganda	On-going	Prototyped a bicycle frame and delivery package to improve efficiency of motorcycle based portable irrigation system in Uganda
CSU – United States International University, (USIU) Kenya	On-going	Established the New Economy Venture Accelerator (NEVA) with their partner USIU in Nairobi. NEVA a venture incubator for innovators to scale up projects into for-profit businesses.

CSU-AYZH		6 students from GSSE worked on a new product line of maternal health kits with AYZH
MIT-USP - Dois Palitos community Brazil	On-going	Developed mobile financial management tools, solar water heaters, low cost flooring in urban areas and plastic bottle recycling.
MIT- USP Brazil, Dois Palitos community		A team of MIT students worked together with 6 USP students for the spring semester on a rainwater collection project in collaboration with the community of Dois Palitos.
MIT- KNUST Ghana	On-going	Improved moringa sheller and moringa oil press and worked on venture development in solar lighting, mushroom farming, beeswax processing and mango drying.
MIT-Avani India	On-going	Solar lantern testing equipment ,pine needle stove testing and a crayons and pastels project.
MIT-Intermediate Technology Transfer Unit, (ITTU) Ghana	On-going	During the spring semester, a team of MIT students worked on a project to help a young girl whose arm had been amputated.
MIT-CAMARTEC Tanzania	On-going	Refined the moringa sheller from Ghana (see above) and introduced it to CAMARTEC.
MIT-AISE Tanzania	On-going	Developed marketing materials for pedal powered juice makers.
MIT-Global Cycle Solutions Tanzania	On-going	Worked on multi-crop thresher.
MIT-Linda Compound Zambia	On-going	Refined and introduced a static auto-chlorination device, and developed a cell phone based public health project for health education.

Appendix 8

Table of consortium students involvement in IDIN during Year 1

<i>Partner</i>	Completed / Ongoing Activity [Indicate tie to activity number]	Outcome(s)
CITE-MIT 200 students attended	Completed	Dr. Dehgan gave a public address at MIT engaging students in AID's vision of science and technology during his 2 day visit to MIT.
Students from IDIN consortium partners 7 students	Completed	Students from each of the consortium partner schools participated in the 2013 IDDS-Zambia
CSU 2 students	On-going	CSU created two IDIN fellowships and granted them to two graduate students.
CSU-USIU 18 students	Rekurs every year	The SEMBAA program accepted 18 new students.
CSU-AYZH 6 students	On-going	6 GSSE students are working on a new product line of maternal health kits with AYZH, in Pakistan launched by an IDDS alumna.
CSU-IDE 4 students	On-going	4 MBA students are working on a project with International Development Enterprises (IDE) in Lusaka.
CSU 2 students	On-going	CSU created two IDIN fellowships that were hired from graduate students.
Olin 60 students	Completed	Olin held an IDIN launch on campus to inform students about the possibilities to engage in IDIN.
Olin 3 students	Completed	The Olin PIs hired 3 research students, one in the spring semester and summer session, two in the summer session.
OLIN-KNUST Ghana 6 students	On-going activity	Students travelled to Ghana to do research on the development of low cost cassava graters. They developed three cassava grater prototypes and tested them in a rural community. They also conducted user studies of women gari producers and vetted the supply chain for production.
OLIN-Zimba India 5 students	On-going activity	Students travelled to India and worked with Zimba to re-design water purifiers to fit under existing hand pumps. They also produced manufacturing jigs and 3

		new prototypes to improve gear ratios for pedal powered rickshaws in Indian national parks.
UC Davis 6 students	On-going	UC Davis hired 6 students to work on IDIN.
UC Davis	Completed	Engaged students to help work on and coordinate 5 Build-its to be presented at the IDDS Zambia summit in July 2013.
UC Davis-KIWA Ecuador Student teams	On-going	Designed built and tested various solar pre-heaters for vegetable chip drying with KIWA in Ecuador.
UC Davis Thailand Student teams	On-going	Developed off-grid zeolite bead regeneration prototype and an evaluation tool in Thailand for seed and herb drying
UC Davis Thailand Students teams	On-going	Evaluated and improved rubber harvesting knife design in Thailand, then prototyped and tested new models centered on user ergonomics.
UC Davis-Agriworks Uganda Student teams	On-going	Prototyped a bicycle frame and delivery package to improve efficiency of motorcycle based portable irrigation system in Uganda.
MIT-Dois Palitos community Brazil 9 students	Completed	Students travelled to Brazil and developed Mobile financial management tools, and worked on low cost flooring in urban areas and plastic bottle recycling and a solar water heater.
MIT- KNUST Ghana 10 students	Completed	Students improved a moringa sheller and a moringa oil press and worked on venture development in solar lighting, mushroom farming, beeswax processing and mango drying and engaged in community projects in sanitation and education.
MIT-Avani –India 4 students	Completed	The student team travelled to India to work with Avani on solar lantern testing equipment and pine needle stove testing and a crayon and pastel project.
MIT-CAMARTEC Tanzania 13 students	Completed	MIT student teams refined the moringa sheller from Ghana, introducing it to CAMARTEC. They helped develop on marketing materials for marketing pedal powered juice makers for AISE and worked on a multi-crop thresher for Global Cycle solutions.
MIT- NTBC and other network partners, Zambia 7 students	Completed	Students worked on a health education radio station in Linda Compound, a nutrition project in Lusaka and outreach

		and programming project at the NTBC. They also refined and introduced a static auto-chlorination device, and developed a cell phone based public health project for health education.
MIT – USP and Dos Palitos Brazil 7 students	Completed	In the spring semester 7 students from the D-Lab Energy class worked together with 6 USP students on a rainwater collection project in collaboration with the community of Dois Palitos.
MIT-Intermediate Technology Transfer Unit, (ITTU) Ghana	On-going	During the spring semester, a team of MIT students worked on a project to help a young girl whose arm was amputated.
MIT-IDIN partners Brazil 2 students	On-going	Two MIT students spent the spring semester in Brazil working with IDIN partners as part of the pilot of the D-Lab study abroad program
MIT HESN Launch 3 students	Completed	MIT brought 3 students to the HESN launch to network and attend designated activities
MIT IDIN research team MIT hired 4 students to work on the research team	On-going	MIT hired 4 students in Quarter 4 to work on the research team for IDIN

Appendix 9



The Future of Science & Technology in International Development

A talk by

Dr. Alex Dehgan

Science and Technology Adviser to the Administration USAID

Building 34 Room 101

Monday May 13th, 2013 5:10pm - 7:00pm

Question and answer period from 7:00 - 8:00pm

Sponsored by MIT's New USAID Programs:

The Comprehensive Initiative on Technology Evaluation (CITE)

The International Development Innovation Network (IDIN)



Higher Education
Institutions Network



Appendix 10



The Future of Science & Technology in International Development

Hosted by

Dr. Alex Dehgan,

Science and Technology Adviser to the Administrator, USAID

Building 34 Room 107

Monday May 13th, 2014 8:00am - 7:00pm

Question and answer period from 7:00 - 8:00pm

Sponsored by MIT's New USAID Programs

The Computer-assisted Institute for Technology Education (SITE)

The Joint Digital Development Innovation Lab (JDDIL)

