

Higher Education Solutions Network

HIGHER EDUCATION SOLUTIONS NETWORK - FINAL REPORT

Massachusetts Institute of Technology International Development Innovation Network (IDIN) AGREEMENT NO. AID-OAA-A-12-00095

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1. Program Summary

The International Development Innovation Network (IDIN) enables a global community of changemakers to design, develop and disseminate innovations that improve the lives of people living in poverty. IDIN accomplishes this goal by introducing people around the world to a **collaborative design approach** and then connecting them to both a **network** of innovators and an **ecosystem** of support. These individuals generate **solutions** to development challenges and spread the **approach** of collaborative design. In this way, IDIN's work seeks to impact people with life-changing technologies as well as with the tools and confidence to solve problems in their own communities.

IDIN's methodology supports the mission of USAID's U.S. Global Development Lab to accelerate the transformation of the development enterprise by opening development to **people everywhere with good ideas**. IDIN's Network of innovators includes people from all walks of life, many of whom have not had the opportunity to define and participate in the development of their own communities.

This engagement begins with the **International Development Design Summit** (IDDS), where diverse participants come together to learn about collaborative design and to develop prototypes that address local challenges. After each summit, IDIN supports alumni to continue developing innovative solutions and to support local innovation where they live.

At present, IDIN counts **166** active innovations in its pipeline, reaching over **750,000** users. IDIN supports these innovations with tiered funding, mentorship, workshop space and tools, and student collaborations. Many of these innovators have been able to leverage early-stage IDIN support to raise additional funding and investment and bring their solutions to users.

Many IDDS alumni have gone on to teach design trainings, found innovation centers, and organize design summits. This organic expansion has allowed IDIN's collaborative design approach to reach over **10,000 people**, deepening its impact in communities well after summits have ended.

IDIN supports the mission of the U.S. Global Development Lab by promoting and deepening **partnerships** with universities, innovation centers, and other institutions in over 20 countries. These partners take an active role in providing an ecosystem of support for local innovation year-round. IDIN works to **build the capacity of its partners** in curriculum delivery, business model development, monitoring and evaluation, and other key elements of organizational stability. IDIN has undertaken these initiatives with the goal of promoting the sustainability of local innovation programming well beyond the life of HESN funding.

In parallel with these programs, IDIN's research program explores the **role of local innovation in development.** It seeks to understand local innovation processes and ecosystems, to investigate the development impacts of local innovation, and to uncover ways to enable and scale local innovation.

IDIN engages **students** in every aspect of its programming. These students, in turn, work with IDIN Network members and partners to advance many of IDIN's initiatives.

2. Program Achievements

KEY LAB PRODUCTS

Local Innovation Research

IDIN's research program sought to build a body of work focused on understanding, enabling and scaling local innovation. IDIN's research program explored the role of local innovation and grassroots problem solving in improving community wellbeing and addressing development challenges associated with poverty. It focused on three areas:

- 1. Local Innovation Processes and Ecosystems: Increasing our understanding of how local innovation works and how innovation processes and ecosystems can be described, mapped, and analyzed.
- 2. **Development Impacts of Local Innovation:** Investigating the development impacts of local innovation, helping us understand why and how local innovation matters.
- 3. **Enabling and Scaling Local Innovation:** Exploring the role that global networks play in enabling local innovation and spreading the development impact of local solutions and approaches.

IDIN's research program has produced three seminal products:

- Local Innovation: What it is and why it matters for developing economies (Hoffecker 2017): There is a nascent but growing body of work on innovation within community-based settings, including what is termed grassroots innovation, jugaad innovation, user-driven innovation, and autonomous innovation. This paper examines a related concept, that of local innovation--the creation of new and improved ways of doing things compared to existing practice within a specific local context. Drawing on existing research and two years of qualitative interviewing and case study research into local innovation processes in Africa, Southeast Asia, and Latin America, we find promising early evidence of the value of local innovation to developing economies, and particularly to the localities where this innovation is taking place. We find that the innovations emerging from these processes create meaningful livelihood impacts for their users and that, more significantly, the act of innovating contributes to building and strengthening a set of system capacities which are essential for local economic development.
- What is capacity to innovate and how can it be assessed? A review of the *literature* (Hoffecker 2016): The paper presents the results of a comprehensive *literature review on the concept of "capacity to innovate (C2I)," and proposes a framework for operationalizing this concept as a starting point for developing practical metrics that can be used to assess changes in C2I at the individual, household, village, and local system levels within agriculturally-oriented communities. This peer-reviewed paper was presented at the 2016 IFSA (International Farming Systems Association) Conference in July 2016.*
- Towards a complexity-aware theory of change for participatory research programs working within agricultural innovation systems (Douthwaite and Hoffecker 2017): Agricultural innovation systems (AIS) are increasingly recognized as complex adaptive systems in which interventions cannot be expected to create predictable, linear impacts. Nevertheless, the logic models and theory of change (ToC) used by standard-setting

international agricultural research agencies and donors assume that agricultural research will create impact through a predictable linear adoption pathway which largely ignores the complexity dynamics of AIS, and which misses important alternate pathways through which agricultural research can improve system performance and generate sustainable development impact. The paper uses two in-depth case studies of participatory innovation development processes in Zambia and the Philippines to develop an argument regarding the need for an updated theory of change to describe how R&D activity by universities and international research institutes can generates sustainable impact in rural agricultural systems.

IDIN's research program also advised over fifteen student research projects on the topic of local innovation. We have highlighted two below:

- From Innovators' Perspective: Processes of Grassroots Innovation in Andhra Padesh and Telangana (Guttikonda 2016): This Masters thesis seeks to understand the innovation processes of grassroots innovators in two states in Southern India. Through interviews and case study research, the thesis sheds light on how each innovator has developed his innovation from idea to product, as well as on the enabling conditions that are needed in order to support processes of local innovation in Southern India. The thesis concludes with some specific policy recommendations for how local and regional policymakers in India can create a stronger enabling environment for grassroots innovation. This thesis was produced by Asresh Guttilonda, who worked as a Research Assistant for the IDIN Research Program for two years.
- Ghanaian Entrepreneurship and Innovation (Connors and Press-Williams 2016): This undergraduate thesis presents the results of 28 in-depth interviews with entrepreneurs and local innovators in four cities across Ghana. The thesis explores the motivations and backgrounds of these entrepreneurs, the factors that have led them to create their own businesses, and structural enablers and barriers to local innovation in the Ghanaian context. This research builds on fieldwork conducted by the co-authors through the IDIN Summer Research Fellowship.

Lean Research Framework

• IDIN's research team spearheaded the **Lean Research** initiative, laying out a set of principles and guidelines while engaging other institutions to learn, pilot and adopt the approach. The Lean Research approach lays out people-centered approach to development research, emphasizing the principles of rigor, respect, relevance, and right-size. To date, the initiative has produced Lean Research Declaration and Guidelines, the Lean Research Field Guide, a white paper, a blog series on Next Billion, a workshop series, an online community of practice, a case series, and an online course entitled Lean Research Skills for Conducting Interviews.

IDDS Curriculum and Toolkits

One of IDIN's main strategies to spread the approach of co-creation has been to document the curriculum, pedagogy, and processes behind the International Development Design Summit. This body of work includes the IDDS Design Notebook, the IDDS Curriculum Guide, IDDS Organizer Toolbox, IDDS Prep Videos, IDDS Design Facilitator Training Curriculum, and a series of modular Build-Its. IDIN has also documented each IDDS project as a report, illustrating the design process for 70 early-stage innovations as a reference for future innovators and design facilitators. This collection of tools has enabled new organizing teams to organize summits of their own, democratizing IDIN's approach and seeding new inclusive innovation

ecosystems. These tools, available on idin.org/idds, will continue to serve the newly-formed IDDS Steering Committee and all future IDDS organizing teams.

PROGRAM AND POLICY CHANGES

IDIN has influenced programs and policies in four main ways: (1) Inspiring new institutions that support inclusive local innovation (2) Encouraging the adoption of a co-creation approach by large players in the development sector (3) Encouraging the adoption of the Lean Research approach, and (4) Connecting coalitions to build regional innovation networks.

Inspiring New Institutions that Support Local Innovation

Inspired by the value of designing hand-in-hand with local communities, **two-thirds of IDIN Network members go on to teach design and co-creation** to others. In many cases, these Network members have created new institutions to do so: building maker spaces that seek to create social impact, founding social ventures dedicated to design education, or launching new university classes and programs.

In the last five years, IDIN has inspired the creation of 11 **new innovation centers** based on the IDDS approach. These centers are local hubs for training, collaboration, and product incubation, offering workshop space, tools, and mentorship to local innovators seeking to tackle development challenges. These range from the ICT-focused **Makeistan** in Pakistan, to the entrepreneurship hub **Kumasi Hive** in Ghana, to the agriculture-focused **Kafue Innovation Centre** in Zambia.

IDIN has also inspired IDDS alumni to create their own impact-oriented **design education** programs, university courses and departments. This includes social enterprises like **Foondi** in Kenya and **SoHub** in Japan, as well as higher education institutions like **Universidad del Valle** in Guatemala and **Information Technology University** in Pakistan.

Below are a handful of quotes from IDIN Network members who founded institutions to promote co-creation in their communities

- "I could really tell the difference of how I look and think about things, before and after IDDS. I wanted more people to experience this change, so I started SoHub in Japan." – Miho Kitagawa, Founder of SoHub
- "IDDS helped me figure out exactly what I wanted to do. And corporate engineering wasn't it." Juliet Wanyiri, Founder of Foondi, Kenya
- "With the work I am doing now...there's no blueprint or map. Being part of and interacting with the IDIN Network allows me to tap into rich expertise and advice as well as the experiences of others as I navigate through uncharted territory." – Aggrey Mokaya, Founder of ChangeHub Kenya
- "I had never actually worked with communities. The whole experience organizing design summits and starting C-Innova [an innovation center] was a life-changing experience. I'm a completely different person today." – Johana Sanabria, Co-Founder of C-Innova, Colombia

Adopting a Co-Creation Approach

IDIN has also begun to push the paradigm of development practice by influencing large development agencies and corporations to adopt elements of co-creative practice. Through

collaborations on individual trainings and through the Practical Impact Alliance, IDIN has both influenced organizations' approach to their existing trainings and inspired new initiatives.

- After co-organizing a cookstove-themed IDDS in August 2016, the **Global Alliance for Clean Cookstoves** incorporated more hands-on design activities and co-creation methodology sessions into their cookstove workshops.
- After reviewing the IDDS Design Workbook, the **US Peace Corps** Headquarters requested to add two pieces of curriculum to their Participatory Analysis for Community Action tools for training kit for Peace Corps Volunteers worldwide.
- After participating in the PIA Co-Design Summit in Ghana, **WorldVision** co-organized two Creative Capacity Building trainings and Co-Design Summits in Zambia and Colombia. They are now pursuing strategies to integrate Creative Capacity Building in their work in Southeast Asia.
- Inspired by their participation in the PIA Co-Design Summit, **Danone** decided to pilot a co-creative approach to recycling in Ghana. They called on D-lab's support to design a 3-year program that engages several local stakeholders in the design and implementation of a large inclusive recycling program that responds to Accra's growing problem of plastic pollution and creates income generation opportunities for waste pickers. This program utilizes the Creative Capacity Building curriculum and is engaging IDIN Network members in the region.

Adopting a Lean Research Approach

The Lean Research approach lays out people-centered approach to development research, emphasizing the principles of rigor, respect, relevance and right-size. Through a series of workshops and convenings, IDIN has influenced several agencies to adopt and incorporate these principles into their development research. Here are three examples:

• **MasterCard Foundation:** After attending two Lean Research convenings and receiving the Lean Research Framework, MCF re-wrote their organizational Research and Learning Policy from a lean research perspective. In a recent e-mail, their Director of Research said "lean research really infuses how our organization approaches research funding." The team leading MCF's research and learning team mentioned Lean Research in an article announcing their revamped policy on the Stanford Social Innovation Review. The article can be found here:

https://ssir.org/articles/entry/making_evidence_practical_for_development

- The Girl Effect: The Girl Effect's Technology Empowered Girl Ambassadors (TEGA) program has integrated Lean Research principles and practices into their fieldwork with young girls in vulnerable settings in Nigeria. A recently published case study shares specific practices which the TEGA team have developed to improve the research experiences for both the girls being researched as well as the young girls who are conducting the research.
- **Bankable Frontiers Associates:** Based on a presentation by Lean Research team members, Bankable Frontiers Associates top management has changed the way they approach research and now refer to their research as "lean."

Forging Coalitions for Co-Creation

IDIN's emphasis on network building has not only inspired the creation of new institutions, but it has also influenced how they interact and collaborate for maximum impact. IDIN's consortium partners **These Hands** (Botswana), **ECHO** (Tanzania), **Twende** (Tanzania), and **National**

Technology Business Centre (Zambia) have submitted a joint proposal to the **Southern Africa Development Community** to continue IDIN's work in the region for another three years. If funded, this work will consist of summits, Creative Capacity Building trainings, innovation centers, local chapters, and direct support to local innovators. The partnership will be modeled directly on IDIN's programs, governance structure, and lessons learned.

KEY LEARNINGS

- Co-creation, especially in very diverse teams, requires a set of enabling conditions to be effective. These conditions include empathetic and open mindsets, ample time, informal relationship building, effective facilitation, language interpretation, and accessible collaboration platforms. These lessons apply not only within design teams at IDDS, but in global partnerships as well.
- Design summits should never be organized as one-off events. Rather, design summits are catalytic events for longer term visions and programs. They should always be accompanied by a long-term follow up plan driven by a local partner.
- To effectively engage local communities in co-design with outsiders, it helps to first facilitate a hands-on activity or Creative Capacity Building training to introduce them to the design process. After that, full summits with international collaborators are more effective.
- The impacts of engaging in a design process are as important as the products of that design process. A product-only focus misses these critical outcomes, namely, the ways in which participants apply the design process to other challenges or spread the approach to others.
- Local innovation programs are most effective when they can focus their mission and story on either education or product support. While these programs can both educate people and incubate products, they must figure out which element is done in the service of which.
- IDIN's expertise, whether for products or innovation initiatives, is strongest in the problem identification, initial planning, and prototyping stages. Future programs should focus on this competency and partner externally when initiatives reach sustainability and scaling stages.
- Innovation Centers need robust ecosystem support in order to succeed, and they need to engage robust ecosystems in order to help their innovators succeed.
- IDIN's support might be more strategic if it were time-delimited and focused on one cohort at a time, rather than spreading resources among an ever-growing network
- Headquartered in the United States, IDIN is not ideally situated to adapt content to local contexts. Instead of supporting innovators directly, IDIN could support people who support innovators: the "ecosystem builders." This transition from a hub-and-spoke model to a more distributed ecosystem model could amplify IDIN's impact.
- As they come across roadblock after roadblock to build and promote their solution, local innovators often create structures, resources and pathways that ultimately support other innovators. In this way, local innovators have a ripple effect on their innovation ecosystem, enabling
- Research operates on a different timeline than program implementation, requiring long lead times from study to output to publication. Fitting this process into limited funding timelines can be challenging, especially when budgets fluctuate and affect implementation mid-course.

3. Discussion of Results Measurement

IDIN monitored program performance and assessed impact using the evaluation framework outlined in Section 3.1, and the indicators outlined in Section 3.2.

3.1 Evaluation 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 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.

IDIN's collaborative design model is focused on nurturing the earliest stages of innovation and then providing additional support to high-potential innovations as they are piloted and scaled. IDIN sources new projects through design summits, trainings, innovation centers and courses that expose participants to a collaborative design approach. IDIN then supports the projects in its portfolio through tiered funding, mentorship and student engagement.

Under this objective, IDIN measures the number of solutions supported under each mechanism, the milestones they have reached in their process of development, and the progress they have made in securing external funding, reaching end users, and providing livelihood opportunities. IDIN pays special attention to the source of each innovation, ensuring that it is preferentially supporting solutions developed in context by local innovators and in close collaboration with end users.

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.

With partners in over 20 countries, IDIN is uniquely poised to teach collaborative design and support local innovation year-round. IDIN's approach reaches local innovators through International Development Design Summits, Creative Capacity Building (CCB) workshops, innovation centers, design trainings, and local chapters.

Under this objective, IDIN tracks the number of summits and trainings held, the partners and institutions delivering these trainings with IDIN support, and the number and gender of participants reached. For summits and major trainings, IDIN also measures each participant's goals, learning, and connections, and then tracks the actions they take in the months and years after the training as a result of these takeaways.

Objective 3: Generate Knowledge and Spread the Approach

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

IDIN's third objective is to increase knowledge about and adoption of a collaborative design approach to addressing development challenges. To that end, it offers opportunities for students, researchers, development practitioners and other actors to engage with and practice this approach.

Under this objective, IDIN tracks the knowledge products that document IDIN's research in local innovation and collaborative design. IDIN also tracks university student engagement with this approach through classes, field experiences and research opportunities. Finally, IDIN monitors the ways in which IDIN's approach has been adopted by existing institutions or influenced the creation of new institutions.

3.2 Overall Performance

NUMBERS-AT-A-GLANCE

- In the past five years, IDIN has held **17 design summits** in **11 countries**. IDIN's Network of IDDS alumni now numbers **1027 members** hailing from **72 countries**.
- In five years, IDIN partners and Network members have trained **10,180 people** in collaborative design through design summits, Creative Capacity Building trainings, and innovation center workshops.
- IDIN has provided catalytic funding and mentorship to **20 innovation centers**, helping these organizations establish avenues for long-term sustainability.
- IDIN has supported a total of **369 innovations** over the five-year period through design facilitation, tiered funding, mentorship and student engagement. At present, IDIN counts **166 active innovations** in its pipeline.
- IDIN's active innovations have reached **753,119 people**. They have leveraged IDIN's support to raise over **\$4.1 million** in follow-on funding, multiplying the initial IDIN support by a factor of **13.5x**.
- IDIN has supported **81 university classes** and **386 student field experiences**, exposing the next generation of practitioners to a hands-on, co-creative approach to development.

FUTURE IMPACTS

- Over 90 IDIN-supported innovations are already reaching users, and 20 have been able to secure follow-on funding. As these innovations continue to evolve and scale, we are likely to see these products and services reach more beneficiaries and create more livelihood opportunities.
- Over 20 IDIN-inspired innovation centers, design trainings, and university programs will continue to operate in 2018. These initiatives will continue to expose more people to the practice of design and co-creation, kicking off hundreds of new innovation processes and collaborations throughout the world.
- With IDDS curricula and processes well documented and accessible to future organizers, IDIN anticipates that Network members will continue to host design summits, producing high-potential innovations and building capacity in collaborative design.
- The network that IDIN built is a dynamic one, with new collaborations emerging each year. We anticipate that Network members will continue to collaborate on products, ventures, education programs, and innovation initiatives.

 IDIN's research program has gained visibility and sparked growing interest in the research agenda: understanding how local innovation works, identifying, mapping, and enabling local innovation ecosystems, and understanding the development outcomes associated with building local capacity to innovate. We anticipate that this field will continue to grow, with D-Lab at the forefront.

Though unfunded by IDIN, the following initiatives represent two strategies to sustain IDIN's most important activities and impacts:

IDDS Steering Committee

In August 2017, IDIN formed the IDDS Steering Committee: a dedicated group of volunteers selected to advise and coordinate International Development Design Summits in 2018 and beyond. This committee, made up of lead organizers of past summits, will (1) solicit, review, and approve applications to host IDDS around the globe, (2) serve as mentors from ideation to evaluation of an IDDS, advising future organizers on best practices around curriculum, projects, participants, organizer teams, community relationships, and logistics, and (3) create and facilitate opportunities for cross-learning and collaboration across summits and maintain a network of summit alumni around the world.

D-Lab Innovation Ecosystems Fellowship

Building on the lessons and the outcomes of IDIN, MIT D-Lab is kicking off the pilot year of a new fellowship program for innovation ecosystem builders: initiatives that support local innovation in their own communities. This fellowship will convene three clusters of ecosystem builders seeking to promote inclusive local innovation for development, including makerspaces, design education programs, funds and accelerators. These ecosystem builders will then engage in a participatory design process to create and pilot strategies to promote local innovation in their context. This pilot is supported by an individual donor.

4. Financial Management

As the program progressed and more trainers became able to replicate the IDIN model, IDIN was able to improve the cost-effectiveness by decentralizing delivery of design summits and trainings through consortium partners and network members.

4.1 Final Financial Report

Final financial report (SF425) has been submitted by IDIN Financial Officer, Asif Obaidee.

Please check the boxes below to confirm that the needed Financial Reporting has been completed:

⊠ Final SF425 Form

Email to AOR attesting no additional cost obligations for award

I AOR memo on and remaining funding and deobligation plans if needed

5. Engagement with Partners

As a global network and consortium, IDIN's programming hinged on collaboration and crosspollination among its members. The following are a sampling of partnerships that have continued after the completion of the program:

- Lean Research: The Lean Research initiative is a collaboration between IDIN, Comprehensive Initiative on Technology Evaluation (CITE), the Fletcher School at Tufts University, the Feinstein International Center at the Friedman School of Nutrition Science and Policy at Tufts University, and Root Capital. The Lean Research Skills for Conducting Interviews edX course was developed and implemented in partnership with The Girl Effect.
- **Scale-Ups Fellowship:** The Scale-Ups Fellowship, which continues through MIT D-Lab, is conceived as not only a funding source but also a community, through which fellows can learn from each other as well as a network of mentors and experts.
- Student Fieldwork: All MIT D-Lab courses involve close collaboration with partners, many of which were collaborators from the IDIN program. This year, D-Lab students collaborated with five organizations founded by IDIN Network members: Link 4 (Guatemala), These Hands (Botswana), C-Innova (Colombia), AEST (Uganda) and BrightGreen Renewable Energy (Kenya).

6. Reporting and Certifications

6.1 Data

All data sets have been submitted to our AOR via biannual reports and uploaded publicly, as instructed.

Please check the boxes below to confirm that the needed Data Reporting has been completed: I Submit to AOR list of all datasets created and their access status I AOR memo confirming that datasets have been registered to the DDL

6.2 **Publications**

All IDIN publications have been submitted to our AOR as they have emerged and then again via biannual reports. All are available publicly.

Please check the boxes below to confirm that the needed Publication Reporting has been completed:

☑ Submit to AOR list of all publications and public documents created and their access status ☑ AOR memo confirming that publications and public documents have been uploaded to the DEC

6.3 Equipment

All equipment purchased through IDIN has been properly disposed. Additional information has been submitted by IDIN Financial Officer, Asif Obaidee.

Please check the boxes below to confirm that the needed Equipment Reporting has been completed:

☑ Submit to AOR list of all equipment purchased during the award and a plan for its disposing.
☑ AO memo confirming that all equipment under the award has been properly disposed.

6.4 Environmental Review

All IDIN Scale-Ups fellows, IDIN Microgrant recipients and IDIN Sustainability Grant recipients adhered to the terms of their Initial Environmental Examinations.

Please check the boxes below to confirm that the needed Environmental Review Reporting has been completed:

Submit to AOR list of all IEEs or EMMPs that were created and their status

I AOR memo confirming that all required environmental monitoring efforts have been met

7. USAID Engagement

During FY2012-FY2018, IDIN implemented the following buy-ins from USAID Missions/Bureaus/Independent Offices, which have now concluded:

N/A

The following buy-ins are actively being implemented beyond the core programming under this cooperative agreement. Upon conclusion of these any future buy-ins, a buy-in report will be submitted detailing each buy-in. These reports will be attached to this report as an Appendix.

N/A

8. Other information and Appendices

IDIN Impact Report 2012-2016: <u>https://www.idin.org/resources/idin-communications/idin-program-impact-report-2012-2016</u>