Building Purpose-Driven Networks

To Deliver Innovative Solutions to the World's Most Pressing Challenges

GLOBAL
KNOWLEDGE
INITIATIVE

2014 Annual Report

Our Mission

The Global Knowledge Initiative's mission is to forge, optimize, and sustain problem-solving networks that use science, technology, and innovation to deliver transformative solutions.

Three core functions underpin GKI's efforts to unleash Collaborative Innovation: locating resources, enabling sustainable partnerships by training on the tools, skills, and processes needed for Collaborative Innovation, and connecting people and resources together into durable, solution-driven networks.

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Top picture: Participants in GKI's workshop engage in our Challenge Mapping exercise, pictured by GKI's Andrew Gerard. Middle picture: The "Map of Science" was produced by a research team including Johan Bollen, Herbert Van de Sompel, Ryan Chute, and Lyudmila Balakireva of LANL's Digital Library Research and Prototyping Team and Aric Hagberg, Luis Bettencourt, and Marko A Rodriguez of LANL's Mathematical Modeling and Analysis Group, and LANL's Center for Nonlinear Studies. Bottom picture: Researchers from Malaysia's Universi of Technologi, engage in GKI's Collaborative Innovation training, focusing on local solutions that form the epicenter of research-action projects, pictured by GKI's Sara Farley.

OUR VISION FOR GLOBAL IMPACT

Aligning the world's resources — technological, human, knowledge-based — to increase the speed, reach, and relevance of innovation aimed at solving challenges faced by the world's poorest and most vulnerable populations.

Letter from the Chairman

Every year I like to take time to reflect and make a new plan for the year ahead. As I look forward, I remain passionate about innovation's central role in creating and delivering social and economic value. Today I am particularly energized and inspired by the Global Knowledge Initiative's work pressing forward to find and refine ways to support Collaborative Innovation and global problem solving.

I continue to value the ongoing, evolving work of building skills for Collaborative Innovation and creating linkages to solve discrete problems. This year, I was also thrilled by the development of GKI's Social Innovation Lab structure. This major milestone takes GKI's expertise in innovation systems research, facilitation, and program and network design and applies it to unordered, complex challenges such as post harvest food loss. In short, GKI's Social Innovation Lab makes sense of what is there and what could be, priming future action to transform social and economic wellbeing. I am eager to see how GKI's Social Innovation Labs, like our other dynamic programs, will shape and spark future action.

We look ahead to 2015 with excitement for broader engagement and expanding impact. As ever, we are thankful for and humbled by our partners' engagement and generosity. To the expanding group of individuals and institutions whom we are lucky to call partners, we applaud your collaborative spirit and shared commitment to global development.

We invite you to review our Annual Report to learn about what GKI has accomplished in 2013-2014, and where we are heading next in 2015. For your continued support and interest in GKI, I thank you.

Sam Pitroda
Chairman

Letter from the Chief Operating Officer

When we started the Global Knowledge Initiative five years ago, the term "Collaborative Innovation" was new. Distinct from familiar stories of innovation in which teams housed within a company build a prototype and usher it to market, Collaborative Innovation is about boundary-busting co-creation. We define Collaborative Innovation as: *"the creation of a good, service, or process using the shared knowledge, resources, and capacity of partners who seek to solve challenges that are beyond the capability of an individual partner."* The Global Knowledge Initiative thrives on creating the enabling environment, the mindset, and the tools that make Collaborative Innovation possible.

Since GKI's formation, our motivation has been the observation that the challenges of our time — mitigating climate change, ensuring food security, generating jobs for millions of unemployed youth — are too vast and complex to be solved by single institutions or within single fields of industry or research. Such challenges require Collaborative Innovation, through which we build linkages across organizational, disciplinary, and geographic boundaries. Collaborative networks are key to this endeavor; they offer a way to align diverse resources and partnerships toward shared goals. When Collaborative Innovators—people skilled in Collaborative Innovation—stand at the center of such networks, incredible things are possible. Yet, with so many moving parts, well-intentioned partnerships often fail to deliver desired social, economic, or environmental benefits. Serving as an honest broker of cross-sectoral partnerships and a facilitator of network development and Collaborative Innovation, the Global Knowledge Initiative helps innovators in industry, government, the lab, and the field to avoid common pitfalls of collaboration. From formation of a global network focused on challenges in Rwanda's specialty coffee sector to cultivation of Asian and African universities' capacity to collaboratively innovate solutions to water challenges together with local communities, the Global Knowledge Initiative's programming is transforming the lives of poor and vulnerable people across the world, and we're using the power of Collaborative Innovation to do it.

Named by The Rockefeller Foundation as one of the top 100 most innovative organizations for the next century, we are proud to see our models for sparking and maintaining Collaborative Innovation working. Yet, even after serving problem solvers from 60 countries since our launch in 2009, we are hungry for greater impact. I want to see GKI unleash a wave of change that builds from these initial achievements. I want to help usher in a world in which 7 billion people are equipped as 7 billion problem solvers. I want Collaborative Innovators to focus their efforts on development challenges for which resources are non-existent or inequitably distributed. For my team and my advisors' support in advancing toward these goals, I am humbled and grateful. To our partners, whose vision and thirst for change fuels our work, we aspire to support you along your innovation pathway and are heartened that you've asked us to join you on your journey.

Best wishes for a bountiful year ahead!

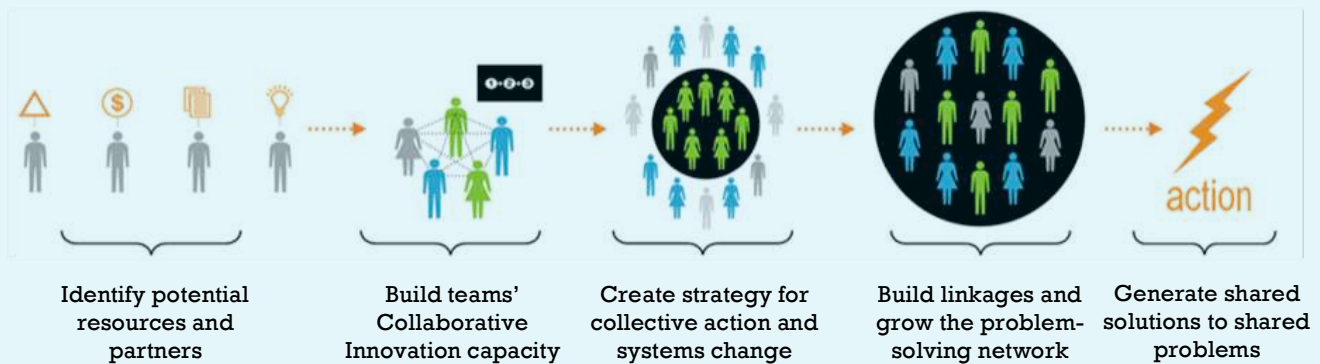Sara E. Farley
Chief Operating Officer

About the Global Knowledge Initiative

How We Work

The premier challenges of today—reducing waste and spoilage in food chains, minimizing water insecurity in arid landscapes, protecting vulnerable ecosystems amid climate change—are complex and multi-sectoral. Solving these and other problems demands that the global community create bold new ways of organizing people and resources that cut across traditional sectoral, disciplinary, and geographic divides. Collaborative Innovation offers a way to align resources and partnerships toward shared goals. Building and supporting networks steeped in Collaborative Innovation skills, tools, and perspectives represents a cornerstone of the Global Knowledge Initiative's (GKI) work.

Guided by the challenges offered by our partners, we help researchers, entrepreneurs, policymakers, students, and others **locate** resources critical for problem solving; **enable** effective collaboration by building skills and designing shared agendas; and **connect** resources and partners into durable networks; all to **solve** development challenges pertinent to science, technology, and innovation (STI). These steps—**Locate**, **Enable**, **Connect to Solve**—underpin our approach to building and optimizing solution-driven networks.

Locate → Enable → Connect to Solve

| Identify potential resources and partners | Build teams' Collaborative Innovation capacity | Create strategy for collective action and systems change | Build linkages and grow the problem-solving network | Generate shared solutions to shared problems |

How We Got Started

The Global Knowledge Initiative (GKI) originated from the 2008 Higher Education Summit for Global Development convened by the US Secretaries of State and Education and the Administrator of the US Agency for International Development. Attended by more than 200 university presidents, heads of technology firms, and philanthropists, the Summit identified the need for a "clearinghouse for resources and information to help build knowledge partnerships that can tackle development challenges." Chief Operating Officer Sara Farley together with Chairman Sam Pitroda and Advisory Board Co-Chair Nina Fedoroff established GKI as a response to this call. In the five years since, we have become a place for experimentation, human-centered design, and constant innovation, building GKI into a global leader in Collaborative Innovation.

How We Choose Challenges to Solve

Not every challenge facing the world today can be addressed through science, technology, and innovation; yet many can. To maintain a clear focus, we address challenges that align with these criteria:

- The challenge constitutes a **shared concern** for developing and developed country partners.
- The challenge relates to **science, technology, and innovation.**
- Solving the challenge will **improve the lives of thousands, if not millions.**
- The challenge is germane to the lives of **poor and vulnerable people.**
- Solving the challenge **deepens global capacity** for science and engineering training, research, or innovation.

We are currently demonstrating impact through initiatives in East and Southern Africa, South and Southeast Asia, and the United States. Our global network of partners supports activities in these focal geographies and other places around the world. To date, GKI has engaged problem solvers through our trainings, networks, and problem solving design sessions in more than 60 countries.

Our Work

SUPPORTING RURAL LIVELIHOODS THROUGH COLLABORATIVE INNOVATION

Through our Learning and Innovation Network for Knowledge and Solutions (LINK) program, we support global teams as they build purpose-driven networks capable of delivering solutions to rural communities, such as in the dry-lands of Kenya where LINK Round III is now live.

A Year in Review

In our fifth year of operations, GKI reached a new level of programmatic and geographic coverage, enabling us to serve an expanded number of problem solvers in more diverse contexts. This year, we served 220 participants through our Collaborative Innovation training programs, bringing the total number of problem solvers trained by GKI to 753. Over 60 institutions are now actively engaged in our award-winning LINK (Learning and Innovation Network for Knowledge and Solutions) programs, hailing from 9 countries across four continents. In addition to those institutions, over 400 individuals participated in facilitated network design events, such as the Collaboration Colloquia noted on page 15.

A number of highlights stand out from this year. GKI was one of six globally recognized institutions named as Social Innovation Labs for The Rockefeller Foundation, following our distinction as one of the "Top 100 Social Innovators of the Next Century" by the Foundation. In this role, we have engaged over 240 experts in a global effort to imagine then prototype innovative approaches to reducing post harvest food loss in Africa. We invite you to turn to page 15 to learn more about this exciting initiative. Building on the success of our work as a Social Innovation Lab, GKI undertook a bold venture to create a new framework for assessing future innovation potential within the social sector, and to design and test new ways to identify opportunities for investment. Beginning in late 2014, GKI partnered with researchers from the Georgia Tech Research Institute and design experts from IDEO to undertake these initiatives. Page 18 profiles this path-breaking work.

In addition to these highlights, GKI launched a new LINK network in Uganda focused on expanding farmer access to high-quality, disease-free banana and sweet potato planting materials. For the first time, we named a slate of LINK finalists that will receive Collaborative Innovation training and mentorship through 2015. More information on the launch of GKI's fourth round of LINK can be found on page 13. The kickoff of our Network Facilitator training program stands as another highlight of the past year. Made possible through support from the Carnegie Corporation of New York, GKI's Network Facilitator training program equips participants with the tools and skills needed to help others cultivate cross-sectoral partnerships, nurture new networks, and maintain network momentum through the arc of the innovation process. GKI introduced this new training program based on our realization that the lack of global network facilitators constitutes a rate-limiting factor for scaling LINK in Africa and, more broadly, seeding purpose-driven networks worldwide.

Unleashing the Collaborative Innovator in the world's 7 billion solvers continues to guide our work. In 2015, GKI will continue its pursuit of opportunities to deliver value through Collaborative Innovation and network formation aimed at curbing international development challenges in agriculture, health, education and beyond.

Program I: Needs Analysis, Research, & Evaluation

Over the past five years, GKI has taken a concerted effort to clarify what tools and approaches are best suited to help problem solvers hailing from diverse sectors, contexts, and disciplines effectively engage in Collaborative Innovation. In 2014, GKI released its *Top Ten Tools for Collaborative Innovation*, to share publicly those tools that consistently add value to our efforts to promote Collaborative Innovation globally. We have deployed these tools to address challenges in fields such as agribusiness, water management, and climate change, and among scholars from places as diverse as Haiti, Tanzania, Pakistan, and the US. Selecting a "best-of" list from the wealth of tools that make Collaborative Innovation feasible was difficult; however, GKI finds that these ten deliver results time after time, even in some of the most resource-strapped, high-stakes contexts imaginable. The toolset, available on GKI's website, is meant to empower others—designers, managers, researchers—who seek to build on our work in new places and with new communities.

Program II: Coalition Building & Network Design

GKI understands that strong partnerships are created, not just of good will, but also of partners' explicit need to access new resources—technologies, experts, knowledge, institutional support—for collaborative problem solving. Without clarity on members' incentives and needs, networks run the risk of becoming platforms for discussion rather than action. GKI helps partners and networks clarify the resources they seek through collaboration and develop the Collaborative Innovation Strategies to engage partners poised to offer those resources. For example, GKI facilitated a resource cataloguing session with the US Agency for International Development's (USAID) Higher Education Solutions Network (HESN) in November 2013. GKI trained USAID staff members to facilitate a global process of identifying resource exchange opportunities among the HESN members—MIT, Duke, Makerere, etc.—and the broader stakeholder constituency convened by this network.

Program III: Trainings

Universities increasingly seek ways to apply their collective knowledge and resources toward solving globally pressing challenges, such as those in agriculture, water, and health. At the same time, there is growing awareness that the skills required for effective international engagement—communication, project management, empathizing with users—often fall outside the training provided by traditional academic institutions. Understanding this inherent tension, Michigan State University (MSU) and GKI partnered to train the inaugural class of Academy for Global Engagement fellows. Rising stars in the engineering and agriculture fields, these fellows received GKI training on topics including communicating their work effectively,

building action-oriented networks, and positioning their work for long-term impact. The crescendo of the year-long experience is a trip to Washington, D.C. focused on crafting a pitch, rebooting it, and delivering it to a host of funders. Of the experience one fellow said, *"My experience with MSU's Center for Global Connections and GKI…took me from being able to explain my research to my peers/fellow academics to creating a story that showed my passion for what I do and helped convey the impact of my work to stakeholders. I was able to put those skills into practice during the trip, and I quickly noticed significant engagement and interest from donors."* With $5 million USD in support to the fellows attributed to their participation in the Academy for Global Engagement program, the program typifies GKI's success in building Collaborative Innovation capacity in change-makers.

Program IV: Policy & Strategy

GKI envisions reaching impact at scale, not only through supporting Collaborative Innovation networks and building the capacity of individual problem solvers, but also by supporting nations and regions in their efforts to create enabling environments that advance science, technology, and innovation. In 2013 and 2014 GKI had the unique experience of contributing to three national science, technology, and innovation policy and strategy efforts for The Government of Rwanda as detailed on page 17.   GKI also formalized our long-standing partnership with the Uganda National Council for Science and Technology (UNCST) through a joint memorandum of understanding (MOU).   UNCST staff members participated in GKI's inaugural network facilitator training, held in July 2014 in Kampala, Uganda. This training aimed to equip individuals responsible for brokering partnerships and cultivating networks with the skills and tools needed to complete this work.

C O N N E C T ᴛᴏ S O L V E
Foster linkages between people and resources

## Program V: Learning and Innovation Network for Knowledge and Solutions (LINK)

GKI's LINK networks in East Africa continue to gain momentum, with existing networks in Rwanda and Kenya, and an exciting new LINK network established in Uganda. In Rwanda, GKI's Coffee Collaboration Colloquium brought together 150 local and global coffee sector stakeholders to forge new partnerships aimed at boosting coffee. Attended by coffee companies, researchers, policymakers, funders, and others, the Colloquium fueled creative thinking and relationship building among participants, spurring action with a $20,000 USD prize for innovative solutions in the sector. In Kenya, LINK collaborators joined with researchers from the World Agroforestry Centre (ICRAF) to conduct fieldwork aimed at developing business models for rainwater harvesting technologies. The LINK network in Kenya identified the lack of viable business models for rainwater harvesting systems as a key bottleneck to scaling access to these potentially transformative technologies. This collaboration with ICRAF will directly contribute to the network's broader ambitions of improving dry-land agriculture through the use of rainwater harvesting in Kenya's arid and semi-arid lands.

LOCATE

ENABLE

The LINK Uganda Challenge

How might we improve smallholder access to quality planting materials
for banana and orange-fleshed sweet potato?
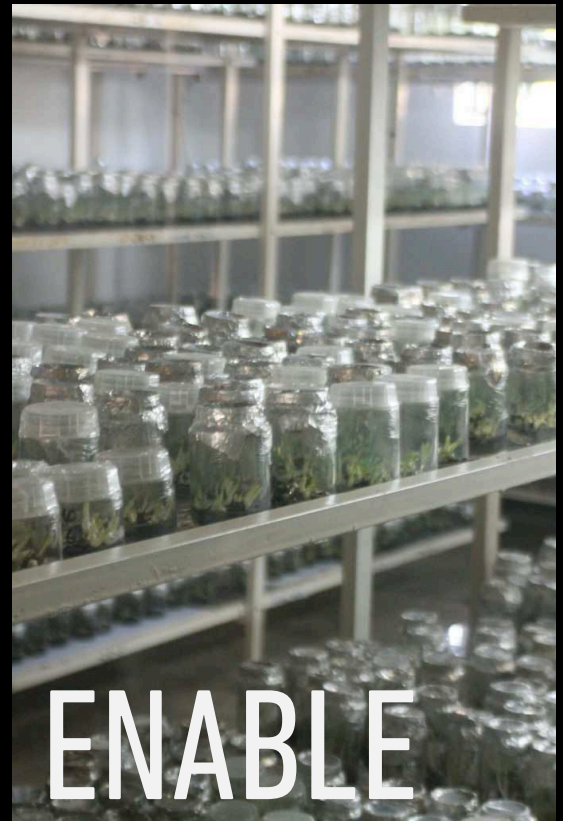
GKI's Achievement Through LINK

Enabling problem solvers from research, industry, and academia to cross boundaries — geographic and disciplinary — and join in solving the world's toughest challenges.

CONNECT

SOLVE

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WHAT DID GKI DO IN 2014?

Launched four new African agricultural innovation partnerships

Four innovative African research teams inaugurated partnerships with GKI in 2014 to build the skills, strategies, and networks they need to solve pressing agricultural challenges facing communities in Africa. Since GKI's LINK program began in 2011, problem solvers have engaged with it to launch networks aimed at solving challenges threatening livelihoods and food security. This newest fleet of LINK networks joins a deep bench of active LINK network participants whose achievements in tackling previous LINK challenges received global attention with The Rockefeller Foundation dubbing LINK one of the world's top 100 innovations for the next century. In June 2014 this fourth round of LINK winners and finalists commenced with a LINK kick-off and Collaborative Innovation skills training organized in Uganda and South Africa.

Earlier in 2014, GKI's Technical Committee selected Dr. Geofrey Arinaitwe of BioCrops Uganda Ltd. and his research team as LINK winners. Arinaitwe and his teammates are applying biotechnology expertise to expand access to quality banana and sweet potato planting materials, an avenue for improving food security in Uganda. As the LINK winner, they also receive a suite of technical and advisory services from GKI aimed at building a cross-sectoral network to achieve this goal.

Additionally, GKI provided training and real-time coaching to three groups of LINK finalists. A finalist team led by Dr. Fredrick Tumwine (Makerere University) aims to implement improved bee farming and beehive product processing programs to diversify rural Ugandan farmers' livelihoods. In South Africa, a team led by Dr. Rose Mboya (University of KwaZulu Natal) focuses on improving food security and health by mitigating the negative effects of mycotoxin contamination in Tanzanian maize, and a team led by Dr. Sandy Turketti (Stellenbosch University) will develop training programs to empower rural farmers to meet local post harvest agricultural needs. Through the GKI-led Collaborative Innovation trainings, LINK teams gained skills for mapping their challenges, identifying resources and partners needed to achieve impact, and developing problem solving strategies.

"The group achieved a lot from the training that changed our scope from micro to macro.
We are now thinking big!"

- Dr. Fredrick Tumwine,
Head of Department, Geography, Geo-informatics, and Climatic Sciences, Makerere University, Uganda

GKI for NETWORK DESIGN

Developed and tested network designs for opportunity detection

GKI has spent years learning, testing, and refining ways to help networks deliver value. We've seen networks deliver solutions in our LINK programs, and we have used convenings to create networks around specific topics, such as our 2014 Coffee Collaboration Colloquium in Rwanda and the Dairy Value Chain Collaboration Colloquium in Uganda. In late 2014, GKI worked with renowned design firm IDEO to explore one of the functions networks can provide: identifying opportunities for investment and action. Working together with support from The Rockefeller Foundation to enhance the social sector's capacity to detect opportunities, GKI and IDEO explored the question: "How might we design and test a method for using networked intelligence (i.e., insights developed through scanning) to help organizations in the social sector better identify opportunities for transformative social impact?"

To start, we researched how organizations learn and process information and how networks may, or may not, contribute to that learning. We developed a framework for parsing (1) how members of a scanning network relate to one another (network cohesion); and (2) how an organization incorporates a network's insights (network inclusion). We interviewed individuals in finance, strategic foresight, defense, and other fields, drawing on external intelligence to learn about preferences for network inclusion and cohesion, and how others engage and incentivize network members to share ideas.

With this insight, we developed and vetted a series of prototypes for transforming information from individual ideas to more synthetic, robust stories. We also constructed a set of prototypes for how and when the social sector might engage networks in scanning. This insight has allowed GKI to design networks to meet the social sector's need for improved intelligence gathering and opportunity detection.   GKI looks forward to piloting these vetted designs for scanning networks and methods to engage them in 2015 with The Rockefeller Foundation.

"This work with GKI was instrumental in shaping our thinking about the type of intelligence we need and how we might encourage potential partners to share such insight."

- Rachel Bergenfield, Senior Program Associate, The Rockefeller Foundation

GKI for SOCIAL INNOVATION LABS
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Prototyped innovative solutions and the networks to activate them aimed at reducing post harvest food loss in Africa

Food loss–the loss of edible food at the production, post harvest, processing, and distribution stages of food value chains–represents a significant challenge for developing countries. According to estimates, approximately 30% of food globally is lost or wasted after it is harvested (FAO). Food loss reduces incomes by as much as 15% for approximately 470 million farmers and other value chain actors, many of whom are themselves food insecure (The Rockefeller Foundation 2013). Understanding the pressing nature of this challenge, The Rockefeller Foundation invited GKI to shape a global effort aimed at sourcing high-potential innovations for reducing food loss in Africa. GKI is undertaking this work as a Social Innovation Lab for the Foundation's Food Waste and Spoilage initiative. The Foundation's selection of GKI as a Social Innovation Lab was informed by our ability to grapple with systems dynamics, engage meaningfully with diverse stakeholders, and design integrated responses to complex challenges.

In this work, GKI employs a multi-stage approach to identify clearer opportunities, more capable stakeholders, and more transformative approaches to reducing food loss in Africa. Since initiating this work in late 2013, GKI has traveled to seven countries and engaged over 240 global experts in an iterative process to: (1) frame the food loss challenge as understood by different stakeholders in diverse contexts; (2) assess the resources available and needed to address the challenge, and (3) envision possible solutions meriting further investigation. This Social Innovation Lab will culminate in early 2015 with a Post Harvest Food Loss Collaboration Colloquium designed to connect key stakeholders and resources involved in bringing the highest potential solutions to scale. Ultimately, GKI aims to provide innovative, vetted options and a readied network of actors poised to significantly reduce food loss and benefit the lives of poor and vulnerable people across Africa.

"[GKI deserves] thanks for presiding over such an enriching [problem framing] session [that engaged participants in] discussions of immense topical importance. I was honored to be afforded the opportunity to participate and hope that whatever contributions I made added value to the overall objectives of the initiative."

- Kenneth Ayuko, Deputy Director Policy Development Coordination, Ministry of Agriculture, Kenya

GKI for TRAINING INNOVATORS

Boosted community engagement and Collaborative Innovation capacity at a leading research university in Southeast Asia

*"The methods we learned in training were so simple, but they transformed our ability to engage the community and find substantive opportunities for partnership.
This experience was beyond imagination and expectation!"*

- Dr. Lee Chew Tin, Associate Professor, Universiti Teknologi Malaysia (UTM)

In an effort to better leverage its ample talents and resources to solve problems faced by communities, the Universiti Teknologi Malaysia (UTM) partnered with GKI to design and implement a new approach for engaging faculty and students as allies in addressing community-based challenges. Looking to build upon UTM's expertise in water resource management, GKI designed a series of activities—the *UTM-GKI Water Challenge*—to set UTM researchers and students on a path toward effectively engaging communities to solve water problems together, employing Collaborative Innovation for community transformation.

In November 2013, GKI trained over 20 UTM researchers and 60 students in methods for Collaborative Innovation. The training offered approaches to respectfully assess the needs and desires of community members; identify shared areas of interest by the university and community; and set a vision for partnership among diverse stakeholders. Following this intensive training, participants debuted their newly learned skills at a Community Kickoff Meeting in Air Papan. Over three days, GKI and the UTM-cohort set out to clarify the goals and challenges faced by community members in Air Papan. They worked alongside community members to identify opportunities for collaborative problem solving and outline a path for ongoing partnership. Building on the knowledge shared and relationships formed, researchers worked with students and communities after the Kickoff to develop collaborative research proposals on paddy field irrigation, sustainable fisheries, promoting eco-tourism, and waste management. Each of these projects is active and has received funding to carry out the work.

Energized by the results of the *UTM-GKI Water Challenge*, UTM continues to propagate the skills for Collaborative Innovation gained through GKI's training among its campus and community engagement efforts.

GKI for POLICY & STRATEGY

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Supported national science, technology, and innovation strategy development in Rwanda

Since Rwanda's 1994 genocide, strong economic policies and investments in human capital and science, technology, and innovation (STI) have contributed to economic transformation. To support this growth, and ensure that it benefits all Rwandans, policymakers recognize the need to structure how they invest, and measure success, in STI. To this end, in 2013 GKI partnered with Rwanda's Ministry of Education (MINEDUC) and the UN Economic Commission for Africa (UNECA) to evaluate the success of Rwanda's 2005 STI Policy. GKI's Review called for—among other things—a clearer role for Rwanda's newly formed National Commission of Science and Technology (NCST), and an STI Policy Implementation Strategy that would guide activities on the ground. By taking forward these two recommendations, GKI has deepened its policy relationship with Rwanda.

Rwanda's NCST has a mandate to advise on, monitor, and coordinate STI-related activities across Rwanda's economy. As a new institution, however, it did not have a Strategic Plan guiding its actions. Beginning in early 2014, GKI partnered with NCST to write a first ever Five-Year Strategic Plan. Combining insights from stakeholder interviews conducted across Rwanda's economy, design sessions with NCST staff, and international benchmarking, GKI developed and presented a Strategic Plan that will guide the National Commission as it coordinates a multitude of STI activities aimed at propelling Rwanda's growth and development.

Following the development of NCST's Five Year Strategic Plan, and building off of the 2013 STI Policy Review also performed by GKI, we began working with UNECA and MINEDUC to develop a STI Policy Implementation Strategy. Consisting of policy priorities, targeted activities, and a clear monitoring and evaluation plan, this Strategy provides structure and guidance for national investments and activities in STI. GKI delivered the Policy Implementation Strategy to stakeholders in October, a bold step toward fortifying the necessary enabling environment for innovation.

"One of the aspects where we need to work together is on the skills level. All of our strategic plans, our strategies reside on capacity. We need skills on the government and private sector side. If we can define critical skills, we can invest in them."

- Didier Nkurikiyimfura, Director General in Charge of Information and Communication Technology (ICT), Rwanda Ministry of Youth & ICTs

GKI for INNOVATION IMPACT POTENTIAL

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Created toolset to assess innovation impact potential to inform decision-making in aid agencies, governments, and beyond

"At a recent technical review workshop, we heard incredible feedback from expert reviewers who helped advance the concepts behind this work and the practical applicability of the toolset.
We look forward to continuing this work together over the coming year!"

- Claudia Juech, Associate Vice President and Managing Director of Strategic Research, The Rockefeller Foundation

In a world of endless economic and social development problems and opportunities, how can we decide what to fund to ensure maximum impact for poor and vulnerable people? To understand if there is the potential for positive, long-lasting change within a problem space, decision-makers must contend with tremendous complexity. Typically, evaluating impact occurs after-the-fact. GKI asked if we might get better intelligence on innovation's potential impact earlier in the decision-making process. Assessing innovation impact potential would allow the social sector to test whether there is sufficient space and opportunity to promote potentially game-changing solutions to complex problems at an earlier stage in the decision making process—before investment, rather than afterward.

The Rockefeller Foundation embraced this question with GKI in 2014. To answer it, GKI and the Georgia Tech Research Institute (GTRI) began developing a toolset that uses a systems approach to assist social sector organizations in assessing innovation impact potential. Using this systems approach enables decision makers to gain confidence in determining which complex problem spaces merit investment and how these problems might be tackled. The toolset includes a suite of systems analysis, strategic foresight, and data integration tools, and will help individuals visualize complex systems and stakeholder networks, clarifying many of the interacting forces at play.

The joint GKI-GTRI team aims to provide decision-makers with greater insight, confidence, and facility in assessing innovation impact potential. The result: better decision-making. Rather than considering the role innovation plays after an investment is made, or based on historic evaluations of how innovation has or has not delivered solutions in a problem space, this approach is forward-looking. The toolset, delivered in early 2015, aims to assess the future potential impact that innovation can deliver in addressing complex global problems.

Highlights from the Year

Late 2013

Launched GKI's Collaborator's Toolkit

GKI released a toolkit to better enable collaboration among problem solvers spanning multiple disciplines. The toolkit is designed to enhance teams' ability to streamline the research process, communicate with counterparts, share ideas and resources, and broadcast findings.

Conducted trainings and field research with LINK III team and Kenyatta University students

Bolstering the research capacity of higher education institutions in Kenya, GKI delivered training on research methodologies to the LINK III team and Kenyatta University graduate students in preparation for field research on the return on investment of rainwater harvesting technologies in Kenya.

Launched our Social Innovation Lab and tackled the first phase of the Food Waste and Spoilage initiative with The Rockefeller Foundation

To help generate innovative approaches to problem solving as part of its Food Waste and Spoilage initiative in Africa, The Rockefeller Foundation (RF) selected GKI as a Social Innovation Lab. In the first phase of the project, GKI organized six international convenings, where 120 international experts identified 590 bottlenecks preventing the reduction of post harvest loss in Sub-Saharan Africa. GKI then converged on the ten challenges that, if solved, would deliver the greatest impact at scale.

Held Training of Trainers and Community Kick-off Meeting in Malaysia for UTM-GKI Water Challenge

GKI delivered a series of trainings to faculty and students at the Universiti Teknologi Malaysia (UTM) over the course of five days to enable meaningful and productive community engagement. By applying Collaborative Innovation tools learned during this training, UTM researchers built critical connections with the nearby community of Air Papan with whom they jointly identified opportunities for action on key issues.

Signed MOU with Uganda National Council for Science and Technology (UNCST)

Recognizing GKI as a key partner in promoting science, technology, and innovation (STI) for development, the Uganda National Council for Science and Technology (UNCST) signed a Memorandum of Understanding (MOU) with GKI to formalize their international partnership. The MOU outlines the shared aspirations to promote STI for development through joint trainings, research, and seminars.

FRAMING GLOBAL CHALLENGES FOR COORDINATED ACTION
Facilitated through GKI's Social Innovation Lab process, experts across four continents offer almost 600 opportunities to harness innovation to reduce food loss, contributing to The Rockefeller Foundation Food Waste and Spoilage initiative. Photo Credit: GKI

Analyzed potential for university-based agricultural networks in northern Haiti

GKI applied its expertise in building and maintaining knowledge networks to craft a robust plan for university engagement in Haiti, in collaboration with Development Alternatives, Inc. (DAI) and the Feed the Future program. The goal of this effort was to create a plan for engaging Haitian universities and leveraging their expertise to improve the sustainability of Feed the Future programs in northern Haiti.

Contributed to Link-and-Learn Workshop for Women Leaders in Rwanda

Designed to develop women leaders in the agricultural sector, GKI delivered a Collaborative Innovation workshop for 25 faculty and staff of the University of Rwanda (UR) as a part of the USAID funded Women's Leadership Program at UR. As a joint venture with Michigan State University (MSU) and Washington State University (WSU), GKI provided training to these leaders on key design tools they can use in identifying shared priorities for action and building communities of practice.

Provided technical support for the Higher Education Solutions Network (HESN)

To further solidify HESN strategy and coordination, GKI designed a process tailored to deepen network collaboration among the seven flagship HESN universities and the broader stakeholder group assembled at the first annual HESN technical convening. Using the broad HESN goals as focal points, GKI trained HESN staff to lead working sessions aimed at cataloguing resources available and needed for sharing across the network.

2014

Spearheaded cross-sector dialogue on potato taste defect in Rwanda's coffee sector, building on award-winning LINK Round I

GKI facilitated a convening of over 150 representatives from academia, private sector, government, and international organizations at the Coffee Collaboration Colloquium in Kigali. The convening brought together these experts to discuss critical obstacles to eliminating potato taste from Rwanda's coffee. The Ministry of Agriculture, National Agricultural Export Development Board (NAEB), and the University of Rwanda (UR) partnered with GKI to sponsor this event, which sought to combat industry losses of more than $3.9 million USD annually.

Announced LINK IV winner and finalists in Africa

The team led by Dr. Geofrey Arinaitwe, Managing Director of BioCrops Uganda Ltd., was selected as the winner of the fourth round of GKI's award-winning LINK program. Dr. Arinaitwe seeks to improve food security issues in Uganda with biotechnology. LINK IV finalists include three additional teams tackling agricultural challenges in South Africa, Tanzania, and Uganda.

Delivered Collaborative Innovation training for students and faculty at Virginia-based George Mason University (GMU)

GKI designed and delivered an intensive Global Problem-Solving Skills Workshop, enabling a cohort of 36 George Mason University (GMU) faculty and students to strengthen their ability to positively impact global challenges. Offering instruction on a series of tools, GKI buttressed GMU's toolkit with proven strategies to address complex development challenges in teams.

Released GKI's Top 10 Tools for Collaboration

To better enable multidisciplinary approaches to complex global issues, GKI released its Top 10 Tools for Collaborative Innovation. This compendium provides an overview of ten key tools that GKI has found to be critical to jumpstarting and sustaining Collaborative Innovation networks around the world.

Clarified resources needed to tackle critical food loss challenges in Africa with The Rockefeller Foundation

During the second phase of GKI's work as a Social Innovation Lab with The Rockefeller Foundation, GKI completed an in-depth assessment of 26 initiatives currently underway to tackle ten key post harvest loss challenges. Saturated in interviews and innovation analysis, this research also catalogued hundreds of resources being put to use and still needed by organizations working to address post harvest loss in Sub-Saharan Africa.

Facilitated the Dairy Value Chain Collaboration Colloquium in Uganda

GKI welcomed 50+ individuals representing research, business, donors, development organizations, and governments to explore ways in which new partnerships could address pressing challenges in the East African dairy value chain. Organized around seven challengers—competitively selected African innovators—currently working to address key issues along the dairy value chain, the Collaboration Colloquium provided a platform for GKI to help broker partnerships between attendees and the challengers.

Launched partnership with Rwanda National Commission for Science and Technology (NCST) to design its five-year strategic plan

Recognized as the national coordinating body for science, technology and innovation policy, the Rwanda NCST invited GKI to support the design of its Five-Year Strategic Plan. GKI provided rigorous and strategic advice to NCST staff and leadership by facilitating intensive in-country design sessions, analyzing NCST's Strengths-Weaknesses-Opportunities-Threats, and conducting international benchmarking.

Delivered formal address to attendees at International Women's Forum on Innovation in Berlin

GKI's Sara Farley was among the preeminent group of leaders invited to explore how innovation intersects with public policies, personal choices, and social structures to forge productive, healthy, and happy societies. Featured in the plenary session on "Innovation: A Case for Global Optimism," Sara spoke to over 700 women leaders on how innovation can counteract the inequitable distribution of wealth, power, and resources.

Facilitated experts in envisioning potential solutions to the post harvest loss challenge in Africa

In the third phase of its work as a Social Innovation Lab for The Rockefeller Foundation, GKI convened a multi-sectoral coalition of agricultural experts in South Africa to envision solutions to key aspects of the post harvest food loss challenge. By artfully engaging diverse and renowned agricultural leaders in a collaborative process, GKI amassed forward-looking prototypes, and gauged them according to their social, environmental and health returns.

Launched Inaugural Facilitator Training at the Uganda National Council

GKI delivered its first "Network Facilitator Training" to equip African leaders with the skills and tools to facilitate collaborative teams and manage networks. Participants represented a diverse group of leaders, including Young Affiliates of The World Academy of Sciences for the advancement of science in the developing world (TWAS), and participants from the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), and the Uganda National Council for Science and Technology.

Launched LINK IV trainings in South Africa and Uganda for LINK winning and finalist teams

With the generous support of the Carnegie Corporation of New York, GKI led concurrent training sessions in Uganda and South Africa for the LINK Winner and Finalist teams. Featuring skills and tools critical to solving complex agricultural challenges through global networks, GKI's training strengthened the strategic outlook of these teams.

TRAINING UP-AND-COMING LEADERS

Students at George Mason University learn new skills for solving problems in teams and finding collaborators as part of GKI's Global Problem-Solving Skills Workshop. Photo Credit: GKI

Catalyzed further action on the potato taste defect in Rwandan coffee by awarding Challenge Prize

GKI partnered with the Alliance for Coffee Excellence to bring about further action on the potato taste challenge by offering a Potato Taste Challenge Prize. The prize was offered to spur collaboration after the Rwanda Coffee Collaboration Colloquium held earlier in the year. Joseph Bigirimana and his team from the Rwanda Agriculture Board emerged as the winners of the nearly $20,000 prize purse. They will pilot interventions aimed at testing whether antestia bug control reduces potato taste in Rwandan coffee, insights that can help thousands of farmers.

Served as a thought leader at the international Foresight KnowLab in Ispra, Italy

GKI's Sara Farley participated in the Foresight KnowLab in Ispra, Italy in August 2014, which was sponsored by UN Educational, Scientific and Cultural Organization (UNESCO), The Rockefeller Foundation, and the European Commission. Through engagement with thought leaders in science and innovation, GKI brainstormed ideas and frameworks to better understand the notion of futures and anticipate new opportunities for action.

Engaged global leaders of Social Innovation Labs at The Rockefeller Foundation Bellagio Convening

GKI's Sara Farley and Amanda Rose were among a small group of global leaders in the Social Innovation Lab practice invited to attend a Bellagio Convening aimed at clarifying the future trajectory of this emerging field. The three-day meeting invited participants from the world's top Social Innovation Labs to shape a collective vision for bringing the Social Innovation Lab practice into the mainstream of global development work.

Supported Michigan State University for Global Engagement Fellows Workshop

GKI partnered with Michigan State University (MSU) to create a "Pitchfest & Network Bootcamp" for nine Fellows— competitively selected tenure-track faculty in engineering and agriculture—at MSU's Academy for Global Engagement. GKI worked closely with the Fellows to help them craft a clear and concise pitch for their work. After delivering these pitches to potential partners and funders in Washington, DC, GKI met with the Fellows again to help them refine their pitch and create a Network Management Plan for following up with important contacts.

Delivered keynote at Asia-Pacific University-Community Engagement Network (APUCEN) Summit

GKI was honored to deliver a keynote address to universities and institutions working to hone their community engagement practices, share lessons learned, and make new connections. Speaking to community engagement leaders from Malaysia, Indonesia, Australia, Thailand and more, GKI offered insights into methods for developing capacity for effective community engagement and co-creation of solutions with communities.

Supported development of Rwanda's National STI Policy Implementation Strategy

Following GKI's review of the 2005 National STI Policy of Rwanda, the United Nations Economic Commission for Africa (UNECA) and the Ministry of Education of Rwanda invited GKI to design a bold implementation strategy for the revised National Science, Technology, and Innovation Policy. GKI developed and delivered this implementation plan with a highly consultative, radically inclusive process to ensure buy-in and impact.

Spoke at 2nd Ministerial Forum on Science, Technology, and Innovation (STI) in Africa

After GKI played a role in facilitating and shaping the 1st STI Forum in Africa, GKI's Andrew Gerard was invited to speak at the 2nd Forum in Rabat, Morocco. Convened by the African Development Bank, the Forum marked an opportunity for experts and practitioners to share and explore ideas for STI to drive economic growth in Africa.

ENGAGING COMMUNITIES TO CREATE SOLUTIONS

Women in the Malaysian village of Air Papan share their interests and goals for the future as part of a facilitated challenge framing session with GKI and the Universiti Teknologi Malaysia. Photo Credit: GKI

GKI: Our Impact

Since 2009, the Global Knowledge Initiative has empowered individuals, strengthened innovation ecosystems within countries, and created problem solving networks across entire regions. We're proud to share the stories of success on our path toward transformational impact.

Regional Case Study: Social Innovation Lab

GKI engaged over 240 individuals from the public, private, and social sectors across eight countries to develop innovative solutions to the challenge of post-harvest food loss across Sub-Saharan Africa

Country Case Study: Rwanda Policy & Strategy

GKI helped strengthen Rwanda's innovation ecosystem by supporting government analysis of science, technology, and innovation policies, and developing two national implementation strategies

Local Case Study: LINK Uganda

GKI trained and provided strategic support to a Ugandan biotech company, improving its operations and creating new innovation strategies to address critical challenges in Uganda's banana and sweet potato value chains

US: Trained USAID Higher Education Solutions Network Lab members how to more effectively share information and resources across a global university network

Malaysia: Trained researchers, students, and community members on tools to forge university-community action teams on water challenges

Mexico: To guide investment in food loss mitigation globally, GKI developed a Social Innovation Lab process to more effectively frame problems and design solutions

Tanzania: Built the capacity of Tanzanian trainers to deliver interactive modules on Collaborative Innovation

Rwanda: Forged the multi-country LINK Rwanda research network to enable problem solving in specialty coffee

A Closer Look

GLOBAL KNOWLEDGE INITIATIVE

Impact in GKI's three core areas of work: Locate, Enable, and Connect to Solve

Locate

Finding resources and tracking needs

590 Opportunities and barriers in post-harvest food loss in Sub-Saharan Africa uncovered and analyzed through GKI's social innovation lab process

9 Top coffee development challenges identified by over 150 coffee stakeholders at the Rwanda Collaboration Colloquium

240 People integrated into an African post-harvest loss network through our Social Innovation Lab process across Africa, Asia and North America

Enable

Building human and institutional capacity

753 Individuals trained on Collaborative Innovation and Solving Problems in Teams during convenings held in seven countries

452 People engaged through surveys, workshops, meetings, interviews, and working groups in writing three national innovation policy and strategy documents for the Rwandan government

125 Number of distinct Collaborative Innovation training modules developed to serve entrepreneurs, policymakers, researchers, and other global innovation leaders

Connect to Solve

Fostering linkages between people and resources

60 Active LINK partnerships in 11 countries, on four continents brought about through GKI's network facilitation

662 Resources offered by partners and available in networks as part of LINK and similar network programs

63 Web and print articles publicizing LINK winners, meeting the challenge of previously digitally invisible change-makers

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2009
- GKI founded by Sara Farley, Nina Fedoroff, & Sam

2010
- GKI advises Uganda National Council for S&T on Policy & Strategy

2011
- 1st round of LINK begins in Rwanda with Carnegie Corporation support
- GKI analyzes potential to harmonize STEM teaching in East Africa

2012
- Rounds of LINK begin in Afghanistan, Pakistan, and Kenya
- GKI hosts Food Security Collaboration Colloquium with Penn State

2013
- GKI reviews Rwanda's Science, Technology, and Innovation Policy
- GKI expands work to Southeast Asia with training in Malaysia
- Rockefeller Foundation invites GKI to serve as Social Innovation Lab

2014
- Rockefeller & GKI partner to develop Assessing Innovation Impact Potential toolset
- LINK expands to four new teams in Uganda and South Africa

2015
- GKI & South Africa Gov't execute Innovation Lab on ICTs in education
- GKI writes 2 national innovation strategies for Rwanda government

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Co-Founder, Director

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Our Staff & Advisors

THE GLOBAL KNOWLEDGE INITIATIVE TEAM

The GKI team includes staff and advisors from a range of academic and professional backgrounds. We are a passionate, energized team committed to bringing about significant social change in the world.

Collaborative Innovation

DEFINITION: The creation of a good, service, or process using the
shared knowledge, resources, and capacity of partners who seek to
solve challenges that are beyond the capability
of an individual partner.

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GKI Anticipated Impact – 2020

- Communities actively participate in the problem solving process
- Entrepreneurial opportunities increase
- More students engage in quality education and research
- Solutions are developed for and distributed to those in need
- Innovations developed through collaboration improve the lives of thousands, if not millions, living on less than $2 USD per day

Magnify your power to solve the world's toughest challenges