USAID Approaches to Engineering Innovation and Disaster Relief
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USAID is a governmental funding agency that assists with development work all over the world through offices in Washington, DC and missions located around the globe. The missions have strategic focuses defined in their five-year Country Development Cooperation Strategy (CDCS) under which they are authorized to issue grants or contracts to achieve the agreed upon objectives. The offices in Washington, DC have either a functional or regional focus. They primarily support overseas missions through programs and mechanisms or country activities where there is no field mission.

These remarks are intended to introduce the reader to eight key departments or offices within USAID that support and utilize innovative engineer-driven solutions to problems. Opportunities mentioned here are broken into three types: (1) funding opportunities that support partnerships between U.S. and overseas institutions; (2) co-creation processes for applicants to work with USAID on multi-party activity design; (3) offices that use engineering innovation in disaster response.

This paper serves as a backdrop and resource for my talk, which will share revelations discovered during a career of development engineering both within and outside of USAID.

(1) Examples of funding opportunities that support partnerships between US and overseas institutions.

American Schools and Hospitals Abroad (ASHA)
https://www.usaid.gov/work-usaid/business-funding/grant-programs/american-schools-and-hospitals-abroad
ASHA provides assistance to schools, libraries, and medical centers outside the U.S. founded or sponsored by U.S. citizens that serve as study and demonstration centers for American ideas and practices. ASHA awards help cultivate positive relationships between citizens of the United States and other nations through funding construction or durable commodities. The U.S. non-profit institutions with which ASHA engages have deep and long-term relationships with their partner institutions overseas that promote mutual understanding and shared fundamental values, ideas, and practices. 2019 Request for Applications will open in fiscal year 2019.

Higher Education Solutions Network (HESN)
https://www.usaid.gov/hesn
HESN is a partnership between USAID and seven top universities (the College of William & Mary, Duke, Makerere University, Michigan State, MIT, Texas A&M, and UC Berkeley) designed to channel the ingenuity of university students, researchers, and faculty towards global development. At the launch of the partnership in 2012, each university established a Development Lab and created a Network with a mission to revolutionize development through science and innovation. Now in their fourth year, the HESN Development Labs are researching, incubating, testing, and accelerating solutions in partnership with local universities, organizations, and communities to deliver the greatest impact. The network has created a vibrant framework of cooperation between local actors, development professionals, and academics that know that innovation is key to tackle the complexities of modern-day development challenges.

Middle East Regional Cooperation (MERC)
https://www.usaid.gov/where-we-work/middle-east/merc
MERC was established in 1981 to facilitate research collaboration between Egyptian and Israeli scientists after their two countries signed the Camp David Accords. The program expanded to include Jordan, Morocco, Tunisia, Lebanon, the West Bank and Gaza Strip in 1993. Arab scientists in the Middle East and North Africa are using science and technology to overcome core development challenges. Working together these scientists have led innovation in agriculture, environment, water resources, and health. Since these are regional challenges, fully realizing potential innovations requires cooperation. Today, at a time of rapid change in the Arab world, MERC continues to bring together Arab and Israeli scientists and students to create and share solutions to regional development challenges while promoting a peaceful exchange between neighbors. MERC will post the upcoming solicitation in September.

Partnerships for Enhanced Engagement in Research (PEER)
https://www.usaid.gov/what-we-do/GlobalDevLab/international-research-science-programs/peer
PEER is an international grants program that funds scientists and engineers in developing countries who partner with U.S. government-funded researchers to address global development challenges. PEER not only catalyzes collaborative research and elevates the use of science and technology to further USAID's development objectives, but also establishes long-lasting research relationships that build scientific research capacity, strengthen the research ecosystem in developing countries, and enable collaborators to become better partners in development. The PEER program is designed to leverage federal science agency funding from NASA, NIH, NOAA, NSF, Smithsonian Institution, USDA, and USGS by directly supporting developing country scientists who work in partnership with current or new colleagues supported by these U.S. government agencies. Technical areas include water resource management, climate change, biodiversity, agriculture, energy, disaster mitigation, nutrition, maternal and child health, and infectious diseases.

(2) Co-creation processes for applicants to work with USAID on multi-party activity design

Broad Agency Announcements (BAAs)
https://www.usaid.gov/partnership-opportunities/respond-solicitation/baa-process
BAAs are a procurement tool used by USAID to collaborate with the private and public sector when facing a development challenge that does not have a clear solution and there appears to be an opportunity for innovation. A BAA is not in itself a procurement instrument, but rather a method to communicate interest in solving a development problem. There is no budget allocated and no particular procurement instrument determined in advance. Through a BAA, a problem is defined, solutions are co-developed, competencies are identified, and resources are explored. Often, but not always, BAAs result in a contract, grant, cooperative agreement, memorandum of understanding, fixed amount award, or other type of agreement.

USAID has successfully used BAAs to help solve a variety of different development problems including an Ebola Grand Challenge. BAAs are open for anyone to participate, including the private sector, public sector, non-governmental, for-profit, non-profit, and educational institutions and is often considered a less onerous way to engage with USAID than the traditional procurement process.

Grand Challenges
https://www.usaid.gov/grandchallenges
Grand Challenges mobilize governments, companies, and foundations around important issues. Through these programs, USAID and public and private partners bring in new voices to solve development problems. They source new solutions, test new ideas, and scale what works. Today, more than 136 million people around the world live in areas experiencing humanitarian crises. Millions of these people are unreachable by traditional humanitarian aid delivery due to armed conflict. As the length, frequency, and scope of the world's conflicts increase, it is becoming more difficult to reach affected people in insecure areas with life-saving and life-improving humanitarian assistance. New solutions are needed that respond to the needs of vulnerable, inaccessible communities – yet, less than one percent of humanitarian aid is focused on investing in the innovations necessary to reach them.

USAID, the UK Department for International Development, and Grand Challenges Canada partner on Creating Hope in Conflict: A Humanitarian Grand Challenge. Through this Grand Challenge, groundbreaking solutions are sought that engage the private sector and draw from the experiences of affected communities in order to significantly improve, and in many cases, save the lives of vulnerable people affected by conflict. Key focus areas include: Safe water and sanitation, energy (special focus on alternative energy solutions), life-saving access to data and information, providing quality health care and health products (drugs and equipment). The next call for innovations will be launched in early 2019.

(3) Offices that use engineering innovation in disaster response

Food For Peace (FFP)
https://www.usaid.gov/who-we-are/organization/bureaus/bureau-democracy-conflict-and-humanitarian-assistance/office-food
Alleviating global hunger is critical to U.S. national security: where hunger persists, instability grows. By supporting the world's most vulnerable, Food for Peace is building a more stable world. Through its emergency food assistance activities, USAID saves lives, reduces suffering, and supports the early recovery of people affected by conflict and natural disaster emergencies, including refugees. Food for Peace development activities reduce food insecurity among vulnerable populations for the long-term and help build resilience in communities facing chronic poverty and recurrent crises such as drought. Development food security activities equip people with the knowledge and tools to feed themselves, reducing the need for future assistance.

The International Food Relief Partnership (IFRP) provides small grants to predominantly faith-based groups to distribute ready-to-use supplementary food and dried soup mix in primarily institutional settings such as health clinics, schools and community centers.

Office of Foreign Disaster Assistance (OFDA)
https://www.usaid.gov/who-we-are/organization/bureaus/bureau-democracy-conflict-and-humanitarian-assistance/office-us
OFDA is responsible for leading and coordinating the U.S. government's response to disasters overseas. OFDA responds to an average of 65 disasters in more than 50 countries every year to ensure aid reaches people affected by rapid-onset disasters—such as earthquakes, volcanoes, and floods—and slow-onset crises, including drought and conflict. OFDA fulfills its mandate of saving lives, alleviating human suffering, and reducing the social and economic impact of disasters worldwide in partnership with USAID functional and regional bureaus and other U.S. Government agencies.

When disaster strikes, OFDA sends regional and technical experts to the affected country to identify and prioritize humanitarian needs. In the wake of a large-scale disaster, OFDA can deploy a Disaster Assistance Response Team (DART) to coordinate and manage an optimal U.S. Government response, while working closely with local officials, the international community, and relief agencies. OFDA also maintains stocks of emergency relief supplies in warehouses worldwide and has the logistical and operational capabilities to deliver them quickly. OFDA utilizes tested and scaled innovative engineering solutions to solve problems.

There are many ways to engage with USAID and obtain assistance in the hopes of expanding the impact of your work through the use of technology and engineering. All information above was taken from public USAID websites and referenced accordingly. For further reference, the key website to answer questions about solicitations is: *https://www.usaid.gov/partnership-opportunities/respond-solicitation*
And the key website to help you submit an unsolicited proposal or grant application is:
https://www.usaid.gov/work-usaid/get-grant-or-contract/unsolicited-proposals