

THE LEMELSON FOUNDATION

improving lives through invention

Founded by Jerome Lemelson, one of U.S. history's most prolific inventors, **the Lemelson Foundation celebrates and supports inventors and entrepreneurs to strengthen social and economic life.**

The Foundation uses its resources to recognize and celebrate accomplished inventors, to mentor young people and support their scientific curiosity and innovative spirit, and to research and disseminate information and technologies that help people help themselves. To date the Foundation has donated or committed more than \$140 million in support of its mission in the U.S. and developing countries.

U.S. - Funded Programs & Initiatives

The Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation at the Smithsonian Institution in Washington, D.C., has reached millions since 1995 through educational programs about the central role innovation plays in America, and through exhibitions and publications about inventions and inventors.

The National Collegiate Inventors and Innovators Alliance (NCIIA) is a network of more than 200 colleges and universities that support multidisciplinary inventing teams of students, faculty and industrial representatives known as "E-teams," for excellence and entrepreneurship. The NCIIA programs engage more than 5,000 students annually.

The Lemelson Center for Invention, Innovation and Entrepreneurship (LCIIE) at the University of Nevada, Reno, fosters curriculum development in invention, innovation and patent law.

The African-American Male Achievers Network, Inc. (A-MAN) encourages underserved children to develop skills in math, science and business through its programs in Los Angeles County and South Africa.

INNOVATIONS: TECHNOLOGY / GOVERNANCE / GLOBALIZATION, a quarterly journal published by MIT Press, analyzes best local practices in a global context, addressing the creative actions of social entrepreneurs, inventors, and public leaders who use technology to transform governance.

The Lemelson-MIT Program (L-MIT) recognizes inventors with the \$500,000 Lemelson-MIT Prize and other awards. Recipients include Leroy Hood, inventor of the DNA Sequencer, which facilitated the Human Genome Project. L-MIT also provides invention experiences for high school students nationwide through its InvenTeams program.

"I love doing this. I felt like I was in a real life situation as an engineer starting with nothing but an idea and ending up with that idea in your hands."

-Walter Myers,
Centennial High School
InvenTeam student

MIT's International Development Initiative (IDI) mentors MIT students to cultivate invention, innovation, and entrepreneurship in service of communities lacking access to products and services that meet basic human needs. Since 2003, more than 390 students have participated in IDI programs, and its projects have benefited thousands of people in developing regions.

The Lemelson Assistive Technology Development Center (LATDC) at Hampshire College in Massachusetts provides students with experiential education in applied design, invention and entrepreneurship with a focus on universal design and the development of adaptive equipment for people with disabilities.

The Cooper Hewitt National Design Museum in New York developed and exhibited *Design for the Other 90%* in 2007. The show highlights the importance of affordable and socially responsible objects that empower global populations surviving under the poverty level or recovering from a natural disaster. It will travel to locations in the U.S. and Canada.

The WGBH Education Foundation's NOVA production unit developed *Saved by the Sun*, a one-hour television program on solar energy with stories of innovators who are changing the way people think about energy.

Saturday Academy, a Portland-based educational outreach organization, is working with Lemelson-MIT to expand the InvenTeams program, providing hands-on invention experiences for high school students in Oregon.

Oregon MESA (Math, Engineering, Science, Achievement) provides students underrepresented in STEM fields with opportunities to develop their talents through hands-on, inquiry-based projects.

The Micro-enterprise Inventors Program of Oregon (MIPO) provides independent inventors access to resources, mentoring, training and networking to protect, market, and grow their inventions and intellectual property.

The Oregon Museum of Science and Industry's (OMSI) Innovation Station is filled with exhibits that engage visitors of all ages in the exploration of technology, giving them a better understanding of the value and relevance of invention.

International - Funded Programs & Initiatives

Technology Dissemination

Portfolio: The Foundation supports projects to promote the creation, manufacturing, distribution and adoption of appropriate technologies. These projects operate at various stages of product development, from the redesign of technologies through market development and expansion—all with the goal of getting life-improving products into the hands of poor people.

Current *Technology Dissemination* projects include:

KickStart, which develops agricultural products to help very poor entrepreneurs in East Africa start businesses, is creating three new or redesigned water pump products and establishing a technology development center in Kenya.

PATH (Program for Appropriate Technology in Health), is developing an improved women's condom to be marketed in developing countries as well as in the U.S. The product will give women the power to protect themselves from unwanted pregnancy and the risk of HIV and other infections.

The **Center for Rural Technology, Nepal** is adapting a proven technology to create a more affordable energy generator for households in rural Nepal.

Sevak Solutions is refining and scaling a "remote transaction system" to enable micro-finance institutions to extend banking services to rural clients in the developing world.

FUNCRAF is adapting a proven, low-cost hearing aid technology developed by Botswana-based Godisa. FUNCRAF will manufacture the product and distribute it, along with its solar rechargeable batteries, to the Brazilian market.

E+Co is undertaking a project to build a key link in the solar energy distribution chain – the rural retail network – by training and financing rural small enterprises to provide households with access to affordable and sustainable energy.

Emergence BioEnergy is initiating an off-grid energy project in Bangladesh to produce sustained energy for a community from biogas and stirling engines.

CAMBIA is developing and disseminating bio-sentinel rice varieties that will empower farmers to effectively detect soil nutrient deficiency or attacks by pests on crops. CAMBIA will share its results with the scientific community through its "open source" BioForge platform.

Envirofit International is installing its innovative direct-injection retrofit kits on 3,000 two-stroke motorcycle taxi engines in Vigan, Philippines — eliminating 3,000 tons per year of carbon dioxide and infusing the local economy with \$1.4 million in fuel cost savings.

IDEAAS is testing the feasibility of providing solar energy to rural poor people in the lower Amazon basin. The organization's solar kits—which households lease rather than purchase—are tailored to a customer's needs, expectations and current energy expenditures.

The Aquaya Institute is exploring the feasibility of affordable and flexible water disinfection technology. By coating water containers and filters with quaternary ammonium silanes (QASs) compounds, Aquaya hopes to improve water quality, sanitation and hygiene for low income consumers.

International Development Enterprises-India (IDE) is expanding its manufacturing, distribution and retail supply chains for its low cost drip irrigation kit throughout India. The Foundation is also providing funds to **IDE-USA** to replicate IDE-India's distribution model in Central America.

Sustainable Harvest Coffee Importers and **EcoLogic Finance** are introducing new coffee technologies to farmers in eastern Tanzania that will increase their incomes while encouraging protection of local biodiversity. The **Jane Goodall Institute** is developing an eco-label for the coffee originating from the region.

Schwab Foundation for Social Entrepreneurship partnered with The Lemelson Foundation to support the transfer and scaling-up of innovations between social entrepreneurs within their respective global networks.

SEWA Housing Trust & SELCO-India are partnering on a renewable energy project to adapt technologies to the needs of the poor and distribute them to households in Gujarat State, India.

Recognition and Mentoring Programs (RAMPs): The Foundation is teaming with institutions and organizations in developing countries to create RAMPs. These programs provide prototype development, marketing, and commercialization support to student and grassroots inventors who are working to advance the broad objectives of sustainable development.

- India RAMP: **Indian Institute of Technology (Madras)**, and **Rural Innovations Network**.
- Indonesia RAMP: **Institut Pertanian Bogor**.
- Peru RAMP: **Non-Profit Enterprise Self Sustainability Team**, the **International Potato Center - Consortium for Sustainable Development of the Andean Region**, and the **Catholic University of Peru's Rural Support Group**.

The Ashoka-Lemelson Fellowship Program: A global partnership to build a critical mass of 100 inventor-entrepreneurs and catalyze their growth and impact.

Ashoka-Lemelson Fellows are early- and advanced-stage inventor-entrepreneurs, primarily in Latin America, Asia, and Africa, whose innovations provide new solutions for solving the world's intractable problems. Fellows are provided with financial support, professional guidance, and access to a network spanning 70 countries.