Platforms for Engineering for Global Development (EGD)

North American Gender Summit 2013

14 November, Washington, D.C.

MADIHA EL MEHELMY KOTB, ENG.
ASME PRESIDENT

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In 2007
the two richest people in the world had more money
than the combined GDP of the 45 poorest countries

Roughly ¼ of the world's population, about 1.5 billion people lack access to electricity


1/6
of the global population lacks access to
clean, safe drinking water

affordable,
appropriate and
sustainable technology

+

building the **capacity**
of local communities

Innovation Gateways

*Practitioners

*NGOs

*Designers/ Engineers

*Education

Professionals

*Government

*ASME Members

Communities/ End-users

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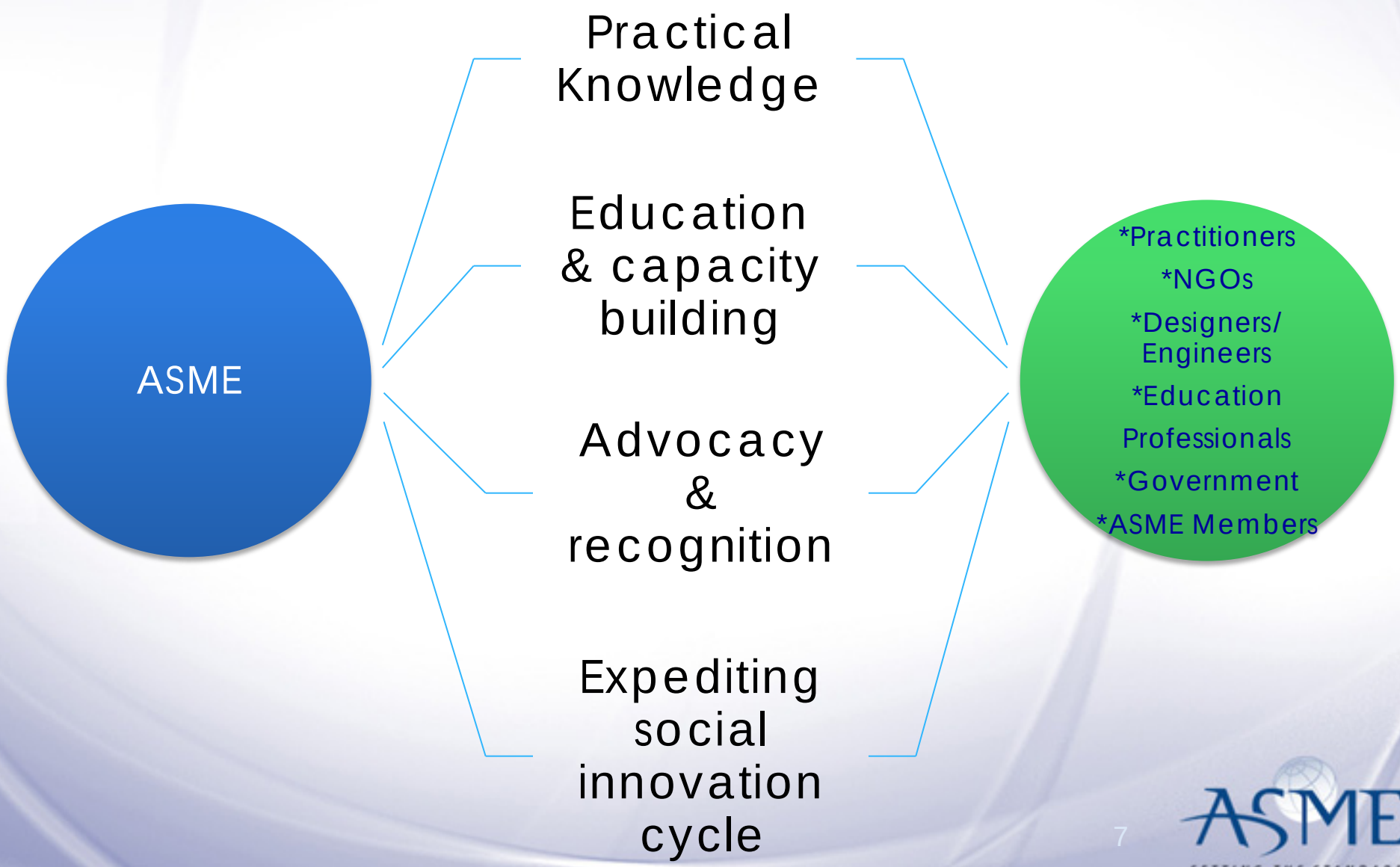
How Does ASME Fit?



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EGD Capabilities

- Content that demonstrates impact

Knowledge Development

- Focused on technology research, development and transfer

Education and Capacity Building

- For the role of engineering in social innovation in policy making, industry and education

Public Policy, Information, Advocacy and Recognition

- Creating funding mechanisms and brokering relationships

Social Innovation Tech Development and Transfer

ASME SETTING THE STANDARD

E4C features an open, innovative, user-friendly online platform that will promote

CONTENT

COMMUNITY

engineering FOR CHANGE

COLLABORATION

FOUNDING ORGANIZATIONS

ASME
SETTING THE STANDARD

ENGINEERS WITHOUT BORDERS USA

IEEE
Advancing Technology for Humanity

E4C COALITION

ASCE ASME IEEE AIChE 1904

Autodesk
A proud supporter of ASME's Strategic Vision

ASCE

THE ASME FOUNDATION

ASABE

Vodafone Foundation

ENGINEERS AUSTRALIA

ASHRAE

SWE Society of Women Engineers

IEEE FOUNDATION

OSA The Optical Society

WFEO / FMOI

SUPPORTERS

engineering FOR CHANGE

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Solutions Library

A free, open source archive of technology solutions from around the world that can be replicated and adapted across regions

Browse the E4C Solutions Library, a growing collection of cataloged solutions and related information from organizations throughout the world. Adapt these solutions where appropriate or innovate to create your own.

...have been implemented by various organizations. The ... contain ... and many are open source. Selected solutions in no way constitute E4C's endorsement. To find out more about the vetting process of any solution in the Library, please contact the contributing organization directly.

Terms of Use

Water | Energy | Health | Structures | Agriculture | Sanitation | Info Systems

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Gravity Fed Drinking Water

Contributed by: Engineers Without Borders California Polytechnic State University - San Luis Obispo (EWB-CP) (Lead); Faith International

The goal of the Engineers Without Borders project in Mae Nam Khun, Thailand is to provide clean drinking water for

E4C Webinars

- broaden expertise
- build knowledge of new opportunities
- showcase how technology-based solutions

► communications ► water ► energy
► housing ► product development
► navigating cross-cultural differences
► and more

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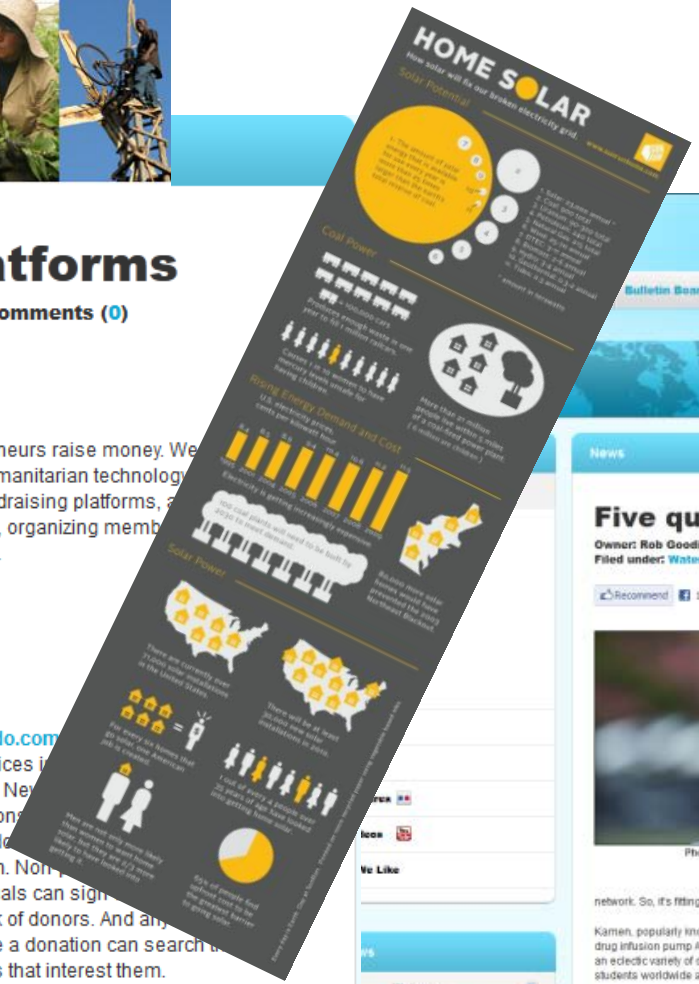
E4C News Plus

▪ Newsletter ▪ Blogosphere roundup ▪ Social media



Ten top fundraising platforms

Owner: Rob Goodier **Created: January 11, 2013** **Comments (0)**
Filed under: General

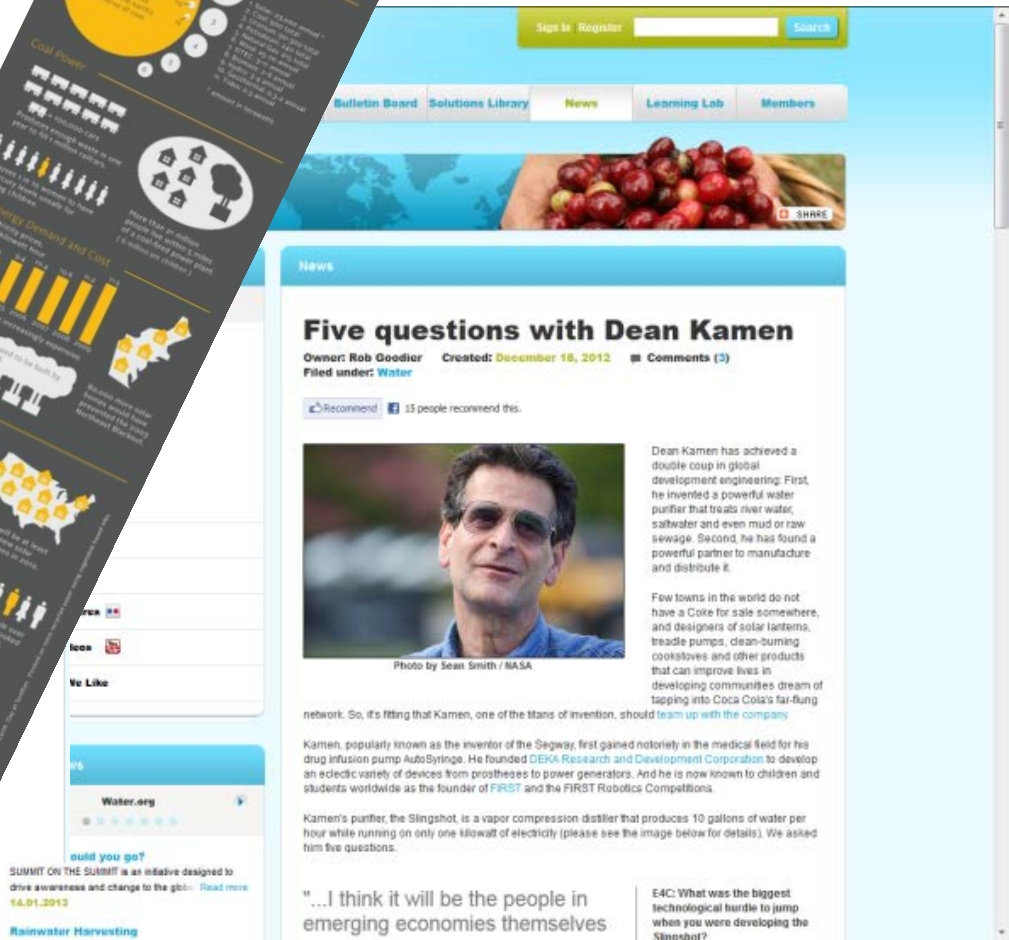
Recommend 8 people recommend this.

Convenient, online tools exist to help non-profits and social entrepreneurs raise money. We
reputable services that could work for organizations that focus on humanitarian technolog
engineering for global development. Some of these are primarily fundraising platforms,
one-stop, full-service platforms that help with Web sites, newsletters, organizing memb
and also fundraising. These are ten top online fundraising platforms.

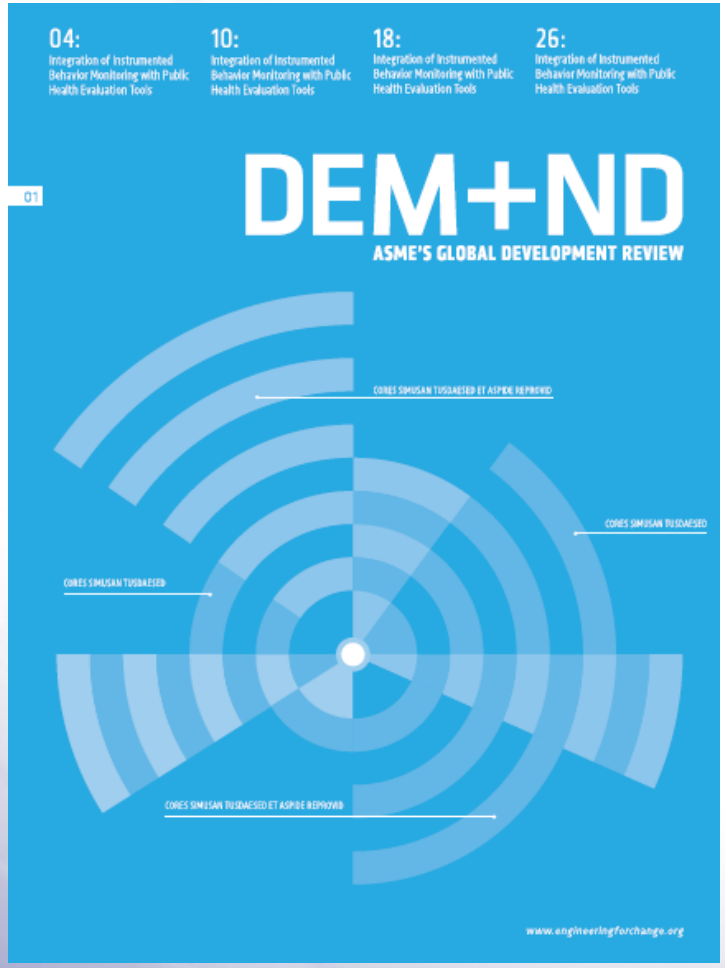
Also, try these other money-raising resources at E4C:
Humanitarian tech development grants roundup
Sustainable design contests and awards roundup

Ammado.com
With offices i
Sydney, Ne
operations
Ammado
platform. Non
individuals can sign
network of donors. And an
to make a donation can search
projects that interest them.

Why it appeals to E4C
The scope is international and project



DEMAND
— ASME's Global Development Review



- **Case studies**
- **Feature articles**
- **E4C articles**
- **Infographics**
- **Evidence-based engineering knowledge**

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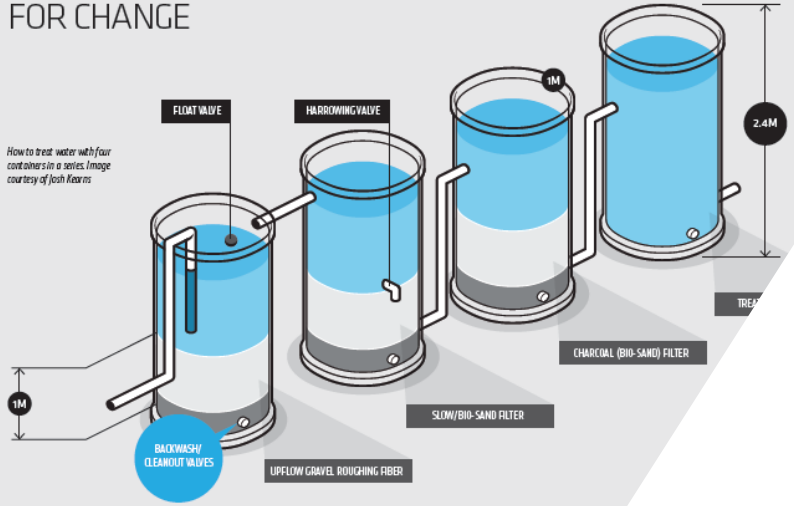
Print Version + Digital Application

ENGINEERING FOR CHANGE



How to treat water with four containers in a series. Image courtesy of Josh Kearns

3An ancient filtration material removes pesticides from drinking water

BY ROB GOODIER

CHARCOAL MAY HAVE BEEN a part of water treatment for at least 4000 years, but can it remove modern synthetic pesticides from drinking water? Farmers in northern in Thailand, concerned about agricultural runnoff, put the question to Josh Kearns, an environmental engineering doctoral candidate at the University of Colorado in Boulder and the science director at Aqueous Solutions, a non-profit water, sanitation and hygiene development organization.

"Farmers introduced me to the ancient tradition of using charcoal for water filtration and asked me, 'will it work to remove pesticides?' I didn't know the answer, and searching the scientific literature revealed that, in fact, no one knows the answer," Kearns told E4C.

The answer, Kearns discovered, is that it can. But a lot depends on how you make the char.

GASIFIERS AND CHAR

Charcoal removes impurities from wat
a process called adsorption, meanin
the contaminants adhere to the ch
surface. Because it is porous, ho
can flow through and permea
That permeation is the bet
of absorption. Dropping t
word "sorption," which

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Five questions with Sasha Kramer

SASHA KRAMER'S enthusiasm for recycling poop is contagious. After hearing from her, it's not hard to imagine the need to give your indoor bathroom a Stone-Age renovation. She developed EcoSan latrines that store human waste in removable 15-gallon drums for composting. Toilets that transform waste into compost are the key to healthy soils and sustainable living, Kramer says. In that case, maybe everyone's toilet should be a modified pit latrine?

Another key to sustainability is sanitation itself. Kramer promotes both, taking her message of back-end recycling (get it?) to camps and communities in Haiti that have no waste treatment systems in place at all. To carry out the work, Kramer co-founded the non-profit organization SOIL, Sustainable Organic Integrated Livelihoods. SOIL and its partners build and manage latrines, compost centers and vegetable gardens and they hold sanitation workshops in Port au Prince. For more on their important work, please see this video from Al Jazeera news. ●

THE FUTURE OF SISAL TWINE

Odundo has become something of a media sensation since he presented his decorticator at Maker Faire Africa in 2010. Since then, he became a TED Fellow in 2012. Moving forward, he has plans to improve the machines.

"I am looking forward to taking these technologies to the next higher levels by improving their efficiency , durability and aesthetics, and finally to do mass production of the machines to meet the demand that is currently rising every day," he says.

NES ARE NOT TECHNICALLY URINE POWERED Recent headlines raised eyebrows at E4C when s Laboratory announced that it had charged a cell phone with urine power. Did anyone else imagine a Indian small business owner holding up her dead Nokia and asking, "you want me to do what to this?" looks shows that these phones are not exactly urine powered, and the concept they are based on may ential. The new device is a microbial fuel cell. It's a urine-powered variant in which microorganisms feed on unds in urine and generate electricity. When stacked in a series, the fuel cells have generated power to charge art phone just enough to send text messages, browse the Web and make a brief call.

LEARN MORE AT: https://www.engineeringforchange.org/news/2013/08/01/these_cell_phones_are_not_technically_urine_powered.html

ASME Conference Programming

Kathleen Sienko, Ph.D.

Associate Professor,
Mechanical Engineering and Biomedical Engineering,
University of Michigan
— technology design in the maternal health space

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Under Exploration

Engineering Fellowships
with NGOs and Multilateral Organizations

www.EngineeringforChange.org

www.ASME.org

Thank you!

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