

The Bill & Melinda Gates Foundation
Reinvent the Toilet Challenge – Round 3

Request for Letters of Inquiry (LOI)

RFP Number: SOL1071002

Open Date: October 1, 2012

Deadline: Thursday, November 8, 2012, 11:00 PM PST

Background

The Bill & Melinda Gates Foundation announces the third round of its Reinvent the Toilet Challenge designed to prototype a means of dealing effectively and cost-efficiently with human waste for the 2.5 billion people on earth who currently lack access to safe and affordable sanitation.

[Apply here](#) by November 8, 11:00 PM PST, 2012

The Bill & Melinda Gates Foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life.

We concentrate on areas with the potential for high-impact—sustainable solutions that can reach millions of people. We work closely with our partners to support innovative approaches and expand existing ones so they reach the people who need them most. We also support policy and advocacy efforts to accelerate progress against the world's most acute poverty.

Global Development

Nearly 2.5 billion people live on less than \$2 a day. For one person in eight, hunger is a constant, potentially deadly companion. The vast majority of the poor also lack access to the most basic financial services, and only a tiny minority have access to the Internet. The foundation's Global Development Program is working with motivated partners to create opportunities for people to lift themselves out of poverty and hunger. Our strategy is focused. Because most of the world's poorest people rely directly on agriculture, we support efforts to help small farmers improve crop production and market access. Because loans, insurance, and savings can help people weather setbacks and build assets, we facilitate access to financial services for the poor. In addition, because information can change lives, we support free public access to computers connected to the Internet. The newest Global Development program area — Water, Sanitation & Hygiene—focuses on sanitation that works for the poor.

Water, Sanitation & Hygiene Program

The Bill & Melinda Gates Foundation works with a wide range of partners through its Water, Sanitation & Hygiene program to reduce the burden of excreta-related disease and improve the lives of the poor. Our approach aims to expand the use of toilet and sanitation technologies that do not connect to a sewer, as this is by far the most common type used by the poor. We invest in effective approaches that help end open defecation and unsafe sanitation, and we help develop the tools and technologies that will allow the poor access to sustainable non-piped sanitation.

The Sanitation Challenge

A large share of the solids and liquids people eat and drink are passed on in urine and feces. Human waste contains potentially valuable and recyclable resources such as water, energy, urea, and minerals. It also consists of large amounts of useful as well as harmful microorganisms, mostly bacteria, as well as pathogens ranging in size from viruses to helminthes. Many diseases are passed on from person to person through the fecal-oral pathway—pathogens in one person’s waste end up ingested by another. For some diseases, this is the primary transmission pathway; for others, it is one of several transmission pathways. Human waste also contains residues of the many complex, engineered chemicals people use, such as food additives, antibiotics, hormones, and nutritional supplements, some of which remain in the environment and result in unsafe accumulation in waste sinks.

Goal of This LOI

The Water, Sanitation & Hygiene Program will be disbursing a set of new grants to support its Reinvent the Toilet Challenge. These grants are intended for exceptionally high-qualified research groups interested in contributing to major advances in sanitation and hygiene in the developing world.

Successful applicants will participate in the next phase of the Reinvent the Toilet Challenge by designing, **prototyping and testing entirely stand-alone, self-contained, practical sanitation modules which intake bodily wastes or fecal sludge** collected from pit latrines and septic tanks and swiftly dispose of them without any incoming water piping, outgoing sewer piping or electric or gas utility services. These modules must intake all outputs of the serviced population – ultimately at single-residence scales (smaller-scale individual family toilet solutions) or group of households (larger-scale neighborhood fecal sludge processor solutions)– with minimal module footprints and assured biosafety. The anticipated capital and operational cost for the final products (commercial units) is expected to be less than \$0.05/user/day, both for the family and neighborhood solutions. The design should anticipate the effects and fate of complementary sanitary products entering the system such as paper, cloth, sand, and other personal hygiene products and chemicals.

Within the scope of this solicitation, the Bill & Melinda Gates Foundation’s interest is primarily in chemical and mechanical engineering approaches.

At present, the Foundation is soliciting letters of inquiry from groups who are well qualified to undertake research and development and execute pertinent program plans. This may include organizations in the academic sector, science and engineering non-profit organizations, and for-profit organizations. Submissions from multi-disciplinary teams representing science and engineering centers of excellence are highly encouraged.

Within this solicitation, we will not consider funding:

- Behavior change programming (e.g., implementation of community led total sanitation or related approaches),
- Boutique technologies that cannot be scaled,
- Digestion proceses or any biological processes which do not remove pathogens and do not recover resources and clean water, or
- Technologies with capital or operating requirements that are inappropriate for the urban poor in developing countries (high capital cost technologies must demonstrate the ability to be rapidly engineered to an affordable level).

Full proposals for grant awards are not being solicited at the present, but proposals may be invited in the near future from those whose concept notes are of extraordinary quality.

How to Apply:

Please use this template to submit your Letter of Inquiry of **up to five-pages**. Our review tool will only import up to 5 pages. If you submit more than 5 pages, the additional pages will be deleted and will not be reviewed.

Applications are due by November 8, 11:00 PM PST, 2012. Applications submitted after the deadline will not be

considered. Please use 10-point font and 1-inch margins. Page size should be set to U.S. letter standard 8.5 x 11.0 inches.

This should concisely declare:

- The project approach, key activities, and anticipated final outcome,
- Citations of any pertinent references,
- Organizational experience, collaborative partnerships, and relevant backgrounds of key personnel.

Please note that submission of a concept note does not imply, directly or indirectly, that any such submission will result in an award of a grant or any other funding.

Due to the expected number of applications, individualized feedback and reviewer comments will not be provided to applicants.

By November 16, 2012 selected applicants will be invited to submit a full proposal, which will be due to the foundation by December 20, 2012.

Notice of non-confidential application process: the foundation does not guarantee that any information submitted will be maintained as confidential.

[Click here to apply](#)

Related Links:

- Strategy Overview: <http://www.gatesfoundation.org/watersanitationhygiene/Documents/wsh-strategy-overview.pdf>
- Program Strategy Launch Press Release: <http://www.gatesfoundation.org/press-releases/Pages/safe-affordable-sanitation-110719.aspx>
- <http://www.gatesfoundation.org/watersanitationhygiene/Documents/wsh-reinvent-the-toilet-challenge.pdf>
- Reinvent the Toilet Round 1 Fact Sheet:
<http://www.gatesfoundation.org/watersanitationhygiene/Documents/wsh-reinvent-the-toilet-challenge.pdf>
- Reinvent the Toilet Challenge Round 1 prize winners and Round 2 grants:
<http://www.gatesfoundation.org/press-releases/Pages/Bill-Gates-Names-Winners-of-the-Reinvent-the-Toilet-Challenge-120814.aspx>