

# Technology for a Global Opportunity

Loowatt's Waterless Toilet System

[www.loowatt.com](http://www.loowatt.com)





**UK-based Loowatt Ltd. has developed a proprietary waterless and energy-generating toilet system that is clean and odourless. Loowatt's unique technology offers pioneering applications to global markets wherever there is a need for high-quality, environmentally-friendly toilet solutions.**

Loowatt toilets use a patented sealing mechanism to wrap human waste in biodegradable polymer film. The film, which lines the toilet bowl, is pulled through the patented sealer when the toilet is "flushed," enclosing the waste in a removable cartridge. The cartridge is then emptied into an anaerobic digester, where the waste and polymer film are converted into natural gas and fertiliser.

2.5 billion people in the world are now without sanitation, and over 4,000 people—mostly children—die every day from resulting diseases. In impoverished urban areas where waste treatment infrastructures don't exist and clean water is scarce, Loowatt can provide a vital sanitation solution that transforms economies and saves lives.

And in developed nations—in the events and festival sector—Loowatt offers an enhanced, environmentally sound and user friendly alternative to standard portable toilets which is odour and chemical free. The UK portable toilet hire market is worth over £800 million annually.

In 2014, Loowatt expanded and refined the pilot programs in Sub-Saharan Africa and the UK with support from the Bill & Melinda Gates Foundation and the UK Government respectively. In 2015, the company conducted successful commercial trials in both markets.

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## Loowatt in the United Kingdom

In the UK, Loowatt has commercially demonstrated the Loowatt Event System, which is funded by grants from the Innovate UK. Our technology has served over 8,000 customers. The Loowatt Event System is a well-appointed, attractive, high-end luxury loo unit. Festival goers benefit from the comforts of clean and odourless Loowatt toilets, and can use the regenerated energy to enjoy hot showers or to charge mobile devices. The Loowatt Event System was first publicly tested at Latitude Festival July 2014. In 2015, the Loowatt Event System served a selected group of UK festivals, targeting a range of event types and serving customers who paid directly for toilet access. Toilet customers and events organisers alike have been delighted with our technology and service, and have asked us to return next year.

### Watch the customer testimonials video:

<http://vimeo.com/loowatt/customertestimonials>



## Loowatt in Sub-Saharan Africa

In Sub-Saharan Africa, Loowatt is working toward widespread impact with over \$1 million (USD) in grant funds from the Bill & Melinda Gates Foundation. The Gates Grand Challenges Explorations (GCE) initiative is funding major expansion of our current small-scale toilet-digester-fertiliser facility in Madagascar's capital city with the plan to serve 100 households by autumn 2015. At the end of the grant period, in 2016, Loowatt will be planning to deliver its products and services at scale in developing countries.

### See more photos on Flickr:

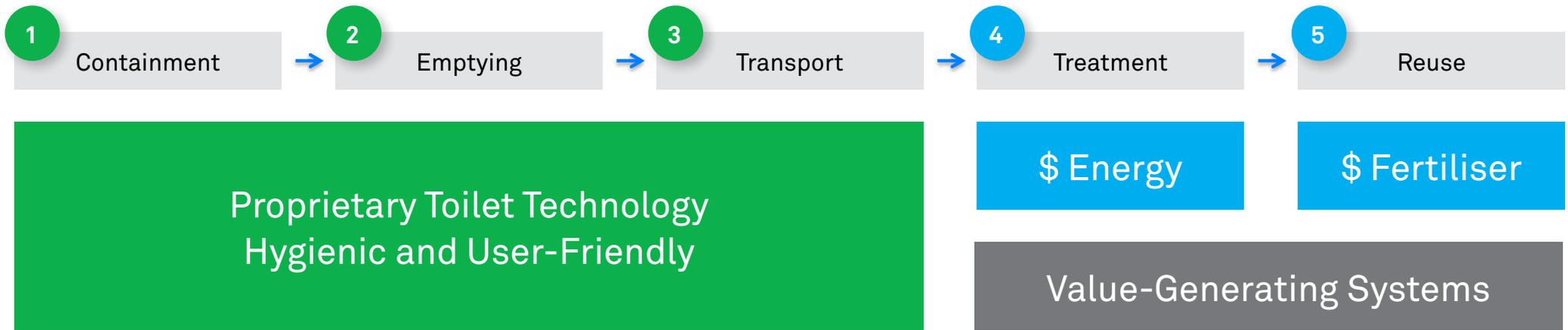
<https://www.flickr.com/photos/loowatt/>



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## Technology and Whole Systems Thinking



### Loowatt for Emergency Relief

Loowatt's vision is to create technologies and business models that enable safe, sustainable and profitable waste treatment throughout the above steps from containment to reuse. Since 2010, we have been developing such systems for urban areas in developing countries, and for outdoor events in the UK.

In humanitarian emergencies, it becomes especially challenging to provide safe technology and treatment across the sanitation value chain. The need for rapid response can easily overwhelm the ability to plan sufficiently, and the consequences of missteps can be dire. In the Spring of 2015, Loowatt began a project sponsored by the Humanitarian Innovation Fund to adapt our toilet and system solutions for the emergency relief sector.



## Case Study: The Madagascar Pilot System

Opened to toilet and energy customers in November 2012.



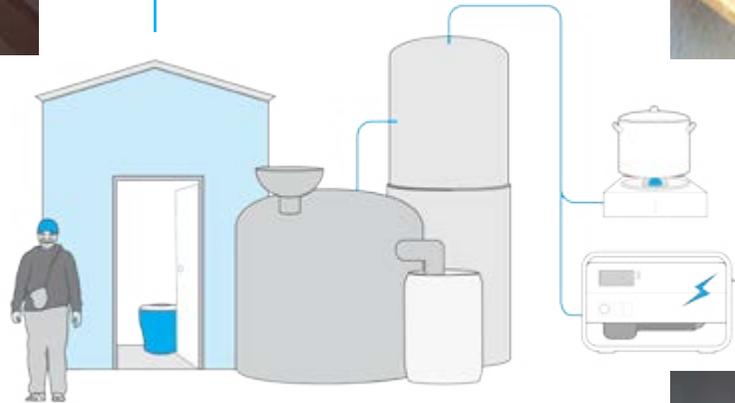
The public toilet serves customers in one of Antananarivo's poorest neighbourhoods.



Biogas is also converted into electricity and used to charge mobile phones.



The biogas is used to produce hot water, which local residents like Mahandry, at left, purchase regularly.



Off-site, a team of trained professionals further treat the digested waste into a high-quality fertiliser for local sale.



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A customer visits the Loowatt toilet in Antananarivo.



The interior of the Loowatt Event System.

Loowatt has received numerous awards, including Innovator of the Year at the New Energy & Cleantech Awards in 2014 and Big Idea prize at the Observer Ethical Awards in 2013. Our innovative technology has been exhibited internationally at events including both Reinvent the Toilet Fairs (Seattle 2012, New Delhi 2014), and we have presented at leading industry conferences such as Fecal Sludge Management 3 in Hanoi in 2015.

We are seeking collaborators who share our mission to make waterless sanitation safe, profitable and sustainable. Join us in the journey to global impact.

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