

Media Release, April 24, 2012

## **Borealis and Borouge endorse mobile toilet innovation x-runner to help meet the global sanitation challenge**

**Borealis and Borouge**, leading providers of innovative and value-creating plastics solutions, announce that the companies are supporting the development of the x-runner portable toilet venture in order to address the growing sanitation challenges in the world's least developed countries.

The United Nations (UN) estimates that in the developing world, approximately 2.5 billion people do not have a dignified or safe place for performing their basic necessities in a hygienic and private way. Nor do they have regular waste collection and treatment facilities to keep streets and communities clean. In such environments, up to ninety percent of human excreta can end up untreated in rivers, causing serious water and environmental pollution, widespread damage to human health as well as depressed economic and human development.

According to the UN World Water Report 2012, "Sanitation infrastructure is not keeping pace with the world's urban population growth, and more than 80 percent of the world's wastewater is neither collected nor treated." In the industrialised world, the modern sanitary revolution has long meant that everyone has access to a flush toilet in their home. Water for bathing, laundry and all domestic use is piped into the household, and once used, piped out again. The world's urban population is forecast to increase to 6.3 billion people by 2050, from 3.4 billion in 2009. This growth will increase problems of adequate water supply, sanitation and drainage, especially in urban slums already faced with a backlog of unserved populations.

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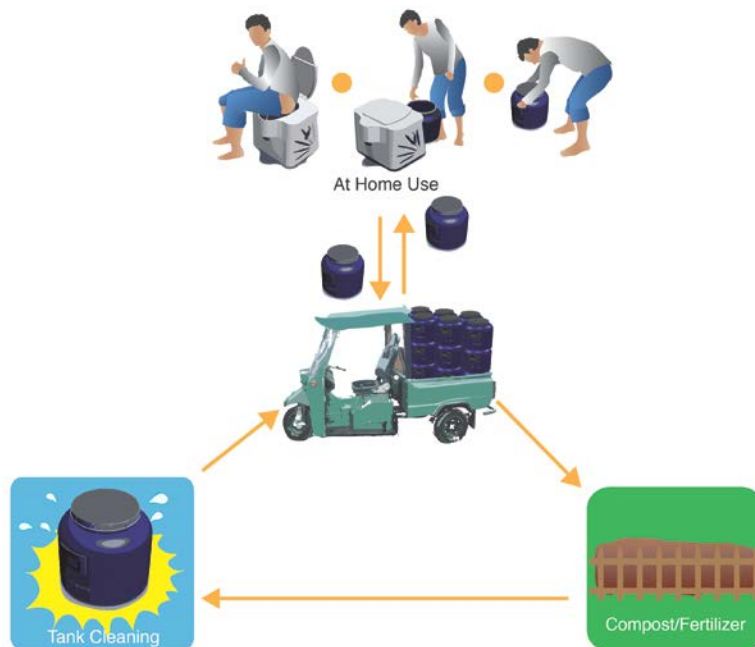
However, an important difficulty in addressing the sanitation crisis is that many slums and rural areas do not have the necessary resources or infrastructure to install the conventional waterborne models for sewerage systems.

**x-runner Venture**, an innovative sanitation initiative and a social business concept is addressing this challenge. It offers an urban, private, water-neutral and low cost solution for the global sanitation crisis. At the core of the system is a compact squat toilet that can be used at home, does not require any connection to a sewage system and fits into small spaces. Human waste is collected in a tank underneath the base, before being brought to a treatment facility for recycling into biogas and compost which can then be used in households in the form of cooking gas, warm water and electricity. As the toilet is made from treated plastic, it provides anti-bacterial and dirt-repellent characteristics, allowing easy cleaning using little water.

The x-runner mobile toilet unit needs to withstand heavy use and the cost of production needs to be as low as possible. "Borealis can contribute not only with financial support during the start-up phase until the social business concept gets going, but also with know-how and expertise identifying which is the most appropriate material to use and how to improve the design so production costs can be kept at a reasonable level," explains Mark Garrett, Borealis Chief Executive. Plastic materials offer excellent perspectives, because of their low density so individual toilets will not be heavy and are easy to handle and transport. In addition, they offer chemical resistance to faeces and cleaning agents, superior impact stiffness balance over a large temperature range, good cost / performance ratio and easy processing, which when combined, will make the final item affordable.

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x-runner has completed design of a first prototype and a first pilot test in India capturing feedback from all stakeholders. As a next step a pilot is now being done in Peru. The aim is to further fine-tune product design and to prove the service concept across the entire value chain.



x-runner, transport service scenario, © x-runner Venture

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**Notes for editors:**

**Water for the World™**

Borealis and Borouge are supporting this innovative project in the development and implementation phase. This support, now in its 2nd year, consists of substantial financial funding as well as material expertise, and is part of the companies' Water for the World™ engagement. Established in 2007, Water for the World is a partnership programme to

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advance solutions, expertise and know-how to address the global water challenge. This Corporate Social Responsibility programme spans a full range of activities at global and regional levels, in science, industry and for local communities.

The x-runner project is currently looking for more investors. For more information see <http://www.xrunner-venture.com/>

#### The global water challenge – some key facts

- In 2010 the UN has declared access to water and sanitation a human right – for details, see <http://www.un.org/apps/news/story.asp?NewsID=35456&Cr=SANITATION>
- Every year inadequate water, sanitation and hygiene contribute to the deaths of about 1.5 million children. Diarrhoea is the second leading contributor to the global burden of disease - two and a half billion cases of diarrhoea occur in children under five years of age every year.
- Recognition of the sanitation crisis prompted the UN to declare 2008 The International Year of Sanitation (IYS), and invited member states and organizations, as well as people worldwide, to get involved.
- Millennium Development Goal (MDG) target to reduce by half the proportion of the 2.5 billion people without access to basic sanitation by 2015. The MDGs include the specific water and sanitation target of halving, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. According to the latest estimates, the water component of this target was met in 2010. However, 783 million people still lack access to improved drinking water, and the world is not on track to meet the sanitation component.
- 37% per cent of the developing world's population – 2.5 billion people – lack improved sanitation facilities inadequate access to safe water and sanitation services, coupled with poor hygiene practices, kills and sickens thousands of children every day, and leads to impoverishment and diminished opportunities for thousands more (UNICEF)
- More than half of the population without sanitation live in India and China. 90% of Asia's waste water is discharged untreated
- Open defecation is practised by 1.1 billion people

**Borealis** is a leading provider of chemical and innovative plastics solutions that create value for society. With sales of EUR 6.3 billion in 2010, customers in over 120 countries, and around 5,100 employees worldwide, Borealis is owned 64% by the International Petroleum Investment Company (IPIC) of Abu Dhabi and 36% by OMV, the leading energy group in the European growth belt. Borealis is headquartered in Vienna, Austria, and has production locations, innovation centres and customer service centres across Europe and the Americas.

Through Borouge, a joint venture between Borealis and the Abu Dhabi National Oil Company (ADNOC), one of the world's major oil and gas companies, the company's footprint reaches out to the Middle East, Asia Pacific, the Indian sub-continent and Africa. Established in 1998, Borouge employs approximately 1,600 people, has customers in more than 50 countries and its headquarters are in Abu Dhabi in the UAE and Singapore.

Building on Borealis' unique Borstar® technology and their more than 50 years experience in polyolefins, Borealis and Borouge provide innovative, value creating plastics solutions for the infrastructure (pipe systems and power and communication cables), automotive and advanced packaging markets. In addition, Borealis offers a wide range of base chemicals from melamine and fertilizer to phenol and acetone.

Today, Borealis and Borouge have a manufacturing capacity of over 5.4 million tonnes of polyolefins (polyethylene and polypropylene) per year having recently completed a 1.5 million tonne capacity expansion in Abu Dhabi. The Borouge 3 plant expansion will be completed at the end of 2013 with a further capacity of 2.5 million tonnes per year (t/y) being fully operational in mid-2014. The companies continue to invest to ensure that their

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customers throughout the value chain and across the globe can always rely on product quality, consistency and security of supply.

Borouge and Borealis are committed to the principles of Responsible Care® and proactively contribute to addressing the world's water and sanitation challenges through their Water for the World™ initiative.

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**For more information visit:**

[www.borealisgroup.com](http://www.borealisgroup.com)  
[www.borouge.com](http://www.borouge.com)  
[www.waterfortheworld.net](http://www.waterfortheworld.net)  
[www.xrunner-venture.com](http://www.xrunner-venture.com)

Water for the World is a trademark of the Borealis group.

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