

## Bill and Melinda Gates Foundation spends \$200M on toilet technology

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BEIJING — Microsoft co-founder Bill Gates unveiled a futuristic toilet Tuesday that doesn't need water or sewers and uses chemicals to turn human waste into fertilizer.

It is the brainchild of research projects funded by the Bill and Melinda Gates Foundation, the world's biggest private philanthropy organization. There are multiple designs of the toilet but all work by separating liquid and solid waste.

"The current toilet simply sends the waste away in the water, whereas these toilets don't have the sewer," Gates said. "They take both the liquids and solids and do chemical work on it, including burning it in most cases."

He compared the change from traditional toilets to waterless models as similar to development in computing around the time he founded Microsoft in the mid-1970s.

"In the way that a personal computer is sort of self contained, not a gigantic thing, we can do this chemical processing at the household level," he said.

Poor sanitation kills half a million children under the age of five annually and costs \$200 billion a year in healthcare costs and lost income worldwide, according to the foundation.

Gates' foundation has committed roughly \$200 million to the toilet project and expects to spend the same amount again before the toilets are viable for widespread distribution.

During a speech at an event in Beijing, Gates held up a clear jar of human feces to illustrate the importance of improving sanitation.

"It's a good reminder that in (the jar) there could be 200 trillion rotavirus cells, 20 billion Shigella bacteria, and 100,000 parasitic worm eggs," he said.

Gates said the next step for the project is to pitch the concept to manufacturers, saying he expects the market for the toilets to be over \$6 billion by 2030.

The billionaire also lauded the globalized and free trade systems that made the toilet technology possible.

"I honestly believe trade allows every country to do what it's best at," he told Reuters in an interview. "So when I talk about components of this toilet being made in China, others in Thailand, others in the United States — you really want to be bringing together all of that IQ so that you're getting that combination."