Sanitation & Reinventing the Toilet and China

I thank Mr Cheng Joe, the China Council for the Promotion of International Trade, and the China Chamber of International Commerce for co-hosting us here. It's great to be back in China, and we should be meeting here for the Reinvented Toilet Expo. In recent decades, China has made significant progress in improving health and sanitation for millions of people. President Xi's toilet revolution underscores China's commitment to accelerating progress on safe sanitation. China has an opportunity to help launch a new category of innovative non-sewered sanitation solutions that will benefit millions of people worldwide.

Although the people in this room come from varied backgrounds - government, private sector, academia, finance, and development institutions - we're all here for one reason: more than half of the world's population doesn't have safe, high-quality sanitation that allows them to lead healthy and productive lives. Governments are here because they want to find a way to solve this large and growing problem, especially in fast-growing urban areas that may never have a traditional sewer system. The private sector is here because they see a market opportunity to meet the needs of the 4.5 billion people lacking proper sanitation.

Opportunities of this scale for a whole new business only come along sometimes. This event is exciting because we've been working towards this goal since the original 2012 toilet fair, funding early-stage research and nurturing the concept to the point where all these partners can see its potential. We want to take it to maturity and improve existing solutions even further.

This is not just about a new product category; it goes beyond that. The impact of what we're talking about here is significant. Lack of proper sanitation leads to diseases, malnutrition, and even death. It's a critical issue that affects millions of lives, particularly children. Unsafe sanitation is also a substantial economic burden, costing over $223 billion annually in lost productivity and wages.

Looking at the population growth trends and urbanisation, this problem will only worsen. Water scarcity is also an issue; many countries, especially in Africa and Asia, need help addressing these challenges. That's why we're here today, to find breakthrough solutions.

About a decade ago, I became aware of this issue while travelling to poor countries with my wife, Melinda. People were talking about water problems, but the real issue was sanitation. Exposure to human waste contaminates water sources and leads to deadly diseases. Seeing the dire conditions of some toilets and the impact on people's lives, we felt compelled to take action.

In 2009, we gathered scientists and engineers to explore a breakthrough approach to sanitation. Could we leapfrog the traditional flush toilet system and find an alternate way to process waste directly at the toilet, avoiding the need for costly treatment plants? The answer was yes, and we started this journey with a challenge and funding for research and development. We believed in the potential to create a new paradigm for sanitation.

The reinvented toilet and the Omni Processor are the fruits of this effort. The reinvented toilet aims to create a self-contained system that converts waste into harmless products, making it easier to manage and dispose of. On the other hand, the Omni Processor is a treatment plant that can process faecal sludge effectively and turn it into valuable resources like clean water, electricity, and fertiliser.

We see this as a philanthropic endeavour and a business opportunity. The goal is to create a multi-billion-dollar market that meets the sanitation needs of millions of people and becomes self-sustaining, just like the evolution of the computing industry. We estimate that by 2030 this market could be worth over six billion dollars annually.

We're already witnessing significant progress, with several companies ready to introduce these products. Governments, finance, and development institutions are also showing support and commitment. We believe we're on the cusp of a sanitation revolution, and the time to act is now. We are still determining how long it will take but are confident it can only happen slowly enough. Thank you.

**Questions:**

**Exercise A – Pre-listening: Background Knowledge**

Instructions: You will listen to part of a speech given by Bill Gates at the Reinvented Toilet Expo in Beijing, China, on November 6, 2018. Discuss the following preparatory questions.

Who is Bill Gates? What are two reasons for his fame?

What is the Bill and Melinda Gates Foundation? Check out the website. https://www.gatesfoundation.org/. What are the Foundation's five Divisions or Programs? Under which Division is the Foundation's work on reinventing toilets and sanitation?

**Exercise B – Pre-listening: Vocabulary Development (Synonyms)**

Instructions: Read the following sentences adapted from Listening 1 and, for each bold key word, select the best synonym.

Through exposure to human waste, the water becomes pathogenic.

a. disgusting

b. poisonous

c. disease-causing

China is committed to accelerating progress on safe sanitation.

a. enhancing

b. quickening

c. encouraging

Bill Gates wanted to leapfrog the traditional system of flush toilets, sewers, and treatment plants.

a. skip over

b. build upon

c. learn from

According to Bill Gates, reinventing the toilet has a strong analogy in what reinventing computing was like when he was young.

a. difference

b. origin

c. similarity

The Omni Processor can manage fecal sludge very effectively.

a. powder

b. mud

c. liquid

Inside a liter of fecal sludge could be thousands of particles of virus, bacteria, and parasites.

a. pieces

b. species

c. types

It was very evocative when Bill Gates was seen drinking the water produced by the Omni Processor.

a. disturbing

b. suggestive

c. unfortunate