Reinventing the Toilet Challenge

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Research question

How can we develop a human waste disinfection treatment for developing countries using

No water
No energy
No money

Contact with faeces kills 1 child / 20 seconds

200 tons/year of faeces untreated
How I explored the research question...

- **Solid**
- **Human waste** → **Diversion**
- **Urine** → **Heat exchanger**
- **Hot gases** → **Pasteurized water** → **Cool gases**
- **Smouldering Combustion**
  - **Ashes**

**2014 Prototype 1**
What I found...

- Self-sustaining combustion up to 75% water
- Complete removal of pathogens
- LOTS OF REPERCUSSION
The ‘global change’ aspect of my water research

While further development is required, the toilet aims to develop a toilet producing **NO WASTE**, and using **NO WATER** and **NO ENERGY**.

The project address the UN’s **Millennium Development Goals (MDG)** in particular:

- Reduce child mortality
- Combat diseases
- Ensure environmental sustainability
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References: