

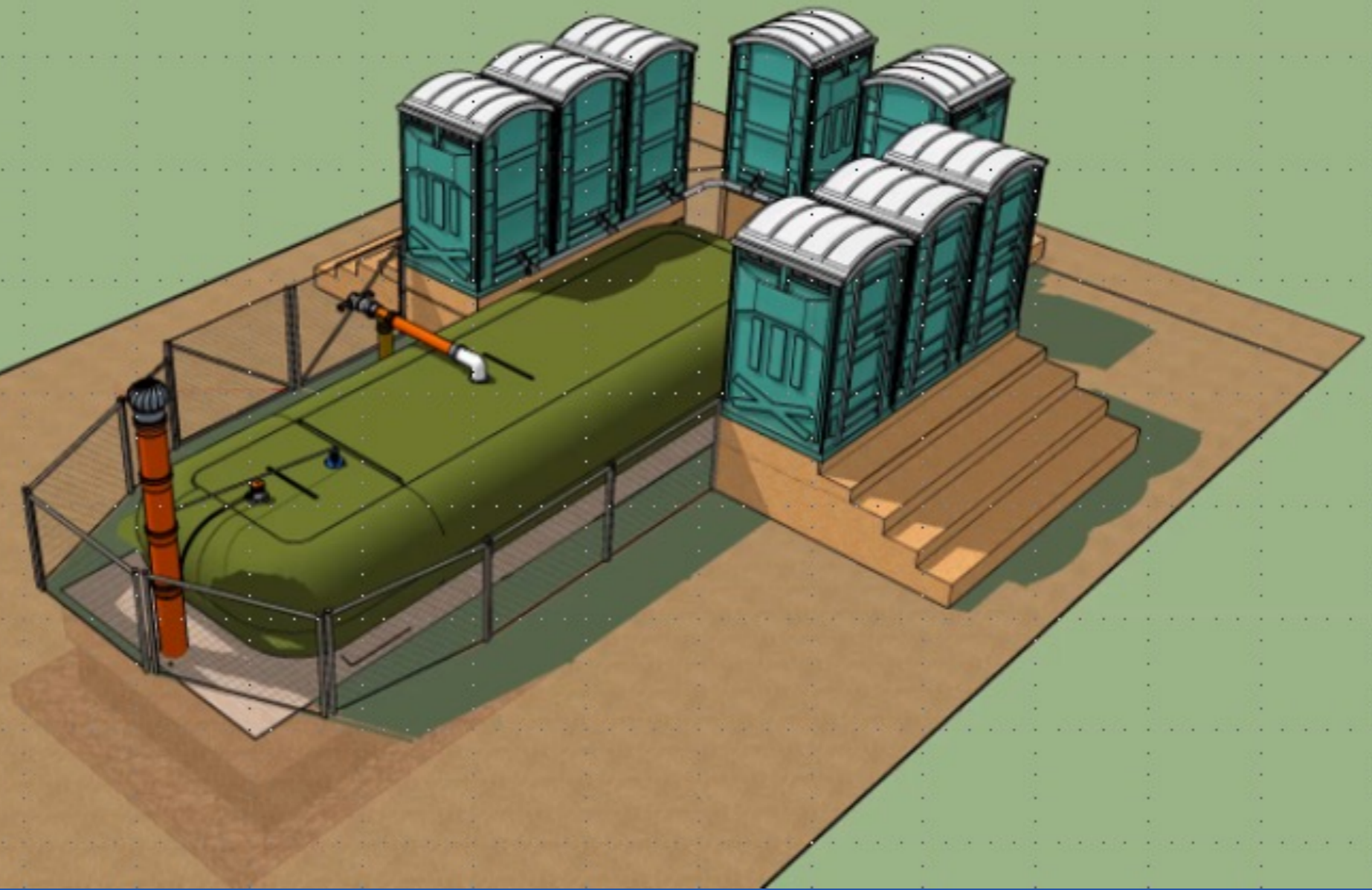
The urgent challenge



- ▶ Refugees and IDPs are often not granted with their basic human right to safely managed sanitation services.
- ▶ Shortcomings especially exist during the first relief phases and where permanent infrastructures are prohibited.
- ▶ So far there is no suitable sanitation solution on the market, which can be easily stored and quickly deployed.
- ▶ A lack of solutions which meets the needs of beneficiaries and relief organizations results often in risky and unsustainable sanitation practices.



3-D model Septic Bag Kit (animation deleted)



The novel solution



- ▶ The pre-fabricated bag is made from a foldable membrane. An integrated baffle divides the bag into the two compartments.
- ▶ It functions like a two chamber septic tank - separates solids from liquids and stabilizes solids.
- ▶ The effluent can be infiltrated into the soil, drained off into a nearby sewer or be treated in an additional treatment modules (e.g. PGF, ABR DEWATS, disinfection unit).
- ▶ The Septic Bag is desludged by vacuum trucks. The sludge is then treated, safely disposed off or can be reused.
- ▶ The foldable structure of the Septic Bag allows to warehouse the kit and quickly deploy it (also via air freight) to emergency locations.



Features of the kit



- ▶ Unit costs aimed at are 1000€
- ▶ Capacity 500 users per daily or 10 latrine cubicles per septic bag
- ▶ Expected desludging cycles: 6 to 8 month
- ▶ Expected lifetime 5 years
- ▶ Size 2m x 4,5m x 1m (w x l x h),
- ▶ Wastewater retention time 24h
- ▶ Made for concentrated blackwater: 2l urine, 0.4kg faeces, 1.5l water per day & capita
- ▶ Sludge is stabilized, especially under higher ambient temperature
- ▶ Biogas can be used for cooking or lighting
- ▶ The Septic Bag can be set up within a few hours by non-specialists

Project status



- ▶ System has been developed and prototypes are produced
- ▶ Assembling and hydraulic tests have been successfully finished jointly with THW (Fed. Agency for Technical Relief Services)
- ▶ A long-term test under real life conditions is currently prepared jointly with the Swiss Corps for Humanitarian Aid (SKH), EAWAG SANDEC and Oxfam. Potential test locations in Bangladesh, Iraq and Switzerland are under discussion.

Vision



- ▶ Contributing to safely managed sanitation in emergencies by establishing a network of relief organizations, which will ensure global availability of the systems through warehousing and rapid deployment.
- ▶ To this end we invite other organizations to get involved in testing and improving the system and establishing the required supply chain.



People. Innovating. Sanitation.

Thorsten Reckerzügl

Regional Advisor West &
Central Asia

reckerzuegl@borda.org

+49.421.40 89 52 – 29

