

Bill & Melinda Gates Foundation SCOPE Team

Context



Sewered sanitation is expensive



Pit latrines are a common solution



But pits fill up...

Requirements

20 m vertical travel

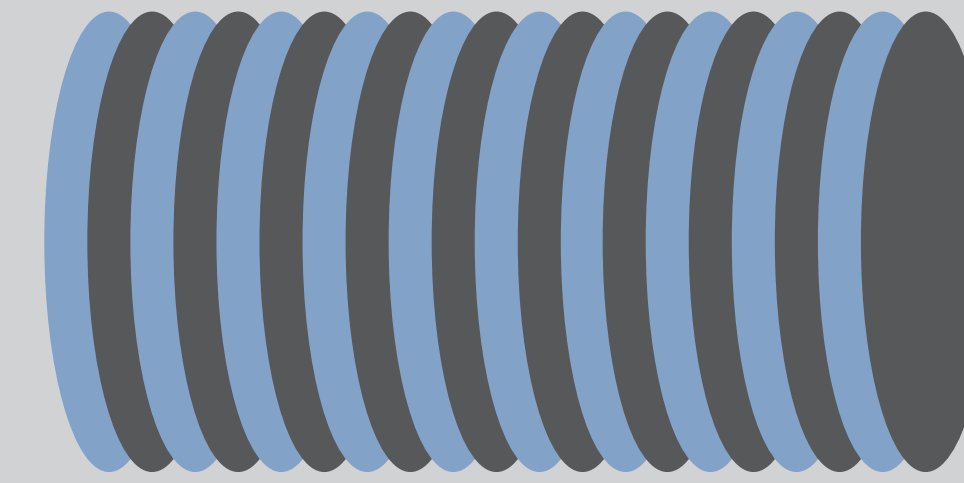
100 m horizontal travel

3 L/s travel speed

4 bar pressure

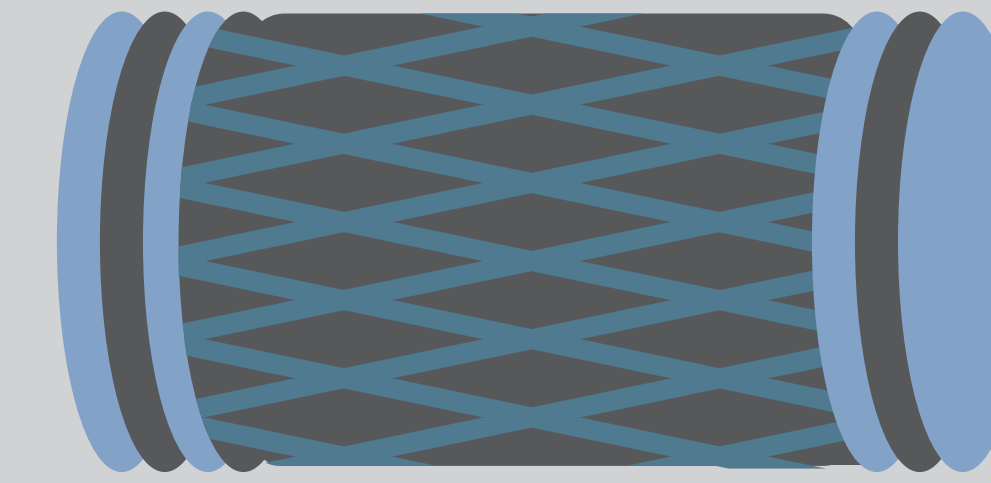
Solution:

Hose



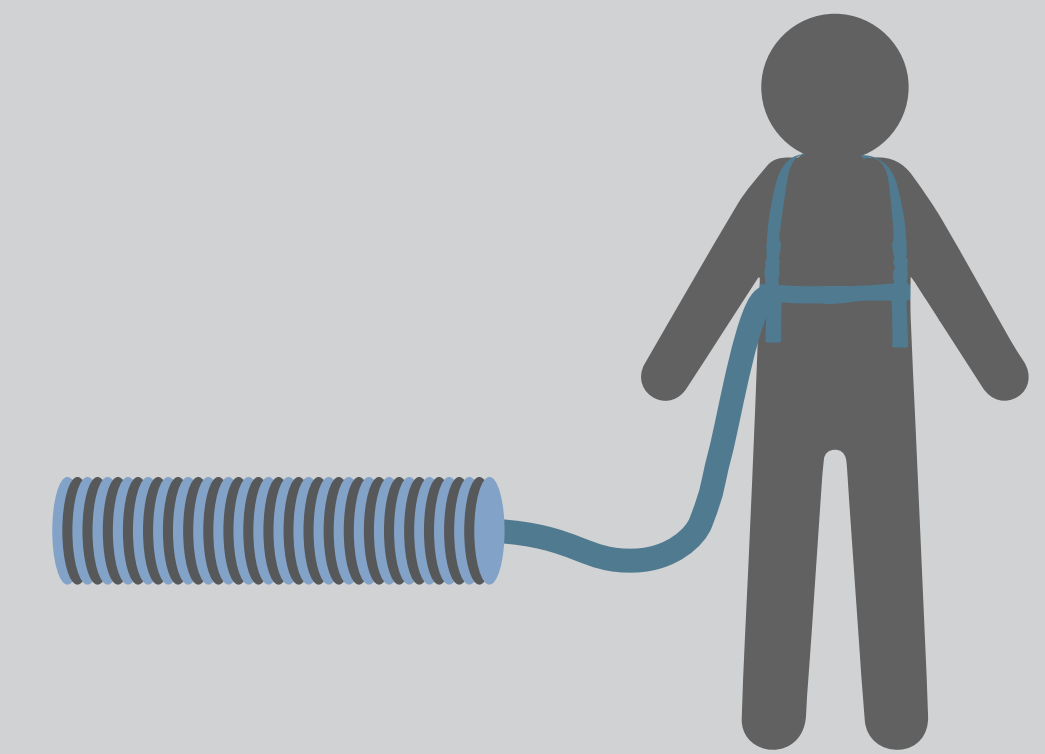
3" EPDM
Intuitive setup
Stored on truck
7 sections
50ft length

Hose Trap



Strong seal
Lightweight
Easy to use
Flexible webbing

Harness



More ergonomic
Inexpensive
Easy to use
Improves setup time

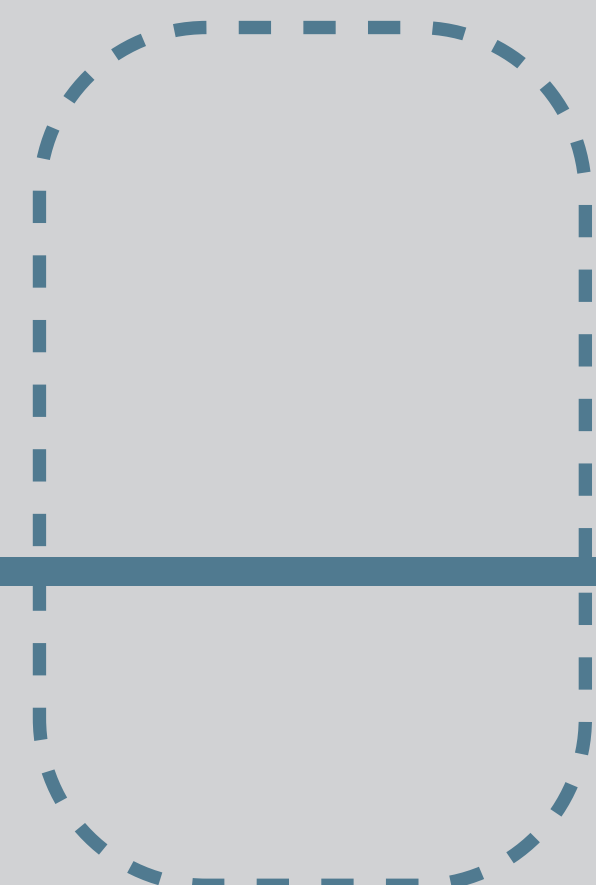
Current State



Containment



Emptying



Conveyance



Treatment/Transport

Impact



Pit contents get treated instead of dumped



Safer working conditions

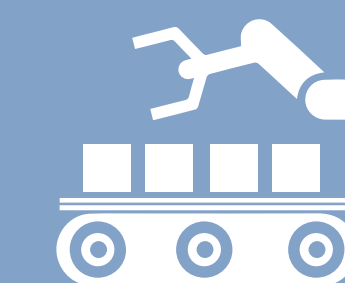


Homeowners save time and space

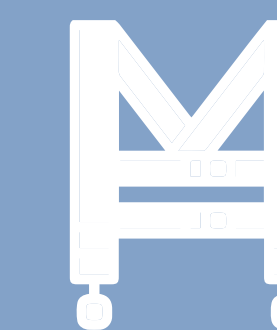
Next Steps



Continue developing connectors



Investigate manufacturing hose in-house



Determine details of harness manufacturing

Our Task

Connect two 3" interfaces with a cheap, durable, and lightweight system without causing harm to the users and the environment

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