

The Earth Auger®

A mechanized, pedal operated urine diverting dry toilet

Critical Practices LLC



Vision

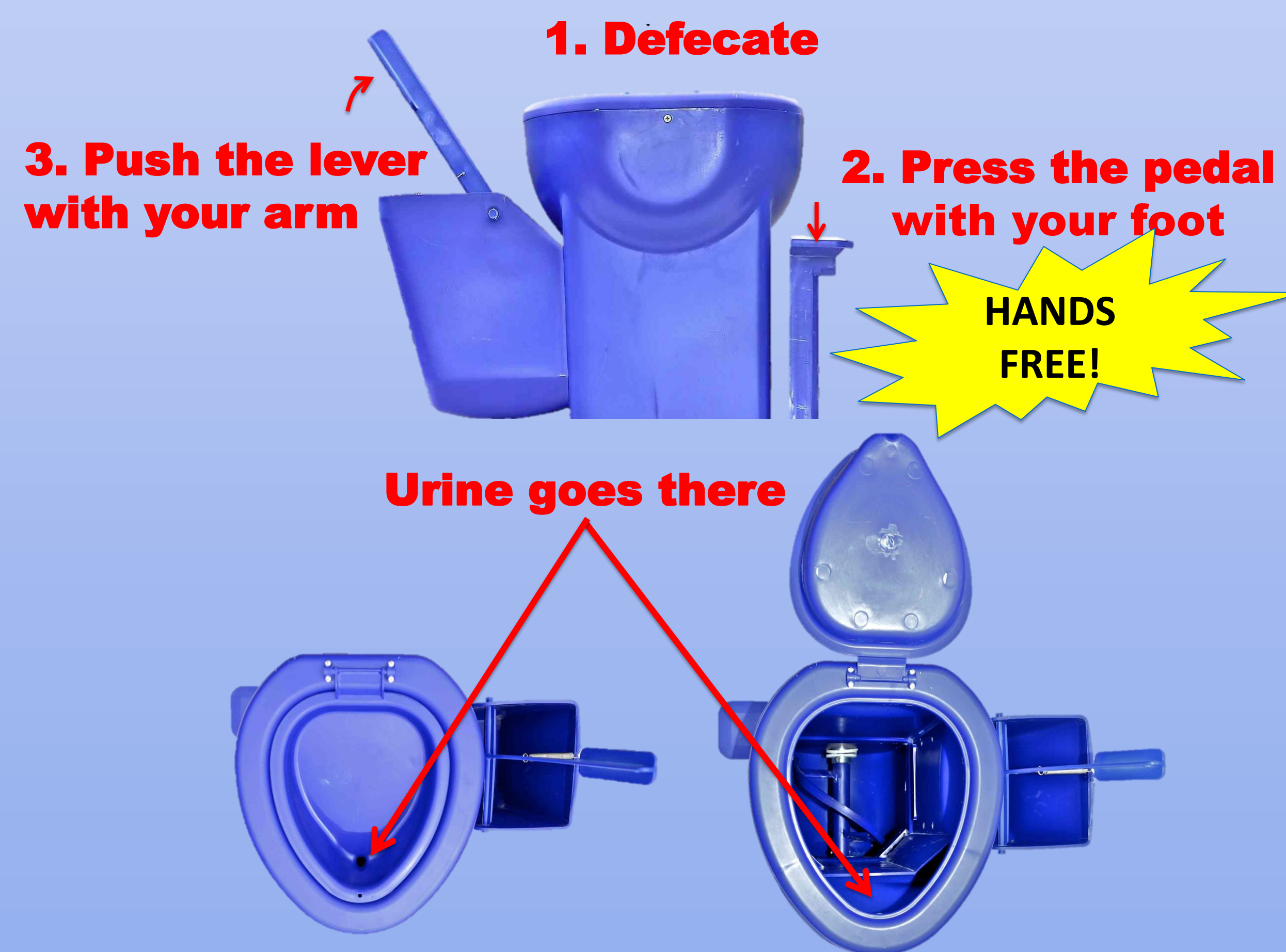
In Terris & Critical Practices are co-developing a decentralized and ecological urine-diverting dry toilet that meets customers aspirations with the goal of starting product commercialization before 2016.

Features

- A 100% decentralized UDDT
- Easy to use, attractive “look & feel”.
- Doesn't use or pollute water.
- Off the grid.
- Produces plant fertilizer
- Ideal for rural & peri-urban areas where there's not sewage system



How does it work: Daily use perspective



How does it work: Composting and Pathogen Die-off

PHASE 2: Pathogen Die Off
Currently: Monitoring storage effective time & testing other approaches: solar heating, Ammonia treatment



Vent pipe: as the sun heats up the pipe, air is drawn away from the toilet seat.

PHASE 1: Composting + Dehydration
“Popost” gets the exit with 20 – 40% moisture content, odor free, non longer attractive to flies.

Compost chamber: holds up to 120 flushes.

Pedal moves the auger inside. The “popost” mixes, oxygenate & moves slowly

Compost (“Popost”)



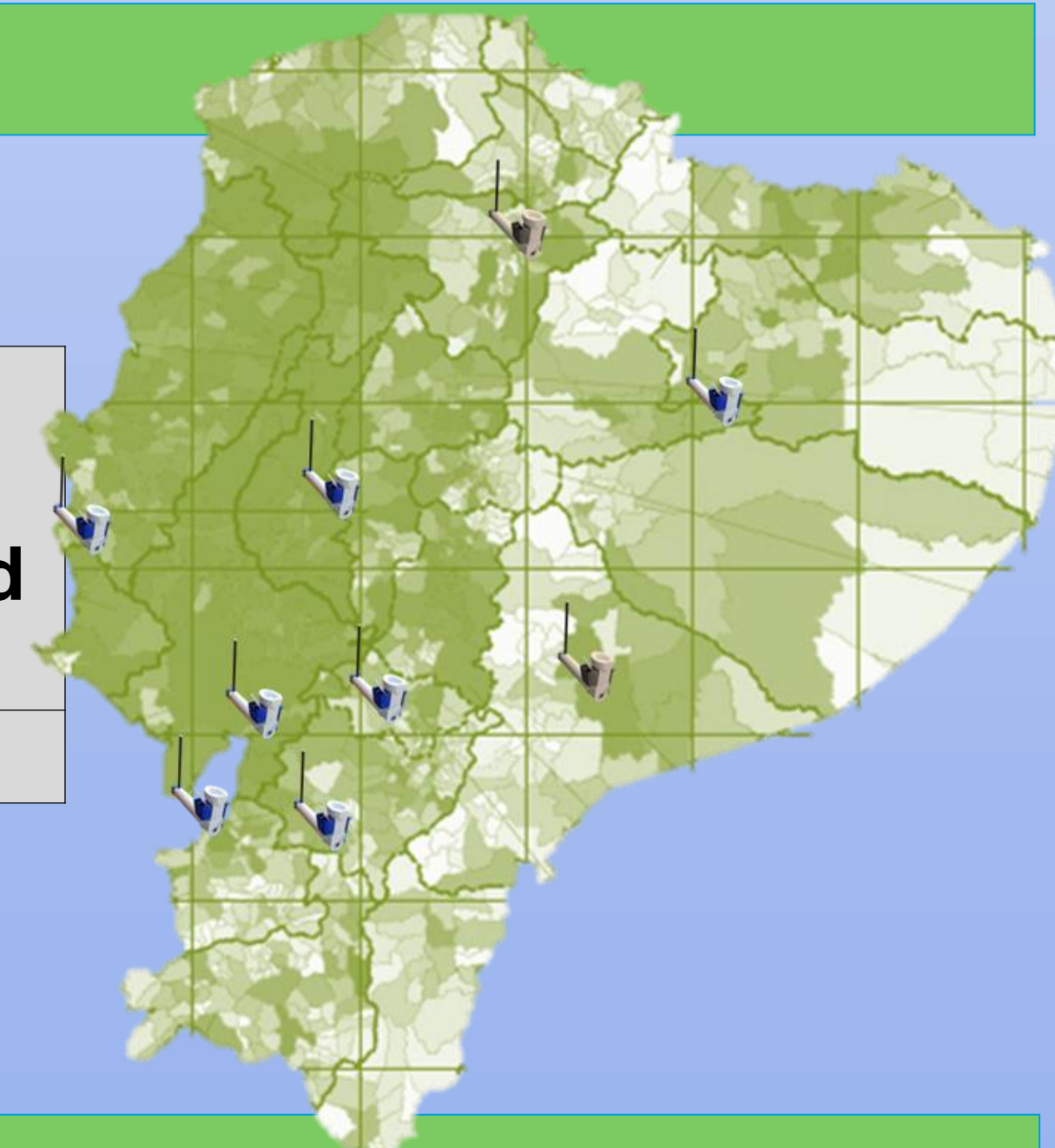
Housing



Demos installations

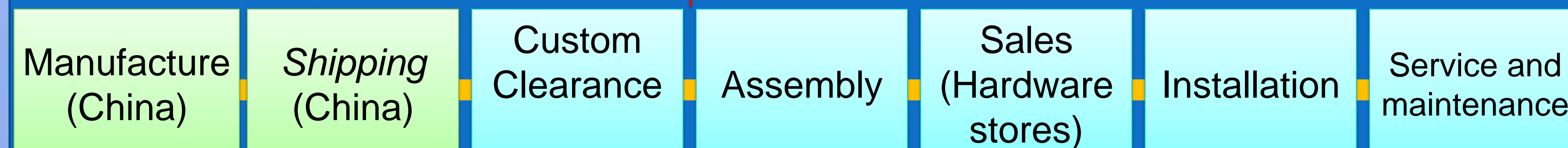
Diversity in weather & cultural conditions

			To be installed soon		Totals expected
Jan 15th			Jan	Feb	
Installed	Activated	In Use	103	157	214
86	42	33			

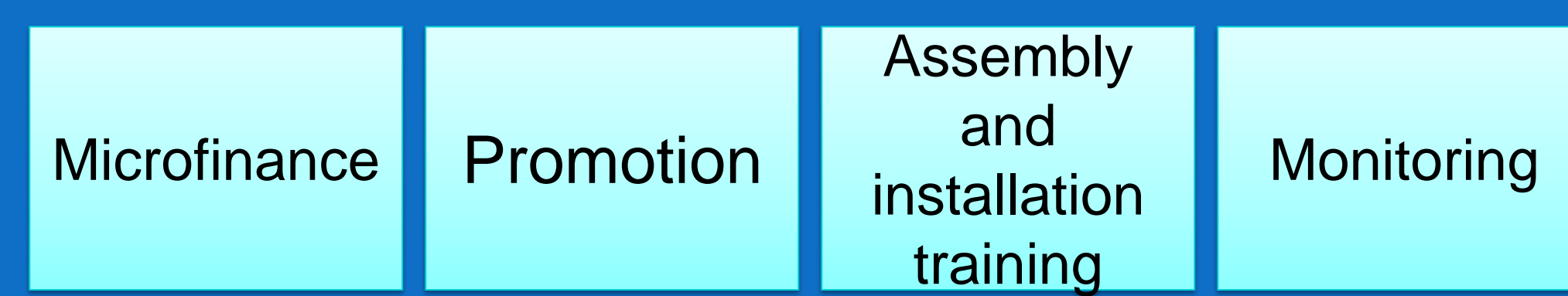


Value Chain

MAIN VALUE CHAIN



COMPLEMENTARY COMPONENTS



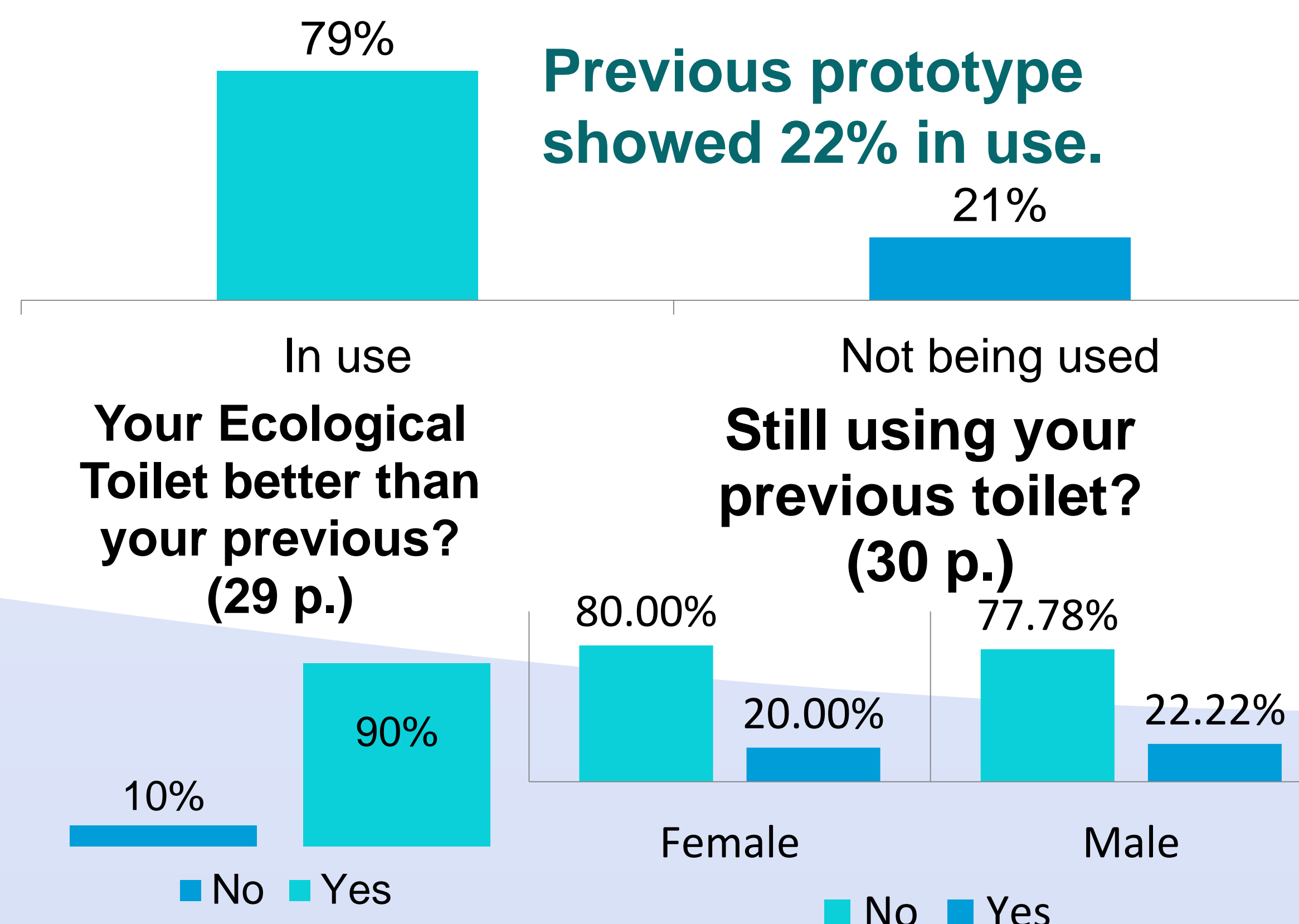
Executors:

FIT

CP

Indicators of Acceptability

42 toilets has being installed and activated (ready to use)



Important learnings

- Users adapt to their new toilet in 3 to 6 months.
- Education approach is how to prevent exposure, then they find their way for use the toilet properly.
- No odor or flies problems.
- We have not found strange objects in the toilet.
- We need to collect data about their experience in harvesting and using compost from the toilet.

Achievements & Indicators of demand

- Several State & County Governments interested
- Signed agreements with Authorities
- Approval from the National Environmental Ministry

Cost analysis and reduction

ENTRY	OST PER UNIT	
1. Prototype (FOB)	\$ 150.00	
2. Shipping + Custom Clearance (1.1+1.2)	\$ 70.52	
3. Prototype (CIF) (1+3)	\$ 220.52	\$ 80.00
4. Assembling costs	\$ 20.18	\$ 10.00
5. Basic Accesories	\$ 51.50	\$ 38.63
Subtotal	\$ 292.20	\$ 128.63
Central Costs	\$ 55.19	\$ 33.11
Total Costs	\$ 347.39	\$ 161.74
Profit	\$ 52.11	\$ 37.20
Price	\$ 399.49	\$ 198.94

Local MFI offers a 12% credit for 24 months, allowing a daily cost per person of 0.07 USD and 0.17 USD if house is included

Pending challenges

- Logistics and sustainability cover material's provision
- Standards methods for pathogen die-off
- Building demand and cost reduction