



# **KHANYISA PROJECTS CASE STUDY**

## **FEASIBILITY STUDY FOR THE LOOWATT TOILET MANAGEMENT SYSTEM**

### **AT A GLANCE**

#### **FUNDERS**

- Water Research Commission
- Unilever

#### **TIMELINE**

The feasibility study was undertaken in 2021 while the large scale pilot rollout will take place in 2022 and 2023

#### **AREAS**

Various informal settlements in eThekweni Municipality (Durban)

"Khanyisa Projects harmonizes academic and commercial, real-world approaches. They do an amazing job of combining the three factors we see as most essential to drive progress in sanitation: deep cultural understanding, rigorous systems analysis, and passion for innovation. They are also a pleasure to work with."

#### **VIRGINIA GARDINER**

Loowatt  
Chief Executive Officer

### **OBJECTIVES**

**Why:** This project forms part of the SASTEP programme which aims to assess sanitation technologies and service options for the South African and African market in terms of uptake and manufacturing opportunities.

**Solution:** The Loowatt toilet uses a "waterless" flush system to seal faeces, urine and toilet paper inside a polymer film. The system prevents users from seeing or smelling the stored waste. The toilet is serviced weekly by a service provider.

**Where:** The study in eThekweni (Durban), South Africa included a pilot implementation of the technology and service model within two informal settlements.

**How:** The project included assessing social and political acceptability as well as financial viability based on operational data, willingness to pay and affordability.

### **KEY FINDINGS**

- A good technical solution for informal settlements where space for the installation of waterborne systems is not available
- The toilet offered a clean, safe and accessible solution to residents of informal settlements
- All the pilot users wanted to have the toilet installed on a permanent basis as long as the servicing was reliable
- There was a willingness to pay for the service
- Generally positive responses to the system from local and political leadership
- Commercial viability is possible at the cost which users in the pilot felt happy to pay but it would need to be implemented at scale



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TOILET MANAGEMENT SYSTEM

## **KEY ACHIEVEMENTS**

- The findings of the pilot and the feasibility study has resulted in the commitment from the Water Research Commission and other co-funders to the piloting of a large scale user pays service managed by an experienced waste collection contractor in the eThekweni Municipality.
- Khanyisa Projects will manage the large scale pilot and be responsible for:
  - Stakeholder liaison
  - Payment approvals
  - Selection of the contractor
  - Social, political and technical monitoring and evaluation

## **INTENDED OUTCOMES**

- 500 toilets installed in 500 households to reach around 2,000 people
- Successful sanitation service delivery to all households
- Local supply chain established for hardware consumables
- Household level sales and marketing set up successfully
- Household level payment infrastructure explored and implemented
- Human and refill waste safely managed and disposed