



Utility Platform

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OFF-GRID AND MINIMAL WATER SANITATION TECHNOLOGIES – INSIGHTS INTO A PILOT INITIATIVE IN DURBAN, SOUTH AFRICA

April 2024

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CONTENTS

1. OVERVIEW OF ETHEKWINI MUNICIPALITY
2. THE NEED FOR OFF-GRID / NON-SEWERED SANITATION
3. PILOTING OF INNOVATIVE NON-SEWERED SANITATION TECHNOLOGIES
4. EXPECTED OUTCOMES & WHAT THE FUTURE LOOKS LIKE

OVERVIEW OF ETHEKWINI MUNICIPALITY



Economic Hub of KwaZulu-Natal province

Municipal boundary – 100km N to S, 70km E to W

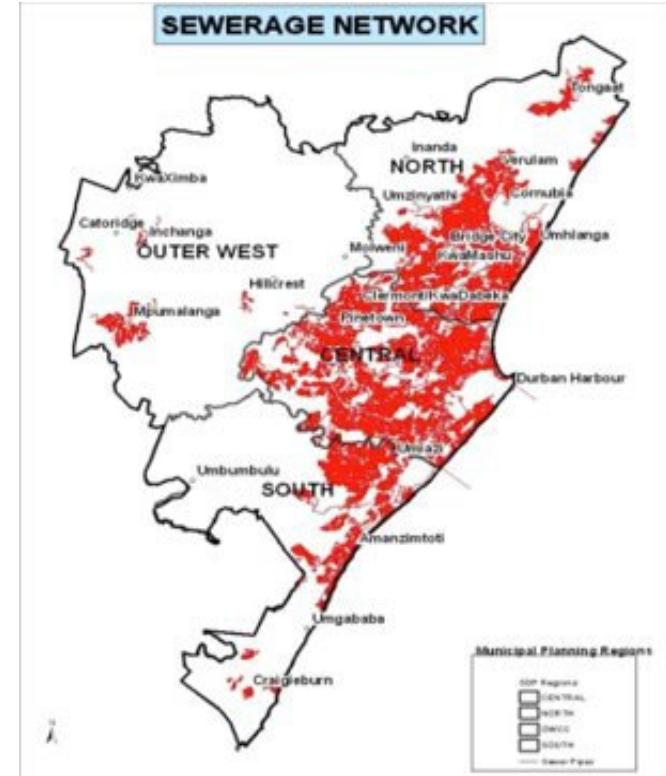
55% rural land

Population >4 million



THE NEED FOR OFF-GRID / NON-SEWERED SANITATION

- 59% of population on centralised sewer system
- 55% of Municipal area is classified as rural
- Not financially feasible to sewer 100% the entire Municipal area
- There is an aspiration for flushing toilets
- A sanitation mix is important for sustainable sanitation provision
- Municipality is piloting NSS for inclusion into approved sanitation mix



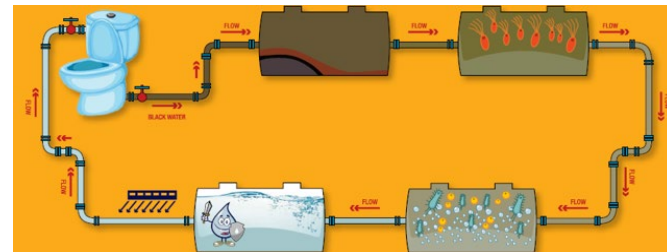
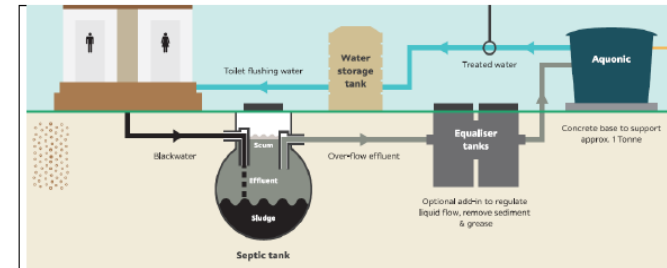
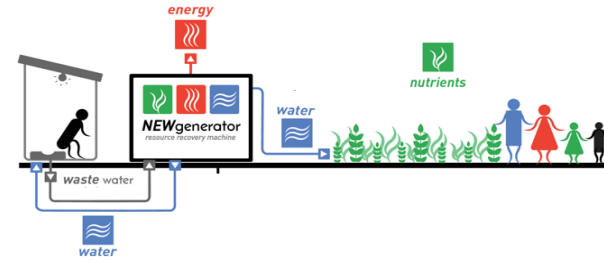
INFORMAL SETTLEMENTS

- Nearly 25% of the population
- >450 settlements of varying sizes
- Water and sanitation services are provided at no cost
- Communal facilities
- 98% connected to centralised sewer – remainder are on conservancy tanks
- Challenges
 - High water usage
 - Vandalism
 - Expensive to maintain



PILOTING OF INNOVATIVE NSS TECHNOLOGIES

- Demonstration of 3 technologies
- Developed from the Reinvented Toilet Challenge by the Bill & Melinda Gates Foundation
- Technologies have been licenced and are being manufactured in South Africa
- Treatment of wastewater generated on-site and treated effluent is recycled for flushing the toilet
- Applicability → areas outside of sewer network, areas with intermittent water supply
- Up to 6kl/day wastewater
- Use solar energy



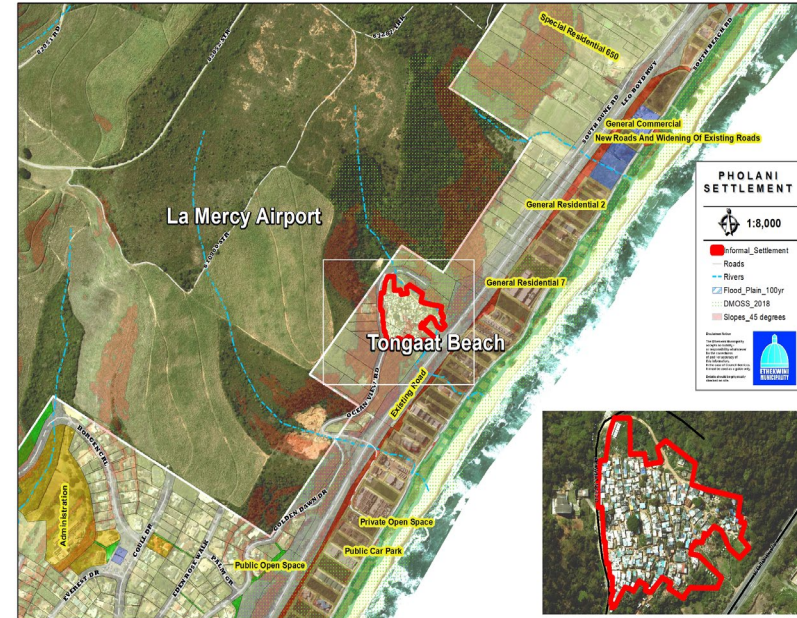
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FUTURE PLANS

- Technologies will be installed at 3 informal settlement sites
- Demonstration for 1 year, support by external organisations
- Technical and social evaluation will be conducted
- Based on results, Phase 2 will be designed
- Phased 2 to focus on upscaling NSS in eThekweni for areas of need



THANK YOU