

# SASTEP

## An introduction to the South African Sanitation Technology Demonstration Programme

3<sup>rd</sup> International Faecal Sludge Management Conference  
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Mr Stuart Woolley

**Water Research Commission**

Private Bag X03, Gezina, 0031, Pretoria, South Africa

[www.wrc.org.za](http://www.wrc.org.za)



**South African  
WATER RESEARCH COMMISSION**  
Supporting sustainable development through research  
funding, knowledge creation and dissemination



**science  
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Department:  
Science and Technology  
**REPUBLIC OF SOUTH AFRICA**

**BILL & MELINDA  
GATES foundation**

# Reinvent the Toilet Challenge

## RTTC Objectives:

- Disinfect human waste
- Recover resources from human waste
- Less than US\$ 5 cents per user per day
- 'Off the grid'
- Self sufficient

**Go AROUND faecal sludge...**

# The Technologies

## RTI International

- Liquid – Solid separation
- Urine disinfected electrochemically
- Solids gasified & combusted
- Energy balanced
- Household or communal



# The Technologies

## HTC Toilet

- Single stage
- Hydrothermal Carbonisation
- Nutrients recovered
- Household or communal



# Innovation Partnership for Rural Development Programme

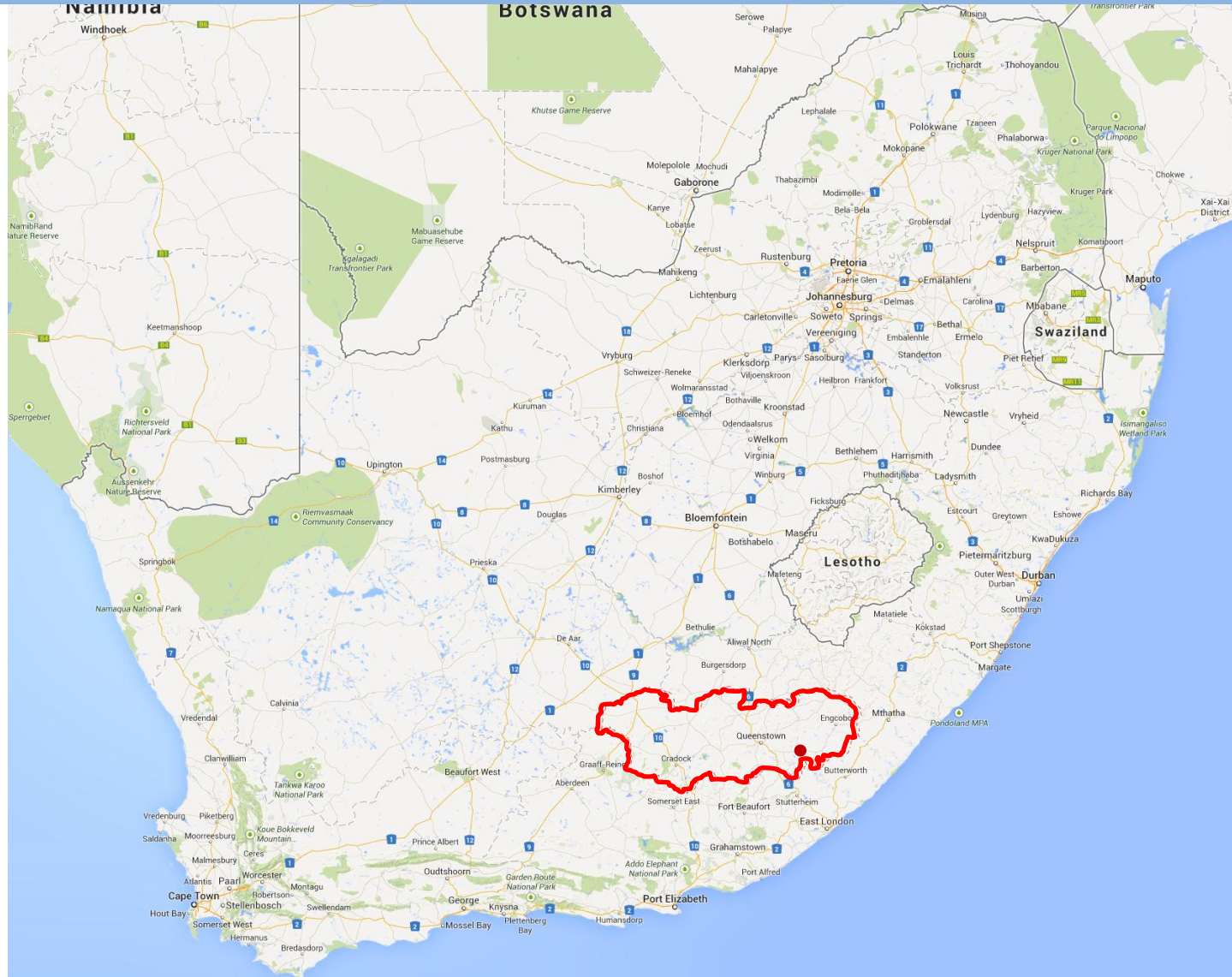
## 27 Priority District Municipalities (DM's)

### IPRDP Programmes:

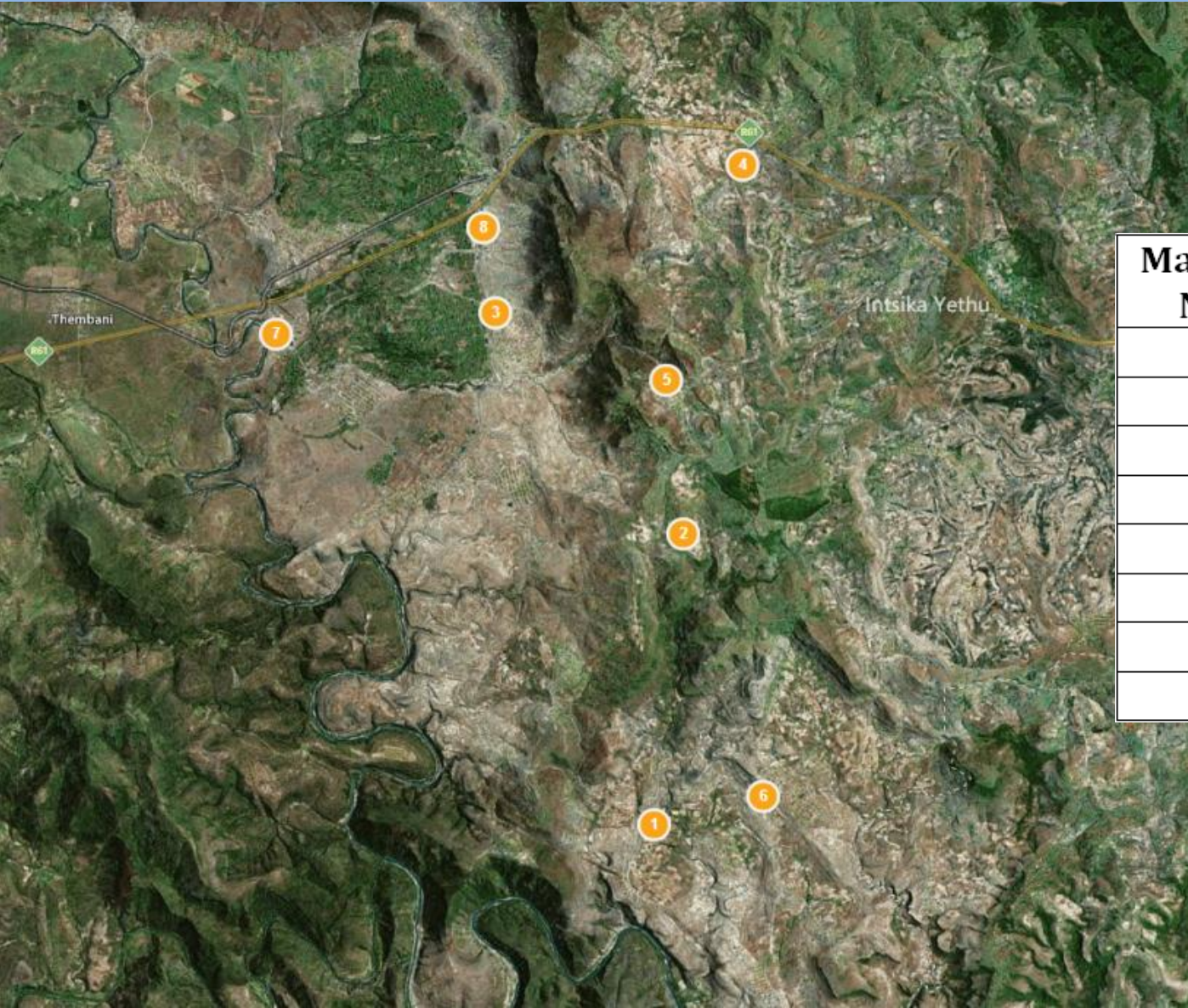
- Hydropower
- Algae Ponds
- Low Flush Toilets
- ICT



# Implementation Areas



# Implementation Areas



Marker No.	School Name
1	Bangilizwe JSS
2	Gudwana JSS
3	Mbudlu JSS
4	Mvuzo JSS
5	Sidubi Poort JSS
6	Siyabalala SSS
7	St Mark's JSS
8	Zamuxolo JSS

# Implementation Areas





# Implementation Areas



# SASTE

## Demonstrate Technologies in the REAL world

### Aims:

- Long-term performance evaluation
- Operations & maintenance learnings
- Social aspects
- Economic aspects

# SASTEP

## Moving Forwards:

- Demonstrate technologies in phases
- Provide hard evidence on performance
- Provide hard evidence on impact
- Iterative feedback to technology developers
- Catalyse change

*Thank you for your time!*



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# RTTC Technologies

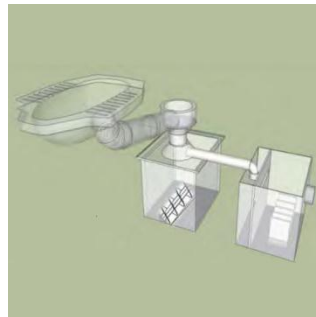
## Technologies

RTI International



Auger  
Combustion  
Electrolysis

AIT



Hydrocyclone  
Pasteurization

WEDC



Carbonisation

Caltech

Carbonisation

Fundación Terris



Auger  
Composting

# Phase 1 - Demonstration

Technologies selected by stakeholders



Multiple stakeholder

Report due: Background

on technology, site

monitoring and

provide input,

performance evaluation,

including user

planning and designs

for upscaling based on

construction

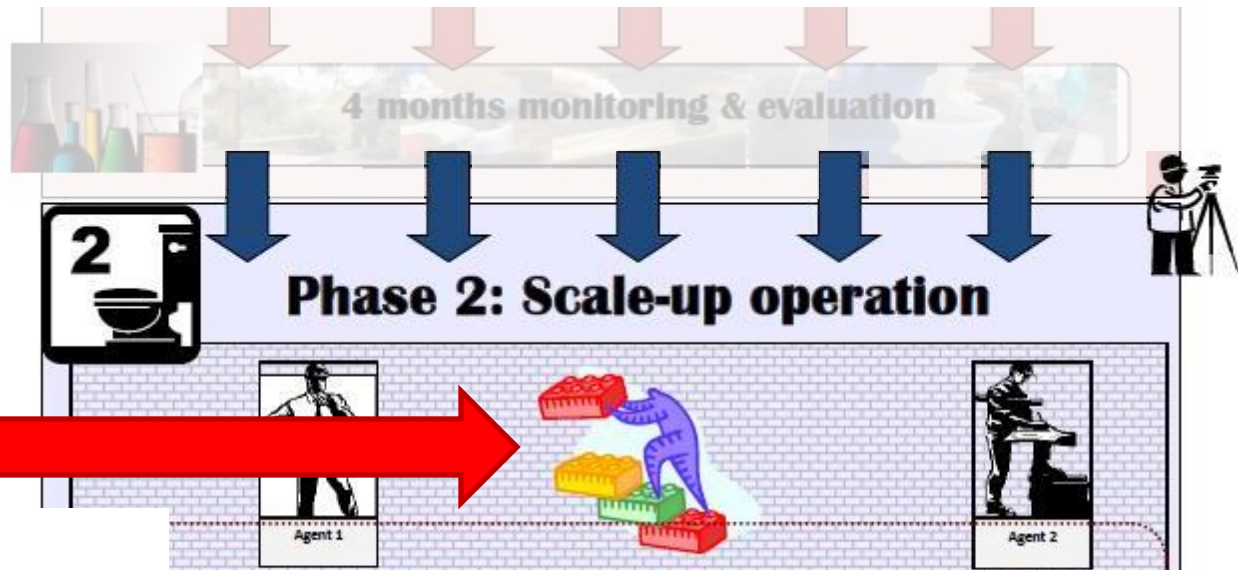
installation

performance

demonstration cycle.



# Phase 2 - Scale Up



Report due:  
Background on  
technology, site  
Civil contractors  
Dissemination:  
to start up-  
reports, newsletter,  
scaling of  
national workshop,  
selected  
social media and  
technologies  
Municipal website  
on  
demonstration cycle.  
programming designs

