SaNiTi

BUILDING A SANITATION ECONOMY IN SOUTH AFRICA
Some lessons in ShIT (sanitation high in transformation)..... Poop It matters

• It does not go anywhere........
• It is full of resources.......oils, fats, nutrients – wedding rings etc
• Get a sanitation solution designed by a sanitation specialist
• Reactor size and design is important
• Aspirational solutions drive behaviour change
• Each households should have its own toilet – even in informal settlements
• Closing the loop upfront has many benefits
• Moisture is the achiles heel....
New Sanitation Model CAN STIMULATE A CIRCULAR ECONOMY
Sanitation Indaba

"It is not all about flushing"
Non-sewered Sanitation

City Wide Sanitation Planning

Sanitation Sensitive Design

• SFD
• SSDs
• New institutional and social model
• Target behaviour change
• Valorisation and beneficiation
• New social entrepreneurial pathways

Municipal Managed

Public driven model

Municipal Enabled

Industry driven model
SANITATION 2.0

Poop: ~75% Water
Poop: ~25% is fibre, fats, living & dead bacteria, non-biodegradable matter
Urine: N, P, K

Resources can be recovered

Next generation Non-sewered sanitation systems
FSM
Circular Economy

New institutional and social model
Target behaviour change
Valorisation and beneficiation
New social entrepreneurial pathways
Circular economy
New Revenue Models
**Sanitation Academy**
Building the next generation and cohort of sanitation professionals

**Industrial Pathway**
- Industrial information platform
- Establishing manufacturing platforms
- Distribution logistics
- Servicing models
- Creating markets

**Policy**
- Sanitation White Paper
- Political will
- IPAP
- WATER RDI

**Technology Standard & Regulations**
- ISO 30500
- SABS Draft
- NBR

**SASTEP**
- EFT
- Demonstration
- Market and manufacturing studies
• Next Generation Sanitation Cluster Programme
  • The establishment of the next generation sanitation CDP.
  • Development of emerging industry capable to develop new technology, within the framework of localisation.
  • Procurement and policy incentives for improved uptake.
  • Development of high-end skills for advanced thermal sanitation technologies and artisanal skills for operation and maintenance.
  • 20 SMMEs per annum post-implementation.
  • Potential 15,000 jobs at 20% market penetration for the currently unserved.
TECHNOLOGY STANDARDS

INTERNATIONAL STANDARD
ISO/FDIS 30500

Non-sewered sanitation systems — Prefabricated integrated treatment units — General safety and performance requirements for design and testing

Activities relating to drinking water and wastewater services — Guidelines for the management of basic on-site domestic wastewater services

INTERNATIONAL STANDARD
ISO 24521

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SASTEP

Technology Demonstration (via CP)
- Platform: Standards
  - Platform: Technical Advisory Group
    - Processes and Business Models of Function:
      - Scan the local and RTT (global) technologies available and report on their characterization;
      - Due diligence; Short list those at TRL 7/8/9; Test against the ISO standard; Approve for field testing; Field testing; Report on user surveys; social acceptance, and engineering robustness

Market Development and Commercialization
- Platform: Business Advisory Group
  - Processes and Business Models of Function:
    - Operational models developed; Market penetration plans; Beneficiation models developed; Resultant shift required; Financial models and projections
    - Commercialization models; Multiple alternatives; Business case per technology; National generic model; Policies in place

Localisation and Industrialisation
- Platform: IGR (inter-governmental) platforms, businesses and investors
  - Processes and Business Models of Function:
    - Localization processes and models to localize and manufacture locally at least 4 global technologies; and ramped up manufacturing from prototypes to large scale production and participation on the manufacturing sector; Local manufacturing sector mobilization strategy and engagement process to be in place.
Not a Flush in the Pan – There is Impetus

EntrePOOnership
In South Africa we on our way to mine a new gold..........................