The future grid dynamic, smart and efficient – The Plentify case study

Urban Energy Network Meeting

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german cooperation
DEUTSCHE ZUSAMMENARBEIT

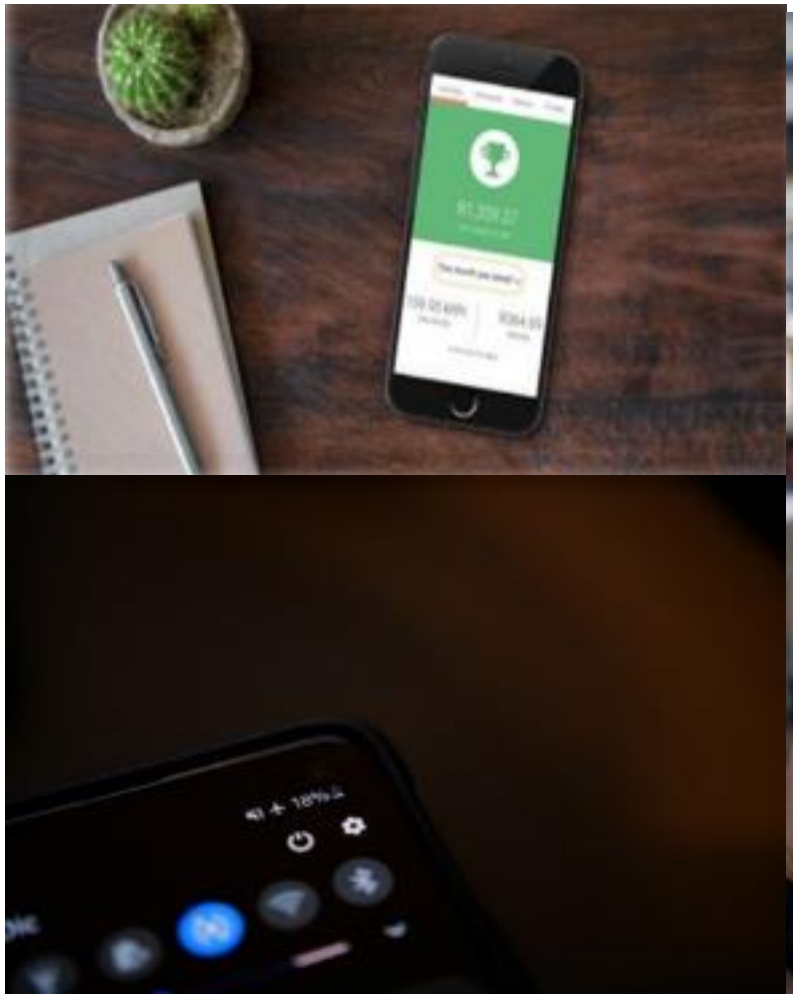
Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Piloting of Technology Innovations for the Energy Transition

The Technology Innovation component under SAGEN aims at **strengthening capacities** for developing technological innovations that contribute to an improved system integration of **variable renewable energy (vRE)**, to the clean **energy transition in the broader sense** and piloting Technology Innovations for Smart Distribution Grids

…. The programme seeks to promote technology innovations that will be tested in collaboration between the private sector (in particular SMMEs, start-ups) or research institutions and established actors in the energy sector (utilities).

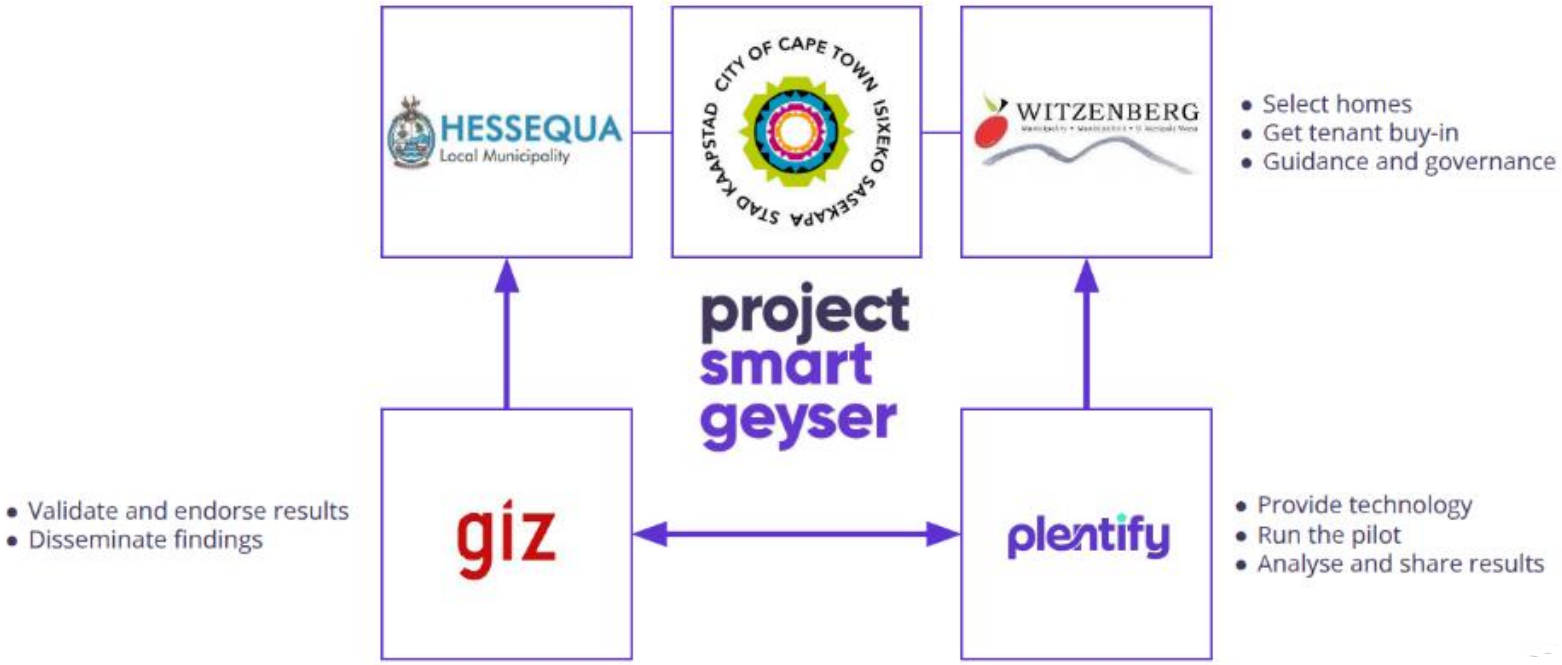


Municipalities are under strain

- Increasing peak demand which is unprofitable to supply
- Solar uptake eroding profitable electricity sales
- Loadshedding hurting infrastructure and society
- Customers defecting from the grid

Project Smart Geyser

- Project Smart Geyser is driven by 5 committed parties



Project Smart Geyser will validate the case for national rollout

project
smart
geyser

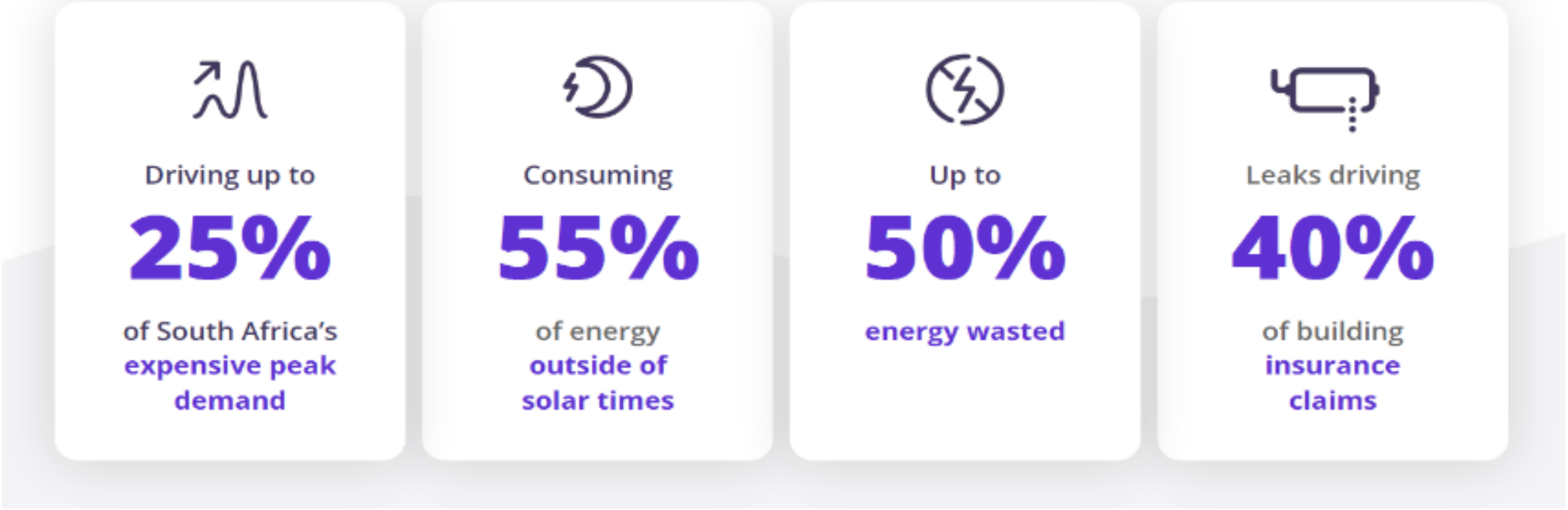
Inputs

- 500 HotBots installed across the Western Cape, predominantly in the City of Cape Town
- 1-year pilot to demonstrate three applications:
  1. Load reduction
  2. Peak shaving
  3. Solar load building

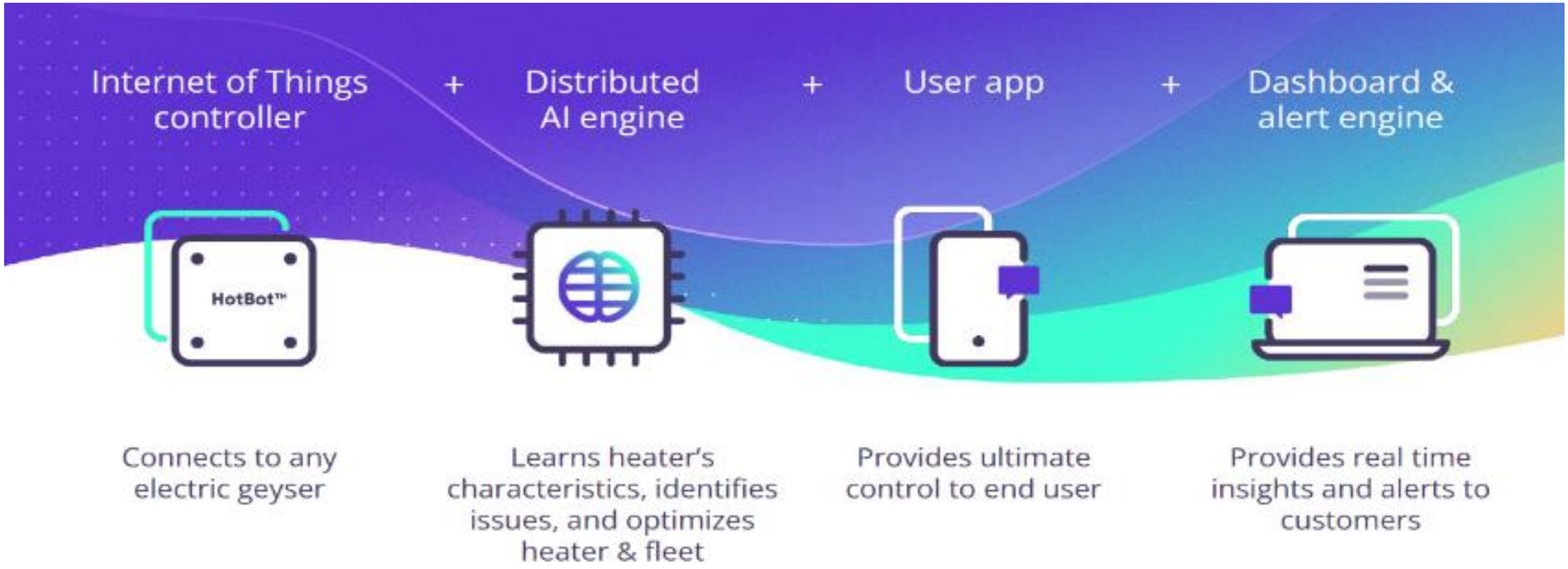
Outputs

- City of Cape Town is a flagship case study
- Independently verified results
- Catalyst for future rollout

Electric geysers present an acute problem for our wallets
and energy grids



Plentify HotBot, a custom IoT controller fused with artificial intelligence



The HotBot addresses all the fundamental issues with electric geysers

Slashes peak energy and demand

Up to 50% reduction in maximum demand

Enables more renewable energy

System sizes 75-100% larger

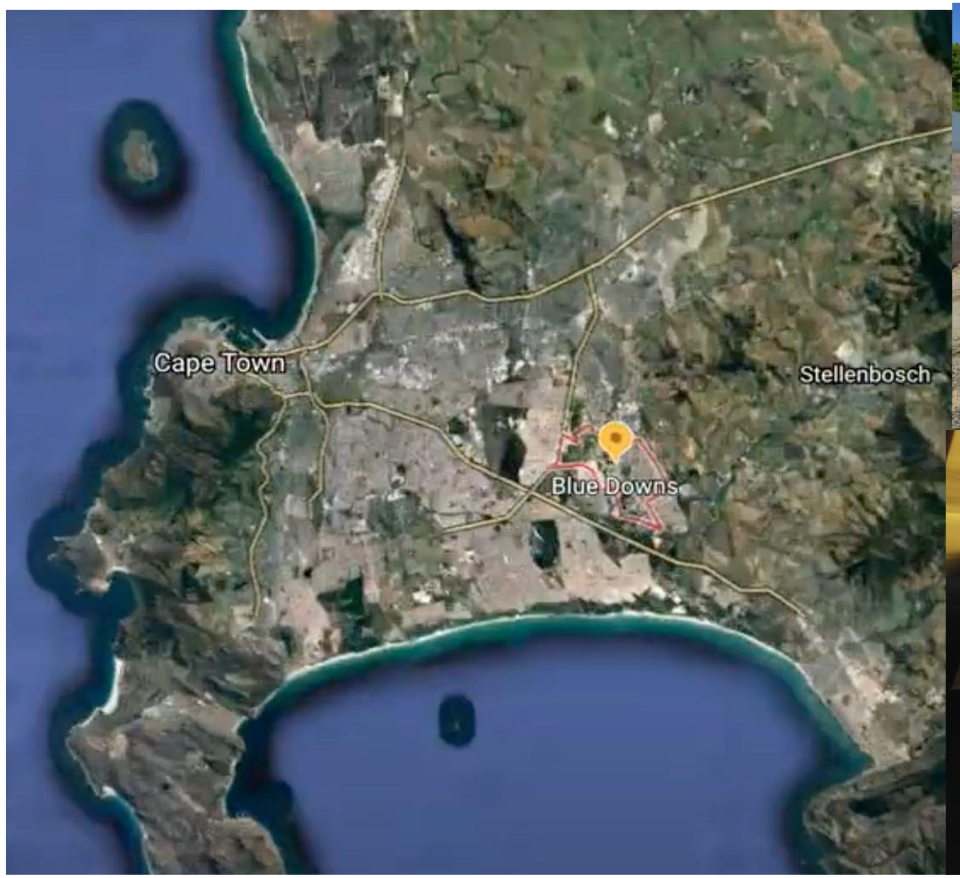
Delivers hot water efficiently

Ensures hot water when you need it, while minimizing energy use

Unlocks smarter building insurance

Reduced risk of damage and enhanced UX

Project Smart Geyser rollout is already underway



Our current priorities are focused on installation

Forming the team → **Contracting** → **Select buildings and install** → **Conduct pilot** → **Publish results**

- **Contracts already signed**
  - City of Cape Town and GIZ agreement
  - GIZ and Plentify agreement
  - Technical consultant contract
  - Installer contract signed and training conducted
- **1. Load reduction:** 100% of the devices installed
- **2. Peak shaving:** 50% of the devices installed
- **3. Solar load building:** 10-15% of the devices installed

- **12 months** of testing
- **Pilots starting in Q3**
  - Load reduction
  - Peak shaving
  - Solar load building
- **Validated results** by an independent third party consultant
- **Results disseminated to municipalities** across the country
- **Encourage national rollout** of intelligent geyser controller programmes

Thank You

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