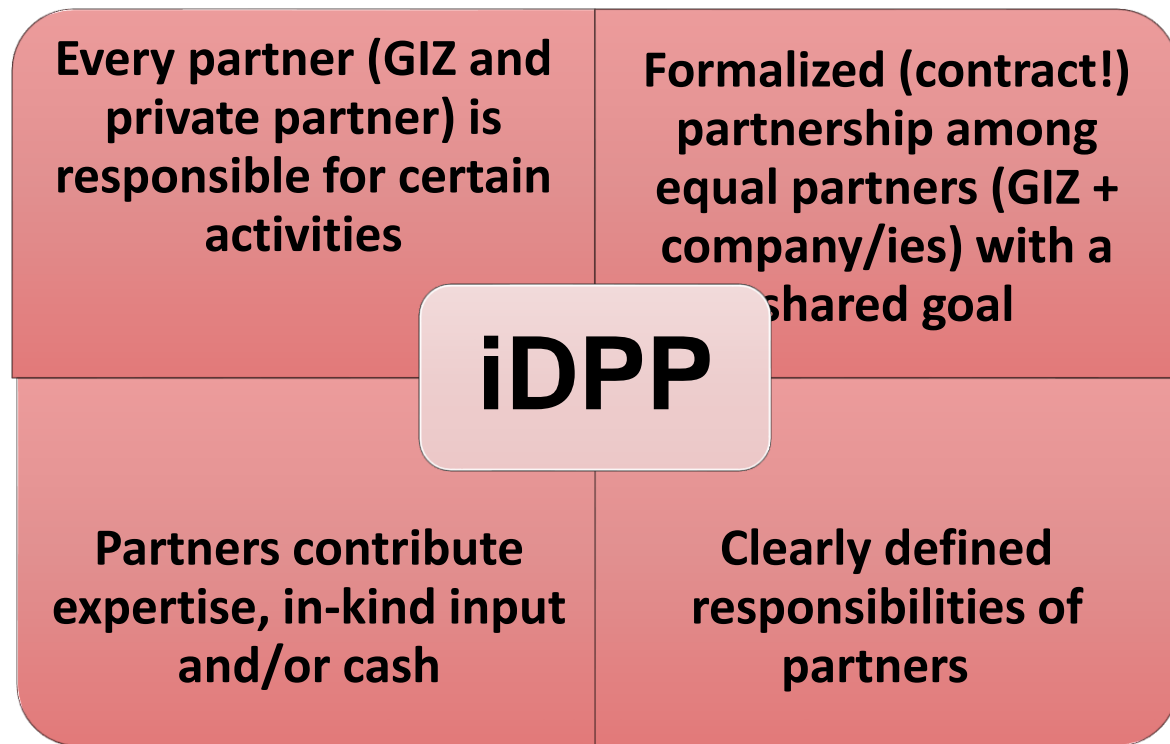


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What is an iDPP?
(Integrated development partnerships with the private sector,
Case: cooperation agreement)

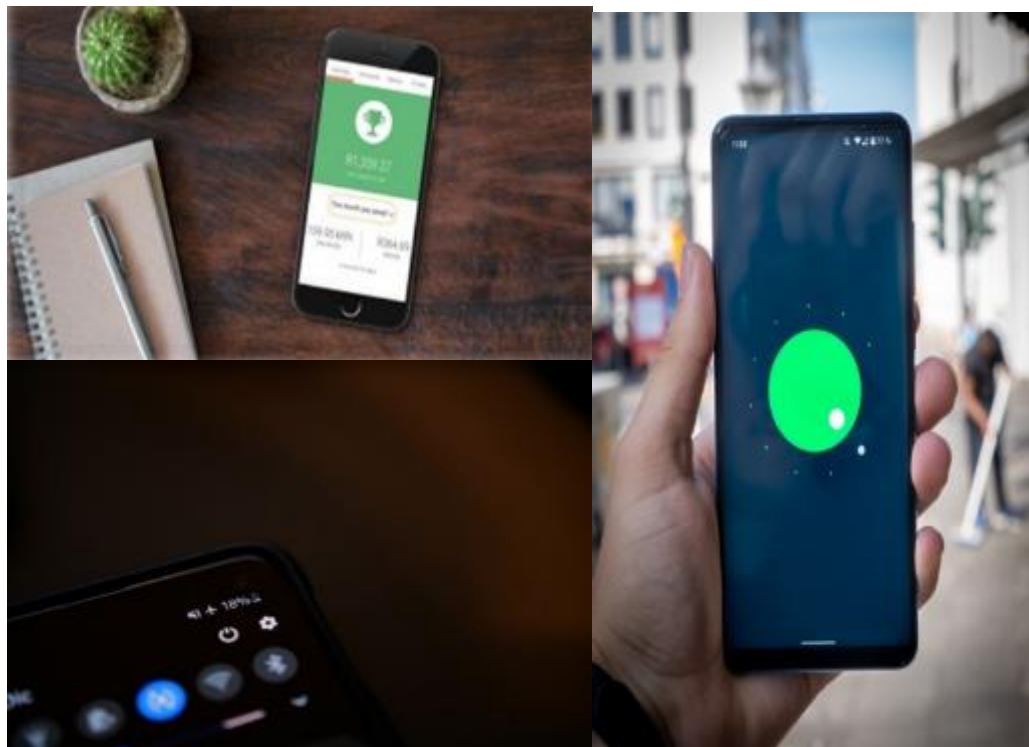


Piloting of Technology Innovations for the Energy Transition



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).



Project partners

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Funded by:



With support from:



M&V support by:



Project objectives

Can **intelligent geyser management** enable a **cheaper, cleaner, more reliable** electrical grid through the provision of **three services**:

- 1 **Load Reduction**: shifting energy use out of either Peak TOU or Rotational hours
- 2 **Maximum Demand Management**: coordinating fleets of geysers to eliminate spikes in energy use.
- 3 **Solar Load Building**: shifting energy use to solar hours, and coordinating geysers to match energy use with solar generation.

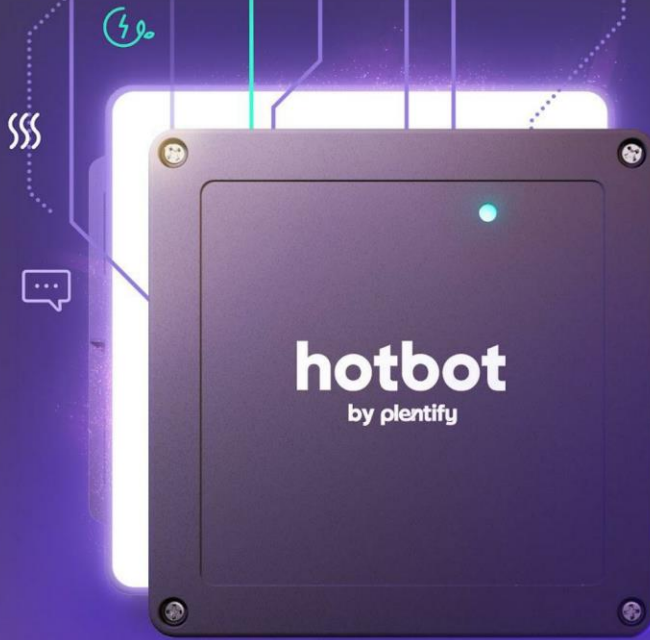
All while promoting **Energy Efficiency** and protecting **Hot Water Satisfaction**.

HotBot provided the intelligent geyser control services

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Internet of Things controller

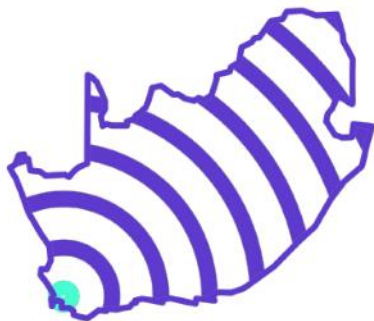
Connected to each geyser



Intelligence engine

Made control decisions based on geyser characteristics, user behaviour and preferences, and service objectives.

project smart geyser



- The project has successfully demonstrated the following across the fleet of Hotbot controlled geysers:
- Improved energy efficiency by up to 30%
- Reduced peak load by more than 80%
- Reduced maximum demand by more than 50%
- Enabled solar PV systems more than 2x the capacity with the same utilisation rate
- Achieved the above while ensuring that users get hot water when they want it





Plentify's cooperation experience with GIZ

- Actively engaged from the beginning to completion
- Showed a keen interest in achieving the project's objectives
- Highly supportive and flexible

Lessons learn and recommendations

- Continue with the exceptional levels of engagement and visibility displayed during the execution phase of the project
- Consider expanding the team conducting technical assessments of service providers to include cooperation partner
- Review the procurement policies to empower GIZ's PM to directly appoint service providers

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