

Leveraging resilient infrastructure opportunities in the Green Economy



GreenCape

Supporting the
business of green

October 2022





Who we are



How we work



Our impact



Who we are

GreenCape is a non-profit organisation that drives the widespread adoption of economically viable green economy solutions.

We work with businesses, investors, academia and government to help unlock the investment and employment potential of green technologies and services, and to support a transition to a resilient green economy.

GreenCape was established in 2010 to support the development of the green economy in the region.





Vision

GreenCape's vision is a thriving prosperous Africa mobilised by the green economy.



Mission

We work at the interface between business, government and academia in order to identify and remove barriers to economically viable green economy infrastructure solutions in developing countries, thereby catalysing their replicable and large-scale uptake to enable each country and its citizens to prosper.



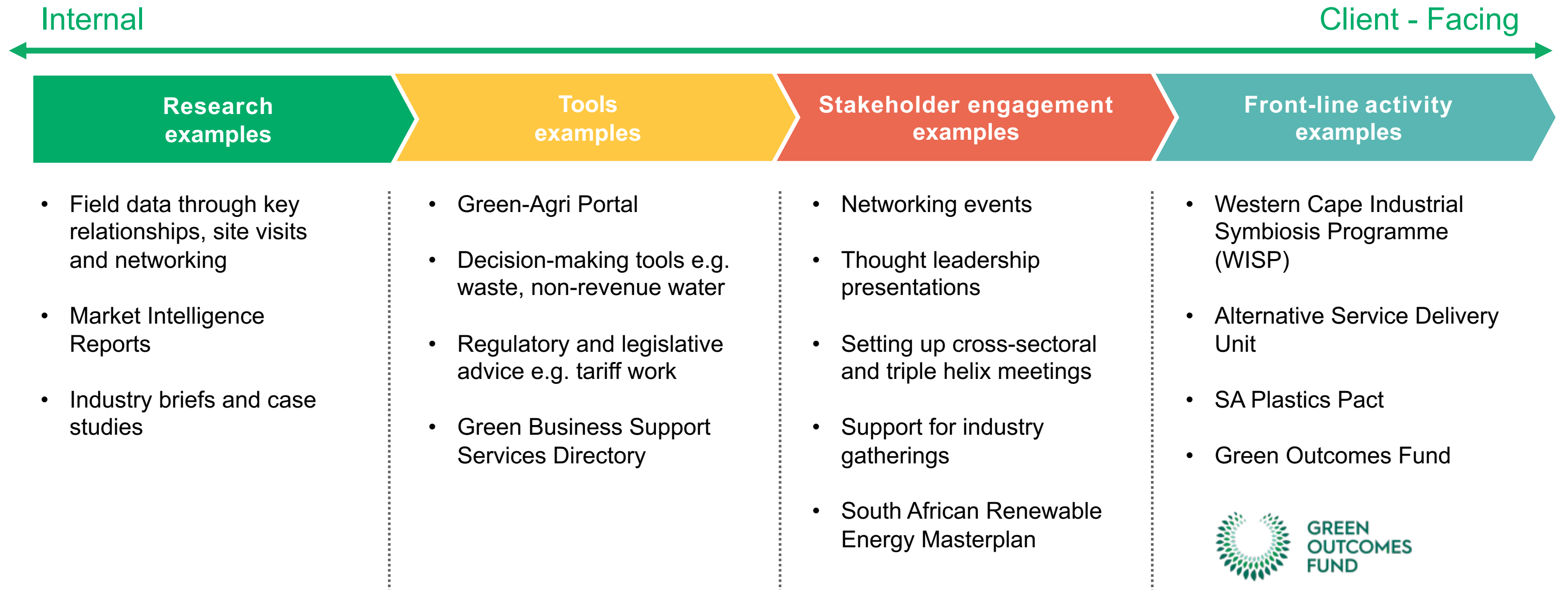
Ambition

In the next 5 years, GreenCape aims to be globally relevant in driving the uptake of green economy infrastructure solutions in the developing world context.



How we work

Examples of the range of our work across a wide variety of **sectors** and **outputs**



Our impact over 10 years



> ~ 22 000 local jobs



> ~ 2 000 members



~ R 58 billion
facilitated investment in the Green Economy



1st African Cleantech cluster member of the International Cleantech Network

Leveraging resilient infrastructure opportunities in the Green Economy

Creating jobs and investment in Mpumalanga

1. Creation of Jobs and Investment into a Green Economy is vital to create a Just Transition.
2. In the context of South Africa, simply replacing lost jobs is insufficient.

A Just Transition has many aspects:

1. **Investments** in low-emission and **job-rich**
2. **Social dialogue**
3. **Training and skills development**
4. **Social protection**
5. **Local economic diversification**

Two important Green Economy drivers:

1. **Decentralisation**
2. **Localisation**

Leverage resilient infrastructure opportunities in the Green Economy

Two projects supported by the Embassy of Denmark in South Africa

Project 1: Mining Rights mapping and planning.

- **Aim:** unlock barriers to the development of Renewable Energy projects in the area

Project 2: Alternative Basic Service Delivery.

- **Aim:** Promoting marginalised communities' participation in the green economy, increasing access to basic service

Overall outcomes:

1. Increased local jobs and investment
2. Increased renewable energy projects in the province
3. Community mobilisation, empowerment and increased basic service delivery

Mining Rights mapping and planning

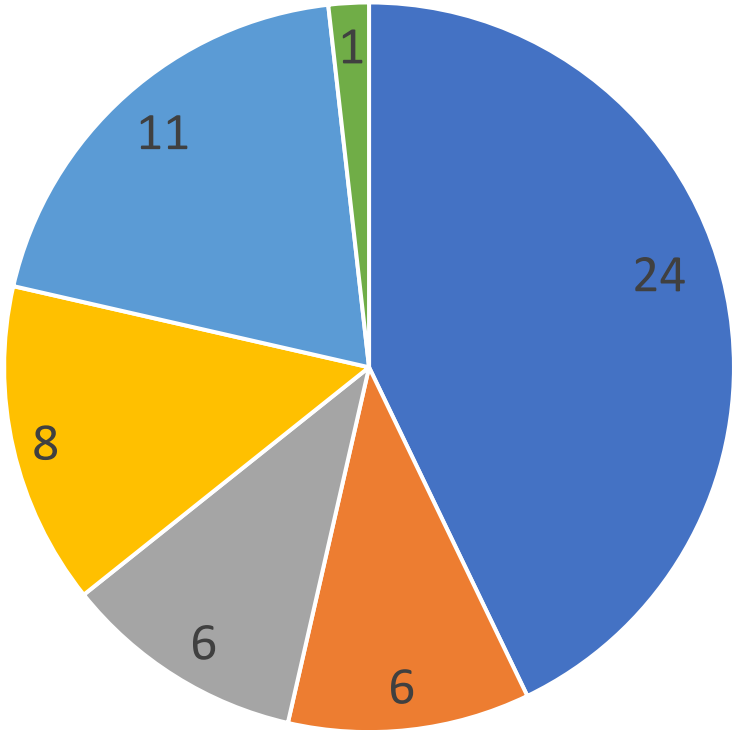
Unlocking barriers to the development of Renewable Energy projects in the area.

The Integrated Resource Plan shows a renewable energy future

	Coal	Coal (Decommissioning)	Nuclear	Hydro	Storage	PV	Wind	CSP	Gas/Diesel	Other (Distributed generation cogen, biomass, landfill)
Current	37 149	-	1 860	2 100	2 912	1 474	1 980	300	3 830	499
2019	2 155	- 2 373	-	-	-	-	244	300	-	Allocation to the extent of the short term capacity and energy gap
2020	1 433	-557	-	-	-	114	300	-		
2021	1 433	-1 403	-	-	-	300	818	-		
2022	711	-844	-	-	513	400	1 000	1 600	-	
2023	750	-555	-	-	-	1 000	1 600	-	-	
2024	-	-	1 860	-	-	-	1 600	-	1 000	500
2025	-	-	-	-	-	1 000	1 600	-	-	500
2026	-	- 1 219	-	-	-	-	1 600	-	-	500
2027	750	-847	-	-	-	-	1 600	-	2 000	500
2028	-	-475	-	-	-	1 000	1 600	-	-	500
2029	-	- 1 694	-	-	1 575	1 000	1 600	-	-	500
2030	-	-1 050	-	2 500	-	1 000	1 600	-	-	500
Total Installed Capacity by 2030 (MW)	33 364		1 860	4 600	5 000	8 288	17 742	600	6 380	-
% Total Installed Capacity (% of MW)	43		2.36	5.84	6.35	10.52	22.53	0.76	8.1	-
% Annual Energy Contribution (% of MWh)	58.8		4.5	8.3	1.2	6.3	17.8	0.6	1.3	-

REIPPP Bid window 6 bids October 2022

Location of bids

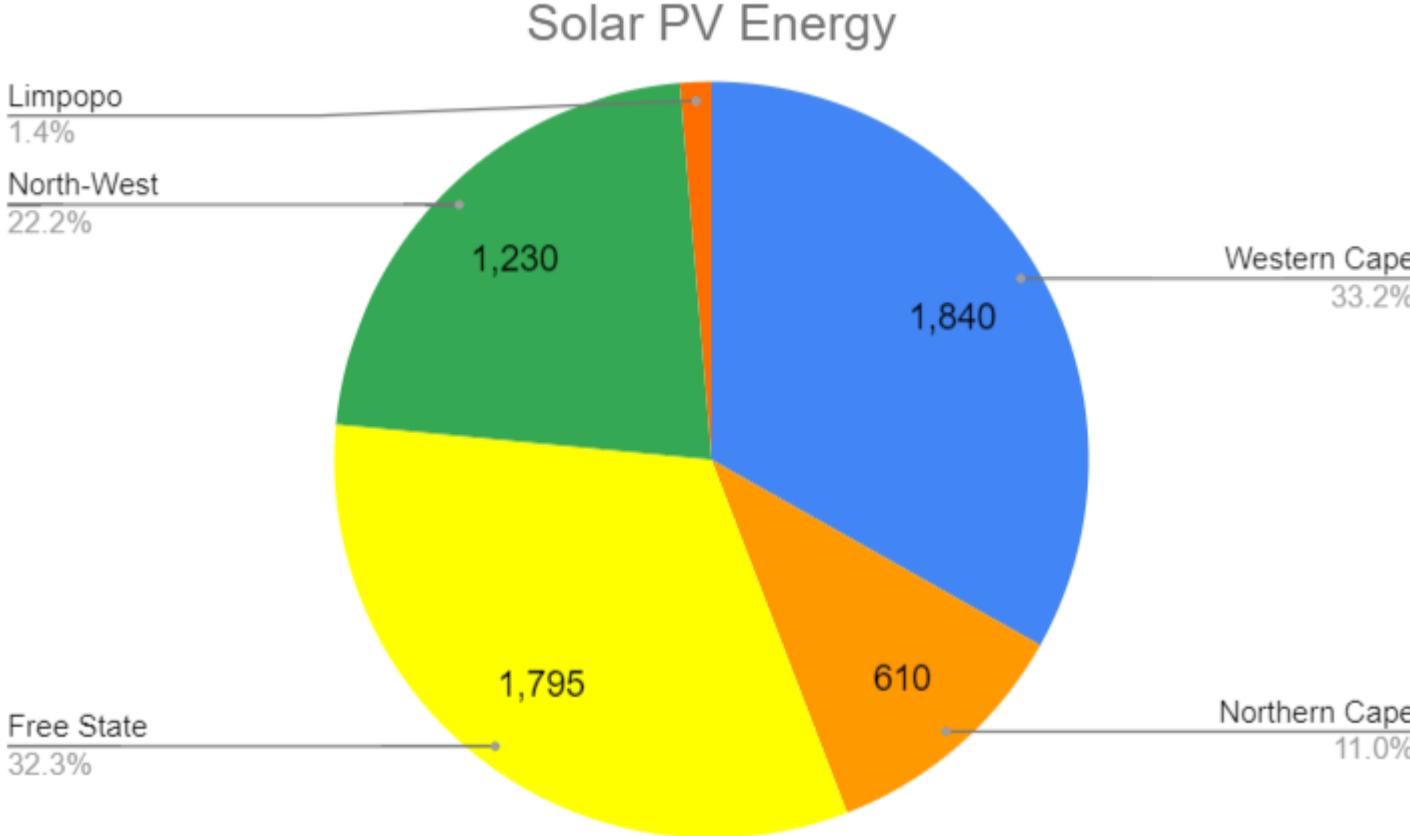
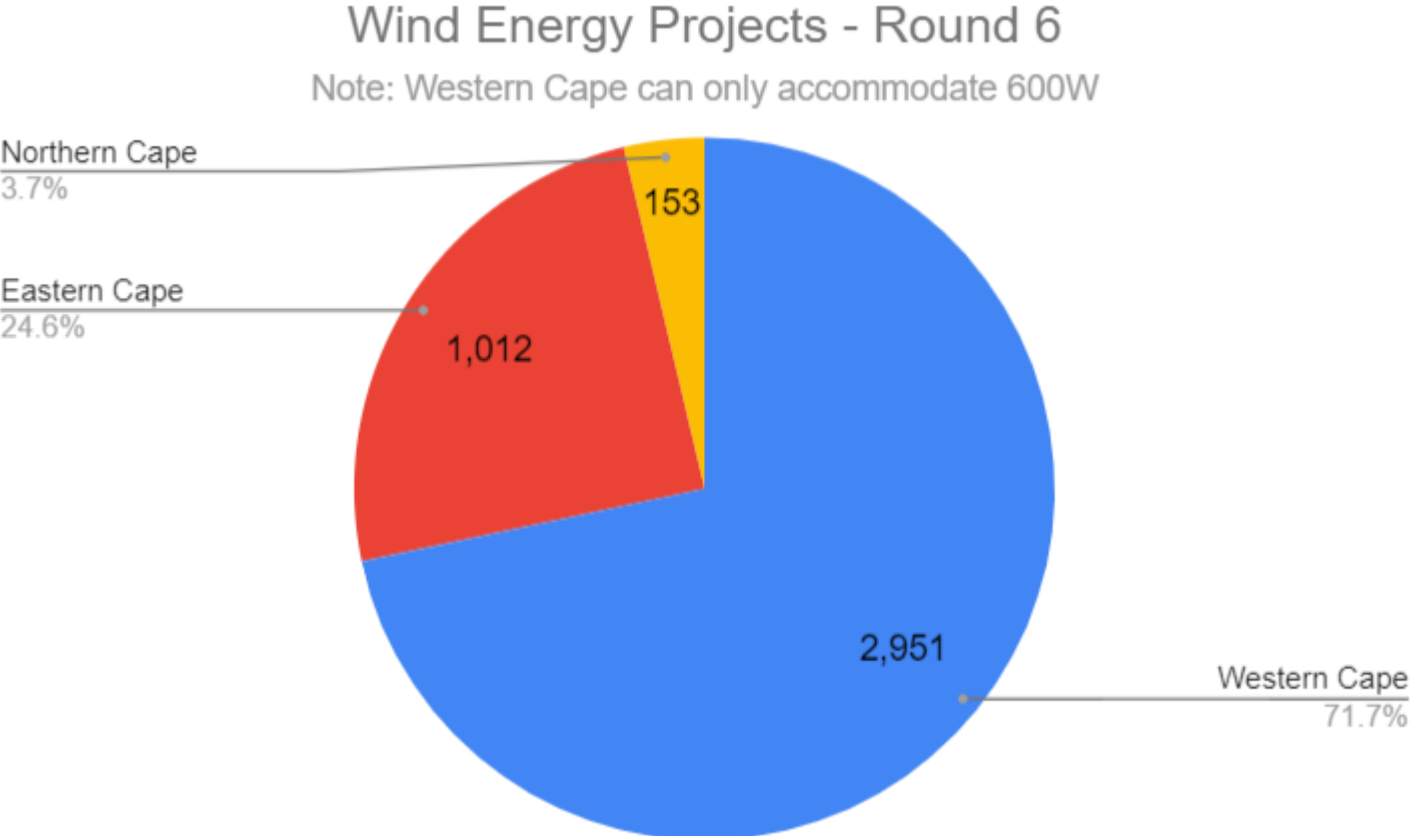


- 56 bids
- 10 GW of renewable energy
- 6 Provinces

■ Western Cape ■ Eastern Cape ■ Northern Cape
■ North West ■ Free State ■ Limpopo

REIPPP Bid window 6 bids October 2022

Wind and solar breakdown



The Mpumalanga green economy potential

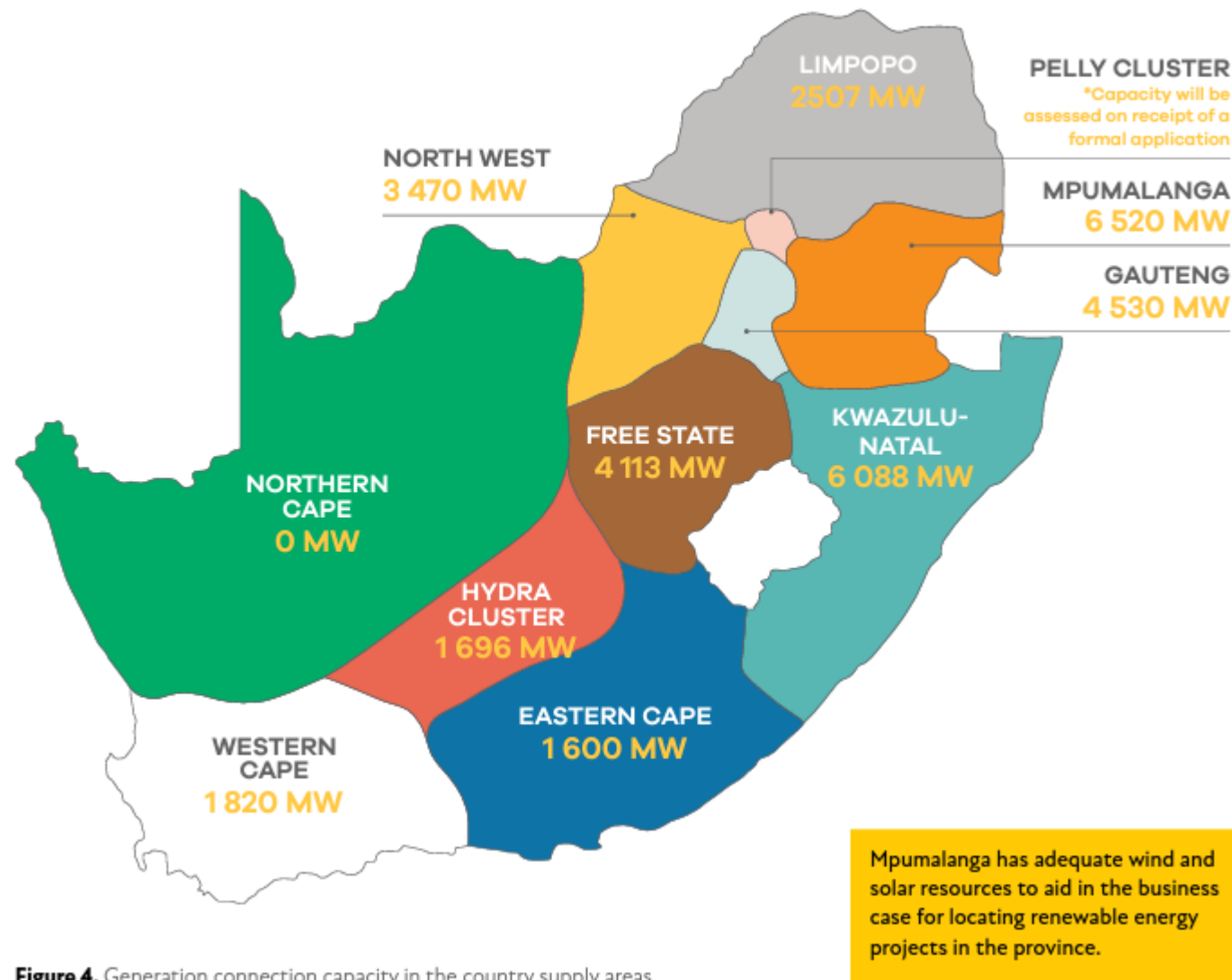


Figure 4. Generation connection capacity in the country supply areas (Source: Eskom)

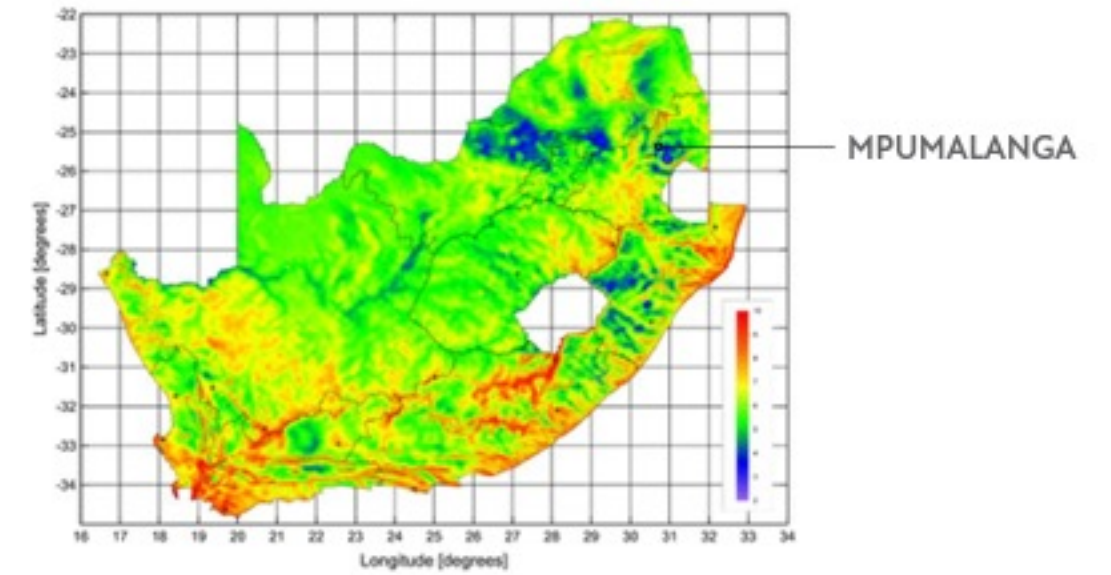


Figure 5. Wind resources map for South Africa highlighting Mpumalanga (Source: CSIR)

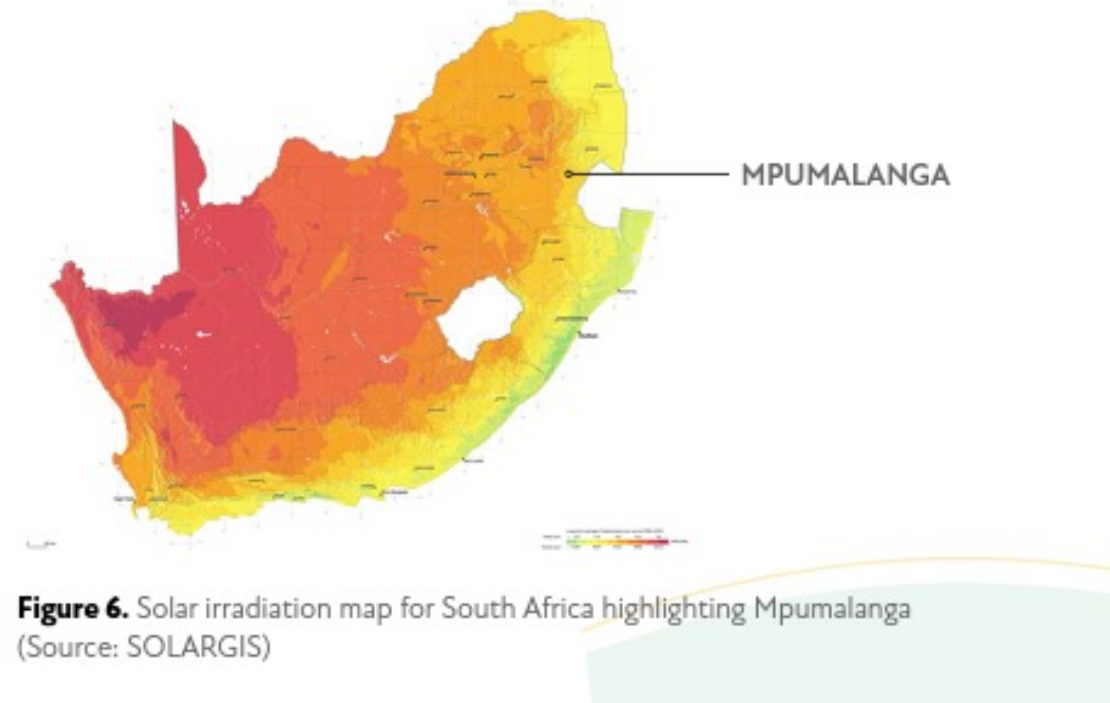


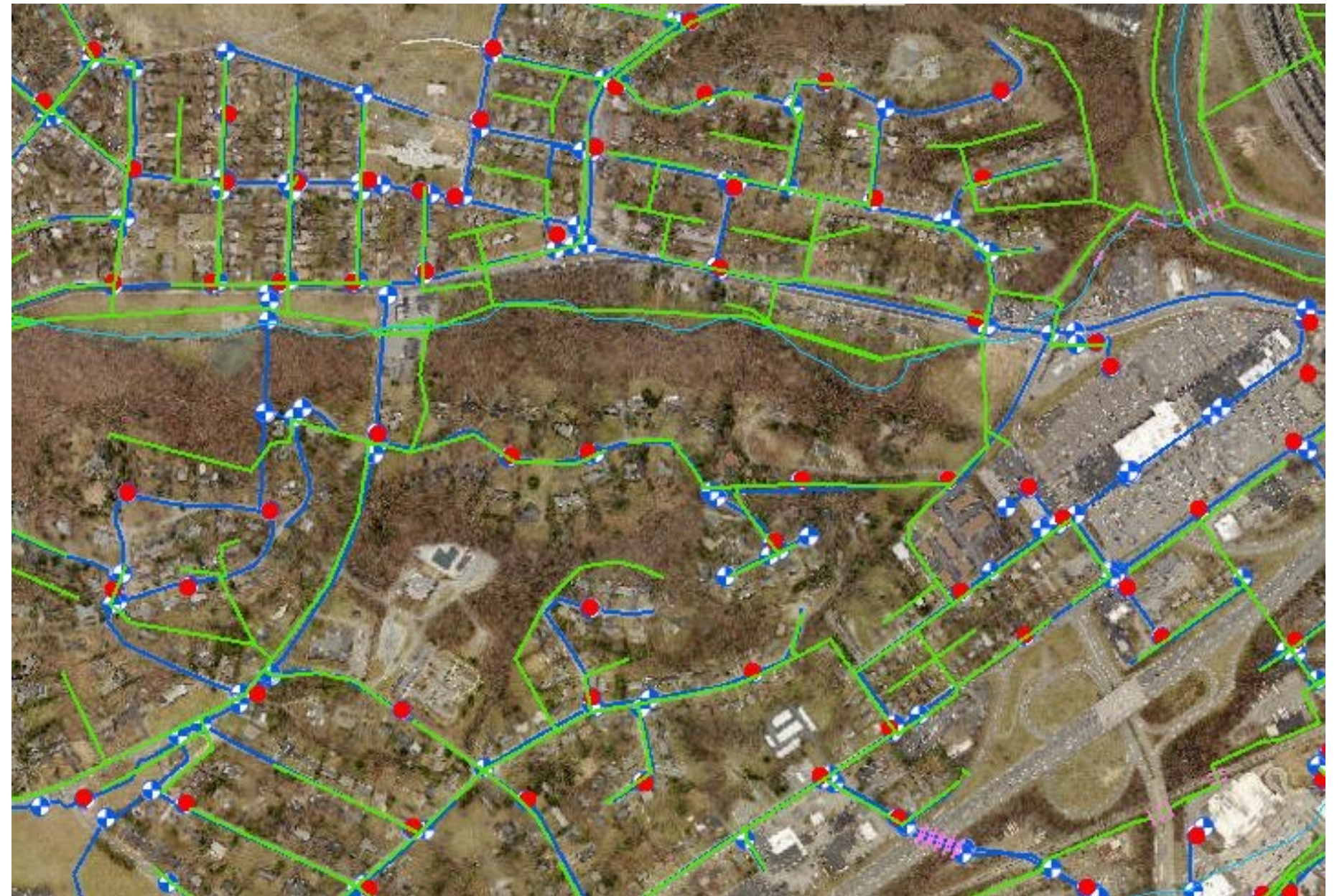
Figure 6. Solar irradiation map for South Africa highlighting Mpumalanga (Source: SOLARGIS)

Land access in Mpumalanga is a barrier to new projects

- Renewable energy technologies generally require a larger land footprint.
- Finding this land in an area with:
 - Sufficient resources (i.e. solar irradiation or wind)
 - The needed grid infrastructure
- This barrier is increased in key mining areas like Mpumalanga.

Mining Rights mapping

- An online resource to support developers
- Map current mining rights
- Integrate other possible datasets
 - Wind Atlas for South Africa
 - Solar resources map
 - Grid availability
- Reduced development costs
- Remove barriers to the development of Renewable Energy projects in the area



Alternative service delivery

Creating a service delivery mechanism that promotes the participation of marginalised communities in the green economy

Alternative service delivery

Basic service delivery is a challenge in South Africa

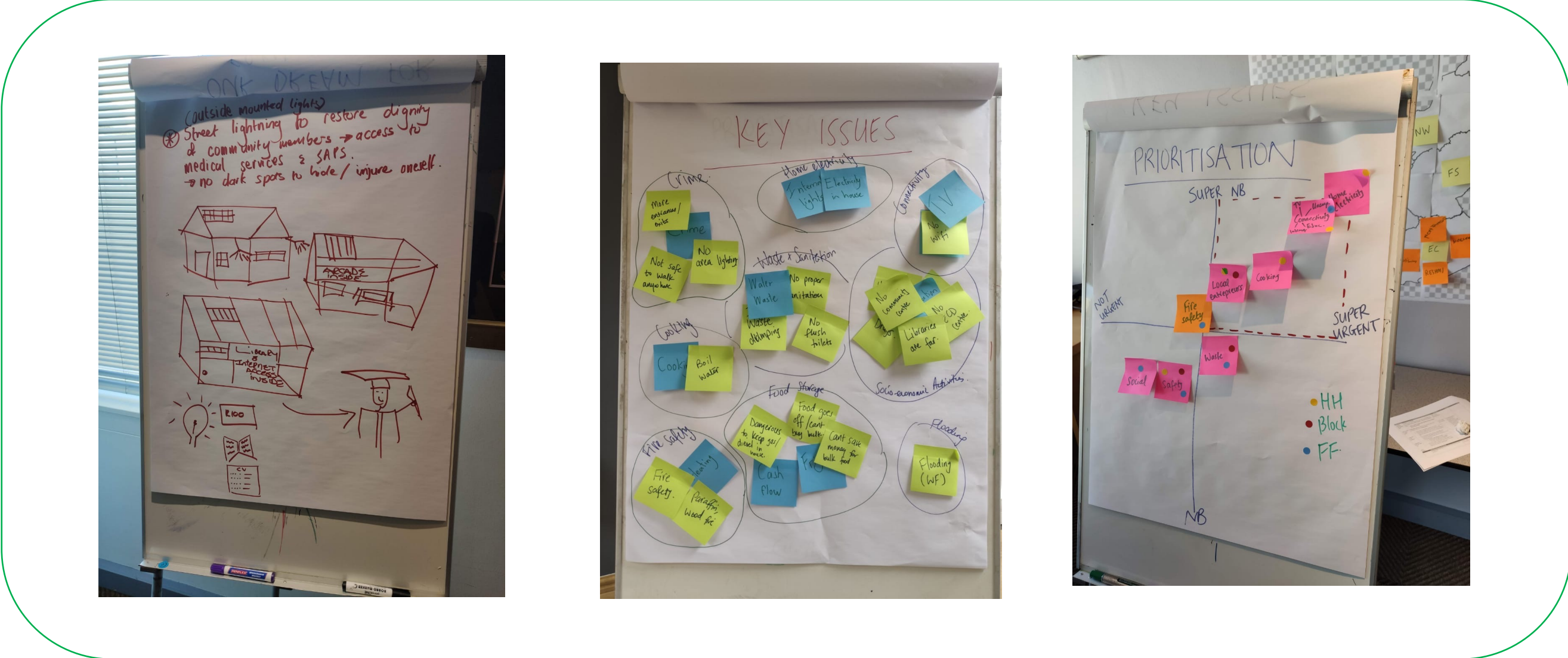
A community-led, data-driven, independent off-grid service delivery unit that oversees the design, facilitation and implementation of tailored service delivery models that are financially sustainable, technically sound and socially inclusive with local government.

A collaboration between local government, industry, CBOs and community



Data-led participatory co-design

Enumeration data



Enumeration data

Enumeration data

Enumeration data

Hopeful outcome – Service Delivery, building rate payers

Community mobilisation, empowerment and increased basic service delivery



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Thank you

www.greencape.co.za

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