

Strengthening the adaptation capacity of industry for a **green and resilient economy** in South Africa



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Enterprise Support Perspective:

1. Build Localised Innovation on Adaptation:

South Africa's unique environmental challenges demand home-grown cleantech solutions, leveraging the strengths of local enterprises to address energy, water, and resource constraints.

2. Enterprise / Firm Level Development:

Building technical and entrepreneurial capacity through tailored accelerator programs ensures that green enterprises are equipped to scale, compete, and deliver long-term value in a green economy

Enterprise Support Perspective:

3. Access to Capital:

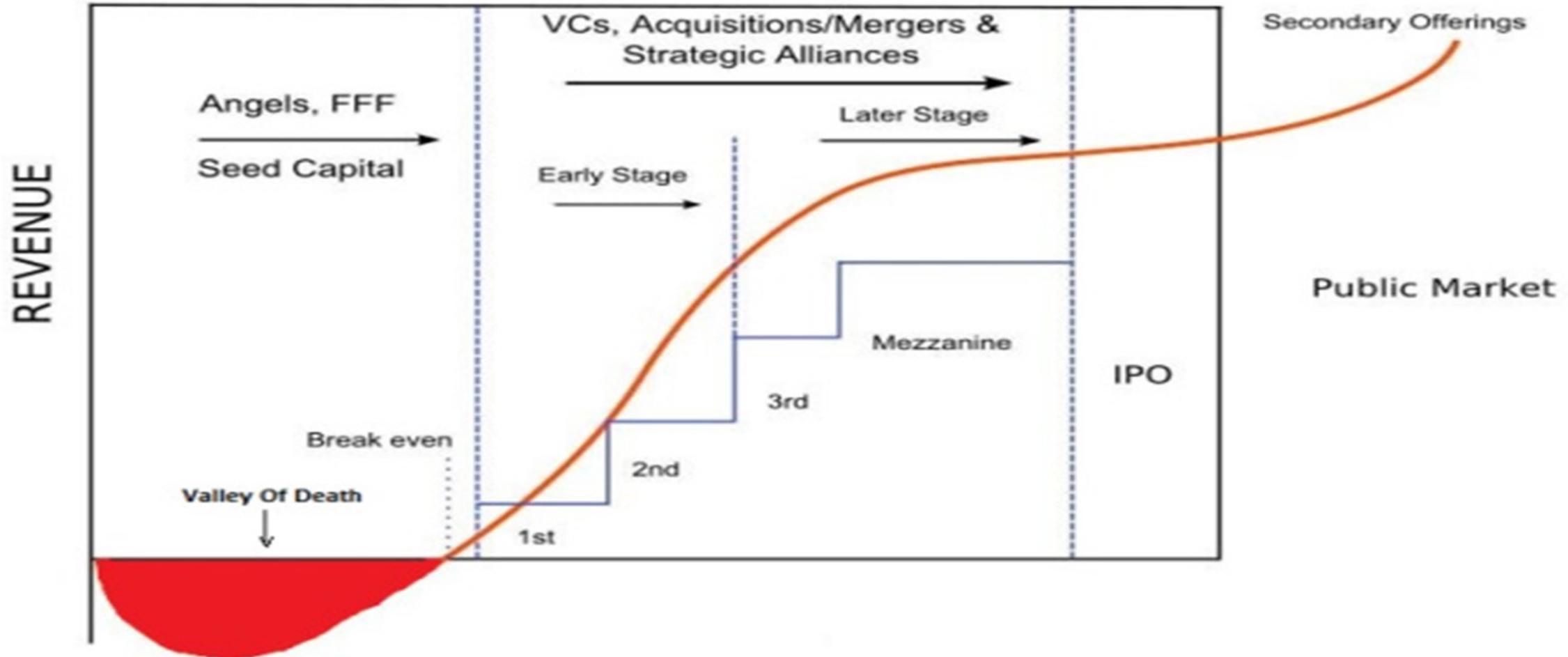
Unlocking the right financial support for **early-stage green enterprises** is critical. A **blend of risk capital at pre-seed and seed stage**, impact investment, venture capital, government-backed initiatives (incentives) must drive innovation in sustainable sectors.

4. Technology Transfer:

Accelerators play a crucial role in facilitating access to global technologies and expertise, ensuring South African enterprises can adopt and localise cutting-edge solutions for sustainability.

Start-Up Funding Stages

Startup Lifecycle



Enterprise Support Perspective:

5. Policy Alignment:

Enterprise acceleration should work in tandem with South Africa's climate change economy strategies, including the Just Energy Transition, ensuring regulatory support and industry incentives that drive green growth.

Common challenges facing all growth stage technology ventures and additional challenges unique to cleantech ventures

Growth Stage Ventures – Common Challenges	Cleantech Ventures – Additional challenges unique to this sector
Team building	Long product development cycles
Technology development	Capital intensive prototypes
Product development and reliability testing	Safety testing and certifications
Business model validation and scalability	Long sales cycles
Operations management	Large working capital needs
Supply chain development	Long term product support
Distribution network development	Field support
Organisational structure definition	
Legal affairs	
Working capital financing	
Capital funding	
Financial management	
Corporate governance	

3 Crucial Start-up Stages

Problem-Solution Fit

1

2

Product Market Fit

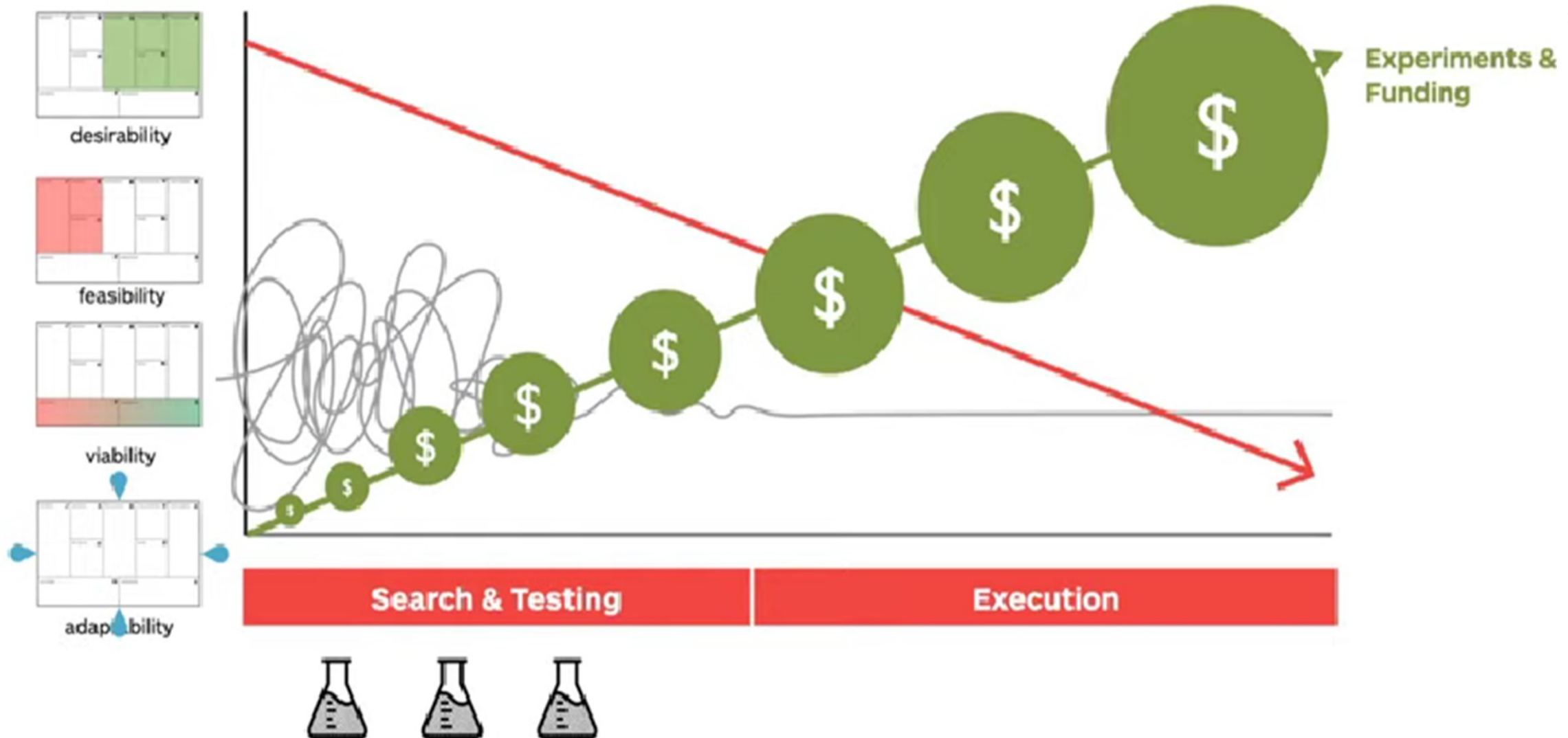
Scale

3

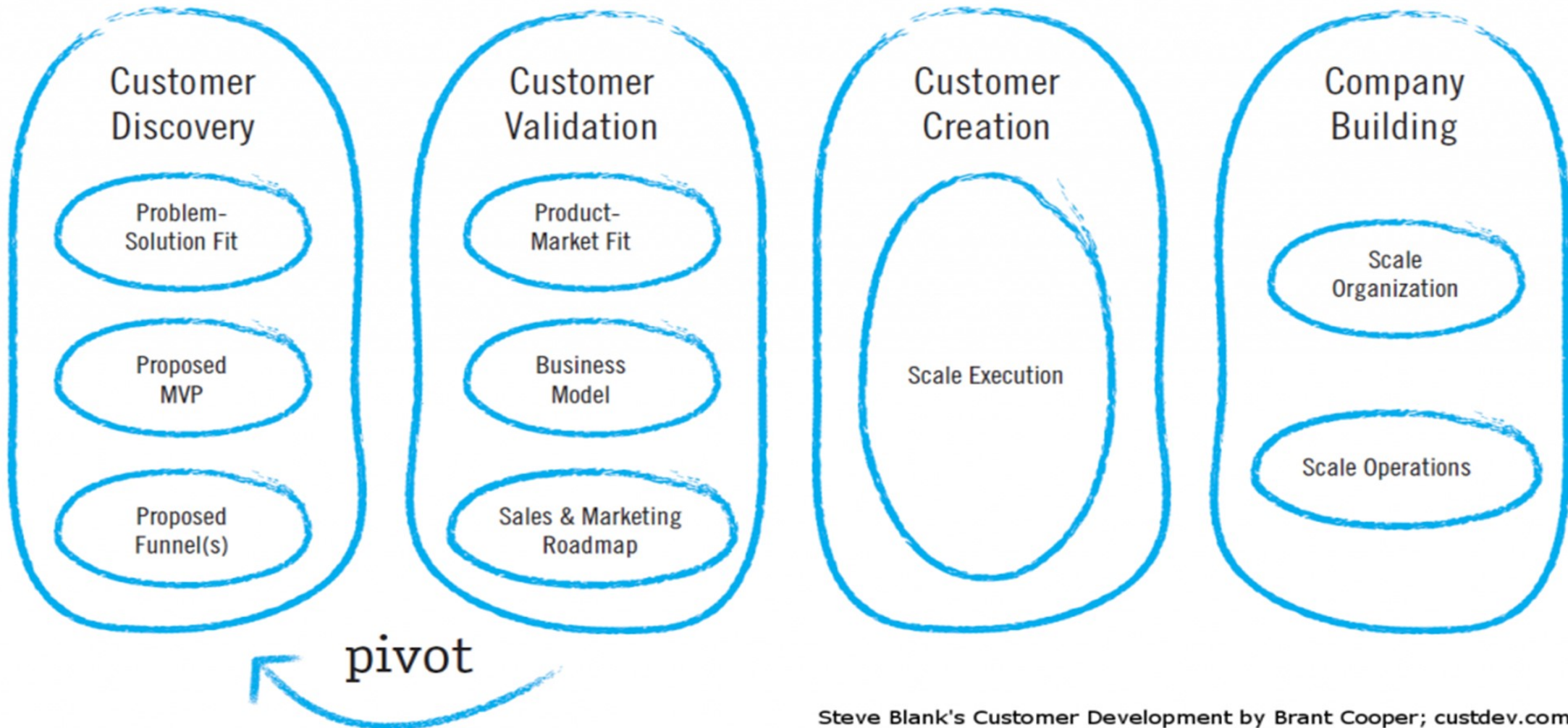
Reducing Uncertainty



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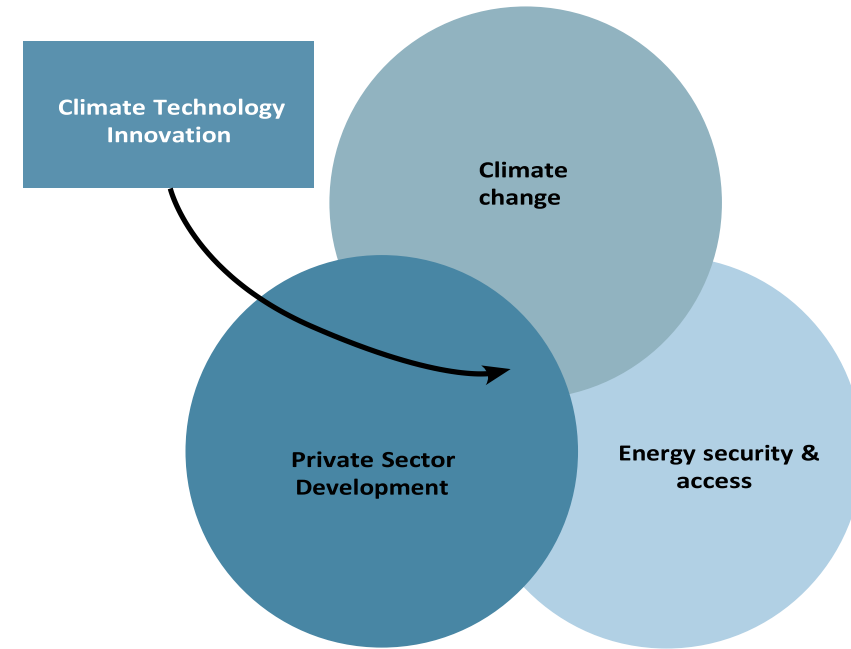
Customer Development



Steve Blank's Customer Development by Brant Cooper; custdev.com

CleanTech Hub Enabling Infrastructure





Source: infoDev

Northern Cape - Just Energy & Digital Transition (JEDT)

NORTHERN CAPE INDUSTRIAL CORRIDOR

Boegoeberg se Baai Green Hydrogen SEZ

- First green, green hydrogen special economic zone for the globe.
- Lighthouse investment for the country as part of the just energy transition trajectory.

Namakwa SEZ

Green field special economic zone focussing on mineral beneficiation , manufacturing and petro chemical and agro-processing.

Kathu Industrial Park

- New industrial and commercial development located in Kathu.
- At the heart of the mining and renewable energy sectors .
- Conveniently situated directly off some of the main regional routes,
- Easy access to national roads to Gauteng, Cape Town and Namibia.

Upington Industrial Park

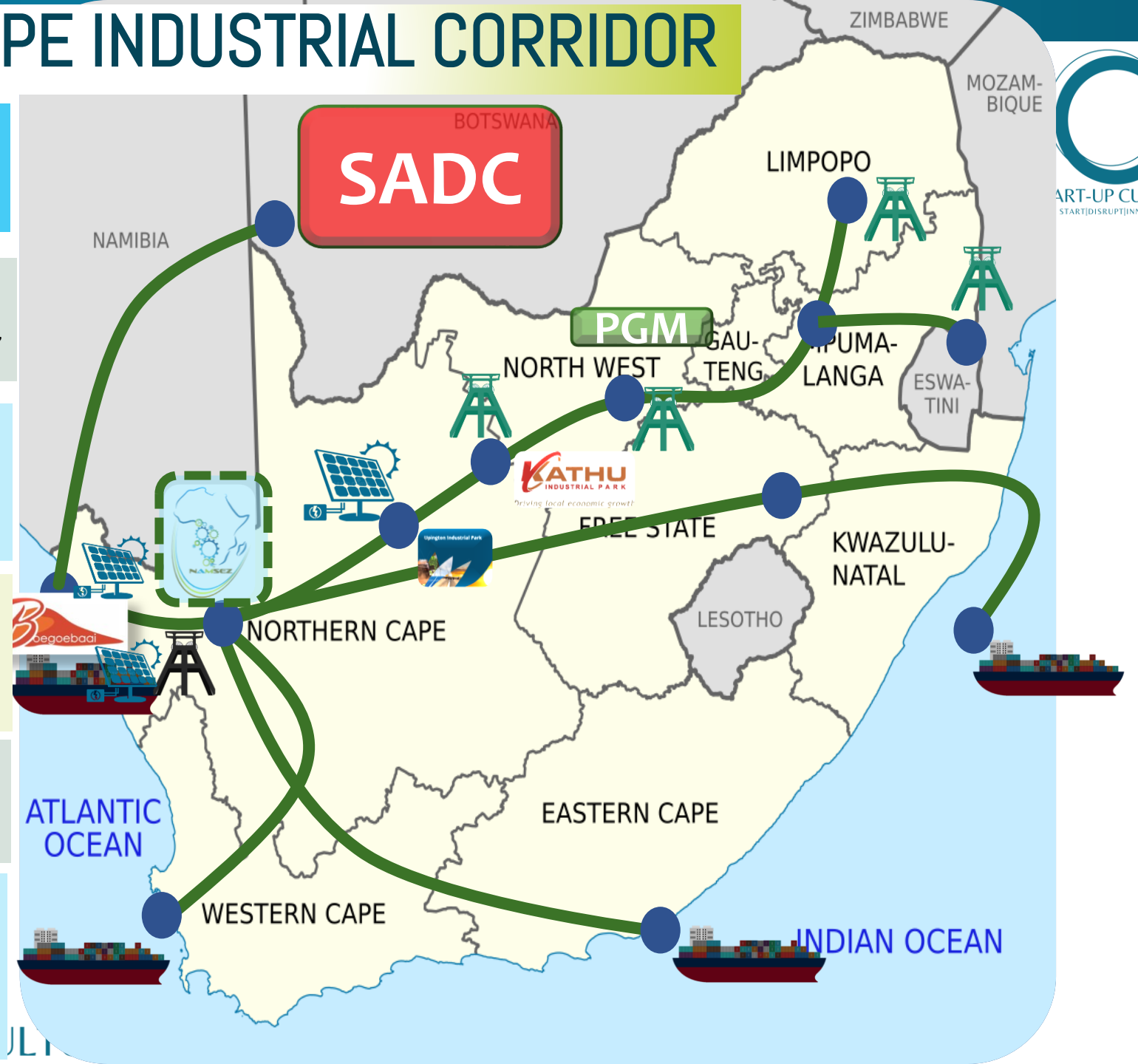
- The Upington Industrial Park is a business entity of the Northern Cape provincial government, responsible for leading a manufacturing revolution in the renewable and solar energy, mining, agricultural, aeronautical and other sectors.

Prieska Power Reserve

- The first green hydrogen project coming upstream for the Northern Cape.
- This will enable mobility and micro grids that will decarbonise hard to abate sectors.

Boegoeberg Harbour and Rail Project

- RFQ for development and finance has been issued by Transnet.
- A greenfield, deep-water port comprising two berths; one dry bulk export berth and one break bulk berth, supported by a 550 km railway line.
- Will focus on exporting bulk commodities (such as manganese, iron ore, etc.), breakbulk (such as agricultural produce) and container staging.

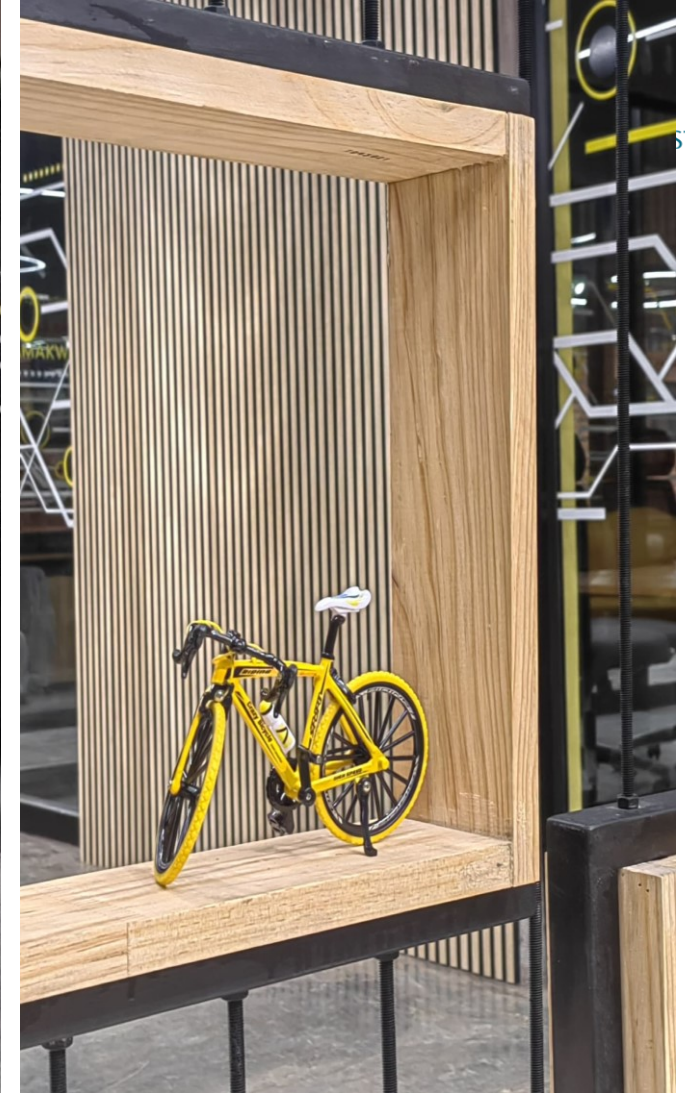




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Address: Namaqualand Campus, Main Road, O'Kiep, 8270



The Future of TVET



Cleantech Accelerator (CTA) – Vertical Focus

- Renewable Energy
- Building Electrification
- Energy Management
- Electric Vehicle Value (EVs) Chain
- Batteries and Long-term Energy Storage
- Energy Production
- Critical Mineral Deposit Discovery (AI) software to discover critical minerals like Lithium, cobalt, nickel, graphite, manganese
- Carbon Removal and Carbon Capture
- Renewable Fuels for the Shipping, Trucking and Aviation
- Advance Energy Generation
- Green Agriculture, Construction,
 - Climate Adaptation
 - Climate Intelligence
 - Fires
 - Drought
 - Water
- Green Fintech



Provincial Focus – NC

Mpumalanga Province – Kriel Case Study



New Industries looking at Agriculture



Digital Conversion

Why This is a Key Opportunity:

Real-Time Emissions Monitoring:

As regulations tighten, coal mines and power plants will need sophisticated systems to continuously monitor and report emissions, including CO₂, NO_x, SO_x, and particulate matter.

Predictive Maintenance:

IoT sensors and analytics can predict equipment failures, optimize maintenance schedules, and reduce downtime, increasing efficiency and reducing the environmental impact.

Energy Efficiency Optimization:

Data-driven insights can identify inefficiencies in energy use, enabling operators to optimise fuel consumption and reduce greenhouse gas emissions.

Environmental Compliance:

Ensuring compliance with increasingly stringent environmental regulations will require real-time data tracking and reporting, necessitating specialized digital platforms.

Sustainability Reporting:

These platforms can also support sustainability reporting, providing stakeholders with transparent data on environmental performance. ESG Reporting



Gauteng Project – Small Vertical Poultry Farm

- Vertical Farming across poultry value chain
- Clean Energy Solar PV to take the hatchery off grid
- Borehole water system taking the pilot farm off water grid
- Retail Facility

Next Phase:

- IOT and Robotics Data system
- Recycling of both broiler and layer manure into liquefied fertilizer



Use cases on adaptation

Drone Accelerator Program

09:00 - 10:00 am



Renewable Energy Accelerator Program

10:30 - 11:30 am



Green Micro-Mobility Accelerator Program

12:00 - 13:00 pm



TIA SAIA Accelerator and Advance Accelerator – 5 High Growth Enterprises

