THE INNOVATIONHUB®
Innovation Catalyst for Gauteng City Region
A subsidiary of the Gauteng Growth and Development Agency

The Green Economy Transition in South Africa

A case of CICSA

Women in Green Economy Webinar

Presenter: Dr R Melamu

Date: 17th November 2020

GAUTENG PROVINCE
ECONOMIC DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

GAUTENG

GAUTENG GROWTH AND DEVELOPMENT AGENCY

Who we are: The Innovation Hub

'We guide today, so you can help build tomorrow'

GAUTENG PROVINCE
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it starts here

GGDA
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THE INNOVATION HUB®
Innovation Catalyst for Gauteng City Region

- Aim: lead, facilitate and manage sustainable job creation and inclusive economic growth and development in the Gauteng City Region
- Aim: enable economic development that is focused on creating sustainable jobs
- Aim: fostering economic development and competitiveness through innovation

Climate innovation Center South Africa

maxum

BIO PARK @Gauteng
Accelerating Life Sciences Innovations

eKasi LABS

Green economy | Smart industries | Bio-economy | Township economy

The Green Economy Unit Focus

TIHMC broad focus areas:

- Smart Industries
- Bio-economy
- **Green Economy**

+ Science Technology Park & eKasiLabs

The Green Economy Unit focuses on the following sectors:

- Clean energy
- Waste management
- Water & Sanitation

Recognition of significant job creation potential of these focus areas (ASSAf, 2008), Opportunities for addressing the ***NDP, AU Agenda 2063 and SDGs***

Supporting green enterprises: Climate Innovation Centre South Africa (CICSA)

- **Climate Innovation Centre South Africa (CICSA) Business Incubator** provides business development support to tech/innovative start-ups in the green economy sector in collaboration with the World Bank's InfoDev
  - Eight CICs around the world: Kenya, Ghana, Egypt, Morocco, Caribbean, Vietnam, Nigeria

- CICSA funded by the Development Bank of Southern Africa (DBSA) Green Fund.
  - R15 millions over 2-3 years (from 2015-2017)

Introduction to Green Economy Unit

Part of a global Network of 8 Climate Innovation Centres that are managed and supported by World Bank's InfoDev unit

Contextualising our green economy efforts

- It is not a specific sector (a philosophy for growing/developing an economy)
- 3 widely accepted characteristics:

Source: Australian National University

Low carbon energy sources

Source: https://resource.co/article/resource-efficiency-fastest-way-cut-carbon-emissions-new-report-claims-12631

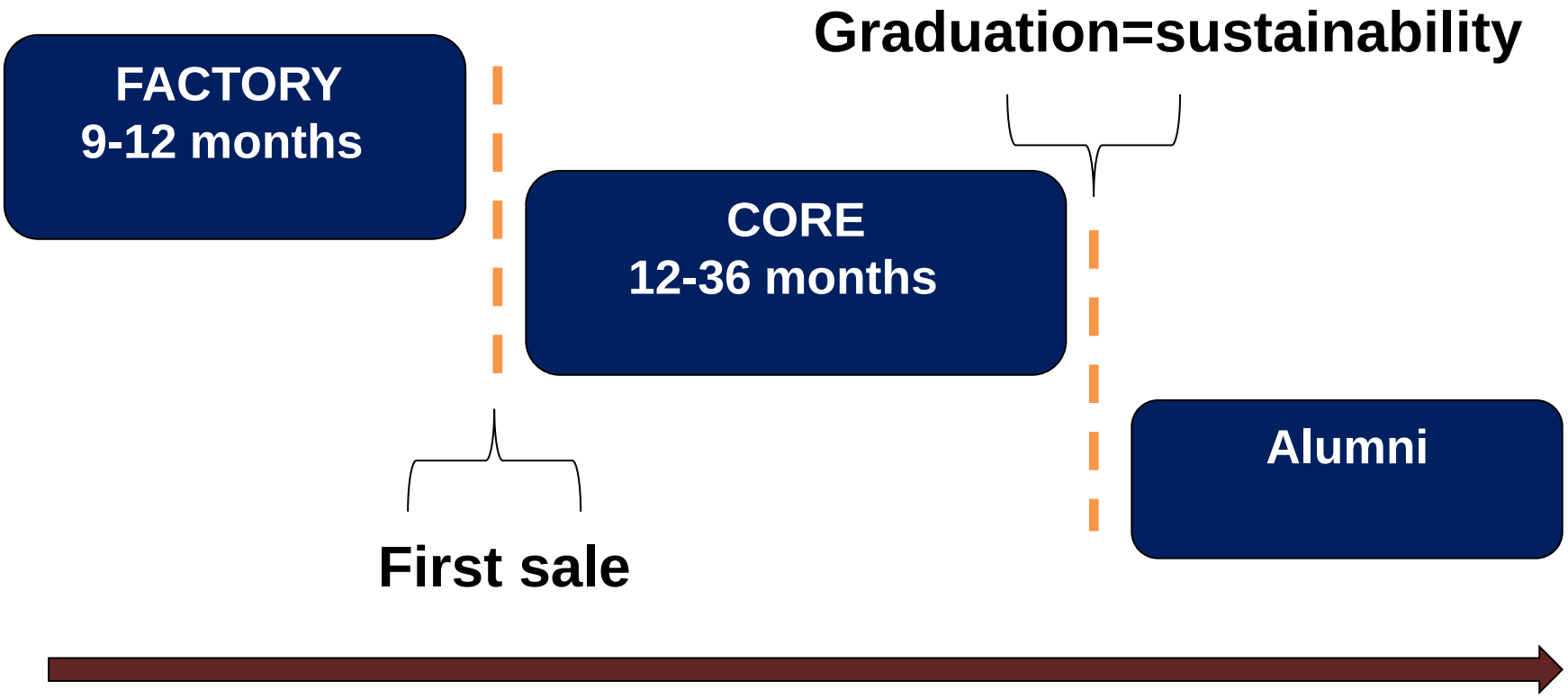
Resource efficiency

Socially inclusive

Challenges faced by green entrepreneurs

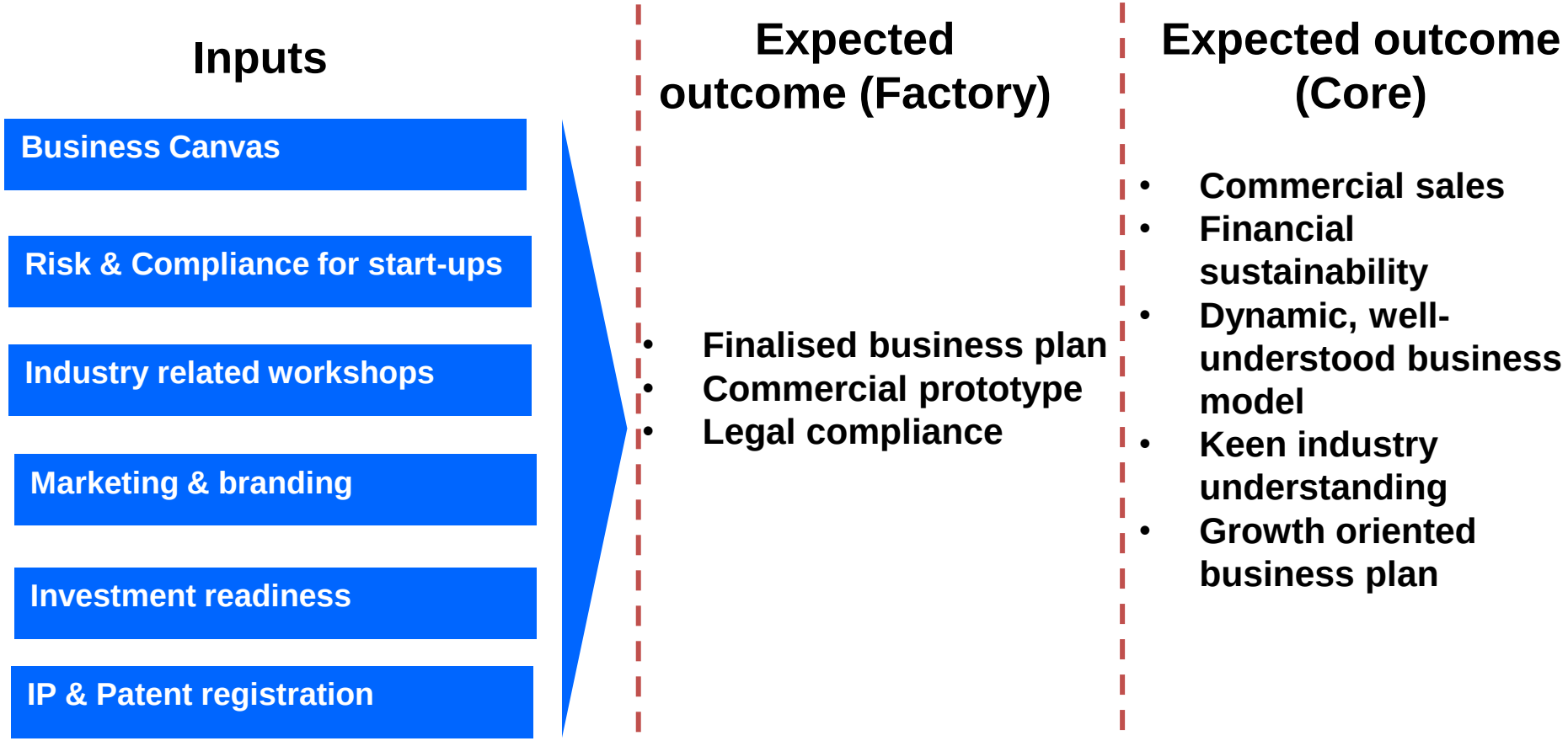
- **Green Economy→ Highly regulated**
  - Limited understanding of green economy opportunities within regulatory framework (Develop market intelligence reports and provide linkages and networks)
- **Funding**
  - Particularly for early stage business/product development
  - Due diligence and articulation of business case
- **Innovation vs entrepreneurship**
  - Focus on product (and patents)/services vs. building a business
  - Single owner vs. team
- **Inadequate assessment of product market fit**
  - Not enough engagements with market segment/customer

Our intervention: incubation overview



Implementing the incubation programme:

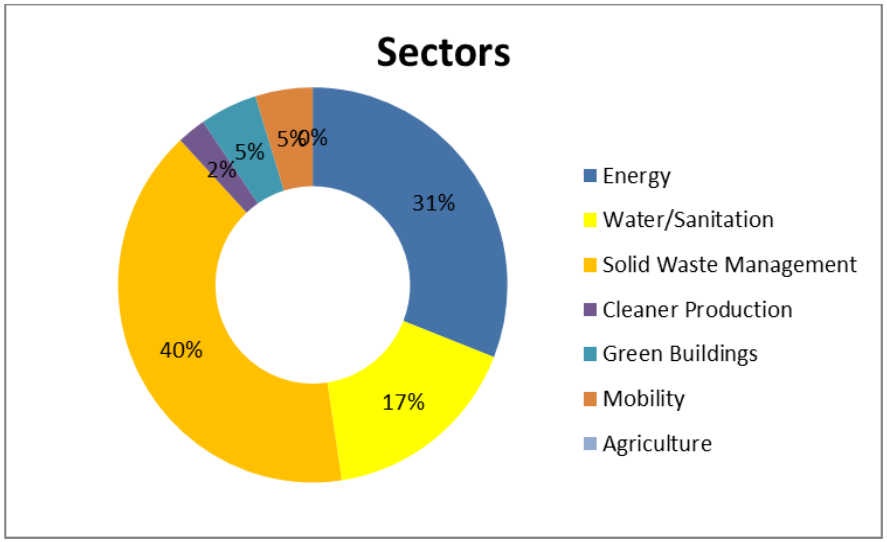
Strategies & expected outcomes

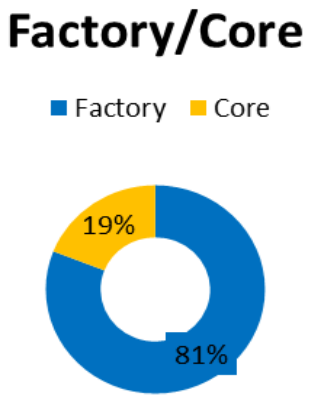


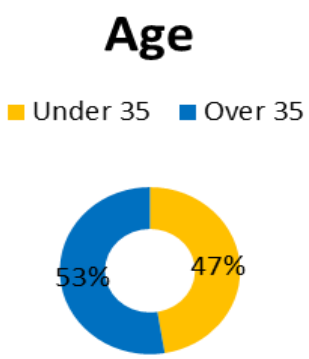
Incubation Value Proposition

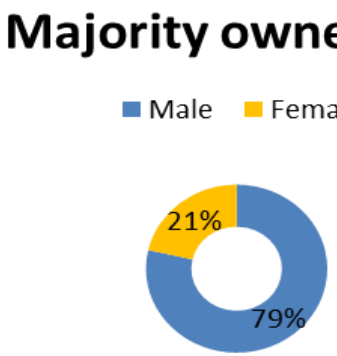
	Factory	Core
Access to Advisory and Skills Development		
Intellectual Property (IP) management and legal advisory	✓	✓
Business and technical advisory and mentorship	✓	✓
Business case development	✓	
Business and technical training	✓	✓
Product development	✓	
Access to Markets		
Market and industry reports	✓	✓
Soft-landing opportunities through introductions to public and private sectors	✓	✓
Assistance with market analysis	✓	
Industry/sector specific networking events	✓	✓
Networking opportunities	✓	✓
Access to Infrastructure		
Office space at subsidised rates	✓	✓
Manufacturing and laboratory space at subsidised rates	✓	✓
Hot-desking space	✓	✓
Free high speed internet	✓	✓
Boardroom with video conferencing facilities for meetings	✓	✓
Access to Funding Opportunities		
Internal (subject to availability)	✓	✓

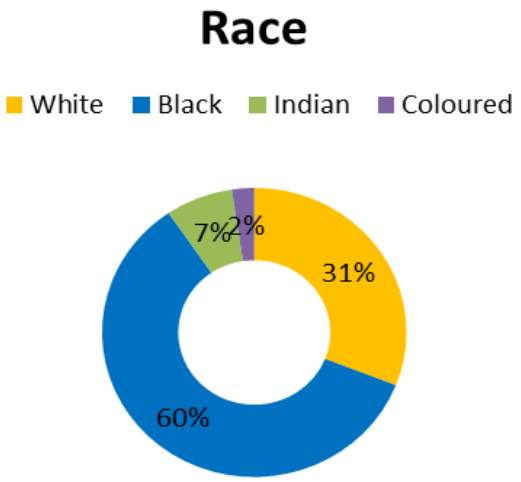
Dashboard – Total 44



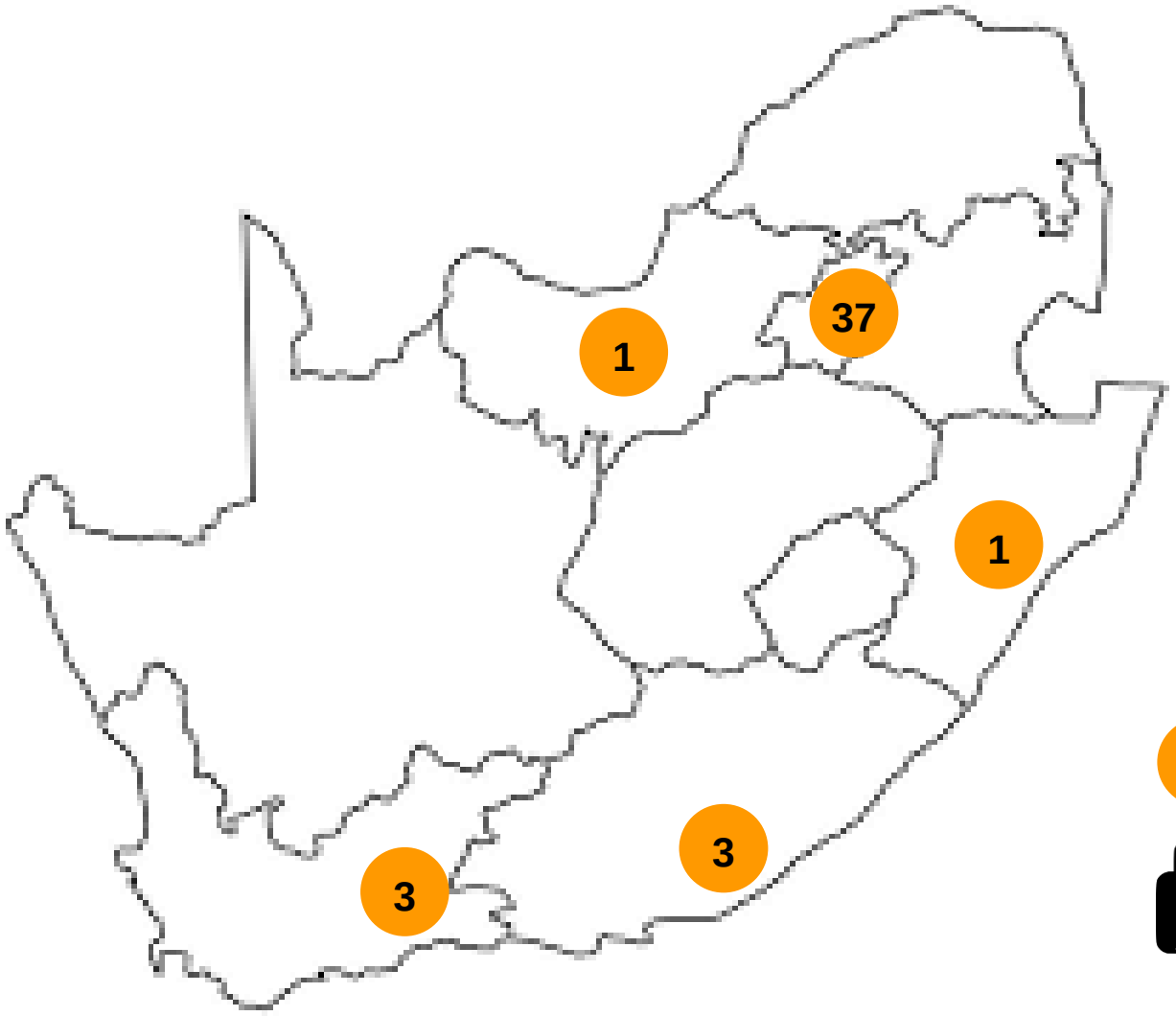








Geographic Spread



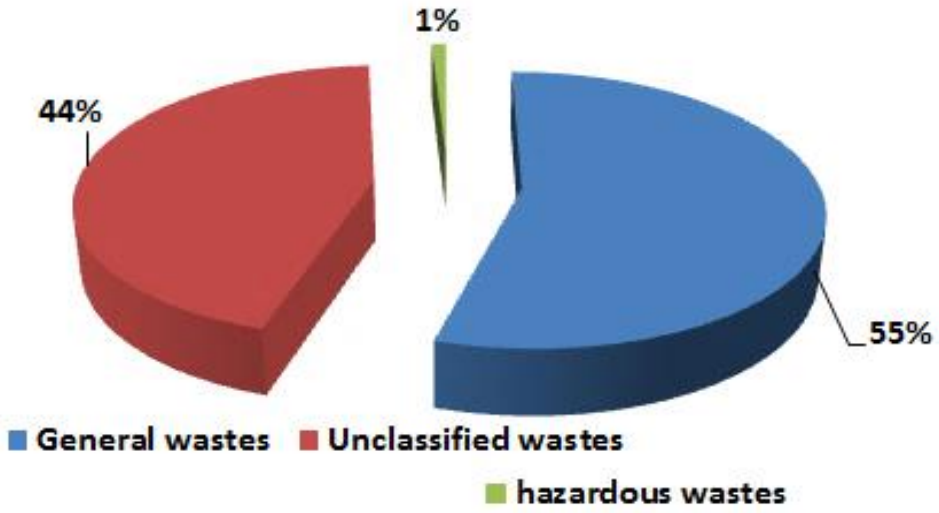
44 Total companies

JOBS 196

Our focus areas – waste sector

SA Status quo

- 108 million tonnes of solid waste annually
- 90% still landfilled
- Waste sector estimated at R15 billion, employing ~ 30 000 people, R17 billion of untapped value



Needs in the sector

- Access to waste streams
- Understanding of complex waste legislation
- Lobbying of government for innovative legislation
- Funding for infrastructure

Examples – DNF Waste

The company's established a recycling company with a buy-back centre, and beneficiating glass waste into a number of products including alternatives for kitchen counter-tops, tombstones etc.

Our focus areas - Energy

Opportunities

- SA has strong Renewable Energy resources
- **Diversification of energy sector – both resources and market players**
- NBI – large untapped opportunities in industrial and commercial sector, ~90%
- Residential applications (potential to increase property values)
- **Technology localisation – manufacturing of components and rest of value chain**
- **Municipal uptake (own use/ ownership) of RE generation – e.g. Merafong solar cluster**

Needs

- **Conducive municipal by-laws for technology adoption**
- Access to market (for SMMEs)
- **Understanding of legislative framework and opportunities therein**
- Access to finance for project development
- **Technology testing and verification**

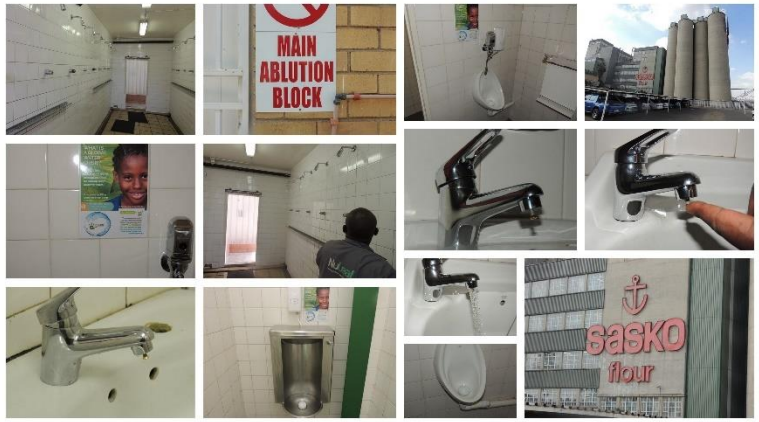
Examples – Ducere (Energy)

- The company's technology is a MISER System which is a regenerative braking and engine optimization solution for all vehicles but specifically aimed at trucks. The MISER System is a new, hydraulic, lower cost and more efficient version of hybrid transmissions

- The IP is South African, all lodged in Ducere Holdings. Patents have been granted in the following countries: USA, UK, China, Japan, South Korea, Europe (Sweden, France, Italy, Germany) and South Africa.

Our focus areas – water sector

NuLeaf



Kusini

Nelisat

Opportunities within the GCR:

- Improving metering and monitoring in catchment systems
- Uptake of leak detection and prevention technologies to minimise losses (e.g. NuLeaf)
- Distribution and billing system technologies in municipalities (e.g. Nelisat, Share Water)
- Technologies to address acid mine drainage (e.g. Roc Water)
- Water access technologies for lowest income bracket in rural and informal setting (e.g. Kusini)

Needs within the sector:

- Cost effective solutions for maintenance and refurbishment of water treatment facilities
- Investment of R8,3 billion in the research and development of innovative solutions

Examples – Roc Water Technologies

- **The company's technology treats acid-mine water.**
- **SA IP**
- **Pilot project with Anglo underway**

Take-home messages

- **Entrepreneurs: Opportunities in the green tech space ripe**
  - Distributed solar PV (Small Scale Embedded Generation)
  - Water sector
  - 4IR related business models across the green economy

- **Policy makers: Procurement of innovation is the biggest stumbling clock**
  - Inputs into reviews of procurement legislation/PFMA/MFMA essential

- **Entrepreneurship is not a panacea for all the country's economic challenges**

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Thank You

Siyabonga | Rea leboha | Enkosi
Merci beaucoup

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