

A WASTE RDI ROADMAP FOR SOUTH AFRICA

Overview of the DST and the Waste RDI Roadmap



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Waste RDI Roadmap Roadshow
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science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

CSIR
our future through science



Outline of presentation

- Overview of the Department of Science and Technology (DST)
- Brief overview of the 10-Year Waste RDI Roadmap process and outcomes

Department of Science & Technology



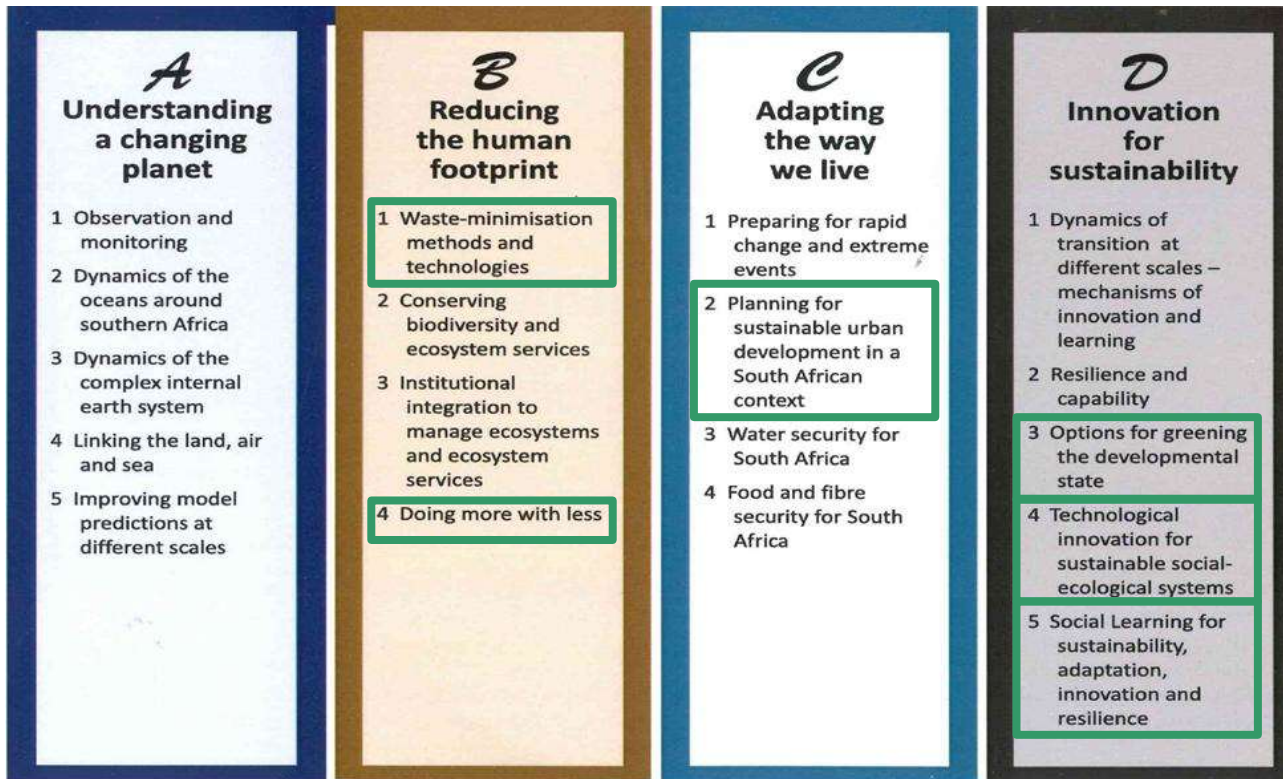
- Vision
 - Increased well-being and prosperity through science, technology and innovation.
- Mission
 - To provide leadership, an enabling environment, and resources for science, technology and innovation in support of South Africa's development.

The **Waste RDI Roadmap** is therefore implemented in line with the DST's mandate "*to use **science** and **technology** to improve the country's economy, create employment and improve the quality of life of all citizens*" [Minister, 2014], as part of a suite of strategies including the Global Change Implementation and Bioeconomy strategies

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The Need for Waste RDI in SA



The Global Change Research Plan identifies four major cross-cutting knowledge challenges and 18 key research themes.



The Need for Waste RDI in SA

6

Waste RDI Roadmap – 2015, DST

The Strategy calls for informed decision-making supported by scientific research.

National Waste Management Strategy – 2011, DEA

Drivers in Waste





The Need for Waste RDI in SA

- The correct management of waste and the diversion of waste away from landfill –
 - Creates opportunities to move resources into a **local** secondary resources **economy**
 - And in so doing, create **environmental**, **social** and **economic** opportunities for South Africa
- In this lies significant **opportunity** and **need** for research, development and innovation (RDI) to –
 - Unlock **new solutions** for utilising “waste”
 - Inform **policy** development and implementation
 - Inform **technology** uptake
 - Inform decision-making through **sound evidence**

Informing the Waste RDI Roadmap



“**Skills** for an Innovative Waste Sector: Current waste HCD initiatives in South Africa”



“Current and Required Institutional **Mechanisms** to Support Waste Innovation”



“Waste Research, Development and Innovation (RDI) **Capabilities** at South African Universities and Science Councils (2014)”



“The **economic benefits** of moving up the waste management hierarchy in South Africa?”

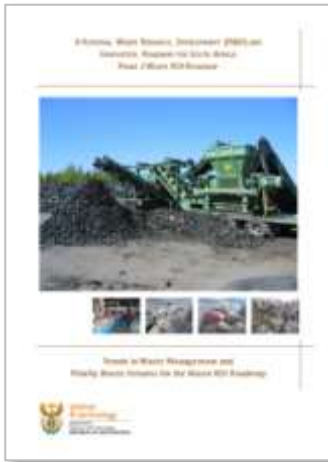
Informing the Waste RDI Roadmap



South African Waste Sector – 2012



Opportunities for Priority Waste Streams



Trends in Waste Management and Priority Waste Streams for the Waste RDI Roadmap



A Waste Research, Development and Innovation Roadmap for South Africa (2015-2025)

Background: The Approach



- Developing the Roadmap together with the waste and recycling sector through –
 - Regional **stakeholder workshops** to prioritise the waste streams and goals
 - **Industry expert working groups** for each of the 5 priority waste streams
 - **Academic expert working groups** for each of the 6 clusters of the Roadmap

Background: Priority Waste Streams



- **Municipal Solid Waste**

e.g. paper and packaging, C&D waste, OFMSW, residual waste



- **Electronic Waste (WEEE)**

e.g. all fractions, metal, plastic, glass, etc.



- **Waste Plastic**

e.g. pre- and post-consumer plastics (all)



- **Organic Waste**

e.g. industrial biomass, OFMSW, food waste



- **Waste tyres**

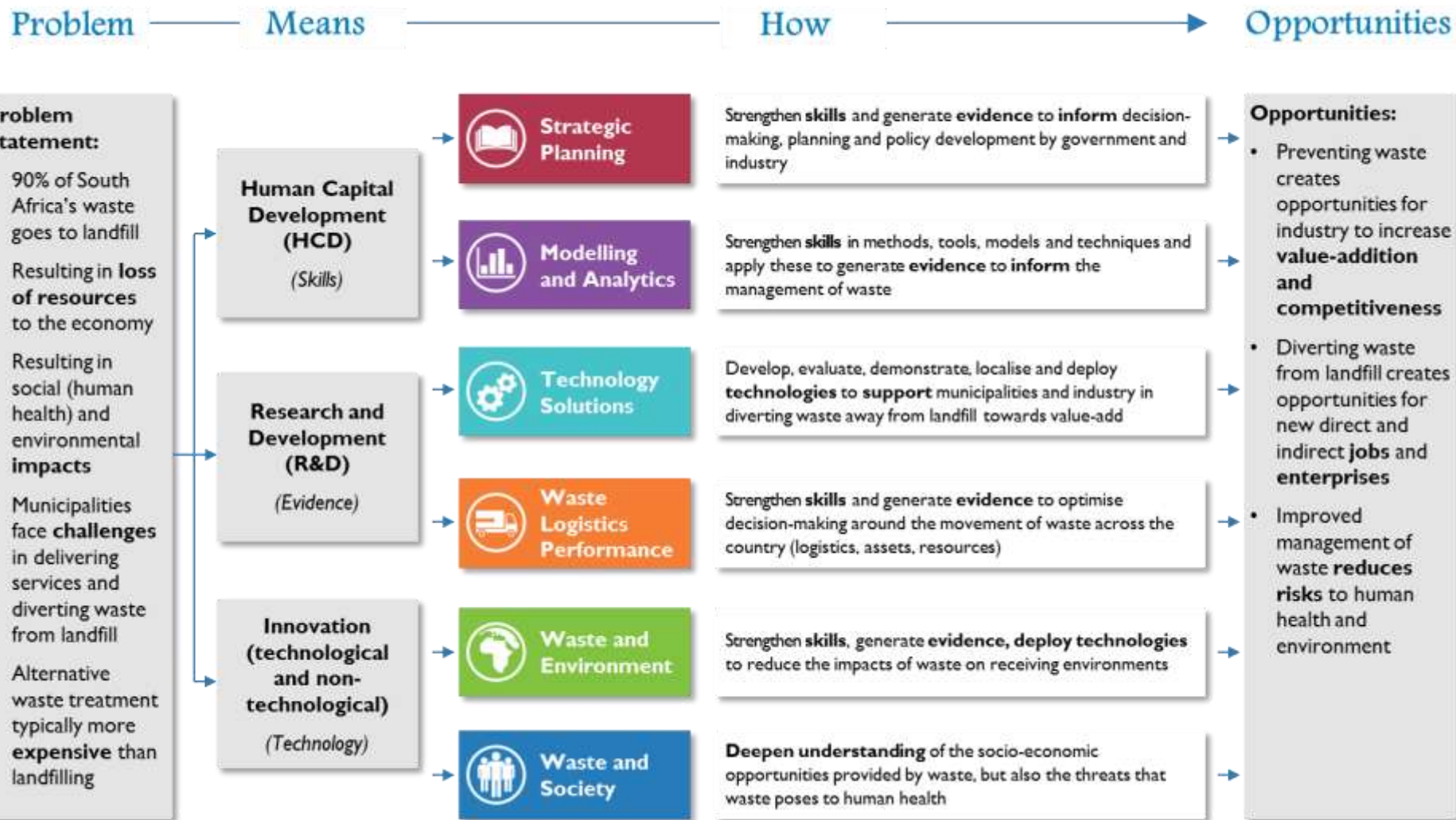
Maximising the diversion of waste away from landfill **towards value-adding opportunities**, including **prevention** of waste and the optimised **extraction of value** from reuse, recycling and recovery, in order to create significant social, economic, and environmental **benefit** for South Africa.



10-year Waste RDI Roadmap for SA

- The Department of Science and Technology (DST)
 - Published South Africa's 10-Year Waste Research Development and Innovation (RDI) Roadmap in 2014
 - Aimed at providing **strategic direction** to guide South Africa's **portfolio investment**, for the next 10 years, in **six identified clusters** of waste and secondary resources research, development and innovation activity
 - That would lead to (1) More effective **decision-making**, (2) Faster insertion of **context-appropriate Technology**, (3) **Export** of Know-How and Technology, (4) Strengthened **RDI capability** and capacity
 - And ultimately support South Africa's implementation of the National Waste Management Strategy and the waste hierarchy

10-year Waste RDI Roadmap for SA



10-year Waste RDI Roadmap for SA



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www.wasteroadmap.co.za

Implementing the Waste Roadmap



- The CSIR was appointed by the DST to **implement** the Waste RDI Roadmap from April 2015
- The Waste RDI Roadmap Portfolio Management Unit (PMU) is **hosted** by the CSIR Implementation Unit and headed up by Prof Linda Godfrey
- The PMU is tasked with driving **human capital development** (HCD), **research and development** (R&D) and **innovation**
 - In **partnership** with Government, Industry and Academia, and
 - Actively engage opportunities (local and international) for waste RDI **collaboration** and **co-investment**

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