

Opportunities for European participation in South African research and innovation programmes targeting societal challenges

Waste & Resources Management: A National Waste RDI Roadmap



Dr Linda Godfrey

**Council for Scientific and
Industrial Research (CSIR),
South Africa**



**science
& technology**

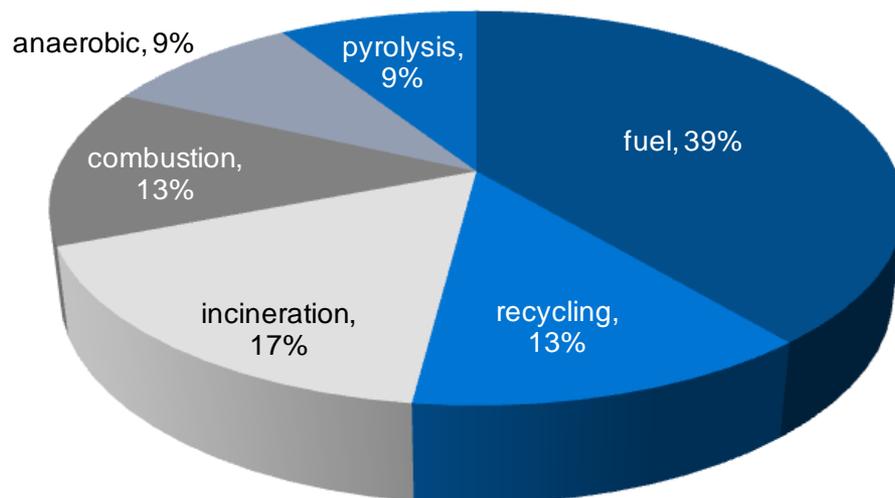
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

CSIR
our future through science

- Waste is an issue which, if left unmanaged, can have a direct social and environment impact
- However, waste also provides opportunities for job creation and enterprise development
- The South African waste sector is estimated –
 - To have an annual turnover of \pm R10b (€770m) (2009)
 - Contribute \pm 0.56% to the country's GDP
 - Opportunity to grow the SA waste sector from 0.56% to >1% of GDP (looking at international trends)
 - Current waste R&D spend estimated to be <0.5% of sector value

SA Waste R&D and Innovation

- Competitive international R&D space in waste technologies
- Inbound technologies influence local R&D and spend
- Registered waste patents in SA over the period (2006-2010)
- Origin of the 63 registered 'waste' patents
 - Europe (20); USA/Canada (18); South African (9); Australia/New Zealand (6); UK (4), India (4); China (1), Singapore (1)



Technology types mentioned in SA waste patent titles mirror global trends –

- Energy recovery from waste
- Thermal treatment



Why the need for Innovation?

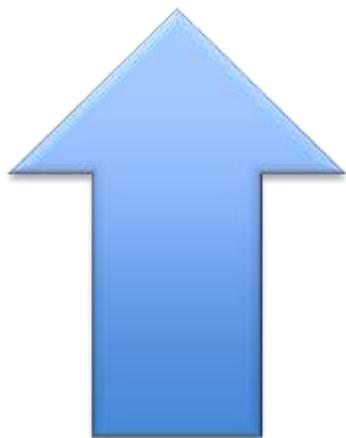
- Waste management in South Africa is becoming –
 - more technologically demanding,
 - the business more competitive, and with
 - increasing costs and legislative requirements,
 - profit margins smaller
- Innovation is considered crucial in growing and sustaining the waste sector
- Need to support and incentivise private and public waste sector to adopt and invest in R&D and innovation



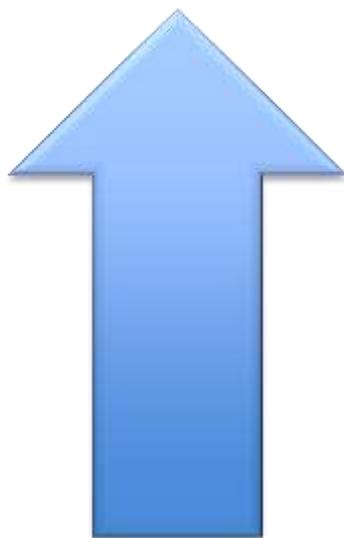


The time is right for Innovation?

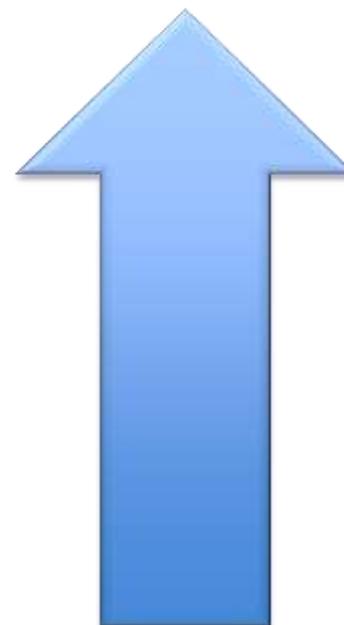
Emerging
landscape for
waste RDI to
support a Green
Economy
transition



Supporting
waste
governance
environment



Growing waste
management
demands





The Waste RDI Roadmap

- The Department of S&T (DST) initiated a project in 2012 to develop a Waste RDI Roadmap for South Africa
- The **vision** of the Roadmap is to –
 - stimulate waste R&D
 - human capital development (HCD)
 - innovation (technological and non-technological)
 - enterprise development and
 - job creation in the waste sector
- Through the **investment in science and technology** and in so doing, support the development of South Africa's green economy



Opportunities for participation

- Human capital development
 - Where there is overlap in priority waste research areas between the continents
- Technology development / transfer
 - Where technological innovations (including knowledge) can be transferred across continents in support of local skills development and technology adoption, adaptation and implementation



Opportunities for participation

- The need for strengthening current waste skills (HCD) was identified as a priority in Phase 1 of the Roadmap.
- Identified mechanisms to address this include –
 - Collaborative International-SA waste research programmes
 - Joint waste PhD degrees or co-supervision (International-SA Universities)
 - Focussed technical waste visits for SA waste professionals abroad
 - Visiting waste technical specialists to South Africa



Opportunities for participation

- Opportunities for European participation in South African waste research and innovation
 - Joint African-European Research & Innovation Agenda on Waste Management (under development 2013) – link with Horizon 2020 (mapping out priority waste areas)
 - Existing and new South Africa – European Country Science & Technology bilateral agreements (research priority areas)
- Provide a vehicle to give effect to aspects of the South Africa Waste RDI Roadmap (skills & technology)
- That can encourage increased local private and public sector investment in waste RDI

The Waste RDI Roadmap



<http://www.wasteroadmap.co.za>



Thank you

For more information on the South African Waste
R&D and Innovation Roadmap contact –

Dr Linda Godfrey @ LGodfrey@csir.co.za

Dr Henry Roman @ Henry.Roman@dst.gov.za

Project website

<http://www.wasteroadmap.co.za>

