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National Department of Science and Technology

South Africa

Session 1

Bioeconomía en América Latina y el Caribe 2015

Latin America and the Caribbean Bioeconomy 2015

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The South African Bio-economy Strategy

science
& technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

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Latin America and the Caribbean Bioeconomy 2015

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Perspective

- Developing World landscape
- Poverty, inequality, unemployment
- New democracy
- Financial constraints (focus on interventions with immediate delivery)

Background

- 1994 - democracy
- 1996 - White Paper on Science & Technology
- 2001 - National Biotechnology Strategy
    - BRICs
    - NBN
    - PUB
        - Based on technology commercialisation
- 2014 Bio-economy Strategy

Lessons learned

a) The full pipeline, from research to commercialisation, needs to be considered to ensure sustainable ‘through-flow’ and desired outcome.

b) Coordination between academic and science council researchers, public and/or private sector institutions is vital to ensure teamwork, efficiency, and to avoid fragmentation of effort.

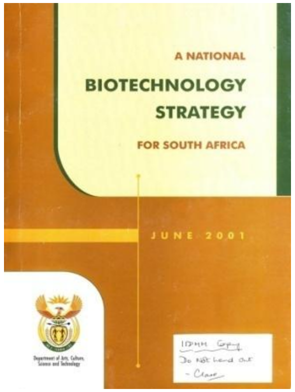
c) Focus on areas of comparative advantage and/or national priority. In SA - health & agric, but harness indigenous knowledge towards the development of products and empowering communities.

d) The absence of biotechnology-relevant Venture Capital is a serious gap for sustainable commercialisation of start-up companies.

e) The absence of local medium to large biotechnology companies creates a challenge both for investors to ‘exit’ their investments, and to ‘scale up’ industry-relevant start-ups.

f) Under-investment in technology commercialisation seriously hampers start-ups from being competitive globally (the local market size is usually insufficient for sustainable commercialisation).

The Bio-economy Strategy



Technical,
opportunistic

Planned,
consulted,
coordinated,
process focus

The Strategy

- Full value chain
- Coordination across value chain
- Focus- competitive advantage/national priority
- World class science, strong intl links
- Smart innovation investment



The Strategy

Input

- 3 thematic docs that outline landscape and strategic priorities
- An 'implementation plan' that reviews & provides interventions across the value chain
- Steering committees: govt, industry, science councils, academia

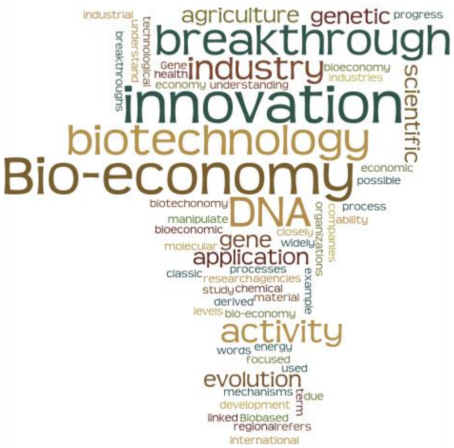
The Strategy

Some competitive advantages

- Human genome
- Clinical trials (precision/genomic medicine)
- Indigenous biodiversity mainstreaming
- Indigenous knowledge - based technology innovation

The Strategy

Some enabling priorities



- Future skills
- Technology Service Platforms
- Entrepreneurialism
- Seed funding (poc)
- Rapid advance off-take
- VC seeded
- Marketing & promotion

- Coordination

The Strategy

Intended to:

- Address shortcomings and gaps.
- By 2030 contribute measurably to the GDP.
- Create the system of innovation with defined value chains that will enable innovation beyond what is directly financed by govt.
- Create socio-economic impact that stimulates broader support for R,D&I.

Governance

- DST leadership
- Govt. ownership & participation
- Industry buy-in
- Management by Science Council

GOVERNMENT PRIORITIES

POVERTY, UNEMPLOYMENT, INEQUALITY

Outcome 1: Improved quality of basic education.

Outcome 2: A long and healthy life for all South Africans.

Outcome 3: All people in South Africa are and feel safe.

Outcome 4: Decent employment through inclusive economic growth.

Outcome 5: A skilled and capable workforce to support an inclusive growth path.

Outcome 6: An efficient, competitive and responsive economic infrastructure network.

Outcome 7: Vibrant, equitable and sustainable rural communities with food security for all.

Outcome 8: Sustainable human settlements and improved quality of household life.

Outcome 9: A responsive, accountable, effective and efficient local government system.

Outcome 10: Environmental assets and natural resources that are well protected and continually enhanced.

Outcome 11: Create a better South Africa and contribute to a better and safer Africa and World.

Outcome 12: An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship.

Promoting the Bio-economy

A) Get creative in demonstrating small successes.

1) Sterile insect company employs more than 40 employees, and it's application in 13 000 hectares equates to R520 million additional income. If expanded to all citrus areas, additional R2 billion, with associated benefits to farmers.

2) Top 7 biotech companies now generating revenues of R1billion per year.

B) Involve govt (& others) to get buy-in.

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