Towards Institutionalising STI Foresight in South Africa:

Lessons, Gaps and the Road Ahead

XV International Academic Conference: Foresight & STI Policy

by
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Making sure it's possible

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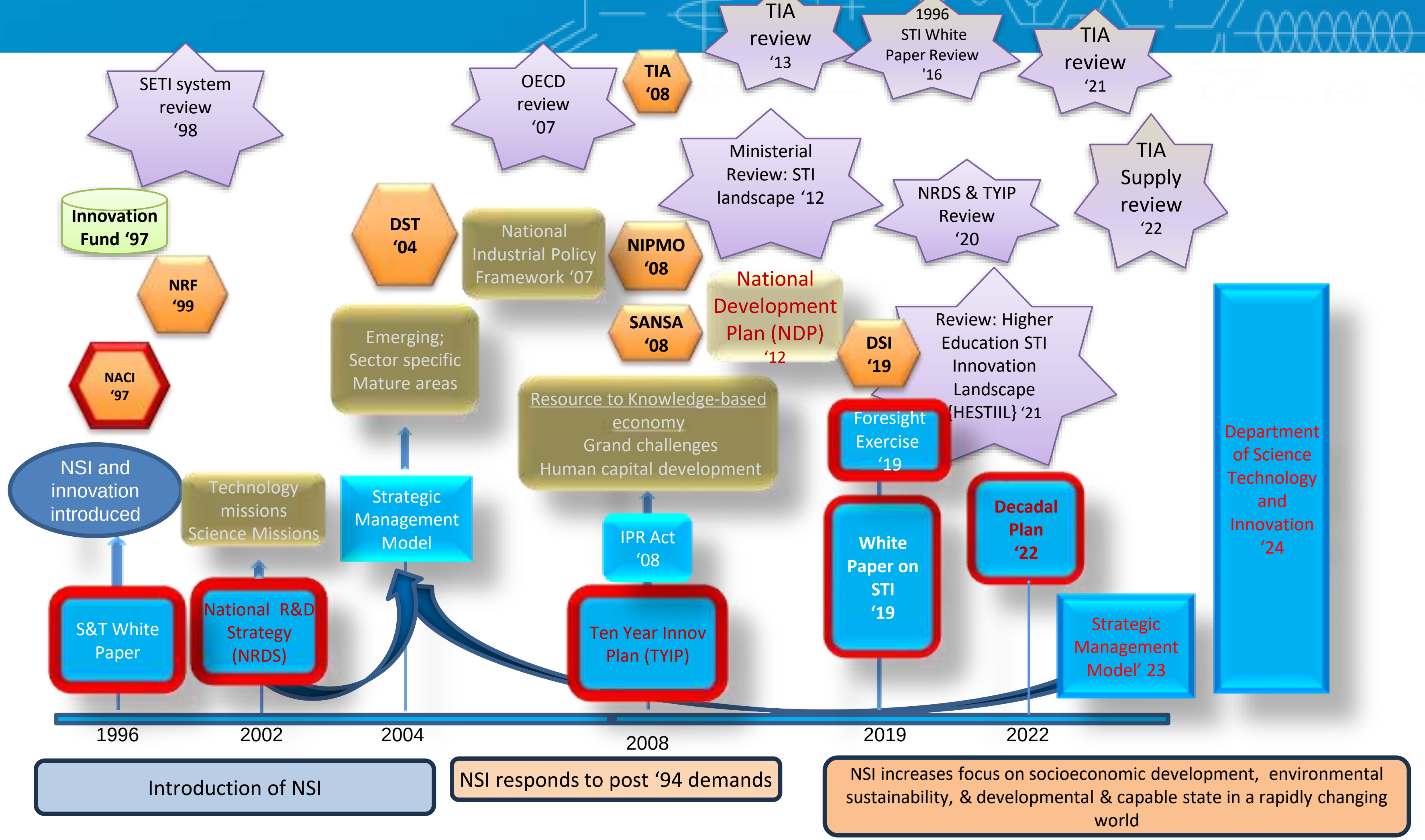
2030 NDP

Presentation Outline

SA's STI Policy Landscape: 1996-2025



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1996 White Paper on Science & Technology

NSI and innovation introduced

White Paper on
Science & Technology

Preparing for the 21st Century

Department of Arts, Culture,
Science And Technology
4 September 1996

"Science and Technology (S&T) are essential components of the government's strategy for <u>creating</u> the South Africa <u>of the future</u>."

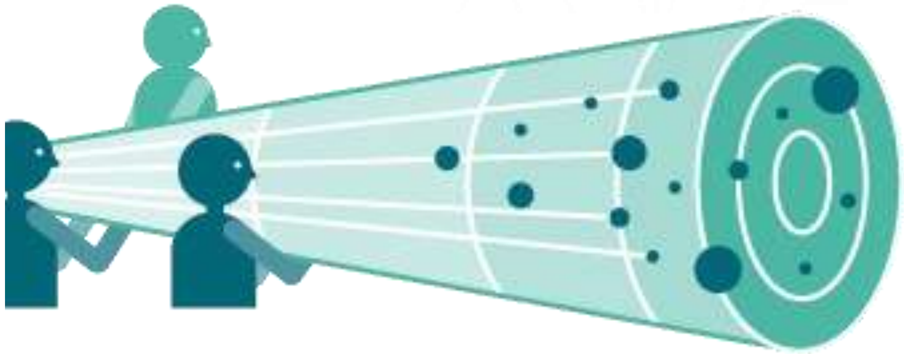
Minister B.S Ngubane, 1996 White Paper on S&T

1996 White Paper & Foresight Exercise

elements of the national system of innovation described in section 5.1.1 can be properly informed.

3. **Utilisation of the Results of the Research and Technology Foresight Exercise**

DACST announced its intentions to conduct a Research and Technology Foresight Exercise in 1995. This process is currently under way and involves detailed consultations concerning potential technological trends and trajectories of significance to the social and economic development of South Africa. The expectations of the results of this important exercise need to be kept in perspective and the potential implications of the outcomes considered.



FORESIGHT SYNTHESIS REPORT: *DAWN OF THE AFRICAN CENTURY*

Foreword by the Minister

In South Africa, the six years since 1994 have been characterized by the need to understand and shape the future of this country and my Ministry has initiated a range of initiatives aimed at meeting this objective. In the science and technology field these initiatives include the White Paper on Science and Technology, the National Research and Technology Audit, the Review of Science and Technology Institutions and the National Research and Technology Foresight (NRTF).

The Science and Technology White Paper, published in 1996, was based on the twin concepts of innovation and a national system of innovation (NSI). The NRTF report is an important milestone that allows us to put real content into the NSI and thereby develop a framework of goals within which our technology programmes can be shaped. NRTF findings indicate a decline in the resource-based economic activities such as mining, primary agriculture and traditional manufacturing. In contrast, new developments in biotechnology, information and communications technologies and new materials signal the future ascendancy of a knowledge-based economy. The wealth of biological diversity in South Africa and our immense tourism potential have, as in other studies, been identified as focal points for growth.

There are a number of challenges that need to be overcome though. The human

- Commits to the development of a National System of Innovation

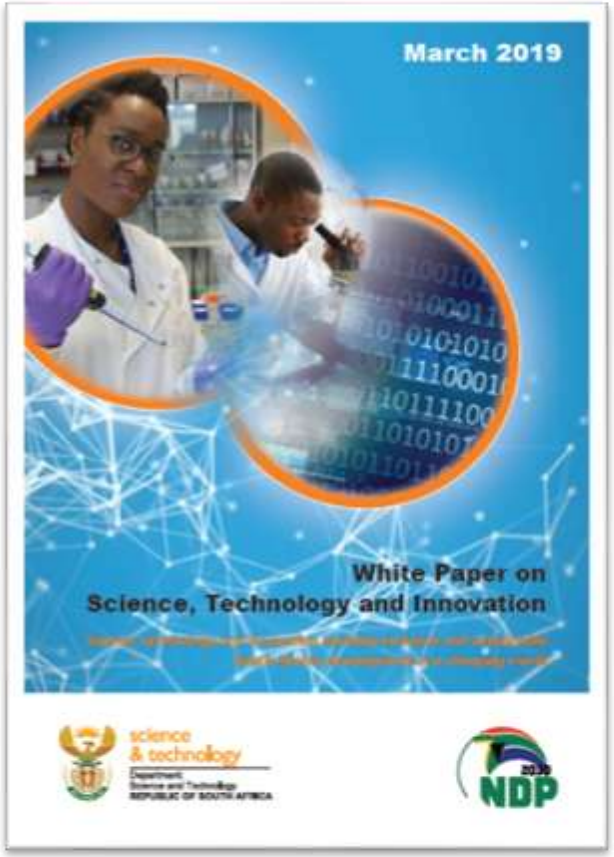
NATIONAL ADVISORY COUNCIL ON INNOVATION

Recoginises government's constant need for evidence-based/informed policy advice

- Elevates the **importance** of Foresight Exercises in informing STI Policy and decisions

  (Chapter 5, Section 2.3)

2019 White Paper on STI



DST TYIP, 2008 –2018:
Attributes economic risks to inadequate foresight in science and technology (S&T)

DST TYIP, 2008 –2018:
Acknowledge 1996 Foresight Exercise as a 'Strategic Document'

"A Decadal Plan for STI will be developed to serve as an implementation plan for the White Paper. This decadal plan will take into consideration not only the policy intents of the White Paper, but also the review of the Ten-year Innovation Plan (2008–2018) and of the National Research and Development Strategy (2002), both of which have seen the attainment of significant milestones. Furthermore, the results of the National Advisory Council on Innovation's (NACI's) **2019 foresight exercise,** as well as the priority outcomes of government, will lend context to the decadal plan."

Ambassador Dr Phil Mjwara, then DG of DSTI,
2019 WHITE PAPER ON STI

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Influencing STI Policy

The exercise sought to investigate the future of science, technology and innovation (STI) in South Africa, and the potential of STI to address ongoing societal challenges (including unemployment, poverty, inequality, health and education)

STI domains and thrusts

- Circular Economy
- Education for the Future
- Sustainable Energy
- The Future of Society
- Health Innovation
- High-tech Industrialisation
- ICTs and Smart Systems
- Nutrition Security
- Water Security

(Adopted)

(Selected for the dev. of STI Missions)

STI Priorities

- Climate change including environmental sustainability
- The future of education
- The future of skills and work
- The Future of society

Successful Influence on STI Futures

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STI Leadership Board

Mr Derek Henekom, '12-'14

Dr Naledi Pandor, '09-'12 & ''14-18

Ms Mmamoloko Kubayi-Ngubane, *'18-'19*

Ministers

Dr Mosibudi Mangena, '04-'09

Dr Ben Ngubane, '96-'04

Prof. Blade Nzimande, '19- current

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"In South Africa, the six years since 1994 have been characterized by the need to understand and shape the future of this country and my Ministry has initiated a range of initiatives aimed at meeting this objective."
Dr Ngubane, 1996 NRTF

"This symposium will conclude with a session on ***strategic intelligence foresight exercises, which will help us to anticipate new challenges, imagine possible futures and identify STI development priorities and trends necessary for the reorientation of STI policy to meet societal challenges."***

Prof. Nzimande, Address at the BRICS STI Policy and Foresight Symposium, 2023.

"We cannot achieve what we cannot imagine"
Elise Boulding

Director-Generals

Dr Rob Adams, '98-'04

Dr Phil Mjwara, '06-'24

Dr Mlungisi Cele, '25- current

NDP 2030

Foresight Champions

Lessons & Gaps (SWOT)

Enablers are crucial

Urgent Gaps

S

- Strong leadership (decision makers)
- Expression in STI Policies (legitimacy)
- MLP Perspective: Landscape Influence (e.g. The Mont Fleur Scenarios exercise)
- Early inclusion of decision makers and adopters.
- Partnerships MoUs (International > local)

W

- Internal capacities (technical methods)
- Weak regional partnerships
- <15% of the employees working on the future all the time (NACI is a small org)
- Lack of continuous awareness

O

- Maintained demand from consumer (new DG), accountability
- Decadal Plan called NACI to Institutionalise Foresight (demand)
- Masterclasses to encourage futures and systems thinking
- Peer-learning activities at regional level (i.e. Botswana, Namibia)

T

- Competing priorities (funding) - Polarities
- Changes in leadership (new priorities, interests etc)
- failure or delays to institutionalise (loss of momentum)

Road Ahead

Vision: ***"STI enabling inclusive and sustainable South African development in a changing world".***

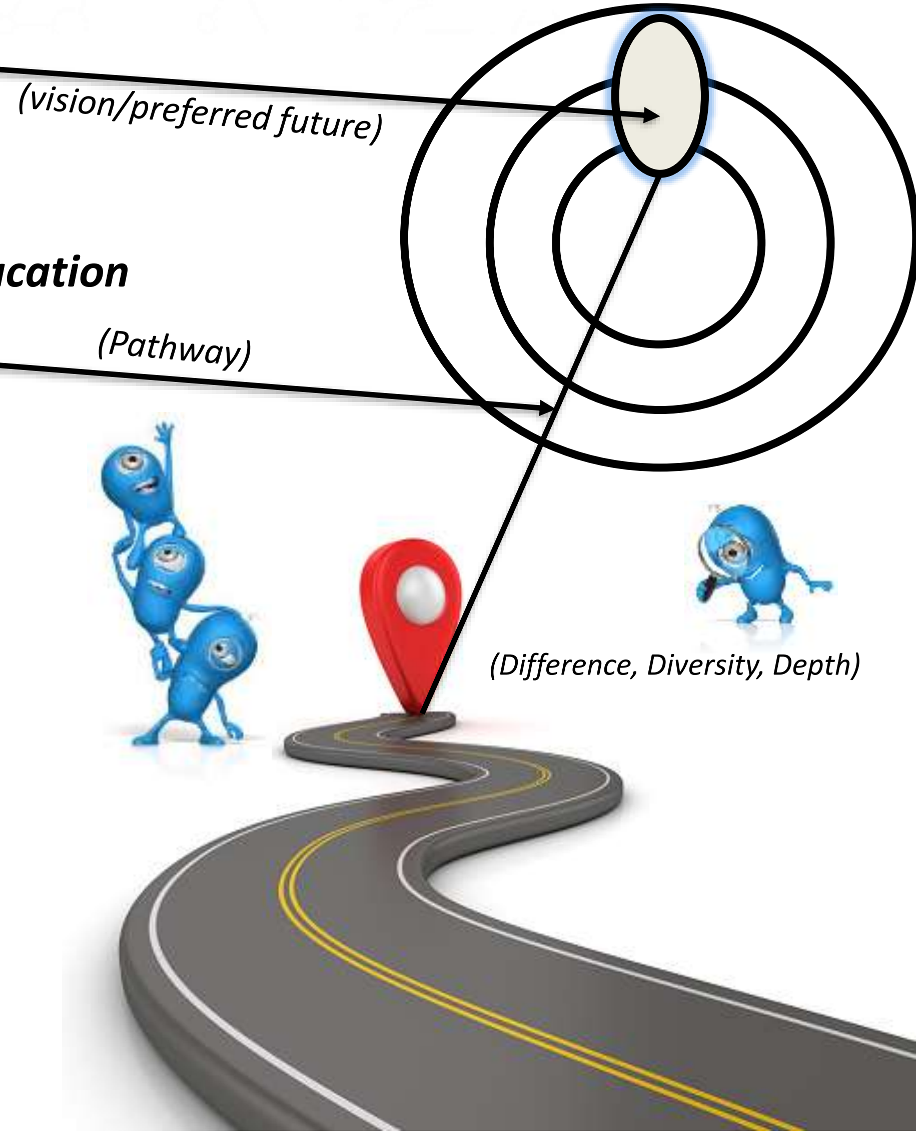
Mantra:

"Placing STI at the center of government, education society and industry"

Activities:

- Institutionalise STI foresight (NB)
- Build capacities (technical)
- Strengthen systems and futures thinking
- Expand and strengthen partnerships
- Review former foresight/ measure impact
- Elevate the profile of STI
- Strengthen the NSI

Making sure its possible!



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Questions?

Enkosi
Ha khensa
Re a leboga
Ro livhuwa
Siyabonga
Siyathokoza
Thank you
Dankie
Obrigado
Спасибо
धन्यवाद
谢谢