

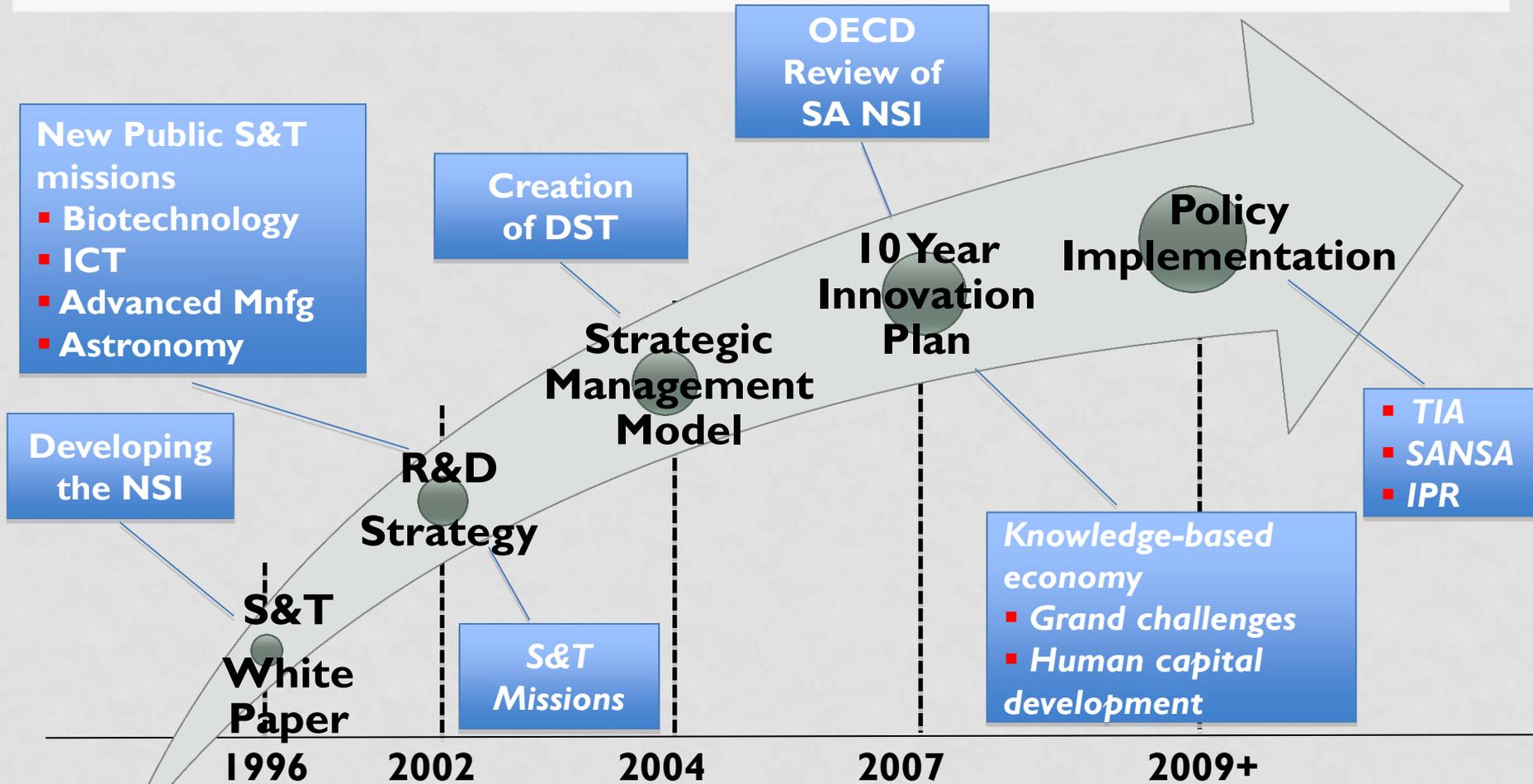
Science in Society

07 November 2014



Ms Eudy Mabuza
Minister Counsellor: Science and Technology
Embassy of the Republic of South Africa, in Japan

POLICY/STRATEGY FRAMEWORK



NRF DIVISIONS

The relationships between the NRF Vision and composition

**World-class Research
Transformed Society
Sustainable Environment**

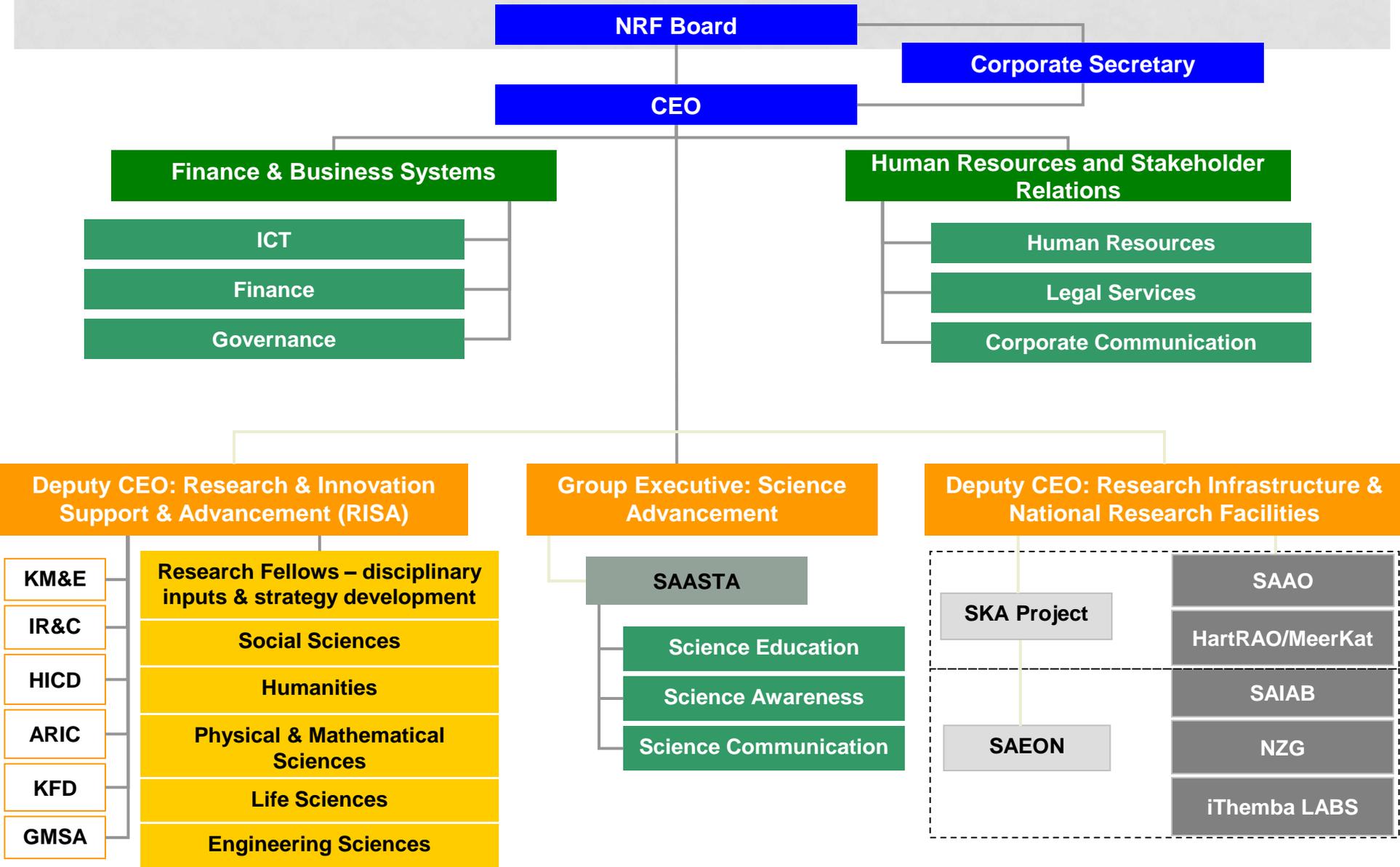
Research, Innovation
Support & Advancement
(RISA)

National
Research
Facilities

Public S&T education
and outreach

National Research Foundation

NRF STRUCTURE



NRF/SAASTA MANDATE

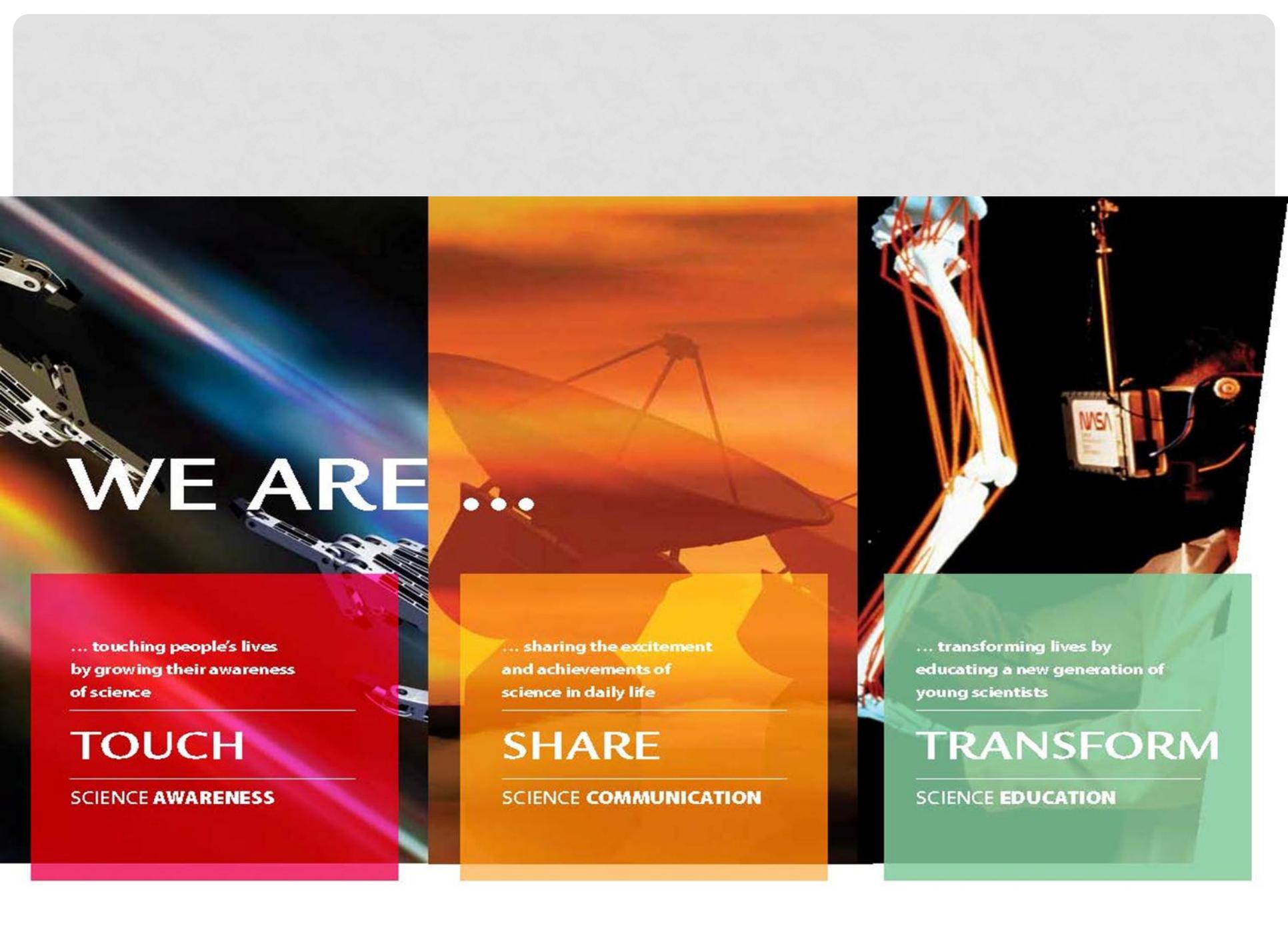
To advance public **awareness, appreciation** and **engagement** of science, engineering and technology (SET) in South Africa through

- **Science Education** – build up the supply of tomorrow's scientists and innovators
- **Science Awareness** – engage the public with the phenomena of science, engineering and technology
- **Science Communication** – share science and technology advancements with the public, building up their appreciation of the benefits of science



SCIENCE COMMUNICATION

- Providing credible and accurate information on science, engineering and technology that is accessible to all South African communities.
- **Processes:**
 - Scientific editorial process
 - Scientific editing
 - Audience analysis
- **Focus areas:**
 - Science and the media
 - Science promotion
 - Science communication and capacity building



WE ARE ...

... touching people's lives
by growing their awareness
of science

TOUCH

SCIENCE AWARENESS

... sharing the excitement
and achievements of
science in daily life

SHARE

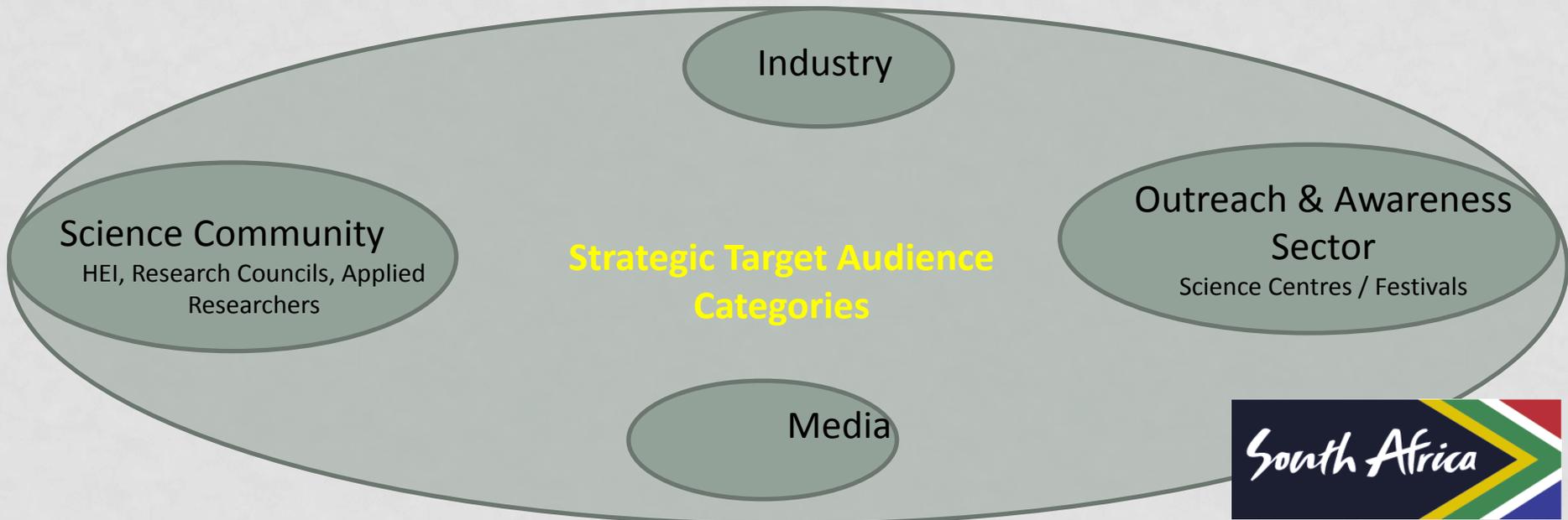
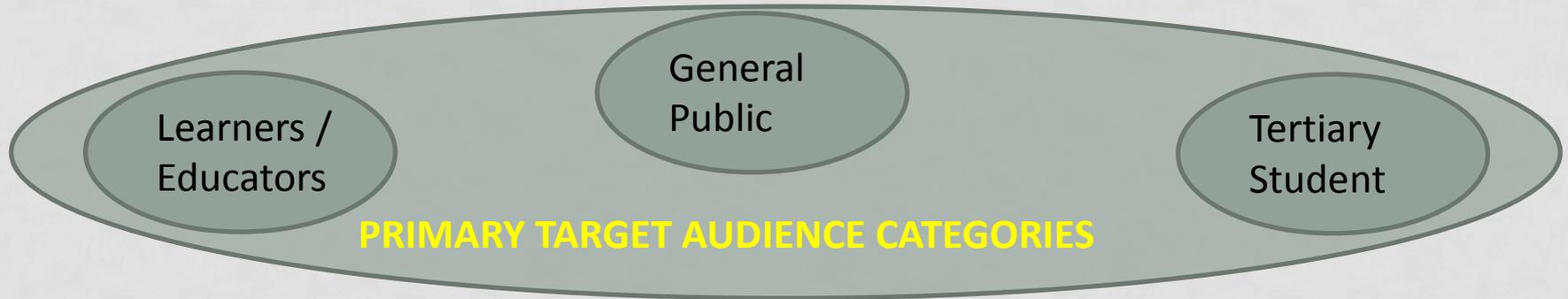
SCIENCE COMMUNICATION

... transforming lives by
educating a new generation of
young scientists

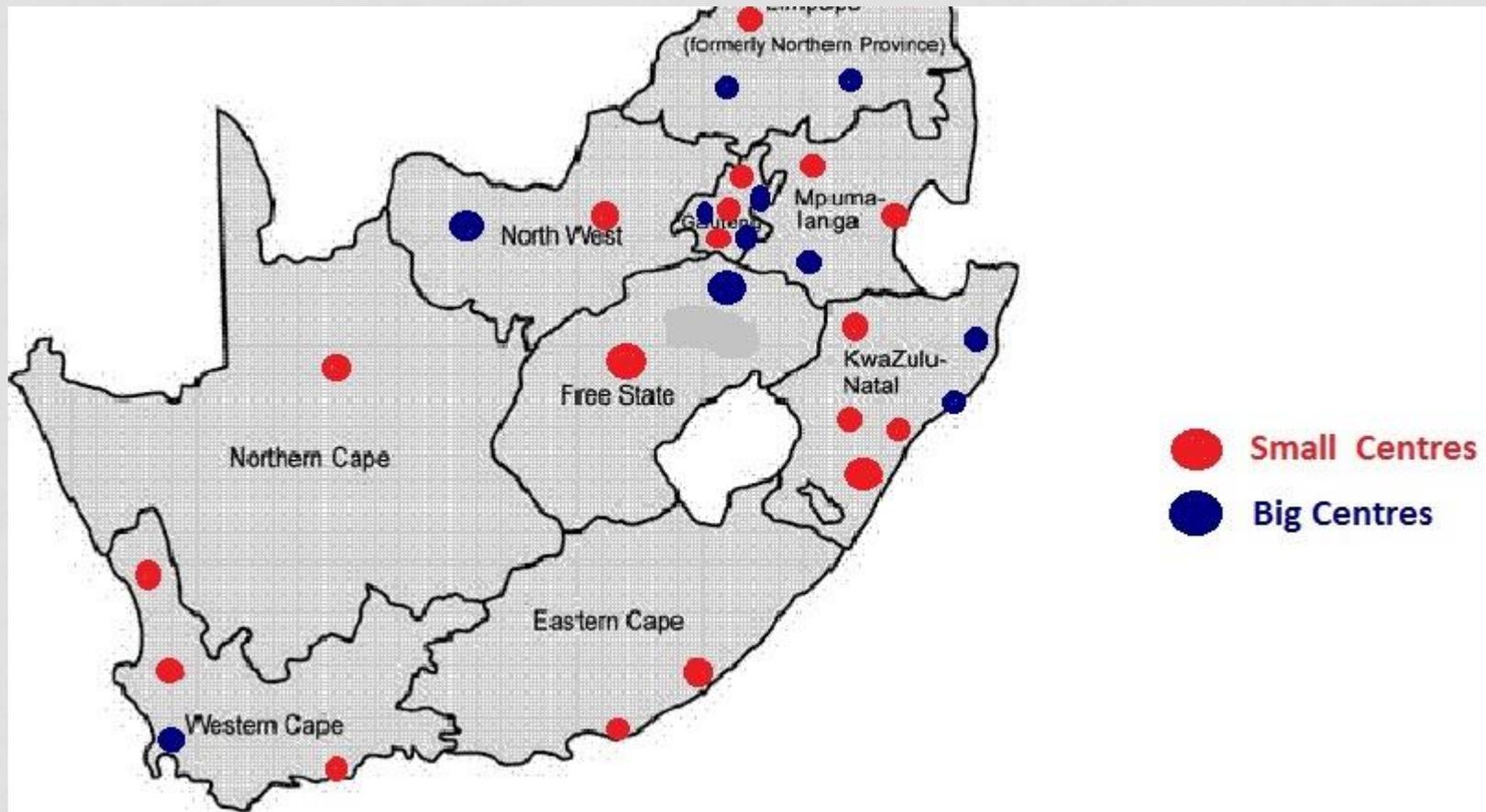
TRANSFORM

SCIENCE EDUCATION

INTERPRETING THE MANDATE OF SAASTA



SCIENCE CENTRE NETWORK



PROVISION OF RESOURCES IN THE SYSTEM

- Curriculum aligned Science, Mathematics educational resources and science kits to learners, educators and schools;
- Resources on SET careers
- Mobile labs, science exhibits, touch screens and funding SET initiatives to science centres
- Fact sheets to students and public

Nanotechnology and Energy
February 2011

The Energy Challenge
The link between human activities, increased greenhouse gas (GHG) emissions and climate change was scientifically established in 2007. Since then, global energy demand has continued to rise. We need to find ways to meet this demand while protecting the environment. This is the energy challenge.

What is Nanotechnology?
Nanotechnology is the art of manipulating matter at very tiny scales (generally 1-100 nanometres). It is a multidisciplinary field that combines physics, chemistry, biology, and engineering. It allows us to create new materials and devices that have unique properties and functions.

What Can Nanotechnology Do?
Nanotechnology has many applications in energy. It can be used to create more efficient solar cells, improve energy storage, and develop new energy conversion technologies. It can also be used to create self-cleaning surfaces and improve the efficiency of power plants.

PERIODIC TABLE OF ELEMENTS
DMITRI MENDELEEV (1834 - 1907)

WESTERN CAPE
NANOTECHNOLOGY

Nanotechnology
A World of New Possibilities

NANOTECHNOLOGY is the use of tiny particles (1-100 nanometres) to create new materials and devices. It has many applications in medicine, energy, and the environment.

Biotechnology is changing the way we ...

- ...treat our sick
- ...run our factories
- ...make our products
- ...protect our criminals
- ...protect our livestock
- ...conserve our wildlife
- ...keep our environment clean
- ...grow our plants, and feed our people

Man has been studying living organisms for many, many years. Today, scientists are continuing to make new discoveries and now understand better than ever before how living things work. Which is why the use of living organisms to benefit humans has reached new heights - and, this is why South Africa needs more and more individuals trained in biotechnology!

Choose a Career in Biotechnology!

Introducing:
South Africans already making a difference through biotechnology!

PUBLIC UNDERSTANDING OF BIOTECHNOLOGY

FRAMEWORK/APPROACH: SCHOOL INTERVENTIONS

OBJECTIVE	MEANS TO REACH OBJECTIVE
1. Learner Performance	Learner camps during school holidays; educator workshops on content and methodology; provision of curriculum educational resource materials to learners, educators and schools
2. Learner and Educator Participation	Through science festivals such as National Science Week and interaction with science exhibits
3. Identify & Nurture Talent	Through Olympiads and Competitions such as the Natural (grades 6 -9) and National Science Olympiads (10 -12), Astronomy Quiz and School Debates
4. SET Careers Awareness	Interaction with appropriate role models in SET; visits to SET related industries and provision of educational resource materials.

OUR IMPACT

- Science Awareness, Engagement and Advancement
- Identifying, nurturing and Developing Tomorrow's Leaders



SCIENCE AWARENESS, ENGAGEMENT AND ADVANCEMENT

Through: Science festivals, interaction with exhibits, science clubs, Media Round Tables, Critical Thinkers Forum, Science Shows



IDENTIFYING, NURTURING AND DEVELOPMENT TALENT

Through: Olympiads and competitions; camps, learner and teacher development programmes, exposure to career opportunities in SET through Role modelling and Internships



Beijing, March 2014

Presentation in Beijing



South Africa

MEDIA PARTNERS



IMPACT: STAKEHOLDERS RELATIONSHIPS & COLLABORATIONS

- Government Departments - Funding and providing access to schools and expertise.
- Higher Education Institutions - Expertise, sharing of resources
- Science Councils - Infrastructure and expertise
- Science Centres - Implementation
- Business Sector - Funding, expertise and infrastructure
- Professional Association - Implementation and expertise

OVERALL OUTPUT OF OUR INTERVENTIONS

- **Social Relevance:**

80% of our reach is in rural areas and disadvantaged communities

- **Economic Relevance:**

Address the shortage of skills in STEMI

- **Scientific Relevance:**

Through it's science awareness outreach activities , SAASTA put the world of Science in the hands of society.



The DST Minister



DANKIE, ENKOSI,

ARIGATO

THANK YOU

