

CAPACITY DEVELOPMENT AND RETENTION IN AFRICA

ASP2022 Forum Day

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Making sure it's possible




science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



What do we mean by capacity development and retention in Africa?

The header features a blue background with a pattern of white scientific symbols, including chemical structures, mathematical formulas, and a sine wave. A yellow and orange triangle is visible in the top right corner.

... Africa's ability to build its own pool of skilled researchers and ensuring that they remain in the continent.

What does Africa need to be able to develop research capacity and retain its researchers?

We need universities

- Quartz Africa and University of the People:
 - There aren't enough universities in Africa to handle the continent's growing population.
 - Low percentage of graduates in areas of engineering, agriculture, health and science.

Our scientists should access first class research infrastructure

Africa Edition of the World University News:

- We need spend more funding on research & development:
 - *1% of GDP on research and development*
 - *By 22 Nov 2022, Africa's R&D funding was only 0.42% of GDP, while the global average was at 1.7%.*
 - *South Africa, Kenya, and Egypt: 0.85%, 0.81% and 0.72% (GDP), respectively.*
- Our scientists should **access** first class research infrastructure and **collaborate** with their peers irrespective of location – (*create an enabling environment*)

Enabling environment

- Dedicated programmes to provide research institutions with world class research equipment.
- In South Africa, there is such support interventions available through the NRF:
 - *The National Equipment Programme*
 - *Equipment-related travel grants*
 - *Equipment-related training*
- White Paper on STI, 2019 – Scientists should engage with the public about their research and the benefits of doing so include the following:
 - It will promote uptake and utilization of their research.
 - It will build public trust in science, science institutions and scientists.

How do we build a sustainable human capital pipeline?

South African context.

Policy Context

March 2019

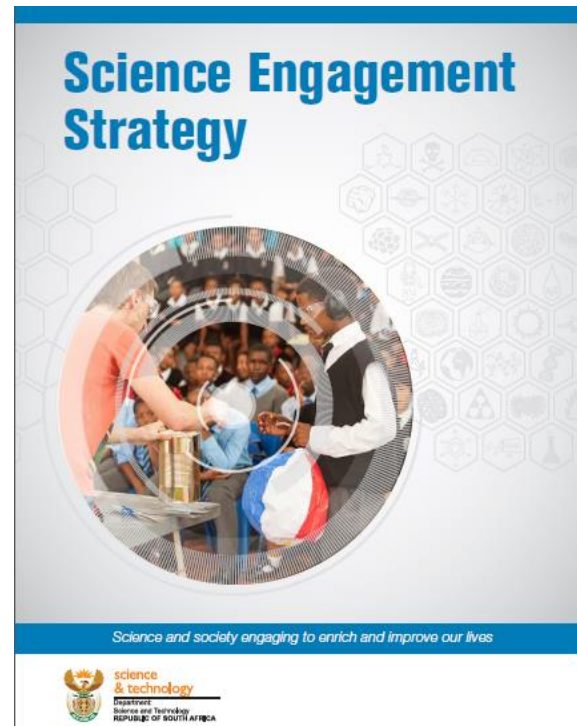


**White Paper on
Science, Technology and Innovation**

*Sciences, technology and innovation enabling inclusive and sustainable
South African development in a changing world*



Science Engagement Strategy



Science and society engaging to enrich and improve our lives



SCIENCE ENGAGEMENT MONITORING AND EVALUATION FRAMEWORK



Making sure it's possible



Existing infrastructure

- DSI-led Science Engagement Programme:

- DSI-entities forum



- Government-wide science engagement forum

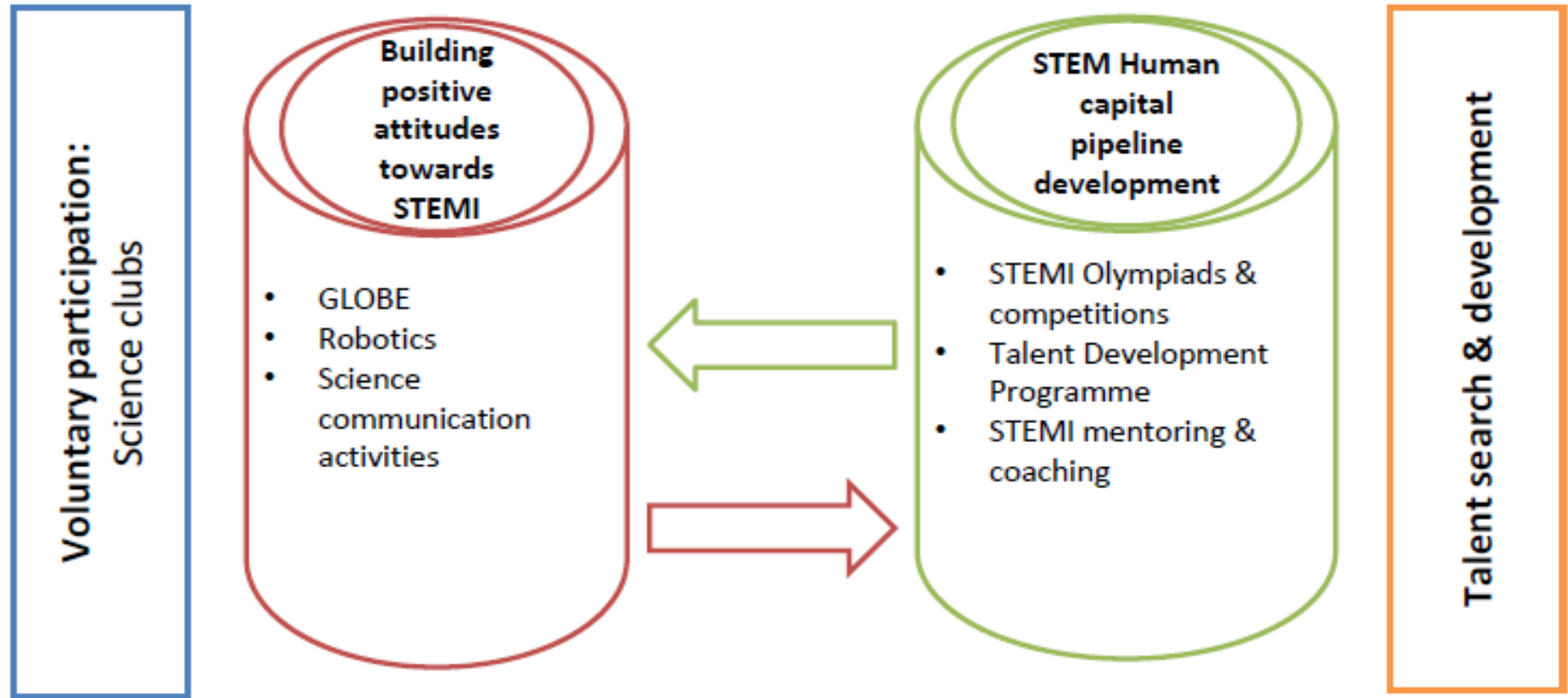
Examples:

- Science Centres
- Universities
- Science Councils (within the DSI and government-wide / other departments)
- Provincial departments of education
- NGOs

DSI: Human Capital and Science Promotion

- Policies and strategies for capital for STI, and support for research activities.
- Strategic direction and support to institutions mandated with HCD and knowledge production, relevant stakeholders in this regard.
- Science awareness and promotion, including activities targeting the youth. → Science Engagement Strategy (SES, 2015).
 - To popularize SETI as attractive, relevant and accessible.
 - ✓ STEM Support through the School-level Youth into Science Initiatives
 - ✓ Inter-governmental agreements with DBE and provincial departments of education.
 - To create a culture of science in schools.

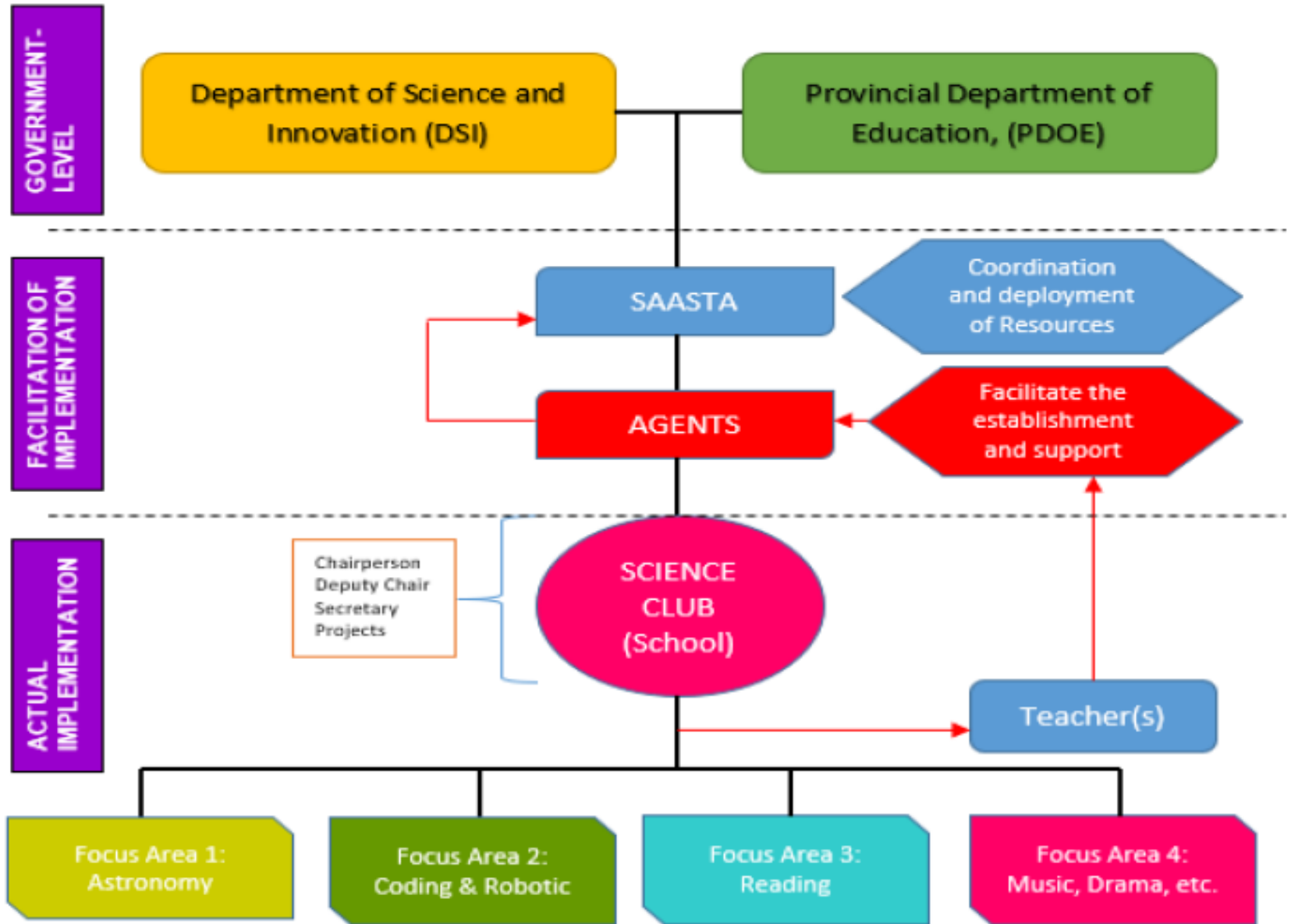
School-level Youth into Science Model




General STEMI awareness & MST education support

- Integrated STEMI popularisation activities (e.g. festivals, NSW, science centres)
- STEM career awareness
- DST priority areas-based LTSM
- Inquiry-based learning & teaching of MST
- Deployment of technologies to enhance teaching & learning environment
- Intellectual property workshops

Science Club Structure





Dankie
Enkosi
Ha khensa
Re a leboga
Ro livhuwa
Siyabonga
Siyathokoza
Thank you