



# NEOSS COMMUNITIES OF PRACTICE (COP) WORKSHOP

MALESE NDHLOVU

06 JUNE 2024



# SPACE INNOVATION INITIATIVE



science & innovation

Department  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA



# SPACE INNOVATION PROGRAMME

MANAGEMENT OF CALLS FOR PROPOSALS FOR THE  
SPACE INNOVATION INITIATIVES

by and between

**DEPARTMENT OF SCIENCE AND INNOVATION**

("DSI")

and

**TECHNOLOGY INNOVATION AGENCY**

("Recipient")

# TIA MANDATE

- TIA is established as a Schedule 3A public entity under the provisions of the Public Finance Management Act (Act 1 of 1999, as amended by Act 29 of 1999). Its mandate is derived from the provisions of the Technology Innovation Agency Act (No 26 of 2008),<sup>1</sup> **which established TIA as an Agency to promote the development and exploitation, in the public interest, of discoveries, inventions, innovations and improvements.**
- TIA's objective is to support the state in stimulating and intensifying technological innovations to improve economic growth and the quality of life of all South Africans.
- **TIA supports development and catalyse the commercialisation of technological innovations into the marketplace.**

## VISION

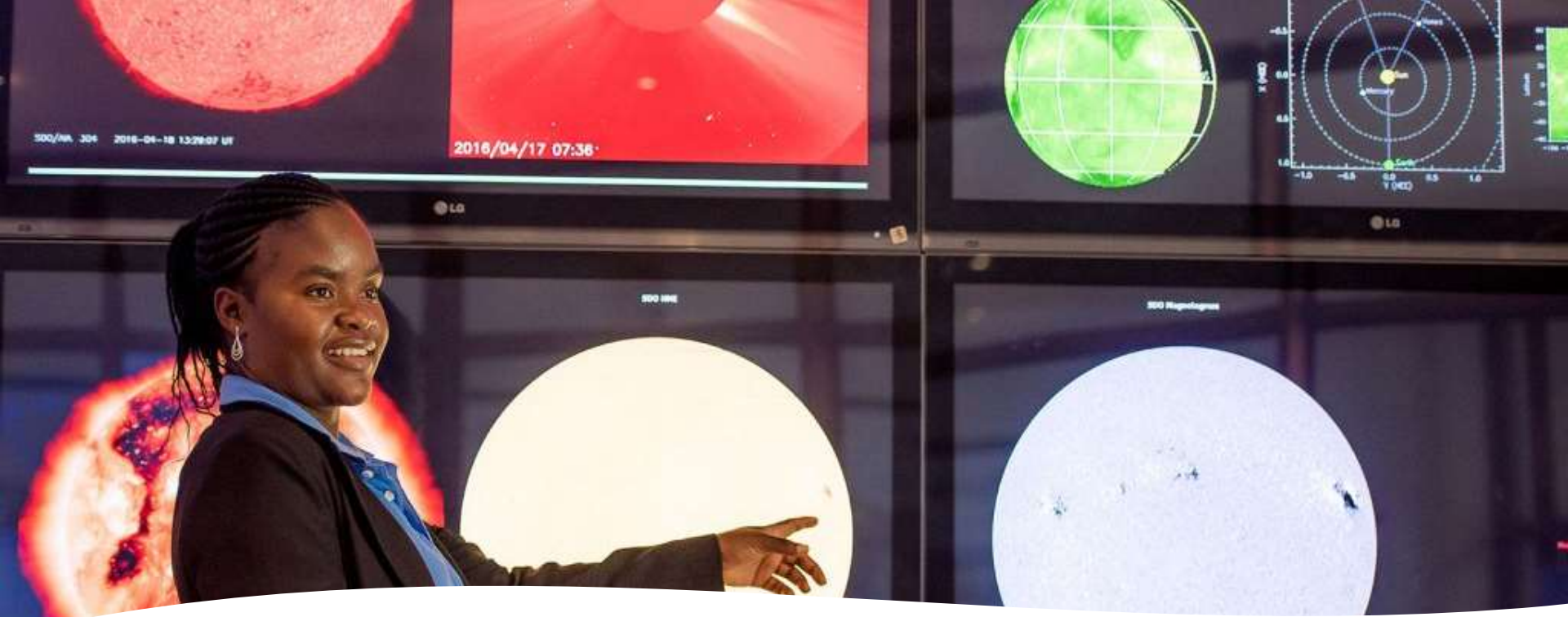
Be a leading technology innovation agency that stimulates and supports technological innovation to improve the quality of life for all South Africans.

## MISSION

Facilitate the translation of South Africa's knowledge resources into sustainable socio-economic opportunities.

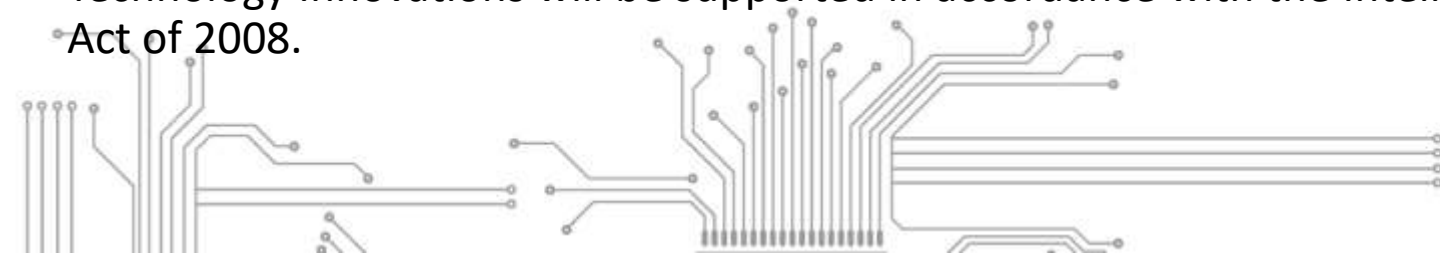
## STRATEGIC OBJECTIVES

- ❑ Growing a strong South African Space economy and encouraging new Space Science and technology players in SA from Academia, Science Councils, SMMEs & Startups.
- ❑ Support the National Space Infrastructure Hub large scale investment imperatives and growing the Space industry value chain.
- ❑ Development and exploitation Space Science Intellectual Property (IP) with established industry players, government and state-owned institutions in regional and global markets for seamless technology adoption and economic transfer.
- ❑ Improving service delivery and environmental sustainability with participating civil (state) and non-state commercial players.
- ❑ Transforming the Space sector by supporting black owned SMME players.



## Which X are we solving?

- **Strengthening the local capabilities in Space Science through supporting the development and commercialisation of Space technologies that will benefit South Africa.**
- Addressing national socioeconomic challenges in accordance with the DSI Decadal Plan and to position the country for global competitiveness.
- Technology Innovations will be supported in accordance with the Intellectual Property Rights Act of 2008.



# GAPS/OPPORTUNITIES

## Restraints:

- Space Monopoly: Space Science was considered complicated and privileged domain, accessible to few wealthy states. This made accessibility to satellite information very expensive to countries whose access depends on other nations with advanced Space science capabilities. Some countries used acquired satellite information against other countries motivated by military superiority and economic advantage over other countries.
- Clarity on Data ownership and exchange between State and non-State players.
- High cost of Space Science R&D and Space exploration mission.

## Opportunities:

- Increased focus and investments in space mining initiatives to solve a myriad of grand challenges.
- Increased Launch of smaller constellations of commercial and institutional satellites.
- **Increasing participation of small enterprises in the Space economy.**
- Rise in startup companies venturing in the Space Economy: Earth Observation downstream applications, Geospatial systems, Advanced Manufacturing and Space Technology as direct competitors and collaborators with established National space agencies, reducing the cost to acquire satellite information.

# CONVERGENCE OF NATIONAL PRIORITIES

## *What makes the Space programme relevant to other industries?*

- Big Data-Meteorological data, Earth Observation datasets, Satellite Internet connectivity software Payloads & Geospatial solutions (ICT)
- Space Exploration missions (Astronomy & Space Technologies)
- Climate Change & Environmental Sustainability, Disaster Management- earthquakes, sinkholes, oil spills, Water, Minerals and Waste monitoring (Natural Resources)
- Food Security, crops vegetation, habitats and Nature Conservation (Biodiversity & Agriculture)
- Solar, Wind, Gas and Land mass monitoring and exploration (Energy)
- Population Monitoring, Health pandemics monitoring- pathogens and waterborne diseases monitoring (Health & Social Sciences)
- Maritime safety and surveillance (Ocean Science, Defense, Logistics & ICT Decision Support)
- National Service delivery imperatives: Human settlements monitoring, Humanitarian relief and civil applications (Service Delivery & Social Sciences)
- Aerospace and Defense satellite component manufacturing, Remote Sensing-SAR, Satellite payloads hardware, SAT communications command and control technologies (Advanced Manufacturing & ICT)





# GLOBAL SPACE TECHNOLOGY MARKET

*Do we support technologies which have demand in the marketplace?*

# SPACE ECONOMY VALUE CHAIN

## GLOBAL SPACE TECHNOLOGY MARKET RESEARCH REPORT



### MARKET SEGMENTS

#### By Subsystem

- Orbit
- Launch Platform
- Launch Vehicle
- Payload

*Upstream*

#### By End-Use

- Civil
- Commercial
- Military

*Downstream*

#### By Region

- North America
- Europe
- Asia-Pacific
- Rest of the World

*Buyers and End Users*

# SPACE PROGRAMME PRIORITY AREAS

- Innovative, competitive and bankable business case proposals in Space subsystems, Satellite payloads for downstream earth observation applications and remote sensing techniques that support national priorities and promote global trade cooperation and climate change imperatives.
- Space systems and applications that support evidence driven decision support services in industry and service delivery.
- EO products and services that respond to socioeconomic challenges i.e. water management, food security, early detection warning disaster management support, maritime safety..
- Space traffic management and Space exploration initiatives.
- Advanced new High-Tech Space Technologies.
- *Priority areas to be confirmed with Steering committee.*

# CALLS FOR PROPOSAL FY24

- **Where are we now?**

- Consultations and Implementation Plan
- Formulating SIH steering committee with Critical stakeholders: DSI, TIA, NEOSS, SANSA and Space Industry Experts
- Project Planning and Resourcing
- Call for proposals will be disseminated End of June 2024
- Target audience: Science councils, University R&D with express inclusion of underserved institutions, Private sector and SMMEs with priority given to black owned and women-owned enterprises.
- Qualifying metrics and exclusions to be finalised and endorsed by steering committee.

Thank You



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