

# P O L I C Y   B R I E F

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## Enhancing the South African Space Sector through a Dedicated Online Portal

### Executive summary

It is a widely known fact that South Africa has a long-standing tradition and legacy in space exploration, which remains critical for envisioning the country's future and fostering growth. This is even more important in the era of the Fourth Industrial Revolution, where evidence, such as data from satellites, inspires more accurate decision-making in a range of fields. In addition to its intelligence services, real-time radar remote sensing is essential for disaster risks reduction programmes, including hazard forecasting, early warning systems and improving disaster response. It also plays a crucial role in sustaining the agricultural sector through effective land management and supports climate change mitigation programmes. An online space portal thus becomes an essential value-added resource and a key enabler for business, society and government.

The South African space sector holds significant potential to drive economic growth, foster technological innovation, and promote regional collaboration. However, fragmented information and the lack of centralised systems often hinder stakeholders from effectively engaging with the sector. This challenge is crucial in an era where fake news and the use of artificial intelligence to generate misleading images are increasingly prevalent. With the growing demand for accessible high-speed internet services, which have the potential to drive socioeconomic development, the centralisation of data science resources becomes increasingly crucial. This centralisation not only ensures the alignment of impact investments targeted at space research but also strengthens cybersecurity across the country, which will improve the credibility and accuracy of information stored within the portal.

This policy brief recommends establishing a dedicated online portal to centralise resources, encourage collaboration, and streamline access to essential information and opportunities within the South African space sector. Such a portal would position South Africa as a leader in space technology, encourage private sector participation, and foster regional cooperation. Furthermore, this initiative will foster strong internal synergy that will prepare the country for strategic global space partnerships. which will position South Africa as a legitimate leading co-developer of cost-effective space solutions, not only within the SADC region but also across the African continent and globally.

## Introduction and background

South Africa has made notable strides in space sciences, earth observation, space systems development and satellite technology in line with the National Space Policy<sup>1</sup> and the National Space Strategy<sup>2</sup>. This advancement has been driven by contributions from government institutions, private entities, and other organisations involved in manufacturing components, contributing significantly to the sector's growth. For example, through the South African National Space Agency (SANSA), which was established in 2010<sup>3</sup>, the country has improved its space monitoring capabilities, which are essential for delivering accurate and reliable weather forecast services. However, South Africa's space sector remains underdeveloped when compared its global counterparts<sup>4</sup>. Some of the key challenges include limited access to real-time sector updates, research, and funding opportunities, attracting and retaining high-end skills, and geopolitical concerns<sup>5</sup>. A unified, comprehensive digital platform would create an avenue to assist in addressing these challenges and provide a vital resource for stakeholders, including government entities, academic institutions, private companies, and international partners.

There is therefore a need for an online platform to bridge this gap so that there is a unified approach among diverse stakeholders with varying mandates to develop the sector, reducing misalignments and creating cohesive synergies. Such a platform would centralise resources, encourage innovation and collaboration, provide links to access funding and development programmes, and promote public awareness and education. For example, recently South Africa made a serious investment in the development of the Space Infrastructure Hub (SIH)<sup>6</sup>, which is designed to benefit South African citizens by advancing the country's space capabilities. An online portal would thus act as a practical accessible data visualisation centre. This has the potential to inspire the youth by showcasing opportunities in modern careers relating to space research. Moreover, start-up enterprises specialising in geosciences and spatial solutions will have the opportunity to expand their operations and develop even more advanced customised solutions, as well as tap into the export market.



## Research approach and method

This policy brief emerges from an in-depth analysis of existing data sources, such as strategies, annual progress reports, current and historical official publications of the relevant entities, and respective policies and strategies of the South African government through departments such as the Department of Science, Technology and Innovation (DSTI) and the Department of Trade, Industry and Competition (DTCI). Also included are government institutions such as the South African National Space Agency (SANSA). It is through the in-depth synthesis and analysis of these selected documents that essential and unique knowledge, insights and dynamics have been appreciated.

## Results and implications

### Key features of the portal include:

#### 1. Resource library

A searchable, indexed collection of documents, policies, research papers, technical standards, and regulations related to the space sector

#### 2. Funding and grants hub

A comprehensive list of available funding programmes, competitions, and calls for proposals, with details on eligibility, deadlines, and application processes

#### 3. Industry directory

A database of space-related businesses, research organisations, government agencies, and international partners, facilitating networking and collaboration

#### 4. Event calendar

An up-to-date calendar with space-related events, including conferences, workshops, webinars, and trade shows

#### 5. Job and internship board

A space for posting opportunities for employment, internships, and apprenticeships in the space sector, aiming to cultivate the next generation of South African space professionals

#### 6. Interactive forums and networking

A space for experts, enthusiasts, and policymakers to engage in discussions, share ideas, and collaborate on projects

#### 7. Educational content

Curated content targeting schools, universities, and the general public, including space science resources, career advice, and STEM outreach programmes

#### 8. International collaboration opportunities

A section dedicated to international projects, partnerships, and space missions where South Africa could play an active role



### **Benefits of the portal include:**

1. **Increased efficiency and collaboration**  
Centralised access to information will reduce time spent searching for sector-specific details and foster more informed decision-making.
2. **Boosting innovation**  
By facilitating collaboration and knowledge-sharing, the portal will stimulate innovation and the development of cutting-edge technologies in South Africa's space sector.
3. **Strengthening South Africa's position globally**  
A well-developed space sector will raise South Africa's profile as a leading player in Africa's space ambitions, attracting international partnerships, investment, and talent.
4. **Economic growth**  
The space industry has the potential to generate significant economic value through job creation, technological advancements, and commercialisation of space-based services.
5. **Public engagement**  
By increasing awareness and involvement of the general public, especially the youth, the portal will promote interest in STEM careers and space exploration.

### **Stakeholders include:**

1. **Government entities**  
The Department of Science, Technology and Innovation (DSTI), the Department of Trade, Industry, and Competition (DTIC), the South African National Space Agency (SANSA), the Council for Scientific and Industrial Research (CSIR) and other related government entities
2. **Private sector**  
South African space companies, satellite manufacturers, telecommunications firms, and space tourism businesses
3. **Educational institutions**  
Universities, research centres, and STEM-focused organisations
4. **International partners**  
Space agencies, satellite operators, and academic institutions in Africa, as well as globally
5. **General public**  
Students, researchers, and citizens interested in the space sector and its related industries

## Recommendations

- **Develop a centralised portal under government leadership**  
The Department of Science, Technology and Innovation (DSTI), in partnership with SANSA and other space agencies, should spearhead the creation of the portal.
- **Collaborate with private sector**  
Private sector space companies and start-ups should be encouraged to contribute content, share projects, and use the portal to promote their services.
- **Secure funding for the portal's development**  
Allocate government funding and establish partnerships with international space agencies, technology companies, and philanthropic organisations to ensure long-term financial sustainability.
- **Launch public awareness campaign**  
Use mass media, social media platforms, and community engagement strategies to raise awareness about the portal and its potential benefits.
- **Monitor and evaluate portal impact**  
Regular feedback should be gathered from users, such as industry professionals, students, and researchers, to ensure the portal meets evolving needs.

## Conclusion

Creating a centralised portal for the South African space sector would significantly improve the sector's accessibility, foster innovation, and strengthen South Africa's position within the global space community. By streamlining resources, fostering collaboration, and offering real-time updates, the portal can play a pivotal role in advancing the country's space ambitions while contributing to economic and educational development. Overall, this portal will provide a secure, user-friendly seamless training platform for many students, diplomats, researchers, and others.

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