

BUDGET VOTE 2021/22

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science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF SCIENCE AND INNOVATION BUDGET GUIDE FOR THE 2021/22 FINANCIAL YEAR

I. Strategic overview

Science, Technology and Innovation (STI) are recognised as core drivers of socio-economic development. As the country and world grapple with the impact of COVID-19, innovation has become key in crafting economic recovery plans and improving the lives of citizens. The 2021/22 budget is tabled in a constrained fiscal environment, which puts pressure on departments to ensure that resources are deployed in a manner that will yield high returns.

It has been more than a year since the approval of the new White Paper on Science, Technology and Innovation, and the Department of Science and Innovation (DSI) has aligned its work with the White Paper toward a more vibrant, inclusive, coherent and coordinated national system of innovation (NSI), that contributes optimally to South Africa's socio-economic and environmental priorities and to a capable state. The DSI is in the process of finalising the Decadal Plan which will guide the implementation of the new White Paper. The Decadal Plan is premised on advancing a holistic approach to innovation in South Africa.

The Department's response to the COVID-19 pandemic showed the value of its past investments in scientific infrastructure and human capacity. The NSI was ready to be leveraged in response to the global disaster – to collect and analyse data for evidence-based decision-making, to carry out genomic sequencing that identified variants of concern, to produce non-invasive ventilators and to measure the human and economic costs of the pandemic.

The DSI's total budget is R8,9 billion in 2020/21. The majority of the Department's budget is spent on transfers to entities with the National Research Foundation receiving the largest share.

2. Some key priorities in 2021/22

Economic recovery

Efforts to stimulate employment as part of economic recovery include various initiatives established or supported by the Department. Targeting youth unemployment, the DSI is contributing to the Presidential Youth Employment Initiative, specifically the Pathway Management Network with funding from the Presidency. The DSI continues its work to enable the modernisation of sectors of the economy such as manufacturing, agriculture and mining to ensure that these sectors are competitive and can contribute to higher GDP growth and participate in the aerospace, mining and automotive master plans. Work is also being done to grow the hydrogen and circular economies, and to help small businesses through the Technology Stations Programme.

Funding research, innovation and infrastructure

The COVID-19 pandemic has highlighted the importance of significant investments in research, innovation and infrastructure over the years. When the pandemic descended on the country last year, the Department and its entities were well prepared to respond to the health crisis. Megascience projects like the South African Radio Astronomy Observatory provided systems engineering and project management support for the design and manufacture of ventilators, DSI-funded infrastructure was repurposed to expand testing facilities and the manufacture of molecular biology enzymes, reagents and testing kits, as well as assisting with data modelling and analysis to track the spread of the pandemic. Further investments will be made during this financial year.

Human Capital Development

Building on existing work, the Department will enhance its contribution to the development of human capabilities and skills for the economy by continuing to expand the transformation agenda in all strategic STI focus areas. This will include demographic transformation, transdisciplinary transformation, institutional

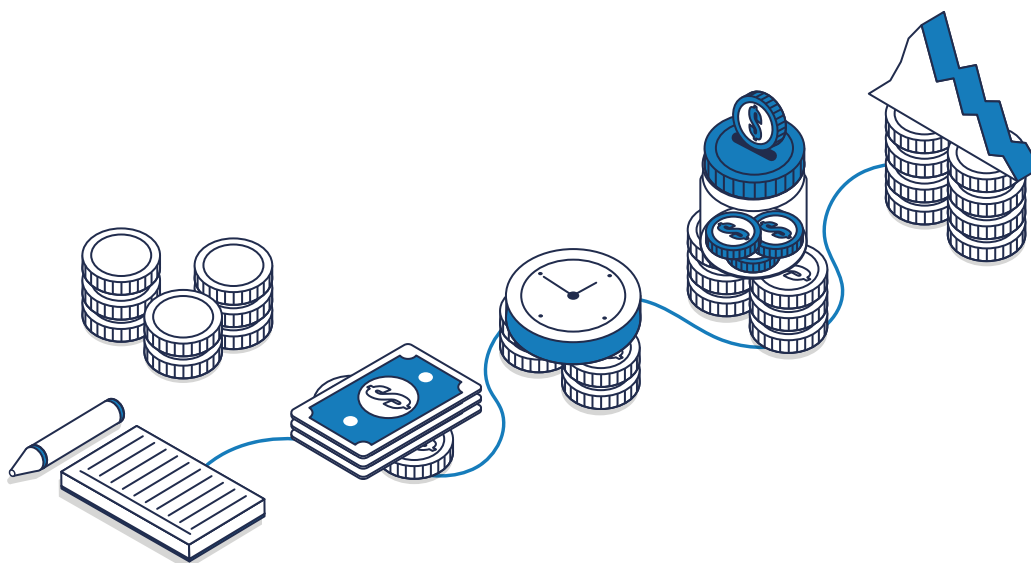
transformation, transformation through the translation of science and innovation into societal benefit, and fundamental economic transformation, among others. The Department approved a new postgraduate funding policy during the previous financial year that provides for full-cost support for certain groups of students. The policy will be implemented during this financial year.

Producing new knowledge

To enhance work in increasing knowledge generation and innovation outputs, the Department will focus on investments that are geared towards supporting the translation of publicly funded intellectual property (IP) into social and economic value, using the National Intellectual Property Management Office's database of disclosures of publicly financed IP as a basis for tracking the utilisation of IP via the conclusion of commercial agreements and the introduction of products and services to the public.

Capable state

To help improve service delivery, the Department will continue to support Earth observation decision-support tools developed by the South African National Space Agency, which will assist with the planning of appropriate resource deployment. It will also broaden the implementation of the Municipal Innovation Maturity Index to provide insights that enable municipalities to plan for innovations to improve the delivery of basic services.



3. Expenditure financing

Funding is allocated to the DSI by National Treasury. For the 2021/22 financial year, the Department is allocated **R8,9 billion**.

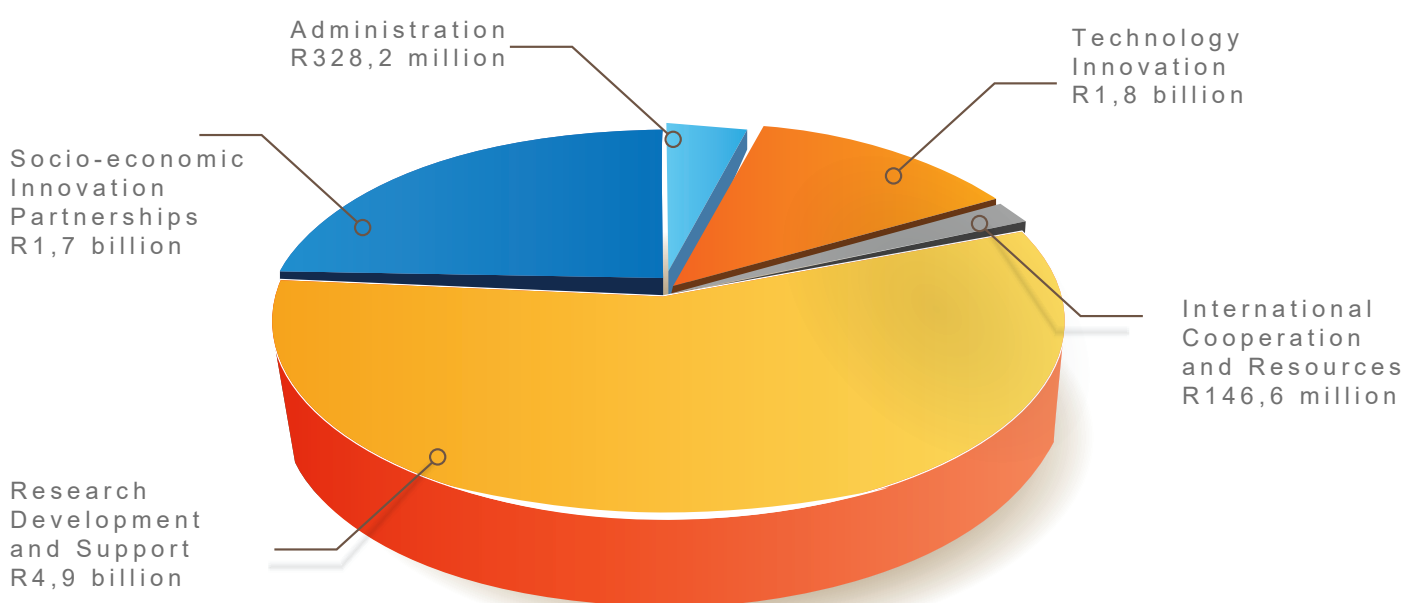
Over the Medium-Term Expenditure Framework period, the resources allocated to the DSI are as follows:

FINANCIAL YEAR	BUDGET
2021/22	R8,9 billion
2022/23	R9,1 billion
2023/24	R9,2 billion

The Department also receives official development assistance from other countries through various funding instruments.

4. Functional classification of expenditure

The DSI's total budget for the 2021/22 financial year is **R8,9 billion**. The chart below shows how this is divided between the Department's five main Programmes, which represent various core focus areas.



Research Development and Support receives an allocation of **R4,9 billion**. The Programme provides an enabling environment for research and knowledge production that supports the strategic development of the basic sciences and priority science areas, through the promotion of human capital development and the provision of research infrastructure and support. The Programme aims to award bursaries to 2 000 PhD students, and 6 200 pipeline postgraduate (BTech, honours and master's) students, as well as to have 750 graduates and students placed in science, engineering, technology and innovation institutions.

Socio-economic Innovation Partnerships receives **RI,7 billion** and plans to improve inclusion and establishing linkages across the NSI by focusing its key actions on strengthening innovation partnerships with civil society organisations, industry innovation partnerships, and contributing to sector research and development, among other areas. Mobilising the NSI to support the District Development Model will also receive priority. The Programme intends to add at least 60 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators, or technology transfer packages) to the industrial development and green economy IP portfolio.

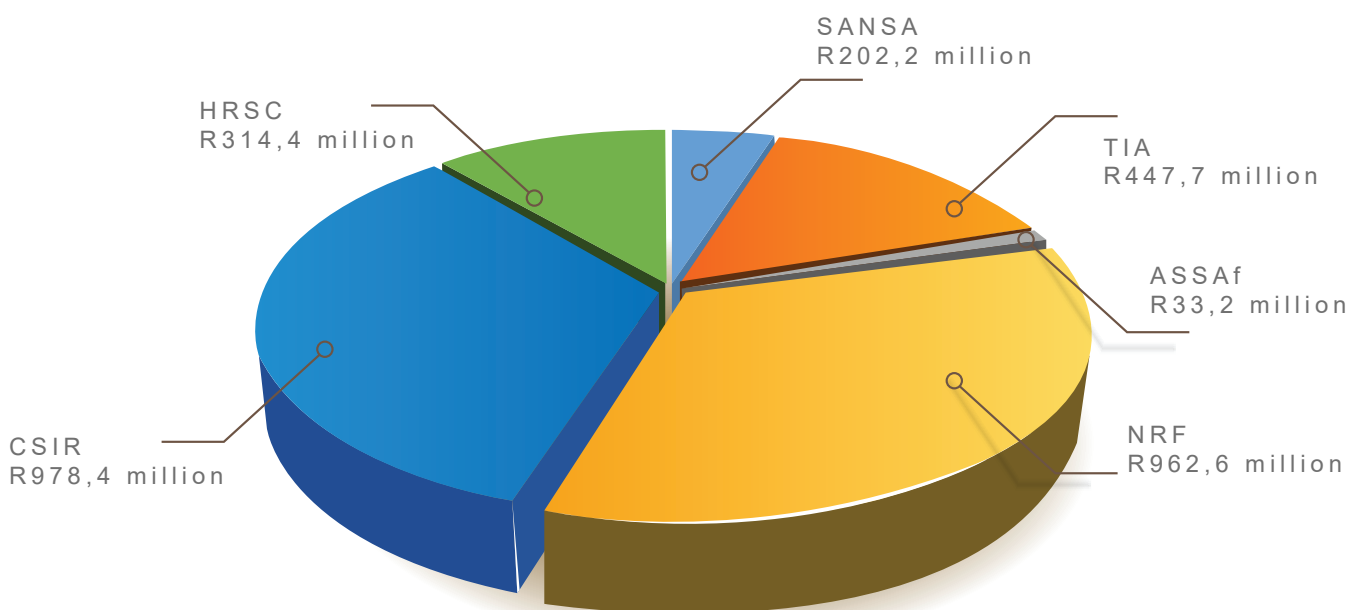
Technology Innovation receives an allocation of close to **RI,8 billion** and expects to present an implementation update to Cabinet on the Innovation Fund. Another policy initiative will be the finalisation of the Hydrogen Society Roadmap. During this financial year, the Programme aims to launch three cube satellites in support of Maritime Domain Awareness. This period will also see the upgrade of the South African National Space Agency's Space Weather Station. Other initiatives include the development of indigenous knowledge-based technology innovations and 10 technology demonstration prototypes, products and services in the space and energy sectors.

Administration receives **R328,2 million** for the overall management of the Department and to ensure that organisations funded by the DSI comply with the standards of good corporate governance and align their activities with the strategic focus of the NSI.

International Cooperation and Resources receives an allocation of **RI 46,6 million** to use for increasing the flow of international resources into the country for STI-based socio-economic development; increasing the exposure of South African researchers and

students to global STI networks; contributing to the global STI discourse through regional, continental and global initiatives; supporting capacity development in Africa to develop the continent's knowledge-based economy; and increasing the participation of South Africans in international human capital development opportunities.

5. Parliamentary grants for entities reporting to the Minister of Higher Education, Science and Innovation



The **National Research Foundation (NRF) (R962,6 million)** supports and promotes research through the funding of human resource development and the provision of facilities to enable the creation of knowledge, innovation and development in all fields of science and technology, including indigenous knowledge systems.

The **Council for Scientific and Industrial Research (CSIR)** receives **(R978,4 million)** to foster industrial and scientific development, particularly through multidisciplinary research and technological development, either by itself or in cooperation with public and private sector institutions.

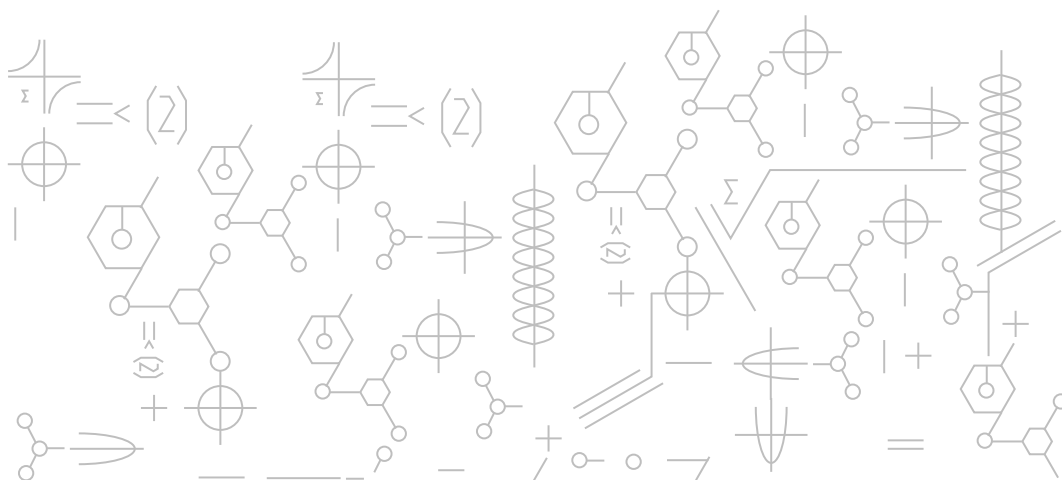
The **Human Sciences Research Council (HSRC) (R314,43 million)** undertakes, promotes and coordinates policy-relevant, problem-oriented research in the human and social sciences, including research projects for public sector users, non-governmental organisations and international development agencies, in partnership with researchers all over the world, but particularly in Africa.

The **Technology Innovation Agency (TIA) (R447,7 million)** stimulates and intensifies technological innovation in order to improve economic growth and the quality of life of all South Africans. The agency is key to ensuring the translation of the research and development outcomes of higher education institutions, science councils and public entities into commercial technology products and services, thereby intensifying the impact of innovation on the economy and society.

The **Academy of Science of South Africa (ASSAf) (R33,2 million)** promotes common ground across all scientific disciplines; promotes innovative and independent scientific thinking, and the optimum development of the intellectual capacity of all people; and provides effective advice and facilitates appropriate action in relation to the collective needs, opportunities and challenges of all South Africans.

The **South African National Space Agency (SANSA) (R202,2 million)** promotes the use of space and cooperation in space-related activities, while fostering research in space science, advancing scientific engineering through developing human capital, and providing support to industrial development in space technologies.

In addition to the parliamentary grants, the DSI's entities receive project funding to implement specific departmental projects.



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