

DSI ANNUAL PERFORMANCE INFORMATION REPORT (F/Y 2019-20)

Date: 1 December 2020
DSI Annual Report
Presentation:
Select Committee of Education
and Technology, Sports, Arts
and Culture

Making *sure* *it's*
possible



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA





Presentation outline

- ❑ **Purpose**
- ❑ **DSI's Vision and Mission**
- ❑ **Alignment to National Priorities**
- ❑ **DSI's overall performance**
- ❑ **Programme Performance Overview**
- ❑ **Sample of DSI's projects**
- ❑ **Finance**

Purpose



To present the **DSI's Annual Report for the 2019-2020 financial year**



DSI VISION AND MISSION

Vision

Increased well-being and prosperity through science, technology and innovation.

Mission

To provide leadership, an enabling environment and resources for science, technology and innovation in support of South Africa's development.

Alignment of the DSI work to national priorities

The Department contributes to the following government outcomes of the MTSF:



Outcome 2: A long and healthy life for all South Africans.



Outcome 4: Decent employment through inclusive economic growth.



Outcome 5: A skilled and capable workforce to support an inclusive growth path.

Alignment of the DSI work to national priorities

The Department contributes to the following government outcomes of the MTSF:



Outcome 6: An efficient, competitive and responsive economic infrastructure network.



Outcome 7: Vibrant, equitable and sustainable rural communities and food security for all.



Outcome 10: Environmental assets and natural resources that are well protected and continually enhanced.

DSI's Strategic outcome-oriented goals



Responsive, coordinated and efficient NSI.



Increased knowledge generation.



Human capital development.



Using knowledge for Economic development.



Knowledge utilisation for inclusive development.

2019/20 DSI Performance Overview

DSI audit trends from 2018 to 2019 by the Auditor General of South Africa (AGSA).



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence





2019/20 Audit Results

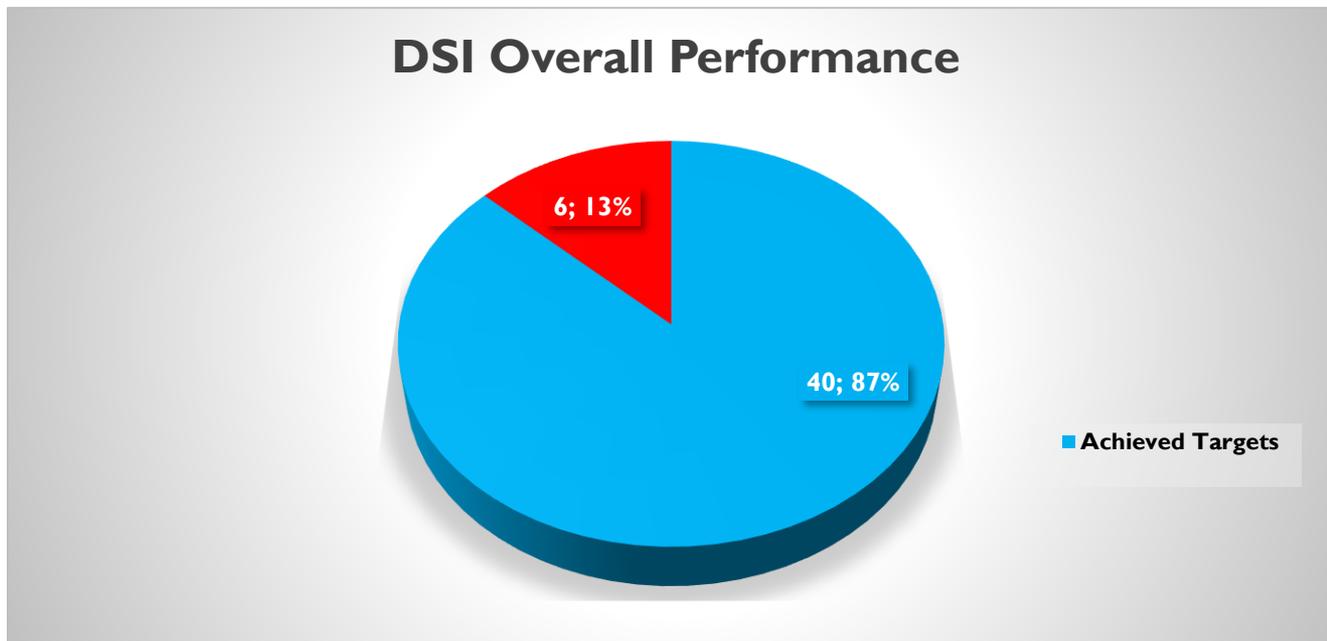
As per the PFMA and National Treasury prescripts, the 2019/20 DSI performance was subjected to the audit process by the AGSA and the following are the results:

- ❑ The DSI received an unqualified audit opinion on both Finance and Predetermined Objectives.
- ❑ This means that the audit outcome of the 2018/19 financial year was maintained.
- ❑ The number of audit findings in the internal Management Report the AGSA shares with the Department has been significantly reduced.

2019/20 DSI OVERALL PERFORMANCE

- Based on the approved 2019/20 Annual Performance Plan (APP), output targets (total number of output targets n=46) the Department achieved a total of 40 (87%) targets and 6 (13%) targets were not achieved (Figure 1).

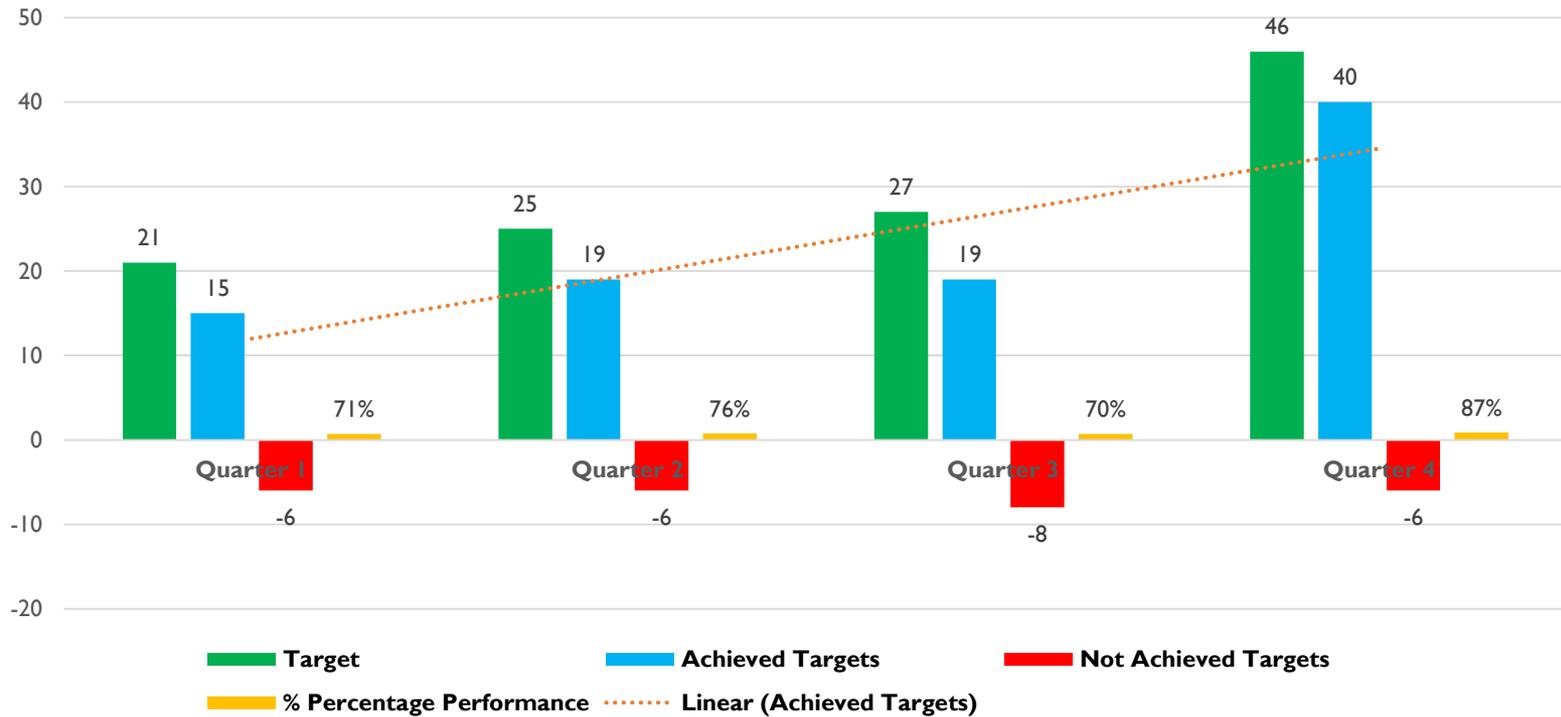
Figure 1: 2019/20 DSI's overall performance



2019/20 DSI OVERALL PERFORMANCE

Quarterly analysis for the Financial Year 2019/20

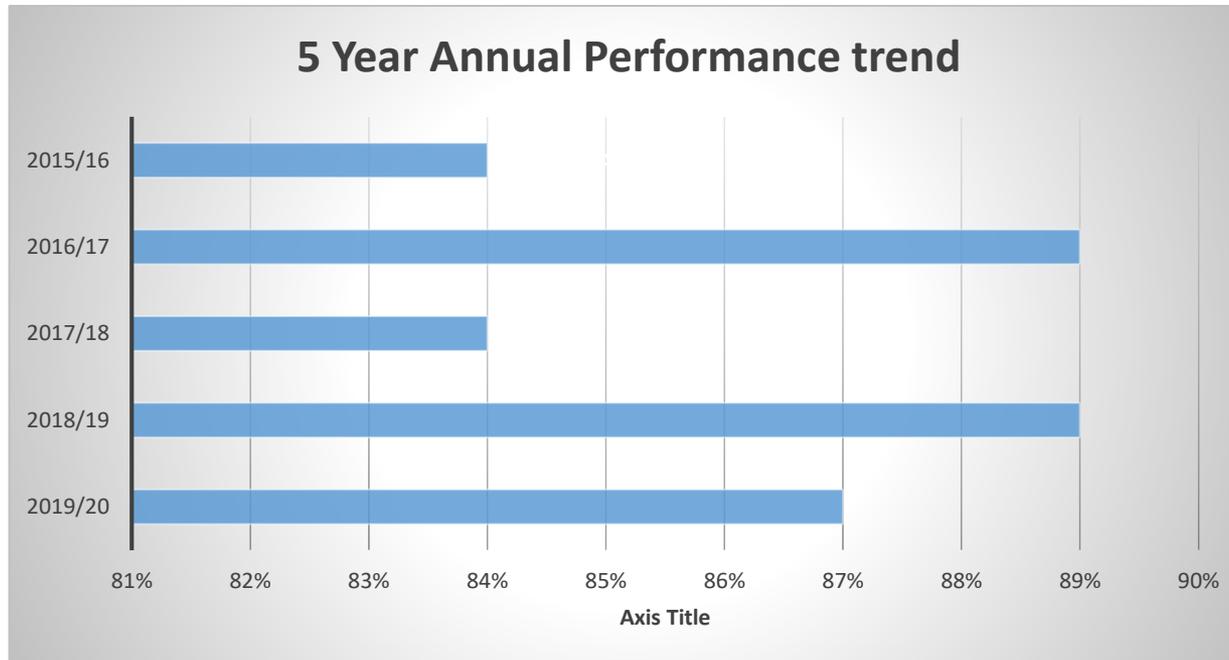
DSI Performance Information per Quarter



DST Overall Performance

- ❑ The DSI's performance trend against predetermined objectives has relatively remained above 80% over the last five financial years as illustrated in Figure 3 below.

Figure 3: DSI overall 5 year annual performance trend





KEY ACHIEVEMENTS PER DSI STRATEGIC OUTCOME-ORIENTED GOALS

- ❑ The Department of Science and Innovation continued to support the National Priorities by implementing its Five (5) Strategic Outcome-Orientated Goals (SOOG's) during the period under review.

These SOOG's are as follows:

- a responsive, coordinated and efficient national system of innovation (NSI),
- increased knowledge generation,
- using knowledge for economic development,
- human capital development (HCD),
- and using knowledge for inclusive development.



**Key Achievements Per DSI Strategic
Outcome-Orientated Goals**



Strategic Outcome-Oriented Goal 1



**A responsive, coordinated
and efficient NSI**



Strategic Outcome-Oriented Goal I

The Higher Education, Science, Technology and Innovation Institutional Landscape Review:

- ❑ After the merger of the two ministries, the scope of the review expanded the panel to cover the higher education institutional landscape in the STI institutional landscape for the White Paper on Science, Technology and Innovation (STI) implementation readiness assessment.
- ❑ The Higher Education, Science, Technology and Innovation Institutional Landscape (HESTIIL) Review Panel started its work in November 2019, and is expected to present its final report to the Minister during the 2020/21 financial year.
- ❑ The recommendations of the HESTIIL Review Panel will inform the 2020 STI Decadal Plan, currently being developed by the DSI.



Strategic Outcome-Oriented Goal 1

Development of the Science, Technology and Innovation Decadal Plan

- ❑ The Department developed a new White Paper on STI (approved by Parliament on March 2019) in response to rapid global technological advancement and megatrends such as geopolitical shifts and climate change.
- ❑ This White Paper on STI will be implemented through a series of decadal plans that will be reviewed at least every five years.
- ❑ The first Science, Technology and Innovation Decadal Plan is being developed, and should be finalised by the end of the 2020/21 year.
- ❑ The framework for the Decadal Plan has been approved, and two major supporting studies that provide input into the Decadal Plan have been completed.

Strategic Outcome-Oriented Goal 2



Increased knowledge generation

- ❑ The DSI acknowledges that without research grants support, knowledge generation is not possible.
- ❑ **Research grants:**
 - ✓ During the 2019/20 financial year, the DSI awarded 3 205 research grants: 48% went to black researchers; and 41% went to women.



Strategic Outcome-Oriented Goal 2

Increased knowledge generation

Publications:

- ✓ Over 7 255 research articles were published by DSI-NRF-funded researchers and cited in the Thomson Reuters Web of Science Citation Database.
- ✓ The Department, through the NRF awarded 33 research infrastructure grants.
- ✓ Research outputs provide a basis for continuous generation of new knowledge and innovation to improve the country's socio-economic status and global competitiveness.

Strategic Outcome-Oriented Goal 3



**Human capital
development**



Strategic Outcome-Oriented Goal 3

Goal statement: Increase the number of high-level graduates and improve their representivity

- ❑ Skills acquisition is the greatest equaliser in reducing, inequality, poverty and unemployment.
- ❑ In line with the NDP goals, the DSI through its various human capital development initiatives aims to empower South African citizens by giving them the right skills to innovate and create solutions.
- ❑ These investments also aimed to unlock opportunities for new businesses to drive the country's economy forward.

Some of the highlights for the period under review are set out below



Strategic Outcome-Oriented Goal 3

Bursaries awarded through NRF and DST programmes:

- ✓ The Department through the NRF funded or co-funded a total of 11 992 students, comprising 8 632 pipeline (undergraduate), eight honours, 327 master's, and 3 025 doctoral students.

Interns supported:

- ✓ Approximately 1 312 graduates and students were placed in DST-funded work preparation programmes in SETI institutions.

Science engagements:

- ✓ A total of 29, 4 million participants were reached through the science awareness and engagement programmes of the DSI, entities and science centres.

Strategic Outcome-Oriented Goal 3

□ Trend analysis of one of DSI' s contributing towards human capital development in the past four years

✓ Note the decrease in numbers of students funded is due to Budget cuts.

Study level	2017/18	2018/19	2019/20
Honours	4 956	4 572	4 545
Masters	6 645	5 202	4 087
Doctoral	3 621	3 380	2 991
Total	14 22	13 154	11 623

Using knowledge and Innovation for economic development

Goal statement: Derive a greater share of economic growth from R&D-based opportunities and partnerships

- ❑ STI initiatives have been identified as the primary drivers of economic growth, job creation and the socio-economic reform agenda in the country.
- ❑ During the period under review, the Department focused on the stimulation and intensification of technological innovation in order to improve economic growth.
- ❑ For example: during the 2019/20 reporting period, the National Intellectual Property Management Office (NIPMO) continued to play an enabling role in the utilisation of knowledge for economic and social development through the Office of Technology Transfer (OTT) Support Fund.

Using knowledge and Innovation for economic development

- ✓ NIPMO refunded 50% (just over R20 million) of all eligible IP rights protection and maintenance costs following submissions to NIPMO by higher education institutions and science councils.
- ✓ Support was extended to previously disadvantaged universities like the University of Venda and Mangosuthu University of Technology.
- ✓ NIPMO supported seven OTTs from four different provinces through this fund.

□ NIPMO through its partnership with the World Intellectual Property Organization (WIPO) continues to provide training/skills development to personnel at OTTs and SMMEs.

□ Artificial Constructed Wetland Bioremediation Consortium: The bioremediation research consortium will consist of UNISA as a lead institution together with CPUT, UJ and UNIVEN. The consortium will undertake various RDI activities targeted at the technology demonstration and upscaling of the artificial constructed wetlands bioremediation technology.

Knowledge utilisation for inclusive development.

Goal statement: Accelerate inclusive development through scientific knowledge, evidence and appropriate technology

- ❑ An investment of R19 million by the DSI for the 2019/20 financial year saw co-funding leveraged and/or increased investments amounting to R72,4 million.

- ❑ In the reporting period, there were two significant developments in the funding of five aquaculture SMMEs with technology development, and two assessments in the mapping of value chains for indigenous, niche and underutilised crops, namely, marula and honeybush.
 - ✓ For marula, a R15 million contract (including co-funding from TIA and the Industrial Development Corporation) was signed for the next five years.

- ❑ ABIPP initiatives also created nine new jobs during the financial year under review.

Knowledge utilisation for inclusive development.

Grassroots Innovation

- This initiative provides comprehensive support to grassroots innovators, including technology development, capacity building, and the protection of intellectual property.
 - ✓ During the year under review, a call for grassroots innovations was issued, which attracted over 288 responses from across the country.
 - ✓ Over 100 qualifying local innovators are being enrolled in the programme, which will help them to develop their concepts, commercialise their ideas, and create prototypes.
 - ✓ Those who were not enrolled in the Grassroots Innovation Programme were selected for other forms of assistance including training and, where applicable, were referred to the DSI's Technology Innovation Agency for support.

Knowledge utilisation for inclusive development.

Municipal Innovation Maturity Index (MIMI)

- ❑ This is a tool that provides critical information on the innovation capabilities and readiness of local government to deliver effective services.
- ❑ In order to contribute towards improving the capacity of municipalities and enhancing the delivery of basic services, the Department was able to expand the number of municipalities participating in the Municipal Innovation Maturity Index (MIMI).
- ❑ In the context of scaling up MIMI, and further refining and realigning the tool with existing initiatives to encourage innovation in government, the innovation capacity of a total of 24 municipalities are being assessed.

Demonstration: Municipal Innovation Maturity Index (MIMI)

MIMI - a **framework** that assesses the smart city maturity levels of municipalities.

It also assesses the individual capabilities of municipal officials to innovate for purposes of service delivery

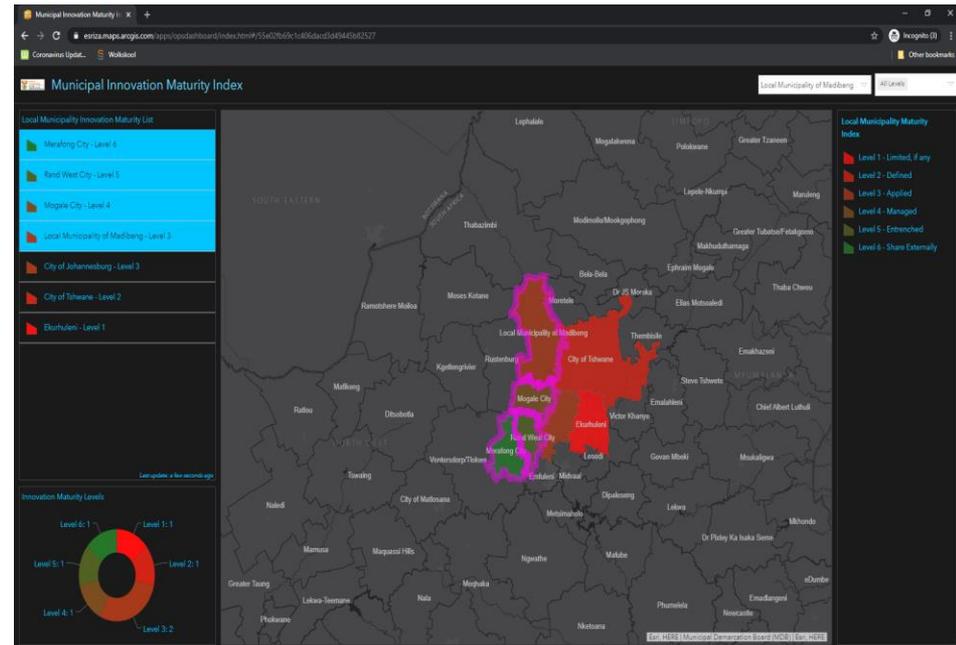
It applies a 5 level objective criteria for assessing the maturity of the innovation ecosystems of municipalities.

Municipal Innovation Maturity Levels



Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Limited, if any	Defined	Applied	Managed	Entrenched	Share learnings
Limited, if any, awareness or evidence of innovation on the part of individual officials or the organisation.	Innovation is defined. Officials understand innovation principles and innovation strategies are in place, but there is little, if any, evidence of innovation implementation.	Innovation is applied. There is evidence of implementation in certain departments of the municipality. Innovation is repeatable, but irregular.	Innovation is managed. Innovation occurs on an on-going basis and processes in relation to this are managed well in the municipality.	Innovation principles and practices are entrenched throughout the municipality. Innovation. Officials seek to optimise and evaluate solutions, and improve on these continuously for internal benefit.	Innovation is open and outward looking. New knowledge is applied creatively, based on evidence, in different contexts and shared with others outside of the organisation.

Two of the **top ten poorest** local municipalities in South Africa are found in the O.R. Tambo District. These Municipalities are adopting innovation and technology to improve their operations



Summary of progress

- First pilot was for 6 district municipalities, with most municipalities at innovation maturity level 2;
- Current piloting of the digital version of the MIMI tool covers 24 municipalities;
- Target is to reach 60% coverage of Municipalities by March 2021.;
- The MIMI assessment is helping municipalities develop their innovation plans and to invest on smart city projects.

Knowledge utilisation for inclusive development.

- ❑ **The Department demonstrated innovative technologies aimed at improving service delivery and quality of life, particularly in rural areas.**
- ✓ These included a cooperative-operated wireless Internet connectivity network project in Mankosi Village, Eastern Cape.
- ✓ In partnership with Mankosi Village cooperatives, the University of the Western Cape, Zenzeleni NPC and TIA, over 3 000 users were connected to the Internet, including schools, non-governmental organisations, clinics, businesses and community members.
- ✓ The model has proven appropriate for providing rural communities with reliable and affordable access to telecommunication services and digital hubs.

STI International Cooperation (I)

- ❑ R738 million foreign investment in South Africa's National System of Innovation leveraged notably through supporting South African participation in the European Union's Horizon 2020 Framework Programme, European Developing Countries Clinical Trials Partnership
- ❑ 684 South African students participating in international training and mobility programmes through opportunities such as the South Africa – China Young Scientists Exchange Programme
- ❑ 617 partner organisations cooperating with South Africans research and technology organisations as a result of extensive portfolio of bilateral cooperation programmes (e.g. UK Newton Fund) or multilateral partnerships (e.g. BRICS Framework Programme)
- ❑ Support for 20 African Union / Southern African Development Community science, technology and innovation cooperation initiatives, providing continental leadership (e.g. South African funding NEPAD S&T Flagship programmes)

STI International Cooperation (2)

- ❑ Influence the global science, technology and innovation policy discourse through active participation forums such as United Nations (UNESCO), OECD, Non-Aligned Movement topics such as Sustainable Development Goals, climate change, Open Science
- ❑ Successfully hosted fifth Science Forum South Africa / Innovation Bridge with more than 3000 participants – event globally recognized as one of Africa's largest science events



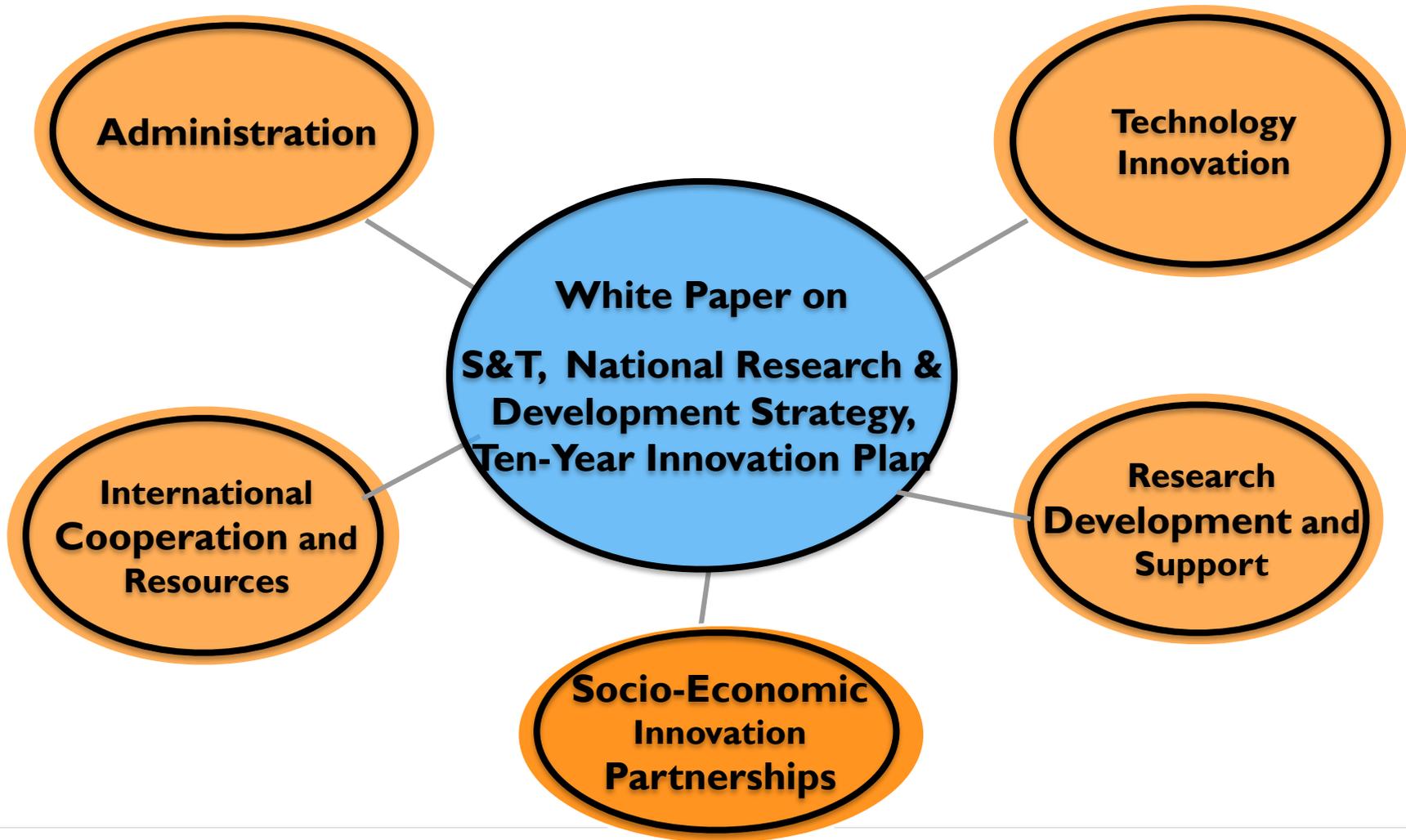
Overview of Performance per Programme



Programme Performance Overview



DSI's Programmes



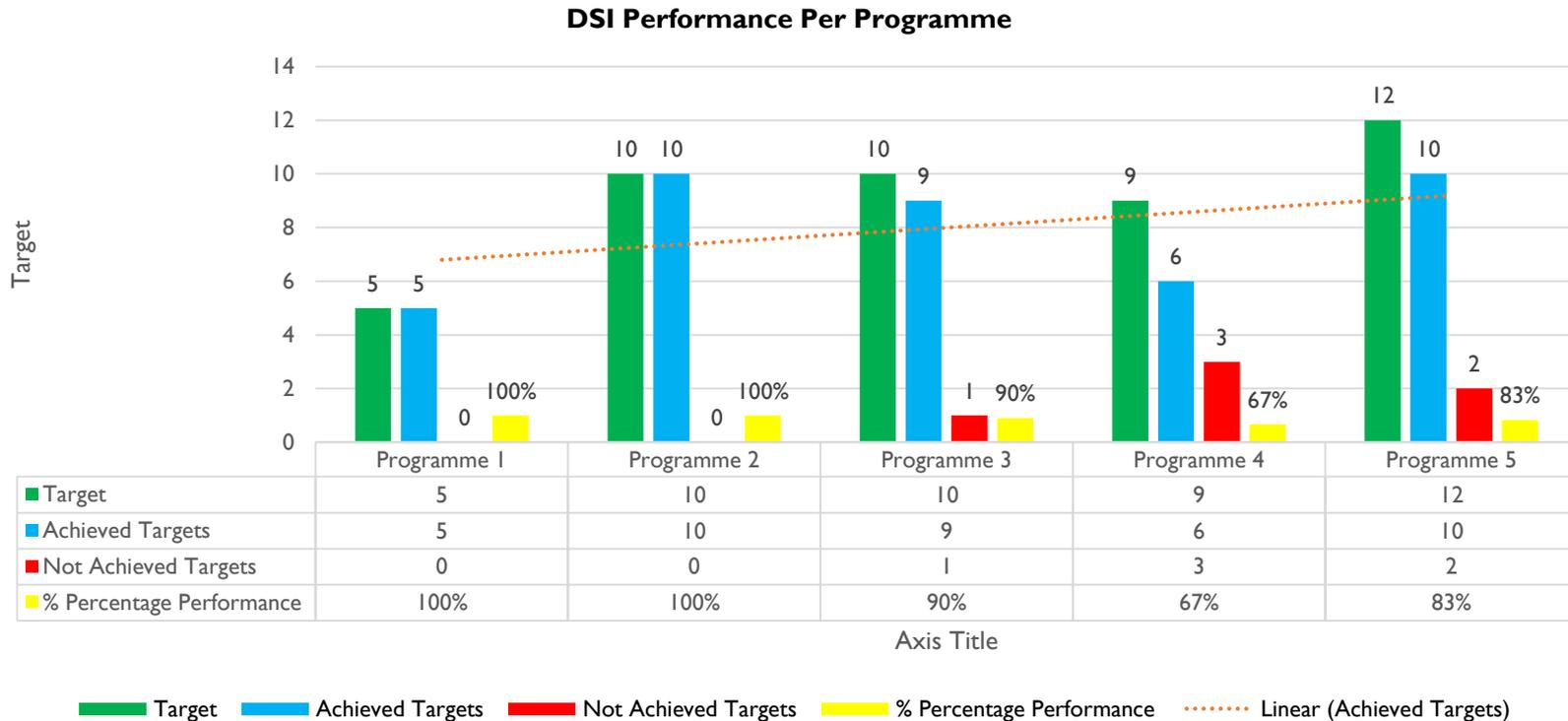
DSI's Performance per Programme

Figure 3 below illustrates the performance of the Department per Programme in the third quarter.

- **Programme 1** achieved 100% of its targets,
- **Programme 2** achieved 100% of its targets,
- **Programme 3** achieved 90% of its targets and 10% of the planned targets were not achieved.
- **Programme 4** achieved 67% of its targets and 33% of the planned targets were not achieved.
- **Programme 5** achieved 83% of its targets and 17% of the planned targets were not achieved.

Overall DSI's Performance per Programme

Figure 3: The DSI performance per Programme



DST Programme 1

Purpose of the Programme (I)

□ Programme I: Administration

To conduct the overall management and administration of the Department.



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence

Programme I Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
DSI public entities' 2018/19 annual reports and 2020/21 annual performance plans and annual reports approved by the Minister by 31 March 2020	DSI public entities' 2018/19 annual reports and 2020/21 annual performance plans and annual reports approved by the Minister by 31 March 2020	Achieved
I combined assurance annual report on the status of combined assurance presented to the Risk and Audit Committees by 31 March 2020	I combined assurance annual report on the status of combined assurance presented to the Risk and Audit Committees by 31 March 2020	Achieved

Programme I Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
24 media articles written to raise the DSI's public profile by 31 March 2020	184 media articles written to raise the DSI's public profile by 31 March 2020	Overachieved
10 public participation programmes held by 31 March 2020	11 public participation programmes held by 31 March 2020	Overachieved
Unqualified audit opinion (clean audit) with no financial matters in the audit report	Unqualified audit opinion (clean audit) with no financial matters in the audit report	Achieved

Purpose of the Programme (2)

□ Programme 2: Technology Innovation

To enable research and development in strategic and emerging focus areas to promote the realisation of commercial products, processes and services from R&D outputs; through the implementation of enabling policy instruments.



Programme 2 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
19 instruments funded in support of knowledge utilisation by 31 March 2020	19 instruments funded in support of knowledge utilisation	Achieved
120 knowledge outputs generated by 31 March 2020	197 knowledge outputs generated	Overachieved
3 strategic policy directives in designated areas in support of economic sectors by 31 March 2020	6 strategic policy directives in designated areas in support of economic sectors	Overachieved
2 decision-support interventions maintained by 31 March 2020	3 decision-support interventions maintained	Overachieved
100% of regulatory recommendations made to the GMO Executive Council through DAFF to support decision making by 31 March 2020	100% of regulatory recommendations made to the GMO Executive Council through the Department of Agriculture, Land Reform and Rural Development to support decision making by 31 March 2020	Achieved

Programme 2 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
210 new disclosures reported by publicly funded institutions by 31 March 2020	258 new disclosures reported by publicly funded institutions by 31 March 2020	Overachieved
185 postgraduate students (master's and doctoral) funded in designated areas by 31 March 2020	297 postgraduate students (master's and doctoral) funded in designated areas	Overachieved
230 trainees attending training initiatives in designated areas by 31 March 2020	242 trainees attending training initiatives in designated areas by 31 March 2020	Overachieved
210 new disclosures reported by publicly funded institutions by 31 March 2020	258 new disclosures reported by publicly funded institutions by 31 March 2020	Overachieved

Programme 2 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
185 postgraduate students (master's and doctoral) funded in designated areas by 31 March 2020	297 postgraduate students (master's and doctoral) funded in designated areas	Overachieved
10 knowledge application products funded in designated areas by 31 March 2020	20 knowledge application products funded in designated areas	Overachieved
8 commercial outputs in designated areas by 31 March 2020	11 commercial outputs in designated areas	Overachieved

DSI Programme 3

Purpose of Programme (3)

□ Programme 3: International Cooperation and Resources

This Programme aims to strategically develop, promote and manage international relationships, opportunities and S&T agreements that strengthen the NSI and enable an exchange of knowledge, capacity and resources between South Africa and its regional and international partners.



Programme 3 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
R480 million in international funds directly invested in research, innovation and STI HCD programmes, as well as research infrastructure investments in South Africa accounted for as part of cooperation initiatives implemented by the DSI by 31 March 2020	R738 million in international funds directly invested in research, innovation and STI HCD programmes, as well as research infrastructure investments in South Africa accounted for as part of cooperation initiatives implemented by the DSI by 31 March 2020	Achieved
R300 million invested by international partners in their own organisations and initiatives, but targeted at cooperation in research, innovation and STI HCD with South African partners as part of cooperation initiatives implemented by the DSI by 31 March 2020	R2 billion invested by international partners in their own organisations and initiatives, but targeted at cooperation in research, innovation and STI HCD with South African partners as part of cooperation initiatives implemented by the DSI by 31 March 2020	Overachieved

Programme 3 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
600 international partner organisations (i.e. legal entities) collaborating with South African partners within the framework of formalised collaborative research, innovation or STI HCD projects as part of cooperation initiatives facilitated by the DSI by 31 March 2020	617 international partner organisations (i.e. legal entities) collaborating with South African partners within the framework of formalised collaborative research, innovation or STI HCD projects as part of cooperation initiatives facilitated by the DSI by 31 March 2020	Overachieved
30 international technical exchanges to build or reinforce South Africa's capacities in key STI domains specifically referenced in the DSI Strategic Plan, undertaken with the support of international partners facilitated by the DSI by 31 March 2020	32 international technical exchanges to build or reinforce South Africa's capacities in key STI domains specifically referenced in the DSI Strategic Plan, undertaken with the support of international partners facilitated by the DSI by 31 March 2020	Overachieved

Programme 3 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
120 research, innovation and STI HCD cooperation projects co-funded or supported in kind by DSI and at least one other African partner by 31 March 2020	144 research, innovation and STI HCD cooperation projects co-funded or supported in kind by DSI and at least one other African partner by 31 March 2020	Overachieved
R90 million in international funds directly invested in African regional and continental research, innovation, STI HCD or research infrastructure programmes as a result of DSI facilitation by 31 March 2020	R195 million in international funds directly invested in African regional and continental research, innovation, STI HCD or research infrastructure programmes as a result of DSI facilitation by 31 March 2020	Overachieved
20 AU or SADC STI initiatives, including programmes, projects or governance frameworks, endorsed at AU or SADC ministerial level supported (financially or in kind) by DSI by 31 March 2020	20 AU or SADC STI initiatives, including programmes, projects or governance frameworks, endorsed at AU or SADC ministerial level supported (financially or in kind) by DSI by 31 March 2020	Achieved

Programme 3 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
4 formally recorded decisions made in intergovernmental STI forums, such as multilateral organisations with a direct bearing on resource allocation to support priorities of government's Programme of Action following specific DSI intervention by 31 March 2020	9 formally recorded decisions made in intergovernmental STI forums, such as multilateral organisations with a direct bearing on resource allocation to support priorities of government's Programme of Action following specific DSI intervention by 31 March 2020	Overachieved
4 leadership positions occupied by South Africa in international STI governance structures relevant to influencing resource allocation to support priorities of government's Programme of Action following specific DSI intervention by 31 March 2020	5 leadership positions occupied by South Africa in international STI governance structures relevant to influencing resource allocation to support priorities of government's Programme of Action following specific DSI intervention by 31 March 2020	Overachieved

DSI Programme 4

Purpose of Programme (4)

□ Programme 4: Research Development and Support

Provide an enabling environment for research and knowledge production that promotes strategic development of basic sciences and priority science areas, through science promotion, human capital development, the provision of research infrastructure and relevant research support in pursuit of South Africa's transition to a knowledge economy.



Programme 4 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
Not less than 650 graduates and students placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2020	1 091 graduates and students placed in DSI-funded work preparation programmes in SETI institutions	Overachieved
20 annual research infrastructure grants awarded as per award letters by 31 March 2020	33 research infrastructure grants awarded as per award letters annually	Overachieved
3 500 Gbps total available broadband capacity provided by SANReN by 31 March 2020	4 522,01 Gbps available broadband capacity provided by SANReN per annum.	Overachieved
Not less than 7 000 research articles published by NRF-funded researchers and cited in the Thomson Reuters Web of Science citation database as reflected in the NRF project reports by 31 March 2020	Not less than 7 255 research articles published by NRF-funded researchers and cited in the Thomson Reuters Web of Science citation database as reflected in the NRF project reports	Overachieved

Programme 4 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
8 large survey projects science mode installed on MeerKAT correlator by 31 March 2020	8 large survey project science modes installed on MeerKAT correlator by 31 March 2020	Achieved
Not less than 2,1 million participants (learners and members of the public) in science awareness and engagement programmes as reflected in the project reports of the NRF and other service providers by 31 March 2020	Approximately 29,4 million participants in DSI-supported science awareness and engagement programmes as per preliminary data obtained from the NRF and other service providers by 31 March 2020	Overachieved

DSI Programme 5

Purpose of Programme (5)

□ Programme 5: Socio-Economic Innovation Partnerships

This Programme enhances the growth and development priorities of government through targeted S&T-based innovation interventions and the development of strategic partnerships with other government departments, industry, research institutions and communities.



Programme 5 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
6 knowledge products on innovation for inclusive development published by 31 March 2020	6 knowledge products on innovation for inclusive development published by 31 March 2020	Achieved
10 decision-support systems maintained and improved by 31 March 2020	10 decision-support systems maintained and improved by 31 March 2020	Achieved
9 learning interventions (seminars) generated by 31 March 2020	9 learning interventions (seminars) generated by 31 March 2020	Achieved
90 unique honours, master's and doctoral students fully funded or co-funded in designated niche areas that support the green economy and sustainable development by 31 March 2020	138 unique honours, master's and doctoral students fully funded or co-funded in designated niche areas that support the green economy and sustainable development by 31 March 2020	Overachieved

Programme 5 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
4 knowledge and innovation products (for example, patents, prototypes, technology demonstrators and technology transfer packages) added to the IP portfolio through fully funded or co-funded research by 31 March 2020	12 knowledge and innovation products (for example, patents, prototypes, demonstrators, methodologies, and technology transfer packages) added to the sustainable developments IP portfolio by 31 March 2020	Overachieved
120 interns fully funded or co-funded in R&D related to design, manufacturing and product development by 31 March 2020	221 interns fully funded or co-funded in R&D related to design, manufacturing and product development by 31 March 2020	Overachieved
At least 50 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development IP portfolio by 31 March 2020	At least 57 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development IP portfolio by 31 March 2020	Overachieved

Programme 5 Performance Information

2019-20 Annual Achievements

Annual Target	Actual Achievement	Status
9 instruments funded in support of increased localisation, competitiveness and R&D-led industry development by 31 March 2020	9 instruments funded in support of increased localization, competitiveness and R&D-led industry development by 31 March 2020	Achieved
12 innovation-support interventions funded or co-funded that strengthen provincial or rural innovation systems between 1 April 2016 and 31 March 2020	16 innovation-support interventions funded or co-funded that strengthen provincial or rural innovation systems by 31 March 2020	Overachieved
6 statistical reports or policy briefs approved by Exco for publication and/ or submitted to Cabinet by 31 March 2020	6 statistical reports and policy briefs approved by Exco for publication and/ or submitted to Cabinet between 1 April 2019 and March 2020	Achieved



Performance Overview



Targets which were not achieved or underachieved



Classification of reasons for variances due to non / under achievement

- ❑ **Process delays** – refers to under/non-achievement due to factors which are not within the control of the DST and therefore the achievement of such targets is mainly dependent on outside stakeholders.
 - ✓ Such targets require the department to better manage the inter-dependent nature of the deliverables which, in turn, affect the DST deliverables.
- ❑ **Ineffectiveness of implementers** – refers to non-achievement due to deficiencies during the implementation phase.
 - ✓ Such targets require the department to better manage the planning of its targets to be aligned to the entities' targets to ensure that they are working towards achieving a common goal.
- ❑ **Target formulation deficiencies** – refers to under/non-achievement due to variables which were not foreseen during the target formulation phase.
 - ✓ These gaps can be addressed during the strategic planning processes of the following financial year as part of the lessons learnt.

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
680 South African students participating in international training programmes offering a postgraduate qualification as part of cooperation initiatives facilitated by the DSI by 31 March 2019	642 South African students participating in international training programmes offering a postgraduate qualification as part of cooperation initiatives facilitated by the DSI by 31 March 2020	Several students participating in international training programmes could not be verified, as sole investors, international partner organisations' privacy policies apply, and these policies prevent partners from providing the DSI with auditable evidence.	Not Achieved	Process delays

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
Not less than 3 100 PhD students awarded an annual bursary funds as reflected in the reports from the NRF and relevant entities by 31 March 2020	2 991 PhD students awarded bursaries annually as reflected in the reports from the NRF and relevant entities	Target underachieved by 3,5% (110). There was a reduction in the National Skills Fund budget for PhD support. Bursaries for PhDs were awarded at the highest per capita value possible (instead of within a range), i.e. instead of PhD bursaries being between R90 000 and R120 000, all PhD bursaries were R120 000.	Not Achieved	Ineffectiveness of Implementers

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
<p>Not less than 10 800 pipeline postgraduate students awarded an annual bursary as reflected in the reports from the NRF and relevant entities by 31 March 2020</p>	<p>8 632 pipeline postgraduate students awarded bursaries annually as reflected in the NRF and relevant entities.</p>	<p>Target underachieved by 20% (2 168). There was a reduction in the National Skills Fund budget for pipeline support. Bursaries for honours and master's degrees were awarded at the highest per capita value possible (instead of within a range), e.g. instead of honours bursaries being between R45 000 to R65 000, all honours bursaries were R60 000</p>	<p>Not Achieved</p>	<p>Ineffectiveness of Implementers</p>

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
Not less than 4 500 researchers awarded research grant through funds through NRF-managed programmes as reflected by the NRF project reports by 31 March 2020	3 205 researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports	The target was underachieved by 29% (1 295).The drastic reduction in the number of researchers supported is due to the revision of the NRF's Competitive Rated Researchers Programme Funding Model. Previously the programme awarded grants annually to all rated researchers for the duration of their rating period.With the revised model, only P-rated ² researchers receive annual grants, and those in other rating categories receive once-off grants in the year in which they get their rating.	Not Achieved	Target formulation deficiencies

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
<p>At least 252 master's and doctoral students fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs and the Industry Innovation Programme, including the SIF) by 31 March 2020</p>	<p>At least 231 master's and doctoral students fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs and the Industry Innovation Programme, including the SIF) by 31 March 2020</p>	<p>Due to a reduction in student funding allocations, and material problems with establishing new university RDI partnerships funded by the Mandela Mining Precinct (MMP) and Joint Research Centre, the target was missed, as no MMP students were funded in 2019/20.</p>	<p>Not Achieved</p>	<p>Process delays</p>

Unachieved Targets

2019-20 Annual Unachieved targets

Annual Target	Actual Achievement	Reasons for non-achievement	Status	Variance Classification
Preapproval decisions provided within 90 days from date of receipt for 80% of applications received for the R&D tax incentive received between 1 January 2019 and 31 December 2019	Preapproval decisions provided within 90 days from date of receipt on 11% (or 12) of the 106 applications received for the R&D tax incentive received between 1 January 2019 and 31 December 2019	Underperformance was due to the cumulative effect of vacancies on staff capacity.	Not Achieved	Process delays

A collage of financial data visualization elements. In the top left, a black calculator shows buttons for 'M+', '%', '8', '9', ':', '5', '6', 'x', '3', '1', and '||'. A blue pen with a silver tip and a black grip lies diagonally across the center. The background features several line charts with dates like '2007-12-01', '2007-08-01', and '2007-10-01'. A magnifying glass is positioned over a table of numbers. To the right, a pie chart is partially visible with percentages like '9.73%' and '5.30%'.

FINANCIAL INFORMATION

66.76	1826.61
66.74	1051.43
57.66	459.42
51.63	457.51
49.82	506.78
43.7	1811.34
47	7083.45
48	5958.84
43	1313.11
42	1236.60
25	15930.57
6979.12	
156.66	
1477.73	
2224.66	
Σ11.00	
18615.00	
1901.48	
2108.22	
891.45	
3.06	
02	



Contents

- Report of the Accounting
- Report of the Audit Committee
- Report of the Auditor General to the Parliament
- A summary of Financial Statements
- Year on year comparison on highest spending items
- Spending on transfers and subsidies
- The impact of the 2019/20 financial outcome on Departmental operations
- A summary on irregular and fruitless and wasteful expenditure



Annual Report: Part E

Financial Information

Financial information presented in the Annual Report (Part E) comprises of the following:

- The Report of the Accounting Officer
- The Report of the Audit Committee
- The Report of the Auditor-General to Parliament
- Financial Statements (including the Appropriation Statement, Notes to the Appropriation Statement, Statements of Financial Performance, Financial Position and Changes in Net Assets as well as the Cash Flow Statement, Accounting Policies, Notes to the Annual Financial Statements and Supplementary Annexures)

The focus on this section is on the following aspects:

- A brief summary of each report
- A summary of the Financial Statements
- Year on year comparison of significant spending items
- The impact of the 2019/20 financial outcome on Departmental operations
- A summary on irregular and fruitless and wasteful expenditure



Report of the Accounting Officer

1. Report of the Accounting Officer provides a summary of the financial affairs of the Department including an overview of significant events, key policy decisions and spending trends that includes the matters addressed by the relevant programmes on the performance information section of the Annual Report.
2. It further includes a narrative pertaining to services, capacity constraints and organisational arrangements alongside corporate governance arrangements endorsed within the Department.
3. Furthermore, the report highlights other matters of significance that occurred after the reporting period that could have a material bearings on the affairs of the department such as budget cuts that occurred due to COVID 19.
4. The Report of the Accounting Officer is presented in Part A of the Annual Report



Report of the Audit Committee

1. The Report of the Audit Committee expresses the Committee's views on the effectiveness of internal controls within the Department, the quality of reporting in terms of PFMA requirements, as well as the operations of Internal Audit and Risk Management within the Department.
2. Based on the information contained in the report, the Audit Committee has expressed its satisfaction with the manner in which the department conducted its affairs and for maintaining an unqualified audit opinion (clean audit).
3. The detail of the Report of the Audit Committee is presented in Part C of the Annual Report.



Report of the Auditor-General

The Report of the Auditor-General is available from the Part E of the Annual Report. In summary the report will indicate that:

1. The Department received an unqualified audit opinion regarding its financial statements, without any findings, which is a clean audit outcome for the third consecutive year.
2. There were no findings in respect of compliance with laws and regulations and performance information.
3. Although there were no areas of concern raised in the audit report, there uncertainty due to COVID 19 challenges was highlighted.



Financial Statements: Appropriation Statement

- The Appropriation Statement provides an indication of the Department's spending against the final Appropriated funds.

- In summary the position is as follows: R'000

➤ Final Appropriation, including donor funds: R8, 184, 488

Voted Funds: R8, 172 302

Donor Funds: R12 186

➤ Actual Expenditure: (R8, 064, 683)

Voted Funds: (R8, 052, 497)

Donor Funds: (12 186)

➤ Variance (Underspending): R119 807 (1.5%)

Voted funds: R119 807 (1.5%)

Donor funds: R0,00

Detailed Information per Programme and Economic Classification is presented in the Appropriation section of the Annual Report

Financial Statements: Appropriation Statement

The underspending per programme was as follows:

Programmes	Appropriated amount R'000	Actual expenditure R'000	Variance R'000	% Variance
Administration	R372,313	R323,170	R49,143	13.2%
Technology Innovation	R1,280,292	R1,236,673	R43,619	3.4%
International Cooperation and Resources	R149,131	R136,027	R13,104	8.8%
Research, Development and Support	R4,583,676	R4,578,431	R5,245	0.1%
Socio-Economic Innovation Partnerships	R1,786,892	R1,778,196	R8,696	0.5%
Total	R8,172,304	R8,052,497	R119,807	1.5%

Financial Statements: Appropriation Statement

Economic Classification	Appropriated amount R'000	Actual expenditure R'000	Variance R'000	% Variance
Compensation of employees	389,105	323,876	65,229	16.8%
Good and services	222,883	207,059	15,824	7.1%
Transfers and subsidies	7,551,282	7,513,932	37,350	0.5%
Payments for Capital Assets	8,900	7,541	1,359	15.3%
Payments for financial assets (damages written-off against savings)	134	89	45	33.6%
TOTAL	8,172,304	8,052,497	119,807	1.5%



Financial Statements: Appropriation Statement

Economic Classification	Reasons for underspending
Compensation of employees	<ul style="list-style-type: none">• Delays in filling prioritised vacant positions.• Transitional measures from the 5th to 6th Administration (suspension of the filling of programme one positions) including the macro organising of the state resulted in delays in the filling of positions.• Changes within Ministry: salaries expenses for the Deputy Minister's Office, the were paid under DHET.



Financial Statements: Appropriation Statement

Economic Classification	Reasons for underspending
Good and services	<ul style="list-style-type: none"><li data-bbox="724 314 1787 592">• The postponement of projects such as public participation programmes, social and digital media bids, and the upscaling of the National Science, Technology and Innovation Information portal (NSTIIP) to the current financial year and<li data-bbox="724 656 1787 935">• Delays in contracting a service provider for the online Research and Development tax incentive system due to disagreements on a limitation of liability clause and delay in the start of technology transfer and Intellectual Property (IP) survey.

Financial Statements: Appropriation Statement, cont

Economic Classification	Reasons for underspending
Transfers and subsidies	<ul style="list-style-type: none"> • Surrendering R31.6 million for the Social Impact Bond to the National Treasury, as the implementing agency was not ready for the next phase of the project and • The decrease in uptake of EU funded projects by SA Institutions.
Payments for Capital Assets	<p>The underspending was due to the delays in the finalization of a service level agreement with the service provider for the provision of intangible assets. The service provider was not willing to agree on liability clause stipulation. This was only resolved in the subsequent financial year.</p>
Payments for financial assets (damages written-off against savings)	<p>The department anticipated finalizing some of the damages and losses in the financial year, however, they were only finalised in the subsequent year.</p>

Financial Statements:

Highest spending goods and services items, note 5

Items	2019/20 R'000	2018/19 R'000	Variance amount / %	Reason for variance
Travel and Subsistence	R46, 928	R56, 944	R10,016 / 17.6%	Due to the elections and ushering in of the new administration there was limited international travel by Minister and officials.
Property payments	R42, 322	R11, 660	(R30, 662) / (263%)	The department was not billed for property rates amounting to R28 million by the municipality that were incurred since occupation of the building was taken. The department was billed in 2019/20 financial year.
Venues and facilities	R17, 482	R14, 863	(R2, 619) / (17.6%)	The increase was due to a number of events that the department hosted such as Science Forum and Innovation Bridge and other planning related meetings that took place outside the office.

Financial Statements:

Highest spending goods and services items, *cont*

Items	2019/20 R'000	2018/1 9 R'000	Variance (%)	Reason for variance
Advertising	R13,195	R24,813	R11,618 / 46.8%	The decrease was due to limiting the number of commercial radio stations used to advertise departmental events.
Computer Services	R13,090	R19,872	R6,782 / 34.1%	The decrease was due to the inability of the department to finalise service level agreement with IT related service providers because of the liability clause in the contracts, which was subsequently resolved.

Financial Statements:

Highest spending goods and services items, cont

Items	2019/20 R'000	2018/19 R'000	Variance (%)	Reason for variance
Agency outsourced services	R9, 149	R12, 005	R2, 856 / 23.8%	The decrease was due to the delay in the appointment of service providers for the provision of agency services.
Contractors	R7, 085	R5, 534	(R1,551) / (28%)	The increase was due to maintenance carried out on the building due to serious defects that were identified such as leaking roof.
Consultants	R12, 372	R16, 391	R4, 4019 / 24.5%	The decrease was due to the reduction in the use of consultants.
Catering	R2, 978	R5, 376	R2, 398 / 44.6%	The decrease in the item was due to the implementation cost containment measures.

FINANCIAL STATEMENTS: SPENDING ON TRANSFERS AND SUBSIDIES (High Spending line items)

Item	2019/20 R'000
Parliamentary grants	2 844 739
Academy of Science of South Africa	26 983
Council for Scientific and Industrial Research	965 823
Human Science Research Council	324 155
National Research Foundation	943 385
South African National Space Agency	143 464
Technology Innovation Agency	440 929
Projects funding (of which)	4 669 193
Human Resource Development	997 808
Research and Development Infrastructure	687 450
Square Kilometre Array	686 974
South African Research Chairs Initiative	566 305
Cyber Infrastructure	251 686
Total	7 513 932



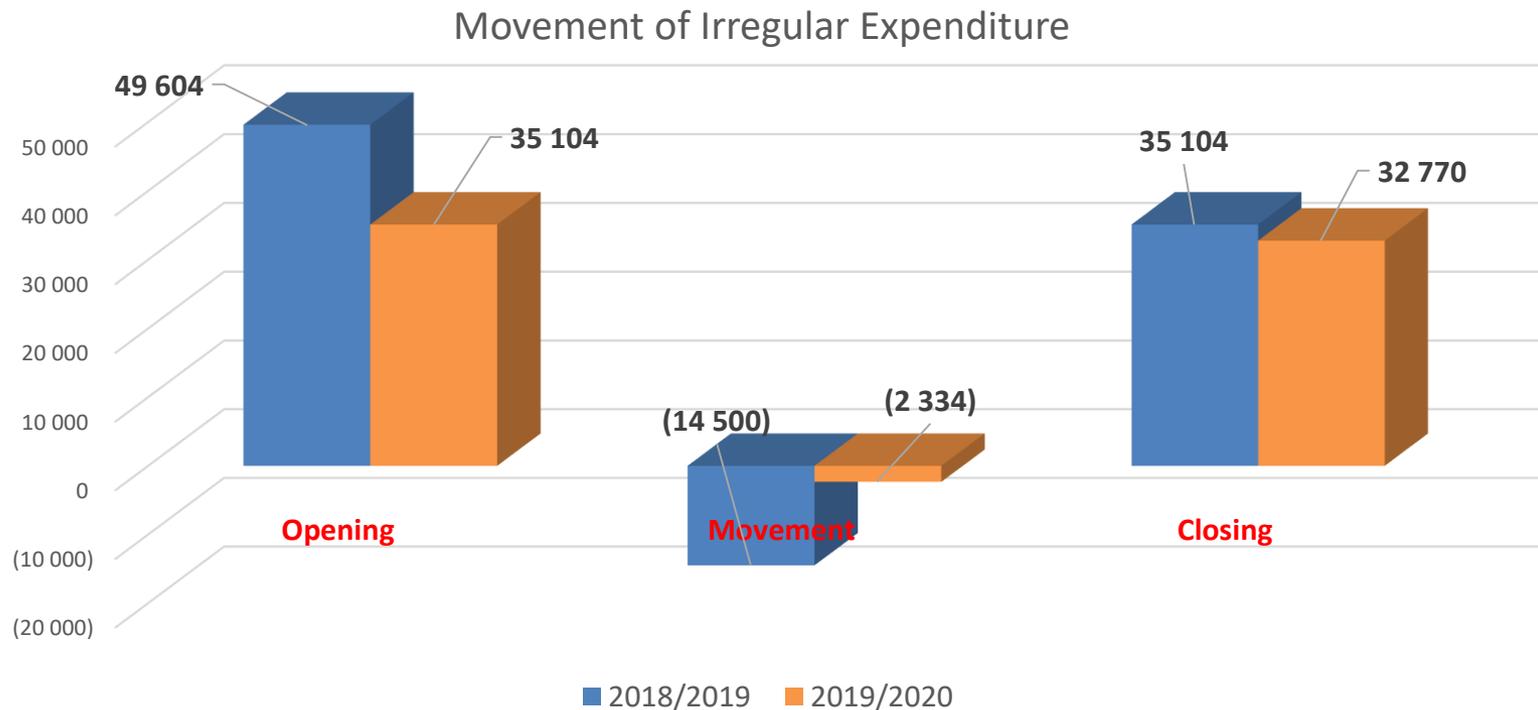
Financial Statements: Impact on Operations

The impact of the underspending to the department:

- There won't be any financial impact to the department as a result of underspending under compensation item. However the delays in the filling of positions will have an impact on the existing personnel due to added responsibilities.
- The underspending in transfers and subsidies under the Social Impact Bond programme will be impacted over time if delays in the implementation of the programme are not resolved.
- The projects that were not finalised in goods and services will be financed through shifting of funds in the subsequent financial year
- The projects that were not finalised in capital assets will be financed through shifting of funds in the subsequent financial year

Financial Statements: Irregular Expenditure, note 24

Irregular Expenditure as at 31 March 2020





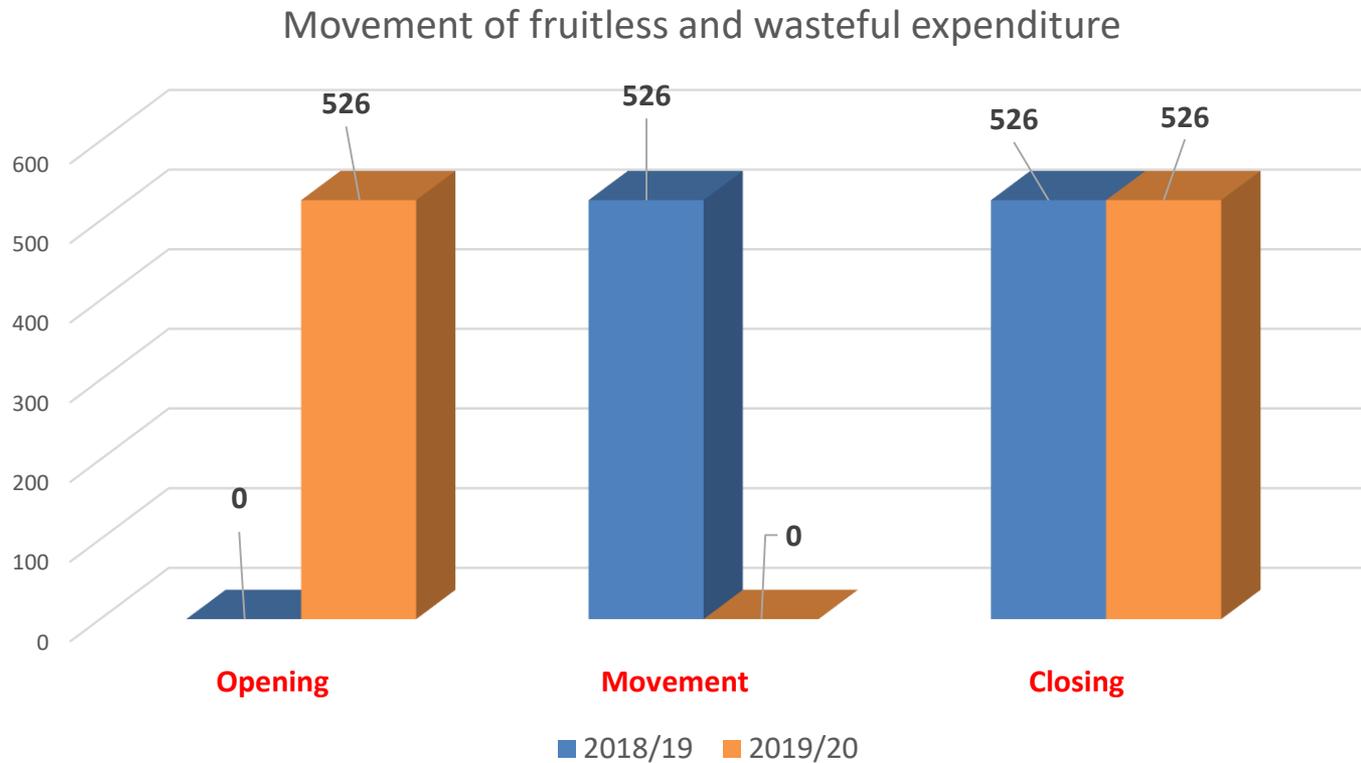
Financial Statements: Irregular Expenditure, cont

Movement of irregular expenditure for 2018/19 and 2019/20

- **Current year:**
 - Irregular expenditure of R194 000 has been incurred in 2019/20 financial year.
 - This is as a results of non-compliance with the Public Service Regulations.
 - Assessment in line with the irregular expenditure framework to establish the cause and remedial measures is at the final stage.
- **Prior periods:**
 - Irregular expenditure of R35 104 million relates to prior years.
 - National Treasury condoned R2 528 million during 2019/20 financial year.
 - 3 cases of irregular expenditure amounting to R 666 incurred in 2018/19 are being concluded.
 - The irregular expenditure amounting to R24 909 was finalised in the first quarter of 2020/21 financial year and the remaining balance is awaiting condonement.

Financial Statements: Fruitless and Wasteful Expenditure, note 25

Movement of fruitless and wasteful expenditure for 2018/19 and 2019/20



Fruitless and Wasteful Expenditure, cont

Fruitless and wasteful expenditure for 2019/20

- No fruitless and wasteful expenditure was incurred in 2019/20.
- Prior year expenditure:
 - The fruitless and wasteful expenditure of R526 000 incurred in 2018/19 was due to a postponement of an event.
 - The investigation was conducted to establish if this could have been avoided had reasonable care been exercised and whether any official should be held accountable.
 - The investigation concluded that no official could be held liable and the matter was finalised in the first quarter of 2020/21 financial year.



Sample of DSI Projects during the year under review





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief/Update
<p>Limpopo: (University of Limpopo); Western Cape: (Cape Peninsula Univ of Technology {CPUT}); Stellenbosch Univ {SUN}); Gauteng: (Univ of Johannesburg {UJ}); Vaal Univ of Technology {VUT}; Tshwane Univ of Technology {TUT}); KZN: (Durban Univ of Technology {DUT}; Mangosuthu Univ of Technology {MUT}) ; E Cape: (Nelson Mandela Univ {NMU} and Walther Sisulu Univ {WSU}) Free State: (Central University of Technology {CUT}); N Cape: (Vaal Univ of Technology - satellite TS {VUT satellite campus})</p>	<p>Technology Stations Programme (TSP)</p>	<ol style="list-style-type: none"> 1) Provide Technology Stations (TSs) (mostly at Universities of Technology) to with specialized equipment and funding to provide technology support to firms, especially SMMEs (including potential entrepreneurs and coops) 2) Incorporate the industry learning (what type of problems and skills are essential) back into enhanced curriculum development; teaching and student training
<p>Gauteng; North West; E Cape; W Cape; Limpopo; KZN</p>	<p><u>Technology Localisation Programme (TLP):</u> Technology Assistance Packages (TAP)</p> <p>Sector Wide Support Assistance Packages (SWTAPS)</p>	<p>Technology Localisation Implementation Unit (TLIU) act as technological match maker by linking and paying for firms to access essential technological services which would enable them to qualify and thereby participate in SOE linked contracts</p>





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief/Update
North West	<p>Fluorochemical Expansion Initiative (FEI)</p> <p>Advanced Metals Initiative (AMI): Nuclear Metals Development Network (NMDN)</p>	<p>FEI: RDI programme at Necsa, to advance and apply fluorine knowledge in batteries</p> <p>NMDN: RDI programme at Necsa to advance and apply knowledge on nuclear metals.</p>
<p>Gauteng</p> <p>Western Cape</p> <p>Kwa-Zulu Natal</p> <p>North West</p> <p>Eastern Cape</p>	WADER	<p>WADER: Water technologies demonstration programme. MoUs with various municipalities and water boards in these provinces to provide test sites for water technology demonstrations and possible co-funding.</p> <ol style="list-style-type: none"> 1. Johannesburg Water 2. City of Cape Town 3. Ethekewini Water and Sanitation 4. Umgeni Water 5. Magalies Water 6. Amatola Water





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief/Update
Gauteng	Plastic in Roads	This project is with the CSIR to investigate the use of non-recyclable plastic in road contraction. A test strip of road will be constructed in Pretoria West for demonstration.





Sample List of DSI Projects

Name of the Province/s	Name of the Project	Project in Brief/Update
Mpumalanga; Eastern Cape; Western Cape; Gauteng, Limpopo, Free State, North-West	Crop/plant improvement, molecular breeding and genome engineering programme	<p>Develop high-yielding wheat germplasm which are distributed to breeding programmes on an annual basis.</p> <p>Plant Health Consortium to develop a digital platform to support plant health initiatives, improved strategies for plant protection (pests and diseases of maize, soybean, wheat and other crops) and establish digital agricultural systems for biosecurity in South Africa.</p> <p>Climate resilience consortium investigates the impact of future climates on agricultural production (maize, wheat, soybean) and develop sustainable response plans to ensure food and nutrition security for the future, while developing capacity to respond to the climate change challenges by way of building a knowledge base of the effect of climate change on agriculture, developing climate change response plans and contributing to the South African knowledge economy by sharing information regarding climate resilience.</p>
Northern Cape; Western Cape; Gauteng	Animal Improvement, molecular breeding and genome engineering	<p>Developing technologies such as low-tech spirulina demonstration and unique, innovative ultra fine bubbler generator, among others, to assist the aquaculture industry with efficient systems and increasing productivity.</p> <p>Validation of the Genetic Component of Wet Carcass Syndrome (WCS) in Sheep and development of a genetic test for commercial use (Phase I).</p>





Sample List of DSI Projects

Name of the Province/s	Name of the Project	Project in Brief/Update
North-West Limpopo Free State Kwa-Zulu Natal	Bio-innovation in support of Food and Nutrition Security and Farmer development innovation support programme	<p>Training of small holder and subsistence farmers on threshing, storage and nixtamalization of maize.</p> <p>Promoting Agroprocessing in rural communities to support innovative community upliftment programmes and new product development to improve the utilization of the predominantly staple food, namely of cereal and grains available to South African smallholder farmers and to develop innovative strategies to enhance the nutrient diversity of processed grains and by improving food security.</p>
Kwa-Zulu Natal Limpopo North-West Free State	Technology Dissemination programme in support of smallholder farmers	Commercialization of Nutrient-Dense and Drought Tolerant Traditional and Indigenous Crops in the KZN province to improve food and nutrition security among rural resource-poor households by enhancing the sustainable production and consumption of locally important and nutritious-dense indigenous legumes and leafy vegetables and tree crops in environmentally friendly systems.





Sample List of DSI Projects

Name of the Province/s	Name of the Project	Project in Brief/Update
Eastern Cape; Limpopo; KZN; Gauteng; Western Cape; Mpumalanga	Value Chain Development Initiatives Programme	<p>Research and development of the potential production of Marula, the development and processing of different products of the tree and current and future channels for these products in the local and international market.</p> <p>Research and development of honey bush, and development of cost effective technologies for the processing of honey bush.</p> <p>Establishment of market opportunities for sorghum locally.</p> <p>Conduct cultivar evaluation trials for upland rice to gather evidence to develop a business case for the rice industry.</p> <p>A value chain analysis of the Cassava subsector in South Africa to determine baseline information for a number of informed interventions and strategies through which to further develop the value chain and improve upon the utilization of Cassava.</p>





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief/Update
Eastern Cape Western Cape North West Limpopo	IK-Based Health Infusions	Technology transfer ongoing on 11 health infusions, e.g. Honeybush and resurrection tea. 11 SMMEs registered, and trained in entrepreneurship and agro-processing.
Gauteng Eastern Cape Mpumalanga	IK-Based Cosmeceuticals	Innovation and technology transfer on IK-based cosmeceuticals for hyper-pigments, cancers, acne, eczema. Nine patents registered, and two pre-processing facilities being constructed. Two SMMEs registered and trained in entrepreneurship.





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief /Update
Countrywide IK-Holder Participants	Tech Transfer, Incubation, Entrepreneurship and Commercialisation	Pre-incubation, incubation, technology transfer, entrepreneurship training and commercialisation initiatives ongoing at SABS, CSIR, ARC, Innovation Hub, BioPark and several universities for IK Holder-owned SMMEs.
Northern Cape	<p>Square Kilometer Array (SKA) and Southern Africa Large Telescope (SALT) telescopes</p> <p>Technology Station Uppington</p>	<p>The telescopes contribute to the following aspects:</p> <ol style="list-style-type: none"> 1. Scientific returns - growth in scientific outputs. 2. Technological returns - reviving the local manufacturing industry and commercialisation of key technologies. 3. HCD and skills development - 1303 grants/bursaries awarded in total to create a pipeline of requisite skills. 4. Socio-economic returns - educational improvements, job creation to communities and growth of SMMEs. 5. African development - strengthening institutional capacities. 6. International partnerships - attracting foreign direct investment, skills transfer and technology exchange. <p>Provides technology support services to firms in the Uppington area</p>





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief /Update
Eastern Cape Free State KwaZulu-Natal Limpopo Northern Cape North West Western Cape Mpumalanga Gauteng.	The National Recordal System (NRS) Initiative	<p>The project is implemented through Indigenous Knowledge Documentation Centres (IKSDCs) in nine provinces. aim is to create opportunities for benefits to flow back to the communities.</p> <p>At a small scale, this project has provided income earnings thereby assisting in providing sustenance to some families. Moreover, it does give a sense belonging to the knowledge holders in terms of security of their information. It is an important instrument for government to address inequalities thereby ensuring and strengthening social cohesion elements in the communities.</p>
All provinces	Structured school-based science engagement initiative	The objective is to build and enhance the culture of science in South African schools.
Eastern Cape	Cofimvaba Science Centre	To complement provision of quality mathematics, science and technology (MST) education, as well as improving general public's knowledge about science .





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief /Update
Northern Cape	Construction of a Science Tourism Centre in Carnavon	<p>To develop and construct a science tourism centre aligned to the MeerKAT and SKA telescopes.</p> <p>The construction of the centre was to bring about short-term construction-related jobs, opportunities for local suppliers; a limited number of longer-term jobs in running the centre, and increased tourism will all its attendant benefits.</p>
All Provinces	Development support for existing science centres	To strengthen infrastructure for the delivery of the science engagement programme
All provinces	National Youth Service	<p>The aim of the project is to create an opportunity for unemployed graduates to contribute to the delivery of the science engagement programme through community service.</p> <p>Inculcate the culture of community service in young people and provide unemployed graduates with work place experience.</p>





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief /Update
Northern Cape	IKS Expo	<p>The IKS Expo provides a platform for practitioners and knowledge holders to showcase their innovative products and services. Awareness on Indigenous Knowledge Systems and Innovation raised. Interrelatedness of IKS with other disciplines through participation of various government departments, institutions and other stakeholders.</p> <p>Involvement of the youth in IKS; bringing together of IKS experts, knowledge holders/ practitioners, professionals, politicians, students, communities together to debate issues around the protection and promotion of IK; demonstration of South Africa's rich knowledge on IKS; and showcasing of IKS and community innovations for sustainable community livelihood.</p>





Sample List of DSI Projects

Name of the Province	Name of the Project	Project in Brief/Update
Durban, KwaZulu-Natal	<p>Sector Wide Technology Assistance Package (SWTAP) at DUT: Electronic testing facility</p> <p>Reinforced Material and Plastics Technology Stations (RMPTS)</p> <p>Bio-residue Beneficiation Value Chain Initiative</p>	<p>Provides certified testing of electronic components in the Durban areas</p> <p>Technology Transfer conduct for product design, testing and simulation, advanced material and manufacturing of composites and plastic products.</p> <p>DSI in partnership with Green Corridors (GC), eThekweni Economic Development Unit and the Dutch company PRM International (PRM) is co-funding a biomass 'Materials Beneficiation Centre' - a circular bioeconomy initiative focusing on the processing of residual biomass into bio-based applications.</p>



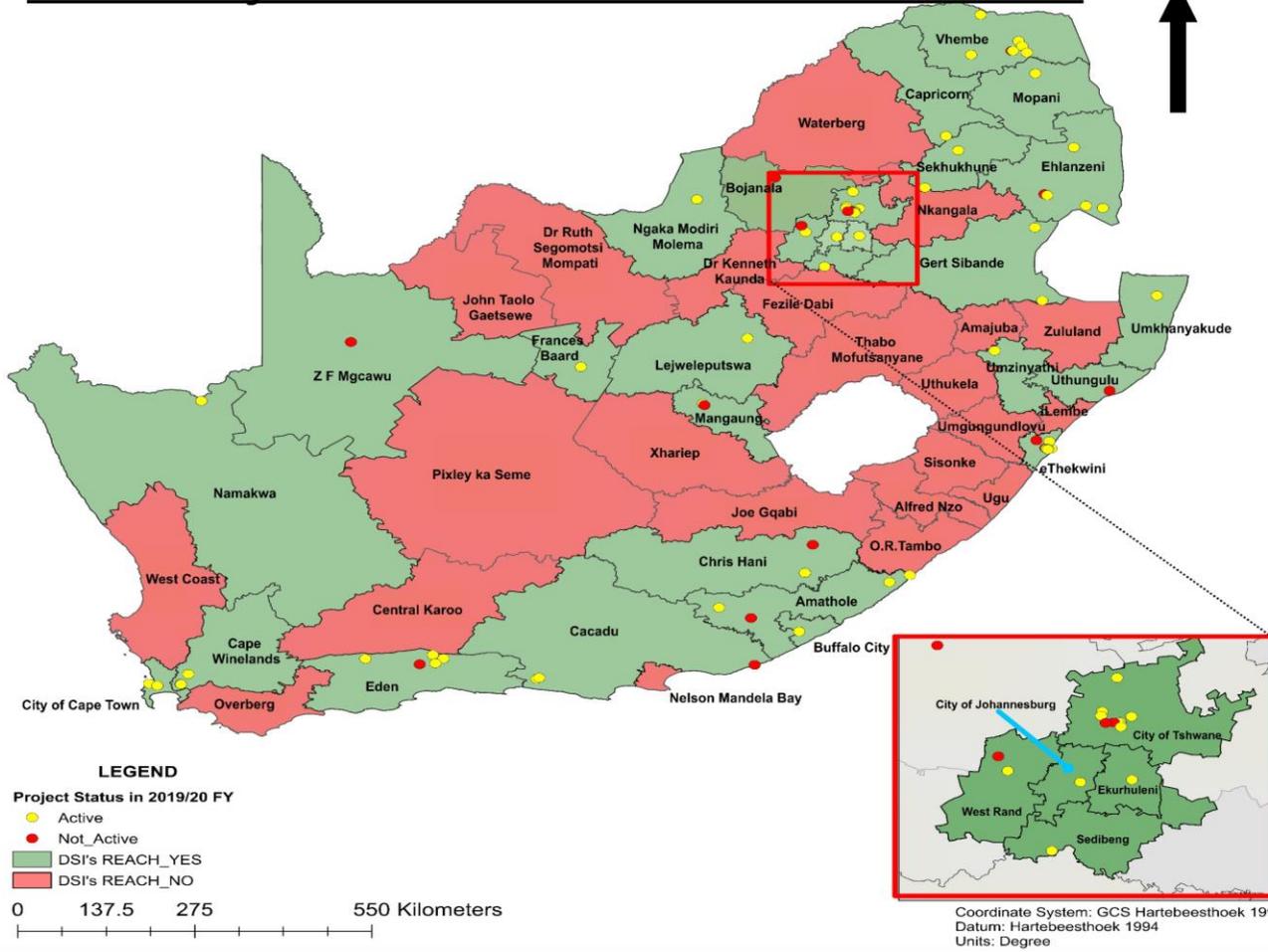


Annexure A: A simplified (Map) breakdown Of DSI Projects in the Country



Sample of DSI Projects in the country

DSI Projects active in the 2019/20 FY



Projects Active in 2019/20 FY per District

- Amathole -Health i-brand Health Beverages X2
- Amathole -Zenzeleni Community Owned Connectivity
- Amathole -Sand Water Extraction Systems
- Buffalo City -East London Regional Innovation Networking Platform
- Cape Winelands-Stellenbosch Network
- Cape Winelands-Winetech
- Capricorn -Sedikong Agribusiness Development
- Chris Hanani -Cofimvaba Science Centre
- CPT-TreeWell
- CPT-Enhanced Energy Harnessing Mechanism
- CPT-Water4All
- CPT-Shear Separation Flotation Technology Demonstrator
- CPT-Living Labs Pilot Programme
- CoT- Phedisnanang Cooperative Agribusiness Development
- CoT- Mothong African Heritage Project
- CoT- Photo Voltaic testing centre
- CoT- NETFA facility
- CoT- Loo Afrique
- CoT- Slide-On Gutter Technology Demonstration
- CoT- Drinking water and saleable products from mine water
- CoT- Swallowing Toilet
- CoT- Biomufacturing Industry Development Centre
- CoT- Nanomaterials Industry Development Facility
- CoT- Photonics Prototyping Facility
- CoT- Regional Innovation Networking Platform
- CoT- National Recordal System Documentation Project
- Ehlanzeni -Phephisa Agribusiness Development
- Ehlanzeni -Phephisa Agribusiness Development
- Ekurhuleni- Gibela Manufacturing Centre
- Ekurhuleni- Look see Do
- Ekurhuleni- Precious and Semi-Precious Metals Value Recovery
- Ekurhuleni- Water Evaporation Experiment
- eThekweni - Living Labs Pilot Programme X2
- eThekweni - Science, Technology & Innovation Park
- eThekweni - Sector Innovation Fund with the Sugar Milling
- eThekweni - Biorefinery Industry Development Facility
- eThekweni - Research Institute
- eThekweni - SA Sanitation Technology Demonstration Programme
- Frances Baard- NC Regional Innovation Networking Platform
- Garden Route-Honeybush agroprocessing X3
- Garden Route-National Recordal System Documentation ProjectX3
- Gert Sibande- National Recordal System Documentation Project X4
- Lejweleputswa-Regional Innovation Networking Platform
- Mangaung - Nosetsa: Irrigation System Using Machine Learning
- Mangaung - Versatile integrated site Selection Tool
- Mbombela - Fishtrac Programme
- Mopani - SEOBI Economic Model for Rose Geranium
- Namakwa- SEOBI Economic Model for Rose GeraniumX2
- National -Grassroots Innovation Programme
- Nelson Mandela Bay - Energy Efficient Surface Aeration
- Ngaka Modiri Molema -Health i-brand Health Beverages
- Sekhukhune -Setsong Tea Project
- Stellenbosch -Bridgiot
- Umkhanyakude - KZN Traditional Medicines
- Umgzinyathi -Project Nkabinde
- Vaal -Casting Simulation Network
- Vembe-MIPFA cooperative project
- Vembe-Metal Oxide Modified Diatomaceous Earth Cartridge
- Vembe-Innovation Champions for LED X4



Sample of DSI Projects in the country

Projects that were active on the 2019/20 Financial Year

Name of Project & District	Current Status	Local Municipality
Amathole		
Health i-brand Health Beverages	Open	Mbashe
Health i-brand Health Beverages	Open	Raymond Mhlaba
Zenzeleni Community Owned Connectivity	Open	Mnquma
Sand Water Extraction Systems	Open	eThekwini
Buffalo City		
East London Regional Innovation Networking Platform	Open	Buffalo City
Cape Winelands		
Stellenbosch Network	Open	Stellenbosch
Winetech	Open	Drakenstein
Capricorn		
Sedikong Agribusiness Development	Open	Lepelle Nkumpi
Chris Hani		
Cofimvaba Science Centre	Open	Intsika Yethu
City of Cape Town		
TreeWell	Open	City of Cape Town
Enhanced Energy Harnessing Mechanism	Open	City of Cape Town
Water4All	Open	City of Cape Town
Shear Separation Flotation Technology Demonstrator	Open	City of Cape Town
Living Labs Pilot Programme	Open	City of Cape Town



Sample of DSI Projects in the country

City of Johannesburg		
Soweto Education and Innovation Centre	Open	City of Johannesburg
City of Tshwane		
Phedisanang Cooperative Agribusiness Development	Open	Hammanskraal
Mothong African Heritage Project	Open	Mamelodi
Photo Voltaic testing centre	Closed	City of Tshwane
NETFA facility	Closed	City of Tshwane
Loo Afrique	Open	City of Tshwane
Slide-On Gutter Technology Demonstration	Open	City of Tshwane
Drinking water and saleable products from mine water	Open	City of Tshwane
Swallowing Toilet	Open	City of Tshwane
Biomanufacturing Industry Development Centre	Open	City of Tshwane
Nanomaterials Industry Development Facility	Open	City of Tshwane
Photonics Prototyping Facility	Open	City of Tshwane
Regional Innovation Networking Platform	Open	City of Tshwane
National Recordal System Documentation Project	Open	Ntwane
Ehlanzeni		
Phephisa Agribusiness Development	Open	Nkomazi
Ekurhuleni		
Gibela Manufacturing Centre	Proposed	Ekurhuleni
Look see Do	Open	City of Johannesburg
Precious and Semi-Precious Metals Value Recovery	Open	City of Johannesburg
Water Evaporation Experiment	Open	City of Johannesburg



Sample of DSI Projects in the country

eThekweni		
Living Labs Pilot Programme	Open	eThekweni
Living Labs Pilot Programme	Open	eThekweni
Science, Technology & Innovation Park	Open	eThekweni
Sector Innovation Fund with the Sugar Milling Research Institute	Open	eThekweni
Biorefinery Industry Development Facility	Open	eThekweni
SA Sanitation Technology Demonstration Programme	Open	eThekweni
Frances Baard		
Northern Cape Regional Innovation Networking Platform	Open	Sol Plaatjie
Garden Route		
Honeybush agroprocessing	Open	George
Honeybush agroprocessing	Open	Koukamma
Honeybush agroprocessing	Open	Koukamma
National Recordal System Documentation Project	Open	Oudstroom
National Recordal System Documentation Project	Open	Oudstroom
National Recordal System Documentation Project	Open	Kannaland Zoar
Gert Sibande		
National Recordal System Documentation Project	Open	Mkhondo
National Recordal System Documentation Project	Open	Chief Albert Luthuli
National Recordal System Documentation Project	Open	Bushbuckridge
National Recordal System Documentation Project	Open	Nkomazi
Lejweleputswa		
Lejweleputswa Regional Innovation Networking Platform	Open	Matjhabeng



Sample of DSI Projects in the country

Mangaung

Nosetsa: Irrigation System Using Machine Learning

Open

Mangaung

Versatile integrated site Selection Tool

Open

Mangaung

Mbombela

Fishtrac Programme

Open

Nelspruit

Mopani

SEOBI Economic Model for Rose Geranium

Open

Greater Giyani

Namakwa

SEOBI Economic Model for Rose Geranium

Open

Khâi Ma

SEOBI Economic Model for Rose Geranium

Open

Khâi Ma

National

Grassroots Innovation Programme

Open

National

Nelson Mandela Bay

Energy Efficient Surface Aeration

Open

Nelson Mandela Bay

Ngaka Modiri Molema

Health i-brand Health Beverages

Open

Ramotshela Moiloa

Sekhukhune

Setsong Tea Project

Open

Ga-Phahla



Sample of DSI Projects in the country

Stellenbosch		
Bridgiot	Open	Stellenbosch
Umkhanyakude		
KZN Traditional Medicines	Open	Umhlabuyalingana
Umzinyathi		
Project Nkabinde	Open	Endumeni
Vaal		
Casting Simulation Network (Vaal University Science Park)	Closed	Sedibeng
Vhembe		
MIPFA cooperative project	Open	Thulamela
Metal Oxide Modified Diatomaceous Earth Cartridge	Open	Thulamela
Innovation Champions for Local Economic Development	Open	Collins Chabane
Innovation Champions for Local Economic Development	Open	Thulamela
Innovation Champions for Local Economic Development	Open	Musina
Innovation Champions for Local Economic Development	Open	Makhado





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