

ANNUAL REPORT 2019-2020 FINANCIAL YEAR

DEPARTMENT OF SCIENCE AND INNOVATION
VOTE NO. 30

Making sure it's possible



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



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PART A

**GENERAL
INFORMATION**

PART A: GENERAL INFORMATION

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2. LIST OF ABBREVIATIONS

ABIPP	Agricultural Bioeconomy Innovation Partnership Programme
AGSA	Auditor-General South Africa
AIS	automatic identification system
AOSP	African Open Science Platform
API	Active Pharmaceutical Ingredient
ARC	Agricultural Research Council
ASIC	African Space Innovation Centre
ASSAf	Academy of Science of South Africa
AU	African Union
BRICS	Brazil, Russia, India, China and South Africa
CPD	continuing professional development
CPGR	Centre for Proteomic and Genomic Research
CPUT	Cape Peninsula University of Technology
CSIR	Council for Scientific and Industrial Research
CSUR	Competitive Support for Unrated Researchers
DAFF	Department of Agriculture, Forestry and Fisheries
DPSA	Department of Public Service and Administration
DSI	Department of Science and Innovation
ERM	Enterprise Risk Management
EU	European Union
Exco	DSI Executive Committee
F'SATI	French South African Institute of Technology
GMO Executive Council	Executive Council established under the Genetically Modified Organisms Act, 1997
HCD	human capital development
HCT	HIV counselling and testing
HF	high frequency
HOA	home-owner's allowance
HSRC	Human Sciences Research Council
HySA	Hydrogen South Africa
ICT	information and communication technology
IESBA	International Ethics Standards Board for Accountants
IKS	indigenous knowledge systems
IOCAP	Ionospheric Characterisation, Analysis and Prediction
IP	intellectual property
IPR Act	Intellectual Property Rights from Publicly Financed Research and Development Act
ISA	International Standards on Auditing
KRISP	KwaZulu-Natal Research, Innovation and Sequencing Platform
LSP	large science projects
M&E	monitoring and evaluation
MCS	Modified Cash Standard
MDA	maritime domain awareness
MEA	membrane electrode assemblies

2. LIST OF ABBREVIATIONS (CONTINUED)

MTSF	Medium-Term Strategic Framework
NACI	National Advisory Council on Innovation
NDP	National Development Plan
NEPAD	New Partnership for Africa's Development
NIPMO	National Intellectual Property Management Office
NMOG	National Macro Organisation of Government
NRF	National Research Foundation
NSFAS	National Student Financial Aid Scheme
NSI	national system of innovation
NSTIIP	National STI Data and Information Portal
OHS	occupational health and safety
OTT	office of technology transfer
PAA	Public Audit Act
PET	positron emission tomography
PFMA	Public Finance Management Act
QCTO	Quality Council for Trades and Occupations
R&D	research and development
RDI	research, development and innovation
S&T	science and technology
SAAO	South African Astronomical Observatory
SAASTA	South African Agency for Science and Technology Advancement
SACNASP	South African Council for Natural Scientific Professions
SADC	Southern African Development Community
SAEON	South African Environmental Observation Network
SAIF	South African Isotope Facility
SALGA	South African Local Government Association
SAMRC	South African Medical Research Council
SANDF	South African National Defence Force
SANReN	South African National Research Network
SAQA	South African Qualifications Authority
SAWiSA	South African Women in Science Awards
SCM	Supply Chain Management
SETA	sector education and training authority
SETI	Science, Engineering, Technology and Innovation
SKA	Square Kilometre Array
SMME	small, medium and/or micro-enterprise
SRH	sexual and reproductive health
STI	science, technology and innovation
TIMSS	Trends in International Mathematics and Science Study
UHF	ultra-high frequency
UKESA	Urban Knowledge Exchange Southern Africa
VDES	VHF Data Exchange Service

FOREWORD BY THE MINISTER



Dr BE Nzimande, MP

Minister of Higher Education, Science and Technology

The Department's commitment to an inclusive national system of innovation (NSI) has seen a number of initiatives implemented in the 2019/20 financial year, resulting in notable progress in various areas of development in South Africa.

These initiatives are aligned with the broader government service delivery agenda, the National Development Plan (Vision 2030), which recognises the importance of science, technology and innovation (STI) in addressing poverty, inequality and unemployment.

This reporting period came on the heels of the approval of the 2019 White Paper on Science, Technology and Innovation at the end of the 2018/19 financial year. This is the guiding policy document through which the Department seeks to contribute towards finding solutions for the country's most persistent challenges.

Replacing the 1996 White Paper, the new policy document identifies the Fourth Industrial Revolution (4IR) as a key focus that places STI at the centre of South Africa's development agenda. Over the next 20 years, the DSI is confident that the White Paper on STI will chart a new path for harnessing the full potential of STI towards growing an inclusive society.

The White Paper will be implemented through a series of decadal plans, which will be reviewed at least every five years. In the period under review, significant progress was made in the development of the first Decadal Plan on Science, Technology and Innovation,

which should be finalised by the end of the 2020/21 financial year.

Following the merger of the Ministries of Higher Education and Training, and Science and Technology, into one Ministry of Higher Education, Science and Innovation, the review of the STI institutional landscape is expanded to include the higher education institutional landscape in its implementation of the White Paper.

The Higher Education, Science, Technology and Innovation Institutional Landscape (HESTIIL) Review Panel commenced its work in November 2019, and is expected to finalise its work during the 2020/21 financial year. The recommendations of the HESTIIL Review Panel will inform part of the first Decadal Plan on STI.

Astronomy remains a vital part of the NSI and a key catalyst for growing South Africa's engineering, science and technology skills and attracting international science partnerships, particularly through the building of the Square Kilometre Array (SKA) radio telescope.

The MeerKAT telescope, which will be incorporated into the SKA, is operational and is being used for science observations. During the reporting period, the correlator modes required for eight MeerKAT large science projects were completed. The memorandum of understanding with the Max Planck Institute for Radio Astronomy for the extension of the MeerKAT

3. FOREWORD BY THE MINISTER (CONTINUED)

was also approved, and the infrastructure procurement processes have commenced.

The DSI continues to encourage industry innovation partnerships as part of broader government efforts to support industry competitiveness. The main objective is to create an environment in which government can collaborate effectively with industry and support co-investments in research, development and innovation (RDI) in key strategic sectors of the economy, thereby encouraging the private sector to invest more in RDI.

In this regard, the DSI has funded a number of large RDI programmes that have the potential to create new industries or to renew the competitiveness and market share of existing industrial subsectors.

The DSI continued to support a diverse and vibrant portfolio of opportunities for South African researchers to collaborate internationally, such as the European Union and BRICS Framework Programmes, in which South Africa participated with significant success. Bilateral cooperation with China and the advancement of pan-African cooperation in science continue to be strategic priorities.

In support of locally developed technologies, the Hydrogen South Africa (HySA) programme filed four patents during the reporting period, and another five patents were granted.

The Department also established the Carbon Capture, Storage and Use RDI Programme. This programme will demonstrate how flue gas from coal-fired power plants can be used to generate value-added products using green hydrogen and green ammonia. The process is based on locally and internationally developed intellectual property, and is aimed at enabling Eskom to continue using coal as an energy source into the future.

In the course of the 2019/20 financial year, the Department began communicating the diverse ways in which its work, including that of its entities and other stakeholders in the NSI, can contribute to the achievement of national priorities. Thus, the DSI and its

entities have established implementable cross-cutting innovation instruments to enhance service delivery.

In order to help improve the capacity of municipalities and enhance the delivery of basic services, the Department increased the number of municipalities participating in the Municipal Innovation Maturity Index (MIMI). The index provides critical information on the innovation capabilities and readiness of local government to deliver effective services. In this regard, the innovation capacity of a total of 24 municipalities is being assessed. The target is to assess the innovation capacity of 60% of municipalities across the country, by the end of the Medium-Term Strategic Framework (MTSF) period.

Education is crucial to socio-economic development in South Africa. In support of this, the DSI seeks to empower young South Africans by giving them the right skills to innovate and create solutions, and is investing in human capital development to unlock opportunities for new businesses to drive the country's economy forward.

During the period under review, the Department supported a total of 11 781 students, including 327 master's and 2 948 doctoral students. The DSI also awarded over 2 831 research grants through programmes managed by the National Research Foundation (NRF), such as the South African Research Chairs Initiative, and the Centres of Excellence programme.

Some remarkable work in the use of knowledge and innovation for economic and inclusive development has been done, including the innovative application of space science and technology in the development of comprehensive decision-support tools.

For example, the South African National Space Agency (SANSA) has built a customised tool for high-frequency (HF) spectrum predictions to assist the South African National Defence Force (SANDF) in communications planning. The tool allows the SANDF to communicate optimally with its personnel on the ground, and is applicable to other sectors, such as the aviation and

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3. FOREWORD BY THE MINISTER (CONTINUED)

maritime sectors, that require timeous, accurate HF spectrum forecasts for their communications planning.

The Department continues to make valuable contributions to agriculture and agroprocessing, as well as healthcare, water and waste service delivery initiatives. Importantly, these initiatives are helping to emancipate marginalised communities, particularly young people and women, by creating opportunities for them to participate fully in the economy.

The Department remains committed to enhance technology development and growth at grassroots level and has improved the implementation of its Grassroots Innovation Programme. In the period under review, a call for grassroots innovations attracted over 288 responses from across the country, and over 100 qualifying local innovators were enrolled in the programme. The initiative will assist these innovators with developing their concepts, commercialising their ideas, and creating prototypes.

As a Department we remain committed to efficient and effective corporate governance. On two occasions during the period under review, the Department received a clean audit award from the Auditor-General for its financial and non-financial operations.

I would like to thank the Portfolio Committee on Higher Education, Science and Technology, the Director-General and the staff, as well as all stakeholders in the NSI, for their commitment towards our goal of placing South Africa on a higher and more inclusive growth trajectory.



Dr BE Nzimande, MP

Minister of Higher Education,
Science and Innovation

3. ISENDLALELO SIKA NGQONGQOSHE

Ukuzibophezela koMnyango ohlelweni lukazwelonke lokubandakanya izinto ezintsha(i-NSI) kubone izinhlelo eziningi ezisetshenzisiwe ngonyaka wezimali ka-2019/20, okuholele enqubekweni ebonakalayo ezindaweni ezahlukahlukene zentuthuko eNingizimu Afrika.

Lezi zinhlelo zihambisana nohlelo olubanzi lukahulumeni lokuhlinzeka ngezidingo, uHlelo lokuthuthukiswa Kwezwe (Umbono 2030) olubona ukubaluleka kwesayensi, ubuchwepheshe kanye nobuchwepheshe obusha (STI) ekubhekaneni nobuphophu, ukungalingani nokuntuleka kwemisebenzi.

Lesi sikhathi sokubika size ngemuva kokuvunywa kwe-White Paper Yezesayensi, Ezobuchwepheshe kanye nezokusungula ekupheleni konyaka wezimali ka-2018/19. Lo ngumqulu wenqubomgomo oqondisa uMnyango ngokufaka isandla ekutholeni izixazululo zezinselelo eziqhubeka kakhulu ezweni.

Esikhundleni se-White Paper yango-1996, umqulu omusha wenqubomgomo ukhomba i-Fourth Industrial Revolution (4IR) njengokugxila okubalulekile okubeka i-STI enkabeni yenqubomgomo yentuthuko yaseNingizimu Afrika. Eminyakeni engama 20 ezayo, i-DSI inesiqiniseko sokuthi iPhepha Elimhlophe le-STI lizohlela indlela entsha yokusebenzisa amandla aphelele e-STI ekukhuliseni umphakathi obandakanya bonke abantu.

Umthethosivivinywa uzoqaliswa ngochungechunge lwezinhlelo zamashumi eminyaka, ezizobuyekwezwa okungenani njalo eminyakeni emihlanu. Esikhathini esibuyekwezwayo, kwenziwe inqubekelaphambili ebonakalayo ekwakhiweni koHlelo Lokuqala Lweminyaka Eyishumi Lwezesayensi, Ubuchwepheshe kanye Nokusungula, okumele ngabe seluphuthuliwe ngasekupheleni konyaka wezimali ka 2020/21.

Ngemuva kokuhlanganiswa kweMnyango yezeMfundo ePhakeme nokuQeqesha, neSayensi neThekhnoloji kwaba uMnyango owodwa wezeMfundo ePhakeme, ezeSayensi kanye neZobuchwepheshe kwaba uMnyango owodwa weZemfundo ePhakeme, ukucutshungulwa kwe-

STI kwalulwa ukuze kubandakanye nezemfundo ephakeme ephepheni elihlongozwayo.

IPaneli yokuBuyekwezwa kweMfundo ePhakeme, iSayensi, ubuchwepheshe Kanye ne-Innovation Institutional Landscape (HESTIIL) iqale umsebenzi wayo ngoNovemba 2019 futhi kulindeke ukuthi iphothule umsebenzi wayo ngonyaka wezimali ka-2020/21. Izincomo zePhaneli Yokubuyekwezwa ye HESTIIL zizokwazisa ingxenye yoHlelo Lokuqala Lweminyaka Eyishumi lwe-STI.

Isayensi yezinkanyezi isalokhu iyingxenye ebalulekile ye-NSI futhi iyinto ebalulekile kakhulu ekukhuliseni amakhono obunjiniyela, isayensi nobuchwepheshe baseNingizimu Afrika nokuheha ukubambisana kwezesayensi emhlabeni jikelele, ikakhulukazi ngokwakhiwa kwesibonakude somsakazo i-Square Kilometre Array (SKA).

Isibonakude i-MeerKAT esizofakwa kwi-SKA, siyasebenza futhi sisetshenziselwa ukubheka isayensi. Ngesikhathi sokubika, izindlela zokuxhumanisa ezidingekayo kumaphrojekthi wesayensi amakhulu we-MeerKAT zaqedwa. Inqubomgomo yokusebenzisana ne-Max Planck Institute for Radio Astronomy ukwelulwa kwe-MeerKAT futhi seziqaliwe izinqubo zokuthengwa kwezingqalasizinda.

I-DSI iyaqhubeka nokukhuthaza ukubambisana kwezimboni ezintsha njengengxenye yemizamo kahulumeni ebanzi yokweseka ukuncintisana kwezimboni. Inhloso enkulu ukudala isimo lapho uhulumeni angasebenzisana khona ngempumelelo nezimboni futhi asekele ukutshalwa kwezimali ngokubambisana ocwaningweni, ekuthuthukisweni nasekusungulweni kwezinto ezintsha (i-RDI) emikhakheni ebalulekile yezomnotho, ngaleyo ndlela kukhuthazwe umkhakha ozimele ukuthi utshale imali eningi ku-RDI.

Mayelana nalokhu, i-DSI ixhase ngezinhlelo eziningi ezinkulu ze-RDI ezinamandla okudala izimboni ezintsha noma zokuvuselela ukuncintisana kanye nesabelo semakethe semikhakha ekhona yezimboni.

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I-DSI iqhubekile nokusekela iphothifoliyo enhlobonhlobo nenempilo yamathuba kubaphenyi baseNingizimu Afrika ukuthi basebenzisane namazwe omhlaba, njenge European Union kanye nezinhlalo ze-BRICS Framework, lapho iNingizimu Afrika ibambe iqhaza ngempumelelo enkulu. Ukubambisana kwamazwe amabili ne-China kanye nokuthuthuka kokubambisana kwamazwe ase Afrika kwezesayensi kuyaqhubeka nokuba yizinto eziseqhulwini.

Ukusekela ubuchwepheshe obuthuthukisiwe endaweni, uhlelo lwe Hydrogen South Africa (HySA) lwafaka amalungelo obunikazi kwamane ngesikhathi sokubika, kwaphinde kwanikezwa amanye amalungelo obunikazi kwamahlanu.

UMnyango uphinde wasungula uhlelo lwe Carbon Capture, Storage and Use RDI. Loluhlelo luzokhombisa ukuthi igesi ye flue ephuma ezitshalweni eziphehla ugesi ngamalahle ingasetshenziswa kanjani ukukhiqiza imikhiqizo enezela ukusetshenziswa kwe hydrogen ne green ammonia. Lenqubo incike kumandla obuhlakani asekhaya nasekhaya futhi ihlose ukunika amandla u-Eskom ukuthi aqhubeke nokusebenzisa amalahle njengomthombo wamandla esikhathini esizayo.

Esikhathini sonyaka ka-2019/20, uMnyango waqala ukuxhumana ngezindlela ezahlukehlukene lapho umsebenzi wawo ufaka phakathi owezinhlangothi zawo kanye nabanye ababambiqhaza ku-NSI, onganikela ekuzuzeni izinto eziseqhulwini kuzwelonke. Ngakho, i-DSI nezinhlaka zayo zisungule amathuluzi wokuqalisa asetshenziswayo wokubamba ukuthuthukisa ukulethwa kwezidingo.

Ukusiza ukwenza ngcono umthamo wamasipala nokwenza ngcono ukulethwa kwezidingongqangi, uMnyango ukhulise inani lomasipala ababamba iqhaza kwi-Municipal Innovation Maturity Index (MIMI). Inkomba inikeza ulwazi olubucayi ngamakhono amasha kanye nokulungela kukahulumeni wasekhaya ukuletha izinsizakalo ezisebenzayo. Maqondana nalokhu, amandla okuqamba kabusha omasipala abangama-24 esewonke ayohlolwa. Inhloso ukuhlola amandla amasha komasipala abangama 60% ezweni

lonke, ekupheleni kwesikhathi soHlaka Lokusebenza Lwesikhathi Esimaphakathi (i-MTSF).

Imfundo ibalulekile ekuthuthukisweni kwezenhlalo nezomnotho eNingizimu Afrika. Ukusekela lokhu, i-DSI ifuna ukuhlomisa abantu abasha baseNingizimu Afrika ngokubanikeza amakhono afanele okusungula nokwenza izixazululo futhi itshale imaliekuthuthukiseni abantu ukuze kuvuleke amathuba amabhizinisi amasha okuqhubekela phambili umnotho wezwe.

Esikhathini esibuyekizwayo, uMnyango weseke isamba sabafundi abayi-11 781, okubalwa kubo abafundi abangama-327 beziqo ze Master's nabangu 2 948 abafundela iziqu zobudokotela. I-DSI iphinde yakomelisa ngaphezu kwezibonelo ezingama-2 831 zocwaningo ngezinhlelo eziphethe yi National Research Foundation (NRF) efana ne South African Research Chair Initiative kanye nohlelo lwe Centres of Excellence.

Omunye umsebenzi ophawulekayo ekusetshenzisweni kolwazi kanye nokuqanjwa kokusha kwezintuthuko yezomnotho kanye nokubandakanya konke okwenziwe okufaka phakathi ukusetshenziswa okusha kwesayensi yesikhala nobuchwepheshe ekwenziweni kwamathuluzi okuxhasa izinqumo.

Isibonelo, iSouth African National Space Agency (SANSA) yakhe ithuluzi elenziwe ngokwezifiso lokuqagela imisebe ephezulu (HF) ukusiza i South African National Defence Force (SANDF) ekuhloleni ukuxhumana. Leli thuluzi livumela i-SANDF ukuthi ikwazi ukuxhumana kahle nabasebenzi bayo abasebenza phansi futhi iyasebenza nakweminye imikhakha, njengemikhakha yezindiza kanye nezasolwandle, edinga ukubikezela isikhathi okunembile kwe-HF spectrum ngokuhlelela kwabo ukuxhumana.

UMnyango uyaqhubeka nokwenza amagalelo abalulekile kwezolimo nokuqedwa kokusebenza kwezolimo kanye nokunakekelwa kwezempilo, amanzi kanye nemizamo yokulethwa kwezidingo. Okubalulekile, lezinhlalo zisiza ukukhulula imiphakathi ebhekwele phansi, ikakhulukazi abantu abasha kanye

3. ISENDLALELO SIKA NGQONGQOSHE

nabesifazane ngokwakha amathuba okuthi babambe iqhaza ngokugcwele emnothweni.

Umntyango usalokhu uzibophezele ekuthuthukisweni kwezobuchwepheshe nokukhula emazingeni aphansi futhi wenze ngcono ukuqaliswa kohlelo lwawo lwe-Grassroots Innovation. Esikhathini esibuyekwayo, isimemezelo sezinhlelo ezintsha sakhanga izimpendulo ezingaphezu kwezingama-288 ezweni lonke futhi abangaphezu kuka-100 abasunguli bendawo abafanelekayo babhaliswa kuloluhlelo. Lesisinyathelo sizosiza labasunguli ngokuthuthukisa imiqondo yabo, ukuthengisa imibono yabo, nokwenza izindlela zokulingisa.

NjengoMntyango sihlala sizibophezele ekuphathweni kwezinkampani ezisebenza kahle futhi ngempumelelo. Ezikhathini ezimbili kulesisikhathi esibuyekwayo, uMntyango uthole umklomelo wokucwaningwa kwamabhuku ongenacala kuMcwanningimabhuku Jikelele ngokusebenza kwawo ngokwezimali nangaphandle kwezimali.

Ngithanda ukubonga iKomidi lezeMisebenzi ePhakeme, iSayensi neZobuchwepheshe Kanye nabasebenzi nabobonke ababambe iqhaza ku-NSI, ngokuzibophezela kwabo ekufezekiseni inhloso yethu yokubeka iNingizimu Afrika ekukhuleni okuphezulu futhi okubandakanya wonke umuntu.



Dr BE Nzimande, iLungu Phalamende

UNgqongqoshe weZemfundo ePhakeme, Isayensi noBuchwepheshe

3. KETAPELE KA TONA

Boitlamo bja Kgoro lenaneong leo le akaretšago la bosetšhaba la go ithomela, bo bontšhitše boithomelo bjo bontši bjoo bo bo diragaditswego ka ngwaga wa ditšhelete wa 2019/20, moo dipelo tša gona e bilego katlego ya go bonala Makaleng a go fapafapana a tlhabollo ka mono Afrika Borwa.

Boithomelo bjo bo lokologantšwe le lenaneo leo le nabilego la mmušo la kabo ya ditirelo, Lenaneo la Tlhabollo la Bosetšhaba (Ponelopele 2030), leo le lemošago bohlokwa bja saentshe, theknolotši le boithomelo (STI) tabeng ya go lwantšha bohloki, le tlhokego ya mešomo.

Nako ye ya pego e latela tumelelo ya Kuranta ya mmušo ya 2019 ya mabapi le Saentshe, Theknolotši le Boithomelo mafelelong a ngwaga wa ditšhelete wa 2018/19. Ye ke tokomane ya mohlalatsela wa pholisi yeo ka yona Kgoro e nyakago go tsenya seatla go humanweng ga ditharollo tša bontši bja dithlohlo tša phegelelo tša naga.

Ge e tšea legato la Kuranta ya mmušo ya 1996, tokomane ye mphsa ya pholisi e šupa Reboloušele ya Bone ya Diinaseteri bjalo ka šedi ye bohlokwa yeo e beago STI gare lenaneong la tlhabollo ya Afrika Borwa. Mo mengwageng ye 20 yeo e ilego go latela, DSL holofela gore Kuranta ya mmušo mabapi le STI, e tla kgora tsela ya go hlaha bokgoni bjoo bo feleletšego bja STI setšhabeng seo se golago le go akaretša bohle.

Kuranta ya mmušo e tla diragatšwa ka molokoloko wa maano a mengwagosome, ao a tlogo mphsafatšwa mo mengwageng ye mengwe le ye mengwe ye mehlano. Mo nakong ya ditšhekatshoko, go bile le kgatelopele ya go retega go hlabollweng ga Leano la mathomo la Ngwagosome mabapi le Saentshe, Theknolotši le Boithomelo, leo le swanetšego go phethwa mafelelong a ngwaga wa ditšhelete wa 2020/21.

Mabapi le go kopanywa ga Dikgoro tša Thuto ya Godimo le Tlhahlo, Saentshe le Teknolotši go ba Kgoro e tee ya Thuto ya Godimo, Saentshe le Boithomelo

tshekatshoko ya STI ka moka e katološitšwe go akaretša tlhako ya thuto ya godimo ka moka ga yona tiragatsong ya kuranta ya mmušo.

Panele ya tshekatshoko ya Thuto ya Godimo Saentshe, Theknolotši le Boithomelo ka Kakaretšo (HESTIIL), e thomile ka mošomo ka Nofemere 2019, gomme go letetšwe gore se tla phetha ngwageng wa ditšhelete wa 2020/21. Panele ya tshekatshoko ya HESTIIL e tla ba karolo ya Leano la mathomo la Ngwagosome mabapi le STI.

Thutadinaledi e sa le karolo ye bohlokwa ya NSL le kokwane ya go tliša diphetogo tša go godiša bokgoni bja Afrika Borwa bja boitšeneereng, saentsheng, le theknolotši le go goketša tšhomišano ya boditšhabatšhaba saentsheng, ka go aga radio theleskoupou ya Square Kilometre Array (SKA).

Theleskoupou ya MeerKAT, yeo e tla tsenywago ka go SKA, e a šoma gomme e šomišetšwa ditekolo tša saentshe. Ka nako ya pego, dikgokaganyi tše dikgolo tša diprotšeke tše seswai va MeerKAT di be di šetše di phethilwe. Memorandamo wa tšhomišano le Institšhute ya Max Plank ya Radio ya Borutadinaledi ya katološo ya MeerKAT, e be e dumeletšwe, gomme mošomo wa go lefela infrastraktšhara o be o šetše o thomile.

DSI e tšwela pele go hlohleletša tšhomišano boithomelong bja diintaseteri bjalo ka karolo ya matsapa a magolwane a mmušo a go thekga phadišano ya diintaseteri. Morero wo mogolo ke go hlola tikulogo yeo go yona mmušo o ka go kgona go tšwetša pele ka intaseteri thekgo le dipeeletšo tša mohlakanelwa dinyakišišong, tlhabollong le boithomelong (RDI) Makaleng a bohlokwa a lekala la praebete go beeletša kudu ka go RDI.

Gona ntlheng ye, DSI e thušitše mananeo a mantši a RDI ao a nago le kgonagatšo ya go go hlongwa ga diintaseteri tše diswa go mphsafatša moya wa phadišano le dišere tša mebaraka ya makalana a diintaseteri tšeo di lego gona.

3. KETAPELE KA TONA

DSI e tšwetše pele go thekga mehutahuta ya dibaka tša dipotefolio tša banyakišiši ba Afrika Borwa gore ba phadišane maamong a boditšhabatšhaba, a bjalo ka European Union, le Mananeo a Tlhako a BRICS, ao Afrika Borwa e kgathilego tema ka gare ga ona ka katlego ya go retega. Tirišano ya mahlakore mabedi le China le go tšwetšapele tšhomišano le pan-African saentsheng, e tšwela pele go ba dintlha tše bohlokwa tša šedi ya pele.

Ka maikemišetšo a go thekga ditheknolotši tšeo di dirilwego mono gae, lenaneo la Hydrogen South Africa (HySA) le be le tsentshe dipatente tše nne ka nako ya pego, gomme tše dingwe tše hlano di dumeletšwe.

Kgoro e hlamilile gape le Lenaneo la Carbon Capture, Toto le Tšhomišo ya RDI. Lenaneo le le tla laetša ka moo gase ya tšhemela yeo e tšwago diplanteng tšeo di fehlogo maatla ka mollo wa malahla e ka šomišwago go hlama ditšweletšwa tša boleng bjoo bo oketšegilego ka tirišo ya haedrotšene ye tala le ammonia ye tala. Tiragatšo ye e theilwe godimo ga patente yeo e hlamilwego dinageng tša boditšhabatšhaba, gomme morero wa yona ke go kgonagatša gore Eskom e tšwele pele ka go šomiša malahla bjalo ka mothopo wa enetši nakong yeo e tlogo.

Ngwageng wa ditšhelete wa 2019/20, Kgoro e thomile ka go bolela ka ditsela tša go fapafapana tšeo ka tšona mošomo wa yona, woo o akaretšago wa ditheo tša yona le bengditseka ba bangwe ka go NSI, di ka bago le seabe phitlhelelong ya tšeo di swanetšego go fiwa šedi ya pele setšhabeng. Ka lona lebaka leo, DSI le makalana a yona di hlamilile dilabakelo tša boithomelo bja go diragatšega tša go nolofatša kabo ya ditirelo.

Gore go kaonafatšwe bokgoni bja bommassepala le go kgonagatša kabo ya ditirelo tša motheo, Kgoro e okeditše palo ya bommassepala bao ba khathago tema ka go Municipal Innovation Maturity Index (MIMI). Tšhupane e laetša tshedimošo ye bohlokwa mabapi le bokgoni bja go ithomela le mokgwa woo ka wona mmušo wa selete o loketšego go aba ditirelo tša maleba. Ka lona lebaka leo, bokgoni bja go ithomela bja bommassepala ba 24, bo a sekasekwa. Nepo ke go sekaseka bokgoni bja go ithomela bja dipersente

tše 60 tša bommassepala go phatlalala le naga, go ya mafelelong a Tlhako ya Leano la Nako ya gare.

Thuto e bohlokwa tlhabollong ya ekonomi le leago mo Afrika Borwa. Go thekga se, DSI e nyaka go tlabakela MaAfrika Borwa a maswa ka go ba nea bokgoni bja maleba bja go ithomela le go hlola ditharollo, gape e hlokomela tlhabollo ya batho go tsupolla dibaka tša dikgweba tše diswa tša go tšwetša pele ekonomi ya naga.

Ka nako ya dinyakišišo tša bjale, Kgoro e thekgile baithuti ba 11 781, go akaretšwa ba 327 ba masetase le ba 2 948 ba dithuto tša bongaka. DSI e abile gape dikerante tša dinyakišišo tša go feta 2 831 ka manao ao a bego a laolwa ke Motheo wa Dinyakišišo tša Bosetšhaba (NRF), go swana le Motheo wa Baduladitulo ba Dinyakišišo Afrika Borwa, le lenaneo la Mafelo a Bokgoni.

Mošomo wa go retega tšhomišong ya tsebo le boithomelo mabapi le ekonomi le tlhabollo, o šetše o dirilwe, go akaretšwa boithomelo bja tiragatšo ya saentshe ya sekala le theknolotši tlhabollong ya didirišwa ka moka tša thekgo ya go tšewa ga dipheho.

Mohlala, Etšensi ya Afrika Borwa ya Bosetšhaba ya tša Lefaufau, e agile setlabakelo sa frekhweni ya godimo sa dikakanyo tša sepektramo go thuša Mašole a Afrika Borwa go boledišana le bašomi ba bona bao ba lego fase, gape e šoma le Makaleng a mangwe, go swana le difofaneng le dikepeng, moo go nyakegago dikakanyo tša nako ya maleba tša HF gape tša paale tša sepektramo thulaganyong ya dipoledišano tša bona.

Kgoro e tšwela pele go tšweletša ditshwaelo tša mohola temong le punong, gotee le tlhokomelong ya maphelo, meetse le matsapa a go abja ga ditirelo mererong ya go ama dilahlwa. Se bohlokwa ke gore, matsapa a a thuša go lokolla badudi bao ba dikilego ba hlokomologilwe kudu basadi le baswa, ka go hloma dibaka tšeo di tlogo ba thuša gore ba kgathe tema ka botlalo ekonoming.

Kgoro e sa itlamilile ka go oketša tlhabollo ya ekonomi le kgoolo legatong la motheo gomme e kaonafaditše tiragatšo ya Lenaneo la Boithomelo bja Motheong.

Making sure it's possible

3. KETAPELE KA TONA

Mo nakong ya tshekatsheko, kgoeletšo ya boithomelo bja motheo e gokeditše diphetolo tša go feta 288 go phatlalala le naga, gomme baithomedi ba go feta 100 bao ba bego ba na le maswanedi ba ile ba tsenywa lenaneong. Matsapa a tla thuša baithomedi ba ka go tlhabolla dikgopolo tša bona, le go hlama diprothothaepe.

Bjalo ka Kgoro re dula re tlamilwe ke pušo ya bokgoni yeo e akaretšago bohle. Mabakeng a mabedi ka nako ya tshekatsheko, Kgoro e humane ditekolo tša matlotlo tšeo di se nago bosodi go tšwa go Mohlakiši-Pharephae mabapi le ditiragatšo tša ditšhelete le tšeo di sa amego ditšhelete.

Ke rata go leboga Komiti ya potefolio ya Thuto ya Godimo, Saentshe le Theknolotši, Kgoro ya Molaodi-Pharephare le bašomi, gotee le bengditseka ka go NSI, ka boitlamo bja bona mabapi le go bea Afrika Borwa maamong a godimo le tseleng ya go gola yeo e akaretšago.



Dr BE Nzimande, MP

Tona ya Thhuto ya Godimo, Saentshe le Boithomelo

4. STATEMENT BY THE DEPUTY MINISTER



Mr KB Manamela, MP

Deputy Minister of Higher Education, Science and Technology

The Department of Science and Innovation (DSI) is mandated to coordinate a responsive and efficient national system of innovation (NSI). This requires that the Department create and manage an enabling framework for the development of science, technology and innovation (STI) in South Africa.

To fulfil this mandate, in its 2015-2020 Strategic Plan, the DSI set out a number of strategic outcome-oriented goals. These include a long and healthy life for all South Africans; decent employment through inclusive economic growth; a skilled and capable workforce to support an inclusive growth path; an efficient, competitive and responsive economic infrastructure network; vibrant, equitable, sustainable rural communities contributing towards food security for all; and the protection and enhancement of our environmental assets and natural resources.

Towards the achievement of these goals, in the period under review, the DSI used research grants to strengthen capacity at universities and research-performing institutions. The Department also used these instruments as a mechanism for promoting transformation in the NSI, as articulated in the Ministerial Guidelines for improving equity in the distribution of bursaries and fellowships under the auspices of the DSI and the National Research Foundation (NRF).

In particular, such instruments as the South African

Women in Science Awards, the South African Research Chairs Initiative, the Centres of Excellence programme, and special programmes such as the Thuthuka bursary fund, have contributed to improving female representation in the NSI.

In the year under review, the Department continued to provide stimulus packages aimed at increasing the percentage of PhD-qualified teaching and research staff in higher education institutions and the proportion of women and black researchers in the country's scientific workforce. Women currently make up 46% of this workforce.

Over 7 255 research articles were published by DSI-NRF-funded researchers and cited in the Thomson Reuters Web of Science Citation Database. In terms of supporting and promoting research that develops basic sciences through the production of new knowledge and relevant training opportunities, the Department awarded 3 205 research grants through DSI-NRF-managed programmes. Of these, 48% (1 524) went to black researchers and 19% (622) to black women. In addition, the Department, through the NRF, awarded 33 research infrastructure grants during the 2019/20 financial year.

As part of our strategic objective of increasing the number of high-level graduates and improving their representivity, the Department, through the NRF, funded or co-funded a total of 11 992 students in

Making sure it's possible

4. STATEMENT BY THE DEPUTY MINISTER (CONTINUED)

the period under review, comprising 8 632 pipeline (undergraduate), eight honours, 327 master's, and 3 025 doctoral students.

The Department also supported a total of 1 312 graduates and interns during the 2019/20 financial year. The DSI-NRF Internship Programme is a workplace preparation programme that places undergraduate and postgraduate students in work environments to gain experience. The programme is complemented by the National Youth Service programme, which places graduate students as volunteer science communicators in the network of science centres across the country.

In support of the national transformation agenda, the DSI hosted the annual South African Women in Science Awards (SAWiSA) on 15 August 2019 under the theme "Making the Fourth Industrial Revolution Work for Women". SAWiSA recognises and rewards excellence by women scientists and researchers, and profiles them as role models for younger women, towards a more inclusive science system.

The DSI worked closely with the Department of Higher Education and Training (DHET) to secure international training and mobility opportunities for young South African researchers. In the area of knowledge and innovation for economic development, the Department aims to derive greater share of economic growth from research and development (R&D) based opportunities and partnerships.

In furtherance of its efforts to create innovative industries for the future, the Department continues to encourage industry innovation partnerships as part of broader government efforts to support industry competitiveness. The DSI has funded a number of large research, development and innovation (RDI) programmes that have the potential to result in new industries or to renew the competitiveness and market share of existing industrial subsectors.

A total of 40 publications were supported through the Hydrogen South Africa (HySA) programme in the period under review. In addition, five fuel cell systems incorporating HySA intellectual property in the form of catalysts and membrane electrode assemblies were unveiled at a ceremony in Pretoria on 24 February 2020. Each of the methanol-based fuel cell systems is capable of producing 5 kW of power. The fuel cell systems, which will be deployed to provide power for public infrastructure, mark a significant milestone towards the commercialisation and local manufacturing of technology developed through the HySA programme.

Areas for renewable energy RDI collaboration between the African Union and the European Union were identified, and a total of R480 million (R132 million from the AU and R68 million from the EU) was committed to a collaboration with the Long-Term Europe-Africa Research and Innovation Partnership (LEAP) on renewable energy.

In order to ensure food security and sustainable rural development, the Department has supported a portfolio of industry sectors including horticulture, post-harvest innovation, viticulture, forestry, minerals processing, paper manufacturing, and agroprocessing. To address some of the challenges of the agricultural bioeconomy, the DSI, in collaboration with the Technology Innovation Agency, continues to support the initiatives of the Agricultural Bioeconomy Innovation Partnership Programme (ABIPP).

The ABIPP, now in its third year, has expanded in a number of areas. An investment of R19 million by the DSI for the 2019/20 financial year resulted in leveraged co funding 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 for technology development, and two assessments in the mapping of value chains for indigenous, niche and underutilised crops, namely, marula and honeybush.

4. STATEMENT BY THE DEPUTY MINISTER (CONTINUED)

The Department, through innovation in support of the agri-parks programme (including the maize nixtamalisation programme) and the soybean food and nutrition programmes, supported 7 501 beneficiaries (smallholders, black farmers, communities, women and young people) in technology dissemination programmes in the 2019/20 financial year. In the farmer development programme, 342 black farmers were supported and helped to grow from subsistence, emerging and small-scale to commercial-scale farmers.

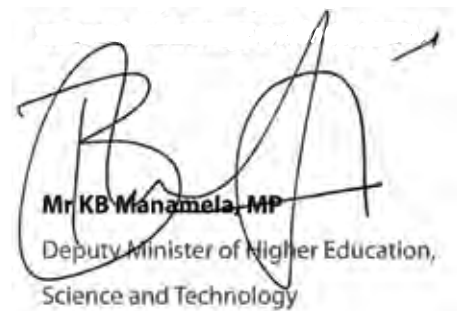
The DSI strengthened its innovation for service delivery portfolio and continued to provide innovative technology solutions to help improve decision-making. The innovation for service delivery interventions included decision-support tools to advance evidence-based decision-making; technology solutions such as water, energy and sanitation solutions; and knowledge products such as local innovation maps to support local economic development strategies.

During the year under review, 10 decision-support tools were maintained. These included solutions in support of addressing spatial marginalisation, disaster management, deployment of innovative technologies in basic education and municipalities, and local economic development capabilities. A number of other decision-support tools were also developed during the reporting period.

In support of sustainable human settlements, the Department's STI for Sustainable Human Settlements Roadmap project hosted the first national Off-the-Wall Human Settlements Showcase, which enabled innovators and entrepreneurs to exhibit creative solutions for the human settlements sector. The roadmap project continues to influence the human settlements discourse in line with national, regional and global development outcomes and in setting a national agenda for innovation, considering Fourth Industrial Revolution (4IR) opportunities that could be harnessed to support the delivery of sustainable human settlements.

In support of virtual learning, the Department, in partnership with the national and provincial departments of education, extended the number of schools participating in the e-readiness maturity assessments. These assessments enable evidence-based decision-making in the deployment of information and communications technologies in schools.

I wish to express my sincere gratitude to the leadership of the country's national system of innovation, the staff of the Department, and the entities for their dedication in enabling us to achieve our mission of providing leadership and an enabling environment and resources for science, technology and innovation in support of inclusive development in South Africa.



Mr KB Manamela, MP
Deputy Minister of Higher Education,
Science and Technology

5. REPORT OF THE ACCOUNTING OFFICER



Dr MP Mjwara
Accounting Officer

5.1 Introduction

The 2019/20 financial year saw the start of a new administration, with some departments merged and some placed under merged ministries. The Department of Science and Technology's name changed to the Department of Science and Innovation (DSI) and it now falls under the Ministry of Higher Education, Science and Innovation. This was done to give impetus to the new era of the Fourth Industrial Revolution (4IR), and the need to take advantage of innovation to revolutionise the technological landscape.

Despite all these changes, the Department did not lose focus on its endeavours to contribute, through science, technology and innovation, to the implementation of the National Development Plan and other priority strategies and policies aimed at alleviating poverty, unemployment and inequality in the country. During the 2019/20 financial year, reviews of the implementation of previous strategies and the development of a decadal plan continued. It is expected that the decadal plan will be finalised in the 2020/21 financial year.

Towards the end of 2019/20 financial year, the world was confronted by the COVID-19 pandemic. The Department is expected to release and redirect significant funds from its budget to assist with the fight against the pandemic. This reduction of the budget will affect the Department's 2020/21 Annual Performance Plan.

5.2 Overview of departmental operations

In order to ensure that its objectives are met, the Department has several governance programmes that assist in the effective utilisation of scarce resources in its operations.

During the period under review, the Department's Audit Committee and Enterprise Risk Management Committee meetings took place as planned. Combined assurance plans ensured alignment to maximise risk and governance oversight, control efficiencies and overall assurance.

The Department also reported to the Portfolio Committee, its oversight body, on activities such as the 2018/19 annual reports for the Department and its entities, 2019/20 annual performance plans and budgets, and quarterly performance reviews.

5.3 Significant events and major projects undertaken

Below are some of the significant events that took place in the 2019/20 financial year. More detail is given in the performance overview sections for the specific Programmes.

Energy Security Grand Challenge

The Energy Security Grand Challenge is implemented mainly through three flagship programmes, namely, Hydrogen South Africa (HySA), the Energy Storage

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

Research, Development and Innovation (RDI) Programme, and the Renewable Energy Hub-and-Spokes Programme.

A study on options for diversifying and using by-products from sugar mills for energy was completed. The aim of the study was to assist the industry create a sustainable pathway that would allow it to retain existing jobs while supporting the country's aspirations to move towards a low-carbon economy. The findings and recommendations from the study were presented to the South African Sugar Association and key stakeholders in December 2019. The Department of Trade, Industry and Competition is expected to use the results to inform the development of the Sugar Industry Masterplan. The Department of Environment, Forestry and Fisheries, and the Department of Mineral Resources and Energy's Biofuels Task Team have shown interest in using the report.

In support of the application of non-energy nuclear technology, the Department's International Atomic Energy Agency Technical Cooperation Programme Strategic Framework was approved by the DSI Exco in July 2019 to support the review of South Africa's nuclear sector and country programme framework.

In support of international collaboration, an international strategic partnership in science and technology between Argonne National Laboratory in the United States of America and the South African Energy Storage Consortium was put in place following a DSI visit to the USA in May 2019. A talented group of early researchers, as well as pipeline and postdoctoral students, were selected for a three-year exchange programme for scientists.

In support of a responsive, coordinated and efficient national system of innovation and policy development across government, the terms of reference for the Hydrogen Society Roadmap process were approved by Exco in March 2020. The terms of reference will pave the way for the development of the roadmap document, which will articulate how South Africa can position itself to derive economic benefit from the

emerging hydrogen economy.

SolarTurtle, a company spun out of the Renewable Energy Hub-and-Spokes Programme, has developed three BabyTurtle prototypes, in a suitcase version, bike trailer version and car trailer version. The three versions provide power to improve energy access and a Wi-Fi hotspot to improve e-connectivity. The different versions are equipped with solar panels, inverters, batteries and a router. This makes the solutions suitable for a range of applications, including being used as mobile offices, basic lighting, and charging stations for cellphones. In the 2020/21 financial year the solutions will be deployed in partnership with informal traders. In January 2020, Business Insider South Africa called the SolarTurtle technology one of the top 10 most exciting innovations in the past 10 years (between 2010 and 2020).



BabyTurtle suitcase



BabyTurtle bicycle trailer

In support of using knowledge and innovation for economic development, five fuel cell systems incorporating HySA intellectual property, in the form of a catalyst and membrane electrode assemblies, were unveiled on 24 February 2020. Each of the methanol-based fuel cell systems is capable of producing 5 kW of power. The fuel cell systems were developed in collaboration with Horizon and Element One, both global original equipment manufacturers, working together with Bambili Investments, a local and black, female-owned SMME. The fuel cell systems, which will be deployed to provide power to public infrastructure, mark a significant milestone towards local manufacturing and the commercialisation of technology developed through the HySA programme.

Making sure it's possible

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)



The Director-General, Dr Phil Mjwara, speaking at the unveiling of fuel cell systems incorporating HySA intellectual property.

Helio 100, a concentrated solar power system, has been upgraded and now has a water desalination plant integrated into it. The desalination unit was commissioned in October 2019 and has the capacity to produce up to 500 litres of desalinated water per day. The system is being optimised and the costs of purification are being quantified so that it can be considered as a technology for improving energy and water access.



Helio 100 demonstration plant



Desalination unit piping

National Intellectual Property Management Office

During the 2019/20 review period, the National Intellectual Property Management Office (NIPMO) continued to provide financial and non-financial support to the offices of technology transfer (OTTs). In 2019/20, for the first time, the OTT Support Fund Guidelines were expanded to include more technology transfer activities, such as intellectual property (IP) audits, techno-feasibility studies and contract drafting. This expansion of the Guidelines saw NIPMO committing an amount of R61 489 403 over a period of

three years as the demand for the funding increased. In addition to the OTT Support Fund, NIPMO managed to pay out 50% of costs (totalling more than R21 million) incurred in the protection and maintenance of IP through the IP Fund.

NIPMO, together with its partners, the Companies and Intellectual Property Commission, the World Intellectual Property Organisation (WIPO), the Technology Innovation Agency and the South African Research and Innovation Management Association, reached more than 225 individuals through IP and technology transfer awareness initiatives, as well as formal training sessions. NIPMO also led the Innovation Bridge merger with Science Forum South Africa, at which universities and science councils got the opportunity to showcase their developed technologies.

During the current review period, NIPMO was also able to exceed its target of new actionable disclosures received from publicly funded institutions, with 258 disclosures received against 210 targeted. This was made possible through the newly implemented Knowledge Management System. Once fully developed and rolled out, this system will assist with tracking not only disclosures but also the financial and non-financial support provided by NIPMO.

Bioeconomy mission

A variety of initiatives have been continued in support of the national Bio-economy Strategy. The partnership with the South African Medical Research Council allowed the support of a variety of research and development projects for therapeutics, diagnostics, medical devices and biologics, all aligned to national health priorities. The emphasis on precision medicine and maternal and child health continues to stand South Africa in good stead.

Since the onset of the COVID-19 pandemic, there has been a significant shift in funding towards the COVID-19 response. The DSI appointed a COVID-19 Research Committee, which has coordinated academic and research laboratories to develop the local supply of polymerase chain reaction reagents, and support

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

the National Health Laboratory Service in testing for the SARS-CoV-2 virus. These activities will carry on in 2020/21.

In agriculture, the DSI has continued to develop and support the Agricultural Bioeconomy Innovation Partnership Programme. This programme, with support from the Technology Innovation Agency (TIA) and Grain SA, is focusing research and innovation towards the development of the agricultural sector, with special emphasis on small-scale and emerging black farmers.

A pilot phase for the support of industrial biotechnology was successfully concluded, and will lead to fuller support, in partnership with the TIA and the Council for Scientific and Industrial Research (CSIR), in the 2020/21 financial year. Support includes backing for biocatalysis, forestry, and biorefinery initiatives.

The Indigenous Knowledge-based Technology Innovation initiative continues to strengthen indigenous knowledge (IK) holders and their communities in the development of IK products and services. The onset of the COVID-19 pandemic saw substantial funding reprioritised to support the development, validation and commercialisation of IK-based therapeutics and immune boosters.

Metrics for the bioeconomy

The National Advisory Council on Innovation (NACI), with support from the Department, concluded its advice and recommendations on measuring the bioeconomy for the Minister. The actual bioeconomy audit will commence in the next financial year.

BIO Africa Convention

The second annual BIO Africa Convention took place in Durban in August 2019. The convention and exhibition, originating from a DSI initiative, recorded 933 delegates, 105 speakers and 66 exhibitors, representing more than 300 companies. Seventeen African countries sent delegates. The convention included a variety of bioeconomy-related themes, and included training, expert addresses, and sessions on

relevant topical developments of significance to South Africa and Africa.

Emerging research areas

During the 2019/20 review period, the Department continued with the implementation of various programmes in support of emerging technologies, transferring a total of R112,4 million during the year in support of programmes in nanotechnology focus areas, such as the Nanotechnology Postgraduate Teaching and Training Platform, the two Nanotechnology Innovation Centres, and photonics programmes. In addition, two new projects in nanomedicine received funding, one at the University of the Western Cape focusing on the exploitation of the antimicrobial properties of nanosilver particles, and the other at the Tshwane University of Technology focusing on developing a range of medical solutions, including synthetic blood and cancer diagnostic tools.

In partnership with the University of the Western Cape, the DSI hosted the 5th Nanotechnology Summer School, looking at nanoscience and technology applications for new materials and new products in areas such as health, medicine, water, energy and the environment, as well as at the commercialisation and industrial aspects of new products. The school, which was oversubscribed, saw a total of 110 postgraduate students, academics and industry representatives participating.

Operation Phakisa – Oceans Economy

The DSI continues to support the National Oceans and Coastal Information Management System. Its decision-support tools are improved on a regular basis and the DSI, through the South African National Space Agency, is providing the relevant satellite data needed to monitor and protect South Africa's oceans and coasts. A new contract between the DSI, the CSIR and the Department of Environment, Forestry and Fisheries is being concluded.

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

Maritime Domain Awareness Cube Satellite Constellation

The most advanced South African nanosatellite to date, ZACube-2, was completed and launched in December 2018. The satellite is a technology demonstrator for maritime domain awareness (MDA), and a precursor to the MDASat constellation. MDASat will be a constellation of nanosatellites that will provide cutting-edge very high frequency data exchange communication systems to the maritime industry, as a contribution to Operation Phakisa. The DSI has invested R27 million in the MDA cube satellite constellation to develop the first three of nine cube satellites. Additional funding of about R60 million will be required for the other six satellites.

Space Weather Regional Centre

After the appointment of South Africa as one of the Regional Centres for Space Weather Information by the International Civil Aviation Organization, the DSI funded the upgrade of the 24/7 space weather information centre. The funding will also be used for the appointment of a research chair, who will be instrumental in developing human capital and increasing South African capabilities in space weather.

South African Mercury Network Project

The DSI has funded a project to monitor mercury levels in South Africa. The aim of the project is to develop a coordinated national observation network for mercury in order to monitor temporal and spatial distributions of concentrations in ambient air and precipitation over land and surface water across South Africa. This will provide high quality data for the validation of local and regional models that can ultimately be used in the global GEOS-Chem model. The project is South Africa's contribution to the Global Observation System for Mercury flagship programme of the Group on Earth Observations.

Upgrade of the Houwteq facility

South Africa's only assembly, integration and testing (AIT) facility, Houwteq, is situated in close proximity to the satellite industry in the Western Cape. The facility was designed for analysing and testing the final assembly, alignment, heat, vacuum and electromagnetic wave properties of satellite and launch vehicle systems that require a high degree of reliability. Satellite AIT facilities are specially designed and form an integral part of the satellite build programme, as most of the work is done in clean rooms to restrict the exposure of sensitive sensors to dust particles.

In the 2019/20 financial year the Department transferred R33 million to the South African National Space Agency (SANSA) for the upgrade of the Houwteq AIT facility, and in January 2020 entered into a contract with SANSA to the value of R72,081 million for this purpose.

Rocket launch capability

In 2019/20, the DSI transferred R3,9 million for the continuation and development of the hybrid and liquid rocket engines for the University of KwaZulu-Natal's sounding rocket vehicle, built as part of the university's Space Propulsion Research Programme. In the 2020/21 financial year, the Department expects to provide additional funding estimated at R5 million.

International cooperation and partnerships

The DSI secured R758,5 million in foreign funds from international partners in support of the South African national system of innovation. The European Union remained one of the largest contributors during the financial year.

The DSI also secured R215,3 million from international partners to support collaborative projects in Africa. The DSI itself has invested in 144 jointly funded projects with African partners, and received endorsement from either the Southern African Development Community or the African Union for 20 initiatives.

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

Research and innovation infrastructure

The South African Research Infrastructure Roadmap includes the Nuclear Medicine Research Infrastructure (NuMeRI). The NuMeRI Node for Infection Imaging was launched on 14 November 2019 as South Africa's first positron-emission tomography/computed tomography (PET/CT) facility dedicated to clinical research. This new state-of-the-art imaging facility located at Tygerberg Hospital (hosted by Stellenbosch University's Central Analytical Facilities) enables researchers to work towards tuberculosis eradication. The PET/CT system is one of the most advanced systems currently available in the world and only the second of its kind installed in the Southern Hemisphere.

Human capital development

On 29 April 2019, the National Research Foundation (NRF) Amendment Act was passed. The amendment clarifies the roles and responsibilities of the organisation within the national system of innovation, empowers the Minister to determine national policy and issue policy guidelines, enables the NRF to operate outside of South Africa, and provides for the organisation to advise the Minister formally.

The annual National Science Week took place from 29 July to 3 August 2019, following a launch event led by the Minister in Kimberley on 27 July 2019. More than 80 exhibitors participated in the launch event, which was attended by almost 3 000 people, most of whom were learners.

On 15 August 2019, the DSI hosted the South African Women in Science Awards (SAWiSA) in Port Elizabeth, under the theme "Making the Fourth Industrial Revolution Work for Women". SAWiSA is a flagship event aimed at recognising the achievements of prominent women scientists and providing motivation for increased participation of women in research. The awards are hosted in August every year as the Department's contribution to the national Women's Month celebrations.

Astronomy

The scientific capabilities of the MeerKAT telescope were significantly enhanced by the successful installation of eight large survey project (LSP) science mode correlators, which will allow the telescope to perform continuum science, do pulsar timing, and produce spectacular high-resolution images.

The MeerKAT telescope has contributed to several discoveries, including the following:

- A long-standing mystery related to the formation and evolution of galaxies was resolved by an international team of scientists, who discovered vast amounts of hydrogen gas in a galaxy 60 million light years from Earth. Their work, published in the journal *Astronomy & Astrophysics*, is based on observations carried out with the MeerKAT in 2019.
- An international team of astronomers announced in September 2019 that, using the MeerKAT, they had discovered enormous balloon-like structures towering hundreds of light years above and below the centre of our galaxy, caused by a phenomenally energetic burst that erupted near the Milky Way's supermassive black hole a few million years ago.

The DSI and the University of Venda partnered to host the 2019 Astrolab workshop in Thohoyandou, Limpopo, from 18 to 22 November 2019. The project aims to provide research tutorials at less-developed universities in need of astronomy infrastructure and curricula, allowing undergraduate students in sciences to perform real-time observations using remote telescopes and transform those observations into scientific results.

Indigenous knowledge systems

On 14 August 2019, the Promotion, Protection, Development and Management of Indigenous Knowledge Act (the IK Act) was passed. After 25 years of democracy in South Africa, the people of South Africa can celebrate the fact that indigenous

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

knowledge systems have been accorded the same worth as any other knowledge system in our country.

The Department held a regional intellectual property workshop from 20 to 24 May 2019 to develop an African Group position in preparation for the negotiations at the WIPO Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions. In partnership with the University of KwaZulu-Natal, the DSI hosted a two-day conference on traditional birth attendants on 5 and 6 June 2019. The theme of the conference, “Restoring African Dignity through Traditional Birth Attendants”, was linked to the recognition of prior learning, a key pillar of the IK Act.

Grassroots Innovation Programme

To enhance the development of an inclusive and responsive national system of innovation, the Department initiated the scale-up of the Grassroots Innovation Programme. A call for grassroots innovations attracted responses from across the country, and qualifying innovators are being helped to develop and commercialise their ideas.

Innovative solutions for human settlements

In partnership with the Department of Human Settlements, the DSI is advancing the deployment of innovative technology solutions in the human settlements sector. This partnership has resulted in the development of a joint strategic and transformative framework on innovation that will guide the deployment of innovative technologies, in line with the Cabinet resolution on the deployment of locally developed technologies. This framework provides the basis for planning, coordination and decision-making for introducing innovations to support the Department of Human Settlements’ effort to transform human settlements into smart settlements by harnessing 4IR opportunities such as 3D-printed buildings and digital business processes. Furthermore, through the TIA, the DSI is piloting an innovative financing instrument, the Technology Adoption and Deployment Fund, which is aimed at enhancing market access for locally

developed innovative technology solutions that respond to development challenges and priorities.

In support of the District Development Model and the effort to improve the functioning and coordination of government efforts to achieve smart cities, the DSI expanded the number of municipalities participating in the assessment and measurement of innovation readiness and maturity. This assessment is administered through the Municipal Innovation Maturity Index (MIMI), a decision-support tool aligned to the National Development Plan goal of a capable state. The MIMI is key in evaluating the learning capabilities of public sector institutions to adopt efficient and innovative approaches to basic service delivery. To enhance innovation capabilities at local municipality level, the Department expanded its Innovation Champions initiative, an instrument that recruits unemployed graduates to help municipalities incorporate innovation into their strategies and operations. The initiative has been piloted mainly in rural municipalities in an effort to inculcate and strengthen innovation culture, a key aspect of a capable state.

The Waste Research Development Innovation Roadmap

Between 2016 and 2019, the DSI sponsored research at the University of the Witwatersrand (Wits) on “Building from what exists: Integrating reclaimers into our understanding of the recycling economy”. The research was conducted in Johannesburg and Metsimaholo in the Free State, and included collaboration with the South African Waste Pickers Association, the African Reclaimers Organisation, and the Packaging Council of South Africa. Reclaimers recover valuable materials from kerbside waste bins and landfills. These materials are sold to centres that sell them on to recyclers. The contribution of waste reclaimers to South Africa’s waste recycling economy is not well known to the public, although it is estimated that they save municipalities hundreds of millions of rand by diverting waste from landfills. The Wits research project has shown that reclaimers and

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

their system of operation need to be integrated into broader interventions at the systems level, and that a holistic approach to the entire waste management system, including the recycling economy, is required, without false divisions between the formal and informal economies. The result of this evidence-based approach to integration has been taken up by the Department of Environment, Forestry and Fisheries in developing the Waste Picker Integration Guideline for South Africa.

The Water Research, Development and Innovation Roadmap

The Water RDI Roadmap Implementation Unit, based at the Water Research Commission, aims to enhance coordination and improved decision-making by translating research into practice. Between its inception and the end of the 2019/20 financial year, the unit had supported seven communities of practice with a focus on water sensitive urban design and ecological infrastructure; invested in programmes enhancing the ability of young engineers to apply research-related outcomes in the workplace and a workplace readiness programme for postgraduate students; and embedded national water RDI priorities into five different national policy and strategy processes (the National Water and Sanitation Master Plan, Industrial Policy Action Plan, NACI Foresight Study, National Water and Sanitation Strategy, and National Biodiversity Skills Strategy).

The unit also aims to focus on enabling faster, more comprehensive deployment of context-appropriate performance improvements. In support of this, by the end of 2019/20, the unit had supported 38 water technology demonstrations, across 15 different test beds nationally. These technology deployment processes are further supported by a series of system interventions and projects such as the development of a water technology validation framework and a national test bed network.

The unit's third objective is driving more products and services to reach the market through a better coordinated water innovation pipeline. To date, three companies have received further sectoral scale-up funding following support from the unit, and at least one company has entered the market with a commercially viable product

Imvelisi Enviropreneurship Programme

The 2019 Imvelisi bootcamps had 58 participants, 94% of which were black and 25% female. The University of Johannesburg was a key partner, providing training venues. Winning ideas included designs for greywater recycling and water monitoring systems, and winners have been entered into incubation programmes with various partners. The adjudicators at the simulated pitching sessions were from the public sector, private companies and NGOs, and the top six candidates received business mentoring for three months after the bootcamps. A key outcome of the bootcamps was networking using social media platform WhatsApp, with contacts made during the bootcamp intended to continue as part of building an enviropreneur community.

South African Risk and Vulnerability Atlas

In 2019, the South African Risk and Vulnerability Atlas (SARVA) team embarked on the development of a district-level Sustainable Development Goals (SDGs) dashboard. This tool links higher spatial and temporal resolution data from a variety of sources to each of the 17 SDGs. The intention is to provide datasets at local and district municipality level that can be used as indicators of important challenges being faced by South Africa. It aims to help municipal planners gather data on where their municipalities stand regarding sustainable development, as well as to tie SDG indicator reporting directly to local reporting and targets. The tool is supported by a searchable atlas and interactive infographics, which assist with translating data from various sources into a consistent set of key messages. With SARVA, each SDG indicator will serve as a measure of adaptive capacity, helping to measure

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

a municipality's vulnerability to economic, community, infrastructure, and environmental hazards resulting from global change.

Deep Learning Indaba 2019

The third annual Deep Learning Indaba was held at Kenyatta University in Nairobi in August 2019, attracting over 500 delegates from across the continent. The principal aim of the week-long event is to increase African participation in and contribution to advances in artificial intelligence and machine learning, and to address issues of diversity in these fields. The DSI funded the participation of 28 honours, MSc and PhD students at the event. The event has attracted co-sponsorships from big technology companies such as Google, DeepMind, Microsoft, IBM and Amazon.

Data Science for Impact and Decision Enablement

In line with the broader DSI response to the 4IR discourse, the DSI-funded programme on Data Science for Impact and Decision Enhancement (DSIDE) has been running for the past six years. Its aim is to support capacity building in the ever-growing field of data science by hosting a 12-week mentor-guided, learn-by-doing programme of solving real-world problems presented by various stakeholders. In 2019/20 the programme recruited and trained 65 students working on 14 projects covering various domains. These students are mostly third and fourth-year undergraduates in engineering, IT, computer science and mathematics. The students tackled a total of 14 projects, including a machine learning model for accurately predicting the likelihood that an image taken by a camera contains a pothole; an age-invariant facial recognition system; spectrum analysis using machine learning techniques to determine which technique can best identify spectrum interference; and labelled language corpora for Setswana, Sepedi and Sesotho. The aim of the last-mentioned is to use language models and word embeddings to augment the available language data, and ultimately to build

robust language classifiers for news articles in local languages.

Mobile technology accelerator mLab

MLab Southern Africa is a mobile technology accelerator that supports innovative new start-ups to unlock the mobile applications economy. The initiative began in 2012 and has evolved into a highly successful programme, with offerings that include coding skills development at academies situated in townships, enterprise development (incubation), and co-creation opportunities with industry for university students. The first mLab sites were in Pretoria and Cape Town, and in 2019/20 two more mLab sites, in Polokwane (Limpopo) and Kimberly (Northern Cape), became fully operational. The first cohort of trainees from the Kimberly site graduated in March 2020, although the outbreak of COVID-19 did not allow for a formal graduation event.

Industry Innovation Partnership Programme

The DSI continued to implement its Industry Innovation Partnership Programme. This includes the Sector Innovation Fund (SIF) portfolio, as well as support for a number of industry development centres hosted by the CSIR.

The SIF portfolio is designed to encourage increased private sector investment in research, development and innovation through co-investment in priorities identified by the private sector. Seven industry associations are supported through the SIF, in horticulture, post-harvest innovation, viticulture, forestry, agroprocessing, mineral processing and paper manufacturing. In the year under review, the SIF programme supported 76 postgraduate students and 26 interns.

The CSIR industry development centres support sectors that represent potential new growth areas of the economy. These are the Biomanufacturing Industry Development Centre (BIDC), the Biorefinery Industry Development Facility, the Nanomaterials Industry Development Facility (NIDF) and the Photonics

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

Prototyping Facility. In 2019/20, 14 interns were supported under the BIDC and NIDF, and five of them are now employed. The BIDC and NIDF supported a total of 13 SMMEs.

The Regional Innovation Support Programme

The DSI continues its support for the Regional Innovation Support Programme through a project management unit established at the CSIR. A new structured approach is used to solicit proposals for interventions that support the development of innovation-enabling ecosystems in identified locations through assistance for infrastructure or networking platforms. In 2019/20, the programme supported 10 interventions in eight provinces. Contracting for the successful applicants from a third call, which was run towards the end of 2019, is being finalised and will be followed by interventions in all the provinces.

Support for South Africa's 4IR response

The DSI is actively participating in a number of intergovernmental processes, processes led by social partners, and international partnership processes aimed at supporting South Africa's response to 4IR. As these processes mature, including the establishment of a Presidential Advisory Commission on the Fourth Industrial Revolution, DSI will be called upon to further enhance its contribution and support to the national response.

5.4 Future plans of the Department

The detailed plans of the Department will be guided by the the review of the National Research and Development Strategy and the decadal plan.

5.5 Activities to be discontinued

The Department will be guided in this regard by the decadal plan and the impact of COVID-19-related budget cuts on its operations.

5.6 New or proposed activities

There are no new or proposed activities that will be implemented in the 2020/21 financial year. However, the Department will be guided by the review of the National Research and Development Strategy and the decadal plan when completed.

5.7 Overview of the financial results of the Department

Departmental receipts

The table below highlights receipts collected by the Department in the financial year under review and the previous financial year (2018/19 and 2017/18).

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

Departmental receipts	2019/20			2018/19		
	Estimate	Actual amount collected	(Over)/Under Collection	Estimate	Actual amount collected	(Over)/Under Collection
	R'000	R'000	R'000	R'000	R'000	R'000
Sale of goods and services other than capital assets	66	69	(3)	35	64	(29)
Interest, dividends and rent on land	15	13	2	26	27	(1)
Sale of capital assets	-	-	-	-	217	(217)
Financial transactions in assets and liabilities	20 000	19 334	666	35 000	32,441	2559
Total	20 081	19 416	665	35 061	32,749	2 312

In the period under review, the Department continued collecting significant revenue, although less than in the previous financial year. The decrease was due to collecting less surpluses on project funds than in 2018/19. Other collections related to commission on insurance deducted from officials.

Spending trends

The Department's appropriation for the year under review was R8,172 billion, which was a 2,7% increase from R7,958 billion in 2018/19. The Department received an additional allocation of R26,148 million for the Ministry budget from Department of Higher Education and Training (DHET) through the National Micro Organisation of Government.

The table below shows budget and actual expenditure per Programme for the financial year under review (2019/20) and the previous financial year (2018/19).

Programme	2019/20			2018/19		
	Estimate	Actual amount collected	(Over)/Under Collection	Estimate	Actual amount collected	(Over)/Under Collection
	R'000	R'000	R'000	R'000	R'000	R'000
Administration	372 313	323 170	49 143	380 349	340 493	39 856
Technology Innovation	1 280 292	1 236 673	43 619	1 157 338	1 143 715	13 623
International Cooperation and Resources	149 131	136 027	13 104	142 449	139 872	2 577
Research Development and Support	4 583 676	4 578 431	5 245	4 519 058	4 516 626	2 432
Socio-Economic Innovation Partnerships	1 786 892	1 778 196	8 696	1 759 194	1 751 220	7 974
Total	8 172 304	8 052 497	119 807	7 958 388	7 891 926	66 462

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

The Department's spending performance has been consistently above 90% since its inception. It was 98,5% for the 2019/20 financial year.

Summary of budget expenditure analysis per economic classification

Details	2019/20 R'000	2019/20 %
Amount voted	8 172 304	100
Actual expenditure	8 052 497	98,5%
Unspent funds	119 807	1,5%
Economic classification		
Current payments	530 935	6,86%
Transfer payments	7 513 932	92,19%
Payments for capital assets	7 541	0,11%
Payments for financial assets	89	0,002%
Total payments	8 052 497	98,5%

Virements

The Department effected virements estimated at R90 million after the Adjusted Estimates of National Expenditure process, which represents 1,1% of the adjusted budget. An amount of R27,5 million was moved between major items and R66,9 million was moved between Programmes.

In addition to funds moved from other items, an amount of R62,5 million was shifted within transfers and subsidies. The funds were used for the operations of the International Centre for Genetic Engineering and Biotechnology, postgraduate bursaries, synthetic aperture radar, the mercury monitoring programme, IK-based technology transfer, medical cannabis and health infusions project management, The Higher Education, Science, Technology and Innovation Institutional Landscape Review, the DSI branding campaign, the IKS Expo and activities to raise public awareness of the IK Act.

Supply Chain Management

The Department continues to implement all Supply Chain Management (SCM) prescripts and policies as required. The Department also ensures that it complies with all guidelines and instructions

introduced by the National Treasury. Furthermore, the Department continues implementing a SCM checklist for the procurement of goods and services to ensure that all procurement processes are followed. The checklist assists in ensuring that the segregation of duties is observed at all times. The Department is also developing a procurement strategy that will give guidelines on procurement by women, the youth and people with disabilities. It is envisaged that the strategy will be finalised in the 2020/21 financial year.

The Department has functioning bid management committees. The members of the bid evaluation committee are appointed on an ad hoc basis, depending on the goods and services required. There was no unsolicited bid procured during the year under review.

The Directorate: SCM had capacity constraints during the year under review, but these are being addressed by appointing officials on a contract basis to ensure that service delivery is not compromised. The appointment of permanent staff will be prioritised in the coming financial year.

5. REPORT OF THE ACCOUNTING OFFICER (CONTINUED)

5.8 Gifts and donations received in kind from non-related parties

No gifts or donations were received in kind from non-related parties.

5.9 Standing Committee on Public Accounts (SCOPA) resolutions

There were no SCOPA resolutions.

5.10 Prior modifications to audit reports

The Auditor-General found no matters of significance regarding the administration of the Department.

5.11 Exemptions and deviations received from the National Treasury

No exemptions or deviations were raised by National Treasury.

5.12 Events after the reporting date

In March 2020, the President of South Africa declared a national state of disaster owing to the COVID-19 pandemic and instituted a lockdown of the country to slow the spread of the coronavirus. The effect on the Department was severe, as a significant part of its budget (R1 435 billion) had to be put aside to assist with the fight against the pandemic. Several departmental projects will be affected by these budget cuts, including innovation projects, infrastructure projects, human capital development, mining research and development, and the filling of positions in the DSI. The annual performance targets of all affected Programmes must be revised. The full impact is not yet known, as the pandemic lockdown has not yet ended.

Owing to the need for officials to work from home during the pandemic lockdown, the Department procured 89 additional laptops to ensure that its operations continued.

The Department was affected by the National Micro Organisations of Government where it was put under the same Ministry with the Department of Higher Education. The transfer of assets for the Ministry was not completed in the period under review, but will be finalised in 2020/21 financial year.

5.13 Other

N/a

5.14 Conclusion

The Department is currently operating in a difficult environment as a result of COVID-19, but guided by the protocols provided by the Department of Health and other relevant organisations, it will continue to do everything possible to minimise the impact of the pandemic on its operations and employees.

5.15 Acknowledgements

I would like to express my sincere appreciation to all staff, the Executive Committee, the Audit Committee and the Enterprise Risk Management Committee for their tireless dedication in ensuring that the Department fulfilled its mandate. My sincere appreciation also goes to the Minister Nzimande and Deputy Minister Manamela for their leadership and support.

5.16 Approval and sign-off

The Annual Financial Statements have been approved by the Accounting Officer.



Dr PM Mjwara

Accounting Officer

31 July 2020

6. STATEMENT OF RESPONSIBILITY AND CONFIRMATION OF ACCURACY OF THE ANNUAL REPORT

I confirm that, to the best of my knowledge and belief –

- all information and amounts disclosed throughout the Annual Report are consistent;
- the Annual Report is complete, accurate and free from any omissions;
- the Annual Report has been prepared in accordance with the Guidelines on Annual Reports issued by the National Treasury;
- the Annual Financial Statements (Part E) have been prepared in accordance with the modified cash standard and the relevant frameworks and guidelines issued by the National Treasury (the Accounting Officer is responsible for the preparation of the Annual Financial Statements and for the judgements made in this regard);
- a system of internal controls that have been designed to provide reasonable assurance as to the integrity and reliability of the performance information, the human resources information and the Annual Financial Statements has been established and is being implemented;
- external auditors were engaged to express an independent opinion on the Annual Financial Statements.

In my opinion, the Annual Report fairly reflects the operations, the performance information, the human resources information and the financial affairs of the Department for the year ended 31 March 2020.



Dr PM Mjwara

Director-General

31 May 2020

7. STRATEGIC OVERVIEW

7.1 Vision

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

7.2 Mission

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

7.3 Values

- **Professionalism**

The Department is professional and delivers high-quality performance to both internal and external stakeholders.

- **Innovation**

The Department is innovative in solving problems and enhancing effectiveness and efficiency.

- **Ethical behaviour**

The Department and its employees are consistent in their actions and accountable and transparent in dealing with public funds and other resources.

- **Knowledge sharing**

The Department and its employees share and use knowledge constructively to ensure that it contributes to the building of a robust and productive knowledge economy.

8. LEGISLATIVE MANDATE

Academy of Science of South Africa Act, 2001

The Act establishes the Academy of Science of South Africa to promote common ground in scientific thinking across all disciplines, including the physical, mathematical and life sciences, as well as human, social and economic sciences; to encourage and promote innovative and independent scientific thinking; to promote the optimum intellectual development of all people; to advise and facilitate appropriate action in relation to the country's needs, opportunities and challenges; and to link South Africa with high-level scientific communities within the Southern African Development Community, the rest of Africa and internationally.

Astronomy Geographic Advantage Act, 2007

The Act provides for the preservation and protection of areas in South Africa uniquely suited to optical and radio astronomy, and for intergovernmental cooperation and public consultation on matters concerning such areas.

Human Sciences Research Council Act, 2008

The Act provides for the continued existence of the Human Sciences Research Council, which carries out research that generates critical and independent knowledge relating to all aspects of human and social development.

Income Tax Act, 1962

Section 11D of the Income Tax Act gives the minister responsible for science and technology authority to approve scientific and/or technological research and development undertaken or funded in South Africa for a tax deduction in order to promote private sector R&D activities in the country.

8. LEGISLATIVE MANDATE (CONTINUED)

Intellectual Property Rights from Publicly Financed Research and Development Act, 2008

The Act provides for the more effective use of intellectual property emanating from publicly financed research and development, through the establishment of the National Intellectual Property Management Office, the Intellectual Property Fund, and offices of technology transfer at higher education institutions and science councils.

National Advisory Council on Innovation Act, 1997

The Act establishes the National Advisory Council on Innovation to advise the Minister responsible for science and technology and, through the Minister, the Cabinet, on the role and contribution of science, mathematics, innovation and technology in promoting and achieving national objectives.

National Research Foundation Act, 1998

The Act establishes the National Research Foundation to promote basic and applied research, as well as the extension and transfer of knowledge in the various fields of science and technology.

Natural Scientific Professions Act, 2003

The Act establishes the South African Council for Natural Scientific Professions and legislates the registration of professional natural scientists, natural scientists-in-training, natural science technologists and natural science technologists-in-training.

Scientific Research Council Act, 1988

The Act refers to the activities of the Council for Scientific and Industrial Research, which undertakes directed research and development for socio-economic growth in areas that include the built environment, defence, the environmental sciences, and biological, chemical and laser technology.

South African National Space Agency Act, 2008

The Act establishes the South African National Space Agency to promote space science research, cooperation in space-related activities, and the creation of an environment conducive to the development of space technologies by industry.

Technology Innovation Act, 2008

The Act establishes the Technology Innovation Agency to promote the development and exploitation of discoveries, inventions, innovations and improvements in the public interest.

9. ORGANISATIONAL STRUCTURE



*The Minister of Higher Education,
Science and Innovation*
Dr BE Nzimande, MP



*The Deputy Minister of Higher Education,
Science and Innovation*
Mr KB Manamela, MP



Director-General
Dr Phil Mjwara



*Acting Deputy Director-General:
Institutional Planning and Support*
Buhle Khumalo



*Deputy Director-General:
Corporate Services*
Nombuyiselo Mokoena



*Deputy Director-General:
International Cooperation and Resources*
Daan du Toit



*Deputy Director-General:
Technology Innovation*
Mmboneni Muofhe



*Acting Deputy Director-General: Research
Development and Support*
Dr Daniel Adams



*Deputy Director-General: Socio-Economic
Innovation Partnerships*
Mr Imraan Patel

10. ENTITIES REPORTING TO THE MINISTER

10.1 Academy of Science of South Africa



Overview of objectives

The Academy of Science of South Africa (ASSAf) aspires to be the apex organisation for science and scholarship in South Africa, recognised and connected both nationally and internationally. Through its membership, which represents the collective voice of the most active scholars in all fields of scholarly enquiry, ASSAf aims to generate evidence-based solutions to national problems.

As the only national science academy to be officially recognised by the South African government, ASSAf recognises and rewards excellence; promotes innovation and scholarly activity; provides effective, evidence-based scientific advice to government and other stakeholders; promotes public interest in and awareness of science and science education; and fosters national, regional and international linkages.

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

Membership

ASSAf is pleased to announce that 23 new members were elected and inaugurated in October 2019, bringing the total ASSAf membership to 572 professionals. Members continue to participate in various activities, thereby advancing the Academy's mandate of using evidence-based science in the service of society.

Evidence-based studies

ASSAf published three statements, two consensus studies, one peer review panel report, 11 proceeding reports, and one policymakers' booklet during the reporting period. Many of the Academy's recent

studies address skills development challenges for a knowledge-based economy, as evidenced by the following reports that were published during the financial year: *Twelve Years Later: Second ASSAf Report on Research Publishing in and from South Africa; Recognising Individual Contributions to Collaborative Research: Limitations of Proportional Publication Counts and Proposals for Alternatives; and Report on Grouped Peer Review of Scholarly Journals in Communication and Information Sciences.*

SciELO SA

During the period under review, Scientific Electronic Library Online South Africa (SciELO SA) underwent an evaluation to assess whether its collection adheres to strict publishing best practice and whether its titles adhere to the SciELO Citation Index, which forms part of the Web of Knowledge search portal criteria. The platform was awarded a score of 99%, a further confirmation of the efficiency of our performance. Going forward, it is imperative that we review the number of journals to be added to this platform.

International liaison

ASSAf's science engagement and science communication footprint has extended widely nationally, throughout the African continent, and internationally. Members and the Secretariat have organised and participated in various events, thereby promoting the DSI-ASSAf brand of using science to make a difference to the lives of the people of South Africa and beyond. These engagements have borne fruit in various ways. The partnership between the DSI, the National Research Foundation (NRF) and ASSAf led to the launch of the African Open Science Platform (AOSP) at the Alexandria Library in Egypt in September 2019. The AOSP gives African scientists opportunities to network and share resources freely and openly across the continent.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

10.2 Council for Scientific and Industrial Research



Overview of objectives

The Council for Scientific and Industrial Research (CSIR) is a world-class African research and development organisation that was established through an Act of Parliament in 1945. The CSIR undertakes directed, multidisciplinary research and technological innovation that contributes to improved quality of life for all South Africans. The organisation plays a key role in supporting government's programmes through directed research that is aligned with the country's priorities, the organisation's mandate, and its science, engineering and technology areas of competence.

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

Initiatives in response to COVID-19

As part of the national data-driven approach to countering COVID-19, the CSIR developed a platform that monitors human movement patterns across targeted areas such as hotspots, high-risk and vulnerable areas, while also monitoring lockdown compliance and the spread of the virus. The platform presents a dashboard of integrated, holistic national mobility intelligence to key stakeholders and decision-makers in areas ranging from data, research and statistics to health care, communicable diseases, law enforcement, roads and transport.

Other achievements include the development of pulmonary nano-formulations, hand sanitiser and body lotion, and advanced antiviral personal protective equipment. The molecular diagnostics and omics group responded to a funding call from the

Technology Innovation Agency and South African Medical Research Council, as well as a UNESCO call, with proposals for an RNA extraction kit based on MagReSyn technology. In addition, the use of proteomics to elucidate disease progression and severity is being discussed with partners in the DIPLOMICS network.

Further initiatives in response to the pandemic are highlighted below.

Manufacturing

The Centre for Robotics and Future Production was awarded a R4,6 million contract by the National Ventilator Project to develop a commercial prototype of a continuous positive airway pressure ventilator. The prototype was approved by the South African Health Products Regulatory Authority, with manufacturing set to begin in the second quarter. The Manufacturing Cluster is also evaluating commercially available light sanitisation solutions, with the aim of trialling devices and developing tests to prove their efficacy. The cluster is part of the COVID-19 Agile Solutions Team, as well as the Business South Africa COVID-19 Expert Innovation Group. In addition, Advanced Manufacturing and Engineering Impact Area has designed a hospital bed that will allow for high-volume production, and a prototype is being manufactured.

Progress in research and development initiatives

- The Water Centre is participating in a sewage-based epidemiological study of the SARS-CoV-2 virus together with Waterlab and the Medical Virology Department of the University of Pretoria, funded by the Water Research Commission.
- NextGen Enterprises and Institutions, working with Fast Academy, has completed version 3 of the AwezaMed mobile application, which incorporates further CSIR-developed speech technologies. The app enables speech-to-speech translation between

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

English-speaking doctors and patients speaking a number of African languages, and is ready for user evaluation during the COVID-19 pandemic.

- The Digital Precision Medicine Platform has been engaging the Solidarity Trial, a global clinical trial for COVID-19 drugs, on the use of its data on adverse drug reactions in four or five clinical treatment arms, together with the CSIR's genotyping test.
- The Smart Places Cluster has released the findings of a life cycle sustainability assessment of grocery carrier bags in South Africa.
- Concrete producer Salberg has agreed to jointly trial the manufacture of sewer pipes using CSIR-developed acid corrosion resistant geopolymer concrete.

Advanced agriculture

The agroprocessing team is part of a DSI-led consortium that is investigating the potential of selected indigenous medicinal plants and herbal mixtures through clinical research, biochemical analysis and innovative product development research, in order to generate candidate products for treating or preventing COVID-19. The cluster expects to benefit to the value of R1,2 million from the project.

Infrastructure development

The CSIR received funding of R185 million over a three-year period from the National Treasury. Allocations have been approved for four projects, namely, an Open Lab to support local pharmaceutical manufacturing, a Learning Factory, an advanced road material testing laboratory project, and a smart mobility modelling project. Other infrastructure initiatives that have received funding and will be implemented in 2020/21 are the development of a pilot-scale supercritical carbon dioxide encapsulation facility, and the development of a hot isostatic press manufacturing platform.

10.3 Human Sciences Research Council



Overview of objectives

The Human Sciences Research Council (HSRC) is mandated to initiate, undertake and foster strategic basic and applied policy research in the human sciences, and to gather, analyse and publish data relevant to developmental challenges in South Africa, elsewhere in Africa and the rest of the world.

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

Understanding innovation in the informal sector

To inform the development of innovation policies suited to the economic activities that prevail in South Africa, the HSRC's Centre for Science, Technology and Innovation Indicators designed a process for measuring innovation that prioritises the inclusion of informal sector participants. The process was informed by an NRF-funded research project on the Local Innovation and Production Systems approach that was developed in Brazil. This approach allows for the construction of a database that represents innovation in the informal sector in a deep and rich manner. This will lend itself to promoting economic development through innovation in a way that is informed by local businesses and communities, and not only by policy experts and measurement professionals.

DSI-NRF Research Chair in City-Region Economies

A decade of high-quality research on South African cities and regions was recognised with the awarding of the prestigious DSI/NRF Research Chair in City-Region Economies to Prof. Ivan Turok, Executive Director of

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

the HSRC's Economic Performance and Development programme. This is the first South African Research Chairs Initiative between the HSRC and a university (the University of the Free State). The initiative seeks to understand how cities can accelerate economic growth and inclusive development, and what policies and practices can be implemented to improve conditions on the ground. It will also increase research capacity through the appointment of additional master's, PhD and postdoctoral students.

Improving learner performance in under-resourced schools

The Trends in International Mathematics and Science Study (TIMSS) allows participating countries to compare their learners' performance in mathematics and science. TIMSS is the only study in South Africa that provides trustworthy performance trend estimates, and is an important indicator of the health of the education system over time. For TIMSS 2019, performance information was collected from 12 000 Grade 5 learners at 190 schools and 21 000 Grade 9 learners at 530 schools. A key finding was that maths and science achievement, although still low, has been steadily improving, and remains linked to children's socioeconomic status. The TIMSS data, when disaggregated, provides important information on inequalities in education resources, infrastructure, teacher experience and learner support. These inequalities begin in the home and have significant implications for learners in different contexts. Understanding these contexts is vital to addressing the inequalities and promoting a more equitable education system in the country.

Understanding graduate pathways and employability

In the year under review, the HSRC conducted a number of graduate pathway studies, included the tracing of postgraduate students funded by the South African Radio Astronomy Observatory, a study of the DSI National Youth Service programme, and multiple

studies for sector education and training authorities. The studies found that graduates continue to struggle to enter the labour market due to factors including bottlenecks within the system, skills mismatches, and cultural obstacles. The findings highlight the need for a systematic study of both the educational transitions within the Further Education and Training phase, as well as graduate pathways and their determinants, as an ongoing signalling mechanism for the country.

Joint TB/HIV pilot survey

A joint national TB and HIV population-based survey – as opposed to separate surveys for TB and HIV – could provide opportunities to gain insights into TB-HIV co morbidity epidemiology, to optimally integrate population-level TB and HIV surveillance, and to make the implementation of these costly surveys more affordable. To determine the feasibility of conducting a national TB/HIV survey, the HSRC conducted a joint TB/HIV pilot survey, the findings of which will be useful in planning similar work in the future

Gender-based violence

The HSRC's School's Out project, funded by AmplifyChange, was launched in 2019 to engage civil society organisations across eastern and southern Africa on sexual and reproductive health (SRH) rights in order to make schools safer places for all youth. The two-year project includes research integration, participatory convenings and capacity strengthening, and aims to contribute evidence to strengthen advocacy and demonstrate impact on issues related to SRH support for schools. A cross-sectoral project, it involves collaboration with 17 organisations working on SHR rights in nine countries, where it is already gathering momentum.

Topical guides on artificial intelligence and data

In March 2020, the HSRC launched a series of topical guides on the social and policy implications of artificial intelligence (AI) and data. Developed in

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

conjunction with evidence specialists and reviewers, the guides provide policymakers and civil society organisations with key research insights on how AI and data technologies should be developed, used and safeguarded to foster a more inclusive and equitable society.

10.4 National Advisory Council on Innovation



Overview of objectives

The National Advisory Council on Innovation (NACI), established by the National Advisory Council on Innovation Act, 1997, is a statutory advisory board that advises the minister responsible for science and technology, and through the minister, the Cabinet, on the role and contribution of science, mathematics, innovation and technology in promoting and achieving national objectives. The NACI Act gives NACI a broad policy (advisory) mandate over all matters intrinsic to the functioning of the national system of innovation (NSI).

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

Framework for the decadal plan

NACI developed a high-level framework for the development of the new decadal plan, through which the 2019 White Paper on Science, Technology and Innovation (STI) will be implemented. The White Paper seeks to find STI-based solutions to key societal challenges including poverty and inequality, to advance inclusive economic growth, and to address systemic STI issues of financing, coordination and coherence. The White Paper also stresses the need for South Africa to prepare for the technological changes of the Fourth Industrial Revolution (4IR). The Council considered issues related to the alignment of STI

policy with other government policies, and the role of innovation in stimulating economic growth and societal development. It made proposals in respect of enablers, especially investment in STI, human resource capabilities, regulatory reform, innovation and international cooperation.

South Africa Foresight Exercise for STI

A synthesis report was produced as part of the South African Foresight Exercise for STI 2030 (SAForSTI), which was led by NACI as part of its contribution to the development of the decadal plan for STI. The Foresight Exercise employed various methodologies, ranging from broad stakeholder participation to big data analytics, to investigate the future of STI in South Africa and its potential to address systemic societal challenges and support inclusive economic development. The report proposed a number of STI domains and thrusts as priorities for the next decade, while stressing the importance of continuing to build human and infrastructure capacity, finding cooperative solutions, and developing more effective ways to combine resources in the public and private sectors. It identified areas of strength and high growth potential, such as renewable energy, as well as areas of weakness requiring urgent attention, notably engineering, mathematics and computer science.

Review of key policy instruments

The Council conducted the first major review of the 2002 National Research and Development Strategy and Ten-Year Innovation Plan 2008-2018, the key instruments for implementing the 1996 White Paper on Science and Technology. To ensure that the results could find immediate application in the development of the new decadal plan for STI, the emphasis was on advising on what had worked and what had not, and recommending actions to address policy gaps. The review started in January 2019, and the draft report was enhanced by extensive interactive engagement by the international reference group and the NACI Council.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

Sector Innovation Fund review

The Council conducted an evaluation aimed at informing the future implementation of the Sector Innovation Fund (SIF) programme. An international benchmarking analysis, online quantitative survey, and qualitative interviews yielded key findings and recommendations on the SIF programme's design, relevance and implementation. Overall, the evaluation found that the programme remains relevant within the NSI, especially for addressing the low levels of business expenditure on research and development.

National STI Data and Information Portal

The National STI Data and Information Portal (NSTIIP) is intended to be a central repository of all key STI data and information in the country. During the period under review, a demonstration version of the portal was developed in partnership with the DSI. In preparation for the scaling up of the NSTIIP, an online survey was carried out to gather user inputs on areas needing improvement, and a two-day hackathon involving multidisciplinary teams was hosted to come up with solutions in these areas. Engagements with the NSTIIP technical forum and other stakeholders were held to facilitate consensus on the scaling up process, and this input was used in developing the business case for scaling up the portal.

South African STI Indicators Report

The 2019 South African STI Indicators Report, which is used to assess the state of the national system of innovation, was produced during the period under review. The report found that, while the target of general expenditure on research and development (GERD) equal to 1,5% of gross domestic product had not been realised (it was 0,82% in 2016/17), government funding of research and development (R&D) had exceeded its R&D budget for the first time. One of the key concerns raised in the report was South Africa's loss of competitive advantage in medium-technology exports. To help redress this, the report

called for stronger integration of STI and industrial policies, while cautioning that low investment in R&D was retarding growth in 4IR-related areas such as robotics, quantum computing and nanotechnology. If national objectives were to be met, the report stated, the current GERD to GDP ratio would have to be doubled and the number of researchers in the country would have to be trebled.

Developing an M&E framework for the NSI

The 2019 White Paper on STI advocates strengthening the monitoring and evaluation (M&E) capability of the NSI to improve policy performance, and assigned the task of developing an M&E framework to NACI. During the period under review, NACI developed a proposed multi-perspective framework aligned with M&E best practice in South Africa and elsewhere. The framework introduces M&E information platforms, such as an STI scoreboard with an STI index, to track and measure the general performance of the entire system, and makes a clear distinction between monitoring objectives and evaluation goals. In respect of monitoring, the framework presents the criteria for systems-level performance indicators and a variety of possible candidates, ranging from background or context indicators to high-priority performance indicators. In respect of evaluation, the framework focuses on systems-level evaluation questions related to previous and ongoing STI policies and proposed interventions. The policy intents and ambitions of the White Paper on STI were used as input, as were relevant systems-level issues in South African STI, and global STI trends. The framework's tailor-made approach puts strong emphasis on connections between actors and processes in the system, both national and international.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

10.5 National Research Foundation



Overview of objectives

The primary objective of the National Research Foundation (NRF) is to contribute to the improvement of the quality of life of all the people of the country through the promotion of an economy based on the generation, transfer and use of knowledge. The organisation supports and promotes research and human capital development through funding and the provision of necessary research infrastructure in order to facilitate knowledge creation, innovation and development in all fields of science and technology, including indigenous knowledge. The NRF also develops, supports and maintains the country's national research facilities, and promotes public awareness of and engagement with science, including promoting the development and maintenance of the national science system in support of government priorities.

Employment equity targets

Progress towards the achievement of long-term employment equity targets continues at a steady pace. The overall representation of black staff stands at 73,7% against a target of 78%, while female representation (foreign nationals excluded) stands at 40,7% against a target of 45%. Gender representation at executive and senior management level, and black representation in the three highest employment categories, remain key challenges. A concerted drive to recruit African women at executive and senior management level is under way. People with disabilities account for 0,6% of staff against a target of 2%.

Human capital development

Next-generation and emerging researchers – During the period under review, the NRF award a total of 11

947 bursaries and fellowships at the honours (4 453), master's (3 883), doctoral (2 831) and postdoctoral (780) levels. Of these, 83% were awarded to black and 59% to female grant holders. The targets for black and female postgraduate students supported was exceeded by 8% and 11% respectively.

Established researchers – The NRF currently supports 395 grant holders (42% black and 36% female) through its Competitive Programme for Rated Researchers (CPRR), and 249 grant holders (61% black and 44% female) through its Competitive Support for Unrated Researchers (CSUR) programme. Collectively, these researchers produced 479 scientific and technical papers which were either peer-reviewed or accepted for publication during the financial year. Three innovative products and one artefact were produced by CSUR grant holders.

Knowledge generation

During the period under review, the NRF's iThemba Laboratory for Accelerator Based Sciences (iThemba LABS) continued with its work on the production of active pharmaceutical ingredient (API) radioisotopes for use in positron emission tomography (PET) myocardial perfusion studies. Myocardial perfusion imaging through PET allows for non-invasive assessment of the flow of blood in the heart, providing important diagnostic and prognostic information for known or suspected heart disease.

iThemba LABS also began research and development of the alpha emitter radioisotope ²¹¹At, which is used in targeted radiotherapy treatment of cancer. Ensuring the supply of this alpha emitter is regarded as an essential nuclear medicine therapeutic priority. The full costing and timelines for producing ²¹¹At were drawn up and a joint request between iThemba LABS and Steve Biko Hospital for funding of R7 million was submitted to the Nuclear Medicine Research Infrastructure (NuMeRI). It was agreed that the project would be funded and a draft memorandum of agreement was submitted to NuMeRI.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

IThemba LABS installed its new three-megavolt Tandem particle accelerator, the Tandetron, in 2017. In the period under review, the first nuclear physics experiment was successfully completed using beams from the Tandetron. This has added to the available research infrastructure for the nuclear physics community, enabling researchers to conduct experiments in nuclear astrophysics locally.

Research infrastructure platforms

South African Isotope Facility project

The South African Isotope Facility (SAIF) project aims to advance isotope research and production in South Africa to meet increasing local and international demand for radioactive isotopes for uses in medicine, industry, research and other areas. Key project milestones were achieved in the period under review, including the successful development of a prototype controller for the SAIF sweeper magnet. A prototype beam position monitor is also ready for testing, the detailed design of the building infrastructure and services is in progress, and new rail tracks and a car have been procured, along with electronic components for testing the new Telelift hardware.

MeerKAT radio telescope

The MeerKAT telescope is operational and is being used for science observations at an availability of 61,5%. The correlator modes required to perform eight MeerKAT large science projects (LSPs) were completed during the reporting period. The memorandum of understanding with the Max Planck Institute for Radio Astronomy for the extension of the MeerKAT was approved, and the infrastructure procurement processes have commenced.

Lesedi Telescope

The South African Astronomical Observatory's newest instrument, the one-metre Lesedi telescope, was installed in Sutherland in 2017. Its custom-made wide-field imaging camera, named "Sibonise", has the largest detector of any SAAO instrument. During the

period under review, the Sibonise camera underwent final software commissioning and development and was successfully mounted. This leaves only two outstanding performance specifications to be met, along with testing of the telescope control system, after which the Lesedi will be available for research.

Science communication

The NRF engaged proactively in a range of communication activities during the reporting period. A total of 1 103 media items, including 818 science and technology stories, were produced, with focused coverage of climate change in isiZulu, Sepedi, isiXhosa and English. The South African Agency for Science and Technology Advancement (SAASTA), through its Youth Science and Technology Journalism programme, engaged students and lecturers from the Rhodes University School of Journalism and Media Studies on the relevance of science reporting. In addition, a mobile application was developed and made accessible to all users on the Google Play Store. The app provides free content on basic and advanced genetics, with real-world examples of genetics projects currently impacting the medical field.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

10.6 South African Council for Natural Scientific Professions



Overview of objectives

The South African Council for Natural Scientific Professions (SACNASP) is the regulatory body for natural science practitioners (professional natural scientists, natural scientists in training, natural science technologists, and natural science technologists in training) in South Africa.

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

Registration of natural scientists

A total of 1 488 new applications were processed during the period under review, bringing the number of scientists registered on the SACNASP database to 12 794.

Informing government policy

During the reporting period, SACNASP interacted with a range of government and other stakeholders to provide input on the role of natural science professions in South Africa. Among others, the Council engaged the DSI on the decadal plan for STI and the Department of Agriculture, Land Reform and Rural Development on the draft National Policy on Comprehensive Producer Development Support. SACNASP also engaged the Water and Sanitation leadership group external skills task team, and made submissions on the national critical skills list to the Ministry of Human Settlements, Water and Sanitation. In addition, National Treasury has asked SACNASP to be part of the steering committee that will provide strategic guidance on the implementation of the Infrastructure Skills Development Grant.

The National Home Builders Registration Council approached SACNASP to help identify level 4 (L4) geo-professionals as identified in South African National Standards 1936 (2012), which defines development densities for different types of land usage. SACNASP was independently approached by the Presidency to make this a priority. Within a short space of time, SACNASP established an L4 evaluation subcommittee which developed the criteria, obtained public comment, advertised a call to all registered scientists, and conducted the evaluations. South Africa now has competent L4 geo-professionals available.

Enabling the natural science sector

During the reporting period, SACNASP was actively involved in public dialogues to promote professional registration and dissemination of knowledge aimed at enabling the natural science sector. SACNASP hosted the first Voluntary Association (VA) Chairpersons Biennial Meeting, as well as the National Biological Science Forum. At the 2019 Science Forum South Africa, the Council hosted a well-received panel discussion on the implications of the 4IR for natural scientists.

Collaboration with stakeholders

SACNASP is busy finalising a memorandum of understanding with the newly established Environmental Assessment Practitioners Association of South Africa, to ensure effective coordination and knowledge sharing between key stakeholders and regulatory authorities. The Council also supported nine VA events, held multiple engagements with the South African Qualifications Authority and VAs on the issuing of professional titles, and assisted the Quality Council for Trades and Occupations in the development of a new natural science occupation for South Africa.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

Networking opportunities for scientists

Apart from the face-to-face networking sessions that were held during the financial year, SACNASP strengthened its online presence, launching an upgraded website that streamlines the registration process and allows for online payment of fees and downloading of certificates. A portal was also established to facilitate networking among scientists.

Life-long learning and transformation

SACNASP's continuing professional development (CPD) website is now operational with over 3 600 scientists registered and over 1 200 events accredited since inception. A total of 247 stakeholders are registered on the CPD service provider website. For younger scientists, there has been significant progress towards the implementation of the Candidate Mentoring Phase programme. SACNASP visited seven universities during the financial year and enrolled 1 217 students on its database. It also reached out to high school learners, teaming up with SAASTA to host engagements at Gauteng schools during National Science Week.

Adherence to ethical standards

The Professional Conduct Committee addressed complaints and where necessary appointed investigation committees to ensure that these were fairly addressed. The SACNASP Code of Conduct was reviewed, approved and published. The complaint mechanism and Code of Conduct are publicly available on the SACNASP website. Further, SACNASP appointed a service provider to design, implement and manage a whistleblowing hotline service, as per the need identified by the Council.

10.7 South African National Space Agency



Overview of objectives

The South African National Space Agency (SANSA) is mandated to promote the peaceful use of space; support the creation of an environment conducive to industrial development in space technology; foster research in space science, communications, navigation and physics; advance scientific, engineering and technological competencies through human capital development, outreach and infrastructure development; and foster international cooperation in space-related activities

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

National safety and security

To improve the secure communications capability of the South African National Defence Force (SANDF), SANSA software engineers have developed an intuitive visual application named the Ionospheric Characterisation, Analysis and Prediction (IOCAP) tool. What navigation apps have done for commuting in modern traffic conditions, the IOCAP tool does for predicting volatile changes in space weather. This is good news for users of high frequency (HF) spectrum, as HF signal propagation relies on radio waves that travel via the ionosphere and are sensitive to space weather changes. SANSA has been providing space weather data to the SANDF for better HF signal propagation for several years. Now, using the easy-to-read IOCAP tool, the SANDF will be able to schedule the HF frequencies that will provide the most reliable communication channels between any two places at any time of night or day.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

New way of monitoring space weather

SANSA researchers have discovered a new way of monitoring how space weather affects radio communications. South Africa is the only African country that owns and operates one of the radars in the Super Dual Auroral Radar Network (SuperDARN). The network is made of 35 radars across the globe that monitor the upper ionosphere for plasma flows and irregularities, thus providing insight into the dynamics of space weather. South Africa's SuperDARN radar is hosted at the country's Antarctic station. What SANSA's researchers have discovered is that, by operating the radar in the riometer mode, the operator is able to monitor the ionosphere in a passive way, and thereby to track how radio communications are affected by space weather.

Cost-effective data deal for government

Satellite data providers often charge a premium for satellite images that are in high demand. During the period under review, SANSA secured a cost-effective data deal for the South African government. This will save a considerable amount of taxpayers' money, as government departments and municipalities use satellite imagery for a range of applications, such as mapping human settlements, monitoring forestry and crop cover, managing water resources, disaster management, and spatial planning for electrification and other infrastructure services.

Previously, the government obtained satellite imagery from the SPOT satellite, owned by Airbus Defence and Space, by purchasing a single-user licence through the CSIR's Satellite Applications Centre. The new agreement allows South Africa to buy a single licence for multiple users within the government and research community. This means that government departments can now approach SANSA for lower prices instead of approaching service providers directly. It also means that a big user of satellite data, such as Statistics SA, no longer has to buy data for itself only, but can contribute with other big players to buying data for the whole country, which works out cheaper for everyone.

Improving water resource management in Africa

Digital Earth Africa has developed a water resource map that will enable African governments to make better water management decisions for the continent. The Water Observation from Space tool will allow African governments to access analysis-ready Earth observation data spanning 30 years. Digital Earth Africa is a collaborative effort between SANSA, Geoscience Australia, the Group on Earth Observations, the Committee on Earth Observation Satellites, the Global Partnership for Sustainable Development Data and other partners, and is funded by the Helmsley Foundation and the Australian government.

10.8 Technology Innovation Agency



Overview of objectives

The Technology Innovation Agency (TIA) is mandated to provide customer-centric technology development funding and support, to provide an enabling environment for technology innovation in collaboration with other role players, and to develop an effective and efficient internal environment for the execution of the strategy.

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

Industry Matching Fund

TIA piloted the Industry Matching Fund in 2019/20 to strengthen collaboration with the private sector, and in particular, to facilitate co-funding and follow-on funding for commercialisation of funded technologies. The Fund took off in 2019 with the onboarding of the SA SME Fund, which was born out of the CEO Initiative between the government and the CEOs of 50 JSE-listed companies. TIA and the SA SME Fund are partnering on three dedicated funds:

Making sure it's possible

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

- The Savant Venture Fund will support pre-commercialisation and commercialisation of early stage technologies through start-up formation.
- OneBIO, as the implementing vehicle for the Biotechnology Fund, will support to biotechnology investments, with focus areas including precision farming and medical devices.
- The University Technology Fund will support the commercialisation of publicly funded research, primarily from universities and science councils.

Through the Industry Matching Fund, TIA has also partnered with three investment vehicles: Dazzle Angels, a woman-owned angel fund that supports women-owned or co-owned start-ups; Jozi Angels, a network of angel investors that helps early-stage companies to grow through knowledge, networks and capital; and WZ Capital, a black-owned venture capital fund that assists entrepreneurs with scalable, disruptive concepts and ideas.

Initiatives in response to COVID-19

During the period under review, TIA partnered with the DSI, the South African Medical Research Council and the National Institute of Communicable Diseases to establish a programme that brings manufacturers and researchers together to develop diagnostic and therapeutic solutions in response to the COVID-19 pandemic. At the same time, the KwaZulu-Natal Research, Innovation and Sequencing Platform (KRISP), and the Centre for Proteomic and Genomic Research (CPGR), both TIA-funded platforms, prepared for the deployment of their genomics capabilities as part of the testing network for COVID-19. In January 2020, KRISP, in collaboration with researchers from South Africa, Belgium and Brazil, released Genome Detective, a bioinformatics tool that allows for the rapid identification and characterisation of novel coronavirus genomes. The web-based application enables researchers to quickly and accurately assemble all known virus genomes using next-generation

sequencing data, and to track new viral mutations.

Positron emission tomography-computed tomography research facility

The Cape Universities Body Imaging Centre, a TIA-funded technology platform, launched its positron emission tomography-computed tomography research facility during the reporting period. The cutting-edge facility will advance South Africa's ability to conduct large-scale clinical studies and seek solutions for diseases with high local prevalence such as tuberculosis, cancer, and cardiovascular and neurological diseases. The facility is co-funded by TIA, the Bill & Melinda Gates Foundation, Aspen Holdings and the University of Cape Town.

SmartBlade video laryngoscope

TIA, through SMME Seed Fund partner the Craft and Design Institute, funded the development of the SmartBlade video laryngoscope to the value of R484 275. The SmartBlade harnesses smartphone technology to enable guided laryngoscopy, enabling individual operators of varied skills levels to intubate airways in a cost-effective way. The project was incubated at the Savant Technology Incubator, two provisional patents and a design registration were filed, prototypes were manufactured, and pre-clinical trials were conducted, yielding good results. The mobile app is being tested. In May 2019, follow-on funding of R9,5 million was secured from the Savant Venture Fund for optimisation and commercialisation.

Bambara groundnut food products

Cape Peninsula University of Technology (CPUT) researchers have used the Bambara groundnut to develop several gluten, lactose and cholesterol-free products, including dairy substitutes and baked goods. These products have the potential for rapid scaling up and marketing as niche, alternative food products. The groundnuts are rich in protein, fibre and antioxidants, with added probiotics for good balance of intestinal flora. In June 2019, the project's flour-based products were demonstrated to potential commercial partners.

10. ENTITIES REPORTING TO THE MINISTER (CONTINUED)

CPUT is leading the commercialisation, with the aim of licensing the intellectual property to a spinout/ start-up company that will manufacture and market the products.

Manufacturing cricket bats in a rural village

The eNtsa Technology Station at Nelson Mandela University has been supporting local company Bellingham and Smith in manufacturing cricket bats in Thornhill, a rural village in the Eastern Cape. Through eNtsa's intervention, the initial production figures of 22 units per day have increased to 50 units per day, and export negotiations with potential distributors have begun.

Pelebox smart lockers

The Internet-enabled Pelebox smart locker system, developed by social impact start up Technovera, enables patients to collect their repeat chronic

medication in minutes instead of having to queue for hours at public clinics. Pelebox continues to garner accolades as a breakthrough social innovation. It was named one of Time Magazine's 100 Best Inventions of 2019, and scooped the United Kingdom's Royal Academy of Engineering 2019 Africa Prize for Engineering Innovation, as well as the 2019 State Information Technology Agency Digital Public Service Award for Digital Social Transformation.

Sawubona Mycelium

Sawubona Mycelium is a 100% black-owned, 50% black female-owned small business supported by the TIA Bioprocessing platform. The company won first prize in the bioscience category in the 2019 Gauteng Accelerator Programme Innovation Competition for its high-value products derived from mycelium fermentation. The award includes commercialisation support, seed funding, and a year of incubation support at an Innovation Hub business incubator.



PART B

PERFORMANCE
INFORMATION

1. AUDITOR-GENERAL REPORT: PREDETERMINED OBJECTIVES

The Auditor-General currently performs certain audit procedures on the performance information to provide reasonable assurance in the form of an audit conclusion.

The audit conclusion on the performance against predetermined objectives is included in the Report of the Auditor-General, published in Part E: Financial Information, on page 161.

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE

2.1 Service delivery environment and alignment with broader government policies

The Department of Science and Innovation's planned service delivery initiatives are aligned with the broader government service delivery agenda. South Africa's National Development Plan (Vision 2030) (NDP) highlights the importance of science, technology and innovation (STI) in national development imperatives. The NDP acknowledges that developments in STI are fundamentally changing the way people live, communicate and transact, with profound effects on economic growth and development. Science, technology and innovation are key to equitable economic growth, underpinning economic advances and improvements in health systems, education and infrastructure. The NDP maintains that countries that are able to address poverty effectively are characterised by strong capabilities in STI.

The Department's contributions to government initiatives are aimed at addressing the deep societal challenges of poverty, inequality and unemployment. In its plans for the 2019/20 financial year, the Department began communicating the ways in which its work and national system of innovation (NSI) stakeholders could confront these challenges and help to meet the NDP goals. The DSI and its entities recognise that the developmental approach adopted by the government requires STI-related initiatives to achieve national priorities, and have established

implementable cross-cutting innovation instruments and solution-oriented capabilities to enhance service delivery.

This section gives high-level information about the Department's service delivery imperatives and its contributions to government's transformation agenda and development priorities. These achievements emanate from various commitments made in the Department's plans and are consistent with its five strategic outcome-oriented goals for the Medium-Term Expenditure Framework (MTEF) period. These goals are a responsive, coordinated and efficient national system of innovation; increased knowledge generation; using knowledge for economic development; human capital development (HCD); and using knowledge for inclusive development.

The STI skills deficit in the country continues to be a major challenge, particularly in marginalised communities. Education remains key to people's prospects of participation in the labour market and pursuit of socio-economic goals. In support of the government's socio-economic and transformation objectives, in the period under review the Department, through various human capital development initiatives, supported a total of 11 781 students, comprising 8 506 pipeline students (honours/BTech), 327 master's students and 2 948 doctoral students.

South Africa is faced with a crisis of high and rising youth unemployment. Young people aged 15 to 35 years are the most vulnerable in the South African

1. AUDITOR-GENERAL'S REPORT: PREDETERMINED OBJECTIVES (CONTINUED)

labour market, with an unemployment rate of 55,2%. Among young graduates, 31% are unemployed. With the implementation of the internship programme, the DSI and its partners recognise that it will take action from a variety of sectors and actors in order to address these challenges and turn the tide.

The Department continued to place students and graduates in STI environments to gain work experience. During the 2019/20 financial year, the Department supported a total of 1 312 graduates and interns in various programmes.

The STI-related services provided by the Department include knowledge-generation stimulus packages in the form of research grants and innovation infrastructure developments. Grants are provided through several instruments designed to strengthen research capacity at universities, including the South African Research Chairs Initiative and the Centres of Excellence Programme. In the year under review the DSI awarded over 2 831 research grants through programmes managed by the National Research Foundation (NRF), and NRF-funded researchers published 7 255 research articles cited in the Web of Science citation database.

Some remarkable work in the utilisation of knowledge and innovation for economic and inclusive development has been done, including the application of space STI in comprehensive decision-support tools. The Department makes valuable contributions to agriculture and agroprocessing, as well as healthcare, water and waste service delivery initiatives. These initiatives have also helped to emancipate marginalised communities, particularly young people and women, and create better opportunities for them to participate fully in the economy.

During the period under review, these initiatives had tangible results. 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), a tool that provides critical information on the innovation capabilities and readiness of local government to deliver effective services. In providing insight on readiness for the deployment of innovative service delivery technology solutions, MIMI continues to be valuable in informing the efficient deployment of resources for service delivery.

MIMI has attracted the interest of private sector partners working on smart city initiatives as a proxy instrument for encouraging smart city practices in municipalities and cities. 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. The target is to assess the innovation capacity of 60% of municipalities across the country by the end of the Medium-Term Strategic Framework (MTSF). This will encourage innovation in municipalities by providing awards and other incentives for innovation.

The Department's contribution to local economic development included producing detailed maps of local innovation systems for selected regions such as the Karoo. In mapping the innovation landscape of the Karoo, the Department worked with the Human Sciences Research Council (HSRC). The maps are intended to inform local economic development strategies and investment decisions affecting the region as part of efforts to develop innovation-driven local economies.

The Department's commitment to an inclusive and responsive national system of innovation saw considerable progress in its Grassroots Innovation Programme. This initiative provides comprehensive support to grassroots innovators, including technology development, capacity building, and the protection of intellectual property. This support is critical as it enables grassroots innovators, especially those in

1. AUDITOR-GENERAL'S REPORT: PREDETERMINED OBJECTIVES (CONTINUED)

townships and rural areas, to participate in creating and actualising innovation opportunities, thereby contributing to economic development. During the year under review, a call for grassroots innovations was issued. The call attracted over 288 responses from across the country, and 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.

Detailed STI-related service delivery outputs aimed at contributing to the realisation of the NDP goals are shown in Table 1 below, and are set out comprehensively in the section covering the Department's strategic outcome-oriented goals performance.

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

2.2 Service delivery improvement plan

The Department has completed a service delivery improvement plan.

Table 1: Main services and standards

Main services	Beneficiaries	Current/actual standard of service	Desired standard of service	Actual achievement
Provide funding to institutions and agencies to support technology solutions in the areas of space science, energy and biosciences	Public research institutions, science councils, universities and entities	All funding transferred by the end of the financial year	All funding transferred by the end of the financial year	All funding transferred by the end of the financial year
Financial support for offices of technology transfer (OTTs) located at higher education institutions and science councils	Recipients include 26 higher education institutions and 10 institutions listed in Schedule 1 of the Intellectual Property Rights from Publicly Financed Research and Development Act	OTTs financially supported by the end of the financial year	OTTs financially supported by the end of the financial year	OTTs financially supported by the end of the financial year
Support uptake of space applications by government departments and agencies	Government departments (national, provincial and local) and agencies	<ul style="list-style-type: none"> National geospatial decision-support tool Base maps for national land use and cover layer (human settlement layer, water bodies layer, disaster management and national vegetation maps) Coordination of national Earth observation activities and promotion of the uptake of Earth observation applications 	<ul style="list-style-type: none"> Up-to-date national geospatial decision-support tool Up-to-date base maps for national land use and cover layer (human settlement layer, water bodies layer, disaster management and national vegetation maps) Better coordination and increased uptake of Earth observation applications 	<ul style="list-style-type: none"> Decision-support tools were developed through the National Oceans and Coastal Information Management System project (Operation Phakisa) and used by the Oceans and Coast stakeholders. The annual stakeholder workshop for the Oceans and Coast community to solicit user requirements for the decision-support tools was held in March 2020).

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

Table 1: Main services and standards (continued)

Main services	Beneficiaries	Current/actual standard of service	Desired standard of service	Actual achievement
Regulatory recommendations	Applicants for Genetically Modified Organism (GMO) permits	Make recommendations on all permit applications received	Justified recommendation made at or in advance of the appropriate GMO Executive Council meeting	100% of all permit applications were processed and recommendations were provided.
Postgraduate bursary support	University students (honours, master's, doctoral) and postdoctoral researchers	Support provided to about 8% of total enrolled postgraduate students in universities	Double the percentage of postgraduate students supported	Support was provided to 8% of postgraduate students in 2019/20
Placement of graduates and postgraduate students in science, engineering, technology and innovation (SETI) institutions for workplace experience	Graduates and postgraduate students	Support provided to about 15% of qualifying graduates	Support provided to about 30% of qualifying graduates	Support was provided to 16% of graduates in 2019/20.
Research grants to researchers	Researchers in universities, science councils and other national research facilities	Support provided to about three of every 10 qualifying researchers	Double the support to about six of every 10 qualifying researchers	Four of 10 qualifying researchers were supported in 2019/20.
Financial and strategic support of R&D initiatives that will lead to publications, patents and prototypes	Universities, science councils, public-private partnerships	Ongoing support provided to R&D and demonstration of technology-based solutions with the intention of promoting their commercialisation and use	To facilitate knowledge generation and exploitation through R&D in key priority areas	189 knowledge outputs (peer-reviewed publications and patents) and 9 prototypes were generated during 2019/20.

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

Table 2: Batho Pele arrangements with beneficiaries (consultation access)

Current/actual arrangement	Desired arrangement	Actual achievement
Institutions and agencies submit research and development (R&D) project proposals and business plans. These are evaluated and approved by the Department and funding is transferred once approval has been obtained.	No change required.	<p>Institutions and agencies submitted R&D project proposals and business plans. These were evaluated and approved by the Department and funding was transferred once approval had been obtained. Proposals approved included the Technology Innovation Agency's Bioeconomy Workplan for 2019/20, Strategic Industrial Bio-Innovation Programme and Agricultural Bio-Innovation Programme, as well as the Strategic Health Innovation Partnership (SHIP) programme of the South African Medical Research Council.</p> <p>The DSI also supported proposals from SANSA Space Weather, Houwteq Assembly, Integration and Testing, the implementation of the South African Earth Observation Strategy, Earth Observation RDI Fund; and the South African Weather Service on Space Science and Technology RDI Fund to support industry development and Cape Point Mercury Monitoring Programme. Various indigenous knowledge-based technology innovation projects were also reviewed and supported.</p>

Table 3: Service delivery information tool

Current/actual information tool	Desired information tool	Actual achievement
Advocacy communication strategy	Implementation plan for dissemination	Strategy approved by the DSI Executive Committee (Exco)
Ministerial guidelines on awarding bursaries	A reporting framework on ministerial guidelines	Annual reporting on progress with implementation of ministerial guidelines
Communication strategy, including exhibitions and media	Implementation plan for dissemination, including exhibitions and media	<ul style="list-style-type: none"> Strategy approved by Exco Exhibitions held at all public participation programmes, and media successfully used

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

Table 4: Complaints mechanism

Current/actual complaints mechanism	Desired complaints mechanism	Actual achievement
The National Research Foundation (NRF) has an appeal process for postgraduate students who are not awarded bursaries.	Panel of experts	Appeal framework reviewed by NRF
The NRF has an appeal process for researchers who are not awarded grants.	Panel of experts	Appeal framework reviewed by NRF
Technology Innovation Agency	Appeals procedure	Appeals procedure in implementation
The National Intellectual Property Management Office (NIPMO) has a dispute mechanism for administrative decisions it takes that may adversely affect a recipient.	Dispute panel	Dispute panel in place, with approved terms of reference and rules of procedure, as mandated by the Intellectual Property Rights from Publicly Financed Research and Development Act

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

In terms of the work of the Department's alignment with broader government policies, much has been said about the intrinsic need for STI in the delivery of the NDP goals. The importance of STI is increasingly occupying government's development agenda. Science, technology and innovation are fundamental to most government initiatives, including Operation Phakisa, as well as the cross-cutters in government's Nine-Point Plan. The Nine-Point Plan aims to diversify and stimulate the economy through a number of initiatives.

2.3 Organisational environment

The DSI organisational environment operations are founded on principles of good corporate governance. Despite the economic constraints that had an impact on its compensation budget, the Department's operational efficiency remained a priority. The DSI was rated among the best performing national departments on two occasions during the period under review. It received a clean audit award from the Auditor-General for both financial and non-financial operations, and its operational performance excellence was confirmed by its score of 82% for the Management Performance Assessment Tool (MPAT) administered by the Department of Planning, Monitoring and Evaluation.

The Department remained resolute in ensuring that good corporate governance prevailed through sound administrative practices, effective operational systems, mechanisms to ensure financial oversight, information technology, and the IT Steering Committee. Combined assurance involved governance structures such as Exco, the Enterprise Risk Management Committee and the Audit Committee, as well as regular reporting and face-to-face interactions. There is also collaboration with the Audit Steering Committee convened by the Auditor-General.

In spite of a complex and changing economic context, with fiscal constraints and low economic growth, the DSI did well in carrying out its mandate. For example, the Cabinet-approved White Paper on

Science, Technology and Innovation will enhance organisational operations in terms of funding and human resources going forward.

The Chief Directorate: Human Resources continued to work proactively, developing guidelines to ensure that the Department has adequate, appropriate, efficient and sustainable capacity for enhanced performance and service delivery. In the period under review, human capacity development initiatives (mentoring and coaching, capacity building and job rotation programmes) were implemented, informed by the Department's actual and envisaged capacity. Recruitment and staffing methods to widen the pool of relevant candidates, particularly for critical positions, were developed and carried out.

The Department implemented its Skills Development Plan to ensure that officials grew skills to improve service delivery. A total of 110 employees went on management development programmes or received training in work-related areas such as project management, financial management and technical skills relevant to the Department. Employees also received orientation on policies and legislation applicable to government, particularly the Department's core functions.

During the period under review, 99% of SMS members submitted their financial disclosures by the due date. There was a significant improvement in compliance with the Performance Management Development System, with documents submitted in time by 98% of SMS members and 100% of non-SMS members.

During the reporting period, the Department continued to address identified health and safety risks to ensure its employees' health and productivity. Four wellness sessions were conducted, enabling staff to be screened for common conditions. Employees also used the Department's health and wellness programme services to address personal and work-related psychosocial challenges.

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE (CONTINUED)

3. Strategic outcome-oriented goals

The DSI is mandated to coordinate a responsive and efficient national system of innovation (NSI). The NSI concept is an enabling framework for the development of science, technology and innovation (STI), and can be understood as a set of functioning institutions, organisations and policies that interact constructively in the pursuit of a common set of social and economic goals and objectives, including the promotion of change through the introduction of innovations. In order to realise the mandate, the Department's five strategic outcome-oriented goals, set out in the 2015-2020 DSI Strategic Plan, guided the Department's annual performance plan. During the year under review, the DSI played a significant role in either leading or supporting the following Medium-Term Strategic Framework outcomes:

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.

Outcome 6:

An efficient, competitive and responsive economic infrastructure network.

Outcome 7:

Vibrant, equitable, sustainable rural communities contributing towards food security for all.

Outcome 10:

Protect and enhance our environmental assets and natural resources.

Goal 1: A responsive, coordinated and efficient national system of innovation

Goal statement: Build on previous gains to create a responsive, coordinated and efficient national system of innovation

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

After Cabinet approved the White Paper on Science, Technology and Innovation (STI) at the end of the previous financial year, the former Minister of Science and Technology initiated a review of the STI institutional landscape to assess its readiness to implement the approved White Paper. The sixth administration merged the former Ministries of Higher Education and Training, and Science and Technology, into the Ministry of Higher Education, Science and Innovation. The new Minister subsequently broadened the scope of the review and expanded the review panel to cover the higher education institutional landscape as well. 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. The review will answer questions like whether South Africa needs more institutions to implement the White Paper on STI, whether links between institutions should be strengthened and what the requirements of a harmonised funding and management framework for all higher education and STI institutions would be. Equally, the recommendations of the HESTIIL Review Panel will be important for the National Plan for Post-School Education and Training.

Development of the Science, Technology and Innovation Decadal Plan

The Department developed the new White Paper on STI in response to rapid global technological advancement and megatrends such as geopolitical shifts and climate change. The White Paper, approved by Cabinet in March 2019, will be implemented

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

through a series of decadal plans, which 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. These studies, both led by the National Advisory Council on Innovation (NACI), are the South Africa Foresight Exercise for Science, Technology and Innovation 2030 and a review of the National Research and Development Strategy and the Ten-Year Innovation Plan.

The NACI foresight exercise identified the following STI focus areas to form the basis of STI missions for the Decadal Plan:

- The circular economy.
- Education for the future.
- Sustainable energy.
- Future of society.
- Health innovation.
- High-tech industrialisation.
- ICTs and smart systems.
- Nutrition security.
- Water security.

Goal 2: Increased knowledge generation

Goal statement: Maintain and increase the relative contribution of South African researchers to global scientific output

Knowledge generation is crucial for science, technology and innovation prospects. Without investment in publications, research grants, and research and innovation infrastructure, knowledge generation is not possible. Research grants are provided through several instruments designed to strengthen research capacity at universities and research-performing institutions.

The Department also used these instruments as a mechanism to promote transformation in the NSI as articulated in the Ministerial Guidelines for Improving Equity in the Distribution of DSI-NRF Bursaries and

Fellowships. For example, the South African Women in Science Awards, the South African Research Chairs Initiative, the centres of excellence, research grants, and special programmes such as Thuthuka have contributed to improving female representation in the system. Women currently make up 46% of the scientific workforce. Despite this, the DSI recognises the need to increase the pace of transformation and intensify its efforts. In the year under review, the Department continued to provide stimulus packages aimed at increasing the percentage of PhD-qualified teaching and research staff in higher education institutions and the proportion of women and black researchers in South Africa's research workforce.

Over 7 255 research articles were published by DSI-NRF-funded researchers and cited in the Thomson Reuters Web of Science Citation Database. In terms of supporting and promoting research that develops basic sciences through the production of new knowledge and relevant training opportunities, the DSI awarded over 3 205 research grants through DSI-NRF-managed programmes, 48% (1 524) of which went to black researchers, and 41% (622) to black women. During the 2019/20 financial year, the Department, through the NRF, awarded 33 research infrastructure grants.

The DSI continued to support a diverse and vibrant portfolio of opportunities for South Africans researchers to collaborate internationally, such as the European Union and BRICS Framework Programmes, in which South Africa participated with significant success. Bilateral cooperation with China and the advancement of Pan-African cooperation in science continued to be strategic priorities.

The investment in researchers supported throughout their research careers, from emerging researchers to established and internationally recognised ones, is bearing fruit in the form of STI-related discoveries with the potential to bring future sources of economic growth, to create new types of jobs, and to provide new solutions to problems (e.g. in healthcare, agriculture and water-related services) that are trapping people in poverty.

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

The DSI, through a consortium led by the Cape Peninsula University of Technology (CPUT), developed a South African constellation of low-cost nanosatellites to support marine domain awareness (MDA) in South Africa as part of Operation Phakisa (Oceans Economy). The MDASat constellation provides international maritime communication services which include the automatic identification system (AIS) standard (MDASat-1) and the evolving VHF Data Exchange Service (VDES) standard (MDASat-2). This constellation will provide South Africa with sovereign control over its AIS and VDES maritime data, with associated improved control over data cost and access. In addition, with its flexible communications platform, MDASat will enable various other satellite-based services for South Africa and the greater continent. Furthermore, a preliminary design review of the MDASat-1 (which comprises three cube satellites) has been completed.

Governments and businesses need to base their decisions on how the planet is changing, and Earth observation data can inform such decisions, delivering major returns on investment to economies and communities. Successes in South Africa include contributions to the Oceans Economy through the National Oceans and Coastal Information Management System, and ZACube-2 AIS data for tracking vessels. South Africa is also in the process of establishing a regional node for the Global Observation System for Mercury, which will contribute to global mercury monitoring, and Digital Earth South Africa will lead and contribute to the development of Digital Earth Africa, which is building the world's largest operational platform for accessing and analysing decades of satellite imagery specific to the continent's land and seas. South Africa facilitated the move of the AfriGEO Secretariat from South Africa to the Regional Centre for Mapping of Resources for Development in Kenya.

In October 2019 the DSI assisted 10 local space companies and SANSA to showcase their capabilities and subsystems at the 70th International Astronautical Congress, organised by the International Astronautical Federation. Exhibitors included flagship projects like the CPUT satellite programme and others under the South African Radio Astronomy Observatory, SMMEs such as Luvhone Consulting and Amaya Space,

and national government initiatives (through the South African Council for Space Affairs). Members of the South African delegation also made technical presentations at the congress.

The DSI is providing full funding for the upgrade of the South African National Space Agency's Houwteq Assembly, Integration and Testing facilities. So far, the upgrade has resulted in the completion of an optical test bench, which is critical for manufacturing the payloads for future missions and the satellite build programme.

Goal 3: Human capital development

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

The DSI aims to empower South African youth by giving them the right skills to innovate and create solutions, and is investing in human capital development to unlock opportunities for new businesses to drive the country's economy forward. In the period under review 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.

The DSI, through its programmes, supported a total of 1 312 graduates and interns during the 2019/20 financial year. The DSI-NRF Internship Programme is a workplace preparation programme that places undergraduate and postgraduate students in work environments to gain experience. The programme makes a significant contribution to the absorption of undergraduate and postgraduate students in the job market, while also attracting them to research careers, thereby contributing to the reduction of unemployment and inequality. This programme is complemented by the National Youth Service programme, which places students with degrees and diplomas as volunteer science communicators in the network of science centres across the country.

In support of the national transformation agenda, the Department hosted the annual South African Women

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

in Science Awards (SAWiSA) on 15 August 2019, under the theme “Making the Fourth Industrial Revolution Work for Women”. The event recognised young and established women researchers in the natural and applied sciences as well as the human and social sciences. SAWiSA recognises and rewards excellence by women scientists and researchers, and profiles them as role models for younger women, towards a more inclusive science system. The SAWiSA event attracted significant public and media interest.

The Department worked closely with the Department of Higher Education and Training to secure international training and mobility opportunities for young South African researchers.

Goal 4: 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.

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. The Intellectual Property (IP) Fund provides financial support for a range of activities which secure IP rights generated following or associated directly with a product, process or service that resulted from publicly financed research and development. During the reporting period, 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.

Furthermore, the OTT Support Fund provides financial support to higher education institutions and science councils to assist with establishing and maintaining OTTs, building the human capacity and capabilities of OTTs, and empowering OTTs to identify IP, protect IP (where appropriate) and ensure that IP is deployed for socio-economic impact. During the period under review, 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. During the period under review NIPMO, with WIPO, hosted a workshop on commercialisation and technology transfer in East London.

Creating innovative industries for the future

The DSI continues to encourage industry innovation partnerships as part of broader government efforts to support industry competitiveness. The main objective is to create an environment in which government can collaborate effectively with industry and support co-investments in research, development and innovation (RDI) in key strategic sectors of the economy, thereby encouraging the private sector to invest more in RDI. The DSI has funded a number of large RDI programmes that have the potential to result in new industries or to renew the competitiveness and market share of existing industrial subsectors.

A total of 40 publications were supported through the Hydrogen South Africa (HySA) programme in the period under review.

In support of locally developed technology, in the reporting period the HySA programme filed four patents, and another five patents were granted. Five fuel cell systems incorporating HySA intellectual property in the form of catalysts and membrane electrode assemblies were unveiled at a ceremony in Pretoria on 24 February 2020. Each of the methanol-based fuel cell systems is capable of producing 5 kW of

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

power. These systems were developed in collaboration with Horizon and Element One, both global original equipment manufacturers, working together with Bambili Investments, a local, black female-owned SMME. The fuel cell systems, which will be deployed to provide power to public infrastructure, mark a significant milestone towards the commercialisation and local manufacturing of technology developed through the HySA programme.

The following knowledge application products were developed through the HySA programme during the reporting period:

- A methanol-based stationary fuel cell based on membrane electrode assemblies developed under HySA were successfully integrated into a commercial fuel cell system in partnership with Bambili/Horizon, e1 and HyPlat.
- A portable hydrogen generator which supplies pure hydrogen gas for air quality analysis using gas chromatography in partnership with Chlorchem, a local company that produces blue hydrogen from its chlorine production process.
- Three-layer catalyst-coated membranes for electrochemical compressors in partnership with Chlorchem

The fuel cell-related technology patents position South Africa as a significant contributor to global knowledge in the sector and a potential hub for fuel cell component manufacturing. During the reporting period, in support of technology commercialisation and getting hydrogen fuel cell technology into the global value chain, the terms of reference for the Hydrogen Society Roadmap process were drafted and approved. The terms of reference will pave the way for the development of the roadmap document, which will articulate how South Africa can position itself to derive economic benefit from the emerging hydrogen economy.

In support of international collaboration, a strategic science and technology partnership between

Argonne National Laboratory and the South African Energy Storage Consortium was created following a visit to the USA that was led by the Director-General in May 2019. During the visit, discussions were held on a collaboration in the form of a research and development programme, a strategic partnership project and a visiting scientists programme. A talented group of seven men and four women, including emerging researchers, and pipeline and postdoctoral students, were selected to participate in the collaboration between the South African Energy Storage Consortium and Argonne National Lab.

Furthermore, in support of the application of non-energy-related nuclear technology, in the reporting period Exco approved a framework for DSI cooperation with the International Atomic Energy Agency. The framework will support the review of the Country Programme Framework and the nuclear sector in South Africa.

The Department contributed to the finalisation of the South African Biofuels Regulatory Framework, which was gazetted in February 2020. The interdepartmental Biofuels Task Team established under the framework has asked the DSI to assist with national project coordination.

A 20 kW slip-synchronous wind turbine has been built and completed and is now ready for field testing.

In the 2019/20 financial year, the DSI established the Carbon Capture, Storage and Use RDI Programme. This programme will show how flue gas from coal-fired power plants can be used to generate value-added products using green hydrogen and green ammonia, based on locally and internationally developed intellectual property, and allowing Eskom to continue to use coal as an energy source in future.

Furthermore, areas for renewable energy RDI collaboration between the African Union and the European Union were identified, and a total of R480 million (R132 million from the AU and R68 million from the EU) has been committed to a collaboration with Long-Term Europe Africa Research and Innovation

Making sure it's possible

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

Partnership (LEAP) on renewable energy (RE).

Discussions are being held on a partnership with Emvelo, a black-owned independent power producer and owner of the Ilanga 100 MW concentrated solar power plant, to host interns. This would enable skills transfer from experts at original equipment manufacturer SENER to young black engineers. The next step is to formalise the agreement.

Through investments made by the DSI in support of locally developed technology, an international patent application (for a novel xylanase enzyme formulation with commercial application in the animal feed additive industry) was filed under the Enzyme and Microbial Technologies Research and Innovation Consortium, which is part of the broader Strategic Industrial Bioinnovation Programme (SIIP) funding instrument. Two technology demonstrators are at technology readiness level 6 (i.e. prototype in a relevant environment). These are for (a) Cas9 (CRISPR associated protein 9) gene-editing technology for the production of industrial enzymes, and (b) production of the catalytic enzyme feruloyl esterase for biorefinery application. A comprehensive IP due diligence (and freedom to operate) assessment was also completed during the financial year. This was aimed at identifying target enzymes with potential industrial and commercial application in the gene-editing technology segment of the molecular reagents market, so as to inform the development of a commercial strategy.

The Department held a three-day workshop for all six platforms of the Indigenous Knowledge-Based Bioinnovation Programme. In addition to the platforms, the meeting was attended by the South African Health Products Regulatory Authority, the Industrial Development Corporation, the Department of Environment, Forestry and Fisheries; the Department of Agriculture, Land Reform and Rural Development, the Department of Trade, Industry and Competition, and the Technology Innovation Agency. The DSI also presented a Medical Cannabis Strategy to the President at the National Economic Development

and Labour Council, the Interministerial Committee on a Masterplan for the Industrialisation of Cannabis, and the Ministry of Health's Advisory Committee on Medical Cannabis.

Goal 5: Using knowledge and innovation for inclusive development

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

Food security and sustainable rural development

Through the Sector Innovation Fund (SIF), the Department has supported a portfolio of industries, namely horticulture, post-harvest innovation, viticulture, forestry, mineral processing, paper manufacturing, and agroprocessing.

Small-scale agroprocessing initiatives in South Africa are still facing major challenges. The structural constraints of such initiatives have been linked to and exacerbated by historical, natural and financial factors. The challenge is to co-design ways to manage these constraints effectively through innovation.

To address some of the challenges of the agricultural bioeconomy, the DSI, in collaboration with the Technology Innovation Agency (TIA), supports Agricultural Bioeconomy Innovation Partnership Programme (ABIPP) initiatives. The ABIPP, now in its third year, has expanded in a number of areas. 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.

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

In the year under review, the Department, through innovation in support of the agri-parks programme (including the maize nixtamalisation programme) and the soybean food and nutrition programmes, supported 7 501 beneficiaries (smallholders, black farmers, communities, women and young people) in technology dissemination programmes. In the farmer development programme, 342 black farmers were supported and helped to grow from subsistence, emerging and small scale to commercial scale.

Health innovation initiatives

The DSI, TIA and North-West University (NWU) initiated a proposal to establish an active pharmaceutical ingredient (API) cluster, hosted by the NWU and managed by TIA. The API Cluster will drive the development of an innovative, competitive and world-class API manufacturing industry in South Africa by leveraging existing skills, technologies and facilities available in South Africa. The cluster will be founded through an aggressive domestically developed technology strategy that can be used to lever collaboration and partnerships within the pharmaceutical sector. The strategy will be underpinned by realigning current capabilities at various higher education and research institutions and commercial companies towards a focused API process synthesis and engineering programme. The target is the development of a list of essential drugs for which APIs must be manufactured locally.

During the period under review, the API Cluster's Steering Committee was established. The committee, which is chaired by the DSI, has met twice to discuss the terms of reference and the selection of API molecules from the pool of potential molecules. After considering priority APIs identified by the Department of Health and APIs that have demonstrated market potential, the meeting selected 14 API molecules for the programme.

The National Health Laboratory Service (NHLS) board has approved an innovation plan that aims to bring

the NHLS into the community supporting and driving innovation in South Africa. The NHLS has also signed a memorandum of understanding with TIA to partner in the promotion of diagnostics development.

The mLab initiative

mLab Southern Africa (Mobile Applications Laboratory NPC) is a mobile technology solutions laboratory and start-up accelerator aimed at unlocking the mobile applications economy. The new mLab sites in Polokwane in Limpopo and Galeshewe in the Northern Cape began with training programmes and ecosystem support activities during the 2019/20 financial year. The first crop of trainees in the Northern Cape have already completed their training. Discussions to establish an mLab site in Mpumalanga are under way. The mLab initiative has evolved successfully, with offerings that include coding skills, development, Internet of Things solutions development, enterprise development (incubation), and co-creation opportunities with industry for university students, among others.

Improved access to water and sanitation

The Young Engineers "Changemakers" Programme created through a partnership between the Water Demonstration Technologies Programme, the DSI and the South African Local Government Association, saw 10 young engineers taking part in an international masterclass exposing them to the latest thinking in managing water and wastewater, with the three top candidates attending a one-week masterclass at Columbia University in New York.

Much progress was made in the demonstration of innovative technology solutions in support of improving access and quality of service delivery. The South African Sanitation Technology Demonstration Programme continued to contribute towards improving access to decent and appropriate sanitation services, with priority given to off-grid sanitation solutions targeting rural areas and informal settlements. During the year under review, this programme was able to enhance synergies

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

with priority initiatives such as the Industrial Policy Action Plan. This synergy enabled the programme to contribute towards industrialisation and technology localisation. The Department participated in discussions of the new global standards for off-grid sanitation, a key enabling factor for the industrialisation of the innovative sanitation technology sector.

Support for service delivery

The Department strengthened its innovation for service delivery portfolio and continued to provide appropriate innovative technology solutions to improve decision-making. The innovation for service delivery interventions included decision-support tools to advance evidence-based decision making; technology solutions, e.g. water, energy and sanitation solutions; and knowledge products such as local innovation maps to support local economic development strategies. During the year under review, 10 decision-support tools were maintained. These included solutions in support of addressing spatial marginalisation, disaster management, deployment of innovative technologies in basic education and municipalities, and local economic development capabilities.

Other decision-support tools developed during the reporting period include the following:

- An agricultural energy efficiency decision-support study to assist with energy consumption in the agricultural sector. The results will be used by the Department of Mineral Resources and Energy for the review of the National Energy Efficiency Strategy. The Department of Environment, Forestry and Fisheries has shown interest in using the report.
- A study on diversifying the application of sugar products into the energy sector was carried out. This will assist the sugarcane industry to make a decision on using sugar as a source of energy. The initial findings were presented to the South African Sugar Association and key stakeholders in December 2019. The Department of Trade, Industry and Competition will use the results for the Sugar Masterplan. The

interdepartmental Biofuels Task Team led by the Department of Mineral Resources and Energy has also shown interest in using the report. The final Sugar Industry Diversification Study was presented to sugar cane millers, the South African Sugar Association, the Sugar Milling Research Institute, and Tongaat on 14 February 2020. The presentation offered scenarios to save and create jobs.

During the period under review, 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, the project was used to develop a policy brief providing evidence-based recommendations on an enabling environment for cooperative-owned connectivity networks. Through the Zenzeleni project in Mankosi Village, 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.

During the period under review, key partners acknowledged the Urban Knowledge Exchange Southern Africa (UKESA) as a strategic online platform to support the Integrated Urban Development Framework. UKESA, hosted by the CSIR, a DSI entity, also contributes towards promoting innovation knowledge exchange and good practice in cities, towns and villages.

In support of sustainable human settlements, the Department's STI for Sustainable Human Settlements Roadmap project hosted the first national Off-the-Wall Human Settlements Showcase, which enabled innovators and entrepreneurs to exhibit innovative solutions for the human settlements sector. The

3. STRATEGIC OUTCOME-ORIENTED GOALS (CONTINUED)

roadmap project continues to influence the sustainable human settlements discourse in line with national, regional and global development outcomes and in setting a national agenda for innovation, taking into account 4IR opportunities that could be harnessed to support the delivery of human settlements.

In support of virtual learning, the Department in partnership with national and provincial departments of education, the DSI has extended the number of schools participating in the e-readiness maturity assessments. These assessments enable evidence-based decision-making in the deployment of ICTs to schools.

The Department's reflection on the role of STI in the implementation of the District Development Model highlighted the importance of engagement with relevant departments and key stakeholders to ensure an enabling, pro-innovation procurement framework. To provide evidence for such a framework, the Technology Acquisition and Deployment Fund is being piloted. It is hoped that this fund will accelerate the demand-driven deployment of innovative technology solutions, primarily local or domestic ones. In enhancing innovation capabilities, the Department also expanded its Innovation Champions initiative, an instrument that recruits unemployed graduates to assist municipalities to incorporate innovation in their strategies and operations. The initiative has been piloted mainly in rural municipalities to help sustain rural communities.

Support for local systems of innovation and production – Essential oils

In support of the essential oils industry, the Department partnered with the South African Essential Oils Business Incubator (SEOBI) and the Agricultural Research Council (ARC) in a European Union-funded initiative to refine good practices in rose geranium essential oil production and value-added processing. This initiative includes capacity building, and a masterclass targeting emerging farmers was hosted by SEOBI and a leading woman farmer near Bronkhorstspuit in Mpumalanga on 21 February 2020. The Department also hosted an Essential Oils e-Learning Systems Design Workshop on 20 March 2020. The Department and its implementation partners then published version 1.0 of a data DVD/ Cloud file store for distribution to the public.

The Department continued to champion the focus on science and innovation as a critical instrument in global forums, especially in relation to the Sustainable Development Goals. This enabled the attraction of significant funding, for example from the European Union, for innovation for inclusive development initiatives.

4. PERFORMANCE INFORMATION BY PROGRAMME

Programme 1: Administration

Purpose

To provide strategic policy and planning alignment, ensure effective governance, risk management, monitoring and evaluation, and provide strategic science communication with stakeholders about the activities of the DSI and the national system of innovation.

Chief directorates

The Ministry and Office of the Director-General support the Minister, Deputy Minister and Director-General by providing professional and executive support. The component is responsible for the development of systems and mechanisms for handling parliamentary questions and replies, Cabinet matters, correspondence, submissions and memoranda. It also coordinates activities within the Department to assist in steering the NSI towards the development of a knowledge-intensive economy with higher productivity levels.

Enterprise Risk Management ensures that a risk management culture is embedded within the Department, by creating risk management awareness, and elevating risk management to a strategic level in the Department to improve the DSI's risk maturity level. The component's secondary role is to ensure that countering fraud is made an integral part of the strategy, operations and administration in the Department (i.e. to promote a fraud risk management culture in the DSI).

Policy, Planning, Governance, Monitoring and Evaluation supports the DSI leadership in steering the NSI.

Internal Audit Activity performs internal appraisal activities to improve the effectiveness of control and governance processes to help the Department achieve its strategic, operational, and financial and compliance objectives.

Human Resources ensures that the Department is able to (i) provide a professional service through accurate, consistent and best employment practices in all its activities, which are aimed at supporting the achievement of the DSI's strategic and operational objectives; (ii) attracting and retaining employees who share the same organisational vision; (iii) championing change and transition, with a view to being a catalyst in the transition of people and the organisation to embrace and implement change; (iv) setting performance standards and managing performance against them; and (v) promoting an environment that supports the personal and career development of all employees so that they can reach their full potential and contribute better to the achievement of the Department's strategic objectives, instilling a culture of service excellence.

Finance ensures the effective, efficient and economic use of financial resources in line with financial prescripts through the development and implementation of financial systems, policies, frameworks and procedures. This includes budget planning and expenditure monitoring, and the management of procurement, acquisition, logistics, assets and financial transactions.

Information Systems and Knowledge Management is responsible for the delivery of services that support the Department's strategic plan and the individual unit's objectives through the effective use of information technology. Its purpose is to align the Department's Information Technology Strategy with its business strategy to ensure that the organisation achieves optimum use of its resources.

Science Communication is responsible for ensuring effective communication between the Department and its key stakeholders and creating awareness of the Department's key objectives and activities. The component raises the profile of the work done by the Programmes in line with the vision and mission of the Department. It also facilitates the preparation of the information that the Minister and the Deputy Minister communicate externally.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Legal Services is responsible for providing effective and efficient legal services to the Department in order to ensure that the interests of the Department are protected against any legal risk. The component ensures that the Department complies with relevant legislation and takes a proactive approach to deal with matters that have the potential to give rise to conflict or legal challenges.

Strategic objectives

- To coordinate the identification, formulation and implementation of strategic initiatives, and ensure that the priorities of the DSI and its entities are aligned to national priorities.
- To develop and maintain good corporate governance systems for the Department and its entities.

- To provide strategic communication for the DSI and its entities through marketing, media and branding initiatives, and the Science Engagement Strategy.
- To make the DSI an employer of choice and acquire and retain appropriately skilled personnel.
- To provide efficient and effective information technology service.
- To ensure effective and efficient financial and procurement services.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Table 5: Programme 1 – Administration

Not achieved			Partially achieved			Achieved	
Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To coordinate the identification, formulation and implementation of strategic initiatives and ensure that the priorities of the DSI and its entities are aligned to national priorities	DSI public entities' strategic and annual performance plans approved by the Minister and shareholder compacts signed by the Minister and chairpersons of the boards	DSI public entities' 2019/20 annual performance plans and annual reports approved by the Minister by 31 March 2019	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	None	Achieved	n/a
To develop and maintain good corporate governance systems for the Department and its entities	Combined assurance annual report on the status of combined assurance presented to the Risk and Audit Committees	1 combined assurance annual report on the status of combined assurance was presented to the Risk and Audit Committees by 31 March 2019	1 combined assurance annual report on the status of combined assurance presented to the Risk and Audit Committees by 31 March 2020	1 combined assurance annual report on the status of combined assurance presented to the Risk and Audit Committees by 31 March 2020	None	Achieved	n/a
To provide strategic communication for the DSI and its entities through marketing, media and branding initiatives, and the Science Engagement Strategy	Number of media articles written to raise the DSI's public profile	108 media articles written to raise the DSI's public profile by 31 March 2019	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	+160	Achieved	Ramped up internal and external engagement to secure more articles, and opportunities to publish articles increased.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To ensure effective and efficient financial and procurement services	Number of public participation programmes held	17 public participation programmes held by 31 March 2019	10 public participation programmes held by 31 March 2020	11 public participation programmes held by 31 March 2020	+1	Achieved	Additional requests for the hosting of PPPs were received.
	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	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	None	Achieved	n/a

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Programme 2: Technology Innovation

Purpose

To enable research and development (R&D) in space science and technology (S&T), energy security and the bioeconomy, and in the emerging and converging areas of nanotechnology, robotics, photonics and indigenous knowledge systems (IKS), and to promote the realisation of commercial products, processes and services from these R&D initiatives. In addition, through the implementation of enabling policies and interventions along the entire innovation value chain, to promote the protection and utilisation of intellectual property, technology transfer and technology commercialisation.

Chief directorates

Bioinnovation leads the Department's implementation of the Bio-economy Strategy, ensuring science, technology and innovation are harnessed, and guided, in building the South African bioeconomy. Bioinnovation includes the strategic themes of agriculture, health, industry and the environment, and indigenous knowledge. The ultimate objective is to exploit opportunities for improving the livelihoods of South Africans, the competitiveness and resilience of the economy, and the sustainability of socio-economic development.

Hydrogen and Energy provide policy leadership in RDI initiatives in the energy sector that are cross-cutting and have a long-term economic and environmental impact. It plays a key role in developing a sustainable and globally competitive South African knowledge-based energy industry, especially as this relates to the nascent global hydrogen economy, by informing and co-shaping the national energy policy in coordination with the Department of Mineral Resources and Energy and other key stakeholders. In particular, the Department plays an advisory role in the broader energy landscape, specifically in the Integrated Energy Plan and Integrated Resource Plan, with special emphasis on the current and emerging low carbon technologies to be used in addressing the country's energy needs, their deployment and

the incentives required to facilitate the successful deployment of these technologies.

Space Science and Technology is a cross-cutting and user-driven component that supports the creation of an environment conducive to the implementation of the National Space Strategy and the South African Earth Observation Strategy, under the overarching guidelines of the National Space Policy led by the Department of Trade, Industry and Competition. The National Space Strategy was a response to the Ten-Year Innovation Plan, which identified key outcomes that had to be realised over the long term for South Africa to leverage the opportunities that the space value chain presents.

Innovation Priorities and Instruments supports and strengthens the innovation policy package (and related interventions) aimed at creating and sustaining an enabling environment for innovation, technology development, and the commercialisation of publicly funded R&D initiatives. This includes the identification, development, creation and support of policy and institutional structures that facilitate technology development and its progression into national and international markets. The Emerging Research Areas focus includes the development of nanotechnology, photonics, robotics, and the South African BioDesign Initiative, through the roll-out of approved strategies and implementation plans.

The **National Intellectual Property Management Office** is the national implementing office for the Intellectual Property from Publicly Financed Research and Development Act (IPR Act), and is currently located in the Department as a specialised service delivery unit. It was established to provide for the more effective utilisation of intellectual property (IP) emanating from publicly financed R&D. It provides support to offices of technology transfer at universities and science councils, develops capacity in IP management, provides incentives for IP creators to encourage them to disclose, protect and commercialise their creations, provides funding through the IP Fund for the protection and maintenance of IP emanating from publicly financed R&D, and provides incentives,

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

support, capacity development, funding and compliance services. NIPMO also ensures compliance with the IPR Act and Regulations by recipients of publicly financed R&D.

Strategic objectives

- To facilitate and resource investments in space S&T, energy, bioinnovation, nanotechnology, robotics, photonics, indigenous knowledge systems (IKS), intellectual property (IP) management, technology transfer and technology commercialisation.
- To oversee, monitor and regulate key policy initiatives, including institutions/agencies and support interventions in the key strategic areas of space S&T, energy, bioinnovation, nanotechnology, robotics and photonics.
- To coordinate and support high-end skills development in –
 - the strategic and emerging S&T areas of synthetic biology, structural biology, systems biology and functional genomics (collectively the South African Biodesign Initiative), space S&T, energy, bioinnovation, nanotechnology, robotics, photonics and IKS.
 - IP management, technology transfer and technology commercialisation.
- To support, promote, and advocate the development and translation of scientific R&D outputs into commercial products, processes and services that will contribute towards economic growth and a better quality of life.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Table 6: Programme 2 – Technology Innovation

Achieved			Partially achieved			Not achieved	
Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To facilitate and resource investments in space science, energy, bioinnovation, nanotechnology, robotics, photonics, IKS, IP management, technology transfer and technology commercialisation	Number of instruments funded in support of knowledge utilisation	21 instruments funded in support of knowledge utilisation by 31 March 2019	19 instruments funded in support of knowledge utilisation by 31 March 2020	19 instruments funded in support of knowledge utilisation	None	Achieved	n/a
	Number of knowledge outputs generated	187 knowledge outputs generated	120 knowledge outputs generated by 31 March 2020	197 knowledge outputs generated	+77	Overachieved	There is a link between the number of knowledge outputs and the number of students supported. As there were more students than anticipated, the knowledge outputs were also higher than expected.
	Number of strategic policy directives in designated areas in support of economic sectors	5 strategic policy directives in designated areas in support of economic sectors developed by 31 March 2019	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	+3	Overachieved	More requests for policy directives were made than anticipated.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	Number of decision-support interventions developed and maintained	2 decision-support interventions maintained by 31 March 2019	2 decision-support interventions maintained by 31 March 2020	3 decision-support interventions maintained	+1	Overachieved	There was an additional request from the Department of Energy to assist with developing a tool to inform agricultural target energy efficiency targets in the National Energy Efficiency Strategy.
	Percentage of regulatory recommendations made to the Genetically Modified Organisms Act (GMO Executive Council) through the Department of Agriculture, Forestry and Fisheries (DAFF) to support decision-making	100% of regulatory recommendations were made to the GMO Executive Council through DAFF to support decision making by 31 March 2019	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 ¹ to support decision making by 31 March 2020	None	Achieved	n/a

¹ The Department of Agriculture, Forestry and Fisheries was restructured in May 2019. The GMO Act falls under the new Department of Agriculture, Land Reform and Rural Development.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To oversee, monitor and regulate key policy initiatives, including institutions/agencies and support interventions in the key strategic areas of space science, energy, bioinnovation, nanotechnology, robotics and photonics	Number of decision-support interventions developed and maintained	2 decision-support interventions maintained by 31 March 2019	2 decision-support interventions maintained by 31 March 2020	3 decision-support interventions maintained	+1	Overachieved	There was an additional request from the Department of Energy to assist with developing a tool to inform agricultural target energy efficiency targets in the National Energy Efficiency Strategy.
To coordinate and support high-end and skills development in the strategic and emerging S&T areas of space science, energy, bioinnovation, nanotechnology, robotics, photonics, synthetic biology, structural biology, systems biology and functional	Number of postgraduate students (master's and doctoral) funded in designated areas	354 postgraduate students (master's and doctoral) funded in designated areas by 31 March 2019	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	+112	Overachieved	Planning was based on baselines as well as on budget cuts. However, the demand for studentships is not always as planned or predicted.
	Number of trainees attending	336 trainees attended training initiatives in	230 trainees attending training	242 trainees attending training	+12 trainees attending training	Overachieved	There was more interest than expected in

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
genomics (collectively the South African BioDesign Initiative), IP management, technology transfer and technology commercialisation	training initiatives in designated areas	designated areas by 31 March 2019	initiatives in designated areas by 31 March 2020	initiatives in designated areas by 31 March 2020	initiatives in designated areas by 31 March 2020		attending the workshops. It was not deemed appropriate to deny people the opportunity to attend the workshops, which offered unique training opportunities.
To support, promote, and advocate for the development and translation of scientific R&D outputs into commercial products, processes and services that will contribute towards economic growth and a better quality of life	Number of knowledge application products funded in designated areas	9 knowledge application products funded in designated areas by 31 March 2019	10 knowledge application products funded in designated areas by 31 March 2020	20 knowledge application products funded in designated areas	+10	Overachieved	It is difficult to predict when and if research is going to lead to a prototype, pilot, demonstrator, etc. and targets are therefore set on the basis of research that seems close to reaching application. However, sometimes a knowledge application product is developed faster than expected

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	Number of commercial outputs in designated areas	7 commercial outputs in designated areas by 31 March 2019	8 commercial outputs in designated areas by 31 March 2020	11 commercial outputs in designated areas	+3	Overachieved	Commercial targets are based on how far specific projects are in terms of technology readiness levels. Sometimes, given the non-linearity of innovation, some innovation proceeds to commercialisation faster than anticipated.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Programme 3: International Cooperation and Resources

Purpose

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 other international partners. International Cooperation and Resources also supports South African foreign policy through science diplomacy.

Chief directorates

International Resources works to increase the flow of international resources into the country by creating conditions for access to international STI skills and global projects.

Multilateral Cooperation and Africa advances and facilitates South Africa's participation in strategic African bilateral agreements and multilateral organisations on STI, to strengthen the NSI and to achieve shared economic and social development in the region and on the continent.

Overseas Bilateral Cooperation promotes and facilitates collaborative activities and leverages resources in support of the NSI from countries

outside Africa, with a specific focus on developing a knowledge-driven economy. outside Africa, with a specific focus on developing a knowledge-driven economy.

Strategic objectives

- To secure international funds to complement South Africa's national investments in STI, including resources for DSI initiatives requiring external investment
- To access international knowledge, capacities and resources, to enhance South Africa's national STI capabilities, and to contribute to the attainment of the DSI's targets for human capital development, especially for international PhD training.
- To strengthen cooperation in STI in Africa, to build capacities and support initiatives for the SADC and AU, for the advancement of both South Africa and Africa's growth and development agenda.
- To maximise South Africa's strategic interests in international cooperation in STI, in support of South Africa's foreign policy objectives, and international trade and investment partnerships, creating a better South Africa and contributing to a better and safer Africa in a better world.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Table 7: Programme 3 – International Cooperation and Resources

Achieved			Partially achieved			Not achieved	
Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To secure international funds to complement South Africa's national investments in STI, including resources for DSI initiatives requiring external investments	Amount (expressed in rand millions) of 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	R517 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 2019	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	+R258m	Overachieved	The target was exceeded owing to an increase in funding from international partners because of the successes of NSI partners in competitive STI initiatives, especially the EU Horizon 2020 programme.
	Amount (expressed in rand millions) of funds invested by international partners in their	R3 347 billion invested by international partners in their own organisations	R300 million invested by international partners in their own organisations and	R2 billion invested by international partners in their own organisations and	+R1,7bn	Overachieved	The target was exceeded owing to participation in the EU Framework Programme which saw greater

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	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	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 2019	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	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			international partner participation than anticipated as well as an increase in cooperation with various bilateral partners.
To access international knowledge, capacities and resources, to enhance South Africa's national STI capabilities, and to contribute to the attainment of the DSI's targets for human capital development, especially for international PhD training	Number of South African students accepted into international training programmes offering a postgraduate qualification as part of cooperation initiatives facilitated by the DSI	1 470 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	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	-38	Not achieved	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.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
	Number of 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	718 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 2019	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	+17	Overachieved	The target was exceeded owing to participation in the Framework Programme, which saw greater international partner participation than anticipated, as well as an increase in cooperation with various bilateral partners.
	Number of international technical exchanges (such	36 international technical exchanges to build or reinforce	30 international technical exchanges to build or reinforce	32 international technical exchanges to build or reinforce	+2	Achieved	The target was exceeded owing to increased engagements with

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
	as workshops, seminars or training programmes) 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	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 2019	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	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			international partners leading to increased exchanges.
To strengthen cooperation in STI in Africa, to build capacities and support initiatives of the SADC and AU, for the advancement of both South Africa and Africa's growth and development agenda	Number of research, innovation and STI HCD cooperation projects, co-funded or supported in kind by DSI and at least one other African partner	93 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 2019	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	+24	Overachieved	The target was exceeded owing to participation in international opportunities which saw greater international partner participation than anticipated.
	Amount (expressed in rand millions)	R91 million in international funds directly invested in	R90 million in international funds directly	R195 million in international funds directly	+R105m	Overachieved	The target was exceeded owing to an increase in

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
	of international funds directly invested in African regional and continental research, innovation, STI HCD or research infrastructure programmes as a result of DSI facilitation	African regional and continental research, innovation, STI HCD or research infrastructure programmes as a result of DSI facilitation by 31 March 2019	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	invested in African regional and continental research, innovation, STI HCD or research infrastructure programmes as a result of DSI facilitation by 31 March 2020			funding from international partners because of the successes of NSI partners in competitive STI initiatives, especially the EU Horizon 2020 programme.
	Number of approved AU or SADC STI initiatives, including programmes, projects or governance frameworks, endorsed at AU or SADC ministerial level supported (financially or in kind) by the DSI	17 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 2019	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	None	Achieved	n/a

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
To maximise South Africa's strategic interests in international cooperation in STI, in support of South Africa's foreign policy objectives, and international trade and investment partnerships, creating a better South Africa, and contributing to a better and safer Africa in a better world	Number of 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	6 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 2019	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	+5	Overachieved	The target was exceeded owing to participation in African and multilateral platforms, which resulted in more South African positions being presented for consideration.
	Number of 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	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 2019	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	+1	Overachieved	Increased participation in international partnerships by the NSI provided an increased platform to promote the quality of South African researchers, increasing the opportunity for appointment.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Programme 4: Research Development and Support

Purpose

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

Chief directorates

Human Capital and Science Promotion formulates and implements policies and strategies that address the availability of human capital for STI, and that provide fundamental support for research activities. The chief directorate provides strategic direction and support to institutions mandated to develop human capital and increased knowledge production, as well as interfacing with relevant stakeholders in this regard. In addition, the chief directorate is responsible for supporting the development of a society that is scientifically literate and critically engaged with science through public engagement in STI and the enhancement of the youth's access to STI.

Basic Sciences and Infrastructure facilitates the strategic implementation of research and innovation equipment and infrastructure to promote knowledge production in areas of national priority and to sustain R&D-led innovation. The component also promotes the development and strengthening of basic or foundational sciences, such as physics, chemistry, biological and life sciences, geographic and geological sciences, and human and social sciences.

Science Missions promotes the development of research, the production of scientific knowledge, and human capital in science areas in which South Africa enjoys a geographic advantage. These areas include the dynamics of climate change and its impact on Earth systems, Antarctic and marine research, the palaeosciences and indigenous knowledge systems.

Astronomy supports the development of astronomical sciences around the Multiwavelength Astronomy Strategy, and provides guidance and support to relevant astronomy institutions in the implementation of strategic astronomy programmes. Of particular relevance are the Southern African Large Telescope, the MeerKAT, the High Energy Stereoscopic System, and the African Very Long Baseline Interferometry Network and Square Kilometre Array (SKA) projects.

Strategic objectives

- To contribute to the development of representative, high-level human capital able to pursue locally relevant, globally competitive research and innovation activities.
- To ensure the availability of and access to internationally comparable research and innovation infrastructure in order to generate new knowledge and train new researchers.
- To support and promote research that develops basic sciences through the production of new knowledge and relevant training opportunities.
- To strategically develop priority science areas in which South Africa enjoys a competitive advantage, by promoting internationally competitive research and training activities and outputs.
- To promote public engagement on STI.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Table 8: Programme 4 – Research Development and Support

Achieved			Partially achieved			Not achieved	
Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To contribute to the development of representative, high-level human capital able to pursue locally relevant, globally competitive research and innovation activities	Total number of PhD students awarded bursaries annually as reflected in the reports from the NRF and relevant entities	3 380 PhD students awarded an annual bursary funds as reflected in the reports from the NRF and relevant entities by 31 March 2019	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	-110	Not achieved	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.
To contribute to the development of representative,	Total number of pipeline postgraduate students	9 774 pipeline postgraduate students awarded	Not less than 10 800 pipeline postgraduate students	8 632 pipeline postgraduate students awarded	- 2 168	Not achieved	Target underachieved by 20% (2 168). There was a reduction in the National Skills Fund budget for pipeline support. Bursaries for honours

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
high-level human capital able to pursue locally relevant, globally competitive research and innovation activities	awarded bursaries annually as reflected in the reports from the NRF and relevant entities	bursaries as reflected in the NRF and relevant entities by 31 March 2019	awarded an annual bursary as reflected in the reports from the NRF and relevant entities by 31 March 2020	bursaries annually as reflected in the NRF and relevant entities.			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.
To contribute to the development of representative, high-level human capital able to pursue locally relevant, globally competitive research and innovation activities	Total number of graduates and students placed in DSI-funded work preparation programmes in SETI institutions	802 graduates and students placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2019	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	+441	Overachieved	Target overachieved by 68% (441) due to the retention of some of the 2018/19 interns, in line with the extension of the programme from 12 to 24 months.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
							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.
	Number of 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	9 159 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 2019	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 report	+ 255	Overachieved	The number of research articles published per researcher was higher than anticipated. This fluctuates slightly from year to year. Moreover, annual performance cannot be predicted or managed within closer margins due to the unpredictability of the publishing processes.

² A "P" rating is assigned to researchers (normally under 35 years of age) who have held a doctorate or equivalent qualification for less than five years.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2017/18	Planned target 2018/19	Actual achievement 2018/19	Deviation between planned target and actual achievement for 2018/19	Status	Comment on deviations
To strategically develop priority science areas in which South Africa enjoys a competitive advantage, by promoting internationally competitive research and training activities and outputs	Number of science mode receivers installed on MeerKAT	64 UHF science mode receivers installed on MeerKAT by 31 March 2019	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	None	Achieved	n/a
To promote public engagement on science, technology and innovation	Number of participants in science awareness and engagement programmes as reflected in project reports of the NRF and other service providers	About 29 437 694 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 2019	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	Approximately 27,3 million	Overachieved	The deviation is due to the increased use of mainstream media, specifically television.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Programme 5: Socio-economic Innovation Partnerships

Purpose

To enhance 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.

Chief directorates

Technology Localisation, Beneficiation and Advanced Manufacturing fund technology and innovation development programmes to advance strategic medium and long-term sustainable economic growth and sector development priorities, as well as government service delivery, through the following value-adding functions:

- Investing in the medium and long-term knowledge-generation capabilities of the NSI in targeted innovation areas.
- In partnership with other government departments and economic actors, spearheading focused efforts that exploit knowledge capabilities for economic benefit. The economic benefit includes the development of advanced technologies and industries, improved government service delivery, improved productivity and competitiveness, and technology transfer and support to SMMEs and manufacturing firms in the supply chains of large-scale public procurement programmes.

Sector Innovation and Green Economy provides policy, strategy and direction-setting support for the R&D-led growth of strategic sectors of the economy and to enhance S&T capacity to support a transition to a green economy. The component does this through the following:

- Facilitating the implementation of high-impact S&T interventions.

- Identifying and initiating S&T programmes that support the growth of the environmental technologies and services sector in South Africa.
- Facilitating policy and strategy development on R&D interventions that support the growth of the ICT sector (excluding the ICT retail sector).
- Providing innovation policy and planning support to economic actors in priority economic sectors and provincial and local governments.

Innovation for Inclusive Development provides leadership and guidance for harnessing science, technology and innovation for the delivery of basic services, local economic development and inculcating the culture of innovation across government through the following interventions:

- Leading the development, demonstration, transfer and diffusion of innovative solutions towards supporting evidence-based policy service delivery making and practice.
- Strengthening STI capacity, maturity and collaboration with local government and sector departments towards a capable and innovative state. This includes the provision of decision-support tools and knowledge products to advance evidence-based service delivery decision making.
- Coordinating collaborative science, technology and innovation catalytic local industries, clusters and value-chains in line with provincial and local development plans.
- Coordinating and inculcating science, technology and innovation initiatives in support of the District Development Model

The chief directorate has two directorates managing thematic priorities aligned to its focus areas, namely, Technology for Sustainable Livelihoods, and Science and Technology for Sustainable Human Settlements.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Science and Technology Investment leads and supports the development of indicators and instruments for measuring and monitoring investments in S&T and the performance of the NSI, and ways of strengthening the NSI and innovation policy. This includes an annual R&D survey, innovation measurement, the development of S&T indicators, the development of databases and information systems such as the Research Information Management System and the national science and technology expenditure tables, and the implementation of section 11D of the Income Tax Act, 1962, to promote private-sector R&D investment.

Strategic objectives

- Through knowledge, evidence and learning, to inform and influence how S&T can be used to achieve inclusive development.
- To identify, grow and sustain niche high-potential STI capabilities for sustainable development and the greening of society and the economy.
- To identify, grow and sustain niche high-potential STI capabilities that -
 - improve the competitiveness of existing industries with growth potential in aerospace, advanced manufacturing, chemicals, advanced metals, mining, ICTs and sector innovation funds;
 - facilitate the development of R&D-led new-targeted industries.
- To enhance understanding and analysis that support improvements in the functioning and performance of the NSI.
- To strengthen provincial and rural innovation and production systems through analysis and catalytic interventions.
- To introduce and manage interventions and incentive programmes that increase the level of private sector investment in scientific or technological R&D.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Table 9: Programme 5 – Socio-economic Innovation Partnerships

Achieved			Partially achieved			Not achieved	
Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
Through knowledge, evidence and learning, to inform and influence how S&T can be used to achieve inclusive development	Number of knowledge products on innovation for inclusive development published	8 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	6 knowledge products on innovation for inclusive development published by 31 March 2020	None	Achieved	n/a
	Number of decision-support interventions introduced and maintained	10 decision-support system maintained and improved by 31 March 2019	10 decision-support systems maintained and improved by 31 March 2020	10 decision-support systems maintained and improved by 31 March 2020	None	Achieved	n/a
	Number of learning interventions (seminars) generated	10 learning interventions (seminars) generated by 31 March 2019	9 learning interventions (seminars) generated by 31 March 2020	9 learning interventions (seminars) generated by 31 March 2020	None	Achieved	n/a
To identify, grow and sustain niche high-potential STI capabilities for sustainable development and the greening of society and the economy	Number of unique honours, master's and doctoral students fully funded or co-funded in designated niche areas that support the greening of society and the economy and sustainable development	84 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 2019	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 honours, master's and doctoral students fully or co-funded in designated niche areas that support the green economy and sustainable development by 31 March 2020	+48	Overachieved	This is the final year of the MTSF, so the number was increased to get closer to the MTSF target of 375 unique students.

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	Number of knowledge and innovation products added to the sustainable development IP portfolio between 1 April 2015 to 31 March 2020 through funded or co-funded	5 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 2019	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	+8	Overachieved	The General Budget Support funding allowed for increased demonstrations of novel technology. The funding was received during the course of the MTSF period.
To identify, grow and sustain niche	Number of high-level research graduates	At least 249 master's and doctoral students	At least 252 master's and doctoral students	231 master's and doctoral students fully funded or	-21	Not achieved	Due to a reduction in student funding

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
<p>high-potential STI capabilities that –</p> <ul style="list-style-type: none"> improve the competitiveness of existing industries with growth potential in aerospace, advanced manufacturing, chemicals, advanced metals, mining, ICTs and sector innovation funds; facilitate the development of R&D-led new targeted industries. 	Number of high-level research graduates (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 2019	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 2019	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	co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs, the Industry Innovation Programme and the Sector Innovation Fund) by 31 March 2010			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.
	Number of interns fully funded or co-funded in R&D related to design, manufacturing and product development	At least 250 interns fully funded in R&D related to design, manufacturing and product development or co-funded by 31 March 2019	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	+101	Overachieved	The technical indicator description states funded or co-funded; this makes it impossible to define the total number of students in advance. Furthermore,

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	Number of knowledge and innovation products added to the Industrial Development IP portfolio through fully funded or co-funded research initiatives						where industry demand for interns increases, there is a greater willingness to co-fund (and also to provide greater amounts) resulting in "savings" in available funds, which can then be allocated to fund more interns – a desirable outcome.
		At least 42 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development IP portfolio by 31 March 2019	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	+7	Overachieved	Increased awareness of what IP products are and that they should be reported, and the fluctuating needs of industry, resulted in more IP products being reported – a desirable outcome.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
	Number of instruments funded in support of increased localisation, competitiveness and R&D-led industry development	9 instruments funded in support of increased localisation, competitiveness and R&D-led industry development by 31 March 2019	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 localisation, competitiveness and R&D-led industry development by 31 March 2020	None	Achieved	n/a
To strengthen provincial and rural innovation and production systems through analysis and catalytic interventions	Number of innovation-support interventions funded or co-funded that strengthen provincial or rural innovation systems	11 innovation-support interventions funded or co-funded that strengthen provincial or rural innovation systems between 1 April 2016 and 31 March 2019	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	+4	Overachieved	The interventions supported depend on the number and quality of proposals received following calls for proposals under the Regional Innovation Support Programme.
To enhance understanding and analysis that support improvements in the functioning and performance of the NSI	Number of statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet	5 statistical reports or policy briefs approved by Exco for publication and/or submitted to Cabinet by 31 March 2019	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	None	Achieved	n/a

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4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Strategic objective	Performance indicator	Actual achievement 2018/19	Planned target 2019/20	Actual achievement 2019/20	Deviation between planned target and actual achievement for 2019/20	Status	Comment on deviation
To introduce and manage interventions and incentive programmes that increase the level of private sector investment in scientific or technological R&D	Turnaround time in providing preapproval decisions on applications for the R&D tax incentive	Preapproval decisions provided within 90 days on 39% (or 51) of the 131 applications for the R&D tax incentive received from 1 January 2018 to 31 December 2018. Overall, of the 131 applications received over the same period, 95 (or 73%) have been provided with decision.	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	69% (or 94 applications)	Not achieved	Underperformance was due to the cumulative effect of vacancies on staff capacity.

4. PERFORMANCE INFORMATION BY PROGRAMME (CONTINUED)

Changes to planned targets

There were no changes to planned targets.

Approval

This is to confirm that the Executive Committee (Exco) of the Department of Science and Innovation discussed the Department's annual performance information report for the 2019/20 financial year using a round robin process due to the COVID-19 pandemic. The report was also discussed at the Audit Committee meeting of 9 July 2020. Both committees made inputs into the content of the report, which reflects the DSI's performance for the period covered in the report.



Dr PM Mjwara

Director-General

5. TRANSFER PAYMENTS

The Department transfers funds to various entities in pursuit of its mandate. These entities assist the Department to achieve its objectives. The table below indicates the entities and the reasons transfers were made. The detailed information regarding the entities to which the transfers were made is disclosed fully in the Annexures to the Annual Financial Statements in Part E.

Programme 1: Administration

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Institutional and programme support	20 086	20 084	Assistance for research activities
Total	20 086	20 084	

Programme 2: Technology Innovation

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Biotechnology Strategy	41 651	41 627	Implementation of the Biotechnology Strategy
Energy Grand Challenge	40 946	40 946	Support R&D in the renewable energy sector
Health innovation	82 840	51 231	R&D for new health products and services
HIV/Aids prevention and treatment technologies	27 866	27 866	Research into technologies to combat and prevent HIV/ Aids
Hydrogen Strategy (Capital)	74 945	74 945	Support research infrastructure in the hydrogen and energy sector
Hydrogen Strategy (Current)	42 458	42 458	Support R&D in the hydrogen and energy sector
Indigenous knowledge systems	15 144	15 122	Implementation of indigenous knowledge systems initiatives
Innovation projects	19 453	19 453	To promote intellectual property management, regulation and commercialisation
International Centre for Genetic Engineering and Biotechnology	40 816	40 815	R&D of new health products
South African National Space Agency	143 464	143 464	To support the creation of an environment conducive to industrial development and space technology
Space science	69 400	69 400	R&D to support space science initiatives
Technology Innovation Agency	440 929	440 929	To stimulate and intensify technology innovation and commercialisation output
Biofuels	7 651	7 640	Biofuels research

5. TRANSFER PAYMENTS (CONTINUED)

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Emerging Research Areas	112 672	112 600	R&D into emerging research areas
Offices of technology transfer – Support	41 184	40 685	Intellectual Property Fund and capacitating offices of technology transfer
Total	1 201 419	1 169 181	

Programme 3: International Cooperation and Resources

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Global science: Bilateral cooperation	15 952	15 876	Growing international partnerships with the aim of leveraging resources for R&D and human capital development
Global science: International resources	46 009	43 746	Growing international partnerships with the aim of leveraging resources for R&D and human capital development
Global science: Multilateral cooperation	10 014	8 032	Growing international partnerships with the aim of leveraging resources for R&D and human capital development
Total	71 975	67 654	

Programme 4: Research Development and Support

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Academy of Science of South Africa	26 983	26 983	To promote innovative and independent scientific thinking
Astronomy	32 789	32 789	Support to radio and optical astronomy
Human and Social Development Dynamics	28 896	28 896	Policy and institution building (10-year plan and centres of excellence)
Human resource development	997 878	997 808	Implementation of human capital development initiatives
National Research Foundation	943 385	943 385	To support and promote research through funding human resource development

5. TRANSFER PAYMENTS (CONTINUED)

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Science awareness	81 579	81 293	Research and initiatives towards youth involvement in the science arena
Square Kilometre Array	686 974	686 974	Infrastructure for the SKA project
South African Research Chairs Initiative	566 305	566 305	To fund research chairs in higher education institutions
Strategic science platforms	222 176	222 165	Strategic science platforms for research and development
Cyberinfrastructure	251 686	251 686	Operation and management of Centre for High Performance Computing initiatives and connectivity of research institutions
Research and development infrastructure	687 458	687 450	Infrastructure development
Total	4 526 109	4 525 734	

Programme 5: Socio-economic Innovation Partnerships

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Advanced Manufacturing Technology Strategy	59 542	59 533	Implementation of the Advanced Manufacturing Technology Strategy
Council for Scientific and Industrial Research	965 823	965 823	This is a parliamentary grant as per the Estimates of National Expenditure, to be used to provide science and technology services and solutions, and identify opportunities for new technologies to be further developed and exploited in the private and public sectors for commercial and social benefit.
Environmental innovation	29 402	29 402	Identifying and initiating S&T programmes that support the growth of the environmental technologies and services sector in South Africa
Human Sciences Research Council	324 155	324 155	Parliamentary grant as per the Estimates of National Expenditure. To conduct large-scale policy-relevant social science research

5. TRANSFER PAYMENTS (CONTINUED)

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Information and communication technology	38 533	38 250	Implementation of the South African ICT RDI Roadmap Facilitating policy and strategy development on R&D interventions that support the growth of the ICT sector (excluding the ICT retail sector)
Mining research and development	21 139	21 139	Mining research and development
Local manufacturing capacity	108 689	108 689	Support for technology localisation. Assistance for local companies to develop their technology capabilities to enable them to leverage procurement opportunities under the infrastructure build programmes of the state-owned enterprises. Funding for technology stations to render technology support to small and medium enterprises.
Local systems of innovation	68,793	68,782	Support for local innovation interventions and science parks. Support for industry innovation partnerships.
Research Information Management System (RIMS)	8 448	8 448	Information access for decision making – continued development and maintenance of RIMS
Resource-based industries	53 652	53 652	S&T policy strategy and direction-setting support to harness value from South Africa's natural resources
Innovation for Inclusive Development	38 905	38 905	Development of indicators and instruments for measuring and monitoring investments in S&T and the performance of the NSI. Supports experimentation with S&T-based innovations for tackling poverty, inequality and unemployment through the creation of sustainable job and wealth opportunities and enhancing the delivery of basic services.
Science and technology indicators	12 404	12 404	

5. TRANSFER PAYMENTS (CONTINUED)

Organisation/theme	Budget R'000	Actual expenditure R'000	Reasons for transfer payment
Science and technology indicators	12 404	12 404	Develop and monitor science and technology indicators
Total	1 729 485	1 729 182	

6. CONDITIONAL GRANTS

The Department did not receive any conditional grants.

7. DONOR FUNDS

The DSI received official development assistance (ODA) from the European Union. Below is a brief summary of the activities supported by these ODA partners in science and technology.

Name of donor	European Union
Full amount of the funding (R'000)	5 000
Period of the commitment	3 years
Purpose of the funding	ESASTAP 2020
Expected outputs	Strengthening Technology Research and Innovation Cooperation between Europe and South Africa
Actual outputs achieved	<p>The project is a coordination and support platform created to strengthen the science, technology and innovation (STI) cooperation between South Africa (SA) and the European Union (EU). The project is divided into five different work packages, and each work package is further broken down into separate tasks addressing specific areas of cooperation within the broader SA-EU STI relations.</p> <p>Development, hosting and management of the ESASTAP website by appointed service provider. The appointed service provider developed the website. The new website was operational by the end of Feb. 2020 as per the service level agreement.</p> <p>DSI officials and Horizon 2020 National Contact Points conducted roadshows to promote opportunities in EU-funded programmes. Travel costs (flights, accommodation and daily allowance) for National Contact Points and DSI officials from the Directorate: Strategic Partnerships are to conduct roadshows and participate in events organised by SA institutions in the national system of innovation.</p> <p>Promotion of SA participation in the European Union (EU) Framework Programme. A number of Horizon 2020 roadshows/info-days and exhibitions were organised in the 2019/20 financial year. ESASTAP promotional and dissemination material, including brochures and exhibition material on EU-funded programmes for the strengthening of STI relations between SA and EU.</p> <p>Co-hosting of pre-events with the European Commission Joint Research Centre and the Africa Academy of Science on evidence-informed policy making during Science Forum SA 2018. Full-day conference package for 200 delegates for two days. Audio-visual equipment service for the duration of the side event.</p>
Amount received in current period (R'000)	970
Amount spent by the department (R'000)	970
Reasons for the funds unspent	Not applicable
Monitoring mechanism by the donor	These funds are audited by Auditor-General or external auditors at the request of the donor.

7. DONOR FUNDS (CONTINUED)

Full amount of the funding (R'000)	48 828
Period of the commitment	3 year
Purpose of the funding	General Budget Support – Small Holder Essential Oils
Expected outputs	<p>During year 1, progress was mainly to be achieved by –</p> <ol style="list-style-type: none"> 1. sourcing suitable essential oil biological stock, technical expertise and market intelligence; 2. mapping areas (clusters) of potential for locally and imported essential oil varieties; 3. establishing a functional mobile farming support service platform; 4. establishing a local economic development/local innovation system fund to promote innovation among smallholder essential oil producers; 5. developing innovative applications for essential oils in agriculture and the cosmetics industry; 6. properly equipping a Good Laboratory Practice-certified, essential oil testing laboratory that is available to industry participants.
Actual outputs achieved	<p>During year 1 –</p> <ol style="list-style-type: none"> 1. 53 essential oil genotypes were acquired from local sources and 26 micro-distilled oils were evaluated for suitability in larger scale production; 2. initial maps of potential climate/irrigated land clusters in SA were completed; 3. mobile laboratory equipment was procured and more than 500 SA soil samples were used to calibrate the soil FT-IR spectrometer; 4. an open call for innovation in essential oil local economic development was published and 20 responses were evaluated; 5. 10 SMMEs were supported to develop, brand and market novel cosmetics products; 6. laboratory equipment was procured and analytical methods were developed for testing composition, conformity with standards and absence of contaminants for a range of indigenous and adapted essential oils.
Amount received in current period (R'000)	11 219
Amount spent by the department (R'000)	11 219
Reasons for the funds unspent	Not applicable.
Monitoring mechanism by the donor	These funds are audited by Auditor-General or external auditors at the request of the donor.

8. CAPITAL INVESTMENT

8.1 Capital investments, maintenance and asset management plan

The Department has an asset management policy in place that assists in ensuring the effective and efficient management of assets. The policy has been reviewed to ensure that it is aligned with new asset management requirements. During the year under review, the Department embarked on a process of enhancing its asset management system to assist with asset management and reporting.

In the year under review, the Department conducted one major asset verification and a final spot-check at end of the financial year, thus ensuring that all redundant, obsolete and damaged assets were identified for disposal and replaced in time. As part of its asset management strategy, the Department periodically reviews its assets and procures new ones where necessary. During the year under review, the Department embarked on a process of purchasing new computer equipment such as laptops to replace old equipment.



GOVERNANCE

PART C

1. INTRODUCTION

The Department is committed to maintaining the highest standards of corporate governance, which are fundamental to the management of public finances and resources. The frameworks below are the main pillars of the Department's corporate governance arrangements.

2. RISK MANAGEMENT

The Department views enterprise risk management (ERM) as imperative for the successful delivery of its mandate. The Department believes that identifying, understanding and managing risks in an enterprise-wide context will ensure accountability and sustainability, and that ERM will direct the Department to address possible negative events in a proactive and timely manner, while exploiting opportunities presented by future uncertainties.

Various processes have been instituted to ensure the commitment of the entire Department to ERM and the definition of clear risk management roles and responsibilities. These include the provision of awareness sessions, the publication of articles in the Department's quarterly newsletter, regular risk assessments and subsequent follow-ups.

The Department has a Chief Risk Officer and effective management systems (policy, framework, strategy, guidebooks and annual implementation plan) for ERM.

To ensure the quality, integrity and reliability of the Department's ERM processes and responses, the Department has an Enterprise Risk Management Committee (ERMC) comprising four independent members and one ex officio member. The Audit Committee Chairperson is a standing invitee to the ERMC. In the period under review, the ERMC continued to play an integral part in ensuring that the Department maintains and enhances its ERM maturity level. The following table indicates the members of the ERMC and the meetings they attended in the period under review:

Name	Member status	Meetings attended	Notes
C Boltman	Independent member (Chairperson)	5 of 5	Appointed as member and Chairperson on 1 Feb. 2018
C Marais	Independent member	5 of 5	Appointed as member on 1 Feb. 2018
F Kobo	Independent member	5 of 5	Appointed as member on 1 Feb. 2018
M Ramataboe	Independent member	5 of 5	Appointed as member on 1 Feb. 2018
B Khumalo	Ex officio member	5 of 5	Appointed as Acting DDG: Institutional Planning and Support with effect from 1 Apr. 2019
L Konar	Audit Committee Chairperson – Standing invitee	5 of 5	

2. RISK MANAGEMENT (CONTINUED)

The Chief Directorate: Internal Audit Activity and the Audit Committee provide independent assurance on the Department's ERM processes, and advise on the effectiveness of risk management controls and risk mitigation initiatives.

Strategic, operational and functional risk profiles were finalised for the period under review, and risk mitigation was monitored quarterly by the ERM. In addition, risk assessments were conducted for key projects, including projects managed on behalf of the Department by its entities.

In the period under review, the Department conducted an ethics and opportunity risk assessment. The outcomes of this assessment were used to inform the development of the Department's five-year Ethics Strategy and Management Plan. Once approved by the Accounting Officer, the Ethics Office, located in the Chief Directorate: Human Resources, will take responsibility for the execution and reporting of progress against the Ethics Strategy and Management plan.

The ERM Chairperson briefed the Director-General quarterly, and the Minister annually, on the effectiveness and adequacy of enterprise risk management across the Department.

In the period under review, the Chief Director: Policy, Planning, Governance, Monitoring and Evaluation was included as a standing invitee to all meetings of the ERM. The ERM Charter was updated to formalise this improvement.

3. FRAUD AND CORRUPTION

The Department has an effective system for fraud risk management, including a framework, a strategy, whistle-blowing policies, and an annual fraud prevention and detection plan.

The fraud risk profile was finalised at the beginning of the period under review, and served as the basis for the formulation of the annual fraud prevention and detection plan. The implementation of the plan is driven by the Directorate: ERM and progress is monitored quarterly by the ERM and the Audit Committee.

Using various mediums of communication, the Department actively promotes awareness of fraud and corruption and the use of the National Anti-Corruption Hotline. The Department has designated mid-November to mid-December of each year as Anti-Corruption Month and hosts its annual Anti-Corruption Day during this period. In the year under review, the Department's programme focused on heightening staff awareness of cybercrime.

The veracity of allegations of fraud and corruption is thoroughly investigated using internal and/or external resources. The outcome of an investigation guides the Accounting Officer on the steps to be taken to finalise a matter (disciplinary action, recovery of state resources, or criminal investigation). If warranted, the Department will report a matter to the appropriate law enforcement authority (e.g. the South African Police Service, the Special Investigation Unit, or the Office of the Public Protector) for further investigation. However, this was not necessary in the period under review. The progress of investigations is reported on in closed sessions at all ERM meetings.

For the period under review, no new matters were referred by the Public Service Commission to the Department for investigation.

4 MINIMISING CONFLICT OF INTEREST

4. MINIMISING CONFLICT OF INTEREST

The Public Service Regulations, 2016, and the Department of Public Service and Administration directive on financial disclosures requires both SMS and non-SMS employees to disclose their financial interests. 100% of SMS and 99% of non-SMS employees in the Department disclosed their financial interests as required. The Department also facilitated the disclosure of potential conflicts of interest in governance structures.

5. CODE OF CONDUCT

The Department conducted awareness sessions on the Code of Conduct for the Public Service in a bid to promote a high standard of ethical behaviour, as required by the Constitution of the Republic of South Africa and the Public Service Regulations, 2016. The Department also facilitated the development of an ethics policy and ethics strategy with the aim of heightening awareness and maintaining the highest level of compliance in ethical matters. The Ethics Committee was reviewed and members are representative of all Programmes within the Department.

6. HEALTH, SAFETY AND ENVIRONMENTAL ISSUES

Section 8 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) requires every employer to “provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of employees”. Furthermore, Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, which is the accepted international standard for occupational health and safety (OHS) management systems, requires the employer to identify all possible workplace hazards, assess the risks associated with these hazards, and as

far as is reasonably practicable, mitigate or eliminate these risks.

The Department’s Occupational Health and Safety Strategy focuses on four objectives, which are (i) to improve the DSI working environment by regularly conducting occupational hygiene surveys and monitoring the implementation of green working environment standards; (ii) to review the OHS management system to address OHS challenges within the Department; and (iii) to enhance compliance with OHS legislation and other requirements, and promote OHS awareness among DSI employees.

Control measures were instituted through regular inspections to address OHS risks and monitor the implementation of the Hazard Identification and Risk Assessment plans. The biological assessment indicated that good hygiene standards were kept, although there were a number of findings on the ventilation assessment. These findings were addressed through short and long-term interventions. An ergonomics assessment was also conducted, and implementation has commenced and will be completed in the 2020/21 financial year.

The Department continues to display the OHS Act and policy. Posters have been placed at all employee workstations to raise awareness of the evacuation procedure and the procedure for management of injuries while on duty. The Department has a functional Health and Safety Committee in place. The committee members have been capacitated regarding their OHS legal obligations so as to equip them to execute their responsibilities. In-house training was also provided to the Emergency Response Team and the Health and Safety representatives to enable them to respond effectively in case of emergency. An emergency evacuation drill was conducted as required.

7. PORTFOLIO COMMITTEE

During the year under review, briefings were made to the Portfolio Committee on Higher Education, Science and Technology as follows:

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
3 July 2019	Briefing by Department on its 2019/20 Annual Performance Plan and budget	<p>The Department was asked for highlights of its work to give new members a sense of what the Department was doing.</p> <p>Members asked the Chief Financial Officer (CFO) of the DSI to speak about the budget.</p> <p>Members asked the Department to comment on a survey undertaken in 2018, that between 1996 and 2016, innovation in South Africa had been completely flat.</p>	<p>All matters were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes).</p> <p>The CFO indicated that the resource allocation model had been the same over the years, but she anticipated that the model would change as the Department aligned its budget in 2020. Currently, the allocation model was that most of the budget went to Programme 4 (Research Development and Support), which transferred most of these funds to the National Research Foundation (NRF), mainly for human capital investment and the Square Kilometre Array. The second biggest allocation went to Programme 5 (Socio-economic Innovation Partnerships). The third biggest allocation went to Programme 2 (Technology and Innovation). The support Programmes – Administration (1) and International Cooperation and Resources (3) – received the rest of the allocation.</p> <p>The Department responded that in late 2008, 2010 and 2012, a series of measures had been put in place around innovation. A survey had been done on the work of the National Intellectual Property Management Office, which had looked at the number of spin-off companies that had come out of the university system and what they were doing.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		Members asked how much the Department was spending on consultants, which was small compared to other departments.	<p>The Department could show the number of patents that had been tracked since the introduction of these two policy levers, and it seemed that innovation was now growing.</p> <p>The Department replied that R34,7 million has been spent on consultants, which constituted 6% of its national budget, and 0,4% of its total budget. The Department had implemented a consultant reduction strategy as proposed by the National Treasury.</p>
20 August 2019	Briefing by Department on the White Paper on Science, Technology and Innovation	<p>Members asked about the hydrogen fuel cell engine and wanted to know whether it produced electricity that could power electric cars or scooters.</p> <p>Members asked about alleged theft at (Biovac) and whether this was just a perception, or whether it was the kind of problem associated with other state-owned enterprises.</p>	<p>The Department responded that the hydrogen fuel cell was a device that converted hydrogen and produced electricity by splitting a hydrogen cell into an electron and proton to produce electricity. The electricity would power anything from a light bulb to a battery in the engine of a car or scooter. They invited the Committee to visit one of the centres at the University of the Western Cape (UWC) that was integrating the different components of the fuel cell.</p> <p>The Department had received no complaints of theft at Biovac. All the audits were clean, but the Department expressed its willingness to interrogate any other issues.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		Members asked about universities and institutions like the CSIR both being funded by the Department.	The Department explained that the incentive and remuneration schemes were completely different. The nature of the institutional arrangements was different, and could never be combined.
		Members asked about the material aim of the Department as a whole and how it could help economically in terms of innovations.	It was indicated that the Department had piloted some innovations that showed how innovation could assist with services. For example, alternative broadband provided by UWC to a small rural community in the Eastern Cape had enabled community members to make bank transactions.
		Members wanted to know if section 217 the Public Finance Management Act (PFMA) was applied as required.	The Department replied that section 217 of the PFMA, which relates to the procurement policies and processes, was applied.
		Members ask for clarity regarding the Sovereign Innovation Fund and links to the Sovereign Work Fund that members of the Standing Committee on Finance referenced repeatedly. The Department was asked how it would work and where the resources would come from.	The Department said it had been informed that Treasury was considering providing innovative, high-tech SMMEs with funding. It was hoped that the money would be available by April 2020. This seemed to be the start of an innovation fund and there were already sector innovation funds run by the Department which would be the basis for setting up the Sovereign Innovation Fund.
		Members asked what the Department of Environment, Forestry and Fisheries was doing around the biodiversity economy and how the DSI was collaborating in this work.	The Department referred to a network of instruments in the biodiversity sphere that were using platforms jointly developed by the two departments. Details could be shared with the Committee if required.

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
11 Sept. 2019	Briefing by the Department on the SKA, MeerKAT and other radio astronomy projects	<p>Members asked how the Department would get SMMEs, especially black-owned ones, to take part in these projects considering how remotely they were located.</p> <p>Members asked where the data centre was located, where the company was from and which scientists were involved in the project.</p> <p>Members asked whether the Department had plans to tell its success stories. It was important that the public were aware of successes.</p> <p>Members asked how many schools the Department supported and where these schools were located.</p> <p>Members asked where community projects were located across the country.</p> <p>Members asked why New Zealand had withdrawn from the SKA Convention.</p>	<p>The detail on the participation of SMMEs involved in the projects would be furnished in writing if the Chairperson allowed.</p> <p>This information could be shared with the Committee through correspondence.</p> <p>The Department admitted that it did not do enough in this space.</p> <p>A breakdown could be provided to the Committee.</p> <p>The Department could come back with a detailed presentation indicating the location of all the projects done by the Department – its entire portfolio. This could also be submitted in writing.</p> <p>New Zealand had withdrawn owing to national budget considerations. However, this was not a significant setback and had been offset by increasing participation from other countries such as Portugal and Germany. The decision had been contested in New Zealand, but the international community had to respect it.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		<p>Members asked about the economic impact of the SKA project, besides the communities near which the project was being built and SMMEs that had partnered in the construction of these projects.</p> <p>Members wanted to know whether the electromagnetic and radio waves risked interfering with Independent Communications Authority of South Africa (ICASA) technology.</p> <p>Members asked about the number of South Africans involved in the Event Horizon Telescope project.</p>	<p>The Department had formed partnerships with multinational companies interested in developing related technologies. One multinational had established a centre for broadband communication at Nelson Mandela University and the Department would be using that to look at alternative broadband infrastructure for the country and the skills needed for networking technologies. A team had been asked to quantify the Rands and cents and, once the figures were available, this would be provided to the Committee.</p> <p>The Department responded that it worked very closely with ICASA in terms of frequency allocation.</p> <p>South Africa was involved in the project. The South African professor involved was supported through the Department's skills development programmes.</p>
11 Sept. 2019	Briefing on the international governance of the SKA project	Members asked about the relationship between the SKA Intergovernmental Organisation and the United Nations. Was it part of the UN system?	The Department responded that the Intergovernmental Organisation was not part of the United Nations. Although some aspects of the rules and processes on the depositary of the Convention were borrowed from the UN, it was independent of the UN.

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		Members asked where the member countries deposited their instruments of ratification. Was it a voluntary process that involved only selected countries?	The Department responded that member countries deposited their instruments with the United Kingdom and that the partnership was open to any country. Involvement would be decided by the government of that country. However, the addition of a new member country would require the approval of the existing member countries.
		Members asked when the protocol convention would be brought to the country.	The Department responded that two memoranda had already been submitted to Cabinet. It would require the approval of both Parliament and the National Council of Provinces.
18 Sept. 2019	Briefing by the Department on the research and development (R&D) tax incentive programme and other initiatives of the DSI to stimulate R&D in the country	Members asked about annual statistical report, and whether it should be submitted to Parliament or published for the general public. Had there been a Cabinet memo and had the report had already been published online?	The Department responded that the legislation (the Income Tax Act) required the annual statistical report required the report to be tabled in Parliament. There was a process for producing the report, and one step was a presentation to Parliament. A submission to Cabinet would follow. After approval by the Cabinet, it would be brought back to Parliament before it was published for the general public.
		Members asked how much tax income had been foregone.	The estimates on this matter were usually published by National Treasury, using data generated by SARS. The current data available, from the start of the programme up until the 2016/17 financial year, showed a total of R5,2 billion in tax foregone.

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		<p>Members asked how much of the investments into the R&D programme this R5,2 billion had amounted to.</p> <p>Members asked how to increase investment expenditure in the R&D programme from 0,8% to 1,5% of the country's GDP.</p>	<p>The Department responded that the investments which had been supported by both government and the private sector amounted to R50 billion. Tax foregone was only R5,2 billion of this.</p> <p>This would be made clearer in the next report.</p> <p>The Department responded that both the government and the private sector needed to increase their contribution to R&D. It would be beneficial if international actors could also increase their investment into the R&D programme. The target of GDP investment of 1,5% was dependent on the state of the country's economy. The Department wanted to see the intensity of investment in R&D increase in the environment of a growing economy. When the economy had higher levels of growth, the total GDP investment into the R&D programme increased as well.</p>
8 October 2019	Briefing by the Department on its 2018/19 Annual Report	<p>Members asked for a financial breakdown.</p> <p>Members asked about the targets for Programme 4 (Research Development and Support) and Programme 5 (Socio-economic Innovation Partnerships) and if these targets were linked to the budget that the Department received.</p>	<p>The Department apologised about the lack of a financial breakdown and promised to furnish more detailed information at a later stage.</p> <p>The Department replied that at the time the targets were set the Department was seeking to address a particular problem. The Minister and other stakeholders engage on targets to ensure that objectives are met. Targets were being met at honours and master's level, but there were difficulties in meeting targets for doctoral students.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
8 Oct. 2019	Briefing by the Department on the Convention establishing the Square Kilometre Array (SKA) Observatory	Members asked where international law would be applicable; would it be inside the offices or elsewhere?	The Department replied that these were details that would be covered in the hosting agreement. There would be aspects falling under the jurisdiction of the SKA Observatory Director General, and the SKA would commit to complying with South African legislation.
9 Oct. 2019	Briefing by the Council for Scientific and Industrial Research (CSIR) on its 2018/19 Annual Report	<p>Members asked why the white population was not included in the achievements, but that only black people were reported on.</p> <p>Members asked for statistics on youth representation and people with disabilities in the workplace.</p> <p>Members asked whether there was a possibility of expanding subsidies to other institutions that provided similar support for researchers. Should other institutions be entitled to these incentives and benefits?</p>	<p>The CSIR explained that references to “black South Africans” in the report included coloured, Indian and South African black people, but where it only referred to “black”, these figures included people from the African Diaspora.</p> <p>The CSIR replied that the organisation had not yet separated that cohort but it needed to do more in that space.</p> <p>The CSIR responded that subsidies for universities came in three parts, i.e. input subsidy, output subsidy and earmarked subsidy. The money allocated to higher education was divided into these three parts. Furthermore, the output subsidy was split into two categories (research and graduate subsidies). The money went to the universities through the DHET appropriation, but some of the institution’s money was used to provide funding using a similar funding model but without necessarily asking the DHET for assistance.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		<p>Members asked about the impact of the entity on industries.</p> <p>Members wanted to know about the criteria used by the CSIR to determine the number of students it would fund.</p>	<p>The CSIR played a key role in forming industries through SMMEs but it could play a bigger role in the expansion of industries.</p> <p>The CSIR had certain base expertise and capabilities. There were some universities with a strong engineering base, and previously disadvantaged universities did not always have the expertise. Although the Department was funding a lot of students from, for example, UP, most of these students were actually black.</p>
9 Oct. 2019	Briefing by the National Research Foundation (NRF) on its 2018/19 Annual Report	<p>Members asked whether entities considered presenting their content into indigenous languages.</p> <p>Members asked how good the NRF's relationship with the National Student Financial Aid Scheme (NSFAS) was.</p> <p>Members asked why the entity could not prevent irregular expenditure.</p>	<p>The NRF tried to do this in its science engagements. It also supported researchers who conducted research on how languages could improve the learning process of students, particularly in science.</p> <p>The NRF would partner with NSFAS to integrate the data. This relationship was currently being formalised.</p> <p>The entity was of the view that maybe the AG had different views when dealing with different organisations. While the CSIR had R6,2 million in irregular expenditure and received a clean audit, the NRF only had R4,3 million in irregular expenditure but did not get a clean audit.</p>
9 Oct. 2019	Briefing by Technology Innovation Agency on its 2018/19 Annual Report	All questions were answered and no follow-up questions were raised.	All matters were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes).

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
9 Oct. 2019	Briefing by the Human Sciences Research Council (HSRC) on its 2018/19 Annual Report	<p>Members asked if there were plans to absorb young people into senior level position.</p> <p>Members asked where the HSRC conducted its public dialogues.</p>	<p>There were talented young people in the organisation, who were probably five to 10 years away from assuming senior positions. Management did not want to push them until they had been prepared.</p> <p>The HSRC indicated that there had been a public dialogue with landless women in Pretoria. A dialogue on restitution, held in consultation and collaboration with other institutions, was attended by over 200 people, and a charter on restitution was developed. A dialogue on gender-based violence and teenage pregnancy in the form of a photographic exhibition had been held in a rural community outside Pietermaritzburg.</p>
13 Nov. 2019	Briefing by the Technology Information Agency on its revised 2018/19 Annual Report	Members asked whether TIA could provide a list of the SMMEs it supported, indicating locations, demographics and racial profiles.	TIA would provide the Committee with an in-depth analysis of the commercialisation and innovation support it provided to SMMEs, as well as the requested racial, gender and age profiles
19 Feb. 2020	Briefing by the Department: Overview of indigenous knowledge systems (IKS), key aspects of the IKS legislation and implementation readiness	<p>Members asked how long the accreditation process took, and who the qualified authorities responsible for accreditation were.</p> <p>Members asked that there should be a colloquium on the IKS legislation presented so that the views of society could be heard.</p>	<p>The Department would have meetings with SAQA and the Quality Council for Trades and Occupations (QCTO) to decide who would be the authoritative body. It was expected that the process of registration and certification would take place within about six months.</p> <p>The Department would help the Committee to structure a colloquium. The Department further agreed that it was necessary, and that implementation was the most important</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
			consideration at this point. A colloquium on the topic would allow the discussion to continue and the Department would be ready to make a presentation at the colloquium.
26 Feb. 2020	Briefing by the Department on energy security	<p>Members wanted to know why South Africa was not using solar power to the best of its ability while other countries, such as Germany, were taking it seriously.</p> <p>Members asked what the Department had achieved in terms of the 10-year solar power project.</p>	<p>The Department responded that investment in solar energy is high, but the advantage is that excess energy can be sold to the service provider or the grid. This encourages the deployment of solar power. When the subsidy programme was initiated for solar power water heaters, there was uptake.</p> <p>The Department responded that it had achieved most of its targets. The only one outstanding related to market capture. Earlier approaches had not been successful, and the Department had realised that it needed to partner with global original equipment manufacturers. The DSI had managed to localise the whole technology development space and ensure that the products went to market. The third phase of the project would be initiated that year.</p>

7. PORTFOLIO COMMITTEE (CONTINUED)

Date	Subject	Matters raised by the Portfolio Committee (highlights of high-level issues)	How the matters were addressed/resolved
		Members asked whether science information was translated into indigenous languages to ensure that it was accessible to all citizens.	The Department indicated that it worked with the National Language Service to have questionnaires for research purposes translated into indigenous languages. This could be scaled up. The National Language Service did not charge the Department for translations.
10 March 2020	Briefing by the Technology Innovation Agency (TIA) on progress with regard to challenges highlighted, and giving a breakdown on support for grassroots innovation and SMMEs	All questions were answered and no follow-up questions were raised.	All matters were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes).

On 13 November 2019, the Department gave a briefing to the Select Committee on Education and Technology, Sports, Arts and Culture on the DSI's Annual Report. All matters were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes).

7. PORTFOLIO COMMITTEE (CONTINUED)

8. SCOPA RESOLUTIONS

There were no Standing Committee on Public Accounts (SCOPA) resolutions.

9. PRIOR MODIFICATIONS TO AUDIT REPORTS

There were no prior modifications to the audit reports of the Department.

10. INTERNAL CONTROL UNIT

There is no internal control unit in the Department. All internal control functions are performed by the Internal Audit Activity.

11. INTERNAL AUDIT AND AUDIT COMMITTEES

Key activities and objectives of Internal Audit Activity

Internal audit is a primary assurance tool that supports stewardship and accountability in the spending of public funds, and is a key component of the governance of the Department in terms of improving the Department's governance, risk management and management controls. This is achieved by proactively providing independent, objective assurance and consulting activities as outlined in the three-year risk based rolling internal audit plan.

In establishing audit priorities during the strategic planning cycle for 2015 to 2020, Internal Audit Activity employed a risk-based approach, considering the key areas of risk for the Department relating both to its current operations and to those proposed in the current Strategic Plan and risk management strategy.

Emerging risks and issues were considered when completing the audit plan. Internal Audit Activity conducted a follow-up of audit recommendations to ensure that value was derived from the auditing performed.

Summary of audit work done

Audit effort was directed to the areas of reporting on performance against predetermined objectives, financial reporting, supply chain management, information technology, Management Performance Assessment Tool results, strategic risk profiles, and a sample of projects implemented by the Department in the achievement of its strategic objectives. Internal Audit Activity also evaluated the level of combined assurance provided by the various assurance providers to determine whether the combined assurance received was appropriate for addressing all significant risks facing the Department.

11. INTERNAL AUDIT AND AUDIT COMMITTEES (CONTINUED)

Audit effort was directed to the areas of reporting on performance against predetermined objectives, financial reporting, supply chain management, information technology, Management Performance Assessment Tool results, strategic risk profiles, and a sample of projects implemented by the Department in the achievement of its strategic objectives. Internal Audit Activity also evaluated the level of combined assurance provided by the various assurance providers to determine whether the combined assurance received was appropriate for addressing all significant risks facing the Department.

Key activities and objectives of the Audit Committee

The Audit Committee is constituted to fulfil the Department's statutory obligations in terms of section 77 of the Public Finance Management Act, 1999, and the Treasury Regulations issued in terms of the Act. The Audit Committee is an oversight body, providing independent oversight over governance, risk management and control processes of the Department. The Committee's mandate and responsibilities are clearly defined in the Audit Committee Charter, in accordance with which four Audit Committee meetings were convened in the year under review.

Attendance of Audit Committee meetings by Audit Committee members

Name	Qualifications	Internal or external	Date appointed	Date contract ended	Number of meetings attended
Shirley Machaba	CA (SA), CD (SA), CRMA, CCSA	External	1 Oct. 2012	30 Sept. 2018	2 of 4
Len Konar	DCom, CA (SA), CRMA	External	1 Oct. 2016	n/a	4 of 3
Nicolette Middleton	MBA, CIA, BCom Hons (Informatics)	External	1 Mar. 2018	n/a	4 of 4
Irene Tlhase	MA in Economics, BSc (Agribusiness)	External	1 Oct. 2018	n/a	2 of 2
Moshupi Mokgobinyane	CA (SA), MPhil in Accounting Sciences, BCom Hons (Accounting), CTA	External	1 Nov. 2018	n/a	2 of 2

12. AUDIT COMMITTEE REPORT (CONTINUED)

12. AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended 31 March 2020.

1. Audit Committee responsibility

The Audit Committee has fulfilled its responsibilities in accordance with the provisions of section 38(1)(a)(ii) of the Public Finance Management Act and Treasury Regulation 3.1.13. The Committee operates under its Audit Committee Charter, and has fulfilled its duties and responsibilities as outlined in the Charter, except that it has not reviewed changes to accounting policies and practices.

2. The effectiveness of Internal Audit Activity

Internal Audit Activity reports functionally to the Audit Committee and the Audit Committee monitors and evaluates the activities of the Internal Audit Activity. The Internal Audit Plan and the Internal Audit Charter are reviewed and approved by the Committee on an annual basis. The audit plan is aligned to the significant risks facing the Department. The Internal Audit Activity completed all audit engagements, including assessing whether the combined assurance received was appropriate for addressing all significant risks facing the Department. An internal audit quality assurance and improvement programme is implemented annually and the results are presented to the Audit Committee.

The Audit Committee is satisfied that Internal Audit Activity is operating effectively and has addressed pertinent risks to the Department by implementing the annual audit plan.

3. The effectiveness of internal controls

Our review of the significant audit findings, which was informed by the risk assessments conducted in the Department, revealed certain weaknesses which were then raised with the Department.

The Committee is satisfied that an adequate system of internal controls is in place to mitigate risks to an acceptable level and that these controls were effective during the financial year under review. Internal Audit provided the Audit Committee with the assurance that the internal controls were appropriate and effective.

Opportunities for improvement were identified with Information Technology areas pertaining to programme change management and business continuity.

4. In-year management and monthly/quarterly reporting

The Department submits monthly reports on departmental expenditure and quarterly reports on its interim financial statements to the Treasury, as required by the Public Finance Management Act. The Department also reports quarterly to the Department of Planning, Monitoring and Evaluation on performance against predetermined objectives. During the year under review, the Audit Committee monitored these reports, which were prepared and issued by the Accounting Officer and management.

5. Evaluation of financial statements

The Audit Committee –

- reviewed and discussed, with the Auditor-General South Africa (AGSA) and the Accounting Officer, the audited annual financial statements to be included in the annual report;
- reviewed the Department's compliance with legal and regulatory provisions;
- reviewed significant adjustments resulting from the audit;
- reviewed the AGSA's management letter and management's response to it;
- reviewed information on predetermined objectives to be included in the annual report.

12. AUDIT COMMITTEE REPORT (CONTINUED)

Overall, the Audit Committee is satisfied with the submission and quality of both the interim and annual financial statements prepared by the Department.

6. Enterprise risk management

Enterprise risk management is a structured process that focuses on the identification, assessment, management and monitoring of risk. A fully functional Enterprise Risk Management Committee supports the Executive Authority and Accounting Officer by providing oversight, reviewing information presented by management, and reporting on the adequacy and effectiveness of the Department's risk management system. The Committee monitored significant risks and is satisfied that they were reduced to an acceptable level. Comprehensive strategies for enterprise risk management and fraud risk management were developed and implemented. The fraud risk management strategy includes a fraud prevention and detection plan. For the purposes of coordination and fostering relationships, the Chairperson of the Audit Committee and the Chief Audit Executive are standing invitees to the Enterprise Risk Management Committee, and the Chairperson of the Enterprise Risk Management Committee and the Chief Risk Officer are standing invitees to the Audit Committee.

7. Annual performance review

The Audit Committee has considered the performance information reports submitted to the AGSA for review..

8. Auditor-General's report

We have reviewed the Department's commitments identified in the AGSA status of review document for audit issues raised in the previous year and we are satisfied that the matters are being adequately addressed. However, the following areas of concern require management intervention:

Information Technology areas pertaining to programme change management and business continuity.

The Audit Committee concurs with and accepts the conclusions of the Auditor-General on the annual financial statements, and is of the opinion that the audited annual financial statements be accepted and read together with the report of the AGSA.



Dr Len Konar

Chairperson of the Audit Committee
Department of Science and Innovation
23 September 2020



PART D

HUMAN RESOURCE MANAGEMENT

PART D: HUMAN RESOURCE MANAGEMENT

1. Introduction

The reporting information contained in this section of the Annual Report has been prescribed by the Department of Public Service and Administration for all departments within the Public Service.

2. Overview of Human Resources

As at 31 March 2020, the departmental post establishment was at 490, with 380 positions filled and 110 vacant, translating to a 22,4% vacancy rate. This was owing to the National Treasury decision to reduce the baseline of the allocation for compensation of employees, which resulted in all vacant positions being declared unfunded.

A total of 37 employees left the Department and 22 employees were recruited, making the departmental turnover rate 9,25%. Expiry of contracts accounted for the highest number of terminations (51,4%), followed by resignations at 37,8%, while transfers to other departments accounted for 10,8%.

The Department continued to comply with the Performance Management and Development System.

All 103 Senior Management Service (SMS) members submitted their performance agreements by the due date, and all performance rewards for both SMS and non-SMS members were processed by 31 December 2019.

As at 31 March 2020, only 85% of the approved departmental organisational structure was funded. The process of reviewing the organisational structure was suspended during the transition from the fifth to the sixth administration. With 15% of the approved structure unfunded, staff in funded positions have to carry out the functions of unfunded positions, and many employees are overburdened and overstretched.

As part of its ongoing commitment to health promotion programmes, the Department has formally designated an SMS member, established a dedicated directorate, allocated sufficient budget, and established and maintained a fully functional statutory committee in line with the Public Service Regulations, 2016. There is sufficient utilisation of the Health and Wellness Programme services offered to employees to address personal and work-related psycho-social challenges.

3. HUMAN RESOURCES OVERSIGHT STATISTICS

3. Human resources oversight statistics

3.1 Personnel-related expenditure

Table 3.1.1: Personnel expenditure by Programme in the period 1 April 2019 to 31 March 2020

Programme	Total expenditure (R'000)	Personnel expenditure (R'000)	Training expenditure (R'000)	Professional and special services expenditure (R'000)	Personnel expenditure as % of total expenditure	Average personnel cost per employee (R'000)
Administration	323 170	148 587	3 073	8 972	45,9	782
Technology Innovation	1 236 673	43 824	0	2 528	3,5	996
International Cooperation and Resources	136 027	48 357	0	0	35,5	912
Research Development and Support	4 578 431	39 915	0	663	0,8	868
Socio-economic Innovation Partnerships	1 778 196	43 193	0	208	2,4	919
Total	8 052 497	323 876	3 073	12 370	4	852

Table 3.1.2: Personnel costs by salary band in the period 1 April 2019 to 31 March 2020

Salary band	Personnel expenditure (R'000)	% of total personnel cost	Number of employees	Average personnel cost per employee (R'000)
Lower skilled (Levels 1-2)	0	0	0	0
Skilled (Levels 3-5)	3 820	1,2	12	318
Highly skilled production (Levels 6-8)	41 012	12,7	99	414
Highly skilled supervision (Levels 9-12)	149 906	46,3	174	861
Senior and top management (Levels 13-16)	129 138	39,8	95	1 359
Total	323 876	100	380	852

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.1.3: Salaries, overtime, home owner's allowance and medical aid by Programme in the period April 2019 to 31 March 2020

Programme	Salaries		Overtime		Home owner's allowance (HOA)		Medical aid	
	Amount (R'000)	Salaries as % of personnel costs	Amount (R'000)	Overtime as % of personnel costs	Amount	HOA as % of personnel costs	Amount	Medical aid as % of personnel costs
Administration	132 583	40,9	598	0,2	2 106	0,7	3 614	1,1
Technology Innovation	39 379	12,2	7	0,002	678	0,2	598	0,2
International Cooperation and Resources	43 338	13,4	6	0,002	685	0,2	1 063	0,3
Research Development and Support	35 747	11	27	0,008	721	0,2	687	0,2
Socio-economic Innovation Partnerships	38 757	11,9	0	0	455	0,1	542	0,2
Total	289 804	89,4%	638	0,20%	4 644	1,4	6 504	2

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.1.4: Salaries, overtime, home owner's allowance and medical aid by salary band in the period 1 April 2019 to 31 March 2020

Programme	Salaries		Overtime		Home owner's allowance (HOA)		Medical aid	
	Amount (R'000)	Salaries as % of personnel costs	Amount (R'000)	Overtime as % of personnel costs	Amount	HOA as % of personnel costs	Amount	Medical aid as % of personnel costs
Lower skilled (Levels 1-2)	0	0	0	0	0	0	0	0
Skilled (Levels 3-5)	2 627	0,08	169	0,05	108	0,03	198	0,06
Highly skilled production (Levels 6-8)	32 765	10	333	0,1	1 440	0,4	2 758	0,9
Highly skilled supervision (Levels 9-12)	131 471	40,5	136	0,04	1 586	0,5	2 538	0,8
Senior and top management (Levels 13-16)	122 941	37,9	0	0	1 510	0,5	1 010	0,3
Total	289 804	89,5	638	0,2	4 644	1,4	6 504	2

3.2 Employment and vacancies

Table 3.2.1: Employment and vacancies by Programme as at 31 March 2020

Programme	Number of posts on approved establishment	Number of posts filled	Vacancy rate	Number of employees additional to the establishment
Administration	242	190	21.5	3
Technology Innovation	62	44	29	0
International Cooperation and Resources	69	53	23.2	1
Research Development and Support	55	46	16.4	0
Socio-economic Innovation Partnerships	62	47	24.2	0
Total	490	380	22.4	4

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.2.2: Employment and vacancies by salary band as at 31 March 2020

Salary band	Number of posts on approved establishment	Number of posts filled	Vacancy rate	Number of employees additional to the establishment
Lower skilled (Levels 1-2)	0	0	0	0
Skilled (Levels 3-5)	13	12	7,6	0
Highly skilled production (Levels 6-8)	124	99	20,1	1
Highly skilled supervision (Levels 9-12)	228	174	23,6	2
Senior and top management (Levels 13-16)	125	95	24	1
Total	490	380	22,4	4

Table 3.2.3: Employment and vacancies by critical occupation as at 31 March 2020

Programme	Number of posts on approved establishment	Number of posts filled	Vacancy rate	Number of employees additional to the establishment
None	0	0	0	0
Total	0	0	0	0

3.3 Filling of Senior Management Service posts

Table 3.3.1: SMS post information as at 31 March 2020

SMS level	Total number of funded SMS posts	Total number of SMS posts filled	% of SMS posts filled	Total number of SMS posts vacant	% of SMS posts vacant
Director-General	1	1	100	0	0
Salary Level 16	0	0	0	0	0
Salary Level 15	9	5	55,6	4	44,4
Salary Level 14	27	18	66,7	9	33,3
Salary Level 13	88	71	80,7	17	19,3
Total	125	95	76	30	24

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.3.2: SMS post information as at 30 September 2019

SMS level	Total number of funded SMS posts	Total number of SMS posts filled	% of SMS posts filled	Total number of SMS posts vacant	% of SMS posts vacant
Director-General	1	1	100	0	0
Salary Level 16	0	0	0	0	0
Salary Level 15	9	5	55,6	4	44,4
Salary Level 14	27	19	70,4	8	29,6
Salary Level 13	88	70	79,5	18	20,5
Total	125	95	76	30	24

Table 3.3.3: Advertising and filling of SMS posts in the period 1 April 2019 to 31 March 2020

SMS level	Total number of funded SMS posts	Total number of SMS posts filled	% of SMS posts filled	Total number of SMS posts vacant	% of SMS posts vacant
Director-General	1	1	100	0	0
Salary Level 16	0	0	0	0	0
Salary Level 15	9	5	55,6	4	44,4
Salary Level 14	27	18	66,7	9	33,3
Salary Level 13	88	71	80,7	17	19,3
Total	125	95	76	30	24

Table 3.3.4: Reasons for not having complied with time frames for the filling of funded vacant SMS posts – advertised within 6 months and filled within 12 months after becoming vacant – in the period 1 April 2019 to 31 March 2020

Reasons for vacancies not being advertised within six months

Positions which were vacant on 1 November 2017 were declared unfunded as a result of the reduction of the baseline allocation on the compensation of employees by National Treasury in November 2017. Positions are reprioritised upon termination of services by other employees.

Reasons for vacancies not being filled within six months

Transitional measures from the 5th to the 6th administration resulted in a moratorium on the filling of positions at Deputy Director-General level together with the suspension in the filling of Programme 1 positions as a result of the reconfiguration of government. Internally, the Department also experienced challenges as a result of delays in pre-employment screening by the State Security Agency.

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.3.5: Disciplinary steps taken for not complying with the prescribed time frames for filling SMS posts in the period 1 April 2019 to 31 March 2020

Vacancies not advertised within six months

None

Vacancies not filled within six months

None

3.4 Job Evaluation

Table 3.4.1: Job evaluation by salary band in the period 1 April 2019 to 31 March 2020

Salary band	Number of posts on approved establishment	Number of jobs evaluated	% of posts evaluated by salary band	Posts upgraded		Posts downgraded	
				Number	% of posts evaluated	Number	% of posts evaluated
Lower skilled (Levels 1-2)	0	0	0	0	0	0	0
Skilled (Levels 3-5)	13	0	0	0	0	0	0
Highly skilled production (Levels 6-8)	124	0	0	0	0	0	0
Highly skilled supervision (Levels 9-12)	228	2	0,9	0	0	0	0
Senior Management Service Band A	88	5	5,7	0	0	0	0
Senior Management Service Band B	27	0	0	0	0	0	0
Senior Management Service Band C	9	0	0	0	0	0	0
Senior Management Service Band D	1	0	0	0	0	0	0
Total	490	7	1,4	0	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.4.2: Profile of employees whose positions were upgraded due to their posts being upgraded in the period 1 April 2019 to 31 March 2020

Gender	African	Asian	Coloured	White	Total
Female	0	0	0	0	0
Male	0	0	0	0	0
Total	0	0	0	0	0

Table 3.4.3: Employees with salary levels are higher than those determined by job evaluation by occupation in the period 1 April 2019 to 31 March 2020

Occupation	Number of employees	Job evaluation level	Remuneration level	Reason for deviation
Deputy Director-General	0	0	0	0
Chief Director	0	0	0	0
Director	0	0	0	0
Deputy Director	44	11	12	Personal notch
Assistant Director	19	9	10	Personal notch
Total	63	0	0	Personal notch
Total number of employees whose salaries exceeded the level determined by job evaluation				63
Percentage of total employed				16,6

Table 3.4.4: Profile of employees with salary levels higher than those determined by job evaluation in the period 1 April 2019 to 31 March 2020

Gender	African	Asian	Coloured	White	Total
Female	28	1	2	3	34
Male	25	0	1	3	29
Employees with a disability	0	0	0	0	0
Total	53	1	3	6	63

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.5 Employment changes

Table 3.5.1: Annual turnover rates by salary band in the period 1 April 2019 to 31 March 2020

Salary band	Number of employees as at 1 April 2019	Appointments and transfers into the Department	Terminations and transfers out of the Department	Turnover rate
Lower skilled (Levels 1-2)	0	0	0	0
Skilled (Levels 3-5)	12	4	1	8,3
Highly skilled production (Levels 6-8)	100	5	8	8
Highly skilled supervision (Levels 9-12)	185	6	16	8,6
Senior Management Service Band A 13	76	5	7	9,2
Senior Management Service Band B 14	20	1	3	5
Senior Management Service Band C 15	6	0	2	33,3
Senior Management Service Band D	1	1	0	0
Total	400	22	37	9,25

Table 3.5.2: Annual turnover rates by critical occupation in the period 1 April 2019 to 31 March 2020

Critical occupation	Number of employees at beginning of period April 2019	Appointments and transfers into the department	Terminations and transfers out of the department	Turnover rate
None	0	0	0	0
Total	0	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.5.3: Reasons why staff left the Department in the period 1 April 2019 to 31 March 2020

Termination type	Number	% of total resignations/ terminations
Death	0	0
Resignation	14	37,8
Expiry of contract	19	51,4
Dismissal – operational changes	0	0
Dismissal – misconduct	0	0
Dismissal – inefficiency	0	0
Discharged due to ill-health	0	0
Retirement	0	0
Transfer to other Public Service departments	4	10,8
Other	0	0
Total	37	100
Total number of employees who left as a percentage of total employment		9,7

Table 3.5.4: Promotions by critical occupation in the period 1 April 2019 to 31 March 2020

Occupation	Employees 1 April 2019	Promotions to another salary level	Salary level promotions as a % of employees by occupation	Progressions to another notch within a salary level	Notch progression as a % of employees by occupation
None	0	0	0	0	0
Total	0	0	0	0	0

Table 3.5.5: Promotions by salary band in the period 1 April 2019 to 31 March 2020

Salary band	Employees 1 April 2019	Promotions to a higher salary level	Salary bands promotions as % of employees by salary level	Progressions to another notch within a salary level	Notch progression as % of employees by salary band
Lower skilled (Levels 1-2)	0	0	0	0	0
Skilled (Levels 3-5)	12	0	0	6	50
Highly skilled production (Levels 6-8)	100	0	0	72	72
Highly skilled supervision (Levels 9-12)	185	1	0,54	163	88
Senior Management (Levels 13-16)	103	0	0	76	73,8
Total	400	1	0,26	317	79,3

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.6 Employment equity

Table 3.6.1: Total number of employees (including employees with disabilities) in each of the following occupational categories as at 31 March 2020

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Legislators, senior officials and managers 13-15	38	3	4	4	32	2	5	7	95
Professionals 9-12	63	1	1	5	91	4	2	6	173
Technicians and associate professionals 6-8	24	2	0	0	65	5	0	4	100
Clerks 3-5	5	0	0	0	6	1	0	0	12
Service and sales workers	0	0	0	0	0	0	0	0	0
Skilled agriculture and fishery workers	0	0	0	0	0	0	0	0	0
Craft and related trades workers	0	0	0	0	0	0	0	0	0
Plant and machine operators and assemblers	0	0	0	0	0	0	0	0	0
Elementary occupations	0	0	0	0	0	0	0	0	0
Total	130	6	5	9	194	12	7	17	380
Employees with disabilities	2	0	0	1	7	1	0	2	13

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.2: Total number of employees (including employees with disabilities) in each of the following occupational bands as at 31 March 2020

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Top management 15-16	2	0	1	1	2	0	0	0	6
Senior management 13-14	36	3	3	3	30	2	5	7	89
Professionally qualified and experienced specialists and middle management 9-12	63	1	1	5	91	4	2	6	173
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents 6-8	24	2	0	0	65	5	0	4	100
Semi-skilled and discretionary decision making 3-5	5	0	0	0	6	1	0	0	12
Unskilled and defined decision making	0	0	0	0	0	0	0	0	0
Total	130	6	5	9	194	12	7	17	380
Employees with disabilities	2	0	0	1	7	1	0	2	13

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.3: Recruitment in the period 1 April 2019 to 31 March 2020 DUDU

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Top management 15-16	0	0	0	0	1	0	0	0	1
Senior management 13-14	3	0	0	0	2	0	0	1	6
Professionally qualified and experienced specialists and middle management 9-12	2	0	0	0	4	0	0	1	7
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents 6-8	1	0	0	0	3	0	0	0	4
Semi-skilled and discretionary decision making 3-5	1	0	0	0	3	0	0	0	4
Unskilled and defined decision making	0	0	0	0	0	0	0	0	0
Total	7	0	0	0	13	0	0	2	22
Employees with disabilities	0	0	0	0	0	0	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.4: Promotions in the period 1 April 2019 to 31 March 2020

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Top management 15-16	0	0	0	0	0	0	0	0	0
Senior management 13-14	0	0	0	0	1	0	0	0	0
Professionally qualified and experienced specialists and middle management 9-12	1	0	0	0	1	0	0	0	1
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents 6-8	0	0	0	0	0	0	0	0	0
Semi-skilled and discretionary decision making 3-5	0	0	0	0	0	0	0	0	0
Unskilled and defined decision making	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	2	0	0	0	1
Employees with disabilities	0	0	0	0	0	0	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.5: Terminations in the period 1 April 2019 to 31 March 2020

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Top management 15-16	2	0	0	0	0	0	0	0	2
Senior management 13-14	4	0	0	0	2	1	1	2	9
Professionally qualified and experienced specialists and middle management 9-12	9	0	0	0	5	0	0	0	14
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents 6-8	2	0	0	0	3	0	0	0	5
Semi-skilled and discretionary decision making 3-5	2	0	0	0	0	0	0	0	2
Unskilled and defined decision making	0	0	0	0	0	0	0	0	0
Total	19	0	0	0	10	1	0	2	32
Employees with disabilities	0	0	0	0	0	0	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.6: Disciplinary action in the period 1 April 2019 to 31 March 2020

Disciplinary action	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Correctional counselling	0	0	0	0	0	0	0	0	0
Verbal warning	0	0	0		0	0	0	0	0
Written warning	0	0	0	0	0	0	0	0	0
Final written warning	0	0	0	0	0	0	0	0	0
Suspension without pay	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	1	0	0	1

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.6.7: Skills development in the period 1 April 2019 to 31 March 2020

Occupational category	Male				Female				Total
	African	Coloured	Asian	White	African	Coloured	Asian	White	
Legislators, senior officials and managers 13-15	19	2	2	2	21	1	2	3	52
Professionals 9-12	50	1	1	4	73	4	2	5	140
Technicians and associate professionals 6-8	1	0	0	0	1	0	0	0	2
Clerks 3-5	12	1	0	0	53	4	0	5	75
Service and sales workers	6	1	0	0	3	1	0	0	11
Skilled agriculture and fishery workers	0	0	0	0	0	0	0	0	0
Craft and related trades workers	0	0	0	0	0	0	0	0	0
Plant and machine operators and assemblers	1	0	0	0	0	0	0	0	1
Elementary occupations	0	0	0	0	2	0	0	0	2
Total	89	5	3	6	153	10	4	13	283
Employees with disabilities	2	0	0	0	2	1	0	2	7

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.7 Signing of performance agreements by SMS members

Table 3.7.1: Signing of performance agreements by SMS members as at 31 March 2020

SMS level	Total number of funded SMS posts	Total number of SMS members	Total number of signed performance agreements	Signed performance agreements as % of total number of SMS members*
Director-General	1	1	1	100
Salary Level 16	0	1	0	0
Salary Level 15	9	4	6	100
Salary Level 14	27	18	20	100
Salary Level 13	88	71	76	100
Total	125	95	103	100

Table 3.7.2: Reasons for not having concluded performance agreements for all SMS members as at 31 March 2020

n/a

Table 3.7.3: Disciplinary steps taken against SMS members for not having concluded performance agreements as at 31 May 2020

n/a

3.8 Performance rewards

Table 3.8.1: Performance rewards by race, gender and disability in the period 1 April 2019 to 31 March 2020

Race and gender	Beneficiary profile			Cost	
	Number of beneficiaries	Number of employees	% of total within group	Cost (R'000)	Average cost per employee
African					
Male	46	145	32	1 823	39 646
Female	82	193	24,5	2 867	34 969
Asian					
Male	1	4	25	48 387	48 387
Female	4	8	50	217 121	54 280
Coloured					
Male	2	5	40	47 562	23 781
Female	3	11	27,2	96 223	32 074
White					
Male	1	8	12,5	57 147	57 147
Female	9	18	50	427 350	47 483
Total	148	392	38	5 585 037	37 736

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.8.2: Performance rewards by salary band for personnel below Senior Management Service level in the period 1 April 2019 to 31 March 2020

Salary band	Beneficiary profile			Cost		Total cost as % of total personnel expenditure
	Number of beneficiaries	Number of employees	% of total within salary bands	Total cost (R'000)	Average cost per employee	
Lower skilled (Levels 1-2)	0	0	0	0	0	0
Skilled (Levels 3-5)	5	12	42	81	16 286	2,1
Highly skilled production (Levels 6-8)	45	101	44,5	1 098	24 422	2,7
Highly skilled supervision (Levels 9-12)	76	186	41	3 152	41 480	2,1
Total	126	299	42,1	4 332	34 388	1,3

Table 3.8.3: Performance rewards by critical occupation in the period 1 April 2019 to 31 March 2020

Critical occupation	Beneficiary profile			Cost	
	Number of beneficiaries	Number of employees	% of total within occupation	Total cost (R'000)	Average cost per employee
None	0	0	0	0	0
Total	0	0	0	0	0

Table 3.8.4: Performance-related rewards (cash bonus), by salary band for Senior Management Service in the period 1 April 2019 to 31 March 2020

Salary band	Beneficiary profile			Cost		Total cost as % of total personnel expenditure
	Number of beneficiaries	Number of employees	% of total within salary bands	Total cost (R'000)	Average cost per employee	
Band A	0	1	0	0	0	0
Band B	0	6	0	0	0	0
Band C	14	20	70	214	15,3	0,01
Band D	50	69	72,5	826	16,5	0,6
Total	64	96	67	1 040	16,2	1,3

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.9 Foreign workers

Table 3.9.1: Foreign workers by salary band in the period 1 April 2019 to 31 March 2020

Salary band	1 April 2018		31 March 2019		Change	
	Number	% of total	Number	% of total	Number	% of total
Lower skilled	0	0	0	0	0	0
Highly skilled production (Levels 6-8)	0	0	0	0	0	0
Highly skilled supervision (Levels 9-12)	0	0	0	0	0	0
Periodic Remuneration	0	0	0	0	0	0
Total	0	0	0	0	0	0

Table 3.9.2: Foreign workers by major occupation in the period 1 April 2019 to 31 March 2020

Major occupation	1 April 2018		31 March 2019		Change	
	Number	% of total	Number	% of total	Number	% of total
Lower skilled	0	0	0	0	0	0
Total	0	0	0	0	0	0

3.10 Leave utilisation

Table 3.10.1: Sick leave in the period 1 January 2019 to 31 December 2019

Salary band	Total days taken	% days with medical certification	Number of employees using sick leave	% of total employees using sick leave	Average days per employee	Estimated cost (R'000)
Lower skilled (Levels 1-2)	0	0	0	0	0	0
Skilled (Levels 3-5)	112	113,6	8	67	3	99
Highly skilled production (Levels 6-8)	937	50,2	96	93	10	1 395
Highly skilled supervision (Levels 9-12)	1 085	68,6,1	159	83	7	3 350
Top and senior management (Levels 13-16)	420	16,2	65	63	6	1 960
Total	2 464	62,14	328	76	8	6 804

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.10.2: Disability leave (temporary and permanent) in the period 1 January 2019 to 31 December 2019

Salary band	Total days taken	% days with medical certification	Number of employees using sick leave	% of total employees using sick leave	Average days per employee	Estimated cost (R'000)
Lower skilled (Levels 1-2)	0	0	0	0	0	0
Skilled (Levels 3-5)	100	100	1	0,87	0	25
Highly skilled production (Levels 6-8)	15	100	3	2,61	5	327
Highly skilled supervision (Levels 9-12)	0	100	0	0,00	0	486
Top and senior management (Levels 13-16)	70	100	1	0,84	70	209
Total	185	100	5	1,3	75	467

Table 3.10.3: Annual leave in the period 1 January 2019 to 31 December 2019

Salary band	Total days taken	Number of employees using annual leave	Average per employee
Lower skilled (Levels 1-2)	0	0	0
Skilled (Levels 3-5)	217	9	24
Highly skilled production (Levels 6-8)	2 520	96	26
Highly skilled supervision (Levels 9-12)	4 077	161	25
Senior management (Levels 13-16)	2 470	93	27
Total	9 284	359	26

Table 3.10.4: Capped leave in the period 1 January 2019 to 31 December 2020

Salary band	Total days taken	Number of employees using annual leave	Average per employee	Average capped leave per employee as at 31 March 2019
Lower skilled (Levels 1-2)	0	0	0	0
Skilled (Levels 3-5)	0	0	0	11
Highly skilled production (Levels 6-8)	0	0	0	26
Highly skilled supervision (Levels 9-12)	0	0	0	28
Senior management (Levels 13-16)	0	0	0	29
Total	0	0	0	27

Making sure it's possible

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.10.5: Leave payouts in the period 1 January 2019 to 31 December 2019

Reason	Total amount (R'000)	Number of employees	Average per employee (R'000)
Leave payouts in 2018 due to non-utilisation of leave for the previous cycle	0	0	0
Capped leave payouts on termination of service in 2018	241	1	241
Current leave payouts on termination of service in 2018	471	12	39
Total	712	13	55

3.11 HIV/Aids and health promotion programmes

Table 3.11.1: Steps taken to reduce the risk of occupational exposure

Units/categories of employees identified to be at high risk of contracting HIV and related diseases (if any)	Key steps taken to reduce the risk
None	None

Table 3.11.2: Details of health promotion and HIV/Aids programmes

Question	Yes	No	Details, if yes
1. Has the Department designated a member of the SMS to implement the provisions contained in Part VI E of Chapter 1 of the Public Service Regulations, 2001? If so, provide her/his name and position.	X		Ms Sipiwe Mthombeni Director: Special Programmes
2. Does the Department have a dedicated unit or has it designated specific staff members to promote the health and well-being of its employees? If so, indicate the number of employees who are involved in this task and the annual budget that is available for this purpose.	X		The Directorate: Special Programmes has five employees (one director, one deputy director and two assistant directors). R1,996 million was allocated for the promotion of employees' health and wellness, including HIV, Aids and TB programmes.

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3. Has the Department introduced an employee assistance or health promotion programme for its employees? If so, indicate the key elements/services of this programme.	X		The Department's Employee Assistance Programme services are outsourced to Careways. The services offered include assistance with personal, family, work, financial, health and legal challenges. Key elements of the programme include counselling, health risk assessments, HIV counselling and testing, TB screenings, the distribution of male and female condoms, and education, awareness and sporting activities.
4. Has the Department established one or more committees as contemplated in Part VI E.5 (e) of Chapter 1 of the Public Service Regulations, 2001? If so, please provide the names of the members of the committee and the stakeholder(s) that they represent	X		<ol style="list-style-type: none"> 1. Ms Loretta Pillay 2. Ms Ellen Moloi 3. Mr Sphiwe Shange 4. Ms Truelove Mnguni 5. Ms Nombulelo Dlalisa 6. Ms Pertunia Mphato 7. Mr Vincent Napo 8. Ms Ncumisa Runeyi 9. Ms Caroline Mohlamonyane 10. Mr Siyabonga Ndlovu 11. Mr Phumelele Yabo 12. Ms Tumisang Sebitloane 13. Ms Matlhodi Mathebula 14. Mr Wiseman Ndlela 15. Ms Vivienne Gondwe 16. Mr Benny Nhlapo 17. Ms Hlamalani Khoza 18. Ms Sphiwe Mthombeni <p>The committee represents all employees in the Department (both SMS and non-SMS members).</p>
5. Has the Department reviewed its employment policies and practices to ensure that they do not unfairly discriminate against employees on the basis of their HIV status? If so, list the employment policies/practices so reviewed.	X		<p>The following policies were reviewed and approved:</p> <ol style="list-style-type: none"> 1. DSI Policy on HIV/Aids and TB in the Workplace. 2. DSI Policy on Occupational Health and Safety. 3. DSI Policy on Reasonable Accommodation for People with Disabilities. 4. The Health and Wellness Programme Policy. 5. The Health and Productivity Policy

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

6. Has the Department introduced measures to protect HIV-positive employees or those perceived to be HIV-positive from discrimination? If so, list the key elements of these measures.	X		The Department has adopted the HIV, Aids and TB policy to communicate the department's commitment to implement an HIV/Aids workplace programme. A number of awareness and education initiatives were implemented to address the issue of stigma and discrimination, such as the commemoration of World Aids Day and the annual candlelight memorial. The Department conducts HIV testing through on and offsite services which ensures confidentiality.
7. Does the Department encourage its employees to undergo voluntary HIV counselling and testing? If so, list the results that this has achieved. .	X		The Department conducts quarterly HIV counselling and testing (HCT) drives. An average of 33.9% of employees were tested over the four quarters. A service provider was appointed with effect from 16 February 2018 to provide off-site HCT services for employees and their family members nationwide.
8. Has the Department developed measures/indicators to monitor and evaluate the impact of its health promotion programme? If so, list these measures/indicators.	X		The Department has adopted measures and indicators as provided by the Department of Public Service and Administration (DPSA) Employee Health and Wellness Strategic Framework for the Public Service. Quarterly progress reports (with remedial actions) are submitted to the DPSA. The department's wellness unit also monitors the implementation of services by Careways and employees provide an evaluation of the services provided. The department also monitors outcome of the following indicators: i. Percentage of employees participating on health screenings. ii. Percentage of employees participating on the HIV Counselling and Testing. iii. Number of SMS health screened. iv. Number of wellness intervention implemented. v. Access to employee assistance programme services. vi. Facilitation of Incapacity leave or ill-health retirement applications. vii. Number of sports initiatives implemented.

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.12 Labour relations

Table 3.12.1: Collective agreements in the period 1 April 2019 to 31 March 2020

Total number of collective agreements	None
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Table 3.12.2: Misconduct and disciplinary hearings finalised in the period 1 April 2019 to 31 March 2020

Outcomes of disciplinary hearings	Number	% of total
Correctional counselling	0	0
Verbal warning	0	0
Written warning	0	0
Final written warning	1	100
Suspension without pay	0	0
Demotion	0	0
Dismissal	0	0

Total number of disciplinary hearings finalised	1
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Table 3.12.3: Types of misconduct addressed at disciplinary hearings in the period 1 April 2019 to 31 March 2020

Types of misconduct	Number	% of total
None	1	100
Total	1	100

Table 3.12.4: Grievances lodged in the period 1 April 2019 to 31 March 2020

Grievances	Number	% of total
Number of grievances resolved	1	100
Number of grievances not resolved	0	0
Total number of grievances lodged	1	100

Table 3.12.5: Disputes logged with councils in the period 1 April 2019 to 31 March 2020

Dispute	Number	% of total
Number of disputes upheld	0	0
Number of disputes dismissed	2	100
Total number of disputes lodged	2	100

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.12.6: Strike actions in the period 1 April 2019 to 31 March 2020

Total number of person working days lost	0
Total cost of working days lost	0
Amount recovered as a result of no work no pay (R'000)	0

Table 3.12.7: Precautionary suspensions in the period 1 April 2019 to 31 March 2020

Total number of person working days lost	0
Total cost of working days lost	0
Amount recovered as a result of no work no pay (R'000)	0

3.13 Skills development

Table 3.13.1: Training needs identified in the period 1 April 2019 to 31 March 2020

Occupational category	Gender	Number of employees as at 1 April 2018	Training identified at start of the reporting period			
			Learnerships	Skills programmes and other short courses	Other forms of training	Total
Legislators, senior officials and managers	Female	48	0	5	5	10
	Male	55	0	5	5	10
Professionals	Female	105	0	10	11	21
	Male	81	0	10	8	18
Technicians and associate professionals	Female	74	0	3	0	3
	Male	25	0	3	0	3
Clerks	Female	5	0	6	5	11
	Male	7	0	4	4	8
Service and sales workers	Female	0	0	4	1	5
	Male	8	0	4	1	5
Skilled agriculture and fishery workers	Female	0	0	0	0	0
	Male	0	0	0	0	0
Craft and related trades workers	Female	0	0	0	0	0
	Male	0	0	0	0	0
Plant and machine operators and assemblers	Female	0	0	0	0	0
	Male	0	0	2	1	3
Elementary occupations	Female	0	0	3	0	3
	Male	0	0	4	0	3
Subtotal	Female	232	0	31	22	53
	Male	168	0	31	19	50
Total		400	0	62	41	103

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.13.2: Training provided in the period 1 April 2019 to 31 March 2020

Occupational category	Gender	Number of employees as at 1 April 2018	Training identified at start of the reporting period			
			Learnerships	Skills programmes and other short courses	Other forms of training	Total
Legislators, senior officials and managers	Female	48	0	20	9	29
	Male	55	0	19	5	24
Professionals	Female	105	0	36	17	53
	Male	81	0	25	12	37
Technicians and associate professionals	Female	74	0	4	0	4
	Male	25	0	2	1	3
Clerks	Female	5	0	29	11	40
	Male	7	0	7	5	12
Service and sales workers	Female	4	0	5	0	5
	Male	8	0	3	0	3
Skilled agriculture and fishery workers	Female	0	0	0	0	0
	Male	0	0	0	0	0
Craft and related trades workers	Female	0	0	0	0	0
	Male	0	0	0	0	0
Plant and machine operators and assemblers	Female	0	0	1	0	1
	Male	0	0	0	1	1
Elementary occupations	Female	0	0	2	0	2
	Male	0	0	0	0	0
Subtotal	Female	232	0	97	37	134
	Male	168	0	56	24	80
Total		400	0	153	61	214

3.14 Injury on duty

Table 3.14.1: Injury on duty in the period 1 April 2019 to 31 March 2020

Nature of injury	Number	% of total employees
Required basic medical attention only	3	0,79%
Temporary total disablement	0	0%
Permanent disablement	0	0%
Fatal	0	0%
Total	3	0,79%

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

3.15 Use of consultants

Table 3.15.1: Report on consultant appointments using appropriated funds in the period 1 April 2019 to 31 March 2020

Project title	Total number of consultants that worked on project	Duration (work days)	Contract value in Rand
Health Risk Management	2	261	170 000
Employee Health Wellness Programme	1	365	1 259 054

Total number of projects	Total number of consultants that worked on project	Duration (work days)	Contract value in Rand
1	2	261	170 000
1	1	365	1 259 054

Table 3.15.2: Analysis of consultant appointments using appropriated funds, in terms of historically disadvantaged individuals, in the period 1 April 2019 to 31 March 2020

Project title	Percentage ownership by HDI groups	Percentage management by HDI group	Number of consultants from HDI groups that worked on the project
Health Risk Management	0	0	0
Employee Health Wellness Programme	0	0	0

Table 3.15.3: Report on consultant appointments using donor funds in the period 1 April 2019 to 31 March 2020

Project title	Total number of consultants that worked on project	Duration (work days)	Contract value in Rand
None	0	0	0
Total	0	0	0

3. HUMAN RESOURCES OVERSIGHT STATISTICS (CONTINUED)

Table 3.15.4: Analysis of consultant appointments made using donor funds, in terms of historically disadvantaged individuals, in the period 1 April 2019 to 31 March 2020

Project title	Percentage ownership by HDI groups	Percentage management by HDI group	Number of consultants from HDI groups that worked on the project
None	0	0	0
Total	0	0	0

3.16 Severance packages

Table 3.16.1: Granting of employee-initiated severance packages in the period 1 April 2019 to 31 March 2020

Salary band	Number of applications received	Number of applications referred to the MPSA	Number of applications supported by MPSA	Number of packages approved by department
Lower skilled (Levels 1-2)	0	0	0	0
Skilled (Levels 3-5)	0	0	0	0
Highly skilled production (Levels 6-8)	0	0	0	0
Highly skilled supervision (Levels 9-12)	0	0	0	0
Highly skilled supervision (Levels 9-12)	0	0	0	0
Senior management (Levels 13-16)	0	0	0	0
Total	0	0	0	0



**FINANCIAL
INFORMATION**

PART E

ANNUAL FINANCIAL STATEMENTS

NOTES TO THE APPROPRIATION STATEMENT

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REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON VOTE NO. 30: DEPARTMENT OF SCIENCE AND INNOVATION

Report on the audit of the financial statements

Opinion

1. I have audited the financial statements of the Department of Science and Innovation set out on pages 164 to 300, which comprise the appropriation statement, statement of financial position as at 31 March 2020, statement of financial performance, statement of changes in net assets and statement of cash flows for the year then ended, as well as the notes to the financial statements, including a summary of significant accounting policies.
2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the Department of Science and Innovation as at 31 March 2020, and its financial performance and cash flows for the year then ended in accordance with the Modified Cash Standard (MCS) prescribed by National Treasury and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the Auditor-General's responsibilities for the audit of the financial statements section of this auditor's report.
4. I am independent of the Department in accordance with sections 290 and 291 of the *Code of Ethics for Professional Accountants* and parts 1 and 3 of the *International Code of Ethics for Professional Accountants* (including the *International Independence Standards*) of the International Ethics Standards Board for Accountants (IESBA codes) as well as the ethical requirements that are relevant to my audit in South Africa. I have

fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA codes.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of matter

6. I draw attention to the matter below. My opinion is not modified in respect of this matter.

Subsequent events

7. Note 26.1 in the financial statements, which deals with subsequent events and specifically the possible effects of the future implications of COVID-19 on the Department's future prospects, performance and cash flows.

Other matter

8. I draw attention to the matter below. My opinion is not modified in respect of this matter.

Unaudited supplementary schedules

9. The supplementary information set out on pages 301 to 318 does not form part of the financial statements and is presented as additional information. I have not audited these schedules and, accordingly, I do not express an opinion on them.

Responsibilities of the accounting officer for the financial statements

10. The Accounting Officer is responsible for the preparation and fair presentation of the financial statements in accordance with the MCS as prescribed by National Treasury and the requirements of the PFMA, and for such internal control as the Accounting Officer determines is necessary to enable the preparation of financial

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON VOTE NO. 30: DEPARTMENT OF SCIENCE AND INNOVATION

statements that are free from material misstatement, whether due to fraud or error.

11. In preparing the financial statements, the accounting officer is responsible for assessing the department's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the department or to cease operations, or has no realistic alternative but to do so.

Auditor-General's responsibilities for the audit of the financial statements

12. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.
13. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report.

Report on the audit of the financial statements

Introduction and scope

14. In accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA) and the general notice issued in terms thereof, I have

a responsibility to report on the usefulness and reliability of the reported performance information against predetermined objectives for the selected programmes presented in the annual performance report. I performed procedures to identify material findings but not to gather evidence to express assurance.

15. My procedures address the usefulness and reliability of the reported performance information, which must be based on the approved performance planning documents of the Department. I have not evaluated the completeness and appropriateness of the performance indicators included in the planning documents. My procedures do not examine whether the actions taken by the Department enabled service delivery. My procedures also do not extend to any disclosures or assertions relating to planned performance strategies and information in respect of future periods that may be included as part of the reported performance information. Accordingly, my findings do not extend to these matters.
16. I evaluated the usefulness and reliability of the reported performance information in accordance with the criteria developed from the performance management and reporting framework, as defined in the general notice, for the following selected programme presented in the annual performance report of the Department for the year ended 31 March 2020:

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON VOTE NO. 30: DEPARTMENT OF SCIENCE AND INNOVATION

Programmes	Pages in annual performance report
Programme 2 - Technology innovation	71 - 77

17. I performed procedures to determine whether the reported performance information was properly presented and whether performance was consistent with the approved performance planning documents. I performed further procedures to determine whether the indicators and related targets were measurable and relevant, and assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

18. I did not identify any material findings on the usefulness and reliability of the reported performance information for the selected programme.

Other matter

19. I draw attention to the matter below.

Achievement of planned targets

20. Refer to the annual performance report on pages 49 to 98 for information on the achievement of planned targets for the year and explanations provided for the under/over achievement of a number of targets.

Report on the audit of compliance with legislation

Introduction and scope

21. In accordance with the PAA and the general notice issued in terms thereof, I have a responsibility to report material findings on the Department's compliance with specific matters in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance. express assurance.

22. I did not identify any material findings on compliance with the specific matters in key legislation set out in the general notice issued in terms of the PAA.

Other information

23. The accounting officer is responsible for the other information. The other information comprises the information included in the annual report. The other information does not include the financial statements, the auditor's report and the selected programmes presented in the annual performance report that have been specifically reported in this auditor's report.

24. My opinion on the financial statements and findings on the reported performance information and compliance with legislation do not cover the other information and I do not express an audit opinion or any form of assurance conclusion thereon.

25. In connection with my audit, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements and the selected programme presented in the annual performance report, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON VOTE NO. 30: DEPARTMENT OF SCIENCE AND INNOVATION

26. I did not receive the other information prior to the date of this auditor's report. When I do receive and read this information, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request that the other information be corrected. If the other information is not corrected, I may have to retract this auditor's report and re-issue an amended report as appropriate. However, if it is corrected this will not be necessary.

Internal control deficiencies

27. I considered internal control relevant to my audit of the financial statements, reported performance information and compliance with applicable legislation; however, my objective was not to express any form of assurance on it.

28. I did not identify any significant deficiencies in internal control.

Auditor-General

Pretoria

30 September 2020



ANNEXURE – AUDITOR-GENERAL'S RESPONSIBILITY FOR THE AUDIT

1. As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements and the procedures performed on reported performance information for selected programmes and on the Department's compliance with respect to the selected subject matters.

Financial statements

2. In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:
 - Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
 - Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal controls.
 - Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the accounting officer.
 - Conclude on the appropriateness of the accounting officer's use of the going concern basis of accounting in the preparation of the financial statements. I also conclude,

based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on the ability of the Department of Science and Innovation to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify my opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause a department to cease operating as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and determine whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication with those charged with governance

3. I communicate with the accounting officer regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.
4. I also confirm to the accounting officer that I have complied with relevant ethical requirements regarding independence, and communicate all relationships and other matters that may reasonably be thought to have a bearing on my independence and, where applicable, actions taken to eliminate threats or safeguards applied.

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Appropriation per Programme									
Appropriation statement	Adjusted appropriation	Shifting of funds	Virement	2019/20			2018/19		
				R'000	R'000	R'000	Final appropriation	Variance	Expenditure as % of final appropriation
	R'000	R'000	R'000	R'000	R'000	R'000	R'000	R'000	%
1. Administration	391,317	-	(19,004)	372,313	323,170	49,143	380,349	340,493	86.8%
2. Technology Innovation	1,224,305	-	55,987	1,280,292	1,236,673	43,619	1,157,338	1,143,715	96.6%
3. International Cooperation and Resources	149,008	-	123	149,131	136,027	13,104	142,449	139,872	91.2%
4. Research Development and Support	4,572,935	-	10,741	4,583,676	4,578,431	5,245	4,519,058	4,516,626	99.9%
5. Socio-Economic Innovation Partnerships	1,834,739	-	(47,847)	1,786,892	1,778,196	8,696	1,759,194	1,751,220	99.5%
TOTAL	8,172,304	-	-	8,172,304	8,052,497	119,807	7,958,388	7,891,926	98.5%
Reconciliation with Statement of Financial Performance									
ADD:	Departmental receipts			19,416			32,749		
	NRF receipts			-			-		
	Aid assistance			12,189			45,348		
Actual amounts per Statement of Financial Performance (Total Revenue)				8,203,909			8,036,485		
ADD:	Aid assistance			12,189				45,348	
	Prior year unauthorised expenditure approved without funding			-				-	
Actual amounts per Statement of Financial Performance (Total expenditure)					8,064,686			7,937,274	

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Appropriation per Programme									
Appropriation statement	Adjusted appropriation	Shifting of funds	Virement	2019/20			2018/19		
				R'000	R'000	R'000	Final appropriation	Actual expenditure	Expenditure as % of final appropriation
Economic classification	R'000	R'000	R'000	R'000	R'000	R'000	R'000	R'000	%
Current payments	645,661	(6,137)	(27,536)			81,053	600,969	546,152	86.8%
Compensation of employee	389,105	-	-			65,229	352,880	330,750	83.2%
Salaries and wages	343,569	672	-			54,437	313,154	296,762	84.2%
Social contributions	45,536	(672)	-			10,792	39,726	33,988	75.9%
Goods and services	256,556	(6,137)	(27,536)			15,824	248,089	215,402	92.9%
Administrative fees	1,782	850	-			2,103	6,897	3,797	79.9%
Advertising	12,326	1,738	-			13,208	25,693	24,938	93.9%
Minor assets	705	(146)	-			349	822	693	62.4%
Audit costs: External	4,488	1,100	-			5,580	5,269	5,245	99.9%
Bursaries: Employees	2,927	(1,730)	-			1,166	1,614	1,545	97.4%
Catering: Departmental activities	3,616	(76)	-			2,963	5,764	5,250	83.7
Communication (G&S)	11,457	(2,130)	(300)			7,203	9,290	8,255	79.8%
Computer services	6,082	7,819	-			13,089	20,172	19,872	94.2%
Consultants: Business and advisory services	21,429	(7,116)	-			12,371	18,098	16,390	86.4%
Scientific and technological services	-	-	-			-	-	-	-
Legal services	-	1,067	-			1,039	1,140	769	97.4%
Contractors	4,863	2,410	-			7,085	5,899	5,533	97.4%

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Appropriation per Programme									
Appropriation statement	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Agency and support/outsourced services	16,132	(6,230)	-	9,902	9,151	751	92.4%	12,746	12,008
Entertainment	5,179	(3,939)	-	1,240	235	1,005	19.0%	893	248
Fleet services (incl. government motor transport)	852	200	-	1,052	637	415	60.6%	1,347	1,347
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Medical supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-
Consumable supplies	1,581	909	-	2,490	2,238	252	89.9%	3,788	2,472
Consumables: Stationery, printing and office supplies	5,956	(488)	-	5,468	4,986	482	91.2%	7,829	6,786
Operating leases	4,527	(180)	-	4,347	2,658	1,689	61.1%	3,154	3,023
Property payments	60,285	300	(16,536)	44,049	42,322	1,727	96.1%	11,857	11,769
Transport provided:									
Departmental activity	1,437	(888)	-	549	-	549	-	-	-
Travel and subsistence	58,542	(4,340)	(7,400)	46,802	46,931	(129)	100.3%	59,086	56,941
Training and development	7,052	(144)	(3,000)	3,908	3,073	835	78.6%	8,101	2,689

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Appropriation per Programme									
Appropriation statement	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Operating payments	8,700	370	-	9,070	9,012	58	99.4%	8,727	8,472
Venues and facilities	16,601	2,537	(300)	18,838	17,469	1,369	92.7%	27,416	14,863
Rental and hiring	37	1,970	-	2,007	2,191	(184)	109.2%	2,487	2,426
Transfers and subsidies	7,523,880	-	27,402	7,551,282	7,513,932	37,350	99.5%	7,343,539	7,336,589
Departmental agencies and accounts	5,605,284	-	33,089	5,638,373	5,165,068	473,305	91.6%	5,491,103	5,003,551
Departmental agencies	5,605,284	-	33,089	5,638,373	5,165,068	473,305	91.6%	5,491,103	5,003,551
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	1,541,908	-	(38,861)	1,503,047	1,811,667	(308,620)	120.5%	1,500,146	1,850,374
Public corporations	1,541,908	-	(38,861)	1,503,047	1,798,871	(295,824)	119.7%	1,500,146	1,836,527
Subsidies on products	965,823	-	-	965,823	965,823	-	100.0%	963,164	963,164
Other transfers to public corporations	576,085	-	(38,861)	537,224	833,048	(295,824)	155.1%	536,982	873,364
Private enterprises	-	-	-	-	12,796	(12,796)	-	-	13,847
Other transfers to private enterprises	-	-	-	-	12,796	(12,796)	-	-	13,847
Non-profit institutions	376,133	-	31,521	407,654	533,590	(125,936)	130.9%	351,640	481,367
Households	555	-	1,653	2,208	3,607	(1,399)	163.4%	650	1,297

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Appropriation per Programme									
Appropriation statement	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Social benefits	555	(25)	1,653	2,183	1,643	540	75.3%	-	647
Other transfers to households	-	25	-	25	1,964	(1,939)	7856.0%	650	650
Payments for capital assets	2,763	6,137	-	8,900	7,541	1,359	84.7%	13,735	9,042
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	2,763	6,137	-	8,900	7,541	1,359	84.7%	13,735	9,042
Transport equipment	-	-	-	-	-	-	-	449	448
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	2,763	6,137	-	8,900	7,541	1,359	84.7%	13,286	8,594
Payments for financial assets	-	-	134	134	89	45	66.4%	145	143
Total	8,172,304	-	-	8,172,304	8,052,497	119,807	98.5%	7,958,388	7,891,926

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
1.1 Ministry	8,126	-	-	8,126	2,896	5,230	35.6%	5,145	4,379
1.2 Institutional Planning and Support	185,059	(12,606)	7,567	180,020	141,193	38,827	78.4%	122,878	110,217
1.3 Corporate Services	145,117	12,606	(10,035)	147,688	144,235	3,453	97.7%	247,293	223,741
1.4 Office accommodation	53,015	-	(16,536)	36,479	34,846	1,633	95.5%	5,033	2,156
Total	391,317	-	(19,004)	372,313	323,170	49,143	86.8%	380,349	340,493

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Economic classification	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Current payments	372,913	(6,137)	(25,536)	341,240	293,699	47,541	86.1%	352,201	317,016
Compensation of employees	182,637	-	-	182,637	148,587	34,050	81.4%	174,032	165,290
Salaries and wages	160,054	-	-	160,054	132,583	27,471	82.8%	154,425	147,758
Social contributions	22,583	-	-	22,583	16,004	6,579	70.9%	19,607	17,532
Goods and services	190,276	(6,137)	(25,536)	158,603	145,112	13,491	91.5%	178,169	151,726
Administrative fees	530	470	-	1,000	853	147	85.3%	4,382	1,503
Advertising	10,979	600	-	11,579	11,401	178	98.5%	24,087	23,458
Minor assets	690	(150)	-	540	348	192	64.4%	822	693
Audit costs: External	4,488	1,100	-	5,588	5,580	8	99.9%	5,269	5,245

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Subprogramme	Adjusted appropriation	Shifting of funds	2019/20				2018/19		
			Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Bursaries: Employees	2,900	(1,730)	-	1,170	1,166	4	99.7%	1,614	1,545
Catering: Departmental activities	1,861	300	-	2,161	2,090	71	96.7%	4,682	4,514
Communication (G&S)	6,843	(1,560)	-	5,283	3,794	1,489	71.8%	5,719	5,214
Computer services	5,639	8,030	-	13,669	13,076	593	95.7%	19,923	19,775
Consultants: Business and advisory services	15,376	(5,600)	-	9,776	8,972	804	91.8%	7,933	7,310
Science and technological services	-	-	-	-	-	-	-	-	-
Legal services	-	300	-	300	296	4	98.7%	864	493
Contractors	4,563	1,300	-	5,863	5,794	69	98.8%	5,444	5,194
Agency and support/outsourced services	7,624	110	-	7,734	7,181	553	92.8%	8,210	7,878
Entertainment	610	(74)	-	536	54	482	10.1%	565	50
Fleet services (incl. government motor transport)	852	200	-	1,052	637	415	60.6%	1,347	1,347
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-
Consumable supplies	1,192	1,159	-	2,351	2,198	153	93.5%	3,573	2,453
Consumables: Stationery, printing and office supplies	5,948	(700)	-	5,248	4,793	455	91.3%	6,954	6,585

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Operating leases	4,527	(180)	-	4,347	2,658	1,689	61.1%	3,154	3,094
Property payments	60,285	290	(16,536)	44,039	42,312	1,727	96.1%	11,721	11,633
Transport provided:									
Departmental activity	543	-	-	543	-	543	-	-	-
Travel and subsistence	34,800	(8,512)	(6,000)	20,288	18,688	1,600	92.1%	29,340	28,799
Training and development	6,221	(160)	(3,000)	3,061	3,059	2	99.9%	8,101	2,689
Operating payments	6,546	(1,800)	-	4,746	4,652	94	98.0%	6,025	5,865
Venues and facilities	7,222	(1,500)	-	5,722	3,518	2,204	61.5%	16,148	4,158
Rental and hiring	37	1,970	-	2,007	1,992	15	99.3%	2,292	2,231
Transfers and subsidies	15,641	-	6,401	22,042	21,843	199	99.1%	14,286	14,331
Departmental agencies and accounts	-	-	-	-	1,600	(1,600)	-	-	1,152
Departmental agencies	-	-	-	-	1,600	(1,600)	-	-	1,152
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-	-	1,415
Public corporations	-	-	-	-	-	-	-	-	-
Subsidies on products	-	-	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	-	-	-	-	-	-
Private enterprises	-	-	-	-	-	-	-	-	1,415

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Subprogramme	Adjusted appropriation	Shifting of funds	2019/20			Variance	Expenditure as % of final appropriation	2018/19	
			R'000	R'000	R'000			Final appropriation	Actual expenditure
Other transfers to private enterprises	-	-	-	-	-	-	-	-	1,415
Non-profit institutions	15,086	-	5,000	20,086	1,602	92.0%	14,286	11,567	11,567
Households	555	-	1,401	1,956	1,759	89.9%	-	-	197
Social benefits	555	(25)	1,401	1,931	1,305	67.6%	-	-	197
Other transfers to households	-	25	-	25	(429)	1816.0%	-	-	-
Payment for capital assets	2,763	6,137	-	8,900	1,359	84.7%	13,735	9,020	9,020
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	2,763	6,137	-	8,900	1,359	84.7%	13,735	9,020	9,020
Transport equipment	-	-	-	-	-	-	449	448	448
Other machinery and equipment	2,763	6,137	-	8,900	1,359	84.7%	13,286	8,572	8,572
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	131	131	44	66.4%	127	126	126
Total	391,317	-	(19,004)	372,313	49,143	86.8%	380,349	340,493	340,493

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 1 – Administration for the year ended 31 March 2020									
Subprogramme 1.1: Ministry	Adjusted appropriation	Shifting of funds	Virement	2019/20				2018/19	
				Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	8,126	-	-	8,126	2,896	5,230	35.6%	5,145	4,379
Compensation of employees	8,126	-	-	8,126	2,896	5,230	35.6%	5,145	4,379
Salaries and wages	7,313	-	-	7,313	2,505	4,808	34.3%	4,554	3,788
Social contributions	813	-	-	813	391	422	48.1%	591	591
Goods and services	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	-	-	-	-	-	-	-	-	-
Communication (G&S)	-	-	-	-	-	-	-	-	-
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	-	-	-	-	-	-	-	-	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 1.2: Institutional Planning and Support	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	167,949	(11,137)	1,085	157,897	119,782	38,115	75.9%	107,167	95,543
Compensation of employees	95,519	-	-	95,519	67,934	27,585	71.1%	68,586	60,610
Salaries and wages	84,218	-	-	84,218	61,746	22,472	73.3%	61,168	55,267
Social contributions	11,301	-	-	11,301	6,188	5,113	54.8%	7,418	5,343
Goods and services	72,430	(11,137)	1,085	62,378	51,848	10,530	83.1%	38,581	34,933
Administrative fees	183	470	-	653	627	26	96.0%	840	838
Advertising	7,204	3,900	-	11,104	11,043	61	99.5%	659	30
Minor assets	214	-	-	214	23	191	10.7%	181	52
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	681	1,200	-	1,881	1,824	57	97.0%	495	327
Communication (G&S)	3,352	-	-	3,352	1,867	1,485	55.7%	2,591	2,086
Computer services	2,118	(1,570)	-	548	23	525	4.2%	1,275	1,127
Consultants: Business and advisory services	13,175	(6,200)	-	6,975	6,203	772	88.9%	3,092	2,481
Legal services	-	-	-	-	-	-	-	-	-
Contractors	643	800	-	1,443	1,395	48	96.7%	606	521
Agency and support/outsourced services	3,897	110	1,085	5,092	5,085	7	99.9%	3,237	3,004
Entertainment	345	-	-	345	40	305	11.6%	316	34
Fleet services (incl. government motor transport)	852	-	-	852	450	402	52.8%	996	996
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 1.3: Corporate Services	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	143,823	5,000	(10,085)	138,738	136,175	2,563	98.2%	234,856	214,938
Compensation of employees	78,992	-	-	78,992	77,757	1,235	98.4%	100,301	100,301
Salaries and wages	68,523	-	-	68,523	68,332	191	99.7%	88,703	88,703
Social contributions	10,469	-	-	10,469	9,425	1,044	90.0%	11,598	11,598
Goods and services	64,831	5,000	(10,085)	59,746	58,418	1,328	97.8%	134,555	114,637
Administrative fees	347	-	-	347	226	121	65.1%	665	665
Advertising	3,775	(3,300)	-	475	358	117	75.4%	23,428	23,428
Minor assets	476	(150)	-	326	325	1	99.7%	641	641
Audit costs: External	4,488	1,100	-	5,588	5,580	8	99.9%	5,269	5,245
Bursaries: Employees	2,900	(1,730)	-	1,170	1,166	4	99.7%	1,614	1,545
Catering: Departmental activities	1,180	(900)	-	280	266	14	95.0%	4,187	4,187
Communication (G&S)	3,491	(1,560)	-	1,931	1,927	4	99.8%	3,128	3,128
Computer services	3,521	9,600	-	13,121	13,053	68	99.5%	18,648	18,648
Consultants: Business and advisory services	2,201	600	-	2,801	2,769	32	98.9%	4,841	4,829
Scientific and technological services	-	-	-	-	-	-	-	-	-
Legal services	-	300	-	300	296	4	98.7%	864	493
Contractors	3,920	500	-	4,420	4,399	21	99.5%	4,838	4,673
Agency and support/outsourced services	3,727	-	(1,085)	2,642	2,096	546	79.3%	4,973	4,874
Entertainment	265	(74)	-	191	14	177	7.3%	249	16
Fleet services (incl. government motor transport)	-	200	-	200	187	13	93.5%	351	351
Inventory: Clothing material and accessories	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Fuel, oil and gas	-	-	-	-	-	-	-
Inventories: Material and supplies	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-
Consumable supplies	1,072	1,034	-	2,106	2,071	35	98.3%
Consumables: Stationery, printing and office supplies	5,158	(700)	-	4,458	4,437	21	99.5%
Operating leases	2,890	(1,600)	-	1,290	1,261	29	97.8%
Property payments	3,501	5,420	-	8,921	8,863	58	99.3%
Transport provided:							
Departmental activities	-	-	-	-	-	-	-
Travel and subsistence	9,264	(350)	(6,000)	2,914	2,906	8	99.7%
Training and development	6,221	(160)	(3,000)	3,061	3,059	2	99.9%
Operating payments	4,491	(2,300)	-	2,191	2,158	33	98.5%
Venues and facilities	1,943	(1,000)	-	943	939	4	99.6%
Rental and hiring	-	70	-	70	62	8	88.6%
Transfers and subsidies	-	-	38	38	507	(469)	1334.2%
Departmental agencies and accounts	-	-	-	-	-	-	-
Higher education institutions	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-
Public corporations	-	-	-	-	-	-	-
Subsidies on products	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	-	-	-	-
Private enterprises	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	-	-	-	-	-	-	-	-	-	-	-	-
Households	38	38	507	(469)	1334.2%	-	-	-	62	-	62	-
Social benefits	-	38	78	(40)	205.3%	-	-	-	62	-	-	-
Other transfers to households	-	-	429	(429)	-	-	-	-	-	-	-	-
Payment for capital assets	1,294	8,900	7,506	1,394	84.3%	12,429	12,429	8,733	8,733	12,429	8,733	8,733
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-	-	-	-
Machinery and equipment	1,294	8,900	7,506	1,394	84.3%	12,429	12,429	8,733	8,733	12,429	8,733	8,733
Transport equipment	-	-	-	-	-	223	223	223	223	223	223	223
Other machinery and equipment	1,294	8,900	7,506	1,394	84.3%	12,006	12,006	8,510	8,510	12,006	8,510	8,510
Software and other intangible assets	-	-	-	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	12	47	(35)	391.7%	8	8	-	8	-	-	8
Total	145,117	12,606	144,235	3,453	97.7%	247,293	247,293	223,741	223,741	247,293	223,741	223,741

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 1.4 Office accommodation	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	53,015	-	(16,536)	36,479	34,846	1,633	95.5%	5,033	2,156
Compensation of employees	-	-	-	-	-	-	-	-	-
Salaries and wages	-	-	-	-	-	-	-	-	-
Social contributions	-	-	-	-	-	-	-	-	-
Goods and services	53,015	-	(16,536)	36,479	34,846	1,633	95.5%	5,033	2,156
Administration fees	-	-	-	-	-	-	-	2,877	-
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	-	-	-	-	-	-	-	-	-
Communication (G&S)	-	-	-	-	-	-	-	-	-
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	-	-	-	-	-	-	-	-	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

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VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Payment for capital assets												
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-	-	-	-
Payment for financial assets												
Total	53,015	-	(16,536)	36,479	34,846	1,633	95.5%	5,033	2,156			

There was change to the structure in Programme 1: Administration in the 2019/20 financial year that affected prior year figures. The subprogramme Governance and subprogramme Management were merged into the subprogramme Institutional Planning and Support.

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 2 – Technology Innovation for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
2.1 Space Science	209,361	300	19,417	229,078	225,244	3,834	98.3%	173,519	170,132
2.2 Hydrogen and Energy	178,526	(600)	1	177,927	176,851	1,076	99.4%	166,816	164,828
2.3 Bioeconomy	193,262	(600)	36,555	229,217	194,876	34,341	85.0%	217,931	215,302
2.4 Innovation Priorities and Instruments	585,388	(2,900)	14	582,502	578,064	4,438	99.2%	535,553	531,360
2.5 National Intellectual Property Management Office	53,607	1,300	-	54,907	55,246	(339)	100.6%	63,519	62,093
2.6 Office of the DDG: Technology Innovation	4,161	2,500	-	6,661	6,392	269	96.0%	-	-
Total	1,224,305	-	55,987	1,280,292	1,236,673	43,619	96.6%	1,157,338	1,143,715
Economic classification									
Current payments	78,807	-	-	78,807	67,433	11,374	85.6%	71,861	60,334
Compensation of employees	56,744	-	-	56,744	43,824	12,920	77.2%	49,317	42,159
Salaries and wages	49,149	612	-	49,761	39,379	10,382	79.1%	43,384	37,933
Social contributions	7,595	(612)	-	6,983	4,445	2,538	63.7%	5,933	4,226
Goods and services	22,063	-	-	22,063	23,609	(1,546)	107.0%	22,544	18,175
Administrative fees	261	145	-	406	350	56	86.2%	500	365

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 2 – Technology Innovation for the year ended 31 March 2020									
2019/20							2018/19		
Advertising	398	1,198	-	1,596	1,500	96	94.0%	503	473
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	27	-	-	27	-	27	-	-	-
Catering: Departmental activities	344	48	-	392	381	11	97.2%	184	78
Communication (G&S)	1,054	(118)	-	936	877	59	93.7%	919	657
Computer services	-	-	-	-	-	-	-	96	20
Consultants: Business and advisory services	1,659	896	-	2,555	2,528	27	98.9%	6,220	5,153
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	1,300	-	1,300	1,281	19	98.5%	125	125
Agency and support/outsourced services	6,597	(5,870)	-	727	655	72	90.1%	1,008	634
Entertainment	3,357	(3,185)	-	172	3	169	1.7%	20	5
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	120	(80)	-	40	15	25	37.5%	110	6
Consumable supplies	-	-	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	-	54	-	54	38	16	70.4%	667	27
Operating leases	-	10	-	10	10	-	100.0%	-	-
Property payments	-	-	-	-	-	-	-	-	-
Transport provided:	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 2 – Technology Innovation for the year ended 31 March 2020									
2019/20							2018/19		
Departmental activity	335	(333)	-	2	-	2	-	-	-
Travel and subsistence	5,250	3,082	-	8,332	9,439	(1,107)	10,135	8,934	-
Training and development	-	-	-	-	-	-	-	-	-
Operating payments	363	(202)	-	161	137	24	620	598	-
Venues and facilities	2,298	3,055	-	5,353	6,395	(1,042)	1,437	1,100	-
Rental and hiring	-	-	-	-	-	-	-	-	-
Transfers and subsidies	1,145,498	-	55,986	1,201,484	1,169,239	32,245	1,085,471	1,083,375	-
Departmental agencies and accounts	727,802	-	29,400	757,202	767,616	(10,414)	704,143	714,920	-
Departmental agencies	727,802	-	29,400	757,202	767,616	(10,414)	704,143	714,920	-
Higher education institutions	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	112,672	-	-	112,672	154,378	(41,706)	96,501	127,785	-
Public corporations	112,672	-	-	112,672	147,323	(34,651)	96,501	126,880	-
Subsidies on products	-	-	-	-	-	-	-	-	-
Other transfers to public corporations	112,672	-	-	112,672	147,323	(34,651)	96,501	126,880	-
Private enterprises	-	-	-	-	7,055	(7,055)	-	905	-
Other transfers to private enterprises	-	-	-	-	7,055	(7,055)	-	905	-
Non-profit institutions	305,024	-	26,521	331,545	247,038	84,507	284,827	240,553	-
Households	-	-	65	65	207	(142)	-	117	-
Social benefits	-	-	65	65	57	8	-	117	-
Other transfers to households	-	-	-	-	150	(150)	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 2 – Technology Innovation for the year ended 31 March 2020										
	2019/20					2018/19				
Machinery and equipment	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	1	1	1	100.0%	6	6	6	6
Total	1,224,305	-	55,987	1,280,292	1,236,673	43,619	1,157,338	1,143,715	1,157,338	1,143,715

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 2 – Technology Innovation for the year ended 31 March 2020									
Subprogramme: 2.1: Space Science	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	15,897	300	-	16,197	12,366	3,831	76.3%	16,984	13,597
Compensation of employees	12,814	(1,000)	-	11,814	6,960	4,854	58.9%	11,071	7,781
Salaries and wages	11,528	(1,000)	-	10,528	6,294	4,234	59.8%	9,876	7,021
Social contributions	1,286	-	-	1,286	666	620	51.8%	1,195	760
Goods and services	3,083	1,300	-	4,383	5,406	(1,023)	123.3%	5,913	5,816
Administrative fees	91	(47)	-	44	42	2	95.5%	80	68
Advertising	223	(220)	-	3	-	3	-	3	3
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	285	(275)	-	10	8	2	80.0%	20	-
Communication (G&S)	335	(154)	-	181	177	4	97.8%	170	133
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	404	(400)	-	4	-	4	-	2,219	2,219
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/outsourced services	452	(117)	-	335	329	6	98.2%	420	420
Entertainment	39	(30)	-	9	-	9	-	6	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Fleet services (incl. government motor transport)	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-
Consumable supplies	78	(77)	1	1	100.0%	2
Consumables: Stationery, printing and office supplies	-	-	-	-	-	20
Operating leases	-	-	-	-	-	-
Property payments	-	-	-	-	-	-
Travel and subsistence	625	1,597	2,222	2,221	100.0%	2,204
Training and development	-	-	-	-	-	-
Operating payments	210	(180)	30	23	76.7%	168
Venues and facilities	341	1,203	1,544	2,605	168.7%	601
Rental and hiring	-	-	-	-	-	-
Transfers and subsidies						
Departmental agencies and accounts						
Departmental agencies	193,464	-	212,881	212,878	100.0%	156,535
Higher education institutions	193,464	-	212,864	197,864	93.0%	151,236
Foreign governments and international organisations	-	-	-	-	-	-
Public corporations and private enterprises						
Public corporations						
Subsidies on products	-	-	-	5,000	-	-
Other transfers to public corporations	-	-	-	5,000	-	-
	-	-	-	5,000	-	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Private enterprises	-	-	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-	-	-
Non-profit institutions	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-
Social benefit	-	-	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	209,361	300	19,417	229,078	225,244	3,834	98.3%	173,519	170,132

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme 2.2: Hydrogen and Energy	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	12,526	(600)	-	11,926	10,860	1,066	91.1%	11,345	9,357
Compensation of employees	8,734	-	-	8,734	7,804	930	89.4%	8,227	7,211
Salaries and wages	7,898	(58)	-	7,840	7,026	814	89.6%	7,451	6,489
Social contributions	836	58	-	894	778	116	87.0%	776	722
Goods and services	3,792	(600)	-	3,192	3,056	136	95.7%	3,118	2,146
Administrative fees	24	45	-	69	66	3	95.7%	67	64
Advertising	81	(45)	-	36	-	36	-	5	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	20	35	-	55	52	3	94.5%	16	16
Communication (G&S)	204	(81)	-	123	117	6	95.1%	92	92
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	629	46	-	675	671	4	99.4%	723	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	1,738	(1,680)	-	58	17	41	29.3%	134	-
Entertainment	8	-	-	8	1	7	12.5%	6	1
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

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VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 2.3: Bioeconomy	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	21,466	(600)	-	20,866	18,185	2,681	87.2%	19,700	17,949
Compensation of employees	15,018	-	-	15,018	12,450	2,568	82.9%	13,798	13,013
Salaries and wages	13,458	-	-	13,458	11,249	2,209	83.6%	12,348	11,738
Social contributions	1,560	-	-	1,560	1,201	359	77.0%	1,450	1,275
Goods and services	6,448	(600)	-	5,848	5,735	113	98.1%	5,902	4,936
Administrative fees	71	55	-	126	123	3	97.6%	209	134
Advertising	37	1,470	-	1,507	1,500	7	99.5%	401	401
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	27	-	-	27	-	-	-	-	-
Catering: Departmental activities	34	5	-	39	36	3	92.3%	81	50
Communication (G&S)	314	(105)	-	209	193	16	92.3%	262	201
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	308	385	-	693	686	7	99.0%	829	485
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	125	125
Agency and support/outsourced services	2,835	(2,615)	-	220	216	4	98.2%	154	154
Entertainment	36	-	-	36	-	36	-	4	1
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Material and supplies	-	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	21	(18)	-	3	2	1	66.7%	5
Operating leases	-	1	-	1	1	-	100.0%	159
Property payments	-	-	-	-	-	-	-	-
Travel and subsistence	-	10	-	10	10	-	100.0%	-
Training and development	2,127	(146)	-	1,981	1,975	6	99.7%	3,037
Operating payments	-	-	-	-	-	-	-	-
Venues and facilities	52	(35)	-	17	15	2	88.2%	241
Rental and hiring	586	393	-	979	978	1	99.9%	395
	-	-	-	-	-	-	-	-
Transfers and subsidies	171,796	-	36,555	208,351	176,691	31,660	84.8%	198,225
Departmental agencies and accounts	33,010	-	10,000	43,010	109,766	(66,756)	255.2%	84,736
Higher Education Institutions	33,010	-	10,000	43,010	109,766	(66,756)	255.2%	84,736
Foreign governments and international organisations	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-	-
Public corporations	-	-	-	-	14,730	(14,730)	-	-
Subsidies on products	-	-	-	-	10,300	(10,300)	-	-
Other transfers to public corporations	-	-	-	-	10,300	(10,300)	-	-
Private enterprises	-	-	-	-	4,430	(4,430)	-	-
Other transfers to private enterprises	-	-	-	-	4,430	(4,430)	-	-
Non-profit institutions	138,786	-	26,521	165,307	52,165	113,142	31.6%	113,489
Households	-	-	34	34	30	4	88.2%	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Social benefit	-	-	-	34	30	4	88.2%	-	-
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	193,262	(600)	36,555	229,217	194,876	34,341	85.0%	217,931	215,302

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 2.4 Innovation Priorities and Instrument	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	12,334	(2,900)	-	9,434	5,069	4,365	53.7%	9,313	5,124
Compensation of employees	6,958	-	-	6,958	2,770	4,188	39.8%	6,495	4,428
Salaries and wages	5,352	-	-	5,352	2,446	2,906	45.7%	5,002	3,978
Social contributions	1,606	-	-	1,606	324	1,282	20.2%	1,493	450
Goods and services	5,376	(2,900)	-	2,476	2,299	177	92.9%	2,818	696
Administrative fees	-	7	-	7	5	2	71.4%	55	10
Advertising	52	(7)	-	45	-	45	-	25	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	4	5	-	9	7	2	77.8%	40	12
Communication (G&S)	13	65	-	78	73	5	93.6%	155	60
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	423	423
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	874	(870)	-	4	-	4	-	240	-
Fleet services (incl. government motor transport)	3,259	(3,155)	-	104	1	103	1.0%	2	1
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to households	-	-	-	-	-	-	-	-	-	531,360
Payment for capital assets	-	-	-	-	-	-	-	-	-	535,553
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-	
Machinery and equipment	-	-	-	-	-	-	-	-	-	
Transport equipment	-	-	-	-	-	-	-	-	-	
Other machinery and equipment	-	-	-	-	-	-	-	-	-	
Software and other intangible assets	-	-	-	-	-	-	-	-	-	
Payment for financial assets	-	-	-	-	-	-	-	-	-	
Total	585,388	(2,900)	14	582,502	578,064	4,438	99.2%	535,553	531,360	

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 2.5: National Intellectual Property Management Office	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	12,423	1,300	-	13,723	14,561	(838)	106.1%	14,519	14,307
Compensation of employees	10,199	-	-	10,199	9,934	265	97.4%	9,726	9,726
Salaries and wages	8,164	820	-	8,984	8,850	134	98.5%	8,707	8,707
Social contributions	2,035	(820)	-	1,215	1,084	131	89.2%	1,019	1,019
Goods and services	2,224	1,300	-	3,524	4,627	(1,103)	131.3%	4,793	4,581
Administrative fees	15	85	-	100	95	5	95.0%	89	89
Advertising	5	-	-	5	-	5	-	69	69
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	1	270	-	271	270	1	99.6%	27	-
Communication (G&S)	98	165	-	263	261	2	99.2%	240	171
Computer services	-	-	-	-	-	-	-	96	20
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	318	865	-	1,183	1,171	12	99.0%	2,026	2,026
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	439	(435)	-	4	-	4	-	60	60
Entertainment	15	-	-	15	1	14	6.7%	2	2
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Fuel, oil and gas	-	-	-	-	-	-	-	-
Inventories: Material and supplies	-	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-	-
Consumable supplies	-	15	-	11	4	73.3%	3	3
Consumables: Stationery, printing and office supplies	-	50	-	36	14	72.0%	40	-
Operating leases	-	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-	-
Transport provided:	-	-	-	-	-	-	-	-
Departmental activities	335	(333)	-	-	2	-	-	-
Travel and subsistence	527	398	-	2,102	(1,177)	227.2%	1,830	1,830
Training and development	-	-	-	-	-	-	-	-
Operating payments	-	100	-	95	5	95.0%	30	30
Venues and facilities	471	120	-	585	6	99.0%	281	281
Rental and hiring	-	-	-	-	-	-	-	-
Transfers and subsidies	41,184	-	-	40,685	499	98.8%	49,000	47,786
Departmental agencies and accounts	-	-	-	-	-	-	-	2,073
Departmental agencies	-	-	-	2,189	(2,189)	-	-	2,073
Higher education institutions	-	-	-	2,189	(2,189)	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-	-
Public corporations	-	-	-	10,977	(10,977)	-	-	8,257
Subsidies on products	-	-	-	8,352	(8,352)	-	-	7,652
Other transfers to public corporations	-	-	-	-	-	-	-	-
Private enterprises	-	-	-	8,352	(8,352)	-	-	7,652
	-	-	-	2,625	(2,625)	-	-	605

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to private enterprises	-	-	-	(2,625)	-	-	605
Non-profit institutions	41,184	-	-	13,815	-	49,000	37,434
Households	-	-	-	(150)	-	-	22
Social benefits	-	-	-	-	-	-	22
Other transfers to households	-	-	-	(150)	-	-	-
Payment for capital assets	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-
Total	53,607	1,300	-	(339)	100.6%	63,519	62,093

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 2.6: Office of the DDG: Technology Innovation	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	4,161	2,500	-	6,661	6,392	269	96.0%	-	-
Compensation of employees	3,021	1,000	-	4,021	3,906	115	97.1%	-	-
Salaries and wages	2,749	850	-	3,599	3,514	85	97.6%	-	-
Social contributions	272	150	-	422	392	30	92.9%	-	-
Goods and services	1,140	1,500	-	2,640	2,486	154	94.2%	-	-
Administrative fees	60	-	-	60	19	41	31.7%	-	-
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	-	8	-	8	8	-	100.0%	-	-
Communication (G&S)	90	(8)	-	82	56	26	68.3%	-	-
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	1,300	-	1,300	1,281	19	98.5%	-	-
Agency and support/ outsourced services	259	(153)	-	106	93	13	87.7%	-	-
Entertainment	-	-	-	-	-	-	-	-	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Fuel, oil and gas	-	-	-	-	-	-	-
Inventories: Material and supplies	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	-	-	-	-	-	-	-
Operating leases	-	3	-	3	1	2	33.3%
Property payments	-	-	-	-	-	-	-
Transport provided:	-	-	-	-	-	-	-
Departmental activities	-	-	-	-	-	-	-
Travel and subsistence	611	450	1,061	1,013	48	-	95.5%
Training and development	-	-	-	-	-	-	-
Operating payments	-	3	3	1	2	-	33.3%
Venues and facilities	120	(103)	17	14	3	-	82.4%
Rental and hiring	-	-	-	-	-	-	-
Transfers and subsidies	-	-	-	-	-	-	-
Departmental agencies and accounts	-	-	-	-	-	-	-
Departmental agencies	-	-	-	-	-	-	-
Higher education institutions	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-
Public corporations	-	-	-	-	-	-	-
Subsidies on products	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	-	-	-	-
Private enterprises	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

There was change to the structure in the Programme in the 2019/20 financial year. The subprogramme Office of the DDG was created as a new subprogramme.

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 3 – International Cooperation and Resources for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
3.1 Multilateral Cooperation and Africa	32,724	(50)	-	32,674	30,500	2,174	93.3%	36,270	36,123
3.2 International Resources	66,883	(1,150)	108	65,841	61,488	4,353	93.4%	63,492	61,851
3.3 Overseas Bilateral Cooperation	43,798	(100)	15	43,713	37,374	6,339	85.5%	42,687	41,898
3.4 Office of the DDG: International Cooperation and Resources	5,603	1,300	-	6,903	6,665	238	96.6%	-	-
Total	149,008	-	123	149,131	136,027	13,104	91.2%	142,449	139,872

Economic classification									
Current payments	77,033	-	-	77,033	68,148	8,885	88.5%	74,321	71,697
Compensation of employees	58,456	-	-	58,456	48,357	10,099	82.7%	50,352	48,017
Salaries and wages	52,930	(225)	-	52,705	43,338	9,367	82.2%	45,331	43,484
Social contributions	5,526	225	-	5,751	5,019	732	87.3%	5,021	4,533
Goods and services	18,577	-	-	18,577	19,791	(1,214)	106.5%	23,969	23,680
Administrative fees	185	277	-	462	395	67	85.5%	1,376	1,345

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Economic classification	471	(240)	-	231	-	231	-	161	161
Advertising	471	(240)	-	231	-	231	-	161	161
Minor assets	15	-	-	15	-	15	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	440	(52)	-	388	274	114	70.6%	316	267
Communication (G&S)	1,627	(510)	-	1,117	1,098	19	98.3%	1,266	1,263
Computer services	193	(20)	-	173	13	160	7.5%	77	77
Consultants: Business and advisory services	301	(222)	-	79	-	79	-	1,984	1,984
Legal services									
Contractors	300	(190)	-	110	10	100	9.1%	327	211
Agency and support/outsourced services	732	(620)	-	112	106	6	94.6%	23	-
Entertainment	875	(624)	-	251	169	82	67.3%	179	179
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Medical supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-
Consumable supplies	243	(193)	-	50	13	37	26.0%	75	8
Consumables: Stationery, printing and office supplies	3	20	-	23	29	(6)	126.1%	40	40
Operating leases	-	-	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-	136	136
Transport provided: Departmental activity	559	(555)	-	4	-	4	-	-	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Economic classification									
Travel and subsistence	6,625	(206)	-	6,419	8,304	(1,885)	129.4%	9,434	9,434
Training and development	831	-	-	831	-	831	-	-	-
Operating payments	1,239	1,360	-	2,599	2,727	(128)	104.9%	512	512
Venues and facilities	3,938	1,775	-	5,713	6,454	(741)	113.0%	7,868	7,868
Rental and hiring	-	-	-	-	199	(199)	-	195	195
Transfers and subsidies	71,975	-	123	72,098	67,879	4,219	94.1%	68,165	68,165
Departmental agencies and accounts	15,952	-	-	15,952	34,155	(18,203)	214.1%	14,948	29,525
Departmental agencies	15,952	-	-	15,952	34,155	(18,203)	214.1%	14,948	29,525
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	8,685	(8,685)	-	-	8,780
Public corporations	-	-	-	-	8,016	(8,016)	-	-	8,402
Other transfers to public corporations	-	-	-	-	8,016	(8,016)	-	-	8,402
Private enterprises	-	-	-	-	669	(669)	-	-	378
Other transfers to private enterprises	-	-	-	-	669	(669)	-	-	378
Non-profit institutions	56,023	-	-	56,023	24,814	31,209	44.3%	52,527	28,970
Households	-	-	123	123	225	(102)	182.9%	650	890
Social benefits	-	-	123	123	225	(102)	182.9%	-	240
Other transfers to households	-	-	-	-	-	-	-	650	650
Payment for capital assets	-	-	-	-	-	-	-	-	10
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	10
Transport equipment	-	-	-	-	-	-	-	-	-
Economic classification									
Other machinery and equipment	-	-	-	-	-	-	-	-	10
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	3	-
Total	149,008	-	123	149,131	136,027	13,104	91.2%	142,449	139,872

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 3.1: Multilateral Cooperation and Africa	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	22,710	(50)	-	22,660	22,468	192	99.2%	26,879	26,735
Compensation of employees	16,545	100	-	16,645	16,557	88	99.5%	18,117	18,117
Salaries and wages	14,719	75	-	14,794	14,709	85	99.4%	16,179	16,179
Social contributions	1,826	25	-	1,851	1,848	3	99.8%	1,938	1,938
Goods and services	6,165	(150)	-	6,015	5,911	104	98.3%	8,762	8,618
Administrative fees	42	247	-	289	282	7	97.6%	422	422
Advertising	169	(165)	-	4	-	4	-	59	59
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	118	-	-	118	112	6	94.9%	152	152
Communication (G&S)	293	35	-	328	327	1	99.7%	347	344
Computer services	37	(35)	-	2	-	2	-	63	63
Consultants: Business and advisory services	-	-	-	-	-	-	-	1,486	1,486
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	10	-	10	10	-	-	170	54
Agency and support/ outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	124	(92)	-	32	2	30	6.3%	6	6
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to households	-	-	-	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-	-	-	-
Total	32,724	(50)	-	32,674	30,500	2,174	93.3%	36,270	36,123			

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 3.2 International Resources	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	20,874	(1,150)	-	19,724	17,612	2,112	89.3%	20,353	18,694
Compensation of employees	17,608	(1,500)	-	16,108	14,072	2,036	87.4%	15,580	13,991
Salaries and wages	15,854	(1,500)	-	14,354	12,739	1,615	88.7%	13,950	12,769
Social contributions	1,754	-	-	1,754	1,333	421	76.0%	1,630	1,222
Goods and services	3,266	350	-	3,616	3,540	76	97.9%	4,773	4,703
Administrative fees	111	-	-	111	56	55	50.5%	105	74
Advertising	224	-	-	224	-	224	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	206	-	-	206	99	107	48.1%	78	78
Communication (G&S)	315	135	-	450	448	2	99.6%	609	609
Computer services	156	-	-	156	1	155	0.6%	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	76	-	-	76	-	76	-	498	498
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	24	85	-	109	106	3	97.2%	23	-
Entertainment	210	(2)	-	208	73	135	35.1%	101	101
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	17	-	-	17	3	14	17.6%	18	2
Operating leases	-	-	-	18	15	3	83.3%	6	6
Property payments	-	-	-	-	-	-	-	-	-
Travel and subsistence	875	114	-	989	2,162	(1,173)	218.6%	1,980	1,980
Training and development	-	-	-	-	-	-	-	-	-
Operating payments	95	-	-	95	178	(83)	187.4%	450	450
Venues and facilities	957	-	-	957	200	757	20.9%	718	718
Rental and hiring	-	-	-	-	199	(199)	-	187	187
Transfers and subsidies	46,009	-	108	46,117	43,876	2,241	95.1%	43,139	43,157
Departmental agencies and accounts	-	-	-	-	18,279	(18,279)	-	-	9,532
Departmental agencies	-	-	-	-	18,279	(18,279)	-	-	9,532
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-	-	-
Public corporations	-	-	-	-	4,305	(4,305)	-	-	4,778
Subsidies	-	-	-	-	3,636	(3,636)	-	-	4,400
Other transfers to public corporations	-	-	-	-	3,636	(3,636)	-	-	4,400
Private enterprises	-	-	-	-	669	(669)	-	-	378
Other transfers to private enterprises	-	-	-	-	669	(669)	-	-	378
Non-profit institutions	46,009	-	-	46,009	21,162	24,847	46.0%	43,139	28,784
Households	-	-	108	108	130	(22)	120.4%	-	63

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Social benefits	-	108	108	65,841	61,488	4,353	93.4%	63,492	61,851
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	66,883	108	(1,150)	65,841	61,488	4,353	93.4%	63,492	61,851

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 3.3 Overseas Bilateral Cooperation	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	27,846	(100)	-	27,746	21,403	6,343	77.1%	27,089	26,268
Compensation of employees	20,043	(100)	-	19,943	12,075	7,868	60.5%	16,655	15,909
Salaries and wages	18,480	(100)	-	18,380	10,768	7,612	58.6%	15,202	14,536
Social contributions	1,563	-	-	1,563	1,307	256	83.6%	1,453	1,373
Goods and services	7,803	-	-	7,803	9,328	(1,525)	119.5%	10,434	10,359
Administrative fees	18	30	-	48	44	4	91.7%	849	849
Advertising	78	(75)	-	3	-	3	-	102	102
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	91	(52)	-	39	36	3	92.3%	86	37
Communication (G&S)	929	(680)	-	249	246	3	98.8%	310	310
Computer services	-	15	-	15	12	3	80.0%	14	14
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	225	(222)	-	3	-	3	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	157	157
Agency and support/ outsourced services	708	(705)	-	3	-	3	-	-	-
Entertainment	539	(530)	-	9	3	6	33.3%	72	72
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Material and supplies	-	-	-	-	-	-	-
Inventories: Medical supplies	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-
Consumable supplies	197	(191)	-	6	2	4	33.3%
Consumables: Stationery, printing and office supplies	-	-	-	-	-	-	-
Operating leases	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-
Transport provided:	-	-	-	-	-	-	-
Departmental activity	559	(555)	-	4	-	4	-
Travel and subsistence	2,349	(12)	-	2,337	2,336	1	100.0%
Training and development	-	-	-	-	-	-	-
Operating payments	957	432	-	1,389	1,385	4	99.7%
Venues and facilities	1,153	2,545	-	3,698	5,264	(1,566)	142.3%
Rental and hiring	-	-	-	-	-	-	-
Transfers and subsidies	15,952	-	15	15,967	15,971	(4)	100.0%
Departmental agencies and accounts	15,952	-	-	15,952	15,876	76	99.5%
Departmental agencies	15,952	-	-	15,952	15,876	76	99.5%
Higher education institutions	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-
Public corporations	-	-	-	-	-	-	-
Subsidies	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	-	-	-	-
Private enterprises	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	-	-	-	-	-	-	-	-	-
Households	-	-	-	15	95	(80)	633.3%	650	827
Social benefits	-	-	15	15	95	(80)	633.3%	-	177
Other transfers to households	-	-	-	-	-	-	-	650	650
Payment for capital assets	-	-	-	-	-	-	-	-	10
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	10
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	10
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	43,798	(100)	15	43,713	37,374	6,339	85.5%	42,687	41,898

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 3.4 Office of the DDG: International Cooperation and Resources	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	5,603	1,300	-	6,903	6,665	238	96.6%	-	-
Compensation of employees	4,260	1,500	-	5,760	5,653	107	98.1%	-	-
Salaries and wages	3,877	1,300	-	5,177	5,122	55	98.9%	-	-
Social contributions	383	200	-	583	531	52	91.1%	-	-
Goods and services	1,343	(200)	-	1,143	1,012	131	88.5%	-	-
Administrative fees	14	-	-	14	13	1	92.9%	-	-
Advertising								-	-
Minor assets	15	-	-	15	-	15	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental								-	-
activities	25	-	-	25	27	(2)	108.0%	-	-
Communication (G&S)	90	-	-	90	77	13	85.6%	-	-
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business								-	-
and advisory services	-	-	-	-	-	-	-	-	-
Scientific and technological								-	-
services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors								-	-
Agency and support/ outsourced services	300	(200)	-	100	-	100	-	-	-
Entertainment	-	-	-	-	-	-	-	-	-
Fleet services (incl. government motor transport)	2	-	-	2	91	(89)	4550.0%	-	-
	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Clothing and accessories	-	-	-	-	-	-	-
Inventories: Fuel, oil and gas	-	-	-	-	-	-	-
Inventories: Material and supplies	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	3	3	4	(1)	133.3%		
Operating leases	3	-	13	(10)	433.3%		
Property payments	-	-	-	-	-		
Travel and subsistence	-	-	732	(732)	-		
Training and development	831	-	-	831	-		
Operating payments	-	-	55	(55)	-		
Venues and facilities	60	-	-	60	-		
Rental and hiring	-	-	-	-	-		
Transfers and subsidies	-	-	-	-	-		
Departmental agencies and accounts	-	-	-	-	-		
Departmental agencies	-	-	-	-	-		
Higher education institutions	-	-	-	-	-		
Foreign governments and international organisations	-	-	-	-	-		
Public corporations and private enterprises	-	-	-	-	-		
Public corporations	-	-	-	-	-		
Subsidies on	-	-	-	-	-		
Products	-	-	-	-	-		
Other transfers to public corporations	-	-	-	-	-		
Private enterprises	-	-	-	-	-		

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to private enterprises	-	-	-	-	-	-	-
Non-profit institutions	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-
Social benefits	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-
Total	5,603	1,300	-	6,903	6,665	238	96.6%

There was change to the structure in the Programme in the 2019/20 financial year. The subprogramme Office of the DDG was created as a new subprogramme.

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 4 – Research Development and Support for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
4.1 Human Capital and Science Promotion	2,608,661	(2,000)	25,298	2,631,959	2,629,802	2,157	99.9%	2,448,311	2,447,150
4.2 Science Missions	235,532	2,000	2,000	239,532	239,201	331	99.9%	223,779	223,348
4.3 Basic Science and Infrastructure	993,485	1,200	(15,557)	979,128	978,717	411	100.0%	1,095,818	1,095,294
4.4 Astronomy	731,903	(1,200)	(1,000)	729,703	728,392	1,311	99.8%	751,150	750,834
4.5 Office of the DDG: Research Development and Support	3,354	-	-	3,354	2,319	1,035	69.1%	-	-
Total	4,572,935	-	10,741	4,583,676	4,578,431	5,245	99.9%	4,519,058	4,516,626

Economic classification									
Current payments	58,565	-	(1,000)	57,565	52,696	4,869	91.5%	50,932	49,365
Compensation of employees	42,640	-	-	42,640	39,915	2,725	93.6%	36,211	34,754
Salaries and wages	37,724	443	-	38,167	35,747	2,420	93.7%	31,614	31,176
Social contributions	4,916	(443)	-	4,473	4,168	305	93.2%	4,597	3,578
Goods and services	15,925	-	(1,000)	14,925	12,781	2,144	85.6%	14,721	14,611
Administrative fees	651	1	-	652	430	222	66.0%	494	494

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Advertising	246	260	-	506	293	213	57.9%	846	846	-
Minor assets	-	4	-	4	1	3	25.0%	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	640	(200)	-	440	187	253	42.5%	353	353	352
Communication (G&S)	771	(78)	-	693	662	31	95.5%	507	507	507
Computer services	170	(116)	-	54	-	54	-	-	-	-
Consultants: Business and advisory services	1,253	(285)	-	968	663	305	68.5%	1,291	1,291	1,291
Scientific and technological services	-	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-	-
Agency and support/outsourced services	983	(630)	-	353	273	80	77.3%	690	690	681
Entertainment	225	(43)	-	182	4	178	2.2%	23	23	8
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-	-
Consumable supplies	21	12	-	33	7	26	21.2%	23	23	3
Consumables: Stationery, printing and office supplies	5	93	-	98	84	14	85.7%	75	75	41
Operating leases	-	-	-	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-	-	-	-
Travel and subsistence	8,200	1,452	(1,000)	8,652	8,310	342	96.0%	7,902	7,902	7,902
Training and development	-	16	-	16	14	2	87.5%	-	-	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Operating payments	507	344	-	851	804	47	94.5%	780	749
Venues and facilities	2,253	(830)	-	1,423	1,049	374	73.7%	1,737	1,737
Rental and hiring	-	-	-	-	-	-	-	-	-
Transfers and subsidies	4,514,370	-	11,739	4,526,109	4,525,734	375	100.0%	4,468,126	4,467,246
Departmental agencies and accounts	4,262,684	-	11,739	4,274,423	3,891,520	382,903	91.0%	4,217,987	3,859,068
Departmental agencies	4,262,684	-	11,739	4,274,423	3,891,520	382,903	91.0%	4,217,987	3,859,068
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	251,686	-	-	251,686	432,416	(180,730)	171.8%	250,139	466,744
Public corporations	251,686	-	-	251,686	432,416	(180,730)	171.8%	250,139	466,744
Subsidies	-	-	-	-	-	-	-	-	-
Other transfers to public corporations	251,686	-	-	251,686	432,416	(180,730)	171.8%	250,139	466,744
Private enterprises	-	-	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-	-	-
Non-profit institutions	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	200,438	(200,438)	-	-	141,435
Social benefit	-	-	-	-	1,360	(1,360)	-	-	-
Other transfers to households	-	-	-	-	1,360	(1,360)	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	12
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	12
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	12
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	2	2	1	1	50.0%	-	3
Total	4,572,935	-	10,741	4,583,676	4,578,431	5,245	99.9%	4,519,058	4,516,626

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 4.1: Human Capital and Science Promotion	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	17,827	(2,000)	-	15,827	14,027	1,800	88.6%	12,858	11,697
Compensation of employees	13,589	(2,000)	-	11,589	10,282	1,307	88.7%	9,606	8,480
Salaries and wages	11,758	(1,277)	-	10,481	9,272	1,209	88.5%	7,904	7,640
Social contributions	1,831	(723)	-	1,108	1,010	98	91.2%	1,702	840
Goods and services	4,238	-	-	4,238	3,745	493	88.4%	3,252	3,217
Administrative fees	55	97	-	152	148	4	97.4%	119	119
Advertising	45	13	-	58	54	4	93.1%	4	4
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	248	(135)	-	113	54	59	47.8%	90	89
Communication (G&S)	333	(190)	-	143	135	8	94.4%	168	168
Computer services	84	(75)	-	9	-	9	-	-	-
Consultants: Business and advisory services	-	215	-	215	211	4	98.1%	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	204	75	-	279	273	6	97.8%	679	670
Entertainment	17	(8)	-	9	-	9	-	7	2
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Material and supplies	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-
Consumable supplies	21	-	-	1	20	4.8%	20
Consumables: Stationery, printing and office supplies	-	8	-	6	2	75.0%	-
Operating leases	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-
Travel and subsistence	1,732	791	-	2,518	5	99.8%	1,816
Training and development	-	-	-	-	-	-	-
Operating payments	224	90	-	311	3	99.0%	324
Venues and facilities	1,275	(881)	-	394	360	8.6%	25
Rental and hiring	-	-	-	-	-	-	-
Transfers and subsidies	2,590,834	-	25,296	2,615,774	356	100.0%	2,435,453
Departmental agencies and accounts	2,590,834	-	25,296	2,545,283	70,847	97.3%	2,370,729
Departmental agencies	2,590,834	-	25,296	2,545,283	70,847	97.3%	2,370,729
Higher education institutions	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	41,234	(41,234)	-	43,397
Public corporations	-	-	-	41,234	(41,234)	-	43,397
Subsidies	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	41,234	(41,234)	-	43,397
Private enterprises	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-
Non-profit institutions	-	-	-	28,177	(28,177)	-	21,327
Households	-	-	-	1,080	(1,080)	-	-
Social benefits	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to households	-	-	-	-	1,080	(1,080)	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	50.0%	-	-
Total	2,608,661	(2,000)	25,298	2,631,959	2,629,802	2,157	99.9%	2,448,311	2,447,150

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 4.2: Science Missions	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	15,356	2,000	-	17,356	17,036	320	98.2%	17,090	17,059
Compensation of employees	12,172	2,000	-	14,172	13,940	232	98.4%	13,107	13,107
Salaries and wages	11,015	1,666	-	12,681	12,493	188	98.5%	11,771	11,771
Social contributions	1,157	334	-	1,491	1,447	44	97.0%	1,336	1,336
Goods and services	3,184	-	-	3,184	3,096	88	97.2%	3,983	3,952
Administrative fees	61	30	-	91	88	3	96.7%	79	79
Advertising	-	82	-	82	79	3	96.3%	32	32
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	45	12	-	57	54	3	94.7%	-	-
Communication (G&S)	205	(40)	-	165	163	2	98.8%	168	168
Computer services	44	(41)	-	3	-	3	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	555	(100)	-	455	452	3	99.3%	1,261	1,261
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	294	(290)	-	4	-	4	-	-	-
Entertainment	5	-	-	5	3	2	60.0%	4	4
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Social benefits	-	-	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	235,532	2,000	2,000	239,532	239,201	331	99.9%	223,779	223,348

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 4.3: Basic Science and Infrastructure	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	9,888	1,200	-	11,088	10,685	403	96.4%	9,885	9,841
Compensation of employees	7,890	1,200	-	9,090	8,863	227	97.5%	8,564	8,554
Salaries and wages	6,896	1,153	-	8,049	7,865	184	97.7%	7,630	7,620
Social contributions	994	47	-	1,041	998	43	95.9%	934	934
Goods and services	1,998	-	-	1,998	1,822	176	91.2%	1,321	1,287
Administrative fees	13	39	-	52	46	6	88.5%	38	38
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	82	-	-	82	46	36	56.1%	60	60
Communication (G&S)	185	(39)	-	146	136	10	93.2%	114	114
Computer services	42	-	-	42	-	42	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	405	(400)	-	5	-	5	-	30	30
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	225	(160)	-	65	-	65	-	11	11
Entertainment	-	-	-	-	-	-	-	1	1
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to households	-	-	-	(280)	280	-	-	-	-	1,095,294
Payment for capital assets	-	-	-	-	-	-	-	-	-	1,095,818
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-	-
Total	993,485	1,200	(15,557)	411	978,717	979,128	978,717	100.0%	1,095,818	1,095,294

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 4.4 Astronomy	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	12,140	(1,200)	(1,000)	9,940	8,629	1,311	86.8%	11,099	10,768
Compensation of employees	6,387	(1,200)	-	5,187	4,875	312	94.0%	4,934	4,613
Salaries and wages	5,715	(1,099)	-	4,616	4,376	240	94.8%	4,309	4,145
Social contributions	672	(101)	-	571	499	72	87.4%	625	468
Goods and services	5,753	-	(1,000)	4,753	3,754	999	79.0%	6,165	6,155
Administrative fees	460	(165)	-	295	142	153	48.1%	258	258
Advertising	201	165	-	366	160	206	43.7%	810	810
Minor assets	-	4	-	4	1	3	25.0%	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	260	(84)	-	176	23	153	13.1%	203	203
Communication (G&S)	-	80	-	80	77	3	96.3%	57	57
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	293	-	-	293	-	293	-	-	-
Scientific and technological services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	260	(255)	-	5	-	5	-	-	-
Entertainment	201	(35)	-	166	1	165	0.6%	11	1
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Other transfers to private enterprises	-	(1,200)	(1,000)	729,703	728,392	1,311	99.8%	751,150	-
Non-profit institutions	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-
Social benefits	-	-	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	12
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	731,903	(1,200)	(1,000)	729,703	728,392	1,311	99.8%	751,150	750,834

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 4.5 Office of the DDG: Research Development and Support	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	3,354	-	-	3,354	2,319	1,035	69.1%	-	-
Compensation of employees	2,602	-	-	2,602	1,955	647	75.1%	-	-
Salaries and wages	2,340			2,340	1,741	599	74.4%	-	-
Social contributions	262			262	214	48	81.7%	-	-
Goods and services	752	-	-	752	364	388	48.4%	-	-
Administrative fees	62	-	-	62	6	56	9.7%	-	-
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	5	7	-	12	10	2	83.3%	-	-
Communication (G&S)	48	111	-	159	151	8	95.0%	-	-
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business and advisory services	-	-	-	-	-	-	-	-	-
Scientific and technological services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	2	-	-	2	-	2	-	-	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

There was change to the structure in the Programme in the 2019/20 financial year. The subprogramme Office of the DDG was created as a new subprogramme.

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Detail per Programme 5 – Socio-Economic Innovation Partnerships for the year ended 31 March 2020									
Subprogramme	2019/20					2018/19			
	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
5.1 Sector Innovation and Green Economy	1,046,003	(2,620)	(200)	1,043,183	1,042,703	480	100.0%	1,032,362	1,102,855
5.2 Innovation for Inclusive Development	378,068	(860)	(3,050)	374,158	373,080	1,078	99.7%	341,529	339,953
5.3 Science and Technology Investment	34,923	2,247	(636)	36,534	33,983	2,551	93.0%	30,155	29,935
5.4 Technology Localisation, Beneficiation and Advanced Manufacturing	372,287	(537)	(43,861)	327,889	323,574	4,315	98.7%	355,148	278,477
5.5 Office of the DDG: Socio Economic Innovation Partnership	3,458	1,770	(100)	5,128	4,856	272	94.7%	-	-
Total	1,834,739	-	(47,847)	1,786,892	1,778,196	8,696	99.5%	1,759,194	1,751,220

Economic classification									
Current payments	58,343	-	(1,000)	57,343	48,959	8,384	85.4%	51,654	47,740
Compensation of employees	48,628	-	-	48,628	43,193	5,435	88.8%	42,968	40,530
Salaries and wages	43,712	(158)	-	43,554	38,757	4,797	89.0%	38,400	36,411
Social contributions	4,916	158	-	5,074	4,436	638	87.4%	4,568	4,119

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Goods and services	9,715	-	(1,000)	8,715	5,766	2,949	66.2%	8,686	7,210
Administrative fees	155	(43)	-	112	75	37	67.0%	145	90
Advertising	232	(80)	-	152	14	138	9.2%	96	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	331	(172)	-	159	31	128	19.5%	229	39
Communication (G&S)	1,162	136	(300)	998	772	226	77.4%	879	614
Computer services	80	(75)	-	5	-	5	-	76	-
Consultants: Business and advisory services	2,840	(1,905)	-	935	208	727	22.2%	670	652
Legal services	-	767	-	767	743	24	96.9%	276	276
Contractors	-	-	-	-	-	-	-	3	3
Agency and support/outsourced services	196	780	-	976	936	40	95.9%	2,815	2,815
Entertainment	112	(13)	-	99	5	94	5.1%	106	6
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing, material accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-
Inventory: Material and supplies	-	-	-	-	-	-	-	-	-
Inventory: Other supplies	-	-	-	-	-	-	-	-	-
Consumable supplies	5	11	-	16	5	11	31.3%	7	2
Consumables: Stationery, printing and office supplies	-	45	-	45	42	3	93.3%	93	93
Operating leases	-	-	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	-	-	-	-
Travel and subsistence	3,667	(156)	(400)	3,111	2,190	921	70.4%	2,275	1,872
Training and development	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Operating payments	45	668	-	713	692	21	97.1%	790	748
Venues and facilities	890	37	(300)	627	53	574	8.5%	226	-
Rental and hiring	-	-	-	-	-	-	-	-	-
Transfers and subsidies	1,776,396	-	(46,847)	1,729,549	1,729,237	312	100.0%	1,707,531	1,703,472
Departmental agencies and accounts	598,846	-	(8,050)	590,796	470,177	120,619	79.6%	554,025	398,886
Departmental agencies	598,846	-	(8,050)	590,796	470,177	120,619	79.6%	554,025	398,886
Higher education institutions	-	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-	-
Public corporations and private enterprises	1,177,550	-	(38,861)	1,138,689	1,216,188	(77,499)	106.8%	1,153,506	1,245,650
Public corporations	1,177,550	-	(38,861)	1,138,689	1,211,116	(72,427)	106.4%	1,153,506	1,234,501
Subsidies on products	965,823	-	-	965,823	965,823	-	100.0%	963,164	963,163
Other transfers to public corporations	211,727	-	(38,861)	172,866	245,293	(72,427)	141.9%	190,342	271,338
Private enterprises	-	-	-	-	5,072	(5,072)	-	-	11,149
Other transfers to private enterprises	-	-	-	-	5,072	(5,072)	-	-	11,149
Non-profit institutions	-	-	-	-	42,816	(42,816)	-	-	58,843
Households	-	-	64	64	56	8	87.5%	-	93
Social benefits	-	-	64	64	56	8	87.5%	-	93
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	8
Total	1,834,739	-	(47,847)	1,786,892	1,778,196	8,696	99.5%	1,759,194	1,751,220

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 5.1: Sector Innovation and Green Economy	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	12,245	(2,620)	(200)	9,425	9,228	197	97.9%	10,341	9,742
Compensation of employees	8,529	-	-	8,529	8,481	48	99.4%	8,773	8,701
Salaries and wages	7,412	170	-	7,582	7,541	41	99.5%	7,795	7,734
Social contributions	1,117	(170)	-	947	940	7	99.3%	978	967
Goods and services	3,716	(2,620)	(200)	896	747	149	83.4%	1,568	1,041
Administrative fees	70	(50)	-	20	16	4	80.0%	57	37
Advertising	90	(85)	-	5	-	5	-	85	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	100	(95)	-	5	2	3	40.0%	95	11
Communication (G&S)	378	(100)	-	278	236	42	84.9%	358	159
Computer services	80	(75)	-	5	-	5	-	76	-
Consultants: Business	1,159	(1,100)	-	59	-	59	-	-	-
and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	46	(40)	-	6	-	6	-	410	410
Entertainment	22	(15)	-	7	-	7	-	21	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

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VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 5.2: Innovation for Inclusive Development	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	11,958	(860)	-	11,098	10,020	1,078	90.3%	11,955	10,380
Compensation of employees	11,266	(1,700)	-	9,566	8,772	794	91.7%	9,546	8,102
Salaries and wages	10,542	(1,934)	-	8,608	7,887	721	91.6%	8,723	7,282
Social contributions	724	234	-	958	885	73	92.4%	823	820
Goods and services	692	840	-	1,532	1,248	284	81.5%	2,409	2,278
Administrative fees	45	(5)	-	40	29	11	72.5%	43	23
Advertising	12	5	-	17	14	3	82.4%	11	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	61	(60)	-	1	-	1	-	58	11
Communication (G&S)	177	38	-	215	112	103	52.1%	102	102
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	19	-	-	19	-	19	-	18	-
Legal services	-	367	-	367	352	15	95.9%	276	276
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	150	(145)	-	5	-	5	-	1,178	1,178
Entertainment	15	-	-	15	2	13	13.3%	14	3
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Social benefit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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VOTE 30 APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 5.3: Science and Technology Investment	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	14,071	2,247	(700)	15,618	13,075	2,543	83.7%	16,171	15,858
Compensation of employees	12,467	-	-	12,467	11,084	1,383	88.9%	14,116	13,856
Salaries and wages	11,149	(229)	-	10,920	9,969	951	91.3%	12,691	12,479
Social contributions	1,318	229	-	1,547	1,115	432	72.1%	1,425	1,377
Goods and services	1,604	2,247	(700)	3,151	1,991	1,160	63.2%	2,055	2,002
Administrative fees	21	-	-	21	11	10	52.4%	20	5
Advertising	130	-	-	130	-	130	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	82	(5)	-	77	16	61	20.8%	10	10
Communication (G&S)	321	200	(300)	221	213	8	96.4%	213	213
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	431	(200)	-	231	208	23	90.0%	360	360
Legal services	-	400	-	400	391	9	97.8%	-	-
Contractors	-	-	-	-	-	-	-	3	3
Agency and support/ outsourced services	-	900	-	900	874	26	97.1%	1,103	1,103
Entertainment	42	-	-	42	2	40	4.8%	40	2
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	-	-	-	-	-	-	-	-

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Material and supplies	-	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-	-
Consumables: Stationery,	-	5	-	5	1	4	20.0%	-
printing and office supplies	-	-	-	-	-	-	-	-
Operating leases	-	-	-	-	-	-	-	14
Property payments	-	-	-	-	-	-	-	-
Travel and subsistence	351	847	(300)	898	259	639	28.8%	280
Training and development	-	-	-	-	-	-	-	-
Operating payments	-	-	-	-	-	-	-	12
Venues and facilities	226	100	(100)	226	16	210	7.1%	-
Rental and hiring	-	-	-	-	-	-	-	-
Transfers and subsidies	20,852	-	64	20,916	20,908	8	100.0%	13,984
Departmental agencies and accounts	20,852	-	-	20,852	20,852	-	100.0%	13,984
Departmental agencies	20,852	-	-	20,852	20,852	-	100.0%	13,984
Higher education institutions	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-
Public corporations and private enterprises	-	-	-	-	-	-	-	-
Public corporations	-	-	-	-	-	-	-	-
Subsidies on products	-	-	-	-	-	-	-	-
Other transfers to public corporations	-	-	-	-	-	-	-	-
Private enterprises	-	-	-	-	-	-	-	-
Other transfers to private enterprises	-	-	-	-	-	-	-	-
Non-profit institutions	-	-	-	-	-	-	-	-
Households	-	-	64	64	56	8	87.5%	93
Social benefit	-	-	64	64	56	8	87.5%	93

VOTE 30 APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 5.4: Technology Localisation, Beneficiation and Advanced Manufacturing	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	16,611	(537)	-	16,074	11,780	4,294	73.3%	13,187	11,760
Compensation of employees	13,662	-	-	13,662	10,614	3,048	77.7%	10,533	9,871
Salaries and wages	12,218	285	-	12,503	9,554	2,949	76.4%	9,191	8,916
Social contributions	1,444	(285)	-	1,159	1,060	99	91.5%	1,342	955
Goods and services	2,949	(537)	-	2,412	1,166	1,246	48.3%	2,654	1,889
Administrative fees	-	12	-	12	8	4	66.7%	25	25
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental	-	-	-	-	-	-	-	-	-
activities	70	(12)	-	58	13	45	22.4%	66	7
Communication (G&S)	218	-	-	218	161	57	73.9%	206	140
Computer services	-	-	-	-	-	-	-	-	-
Consultants: Business	-	-	-	-	-	-	-	-	-
and advisory services	1,231	(605)	-	626	-	626	-	292	292
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	-	65	-	65	62	3	95.4%	124	124
Entertainment	33	-	-	33	-	33	-	31	1
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-

APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Inventories: Clothing and accessories	-	-	-	-	-	-	-	-
Inventories: Fuel, oil and gas	-	-	-	-	-	-	-	-
Inventories: Material and supplies	-	-	-	-	-	-	-	-
Inventories: Other supplies	-	-	-	-	-	-	-	-
Consumables: Stationery, printing and office supplies	-	6	-	4	2	66.7%	2	2
Operating leases	-	45	-	42	3	93.3%	79	79
Property payments	-	-	-	-	-	-	-	-
Travel and subsistence	1,158	(588)	-	343	227	60.2%	868	484
Training and development	-	-	-	-	-	-	-	-
Operating payments	-	540	-	533	7	98.7%	735	735
Venues and facilities	239	-	-	-	239	-	226	-
Rental and hiring	-	-	-	-	-	-	-	-
Transfers and subsidies	355,676	(43,861)	311,815	311,794	21	100.0%	341,961	266,717
Departmental agencies and accounts	182,482	(5,000)	177,482	80,980	96,502	45.6%	177,856	57,813
Departmental agencies	182,482	(5,000)	177,482	80,980	96,502	45.6%	177,856	57,813
Higher education institutions	-	-	-	-	-	-	-	-
Foreign governments and international organisations	-	-	-	-	-	-	-	-
Public corporations and private enterprises	173,194	(38,861)	134,333	212,389	(78,056)	158.1%	164,105	207,704
Public corporations	173,194	(38,861)	134,333	207,317	(72,984)	154.3%	164,105	196,956
Subsidies on products	-	-	-	-	-	-	-	-
Other transfers to public corporations	173,194	(38,861)	134,333	207,317	(72,984)	154.3%	164,105	196,956
Private enterprises	-	-	-	5,072	(5,072)	-	-	10,748
Other transfers to private enterprises	-	-	-	5,072	(5,072)	-	-	10,748

APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	-	-	-	-	18,425	(18,425)	-	-	-
Households	-	-	-	-	-	-	-	-	1,200
Social benefits	-	-	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Buildings and other fixed structures	-	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-	-
Payment for financial assets	-	-	-	-	-	-	-	-	-
Total	372,287	(537)	(43,861)	327,889	323,574	4,315	98.7%	355,148	278,477

APPROPRIATION STATEMENT
FOR THE YEAR ENDED 31 MARCH 2020

Subprogramme: 5.5 Office of the DDG: Socio Economic Innovation Partnership	Adjusted appropriation	Shifting of funds	Virement	Final appropriation	Actual expenditure	Variance	Expenditure as % of final appropriation	Final appropriation	Actual expenditure
Current payments	3,458	1,770	(100)	5,128	4,856	272	94.7%	-	-
Compensation of employees	2,704	1,700	-	4,404	4,242	162	96.3%	-	-
Salaries and wages	2,391	1,550	-	3,941	3,806	135	96.6%	-	-
Social contributions	313	150	-	463	436	27	94.2%	-	-
Goods and services	754	70	(100)	724	614	110	84.8%	-	-
Administrative fees	19	-	-	19	11	8	57.9%	-	-
Advertising	-	-	-	-	-	-	-	-	-
Minor assets	-	-	-	-	-	-	-	-	-
Audit costs: External	-	-	-	-	-	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	-	-	-
Catering: Departmental activities	-	-	-	-	-	-	-	-	-
Communication (G&S)	18	-	-	18	-	18	-	-	-
Computer services	68	(2)	-	66	50	16	75.8%	-	-
Consultants: Business and advisory services	-	-	-	-	-	-	-	-	-
Legal services	-	-	-	-	-	-	-	-	-
Contractors	-	-	-	-	-	-	-	-	-
Agency and support/ outsourced services	-	-	-	-	-	-	-	-	-
Entertainment	-	2	-	2	1	1	50.0%	-	-
Fleet services (incl. government motor transport)	-	-	-	-	-	-	-	-	-
Inventory: Clothing and accessories	-	-	-	-	-	-	-	-	-

APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

[illegible]

APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

Social benefits	-	-	-	-	-	-	-	-
Other transfers to households	-	-	-	-	-	-	-	-
Payment for capital assets								
Buildings and other fixed structures	-	-	-	-	-	-	-	-
Machinery and equipment	-	-	-	-	-	-	-	-
Transport equipment	-	-	-	-	-	-	-	-
Other machinery and equipment	-	-	-	-	-	-	-	-
Software and other intangible assets	-	-	-	-	-	-	-	-
Payment for financial assets								
Total	3,458	1,770	(100)	5,128	4,856	272	94.7%	-

There was change to the structure in the Programme 1 in the 2019/20 financial year. The subprogramme Office of the DDG was created as a new subprogramme.

NOTES TO THE APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

1. Details of transfers and subsidies as per Appropriation Act (after virement):

Details of these transactions can be viewed in the note to the Transfers and Subsidies, disclosure notes and Annexure 1 (B, C, E, D, F and G) to the Annual Financial Statements.

2. Details of specifically and exclusively appropriated amounts voted (after virement):

Details of these transactions can be viewed in note 1 (Annual Appropriation) to the Annual Financial Statements.

3. Details on payments for financial assets.

The details of these transactions can be viewed in Note 7 to the Annual Financial Statements.

4. Explanations of material variances from amounts voted (after virement):

4.1 Per Programme:

	Final appropriation	Actual expenditure	Variance R'000	Variance as a % of final appropriation
	R'000	R'000	R'000	%
Programme name				
Administration				
Compensation	182,637	148,587	34,050	18.6%
Goods and services	158,603	145,112	13,491	8.5%
Payments for capital assets	8,900	7,541	1,359	15.3%

The variance was due to transitional measures from the 5th to 6th administration (suspension of the filling of Programme 1 positions) including the National Macro Organisation of Government (NMOG), which resulted in delays in the filling of positions, and the inability to spend the additional funding allocated to the Department during the NMOG process.

Programme name **Technology Innovation**

Compensation	56,744	43,824	12,920	22.8%
Goods and services	22,063	23,609	(1,546)	(7.0)%
Payments for capital assets	1,201,484	1,169,239	32,245	2.7%

The variance was due to delays in the filling critical positions and non-payment for the Social Impact Bond due to slow progress on the project.

Programme name **International Cooperation and Resources**

Compensation	58,456	48,357	10,099	17.3%
Goods and services	18,577	19,791	(1,214)	(6.5)%
Payments for capital assets	72,098	67,879	4,219	5.9%

The variance was due to delays in the filling of critical positions, payments for the Innovation Bridge-Science Forum South Africa event and a decrease in uptake of EU-funded projects by South African institutions.

NOTES TO THE APPROPRIATION STATEMENT FOR THE YEAR ENDED 31 MARCH 2020

4.2 Per Programme:

	Final appropriation	Actual expenditure	Variance	Variance as a % of final appropriation
	R'000	R'000	R'000	%
Current payments				
Compensation of employees	389,105	323,876	65,229	16.8%
Goods and services	222,883	207,059	15,824	7.1%
Interest and rent on land	-	-	-	-
Transfers and subsidies				
Departmental agencies and accounts	5,648,533	5,165,069	483,464	8.6%
Higher education institutions	-	-	-	-
Public corporations and private enterprises	1,503,047	1,811,667	(308,620)	(20.5)%
Non-profit institutions	397,494	533,589	(136,095)	(34.2)%
Households	2,208	3,607	(1,399)	(63.4)%
Payments for capital assets				
Machinery and equipment	8,900	7,541	1,359	15.3%
Intangible assets	-	-	-	-

The variance was due to delays in filling critical positions and 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 to the next financial year. There were also 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 a delay in the start of Technology Transfer and Intellectual Property Survey, as well as non-payment for the Social Impact Bond due to slow progress on the project.

STATEMENT OF FINANCIAL PERFORMANCE
FOR THE YEAR ENDED 31 MARCH 2020

PERFORMANCE	Note	2019/20 R'000	2018/19 R'000
REVENUE			
Annual appropriation	<u>1</u>	8,172,304	7,958,388
Departmental revenue	<u>2</u>	19,416	32,749
Aid assistance	<u>3</u>	12,189	45,348
TOTAL REVENUE		8,203,909	8,036,485
EXPENDITURE			
Current expenditure			
Compensation of employees	<u>4</u>	323,876	330,750
Goods and services	<u>5</u>	207,059	215,402
Aid assistance	<u>3</u>	970	1,151
Total current expenditure		531,905	547,303
Transfers and subsidies			
Transfers and subsidies	<u>7</u>	7,513,932	7,336,589
Aid assistance	<u>3</u>	11,219	44,176
Total transfers and subsidies		7,525,151	7,380,765
Expenditure for capital assets			
Tangible capital assets	<u>8</u>	7,541	9,063
Intangible assets	<u>8</u>	-	-
Total expenditure for capital assets		7,541	9,063
Unauthorised expenditure approved without funding		-	-
Payment for financial assets	<u>6</u>	89	143
TOTAL EXPENDITURE		8,064,686	7,937,274
SURPLUS FOR THE YEAR		139,223	99,211
Reconciliation of net surplus for the year			
Voted funds		119,807	66,462
Departmental revenue	<u>14</u>	19,416	32,749
Aid assistance	<u>3</u>	-	-
SURPLUS FOR THE YEAR		139,223	99,211

STATEMENT OF FINANCIAL POSITION

FOR THE YEAR ENDED 31 MARCH 2020

POSITION	Note	2019/20	2018/19
		R'000	R'000
ASSETS			
Current assets		73,756	65,652
Cash and cash equivalents	<u>9</u>	70,948	64,589
Prepayments and advances	<u>10</u>	136	953
Receivables	<u>11</u>	2,672	110
Non-current Assets		191	221
Receivables	<u>11</u>	191	221
TOTAL ASSETS		73,947	65,873
LIABILITIES			
Current liabilities		73,843	65,842
Voted funds to be surrendered to the Revenue Fund	<u>13</u>	73,679	65,812
Departmental revenue to be surrendered to the Revenue Fund	<u>14</u>	13	12
Payables	<u>15</u>	151	18
Aid assistance repayable	<u>3</u>	-	-
TOTAL LIABILITIES		73,843	65,842
NET ASSETS		104	31
Represented by:			
Recoverable revenue		104	31
TOTAL		104	31

STATEMENT OF CHANGES IN NET ASSETS
FOR THE YEAR ENDED 31 MARCH 2020

NET ASSETS	Note	2019/20	2018/19
		R'000	R'000
Recoverable revenue			
Opening balance		31	30
Transfers:		73	1
Debts revised		-	-
Debts recovered (included in departmental receipts)		(51)	(41)
Debts raised		124	42
Closing balance		104	31
TOTAL		104	31

CASH FLOW STATEMENT

FOR THE YEAR ENDED 31 MARCH 2020

CASH FLOW	Note	2019/20 R'000	2018/19 R'000
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts		8,157,781	8,035,618
Annual appropriated funds received	<u>1.1</u>	8,126,176	7,957,738
Departmental revenue received	<u>2</u>	19,403	32,505
Interest received	<u>2.2</u>	13	27
Aid assistance received	<u>3</u>	12,189	45,348
Net (increase) decrease in working capital		(1,612)	(13,135)
Surrendered to Revenue Fund		(85,227)	(100,428)
Surrendered to RDP Fund/Donor		-	(332)
Current payments		(531,905)	(547,303)
Interest paid		-	-
Payments for financial assets		(89)	(143)
Transfers and subsidies paid		(7,525,151)	(7,380,765)
Net cash flow available from operating activities	<u>16</u>	13,797	(6,488)
CASH FLOWS FROM INVESTING ACTIVITIES			
Payments for capital assets	<u>8</u>	(7,541)	(9,063)
Proceeds from sale of capital assets	<u>2.3</u>	-	217
Increase in non-current receivables		30	-
Net cash flows from investing activities		(7,511)	(8,846)
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase/(decrease) in net assets		73	1
Net cash flows from financing activities		73	1
Net increase/(decrease) in cash and cash equivalents		6,359	(15,333)
Cash and cash equivalents at the beginning of the period		64,589	79,922
Cash and cash equivalents at end of period	<u>17</u>	70,948	64,589

ACCOUNTING POLICIES FOR THE YEAR ENDED 31 MARCH 2020

The financial statements have been prepared in accordance with the policies indicated below, which have been applied consistently in all material aspects, unless otherwise indicated. Management has concluded that the financial statements fairly represent the Department's primary and secondary information.

The historical cost convention has been used, except where otherwise indicated. Management has used assessments and estimates in preparing the annual financial statements where necessary. These are based on the best information available at the time of preparation.

Where appropriate and meaningful, additional information has been disclosed to enhance the usefulness of the financial statements and to comply with the statutory requirements of the Public Finance Management Act, 1999, and the Treasury Regulations issued in terms of the Act and the Division of Revenue Act.

1. Basis of preparation

The financial statements have been prepared in accordance with the Modified Cash Standard.

2. Going concern

The financial statements have been prepared on a going concern basis due to the following reasons, among others:

- (i) The Department was allocated a budget over the Medium-Term Expenditure Framework period that includes R8 billion that was allocated for the next financial year for its operations. This budget will assist in paying for short-term financial obligations such as personnel and other priority projects.
- (ii) The Department's five-year (2015-2020) strategic plan is still ongoing. The plan is being implemented and will only be reviewed after 2020.

3. Presentation currency

All amounts have been presented in South African rand (R), which is also the functional currency of the Department.

4. Rounding

Unless otherwise stated all financial figures have been rounded to the nearest one thousand rand (R'000).

5. Foreign currency translation

Cash flows arising from foreign currency transactions are translated into South African rands using the spot exchange rates prevailing at the date of payment/receipt.

6. Comparative information

6.1. Prior period comparative information

Prior period comparative information has been presented in the current year's financial statements. Where necessary figures included in the prior period financial statements have been reclassified to ensure that the format in which the information is presented is consistent with the format of the current year's financial statements.

6.2. Current year comparison with budget

A comparison between the approved, final budget and actual amounts for each Programme and economic classification is included in the appropriation statement.

7. Revenue

7.1. Appropriated funds

Appropriated funds comprise of departmental allocations. Appropriated funds are recognised in the statement of financial performance on the date the appropriation becomes effective. Adjustments to the appropriated funds made in terms of the adjustments budget process are recognised in the statement of financial performance on the date the adjustments become effective.

The net amount of any appropriated funds due to or from the National Revenue Fund at the reporting date is recognised as payable or receivable in the Statement of Financial Position.

A comparison between the approved, final budget and actual amounts for each Programme and economic classification is included in the appropriation statement.

7.2. Departmental revenue

The departmental revenue is recognised in the Statement of Financial Performance when received and is subsequently paid into the National Revenue Fund, unless otherwise stated.

Any amount owing to the National Revenue Fund at the reporting date is recognised as payable in the Statement of Financial Position.

7.3. Accrued departmental revenue

Accruals in respect of departmental revenue (excluding tax revenue) are recorded in the notes to the financial statements when –

- it is probable that the economic benefits or service potential associated with the transaction will flow to the Department; and
- the amount of revenue can be measured reliably.

The accrued revenue is measured at the fair value of the consideration receivable. Write-offs if any are made according to the Department's debt write-off policy

8. Expenditure

8.1. Compensation of employees

8.1.1. Salaries and wages

Salaries and wages are recognised in the Statement of Financial Performance on the date of payment.

8.1.2. Social contributions

Social contributions made by the Department in respect of current employees are recognised in the Statement of Financial Performance on the date of payment. Social contributions made by the Department in respect of ex-employees are classified as transfers to households in the Statement of Financial Performance on the date of payment.

8.2. Other expenditure

Other expenditure such as goods and services, transfers and subsidies and payments for capital assets are recognised in the Statement of Financial Performance on the date of payment. The expense is classified as a capital expense if the total consideration paid is more than the capitalisation threshold.

8.3. Accruals and payables not recognised

Accruals and payables not recognised are recorded in the notes to the financial statements when the goods are received or, in the case of services, when they are rendered to the Department or, in the case of transfers and subsidies, when they are due and payable. Accruals and payables not recognised are measured at cost.

8.4. Leases

8.4.1. Operating leases

Operating lease payments made during the reporting period are recognised as current expenditure in the Statement of Financial Performance on the date of payment. The operating lease commitments are recorded in the notes to the financial statements.

8.4.2. Finance leases

Finance lease payments made during the reporting period are recognised as capital expenditure in the Statement of Financial Performance on the date of payment. The finance lease commitments are recorded in the notes to the financial statements and are not apportioned between the capital and interest portions.

Finance lease acquired at the end of the lease term are recorded and measured at the lower of –

- cost, being the fair value of the asset; or
- the sum of the minimum lease payments made, including any payments made to acquire ownership at the end of the lease term, excluding interest.

9. Aid assistance

9.1. Aid assistance received

Aid assistance received in cash is recognised in the statement of financial performance when received. In-kind aid assistance is recorded in the notes to the financial statements on the date of receipt and is measured at fair value.

Aid assistance not spent for the intended purpose and any unutilised funds from aid assistance that are required to be refunded to the donor are recognised as a payable in the statement of financial position.

9.2. Aid assistance paid

Aid assistance paid is recognised in the Statement of Financial Performance on the date of payment. Aid assistance payments made prior to the receipt of funds are recognised as a receivable in the Statement of Financial Position.

10. Cash and cash equivalents

Cash and cash equivalents are stated at cost in the Statement of Financial Position.

Bank overdrafts are shown separately on the face of the Statement of Financial Position.

For the purposes of the Cash Flow Statement, cash and cash equivalents comprise cash on hand, deposits held, other short-term highly liquid investments and bank overdrafts.

11. Prepayments and advances

Prepayments and advances are recognised in the statement of financial position when the Department receives or disburses the cash. Prepayments and advances are initially and subsequently measured at cost.

12. Loans and receivables

Loans and receivables are recognised in the statement of financial position at cost plus accrued interest, where interest is charged, less amounts already settled or written-off. Write-offs are made according to the Department's write-off policy

13. Investments

Investments are recognised in the Statement of Financial position at cost.

14. Financial assets

14.1. Financial assets (not covered elsewhere)

A financial asset is recognised initially at its cost plus transaction costs that are directly attributable to the acquisition or issue of the financial assets. At the reporting date, a department must measure its financial assets at cost, less amounts already settled or written-off, except for recognised loans and receivables, which are measured at cost plus accrued interest, where interest is charged, less amounts already settled or written-off.

14.2. Impairment of financial assets

Where there is an indication of impairment of a financial asset, an estimation of the reduction is the recorded carrying value, to reflect the best estimate of the amount of the future economic benefits expected to be recovered from that asset is recorded in the notes to the financial statements

15. Payables

Loans and payables are recognised in the Statement of Financial Position at cost.

16. Capital assets

16.1. Immovable capital assets

Immovable capital assets are reflected in the asset register of the Department and recorded in the notes to the financial statements at cost or fair value where the cost cannot be determined reliably. Immovable capital assets acquired in a non- exchange transaction are recorded at fair value at the date of acquisition. Immovable assets are subsequently carried in the asset register at cost and are not currently subject to depreciation or impairment.

Subsequent expenditure of a capital nature forms part of the cost of the existing asset when ready for use.

Additional information on immovable assets not reflected in the asset register is provided in the notes to financial statements.

16.2. Movable capital assets

Movable capital assets are initially recorded in the notes to the financial statements at cost. Movable capital assets acquired through a non-exchange transaction are measured at fair value as at the date of acquisition.

Where the cost of movable capital assets cannot be determined accurately, the movable capital assets are measured at fair value and where fair value cannot be determined; the movable assets are measured at R1.

All assets acquired prior to 1 April 2002 (or late as approved by the Office of the Accountant General) are measured at R1.

Movable capital assets are subsequently carried at cost and are not subject to depreciation or impairment.

Subsequent expenditure that is of capital nature is added to the cost of the asset at the end of the capital project unless the movable asset is recorded by another department, in which case the completed project costs are transferred to the department.

16.3. Intangible assets

Intangible assets are initially recorded in the notes to the financial statements at cost. Intangible assets acquired through a non-exchange transaction are measured at fair value as at the date of acquisition.

Internally generated intangible assets are recorded in the notes to the financial statements when the Department commences the development phase of the project.

Where the cost of intangible assets cannot be determined accurately, the intangible capital assets are measured at fair value and where fair value cannot be determined; the intangible assets are measured at R1. All assets acquired prior to 1 April 2002 (or a later date as approved by the Office of the Auditor-General) are recorded at R1. Intangible assets are subsequently carried at cost and are not subject to depreciation or impairment.

Subsequent expenditure that is of a capital nature is added to the cost of the asset at the end of the capital project unless the intangible asset is recorded by another department/entity in which case the completed project costs are transferred to that department.

16.4. Project costs: Work in progress

Expenditure of a capital nature is initially recognised in the statement of financial performance at cost when paid. Amounts paid towards capital projects are separated from the amounts recognised and accumulated in work-in progress until the underlying assets is ready for use. Once ready for use, the total accumulated payments are recorded in an assets register. Subsequent payments to complete the project are added to the capital asset in the asset register. Where the Department is not the custodian of the completed project asset, the asset is transferred to the custodian subsequent to completion.

17. Provisions and contingents

17.1. Provisions

Provisions are recorded in the notes to the financial statements when there is a present legal or constructive obligation to forfeit economic benefits as a result of events in the past and it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation and a reliable estimate of the obligation can be made. The provision is measured as the best estimate of the funds required to settle the present obligation at the reporting date.

17.2. Contingent liabilities

Contingent liabilities are recorded in the notes to the financial statements when there is a possible obligation that arises from past events, and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not within the control of the department or when there is a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation or the amount of the obligation cannot be measured reliably.

17.3. Contingent assets

Contingent assets are recorded in the notes to the financial statements when a possible asset arises from past events, and whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events not within the control of the Department.

17.4. Commitments

Commitments are recorded at cost in the notes to the financial statements when there is a contractual arrangement or an approval by management in a manner that raises a valid expectation that the department will discharge its responsibilities thereby incurring future expenditure that will result in the outflow of cash.

18. Unauthorised expenditure

Unauthorised expenditure is recognised in the statement of financial position until such time as the expenditure is either –

- approved by Parliament with funding and the related funds are received; or
- approved by Parliament without funding and is written off against the appropriation in the statement of financial performance; or
- transferred to receivables for recovery.

Unauthorised expenditure is measured at the amount of the confirmed unauthorised expenditure.

19. Fruitless and wasteful expenditure

Fruitless and wasteful expenditure is recorded in the notes to the financial statements when confirmed. The amount recorded is equal to the total value of the fruitless and or wasteful expenditure incurred.

Fruitless and wasteful expenditure is removed from the notes to the financial statements when it is resolved or transferred to receivables for recovery. Fruitless and wasteful expenditure receivables are measured at the amount that is expected to be recoverable and are de-recognised when settled or subsequently written-off as irrecoverable.

20. Irregular expenditure

Irregular expenditure is recorded in the notes to the financial statements when confirmed. The amount recorded is equal to the value of the irregular expenditure incurred unless it is impracticable to determine, in which case reasons therefore are provided in the note.

Irregular expenditure is removed from the note when it is either condoned by the relevant authority, transferred to receivables for recovery or not condoned and is not recoverable.

Irregular expenditure receivables are measured at the amount that is expected to be recoverable and are de-recognised when settled or subsequently written-off as irrecoverable.

21. Changes in accounting estimates

Changes in accounting policies that are effected by management have been applied retrospectively in accordance with MCS requirements, except to the extent that it is impracticable to determine the period-specific effects or the cumulative effect of the change in policy. In such instances the department shall restate the opening balances of assets, liabilities and net assets for the earliest period for which retrospective restatement is practicable.

Changes in accounting estimates are applied prospectively in accordance with MCS requirements.

Correction of errors is applied retrospectively in the period in which the error has occurred in accordance with MCS requirements, except to the extent that it is impracticable to determine the period-specific effects or the cumulative effect of the error. In such cases the department shall restate the opening balances of assets, liabilities and net assets for the earliest period for which retrospective restatement is practicable.

22. Events after the reporting date

Events after the reporting date that are classified as adjusting events are accounted for in the financial statements, if such events occurred. The events after the reporting date that are classified as non-adjusting events after the reporting date are disclosed in the notes to the financial statements, if such events occurred.

23. Agent – Principal arrangements

The Department is not party to any principal-agent arrangement. In terms of the arrangement of a principal-agent, all related revenues, expenditures, assets and liabilities have to be recognised or recorded in terms of the relevant policies listed herein. Additional disclosures have to be provided in the notes to the financial statements where appropriate.

24. Departures from the MCS requirements

Management has concluded that the financial statements present fairly the department's primary and secondary information; that the department complied with the Standard and that there was no departure from any particular requirement to achieve fair presentation.

25. Capitalisation reserve

The capitalisation reserve comprises of financial assets and/or liabilities originating in a prior reporting period but which are recognised in the statement of financial position for the first time in the current reporting period. Amounts are recognised in the capitalisation reserves when identified in the current period and are transferred to the National Revenue Fund when the underlying asset is disposed of and the related funds are received.

26. Recoverable revenue

Amounts are recognised as recoverable revenue when a payment made in a previous financial year becomes recoverable from a debtor in the current financial year. Amounts are either transferred to the National Revenue Fund when recovered or are transferred to the Statement of Financial Performance when written-off.

27. Related-party transactions

A related-party transaction is a transfer of resources, services or obligations between the reporting entity and a related party. Related-party transactions within the Minister's portfolio are recorded in the notes to the financial statements when the transaction is not at arm's length.

Key management personnel are those persons having the authority and responsibility for planning, directing and controlling the activities of the department. The number of individuals and their full compensation is recorded in the notes to the financial statements.

28. Inventories

At the date of acquisition, inventories are recorded at cost price in the statement of financial performance. Where inventories are acquired as part of a non-exchange transaction, the cost of inventory is its fair value at the date of acquisition. Inventories are subsequently measured at the lower of cost and net realisable value or the lower of cost and current replacement value (the factors which could lead to the revaluation of inventory includes but not limited to obsolesce, defects, over-supply and major price declines). Subsequent measurement of the cost of inventory is determined on a weighted average basis. The Department is not an inventory institution therefore the note on inventory is not applicable.

29. Public-private partnerships

Public-private partnerships (PPP) are accounted for based on the nature and/or the substance of the partnership. The transaction is accounted for in accordance with the relevant accounting policies. The summary of the significant terms of the PPP agreement, the parties to the agreement, and the date of commencement thereof together with the description and nature of the concession fees received, the unitary fees paid, rights and obligations of the department are recorded in the notes to the financial statements. The Department is not a party to any PPP.

30. Employee benefits

The value of each major class of employee benefit obligation (accruals, payables not recognised and provisions) is disclosed in the employee benefits note.

31. Transfer of functions

Transfer of functions are accounted for by the acquirer by recognising or recording assets acquired and liabilities assumed at their carrying amounts at the date of transfer. Transfer of functions are accounted for by the transferor by derecognising or removing assets and liabilities at their carrying amounts at the date of transfers.

32. Mergers

Mergers are accounted for by the combined department by recognised or recording assets acquired and liabilities assumed at their carrying amounts at the date of the merger.

Mergers are accounted for by the combining departments by derecognising or removing assets and liabilities at their carrying amounts at the date of the merger.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

1. Annual appropriation

1.1 Annual appropriation

Included are funds appropriated in terms of the Appropriation Act (and the Adjustments Appropriation Act) for National Departments (Voted funds):

	Final appropriation 2019/20	Actual funds received 2019/20	Funds not requested /not received 2019/20	Final appropriation 2018/19	Final appropriation 2018/19	Appropriat ion received 2018/19
	R'000	R'000	R'000	R'000	R'000	R'000
Administration	372,313	337,981	34,332	383,802	383,152	650
Technology Innovation	1,280,292	1,273,011	7,281	1,131,723	1,131,723	-
International Cooperation and Resources	149,131	146,943	2,188	136,399	136,399	-
Research Development and Support	4,583,676	4,582,801	875	4,528,204	4,528,204	-
Socio-Economic Innovation Partnerships	1,786,892	1,785,440	1,452	1,778,260	1,778,260	-
Total	8,172,304	8,126,176	46,128	7,958,388	7,957,738	650

The Department anticipated underspending under goods and services as a result an amount of R46,128,000 was not requested.

2. Departmental revenue

	Note	2019/20 R'000	2018/19 R'000
Sales of goods and services other than capital assets	<u>2.1</u>	69	64
Interest, dividends and rent on land	<u>2.2</u>	13	27
Sale of capital assets	<u>2.3</u>	-	217
Transactions in financial assets and liabilities	<u>2.4</u>	19,334	32,441
Departmental revenue collected		19,416	32,749

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

2.1 Sales of goods and services other than capital assets

	Note 2	2019/20 R'000	2018/19 R'000
Other sales		67	64
Sales of scrap, waste and other used current goods		2	-
Total		69	64

2.2 Interest, dividends and rent on land

	Note 2	2019/20 R'000	2018/19 R'000
Interest		13	27
Total		13	27

2.3 Sale of capital assets

	Note 2	2019/20 R'000	2018/19 R'000
Machinery and equipment		-	217
Total		-	217

2.4 Transactions in financial assets and liabilities

	Note 2	2019/20 R'000	2018/19 R'000
Other receipts, including recoverable revenue		19,334	32,441
Total		19,334	32,441

3. Aid assistance

3.1 Aid assistance received in cash from RDP

	Note 3	2019/20 R'000	2018/19 R'000
Foreign			
Opening balance			332
Prior year error		-	-
As restated		-	332
Transferred from Statement of Financial Performance		-	-
Paid during the year		-	(332)
Closing balance		-	-

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

3.2 Analysis of balance by source

	Note		
Aid assistance from RDP	<u>3</u>	-	-
RDP Fund		-	-
Closing balance		<u>-</u>	<u>-</u>

3.3 Analysis of balance

	Note		
Aid assistance repayable	<u>3</u>	-	-
Closing balance		<u>-</u>	<u>-</u>

3.4 Aid assistance expenditure per economic classification

	Note		
Current	<u>3</u>	970	1,151
Capital		-	21
Transfers and subsidies		11,219	44,176
Closing balance		<u>12,189</u>	<u>45,348</u>

The analysis on sub-note 3.4 was introduced in 2018/19 to indicate the allocation of donor funds expenditure during the financial year.

4. Compensation of employees

4.1 Salaries and wages

	Note	2019/20	2018/19
	<u>4</u>	R'000	R'000
Basic salary		214,868	218,142
Performance award		5,594	5,161
Service-based		154	152
Compensative/circumstantial		4,358	4,757
Periodic payments		-	-
Other non-pensionable allowances		64,831	68,549
Total		<u>289,805</u>	<u>296,761</u>

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

4.2 Social contributions

	Note	2019/20 R'000	2018/19 R'000
	<u>4</u>		
Employer contributions			
Pension		27,470	27,581
Medical		6,540	6,371
Bargaining council		61	37
Total		34,071	33,989
Total compensation of employees		323,876	330,750
Average number of employees		380	407

5. Goods and services

	Note	2019/20 R'000	2018/19 R'000
Administrative fees		2,103	3,799
Advertising		13,195	24,813
Minor assets	<u>5.1</u>	349	692
Bursaries (employees)		1,166	1,545
Catering		2,978	5,376
Communication		7,204	8,255
Computer services	<u>5.2</u>	13,090	19,872
Consultants: Business and advisory services		12,372	16,391
Legal services		1,039	766
Contractors		7,085	5,534
Agency and support/outsourced services		9,149	12,005
Entertainment		236	248
Audit cost – external	<u>5.3</u>	5,580	5,245
Fleet services		637	1,347
Consumables	<u>5.4</u>	7,224	9,256
Operating leases		2,658	3,069
Property payments	<u>5.5</u>	42,322	11,660
Rental and hiring		2,191	2,425
Travel and subsistence	<u>5.6</u>	46,928	56,944
Venues and facilities		17,482	14,863
Training and development		3,059	2,689
Other operating expenditure	<u>5.7</u>	9,012	8,608
Total		207,059	215,402

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

5.1 Minor assets

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Tangible assets		349	692
Machinery and equipment		349	692
Intangible assets			
Total		349	692

5.2 Computer services

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
SITA computer services		8,610	8,500
External computer service providers		4,480	11,372
Total		13,090	19,872

5.3 Audit cost – External

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Regularity audits		5,580	5,245
Total		5,580	5,245

5.4 Consumables

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Consumables supplies		2,237	2,517
Uniform and clothing		277	215
Household supplies		305	781
Communication accessories		6	-
IT consumables		1,369	1,144
Other consumables		280	377
Stationery, printing and office supplies		4,987	6,739
Total		7,224	9,256

5.5 Property payments

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Municipal services		3,579	1,548
Property maintenance and repairs		31,575	-
Other		7,168	10,112
Total		42,322	11,660

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

5.6 Travel and subsistence

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Local		33,158	38,137
Foreign		13,770	18,807
Total		46,928	56,944

5.7 Other operating expenditure

	Note	2019/20	2018/19
	<u>5</u>	R'000	R'000
Professional bodies, membership and subscription fees		3,972	2,726
Resettlement costs		910	186
Other		4,130	5,696
Total		9,012	8,608

6. Payments for financial assets

	Note	2019/20	2018/19
		R'000	R'000
Other material losses written off	<u>6.1</u>	54	133
Debts written off	<u>6.2</u>	35	10
Total		89	143

6.1 Other material losses written off

	Note	2019/20	2018/19
	<u>6</u>	R'000	R'000
Nature of losses			
Losses in respect of damaged vehicle written off		54	133
Total		54	133

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

6.2 Debts written off

	Note <u>6</u>	2019/20 R'000	2018/19 R'000
Nature of losses			
Irrecoverable debts written off		35	10
Total		35	10

7. Transfers and subsidies

		2019/20 R'000	2018/19 R'000
	Note		
Departmental agencies and accounts	Annex 1B	5,165,068	5,003,551
Higher education institutions	Annex 1C	-	-
Foreign governments and international organisations	Annex 1E	-	-
Public corporations and private enterprises	Annex 1D	1,811,667	1,850,374
Non-profit institutions	Annex 1F	533,590	481,367
Households, gifts, donations and sponsorships	Annex 1G&J	3,607	1,297
Total		7,513,932	7,336,589

8. Expenditure for capital assets

	Note	2019/20 R'000	2018/19 R'000
Tangible assets		7,541	9,063
Machinery and equipment	<u>8.1</u>	7,541	9,063
Intangible assets		-	-
Software	<u>8.1</u>	-	-
Patents, licences, copyright, brand names, trademarks		-	-
Total		7,541	9,063

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

8.1 Analysis of funds used to acquire capital assets – 2019/20

	Voted funds	Aid assistance	Total
	R'000	R'000	R'000
Tangible assets		-	
Machinery and equipment	7,541	-	7,541
Total	7,541	-	7,541

8.2 Analysis of funds utilised to acquire capital assets – 2018/19

	Voted funds	Aid assistance	Total
	R'000	R'000	R'000
Machinery and equipment	9,042	21	9,063
Total assets acquired	9,042	21	9,063
Total	9,042	21	9,063

8.3 Finance lease expenditure included in expenditure for capital assets

	Note	2019/20 R'000	2018/19 R'000
Tangible assets			
Machinery and equipment		1,138	1,729
Total		1,138	1,729

9. Cash and cash equivalents

	Note	2019/20 R'000	2018/19 R'000
Consolidated Paymaster-General Account		70,915	64,556
Cash on hand		33	33
Total		70,948	64,589

NOTES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

10. Prepayments and advances

	Note	2019/20 R'000	2018/19 R'000
Travel and subsistence		14	133
Advances paid		122	820
Total		136	953

10.1 Advances paid (not expensed)

	Amount as at 1 April 2018 R'000	Less: Amount expensed in current year R'000	Add/Less: Other R'000	Add: Current year advances R'000	Balance as at 31 March 2020 R'000
National departments	820	(2,256)	-	1,558	122
Provincial departments	-	-	-	-	-
Closing balance	820	(2,256)	-	1,558	122

	Amount as at 1 April 2017 R'000	Less: Amount expensed in current year R'000	Add/Less: Other R'000	Add: Current year advances R'000	Balance as at 31 March 2019 R'000
National departments	402	(1,602)	-	2,020	820
Provincial departments	-	-	-	-	-
Closing balance	402	(1,602)	-	2,020	820

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

11. Receivables

		2019/20			2018/19		
		Current	Non-current	Total	Current	Non-current	Total
		R'000	R'000	R'000	R'000	R'000	R'000
<i>Note</i>							
Claims recoverable	<u>11.1</u>	2,070	16	2,086	62	46	108
Recoverable expenditure	<u>11.2</u>	396	136	532	1	124	125
Staff debt	<u>11.3</u>	206	39	245	47	51	98
Total		2,672	191	2,863	110	221	331

11.1 Claims recoverable

	<i>Note</i>	2019/20	2018/19
	<u>11</u>	R'000	R'000
National departments		32	-
Households and non-profit institutions		2,054	108
Total		2,086	108

11.2 Recoverable expenditure (disallowance accounts)

	<i>Note</i>	2019/20	2018/19
	<u>11</u>	R'000	R'000
Income tax debt		-	-
Persal Salaries and Stoppages		-	-
Damages to vehicles		532	125
VAT Clearing account		-	-
Total		532	125

11.3 Staff debt

	<i>Note</i>	2019/20	2018/19
	<u>11</u>	R'000	R'000
Salary overpayment		72	40
Cellphone debts		27	37
Other debts		18	9
Income tax debts		8	12
Travel and subsistence advances debts		34	-
Travel-related debts		86	-
Total		245	98

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

12. Investments

The Department acquired shares for 35% shareholding of the Biological and Vaccines Institute (Biovac) of South Africa valued at R112,674 million (calculated as percentage of retained earnings of Biovac as at 31 December 2019) from the Department of Health at no cost. The value of the shares could not be disclosed in the Statement of Financial Position because they were transferred at no cost.

13. Voted funds to be surrendered to the Revenue Fund

	<i>Note</i>	2019/20 R'000	2018/19 R'000
Opening balance		65,812	67,684
Prior period error		-	-
As restated		65,812	67,684
Transfer from statement of financial performance		119,807	66,462
Voted funds not requested/not received	1.1	(46,128)	(650)
Paid during the year		(65,812)	(67,684)
Closing balance		73,679	65,812

14. Departmental revenue to be surrendered to the Revenue Fund

	<i>Note</i>	2019/20 R'000	2018/19 R'000
Opening balance		12	7
Prior period error		-	-
As restated		12	7
Transfer from Statement of Financial Performance		19,416	32,749
Paid during the year		(19,415)	(32,744)
Closing balance		13	12

15. Payables – current

	<i>Note</i>	2019/20 R'000	2018/19 R'000
Clearing accounts	15.1	151	18
Other Payables	15.2	-	-
Total		151	18

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

15.1 Clearing accounts

	Note	2019/20	2018/19
	15	R'000	R'000
Sal: Government Employee Housing Scheme refund control account: Current liability		-	18
Sal: Income tax: Current liability		149	-
Sal: Pension Fund: Current liability		2	-
Total		151	18

16. Net cash flow available from operating activities

	Note	2019/20	2018/19
		R'000	R'000
Net surplus as per Statement of Financial Performance		139,223	99,211
Add back non-cash/cash movements not deemed operating activities		(125,426)	(105,699)
(Increase)/Decrease in receivables – current		(2,562)	461
(Increase)/Decrease in prepayments and advances		817	(506)
Increase/(Decrease) in payables – current		133	(13,090)
Proceeds from sale of capital assets		-	(217)
Expenditure on capital assets		7,541	9,063
Surrenders to Revenue Fund	13	(85,227)	(100,428)
Surrenders to Donor Fund		-	(332)
Voted funds not requested/not received		(46,128)	(650)
Net cash flow generated by operating activities		13,797	(6,488)

17. Reconciliation of cash and cash equivalents for cash flow purposes

	Note	2019/20	2018/19
		R'000	R'000
Consolidated Paymaster-General Account		70,915	64,556
Cash on hand		33	33
Total		70,948	64,589

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

18. Contingent liabilities

	Note	2019/20 R'000	2018/19 R'000
Liable to			
Claims against the Department	<u>Annex</u>	401	401
	<u>3B</u>		
Total		401	401

1. The Department received a claim at the end of the 2018/19 reporting period, where a former manager of science centre alleged unfair treatment and financial loss, and therefore claimed restitution fees. On 20 June 2019, management received a legal opinion that indicated that the claim was frivolous and vexatious should therefore be dismissed with costs, and furthermore the amount of the claim was not a reliable estimate, and it could therefore not be disclosed. For the purpose of disclosure for the 2019/20 financial year the Department requested a legal opinion to ascertain whether the status of the claim had changed and it was indicated in the legal opinion that the status remained the same.
2. The contingent liability of R401 000 has been disclosed since the 2013/14 financial year. The matter has been dormant for some time; however, it can only be removed when the matter has been removed from the court roll.

19. Commitments

	Note	2019/20 R'000	2018/19 R'000
Capital commitments			
		-	553
		-	
			553
Total commitments		-	553

The commitment disclosed for 2019/20 is limited to commitments on capital assets. The commitments on goods and services are no longer a disclosure requirement in terms of the Modified Cash Standard. There were no capital commitments for the 2019/20 financial year.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

20. Accruals and payables not recognised

20.1 Accruals

			2019/20 R'000	2018/19 R'000
Listed by economic classification				
	30 days	30+ days	Total	Total
Goods and services	5,516	-	5,516	6,918
Capital assets	-	-	-	-
Total	5,516	-	5,516	6,918

Listed by Programme

Note

Programme 1: Administration	4,220	3,564
Programme 2: Technology Innovation	123	479
Programme 3: International Cooperation and Resources	888	2,430
Programme 4: Research Development and Support	242	335
Programme 5: Socio-Economic Innovation Partnerships	43	110
Total	5,516	6,918

20.2 Payables not recognised

Listed by economic classification	30 days	30 +days	Total	Total
Goods and services	968	-	968	459
Capital assets	-	-	-	-
Total	968	-	968	459

	<i>Note</i>	2019/20 R'000	2018/19 R'000
Listed by Programme			
Programme 1: Administration		581	256
Programme 2: Technology Innovation		-	200
Programme 3: International Cooperation and Resources		-	-
Programme 4: Research Development and Support		-	3
		2019/20 R'000	2018/19 R'000
Programme 5: Socio-Economic Innovation Partnerships		387	-
Total		968	459
Confirmed balances with other departments	<i>Annex 5</i>	922	2,442
Confirmed balances with other government entities		-	-
Total		922	2,442

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

21. Employee benefits

	Note	2019/20 R'000	2018/19 R'000
Leave entitlement*		12,572	12,521
Service bonus (Thirteenth cheque)		7,464	7,496
Performance awards		5,837	5,293
Capped leave commitments		3,194	3,278
Other (Long Service Awards)		54	31
Total		29,121	28,619

*A negative amount of R463,752.29 was offset against leave entitlement. The amount was as a result of a pro rata calculation of leave taken by employees as at the 31 March 2020. In terms of the pro rata calculation, employees are entitled to 5.49 days leave from 1 January to 31 March. If an employee takes more leave this results in a negative leave taken for the three-month period. This situation will be automatically rectified during the leave period.

22. Lease commitments

22.1 Operating leases expenditure

2019/20	Land R'000	Buildings and other fixed structures R'000	Machinery and equipment R'000	Total R'000
Not later than 1 year	-	452	1,043	1,495
Later than 1 year and not later than 5 years	-	-	1,699	1,699
Total lease commitments	-	452	2,742	3,194

2018/19	Land R'000	Buildings and other fixed structures R'000	Machinery and equipment R'000	Total R'000
Not later than 1 year	-	-	785	785
Later than 1 year and not later than 5 years	-	-	-	-
Total lease commitments	-	-	785	785

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

22.2 Finance leases expenditure

		Buildings and other fixed structures	Machinery and equipment	Total
	Land R'000	R'000	R'000	R'000
2019/20				
Not later than 1 year	-	-	183	183
Later than 1 year and not later than 5 years	-	-	2	2
Total lease commitments	-	-	185	185
2018/19				
	Land R'000	Buildings and other fixed structures R'000	Machinery and equipment R'000	Total R'000
Not later than 1 year	-	-	2,015	2,015
Later than 1 year and not later than 5 years	-	-	555	555
Total lease commitments	-	-	2,570	2,570

23. Accrued departmental revenue

	Note	2019/20	2018/19
		R'000	R'000
Transactions in financial assets and liabilities		-	201
Total		-	201

23.1 Analysis for accrued departmental revenue

	Note	2019/20	2018/19
		R'000	R'000
Opening balance		201	7,076
Less: Amounts received		(201)	(3,914)
Add: Amounts recognised		-	201
Less: Amounts written-off/reversed as irrecoverable		-	(3,162)
Total		-	201

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

24. Irregular expenditure

24.1 Reconciliation of irregular expenditure

	Note	2019/20 R'000	2018/1 R'000
Opening balance		35,104	49,604
As restated		35,104	49,604
Add: Irregular expenditure – relating to prior year		-	-
Add: Irregular expenditure – relating to current year		194	684
Less: Prior year amount condoned		(2,528)	(15,184)
Less: Current year amounts condoned		-	-
Less: Amounts recoverable (not condoned)		-	-
Irregular expenditure awaiting condonation		32,770	35,104

Analysis of awaiting condonation per age classification

Current year	194	684
Prior years	32,576	34,420
Total	32,770	35,104

24.2 Details of irregular expenditure – current year

Incident	Disciplinary steps taken/criminal proceedings	2019/20 R'000
Non-compliance with Public Service Regulations	Determination is being conducted	194
		-
Total		194

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

24.3 Details of irregular expenditure – condoned

Incident	Condoned by	2019/20 R'000
Non-compliance with SCM processes	National Treasury	2,528
Total		2,528

24.4 Irregular expenditures referred to the National Treasury

The request to remove irregular expenditure amounting to **R24,909,382.10** was approved in the new financial year and will be removed in the 2020/21 financial year.

25. Fruitless and wasteful expenditure

25.1 Reconciliation of fruitless and wasteful expenditure

	Note	2019/20 R'000	2018/19 R'000
Opening balance		526	-
Prior year period error		-	-
As restated		526	-
Fruitless and wasteful expenditure – relating to prior year			
Fruitless and wasteful expenditure – relating to current year		-	526
Less: Amounts resolved		-	-
Fruitless and wasteful expenditure awaiting condonement		526	526

25.2 Analysis of current year's fruitless and wasteful expenditure

Incident	Disciplinary steps taken	2019/20 R'000
		-
Total		-

The fruitless and wasteful expenditure was approved in the new financial year and will be removed in 2020/21 financial year.

26. Events after the reporting date

26.1 The effect of the COVID-19 pandemic on the Department

26.1.1 In March 2020, the President of South Africa declared a national state of disaster and instituted a lockdown of the country as a result of the coronavirus pandemic. The lockdown has had a great impact on the Department, with a significant portion of the budget, amounting to R1 435 billion, having to be put aside to assist with the fight against the pandemic. There are several departmental projects that will be affected by these budget cuts. The following, among other programmes, will be affected: innovation projects, infrastructure projects, human capital development, mining research and development and the filling of positions in the DSI. The annual performance targets of all affected Programmes must be revised. The impact of this is not yet fully known, since the pandemic has not ended and the lockdown is still in effect.

26.1.2 Due to the advent of COVID-19 pandemic and the need for officials to work from home, the Department procured 89 additional laptops to ensure continued operations.

26.2 The Department was affected by the National Micro Organisation of Government where it was put under the same Ministry as the Department of Higher Education and Training. During the period under review the transfer of assets for the Ministry was not completed, but it will be finalised in the 2020/21 financial year.

27. Related party transactions

27.1 Related party transactions

Payments made	2019/20 R'000	2018/19 R'000
Goods and services	-	-
Total	-	-

27.2 DSI public entities under ownership control of the Department of Science and Innovation

The following entities are under the ownership control of the Department in terms of Chapter 1 of the Public Finance Management Act, 1999, and report to the Minister of Higher Education Science and Innovation, and as such are related parties to the Department:

Schedule 3A – National public entities

- ☐ Human Sciences Research Council
- ☐ National Research Foundation
- ☐ South African National Space Agency
- ☐ Technology Innovation Agency

Schedule 3B – National government business enterprises

- ☐ Council for Scientific and Industrial Research

The Department's transactions with these entities are limited to transfer and subsidy payments. Annexure 1C and 1E to the Annual Financial Statements reflect payments to these public entities. Where transactions other than these occur, they occur within a normal supplier/client relationship in terms of the procurement procedures of the Department and the Public Finance Management Act, 1999.

27.3 Public entities under the control of the Minister of Higher Education Science and Innovation

Schedule 3A – National public entities

Council on Higher Education and Training
National Student Financial Aid Scheme
South African Qualifications Authority
Quality Council for Trades and Occupations
National Skills Fund

Sector education and training authorities (SETAs):

Agriculture SETA
Banking SETA
Chemical Industries Education and Training Authority
Construction SETA
Culture, Arts, Tourism, Hospitality and Sports SETA
Education, Training and development Practices SETA
Energy and Water SETA
Fibre, Processing and Manufacturing SETA
Financial and Accounting Services SETA
Food and Beverages SETA
Health and Welfare SETA
Insurance SETA
Local Government SETA

Manufacturing, Engineering and Related Services SETA
Media, Information and Communication Technologies SETA
Mining Qualifications Authority
Public Services SETA
Safety and Security SETA
Services SETA
Transport SETA
Wholesale and Retail SETA

Technical and vocational education and training colleges

Buffalo City College; East Cape Midlands College; Ikhala College; Ingwe College; King Hintsa College; King Sabata College; Lovedale College; Port Elizabeth College; Flavius Mareka College; Gold Fields College; Maluti College; Motheo College; Central Johannesburg College; Ekurhuleni East College; Ekurhuleni West College; Sedibeng College; South West College; Tshwane North College; Tshwane South College; Western College; Coastal College; Elangeni College; Esayidi College; Majuba College; Mnambithi College; Mthashana College; Thekwini College; Umfolozi College; Umgungundlovu College; Capricorn College; Lephalale College; Letaba College; Mopani College; Sekhukhune College; Vhembe College; Waterberg College; Ehlanzeni College; Gert Sibande College; Nkangala College; Rural College; Urban College; Orbit College; Taletso College; Vuselela College; Boland College; Cape Town College; False Bay College; Northlink College; South Cape College; West Coast College

Community education and training colleges

Eastern Cape Community Education and Training College; Free State Community Education and Training College; Gauteng Community Education and Training College; KwaZulu Natal Community Education and Training College; Limpopo Community Education and Training College; Mpumalanga Community Education and Training College; Northern Cape Community Education and Training College; North West Community Education and Training College; Western Cape Community Education and Training College

27.4 Related party relationships with other departments

All government departments and public entities in the same sphere of government are related parties to the Department of Science and Innovation, however, the Department has a related party relationship with the Department of Public Works and Infrastructure that provides office accommodation free of charge to the Department. The Department of Public Works and Infrastructure claims maintenance fees only. The Department has a relationship with the Academy of Science of South Africa and is funding its operations. All the transactions the Department has with these entities are at arm's length. The Department did not have transactions with these entities that required disclosure in terms of the Modified Cash Standard.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

28. Key management personnel

	No. of individuals	2019/20 R'000	2018/19 R'000
Political office bearers (provide detail below)	3	2,896	4,357
Officials:			
Level 15 to 16	12	16,621	17,767
Level 14 (incl. CFO if at a lower level)	31	30,224	31,160
Total		49,741	53,284

The key management personnel do not qualify for any remuneration other than the approved remuneration structures for the different classes of key management personnel (political office bearers and officials).

29. Movable tangible capital assets

Movement in movable tangible capital assets per asset register for the year ended 31 March 2020

	Opening balance R'000	Value adjustme nts R'000	Additions R'000	Disposals R'000	Closing balance R'000
MACHINERY AND EQUIPMENT	105,075	-	6,403	(1,455)	110,023
Transport assets	7,801	-	-	-	7,801
Computer equipment	55,704	-	2,982	(613)	58,218
Furniture and office equipment	18,867	-	2,684	(756)	21,551
Other machinery and equipment	22,703	-	737	(86)	22,453
Total movable tangible capital assets	105,075	-	6,403	(1,455)	110,023

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

29.1 Additions

Additions to movable tangible capital assets per asset register for the year ended 31 March 2020

	Cash	Non-cash	(Capital work in progress current costs and finance lease payments)	Received current, not paid (Paid current year, received prior year)	Total
	R'000	R'000	R'000	R'000	R'000
MACHINERY AND EQUIPMENT	7,541	-	(1,138)	-	6,403
Transport assets	-	-	-	-	-
Computer equipment	2,982	-	-	-	2,982
Furniture and office equipment	2,684	-	-	-	2,684
Other machinery and equipment	1,875	-	(1,138)	-	737
Total additions to movable tangible capital assets	7,541	-	(1,138)	-	6,403

29.2 Disposals

Disposals of movable tangible capital assets per asset register for the year ended 31 March 2020

	Sold for cash	Non-cash disposals	Total disposals	Cash received actual
	R'000	R'000	R'000	R'000
MACHINERY AND EQUIPMENT	-	1,455	1,455	-
Transport assets	-	-	-	-
Computer equipment	-	613	613	-
Furniture and office equipment	-	756	756	-
Other machinery and equipment	-	86	86	-
Total disposal of movable tangible capital assets	-	1,455	1,455	-

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

29.3 Movement for 2018/19

Movement in movable tangible capital assets per asset register for the year ended 31 March 2019

	Opening balance	Prior period errors	Additions	Disposals	Closing balance
	R'000	R'000	R'000	R'000	R'000
MACHINERY AND EQUIPMENT	105,373	(688)	7,702	(7,312)	105,075
Transport assets	7,339	706	789	(1,033)	7,801
Computer equipment	56,713	(359)	5,583	(6,233)	55,704
Furniture and office equipment	18,869	2	30	(34)	18,867
Other machinery and equipment	22,452	(1,037)	1,300	(12)	22,703
Total movable tangible capital assets	105,375	(688)	7,702	(7,312)	105,075

29.3.1 Prior period errors

Nature of prior error	2018/19 R'000
Transport asset understated	706
Other machinery and equipment overstated	(1,037)
Computer equipment overstated	(359)
Furniture and office equipment understated	2
Total	(688)
Relating to 2018/19	2018/19 R'000
Transport asset understated	706
Other machinery and equipment overstated	(1,037)
Computer equipment overstated	(359)
Furniture and office equipment understated	2
Total	(688)

During the 2018/19 financial year, management discovered that transport assets amounting to R706 000 were understated and other machinery and equipment were overstated by R1 037 000. However, the correction of the error for the amount of R706 000 in transport assets and the amount of R706 000 in other machinery and equipment were erroneously omitted. During the same year (2018/19) furniture and office equipment was understated by R2 000.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

29.4 Minor assets

Minor assets of the department for the year ended 31 March 2020

	Intangible assets	Heritage assets	Machinery and equipment	Biological assets	Total
	R'000	R'000	R'000	R'000	R'000
Opening balance	-	-	7,027	-	7,027
Value adjustments	-	-	-	-	-
Additions	-	-	349	-	349
Disposals	-	-	48	-	48
Total minor assets	-	-	7,328	-	7,328

	Intangible assets	Heritage assets	Machinery and equipment	Biological assets	Total
Number of R1 minor assets	-	-	5,750	-	5,750
Number of minor assets at cost	-	-	4,449	-	4,449
Total	-	-	10,199	-	10,199

Minor assets

Minor assets of the department for the year ended 31 March 2019

	Intangible assets	Heritage assets	Machinery and equipment	Biological assets	Total
	R'000	R'000	R'000	R'000	R'000
Opening balance	-	-	6,601	-	6,601
Prior period error	-	-	(13)	-	(13)
Additions	-	-	692	-	692
Disposals	-	-	253	-	253
Total	-	-	7,027	-	7,027

	Intangible assets	Heritage assets	Machinery and equipment	Biological assets	Total
Number of R1 minor assets	-	-	11,494	-	11,494
Number of minor assets at cost	-	-	4,165	-	4,165
	-	-	15,659	-	15,659

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

29.4.1 Prior period errors

Nature of prior error

Capital assets incorrectly classified as minor assets

2018/19
R'000
(13)

30. Intangible capital assets

	Opening balance R'000	Additions R'000	Disposals R'000	Closing balance R'000
Software	7,483	-	-	7,483
Patents, licences, copyright, brand names, trademarks	-	-	-	-
Total intangible capital assets	7,483	-	-	7,483

30.1 Additions

Additions to intangible capital assets per asset register for the year ended 31 March 2020

	Cash R'000	Non-cash R'000	(Development work in progress current costs) R'000	Received current, not paid (Paid current year, received prior year) R'000	Total R'000
Software	-	-	-	-	-
Total additions to movable tangible capital assets	-	-	-	-	-

NOTES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

30.2 Disposals

Disposals of intangible capital assets per asset register for the year ended 31 March 2020

	Sold for cash R'000	Transfer out or destroyed or scrapped R'000	Total disposals R'000	Cash received actual R'000
Software	-	-	-	-
Total disposal of intangible capital assets	-	-	-	-

30.3 Intangible capital assets

Movement in intangible capital assets per asset register for the year ended 31 March 2019

	Opening balance R'000	Prior year error balances R'000	Additions R'000	Disposals R'000	Closing balance R'000
Software	7,483	-	-	-	7,483
Patents, licences, copyright, brand names, trademarks	-	-	-	-	-
Total intangible capital assets	7,483	-	-	-	7,483

31. Principal-agent arrangements

31.1 Department acting as the principal

	2019/20 R'000	2018/19 R'000
Department of Justice and Constitutional Development	843	673
Total	843	673

The Department of Science and Innovation and the Department of Justice and Constitutional Development are in an agent-principal arrangement. The Department of Justice and Constitutional Development appoints legal representatives to settle litigation and labour matters on behalf of the DSI and then claims the costs of proceedings from the DSI.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

29.3.1 Prior period errors

Nature of prior error	Note	Amount before error correction R'000	Prior period error R'000	2019/20 R'000 Restated amount R'000
Agent principal arrangement with the Department of Justice and Constitutional Development	-	-	-	-
Total intangible capital assets	-	-	-	-

ANNEXURE 1B

STATEMENT OF TRANSFERS TO DEPARTMENTAL AGENCIES AND ACCOUNTS

Department/Agency/Account	Transfer allocation				Transfer		2018/19
	Adjusted Appropriation Act	Rollovers	Adjustments	Total available	Actual transfer	% of Available funds transferred	
	R'000	R'000	R'000	R'000	R'000	%	
Agricultural Research Council	39,288	-	-	39,288	38,288	97%	62,510
Academy of Science of South Africa	26,983	-	-	26,983	26,983	100%	25,668
Human Sciences Research Council	340,711	-	-	340,711	336,711	99%	332,000
National Research Foundation	4,172,308	-	13,689	4,185,997	3,753,765	90%	4,163,925
National Metrology Institute of South Africa	620	-	-	620	600	97%	-
Council for Geoscience	800	-	-	800	752	94%	-
South African Medical Research Council	120,249	-	-	120,249	113,249	94%	142,000
South African National Biodiversity Institute	33,000	-	-	33,000	31,638	96%	35,000
South African National Space Agency	250,929	-	9,400	260,329	243,929	94%	175,000
South African Weather Services	-	-	10,000	10,000	10,000	100%	-
Technology Innovation Agency	595,396	-	-	595,396	586,396	98%	555,000
Water Research Commission	25,000	-	-	25,000	22,757	91%	-
Total	5,605,284	-	33,089	5,638,373	5,165,068		5,491,103

ANNEXURE 1D

STATEMENT OF TRANSFERS/SUBSIDIES TO PUBLIC CORPORATIONS AND PRIVATE ENTERPRISES

Name of public corporation/private enterprise	Transfer allocation			Expenditure			2018/19 Appropriation Act
	Adjusted Appropriation Act	Rollovers	Adjustments	Total available	Actual transfer	% of Available funds transferred	
	R'000	R'000	R'000	R'000	R'000	%	R'000
Public corporations							
Transfers							
Council for Mineral Technology (Mintek)	82,863	-	-	82,863	82,863	100.0%	55,000
Council for Scientific and Industrial Research	461,674	-	(38,861)	422,813	718,637	170.0%	436,982
South African Nuclear Energy Corporation Ltd	23,348	-	-	23,348	23,348	100.0%	-
National Health Laboratory Service	8,200	-	-	8,200	8,200	100.0%	45,000
Subtotal	576,085	-	(38,861)	537,224	833,048	155.1%	536,982
Subsidies							
Council for Scientific and Industrial Research	965,823	-	-	965,823	965,823	100.0%	963,164
Subtotal	965,823	-	-	965,823	965,823	100.0%	963,164
Total	1,541,908	-	(38,861)	1,503,047	1,798,871	119.7%	1,500,146

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

Name of public corporation/private enterprise	Transfer allocation				Expenditure			2018/19 Appropriation Act
	Adjusted Appropriation Act	Rollovers	Adjustments	Total available	Actual transfer	% of Available funds transferred	Capital	
	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Private enterprises:								
Transfers								
The Innovation Hub	-	-	-	-	2,269	-	-	-
Management Co	-	-	-	-	2,161	-	-	-
Wits Health Consortium	-	-	-	-	480	-	-	-
Society for Industrial and Organisational Psychology of South Africa (SIOPSA)	-	-	-	-	18	-	-	-
Brayfoill Technologies	-	-	-	-	171	-	-	-
Hitachi Europe Ltd	-	-	-	-	173	-	-	-
Manufacturing Indaba	-	-	-	-	4,899	-	-	-
Citrus Research International	-	-	-	-	2,625	-	-	-
Wits Enterprise	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	12,796	-	-	-
Total	1,541,908	-	(38,861)	1,503,047	1,811,667	120.5%	389,368	1,408,503
								1,500,146

ANNEXURE 1F

STATEMENT OF TRANSFERS TO NON-PROFIT INSTITUTIONS

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	Transfer allocation				Expenditure		2018/19
	Adjusted Appropriation Act R'000	Rollovers R'000	Adjustments R'000	Total available R'000	Actual transfer R'000	% of Available funds transferred %	
Transfers							
Academy of Science of South Africa	14,608	-	-	14,608	14,608	100%	13,000
Aeronautical Society of South Africa	100	-	-	100	100	100%	100
AfricaBio NPC	-	-	-	-	-	-	500
Black Science, Technology and Engineering	-	-	-	-	-	-	150
Cape Peninsula University of Technology	863	-	-	863	863	100%	25,000
Central University of Technology	17,877	-	-	17,877	35,754	200%	30,000
Centre for Proteomic and Genomic Research	18,054	-	-	18,054	18,054	100%	10,000
CUTIS	-	-	-	-	-	-	300
Da Vinci TT100 Awards Programme	4,135	-	-	4,135	4,135	100%	-
Department of Mineral Resources	800	-	-	800	800	100%	800
Durban University of Technology	1,527	-	-	1,527	1,527	100%	2,500
Forestry South Africa	4,000	-	-	4,000	4,000	100%	3,000

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	Transfer allocation				Expenditure		2018/19
	Adjusted Appropriation Act R'000	Rollovers R'000	Adjustments R'000	Total available R'000	Actual transfer R'000	% of Available funds transferred	Appropriation Act R'000
						%	
Fresh Produce Exporters' Forum	5,677	-	-	5,677	5,677	100%	4,000
Gauteng Provincial Government	500	-	-	500	500	100%	350
Grahamstown Foundation	-	-	-	-	-	-	2,000
Green Cape Sector Development	-	-	-	-	-	-	400
Green Youth Network	151	-	-	151	151	100%	450
Green-matter	1,000	-	-	1,000	1,000	100%	1,000
Innovation Hub Management	-	-	-	-	-	-	1,700
International Atomic Energy Agency	5,863	-	-	5,863	5,863	100%	9,000
International Centre for Genetic Engineering and Biotechnology	29,295	-	26,521	55,816	50,765	91%	30,000
Mangosuthu University of Technology	2,591	-	-	2,591	2,591	100%	100
Mapungubwe Institute for Strategic Reflection	3,000	-	-	3,000	3,000	100%	2,400
Mine industry network of expertise	2,500	-	-	2,500	2,500	100%	-
Mobile Application Laboratory NP	10,274	-	-	10,274	10,274	100%	-
Mpilonhle	2,459	-	-	2,459	2,459	100%	-
Mpumalanga Tourism and Parks	200	-	-	200	200	100%	300
National Health Laboratory Service	-	-	-	-	-	-	1,700
National Metrology Institute of SA	-	-	-	-	-	-	600
National Science and Technology Forum	8,196	-	5,000	13,196	13,196	100%	2,800
Nelson Mandela University	6,564	-	-	6,564	6,564	100%	8,200
North West University	40,792	-	-	40,792	81,676	200%	50,000

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

Non-profit institutions	Transfer allocation				Expenditure		2018/19
	Adjusted Appropriation Act	Rollovers	Adjustments	Total available	Actual transfer	% of Available funds transferred	
	R'000	R'000	R'000	R'000	R'000	%	R'000
Paper Manufacturers Association of South Africa	1,500	-	-	1,500	1,500	100%	1,500
Prof. M Gulumia	27	-	-	27	27	100%	-
Rhodes University	760	-	-	760	760	100%	1,400
South African Council for Natural Scientific Professions	4,725	-	-	4,725	4,725	100%	6
South African Local Government Association	313	-	-	313	313	100%	750
South African Research and Innovation Management Association	-	-	-	-	-	-	1,600
Sci-Bono Discovery Centre	-	-	-	-	-	-	3,100
SEDA Essential oils	2,251	-	-	2,251	2,251	100%	2,000
SIOPSA	-	-	-	-	-	-	750
South African Astronomical Observatory	42	-	-	42	42	100%	-
South African Chemical Institute	-	-	-	-	-	-	150
South African Institute of Physics	1,500	-	-	1,500	1,500	100%	1,500
South African Mathematics Foundation	1,060	-	-	1,060	1,060	100%	1,100
South African San Institute	1,100	-	-	1,100	1,100	100%	300
Stellenbosch University	14,008	-	-	14,008	28,015	200%	35,000
Sugar Milling Research Institute	3,847	-	-	3,847	3,847	100%	2,000
GreenCape Sector Development	41	-	-	41	41	100%	-
Top Media and Communication	150	-	-	150	150	100%	150
Tshwane University of Technology	16,034	-	-	16,034	16,034	100%	2,200

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2020

	Transfer allocation				Expenditure		2018/19
	Adjusted Appropriation Act	Rollovers	Adjustments	Total available	Actual transfer	% of Available funds transferred	
	R'000	R'000	R'000	R'000	R'000	%	R'000
Non-profit institutions							
University of Cape Town	28,939	-	-	28,939	57,878	200%	30,000
University of Fort Hare	1,436	-	-	1,436	1,436	100%	1,000
University of the Free State	7,852	-	-	7,852	7,852	100%	3,000
University of Johannesburg	6,093	-	-	6,093	6,093	100%	1,100
University of KwaZulu-Natal	19,367	-	-	19,367	19,367	100%	8,000
University of Limpopo	6,458	-	-	6,458	6,458	100%	7,000
University of Mpumalanga	-	-	-	-	-	-	310
University of Pretoria	16,641	-	-	16,641	16,641	100%	15,000
University of South Africa	406	-	-	406	406	100%	1,122
University of Stellenbosch	16,951	-	-	16,951	23,127	136%	-
University of Venda	12,188	-	-	12,188	12,188	100%	2,736
University of Venda Foundation	-	-	-	-	-	-	450
University of the Western Cape	23,104	-	-	23,104	46,208	200%	13,166
University of the Witwatersrand	1,697	-	-	1,697	1,697	100%	3,600
University of Zululand	1,500	-	-	1,500	1,500	100%	-
University of Zululand Foundation	61	-	-	61	61	100%	-
Walter Sisulu University	56	-	-	56	56	100%	500
Water Research Commission	-	-	-	-	-	-	7,000
Wine Industry Network of Expertise	-	-	-	-	-	-	2,500
Wits Health Consortium	-	-	-	-	-	-	1,300
World Meteorological Organisation	5,000	-	-	5,000	5,000	100%	-
Total	376,133	-	31,521	407,654	533,590		351,640
Subsidies	-	-	-	-	-	-	-
	-	-	-	-	-	-	-

	Transfer allocation				Expenditure		2018/19
	Adjusted Appropriation Act R'000	Rollovers R'000	Adjustments R'000	Total available R'000	Actual transfer R'000	% of Available funds transferred %	
Non-profit institutions	376,133	-	31,521	407,654	533,590		351,640
Total							

ANNEXURE 1G STATEMENT OF TRANSFERS TO HOUSEHOLDS

Households	Transfer allocation				Expenditure		2018/19
	Adjusted appropriation Act R'000	Rollovers R'000	Adjustments R'000	Total available R'000	Actual transfer R'000	% of available funds transferred %	
Transfers							
Claim against the state	-	-	-	-	334	-	-
Funds from Department of Higher Education and Training	555	-	-	555	-	0%	-
Leave gratuity: Arendse, N	-	-	-	-	-	-	-
Leave gratuity: Auf der Heyde, TPE	-	-	-	-	-	-	-
Leave gratuity: Basetse, HR	-	-	-	-	30	-	-
Leave gratuity: Boyi, WS	-	-	-	-	-	-	-
Leave gratuity: Chauke,, CT	-	-	-	-	-	-	-
Leave gratuity: Dlamini PS	-	-	-	-	20	-	-
Leave gratuity: Du Toit, JCE	-	-	-	-	2	-	-
Leave gratuity: Dube, LE	-	-	-	-	14	-	-

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

Leave gratuity: Gule, V	-	-	15	-	-	-
Leave gratuity: Hlabathi, HR	-	-	57	-	-	-
Leave gratuity: January, MV	-	-	76	-	-	-
Leave gratuity: Kgosieng, SO	-	-	22	-	-	-
Leave gratuity: Klose, K	-	-	-	-	-	-
Leave gratuity: Madiba, G	-	-	72	-	-	-
Leave gratuity: Madlala, N	-	-	49	-	-	-
Leave gratuity: Mahangi, NL	-	-	-	-	-	-
Leave gratuity: Mahlatsi, N	-	-	24	-	-	-
Leave gratuity: Makgoba, ML	-	-	31	-	-	-
Leave gratuity: Makhode, LT	-	-	-	-	-	-
Leave gratuity: Makume, MK	-	-	101	-	-	-
Leave gratuity: Mamanyuha, M	-	-	12	-	-	-
Leave gratuity: Masemola, MP	-	-	74	-	-	-
Leave gratuity: Masher, GL	-	-	347	-	-	-
Leave gratuity: Mathibela, S	-	-	-	-	-	-
Leave gratuity: Matumba, HE	-	-	2	-	-	-
Leave gratuity: Mbatha, NS	-	-	19	-	-	-
Leave gratuity: Mdletshe, C	-	-	43	-	-	-
Leave gratuity: Mkwana, S	-	-	22	-	-	-
Leave gratuity: Mkwana, SM	-	-	14	-	-	-
Leave gratuity: Mkwana, NB	-	-	-	-	-	-
Leave gratuity: Molefe, M	-	-	-	-	-	-
Leave gratuity: Morgan, AL	-	-	108	-	-	-
Leave gratuity: Mothiba, HN	-	-	14	-	-	-
Leave gratuity: Mulaudzi, HP	-	-	22	-	-	-
Leave gratuity: Naicker, I	-	-	-	-	-	-
Leave gratuity: Ndudane, ZZ	-	-	100	-	-	-
Leave gratuity: Netshwani, R	-	-	6	-	-	-
Leave gratuity: Nomawule, U	-	-	-	-	-	-
Leave gratuity: Ntanzu, SN	-	-	29	-	-	-
Leave gratuity: Perumal, S	-	-	42	-	-	-
Leave gratuity: Pinto, CMST	-	-	13	-	-	-

ANNEXURE 11 STATEMENT OF LOCAL AND FOREIGN AID ASSISTANCE RECEIVED

Name of donor	Purpose	Opening balance R'000	Revenue R'000	Expenditure R'000	Paid back on/by 31 March R'000	Closing balance R'000
Received in cash						
European Union	ESASTAP Plus Advancement of SA-EU collaboration	-	970	970	-	-
European Union	Smallholder Essential Oils	-	11,219	11,219	-	-
Subtotal		-	12,189	12,189	-	-
Received in kind						
Subtotal		-	-	-	-	-
Total		-	12,189	12,189	-	-

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

Leave gratuity: Ramalata, ET	-	-	-	15	-
Leave gratuity: Ramolobeng, A	-	-	-	57	-
Leave gratuity: Sefora, MM	-	-	-	73	-
Leave gratuity: Shange, SC	-	-	-	21	-
Leave gratuity: Sibidla, VTJ	-	-	-	-	-
Leave gratuity: Sithole, TT	-	-	-	10	-
Leave gratuity: Talane, RA	-	-	-	22	-
Leave gratuity: Thosago, MP	-	-	-	-	-
Leave gratuity: Tshabalala, L	-	-	-	65	-
Women in Science	-	-	-	1,630	-
Young Science Professionals	-	-	-	-	650
TOTAL	555	-	-	555	650

ANNEXURE 1J

STATEMENT OF GIFTS, DONATIONS AND SPONSORSHIPS MADE AND REMISSIONS, REFUNDS AND PAYMENTS MADE AS AN ACT OF GRACE

Nature of gift, donation or sponsorship	2019/20	2018/19
	R'000	R'000
Paid in cash		
Women in Science Awards	1,630	875
Young Science Professionals	-	650
Subtotal	1,630	1,525
TOTAL	1,630	1,525

The Department of Science and Innovation (DSI) acquired Biovac shares from the Department of Health. The shares were transferred to the DSI without any financial implications to the DSI. The amount of R112,674 million is the value of shares calculated at 35% of the retained earnings of Biovac as at 31 December 2019.

ANNEXURE 3B STATEMENT OF CONTINGENT LIABILITIES AS AT 31 MARCH 2020

Nature of liability	Opening balance 1 April 2019	Liabilities incurred during the year	Liabilities paid/cancelled/reduced during the year	Liabilities recoverable)	Closing balance 31 March 2020
	R'000	R'000	R'000	R'000	R'000
A claim against the Department in respect of injuries allegedly sustained when the claimant fell in an open manhole in Pretoria	401	-	-	-	401
Total	401	-	-	-	401

The Department received a claim at the end of the 2018/19 reporting period from a former manager of a science centre, who alleges unfair treatment and financial loss, and is therefore claiming restitution fees. On 20 June 2019, management received a legal opinion that indicated that the claim is frivolous and vexatious, and should therefore be dismissed with costs, and furthermore the amount of the claim was not a reliable estimate, and therefore cannot be disclosed. For the purpose of disclosure for 2019/20 financial year, the Department requested a legal opinion to ascertain whether the status of the claim had changed, and it was indicated in the legal opinion that the status remained the same.

ANNEXURE 4 CLAIMS RECOVERABLE

Government entity	Confirmed balance outstanding		Unconfirmed balance outstanding		Total	
	31/03/2020	31/03/2019	31/03/2020	31/03/2019	31/03/2020	31/03/2019
	R'000	R'000	R'000	R'000	R'000	R'000
Department						
Gauteng Department of Education	-	32	-	-	-	32
Department of Cooperative Governance and Traditional Affairs	-	7	-	-	-	7
Department of Higher Education and Training	-	191	-	-	-	191
Department of Trade, Industry and Competition	32	-	-	-	32	-
Subtotal	32	230	-	-	32	230
Other government entities						
	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Total	32	230	-	-	32	230

ANNEXURE 5 INTER-GOVERNMENT PAYABLES

Government entity	Confirmed balance		Unconfirmed balance		Total	
	31/03/2020	31/03/2019	31/03/2020	31/03/2019	31/03/2020	31/03/2019
	R'000	R'000	R'000	R'000	R'000	R'000
Department						
Current						
Department of International Relations and Cooperation	816	2,239	-	-	816	2,239
Department of Justice and Constitutional Development	106	203	-	-	106	203
Subtotal	922	2,442	-	-	922	2,442
Other government entities						
Current						
	-	-	-	-	-	-
	-	-	-	-	-	-
Total	922	2,442	-	-	922	2,442

ANNEXURE 6 INVENTORY

ANNEXURES TO THE ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

Inventory	Note	Quantity	2019/20 R'000	Quantity	2018/19 R'000
Opening balance		-	-	-	-
Add/(Less): Adjustments to prior year balance		-	-	-	-
Add: Additions/purchases – Cash		-	-	-	-
Add: Additions - Non-cash		-	-	-	-
(Less): Disposals		-	-	-	-
(Less): Issues		-	-	-	-
Add/(Less): Adjustments		-	-	-	-
Closing balance		-	-	-	-

The inventory was transferred to consumables in terms of the requirements of the Modified Cash Standard and the Accounting Manual for Departments. In terms of the Modified Cash Standard, the disclosure for inventory is not applicable in 2019/20 financial year.

ANNEXURE 8A INTER-ENTITY ADVANCES PAID (NOTE 17)

Government entity	Confirmed balance		Unconfirmed balance		Total	
	31/03/2020	31/03/2019	31/03/2020	31/03/2019	31/03/2020	31/03/2019
	R'000	R'000	R'000	R'000	R'000	R'000
Departments						
Current						
Department of International Relations and Cooperation	122	820	-	-	122	820
	-	-	-	-	-	-
Total	122	820	-	-	122	820

APPROVAL

The Annual Financial Statements set out from pages 2 to 164 for the financial year ended 31 March 2020 have been approved.



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Dr PM Mjwara
Director-General
30 September 2020



**DEPARTMENT OF SCIENCE AND INNOVATION
ANNUAL REPORT 2019/2020**

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