



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

Annual Report 2004/05



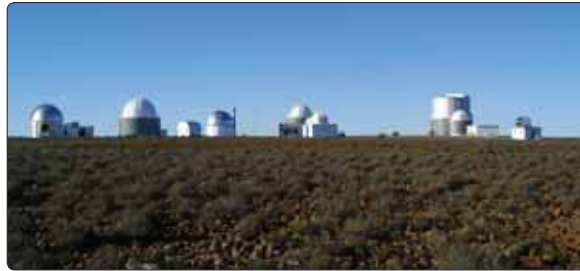


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ANNUAL REPORT

2004-2005



The cover design is an abstraction of this photo of the observatory domes at Sutherland in the Karoo, which includes the new Southern African Large Telescope (SALT).

Photo by Kevin Crause.





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Our Vision

To create a prosperous society that derives enduring and equitable benefits from science and technology.

Our Mission

To develop, coordinate and manage a national system of innovation that will bring about maximum human capital, sustainable economic growth and improved quality of life for all.

Foreword

Innovation for development

Knowledge production is intimately linked to a vision of the economy supported by science and technology, enhancing the daily lives of our people. To achieve this vision, the Department of Science and Technology (DST) promotes the mastery of technological change in South Africa's economy and society. We aim to position the country to compete successfully in the dynamic global knowledge economy.

I have pleasure in introducing the Annual Report of my Department for the first full year in which I have been Minister. The report conveys the many initiatives under way to ensure that innovation and development run hand in hand.

The department is going through important structural changes that place it on a better footing to support innovation, the creative process of introducing new products and processes to the marketplace. In support of this process government is providing funding and other stimuli to universities and other research programmes from which most breakthrough innovations arise. Research and development is central to this goal. Expenditure on both public and private sectors on R&D has grown from 0,76% of GDP in 2001/02 to 0,81% in 2003/04, according to figures which appeared in the year under review. This is a highly promising upturn, though the national level of R&D investment is still only about a third of the average in OECD countries. Cabinet has set a target of 1% to be invested by both public and private



Mosibudi Mangena
Minister of Science and Technology

sectors by 2008. Recent DST initiatives in science and technology policy and systems development include:

- The establishment of the Biotechnology Regional Innovation Centres (BRICs), the result of our Biotechnology Strategy;
- A Centres of Excellence Programme to build the much-needed human resources for research and



SALT photographed at night

- The establishment of a programme to promote nanotechnology and nanoscience;
- The launch of the South African Environmental Observation Network (SAEON), which aims to inform South Africans about their natural environment and how it is changing over time and space;
- Expanding the research agenda of the South African National Antarctic Programme (SANAP), which will include broadening the base of international cooperation and participation in the International Polar year 2007/08;
- Soliciting international support for research programmes into diseases and recurrent diseases that are of relevance to South Africa and other African countries, as well as the associated programmes on vaccine development and tele-medicine.

New sets of relationships with donors, emphasising and mainstreaming science and technology as a vehicle for development, will be important and we will focus on building these. In particular we will be developing the South-South configuration, partnering countries like India, Brazil (IBSA) and China.

These will benefit from the knowledge generated, the international R&D networks established and the human capacity being developed. In the context of regional development, the diffusion of appropriate technologies and skills will be important contributors to growth.

The DST has identified the hydrogen economy and related fuel cells technologies as a potential lead that could promote innovative uses of the country's natural

development, and to attract partners in achieving the objectives of our National Research and Development Strategy (NR&DS);





resources, and yield multiple social and economic benefits. Hydrogen and fuel cells will be key in the 21st century energy economy, enabling clean efficient production of power and heat from a range of primary energy sources.

In the spectrum of technologies that interconnect to construct the hydrogen economy, platinum plays a crucial role as a catalyst that converts hydrogen to electricity. Fortunately, South Africa is well endowed with platinum resources.

In the field of astronomy and space technology, the construction on the South African Large Telescope (SALT) is complete and brings us a step closer to creating a hub of astronomy research in southern Africa.

In global terms, other initiatives, such as the Group on Earth Observation (GEO) and the current bidding by South Africa for the new Square Kilometre Array (SKA) astronomy facility, should open doors to research opportunities in further cooperative arrangements such as IBSA.

South Africa today stands at the knowledge frontier of the developing world. The strategies and activities under way through the DST are closely aligned with the objectives of a modern, democratic society. The overarching objective is to overcome poverty and improve the quality of life for all.

Science and technology take time to prove their benefits. The climate of innovation is steadily improving. The DST has joined hands with other government

departments and stakeholders in research institutions, the business sector and civil society, and together we are driving national competitiveness to new heights.

Mosibudi Mangena
Minister of Science and Technology



Preface

The generation of knowledge and the application of science and technology provide South Africans with ways and means to promote economic growth. From 2004 to 2005, the second year of the stand-alone Ministry of Science and Technology, we have established a sound framework for accomplishing social objectives that focus on health, water, energy, incidence of poverty and food security.

Improving people's lives

Our science system aims, amongst other things, at protecting our environment and its regeneration ability, and enhancing the quality of life of all South Africans.

The challenges of improved water resource management and biodiversity issues are being addressed. At the same time we are creating job opportunities for the unemployed, and ensuring skills training and a sense of ownership of DST-funded projects among communities.

The DST finances a Centre of Excellence at the University of Stellenbosch, specialising in the physical removal of alien plant species, complemented by effective biological control. This is an example of excellent and necessary research, linked to a successful poverty alleviation programme and achieving multiple objectives: water management, jobs and biodiversity.



Derek Hanekom
Deputy Minister of Science and Technology

Energy solutions

In the energy sector, the department works closely with the Department of Minerals and Energy in the search for long-term sustainable solutions to our country's energy needs, minimising pollution and decreasing reliance on non-renewable fossil fuels. High-tech solutions are being researched through our

support for the Pebble-Bed Modular Reactor project, as well as research work on the hydrogen fuel cell regime. The department's investment in the Buffalo City Dry Sanitation and Energy project records another milestone in ensuring healthy sanitation and safe energy for all.

Information Technology

One of the challenges we face is to give all our citizens access to information through accessible technology. Poor people do not have ready access to computers and email facilities on the internet. The CSIR has come up with an innovative way of giving the poor and those who live in remote areas access to computers. This is achieved through mounting computers in structures resembling the old telephone booths, and giving the public 24-hour free access.

This joint project between the DST and CSIR, the Digital Doorway, is a smart way of bridging the digital divide. There are 23 sites currently in operation. Ten more are in the pipeline.

HIV vaccine research

The department's contribution to the fight against HIV and Aids, with an estimated 5,6 million of our people living with the condition, simply has to be one of our greatest priorities.

The South African Aids Vaccine Initiative (SAAVI) is funded in a public-private partnership at a level of R50 million a year. This is a holistic vaccine development that has three South African products that are going through

the regulatory processes preceding Phase I human trials. Millions of people in sub-Saharan Africa, and in the entire continent, are anxiously waiting for positive results. The cold truth is that the spread of HIV will not be reduced without an effective vaccine in place alongside other interventions. This includes anti-retroviral treatment and continuing research work on microbicides.

However, even in the best-case scenario it will take a number of years before such a vaccine is available. This is because the SAAVI activities cover the broad spectrum of vaccine development components. These include laboratory research and development, immunology testing in animals, community education, ethical protocols, actuarial modelling, data collection and management, laboratory testing and planning for clinical trials.

Agriculture

The rural economy is one of our developmental priorities. In partnership with the science councils, universities and research institutes, the DST supports a number of income-generating projects in the area of agro-processing, such as the cultivation and processing of essential oils.

A factory that produces mosquito-repellent candles from these essential oils is presently operational and employs 67 people in Giyani in the Limpopo province. These are labour-intensive community projects that offer high returns on investment created by the high global demand for the products.





Innovative water project

Too often the need to address developmental priorities is simply associated with alternative and lower level technologies. What our government has managed to show is that it is possible to address our needs in such a way that poverty alleviation and large innovative global projects can be simultaneously managed in a complementary manner.

In 2005, the DST and Buffalo City Municipality launched a pilot project focusing on the water, sanitation and energy needs of 290 houses. The Buffalo City project is an excellent example of a technological intervention achieving a variety of objectives.

The municipality found that its current approach to providing waterborne sanitation was unsustainable. Officials of the DST came up with an innovative solution and demonstrated that dry sanitation can

be placed inside a house, without odour or hygiene problems.

They have also shown that so-called grey water can be safely managed onsite by the home owner. The result is that there will be no need for sewer reticulation or treatment works, the municipality will save money and the system will be more environmentally friendly.

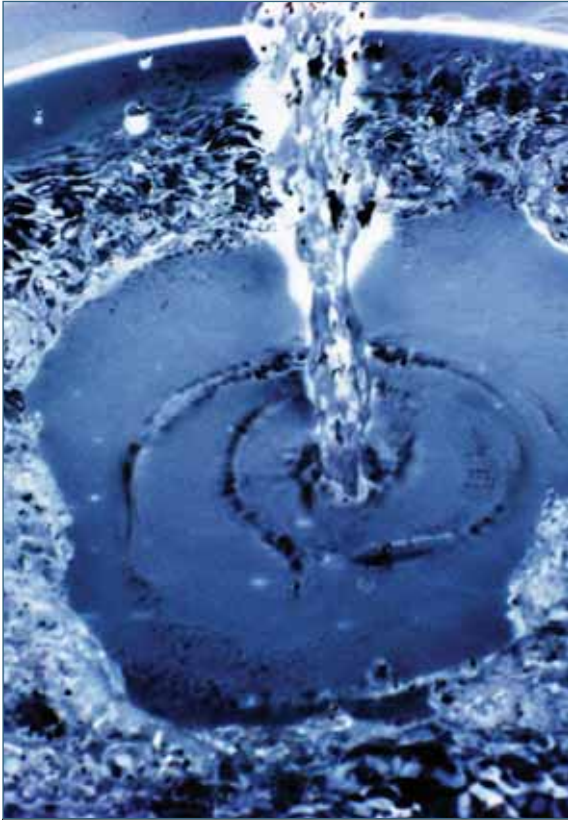
This capital saving will be utilised to dramatically improve the houses so that they are warm in winter and cool in summer. Hot water is provided at minimal cost by installing ceilings, insulation, roof ventilation and a solar hot-water geysers.

The DST committed R5,6 million to the project, which was formally launched in April 2005 and has all the ingredients for possible large-scale implementation.

We also support aquaculture projects in the Western Cape in collaboration with the University of Stellenbosch and the Agricultural Research Council (ARC). In these projects farmers produce food and additional income for their respective communities.

Plans are in place to expand these projects to the KwaZulu-Natal, Mpumalanga, North West and Limpopo provinces. We have allocated R6 million to these projects, in which a total of 60 farmers are participating, each with a potential annual income of R44 000.





Turbulence

A photo of water striking a surface shows how the force of water being propelled in every direction holds back the accumulated water that is trying to flow back in.

This tale represents many successes in our quest for a better life through science and technology and a journey to a South Africa that truly belongs to all!

Derek Hanekom

Deputy Minister of Science and Technology



Introduction

The 2004/05 year saw the creation, in April, of a stand-alone Ministry of Science and Technology. This step is in line with the higher profile being given to technology and to research and development around the world. In South Africa, the science and technology to serve national needs, both in the first and the second economies, is best driven at a very senior political level.

We have focused on both ends of the development spectrum. Programmes in biotechnology, nuclear research, astronomy and space science, hydrogen and fuel cells are of a quality which is at the highest international level. But we have also concentrated on reducing poverty through technology transfer and by stimulating small technology-based enterprises. Moreover, the DST is extending its capabilities to assist the development of science and technology in Africa, especially in sub-Saharan countries and amongst our neighbours in the SADC region.

Underpinning all of this is the DST's determination to develop people with the appropriate intellectual and technical skills. Without adequate numbers of high quality scientific researchers and engineers, no country can grow its competitiveness in the global arena. The human resources domain is a particularly exciting area of growth in the DST's MTEF budget. The Centres of Excellence and Research Chairs, where we partner the National Research Foundation, present significant opportunities to grow our knowledge and skills in the context of excellence.



Dr Rob Adam
Director General

More vigorous forms of governance have accompanied our efforts at all levels in the science system. Early in 2004 Cabinet approved a new strategic management model, designed to address the lack of a strategic approach to the management of the State-funded portion of South Africa's science and technology system. In 2004 we have worked hard in preparation for the implementation of this model, which requires the

DST to play a significant role in assisting different sectors to develop appropriate strategies, and to make sound investments in technology, research and development.

From a corporate governance perspective, we pride ourselves on the fact that, in the 2004/05 financial year, we spent 99,9% of our budget of approximately R1,5 billion and received an unqualified report from the Auditor-General. Our various statutory bodies exhibit similar excellence in managing their affairs.

Integrating the work of the DST with the activities of Science Councils and the higher education sector is a major challenge in a country whose science and technology system was highly fragmented and, under apartheid, served only a minority. In 2005/06 we have changed to a new programme structure. This structure reflects more accurately both the leading role that DST plays in certain cutting-edge scientific areas (e.g. space science and nanotechnology) and our support of other departments from a research and technology perspective.

In DST our vision is of South Africa as a prosperous society that derives enduring and equitable benefits from science and technology. DST is an exciting and enjoyable department to work in.

I have the honour of submitting the 2004/05 Annual Report of the Department of Science and Technology in terms of the Public Finance Management Act, 1999.



Dr Rob Adam
Director General





Structural Changes

The Department of Science and Technology developed a new strategic framework following the introduction of the National Research and Development Strategy adopted by Cabinet in 2002. The Cabinet approved the detailed planning around this new framework in 2004.

While this annual report reflects the programmes up to 2005, the future is reflected in the new structure that is now in place, and will be reported on next year.

The new framework classifies the technology-related activities supported by government into three basic types:

- Early stage or highly cross-sectoral generic technology or knowledge platforms and core human capital, for which DST would take responsibility;
- Focused, sectoral and relatively mature technology domains, which would primarily be the responsibility of line departments, with DST assistance where required;
- Standard technology-based services, for which the line departments would take responsibility.

The new strategic framework and change in approach to the publicly funded portion of South Africa's science and technology system initiated a number of concrete steps. These include:

- The transfer of the CSIR from the Department of Trade & Industry (dti) to the DST, timed to coincide with the beginning of the 2005 financial year;
- The decision to develop an institutional mechanism

for the integration of Higher Education Research by the Department of Education and the DST;

- The appointment of DST representatives on the boards of the Agricultural Research Council (ARC), the Medical Research Council (MRC), the Council for Mineral Technology (Mintek), South African Biodiversity Institute (SANBI), the Nuclear Energy Council of South Africa (NECSA), the National Energy Research Institute (NERI) and the Water Research Commission (WRC);
- The redefinition of the Science Vote process for the 2006/07 budgeting process to create a national science and technology expenditure plan;
- The implementation of a three-tiered medium-term expenditure framework (MTEF) science and technology expenditure plan with the National Treasury and other departments; and
- The drafting of a policy on governance standards for science and technology institutions.

This initiative has implications for better allocation of accountability and more effective alignment between the DST and the line-function department's serving councils and other institutions.

Structure of reporting period



Mosibudi Mangena
Minister of Science and Technology



Derek Hanekom
Deputy Minister of Science and Technology



Dr Rob Adam
Director General



Programme 1:
Administration

Daniel Moagi
General Manager: Administration

Programme 2:
Technology for
Development

Vacant



Programme 3:
International Cooperation
& Resources

Dhesigen Naidoo
Group Executive



Programme 4:
Government Science &
Technology System

Peter Pedlar
Group Executive



Programme 5:
Science and Technology for
Competitiveness

Dr Adi Paterson
Acting Group Executive



New Structure – effective April 2005



Mosibudi Mangena
Minister of Science and Technology



Derek Hanekom
Deputy Minister of Science and Technology



Dr Rob Adam
Director General



Programme 1:
Corporate Services &
Governance

Peter Pedlar
Group Executive



Programme 2:
Science & Technology
Expert Services

Dr Adi Paterson
Group Executive



Programme 3:
International Cooperation
& Resources

Dhesigen Naidoo
Group Executive



Programme 4:
Frontier Science
& Technology

Dr Bethuel Sehlapelo
Group Executive



Programme 5:
Government Sector
Programmes and Coordination

Marjorie Pyoos
Group Executive



Administration

This programme provides policy leadership and advice, integrative functions across the DST and the broader science and technology system, and ministerial services focused on the implementation of the national R&D strategy. Core support services is responsible for communications, human resource management, legal services and internal auditing.

Policy support services funds the National Advisory Council on Innovation and coordinates interactions of key policy issues between the ministry, the DST and the council.

Communications

Operating in line with the Government Communication and Information System, this unit aims to keep the public informed about the work of the Department of Science and Technology by strategically managing the media profile of the Ministry and the department.

It is the policy of the DST to:

- Provide the public with timely, accurate, clear, objective and complete information about its policies, programmes, services and initiatives;
- Communicate in all official languages;
- Ensure that the Department of Science and Technology is visible, accessible and accountable to the public it serves;
- Employ a variety of ways and means to communicate,



Daniel Moagi
General Manager: Administration

- and provide information in multiple formats to accommodate diverse needs;
- Consult the public, listen to and take account of people's interests and concerns when establishing priorities, developing policies, and planning programmes and services;
- Deliver prompt, courteous and responsive service underpinned by the principles of Batho Pele, which is sensitive to the needs and concerns of the public and respectful of individual rights.



The Inaugural Philip Tobias Lecture Award 2004

Minister Mosibudi Mangena, Professor Sydney Brenner and Professor Philip Tobias at the Philip Tobias Lecture Award 2004, held in November in Johannesburg.

The communication unit provides a strong media liaison service to the Ministry and the department and manages the flow of information to both internal and external stakeholders. Various activities, including breakfast and information-sharing sessions with the media, were undertaken. An informative website (www.dst.gov.za) is regularly updated to maximise the DST's ability to reach the public with essential, accessible

information on its services and programmes. Key events and communication projects undertaken in the review period include:

- The quarterly production of the DST magazine, "Innovation for Development", which features an interesting mix of information about the science and technology sector, and is widely distributed;
- The launch by the Minister of Science and Technology, Mosibudi Mangena, of the 2004 Science Week in Pretoria at the National Research Foundation;
- The department budget vote event, which was well received by all stakeholders;
- The first International Innovational and Science and Technology Exhibition (INSITE 2004), held in Johannesburg in November. INSITE 2004 won the best trade exhibition award in the 2001m²–4000m² category from the Exhibition Association of Southern Africa (EXSA);
- The inaugural Philip Tobias Lecture Award 2004, which was presented by Nobel Prize winner Professor Sydney Brenner in November;
- The celebration of innovation in South Africa through the annual Technology Top 100 (TT100) Awards.
- The production of a coffee-table book celebrating ten years of science and technology in a democratic South Africa. The coffee-table book won a silver award in the Sappi African Printer of the Year competition.



Human Resources

Following the DST's establishment in August 2002, the review period was characterised by the implementation of structures and systems to build a leading organisation, focused on optimising the return on human capital. Key strategic positions were filled and the transition into a fully-fledged ministry seamlessly managed with organised labour.

During the year under review, HR implemented initiatives designed to develop competencies required to meet strategic goals:

- Performance agreements, personal development plans and workplace skills plans were finalised and submitted to the Department of Public Service and Administration (DPSA);
- Eighty-three employees were exposed to training and development initiatives;
- To create a performance-centred culture and to improve performance levels of DST staff, performance reviews and annual assessments were conducted and submitted to the DPSA;
- To ensure that employees were informed and empowered, four awareness and education workshops on performance management were held with employees.

Information Technology

The year was dominated by the implementation of the new IT infrastructure for the DST. The goal is to eliminate paper from DST administration as far as possible.

Projects recently completed in the department include:

- Implementation of the first phase of the ITIP information system, which provides a database of South African and global scientific information;
- Broader roll-out of the Hummingbird Document Management System.

The Document Management module went live on 1 June 2004. The electronic submissions process went live on 1 August 2004.

National Advisory Council on Innovation

The mandate of the National Advisory Council on Innovation (NACI) is to advise the Minister and Cabinet on all matters relating to innovation, including science and technology, as a contribution to the achievement of national objectives – proactively and reactively.

NACI advised the Minister in the following areas during the year under consideration:

- Women in S&T;
- Shortage of technical skills;
- Mobility of research workers; and
- Utilisation of research findings.

New projects were also launched during the same period based on motivation, scoping, design, terms of reference, and recruitment of service providers, including contracts and monitoring:



- Human Resources for the National System of Innovation;
- National System of Innovation after a decade of democracy;
- Ethics in the NSI;
- Women in industrial R&D.

The Indicator programme (staff and projects) was transferred from the DST to NACI in May 2004. This programme comprises two main projects, i.e. the National R&D Survey (NRDS), and the National Innovation Survey (NIS), currently being managed (including monitoring of progress, design and implementation of different phases) by the NACI and executed by the HSRC (Cape Town).

The resources that were at the NACI's disposal during the full financial year from 1 April 2004 to 31 March 2005 were R6,5 million for all expenditure, including staff, accommodation and operational items. More details of NACI's activities may be obtained from the NACI Annual Report for 2004/05, which will be published separately.





Technology for Development

This programme aims to improve quality of life through access to technology, by creating capacity and skills for innovation, and the use of indigenous knowledge. It focuses on using science and technology to reduce poverty and improve quality of life, increasing access to information technology and improving government procurement procedures for innovative products and services.

Indigenous Knowledge Systems

On the policy front, the Indigenous Knowledge Systems (IKS) Policy was finalised and approved by Cabinet. The policy provides an enabling framework to stimulate and strengthen the contribution of indigenous knowledge to social and economic development in South Africa. A trust fund for IKS was established and funded. An IKS workshop, drawing participation at the SADC level, was held to address the issues of protection of indigenous knowledge.

Country Programme Framework

One of the major strategy development activities led by the programme during this period has been the development of the 2005–2010 Country Programme Framework (CPF) that sets the priorities and parameters for South Africa's participation in the Technical Cooperation (TC) Programme of the International Atomic Energy Agency (IAEA). The DST led the national collaborative effort, involving a number of stakeholder departments, research institutions and academics and

Focus on reducing poverty

A breakthrough in the use of technologies for the reduction of poverty has come with new thinking from leaders in the field.

While in the past scientists focused narrowly on the technology for exploiting foods and their processing, today priority is given to how best technology can serve people in their immediate context. It puts emphasis on processing resources in the environment of communities that can become sources of income as well as sustenance.

For the past four years the focus of Technology for Poverty Reduction programmes has been on promoting technology transfer, jobs and commerce.

In the past year this programme has developed with increased success in new commercial possibilities for using technologies for the use and production of indigenous plants. These include rooibos, mushrooms and cashew apples, Devil's Claw, Marula beer, plants that repel mosquitoes, paprika for export, as well as the propagation and processing of seeds and aromatherapeutic oils. Other schemes involve wool, cashmere and

mohair projects as well as bee keeping, grass weaving, plant fibres, leather production schemes and hydroponics. Many of these initiatives have remained hidden from view while they gear up to produce products for local and export markets.

The programme has planned funding from the Treasury of R142 million over three years (2004/05, 2005/06, and 2006/07). The purpose is to improve the day-to-day living of people with the objective of moving them from being economically marginalised to the centre of the economy. Communities understand how science works, because more often than not there is a lot of science in what they do. Problems arise between them and those of us with Eurocentric approaches because we fail to communicate what we do in the correct language and methodologies.

The DST uses different tools to reach the same end point. Convergence occurs when science is converted to useful goods and services that make a real impact on developmental priorities such as poverty eradication. Indigenous knowledge systems become pivotal in this process.

representatives from regulatory authorities, to prepare the 2005–2010 South African CPF submission to the IAEA.

South Africa is the only country on the African continent that has succeeded in collaborating with the IAEA in two CPF cycles; the level of support made available to South African researchers through the IAEA's TC programme for peaceful applications of nuclear-based technologies has more than trebled since the first CPF cycle from 1999–2004. The priority areas for the 2005–2010 CPF cycle include: agriculture and livestock production; energy; human health; water resources development; environmental management and integrated pollution control; human capital for nuclear science and technology; and capacity building.

Review of instruments for delivery

At a programme level the DST's technology transfer and diffusion instruments for delivery were subjected to a range of reviews and performance assessments that served to improve the DST's decision-making processes on priorities, monitoring and evaluation and reporting frameworks. These instruments include implementing agencies such as:

- The Godisa Technology Incubator programme;
- The Tshumisano Technology Stations programme based at technikons;
- Higher education and research institutions such as Technikon Witwatersrand (now University of Johannesburg), the CSIR and Mintek, involved in value-adding for new micro and small business





development activities;

- The Nuclear Energy Corporation of South Africa (NECSA) and the National Research Foundation (NRF), in support of promoting peaceful applications of nuclear technology;
- The Agricultural Research Council (ARC) in developing and maintaining 'public assets' such as gene banks; and
- The National Research Foundation (NRF) and the technology programmes for establishing South Africa's biodiversity information network facility (SABIF), the programme supporting biosystematics research (SABI) and also the South African Environmental Observation Network (SAEON).

Technology transfer and diffusion

The Tshumisano programme established its credentials in terms of technology diffusion, with contracts secured for support to the Lesotho 'Appropriate Technology Services Programme' that assists small businesses. Some of the other highlights for the year include the award to the Automotive Components Station in Port Elizabeth of a contract by one of the Original Equipment Manufacturers (OEMs) of hinge assembly and engine-hood performance testing. This kind of performance attracts small and medium enterprises (SMEs) to the Tshumisano Station because it represents global industry recognition of the station's capacity. In the previous year this same Tshumisano assisted one SME to meet new Euro standards in the manufacture of welding guns by producing a welding gun that met all the Euro specifications and was 2kg lighter than the standard.

Engineers train in tool-making in India

In June 2004, the first group of nine South African mechanical engineering graduates left for the Indo-German Tool Room in Aurangabad, India, to commence a one-year intensive post-diploma programme in tool design and manufacture.

This initiative was established through the DST and negotiated with the Indian Ministry for Small-Scale Industries under the SA-India Agreement on Scientific and Technological Cooperation.

Its aim was to address the shortage of skills in the area of tool design and manufacture, identified as the main obstacle to competitiveness and economic growth in the South African tooling industry, which would impact negatively on the future sustainability of the SA automotive industry.

More specifically, the initiative is aimed at establishing a critical mass of trainers to resource specialist training "Institutes for Advanced Tooling" envisaged for South Africa. This will further build skills in this high-technology field to supply the demand in industry.



During this year there were also SME productivity gains in the Clothing and Textile Industry Station in Cape Town, after Tshumisano made available expertise from Germany to demonstrate optimal sewing methods and modular production layout. Overall, Tshumisano stations across the country worked successfully on projects, services and training for SMEs. The number of SMEs in projects exceeded 455, while 206 SMEs received training. The DST has managed to secure new funding, from German cooperative development aid, for Tshumisano's skills development initiatives. The Board of Trustees approved funding to establish a further three Tshumisano stations. Capacity in food technology has been recognised as a critical area for development, particularly as the export market has been subjected to tougher phyto-sanitary conditions.

One of the new Tshumisano stations is a Food Technology Station, established in a partnership between Cape Technikon and Peninsula Technikon: Satellite Food Technology. Further stations will be established in future in Mpumalanga and Limpopo. Another newly created station is the Materials Station at the Durban Institute for Technology. The Godisa Trust, established by the Department of Science and Technology in partnership with the Department of Trade and Industry, enjoyed a year of support from the European Union. The focus of Godisa is on providing incubation and demonstration support to new technology-based businesses. During the 2004/05 year Godisa assisted in the establishment of 33 new SMEs; Zenzele is the frontrunner in the Godisa stable in the creation of black-owned SMEs. During

the last quarter of this year, the electronic system was operationalised for performance-reporting based on the agreed Key Performance Indicators (KPIs). Results show that, on average, black-owned SMEs amount to 42% of the SMEs supported across the eight existing Godisa Centres: namely Zenzele, Softstart, Timbali, Chemin, BTI, Acorn, Embizeni and EgoliBio. Another indicator is the commitment to raise the level of women-owned SMEs supported from the 2004/05 level of 8% to 18,4% by the end of March 2006. The Godisa Centres are off to a good start, with the first quarter already showing an 11,25% level.

Provincial Technology Imbizos

The DST established a Provincial Technology Imbizo programme as a mechanism for engaging with provinces to assess the local capacity for innovation and as an information mechanism on DST's strategies and support instruments. The institutions listed above participated in the Imbizos. The programme completed the last of the Provincial Technology Imbizos in the provinces of Mpumalanga, Limpopo, North West, Free State and Northern Cape. The individual provincial reports and the consolidated report have been finalised and will be discussed with provinces individually during the 2005 year. The programme also established the need for another assessment instrument: for supporting development planning within the provinces. In this respect, DST adopted and adapted for its own use the Technology Achievement Index (TAI) methodology that had been developed by the United Nations Development Programme. This methodology served to provide, at a





Tooling Farewell Function with Minister

The Minister of Science and Technology met with one squad of tooling trainees before they departed for India.

in 'tooling manufacturing' at the Indo-German Toolroom (IGTR) in Aurangabad, India. The first squad of trainees, mainly mechanical engineering graduates, left for India in mid-June 2004, the second squad beginning 2005 and the last squad mid-2005. The first squad has completed the year of training and the trainees are set to take up appointments within the Institutes for Advanced Tooling that are currently being established. DST is cooperating with the Indian Ministry for Small-Scale Industries through the South Africa-India Agreement on Scientific and Technological Cooperation. This initiative has also been supported by the Manufacturing Sectoral and Education Training Authority (Merseta), with participation by the Tooling Association of South Africa, the Department of Labour and the Western Cape Provincial Government.

Environmental observation network

The objective of the DST's SAEON programme is to support long-term research to distinguish between natural (especially climatic) causes of environmental change and human induced causes, in order to take appropriate action and establish suitable policies and procedures for dealing with inevitable environmental change and its consequences for the livelihoods of South Africa's people. Driven by a consortium of research interest groups that included the ARC, the CSIR, Kruger National Park (KNP) and the Wits Rural Facility, a number of potential sites were assessed for establishing the first SAEON node. The Lowveld Ndlovu Node was prioritised in view of the following special features:

- The fact that as a SAEON node it already holds 13 years of ARC data;
- Ongoing research efforts to monitor animal, vegetation, climate and water systems;
- The fact that it hosts the CSIR Fluxtower/Skukuza monitoring of nutrient cycles;
- The KNP ex- and in-closure opportunities for comparative/experimental research;
- The KNP fire trails;
- A recent project of the University of Cape Town on ecology of grasses and trees;
- The Wits project on riverine ecology supported by the Melon Foundation;
- The river health programme of the Department of Water Affairs and Forestry.

outputs are projected to be 80% bio-resources, 10% earth observation and 10% southern oceans, islands and the Antarctic.

Poverty reduction

Poverty reduction interventions are concentrated in the poverty nodes of the Integrated Rural Development Strategy and other underdeveloped areas with significant economic potential and high population density levels (with a focus on the poor). This intervention had provided more than 5000 permanent employment and temporary job opportunities by 2003/04, and 2004/05 has seen growth in agro-processing interventions. These opportunities target mainly the most vulnerable sectors of the population: women, youth and the disabled. Information and Communication Technology (ICT) and investment in the form of social infrastructure capital were provided to the Multipurpose Community Centres and municipalities in the Eastern Cape, Gauteng and Free State provinces.

Over the last financial year, the programme has developed a new focus on public-good technology and innovation, whereby the department pilots innovative technology that demonstrates a significant cost benefit over current practice, thereby reducing costs to the poor. These initiatives have covered Minimum Invasive Education programmes for learning how to use computers; telemedicine, so that patients do not have to travel to major centres for diagnostic services; and the promotion of more appropriate technologies to reduce municipal service costs and household heating bills.

Another focus has been on the promotion of ethanol gel as an alternative to paraffin. With paraffin being responsible for so many deaths and injuries through fire, the government has a responsibility to search for a safe alternative. Ethanol gel offers that possibility, but the main stumbling block has been lack of knowledge of the product by consumers.

The department therefore funded two projects to promote the use of gel by consumers. A shift in focus is developing in terms of government possibly using regulatory instruments of the Department of Minerals and Energy to address the issue of safer cooking fuel options, rather than a variety of small projects. The DST intends to further expand its non-intrusive education support initiative in the form of the Digital-Doorway project across a number of provinces during 2005. Social research projects covered the monitoring and evaluation of current projects, and best practices in technology transfer for development. These were conducted by Sustainable Villages Africa in collaboration with the CSIR and the Human Sciences Research Council. The findings of these research endeavours were shared with other government departments in workshops, in order to provide them with information about technologies they can draw on for their sector-specific development programmes.





International Cooperation and Resources

This programme is responsible for the development of bilateral and multilateral cooperation in science and technology to strengthen the National System of Innovation. It provides a strategic, integrated programme for accessing international development assistance and other international resources for science and technology in South Africa and on the African continent.

The DST is engaged in developing functional relationships with a range of countries and international S&T organisations, on both a bilateral and a multilateral basis, in order to access resources and nurture partnerships to develop science and technology in South Africa and Africa.

International resources and strategic partnerships

South Africa's participation in competitive international research funding programmes such as the European Union's Framework Programmes has been enhanced by the establishment and successful operation of a dedicated network of National Contact Points. These have positioned the South African research community well to leverage a substantial share of the European Commission's commitment to allocate at least €285 million of the Sixth Framework Programme (FP6) funding to 'third country' participants such as South Africa.



Dhesigen Naidoo
Group Executive: International Cooperation and Resources

In 2004, South Africa was a partner in more than forty consortia that were awarded FP6 funding. This amounted to a direct investment of more than R60 million in South African R&D, but even more important was the multiplier factor, through which South Africa was afforded access to total R&D activity of approximately R300 million. This round is not yet complete. During the



International Cooperation through IBSA

The IBSA Agreement (India, Brazil and South Africa) took a distinct upturn with South African leadership as there is now an agreed work-plan. The Rio de Janeiro Declaration that came out of the June 2005 Ministerial meeting has set a new political



tone for the Agreement. It endorsed three priority areas of work: Biotechnology (South Africa as the convener); Nanotechnology (India as convener); and Oceanography and Antarctica (Brazil as convener).

Research in biotechnology focuses on human health issues, crop science and livestock research in agriculture, and bio-harvesting of microbes for testing minerals in the industrial field. Nanotechnology has a wide range of applications, especially in drug delivery systems and human and animal health. DST's role will be to strongly capacitate the information technology structure being used by scientists. Oceanography resource management and the development of early-warning systems are big issues for all three countries.

All three have an active interest in polar research in Antarctica, particularly in biodiversity and the monitoring of space. They will share equipment and personnel. The Ministerial Meeting also endorsed research into three priority diseases of the South, and their convener countries: HIV/Aids (India), Tuberculosis (South Africa), and Malaria (Brazil). In HIV/Aids research vaccine development is a main focus. In South Africa the SA Medical Council and the University of Cape Town's Lung Institute play key roles in tuberculosis research.



earlier FP5, South Africa was represented in 64 projects, which represented participation in cutting-edge global R&D collaboration worth approximately R350 million.

The European Commission in 2004 also approved a proposal prepared by the department for the creation of a dedicated platform to promote improved SA-EU S&T cooperation. This initiative, the European South African Science and Technology Advancement Programme (ESASTAP), to be implemented by the department with substantial funding support from the EC, is being launched in 2005. The programme will notably ensure that synergies between Framework Programme participation and South Africa's bilateral relations with EU member states are optimally leveraged, and it will be the primary instrument for South Africa's preparation for the FP7, to be launched at the end of 2006.

In 2004, the Director General continued to lead South Africa's participation in the Group on Earth Observations (GEO) as one of the co-Chairs of this unique international partnership to enhance global Earth observation capacity. The GEO achieved a critical milestone when the ten-year Implementation Plan for the development of the Global Earth Observation System of Systems (GEOSS) was approved by Ministers at the Third Earth Observation Summit held in Brussels in February 2005. In recognition of South Africa's leadership role in the GEO, Minister Mangena delivered the closing address at the Summit. Throughout 2004, the department registered sustained progress in its new endeavours to foster partnerships with multinational companies and promote South Africa

as a preferred destination for the location of their global R&D capacities. A good example of these activities is the close collaboration with the global business solutions giant, SAP AG, which became one of the few multinationals operating in Africa to establish a dedicated research programme on the continent. Apart from establishing a research group in South Africa, SAP AG continues to invest in partnership with the department in the development of young South African information and communications technology researchers, through a number of fellowship and internship programmes targeting historically disadvantaged communities.

Other strategic bilateral resource leveraging relations continue to be explored, with progress achieved in preparing a regional innovation systems programme, which it is envisaged will be funded by the Government of Finland.

Overseas bilateral cooperation

At present the department manages 30 signed non-African international bilateral agreements, which have resulted in over 400 Research and Development projects in areas such as information technology, environmental management, and manufacturing technologies.

As part of the celebration of ten years of democracy in South Africa, the DST hosted an International Innovation Science and Technology Fair (INSITE). This served as a platform to showcase innovation and scientific expertise and to encourage research cooperation, business



The INSITE 2004 exhibition

DST supported and sponsored the highly successful INSITE 2004 Exhibition, South Africa's first International Science, Innovation and Technology Exhibition. Along with South Africa, 12 other countries exhibited at the fair. In addition to having had the participation of visitors from 27 countries, INSITE had an innovative format of events, pavilions and parallel events interspersed with high quality exhibitions. South Africa won the Exhibition of the Year (2004) in its class.

One of its aims was to showcase products, technologies and services as well as the ideas, innovations and solutions that will drive South Africa and many other economies in the future.

Launched as an integral part of South Africa's 10 years of democracy celebrations, INSITE 2004 included as exhibitors both local and international governments and research institutions, science and technology institutions, entrepreneurs, funding agencies, and the United Nations family of science and technology-related organisations.



opportunities and science and technology interaction between South Africa and its international partners and scientific institutions.

South-South relationships show huge momentum. Besides the South-South IBSA (India, Brazil, South Africa) Agreement, we have a range of one-on-one



relationships, as well as 'one-on-many' relationships. A significant step was taken with the formation of a trilateral consortium between India, Brazil and South Africa (IBSA) in June 2003. This was followed by the establishment of an IBSA Science and Technology chapter in March 2004 and the inaugural IBSA S&T Ministerial in October 2004, where an action plan of priorities was developed.

For our bilateral work this has been a high-performance year. In this period the Romanian agreement was signed and the negotiations with Australia completed. New modalities were successfully negotiated with Norway and Switzerland, while Canada and the US look increasingly promising. Work on the 'new 10' of the EU has begun, with missions in planning for 2005/06. The new Asian bilaterals (Republic of Korea and Japan) are at a high level of functionality. Formal engagement with the international donor community was achieved through the establishment of the Partnership Forum, which also provided the unit with an opportunity to market itself. To this end, many good initial contacts with major donor players have been established and a higher momentum of engagement is planned for the coming years to land major wins and successes. In addition, the Inaugural Ambassadorial Forum was hosted by the Minister.

The unit has successfully negotiated for the South African research community to participate in the competitive DfID Research Framework Fund worth £1 billion and has also agreed with Prof. Gordon Conway, chief scientific advisor to DfID, for South Africa to become the key input and entry point for UK science

and technology engagement and for the roll-out plan of science and technology components of the Commission for Africa Report.

The unit has negotiated the inclusion of science and technology funding for the 2007–2010 cycle with Denmark, and has successfully lobbied to participate in the Steering Committee of the Renewable Energy Efficiency Programme, where it will leverage more resources. The DST and the EC delegation are undertaking a pre-feasibility study for funding of a science and technology sector programme (SWSTP), which when implemented in 2007 may be in the order of €10 million a year.

JICA negotiated with the unit and signed an Agreement with Plant Bio to fund the latter's programme, which will commence with a feasibility study, and pending a positive outcome will evolve into long-term commercialisation funding for the programme. The unit will be strengthening and deepening development aid relations with JICA/Japan through South-South engagement (SA-Asian Country-Japan); regional collaboration (SADC-Japan); and poly-lateral cooperation (SA-African Country/countries-Japan) as a strategic outlook for future partnerships.

The unit has consistently interacted with individual Nordic countries and participated in annual consultations to canvass funding of science and technology, over and above the joint research programmes managed by the NRF, and will continue to pursue these engagements with the Nordic countries and with other major donor players.



Multilateral cooperation

In the multilateral sphere we are players in the African-Asian Regional Organisation for Cooperation, and we participated in the Tokyo International Conference on African Development.

DST is an active participant in the United Nations system, in South-South relations, the Non-Aligned States, and the 132 states in the G77, as well as the Organisation for Economic Co-operation and Development (OECD). In the OECD the department participates in initiatives in science and technology for sustainable development, and formed a political bloc with China, Russia and Israel. We are a member of the International Atomic Energy Agency (IAEA), where South Africa has been successful in leveraging research funds in the Technical Cooperation Programme, and a player in the Global Biodiversity Information Fund, and the European Union's African, Caribbean and Pacific (ACP) Science and Technology Fund.

In the UN system we participate in the Commission for Science and Technology and the UN Conference on Trade and Development (UNCTAD). In the field of industrial development we partner with UNIDO and play a key role in the science platform for the United Nations Educational, Scientific and Cultural Organisation (UNESCO). South Africa was successful in securing financial support for SADC activities in increasing public awareness of science and technology from UNESCO, and gaining a commitment from UNIDO to support

science and technology policy development in SADC countries.

We have played a role in changing 'science and technology' agendas to 'science and technology for sustainable development' agendas. The department contributed to the sustainable development agenda through participation in the 12th meeting of the United Nations Commission on Sustainable Development, where the DST hosted a successful side event on S&T for Sustainable Development. In September 2004 the DST hosted a Ministerial science and technology event workshop at the WSSD +2 Conference which was very well received.

In addition to good interactions with UNCSTD, the United Nations Division for Sustainable Development (CSD) and UNEP, a broader based engagement with the multilateral players based in South Africa has begun with a DST-seeded forum. The United Nations Commission on Science and Technology for Development (UNCSTD) set up a working group on information technology and development. The working group investigated the obstacles to production, access and use of ICTs in developing countries. The department has successfully promoted South African participation in strategic multilateral organisations such as the International Centre for Genetic Engineering and Biotechnology (ICGEB), in which a number of South Africans have been nominated for key positions, including that of ICGEB External Auditor. South Africa was an active participant in establishing a work-plan on sustainable development

African Cooperation through NEPAD

Following South Africa's hosting and chairing of the inaugural Nepad Ministerial Conference on Science and Technology in 2003, the Ministers responsible for Science and Technology (AMCOST) adopted a plan of action outlining 12 flagship programmes. South Africa through the chairing of the Nepad S&T Steering Committee headed a process to activate the 12 priority areas in NEPAD's science and technology Plan of Action. It was agreed that in each of these areas African countries would pool their resources through public and private partnerships in setting up networks of Centres of Excellence around which the development of human resources and the promotion of innovation would be designed. South African research institutions are playing a major role as focal points in the networks that are driving the programmes.



One of the areas where South African participation has been vibrant is the African Laser Centre in NEPAD.

by the Organisation for Economic Co-operation and Development (OECD), and has developed as a key member of its science and technology programme on its various committees. South Africa has joined 52 other

countries to become a full member of the International Centre for Genetic Engineering and Biotechnology.



International Technology Information

This is an area that has proceeded well, with the successful completion of the International Technology Information Platform (ITIP). This will eventually be available to the South African Science and Technology community at large. This will operate on a 'Wikipedia' model, in which the users will be active in contributing to the databases and the information platform. The DST training/exposure programme has been completed, working with an early adopter group.

A technology intelligence capacity is being developed to enhance the DST's ability to monitor and evaluate international S&T trends, and to leverage South Africa's competitive advantage in new and innovative technologies globally. DST has embarked on research studies to establish South Africa's S&T development trends and strategic national assets and S&T profiles of strategically identified developed and developing countries.

DST has secured a capacity-building partnership with the Japanese National Institute for Science and Technology Policy (NISTEP).

South Africa as a preferred S&T destination

The department continued to undertake concerted efforts to profile South Africa as a preferred destination for the location of global science facilities. In July 2004 the department celebrated a major success with Ministers Mangena and Tshabalala-Msimang opening the offices of the Secretariat of the European Developing Countries' Clinical Trials Partnership (EDCTP). The Medical Research

Council, with the department's support, had successfully bid to host the Secretariat Office, which enjoys equal status with the EDCTP Secretariat Office in The Hague. The EDCTP is a €400 million funding programme that will run over four years to accelerate the development of new interventions in the fight against poverty-related communicable diseases such as HIV-Aids, malaria and tuberculosis.

Collaboration in space science and astronomy was aggressively pursued as a key focus area for strategic international partnerships, specifically within the context of hosting global facilities. Apart from the ongoing bid for South Africa to host the Square Kilometre Array (SKA) global radio telescope facility, the long-standing partnership in deep space research with the National Aeronautical and Space Administration (NASA) of the US was further strengthened. Important progress has been registered with the SKA bid, with South Africa participating in an EU-funded SKA design study project, the exploration of international partnerships for the Karoo Array Telescope (KAT) demonstrator and the strengthening of cooperation with partner African countries which will participate in the South African bid.



Members of the Audit Committee

Back, left to right: Prof D Fourie, Mr M Gantsho and Dr JM Stewart. Front, left to right: Mr S Kajee, Chairperson, and Dr RM Adam, DG of DST.

Act, and crafting a stakeholder compact between the HSRC and DST.

The programme made important contributions to the recent review of the National Treasury and the Department of Public Service and Administration (DPSA), and of Public Entities and State-Owned Enterprises (SOEs). Its recommendations mean that the harmonisation of the institutional frameworks can be synergised with proposed draft legislation to bring coherence to the government of all science and technology institutions that are publicly financed.

An investigation was conducted into the current status and potential exposure of the fiscus to post-retirement medical funding in the Science Vote institutions. The first phase has been completed and the relevant institutions were notified of their status in terms of this report. In the next financial year this exposure will be fully quantified at the institutional level and in respect of the DST's proposed actions in concert with the Treasury.

The Godisa Trust was registered as a public entity, with the programme playing a major role by putting in place policies to launch the Trust from a sound corporate governance platform. The programme continued to give strategic advice to relevant stakeholders to maintain sound governance practices in the science system.

DST is part of the governance cluster in Government. In the past year the Department has joined the Corporate Governance Network and the Global Bio-Diversity Information Facility (GBIF). The GBIF has also appointed the head of the programme to its budget committee.

The governance capacity of the programme was also given international recognition by our being invited to give inputs to the development of the Organisation for Economic Co-operation and Development (OECD) in the form of guidelines for corporate governance of state-owned enterprises.

The governance unit of the DST ensures, on behalf of the DST, that periodic strategic reviews of publicly funded Science, Engineering and Technology



KPI reporting

The KPI reporting system requires annual performance measurement and evaluation of the SETIs. In this regard a framework of key performance indicators was developed, applying the balanced scorecard approach. On this basis, performance is measured from the stakeholder / customer perspective, the financial and investment perspective, the organisational perspective, the innovation and learning perspective, and the human resources and transformation perspective.

The key performance indicators, which are a set of quantitative and qualitative indicators, are used to measure, monitor and manage effectiveness, efficiency and sustainability of the SETIs. They allow decisions to be made regarding the quality, relevance, and present and probable future contributions to be made by the SETIs to South Africa's development. They are also used to evaluate the performance of SETIs against international best practice.

The DST reviewed the suitability of the KPI reporting system during 2002/03 and is implementing the recommendations from that review.



The outcomes include the creation of jobs, establishment of new enterprises, higher levels of collaborative research, increased local and overseas confidence and hence investment in R&D by the private sector. Most of these programmes operate with funding competition to ensure that there is both excellence and relevance in the proposed activities.

Strategic science investment is focused on platforms with high geographical relevance. There is a key focus on astronomy and earth observation, palaeontology and palaeo-anthropology and on Antarctic and oceans research. A number of these areas, and newer ones such as key bioscience areas, have established a strong base among stakeholders. Initiatives include the SALT Telescope, the Square-Kilometre Array (SKA) bid, the Coelacanth research programme and the strengthened Antarctic Research programme.

During the course of the year Professor Phil Charles was appointed as Director of the SAAO. He will play a key role in the development of the science programme and ensuring the better integration of southern African astronomy activities. A key programme, in which all essential engineering construction has been completed, is the Southern African Large Telescope. In November 2005 the scientific launch of this globally important facility with its 10m class optical and infrared telescope will take place.

The Antarctic Research Strategy was completed in June 2004, with an increased funding cycle in the second

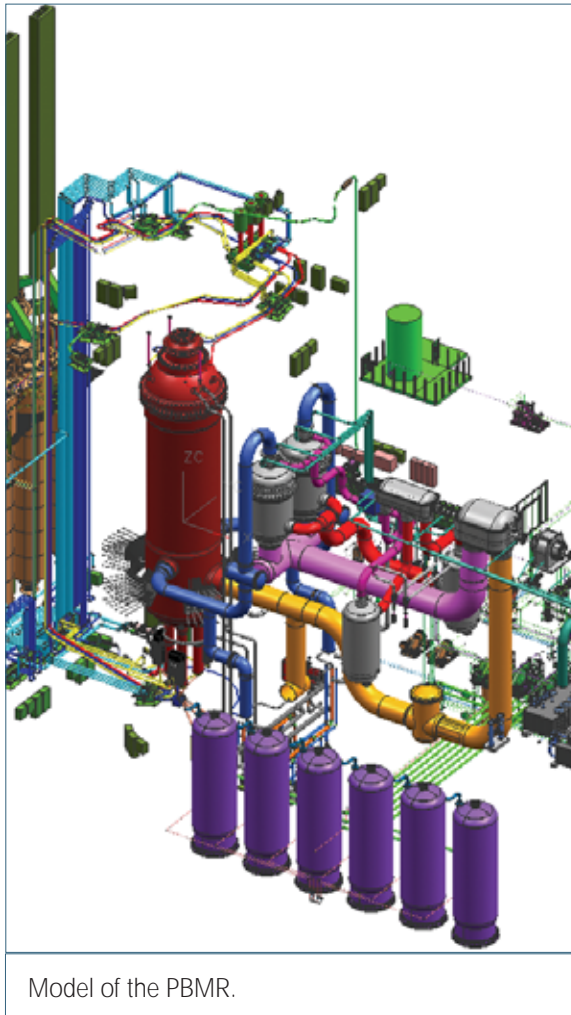
half of the year from R1,5 million to R3 million. South Africa's Antarctic research focuses on five main themes: covering the geosciences, physical sciences, life sciences, the impact of human presence in Antarctica and the history, sociology and politics of the country's long-term presence in the region.

Successes with technology

In the financial year 2004/05 the technology missions have registered a number of important successes. They include the development and commercialisation of new products and businesses through the three Biotechnology Regional Innovation Centres (BRICs). The National Bio-Informatics Network programme expanded to include the University of KwaZulu-Natal. The National Plant Biotechnology Innovation Centre was established and launched by the Minister of Science and Technology. It focuses on food security and critical economic plant resources.

The DST has provided capital grants for CSIR and the Council for Mining Technology (Mintek) to strengthen nanotechnology characterisation facilities; to the iThemba Laboratory for Accelerator Based Sciences for the second proton beam-line for the treatment of cancer patients; to the CSIR to strengthen the capital infrastructure of the wind-tunnels, which links to the current aerospace initiatives of government; and, among others, for the recapitalisation of the Schonland Research Institute (SRI). In the case of the SRI the Minister approved its incorporation into iThemba LABS, by agreement with the University of the Witwatersrand, and this has been





initiated in terms of an approved business plan. In the ICT field a framework for Open Source Software promotion and development was achieved in a partnership between the DST, the CSIR and Mark Shuttleworth's Ubuntu Foundation, and others. This partnership is stimulating initiatives to allow consumers to have the capacity to adopt Open Source Software. Among the challenges of introducing Open Source Software is attaining a critical mass of business users and educational users so that proper alternatives, from both a cost and utility point of view, support the evolution of the solutions.

The governance framework for the National Energy Research Institute (NERI) was approved by Cabinet and the requirements for its establishment completed. The planning of the National Energy Research and Development Strategy was finalised in March 2005. A series of flagship projects have been established and funded, covering a range of technologies and energy systems.

The DST has identified the Hydrogen Economy and related Fuel Cells technologies as a "Frontier Science and Technology" domain. This work underpins a series of activities designed to strengthen government understanding of this area, develop strategic options for the future and ultimately have a coherent programme of research and demonstration. The Innovation Fund has completed its internal reorganisation from a "closed-call" innovation portfolio to a fully-fledged innovation funder and provider of public-sector intellectual property "wholesaler" services. This change required the

development of a more effective governance model. In this regard the Minister dissolved the Innovation Fund Trust, which had overseen the successful transition. The new Innovation Fund model is designed according to the model used for the dti Technology for Human Resources and Industry Programme.

The Innovation Fund launched support programmes for inventors at publicly funded institutions and for technology commercialisation offices at Universities and Science Councils. A number of successful projects have been commercialised through the Innovation Fund. These are reflected in its separate Annual Report and its website: www.innovationfund.ac.za.

The Western Cape received a boost in October 2004 when the Western Cape Provincial Advanced Manufacturing Technology strategy (PAMTS) was launched. This strategy is derived from the Advanced Manufacturing Technology Strategy. The partnership between provincial and national governments to advance innovation in manufacturing is an important development.

The Gauteng Government Blue IQ initiative, the Innovation Hub, has been opened on its new campus in Tshwane. The DST has linked a number of programmes to this development, including placing the FABlab – a unique fabrication facility for entrepreneurs, students and learners – to engage easily with cutting-edge fabrication facilities at low cost and low risk.



Adding new dimensions to an old technology

Lateral thinking by an Innovation Fund research consortium promises to revolutionise the manufacture of tooling in South Africa, spearheading the country's entry as a product-based nation into the world economy. The consortium has combined the age-old technique of lost wax investment casting with the latest in projected light fringe and laser technology, to create a fast, cost-effective and highly accurate solution for the manufacture of tooling.

Influence of success in science

The National Research and Development Strategy identified the need to create 'centres and networks of excellence' in science and technology, including the social sciences, as a key component of the human capital and transformation dimensions of government policy. Such centres will stimulate sustained distinction in research while simultaneously generating highly qualified human-resource capacity in order to impact meaningfully on key national and global areas of knowledge.

The six centres that passed the stringent NRF test are:

- The DST-NRF Centre for Biomedical TB Research;
- The DST-NRF Centre for Invasion Biology;
- The DST-NRF Centre of Excellence in Strong Materials;
- The DST-NRF Centre of Excellence in Birds as Keys to Biodiversity Conservation at the Percy FitzPatrick Institute;
- The DST-NRF Centre of Excellence for Catalysis; and
- The DST-NRF Centre of Excellence in Tree Health Biotechnology at FABI.

These centres were launched by the Minister in June 2004 after a process of selection operated by the National Research Foundation, the main implementer of this strategic initiative. In addition to this, consultations have been held with other groups on strengthening African Networks of Excellence, as well as initiatives that

focus on postgraduate training. This has been achieved in the formation of the African Laser Centre and ongoing support for the African Institute for Mathematical Sciences. The development of the South African Centre of Epidemiological Modelling and Analysis continued apace, with selection of focus areas for research, a range of workshops and academic programmes and the finalisation of a governance model.

A number of independent reviews have been presented to the DST by different communities, and the implications of the findings are given serious consideration. The review by the South African Institute of Physics on the state of physics and its contribution in South Africa has proposed the establishment of an Institute of Theoretical Physics. The DST has allocated a grant to a working group which is seeking to scope and define the responsibilities and modalities of such an institute. A similar, independent approach has been made by the Astronomy community, which operates a very creative inter-institutional programme for postgraduate studies, for the formation of an Institute of Astronomy. This approach is also under review. There is clearly a need for more interaction at the level of key disciplines, and the DST and NRF have initiated a process to have a coherent approach to the emergence of disciplinary institutes – particularly where they have a vision for postgraduate research leverage and global connectedness. There is a consistent increase in research capacity development through a number of initiatives. In 2003 1000 Ph.D. graduates were produced in South Africa for the first time. Engineering disciplines and natural and social sciences are well represented.



Overall S&T registrations for postgraduate studies have increased since the late 1990s. However, this has not yet converted into increased levels of publication overall. The quality of South African publications reflected in the international literature as assessed by citation indices has, however, improved.

The review of the NRF, the results of which are expected in the next period, will provide a useful platform for further development of these key human capital themes. In anticipation of this the DST is funding a prestigious NRF pilot post-doctoral fellowships programme, and a number of research councils are being supported in the roll-out of a professional development programme. These interventions are intended to deal with early career-stage researchers – so that they can undertake meaningful, internationally competitive research rather than making career choices that cause them to leave research careers too early.

Partnering for impact

It is not possible to describe all the initiatives taken to provide direction and achieve 'joined-up' government. The examples chosen here are mainly related to activities beyond the DST that have impacted on other domains or represent bottom-up activities by the S&T community in which the DST has participated.

National Science Week once again took place in all provinces. This is a unique annual partnership between SAASTA at the NRF, the National Department of Education and the nine provincial Departments of

Education and the DST. It takes place in early May and encourages young learners to study mathematics and science subjects with a view to influencing their subject and career choices as future tertiary students.

During the course of the year good progress was made with the development of the South African Research Network – South Africa's Internet 2 – with a clear identification of the regulatory, management and infrastructural challenges. A small band-width pilot scale connection to the European GEANT network is in place.

UCT and the CSIR, in consultation with the DST, brought together a consortium of interested stakeholders to consider the establishment of a National Centre for High Performance Computing. It is evident from their deliberations that South Africa has fallen behind in the provision of key research infrastructure for these purposes. This poses a threat to our ability to retain key scientists and technologists and indeed to participate successfully in new computation-based disciplines.

Similar deliberations have taken place with a range of stakeholders, such as, but not limited to:

- The South African Nanotechnology Initiative on a national nanotechnology strategy;
- The South African Weather Services on a range of technology and climate change issues;
- The Marine and Coastal Management Division of the Department of Environment Affairs and Tourism,



mainly on aquaculture and resource estimation; and

- The CSIR, Department of Education and Department of Communication on the establishment of the African Advanced Institute for Information and Communication Technology (now the Meraka Institute).

The National Science Centre policy was finalised following consultations with stakeholders in all provinces. It caters for 31 existing South African centres that promote an understanding of the uses of science and technology through interactive exhibits, displays and programmes. The policy now needs an appropriate business plan and operational model to deal with the significant under-servicing of rural areas and the need to link stronger curriculum-based S&T facilities to these institutions.

A human capital programme for new and current scientists and engineers involved in the development of the Pebble-Bed Modular Reactor was approved by Cabinet and funded by the DST. This will include the creation of key research and education professorships in some institutions, stronger bursary support for undergraduate and postgraduate students, better dissemination of reliable information on nuclear use and the networking of students engaged in research in the nuclear industry in South Africa.

The National Space Working Group continued its activities, focusing on the formation of a Group of Lead Users of earth observation data in government who are developing a practical set of measures to improve

user interactions. This complements the ongoing developments leading to the formation of a unitary Space Agency.





Public Entities

The key public entities programmes that report to the Minister of Science and Technology are listed here. These entities separately produce full annual reports.



The CSIR is governed by the Scientific Research Council Act (46 of 1988, amended in 1990). Its mandate is to foster industrial and scientific development through directed and multidisciplinary research and technological innovation. It also operates a number of large facilities on behalf of the nation, such as the National Metrology Laboratory, the wind tunnel, the Satellite Applications Centre and the National Laser Centre. Some examples of DST/CSIR projects during the 2004/05 financial year:

- **Transferring agro-processing technology to communities**

The CSIR undertakes significant research to unlock the economic value of South Africa's biodiversity and indigenous knowledge, while transferring agro-processing technology to communities.

- **Putting citrus waste to good use**

The project is funded by the DST's LIFElab ECoBio Regional Innovation Centre, which hopes to

improve the competitiveness of South Africa's waste producers through waste beneficiation.

- **Novel egg pasteurisation technology**

A novel microwave technology system to pasteurise raw, whole-shell eggs has resulted from a collaborative research project between food scientists from the CSIR, electronic engineers, physicists and the egg industry, as funded by the Innovation Fund.

- **A major new EU food safety research project in which CSIR participated**

Food safety is under the spotlight in a European Commission-funded research project in which 33 leading organisations worldwide are participating. Through the inclusion of the CSIR, South Africa is the only participating African partner and one of only two non-European countries.

- **Appointment by the DST of CSIR experts as EU contact points**

The DST appointed Dr Geoff Meese and Johan Eksteen as South Africa's National Contact Points (NCPs) for the Food Quality and Safety theme, and the Information Society Technologies theme, respectively.

- **Launch of the National ICT Roadmap to industry**

The industry phase of the National ICT Roadmap

initiative, coordinated by the CSIR on behalf of the DST, was formally launched during the year under review.

- **CSIR support of earth observation and ICT-related efforts**

The CSIR is providing support to the DST in the development of a national earth observation strategy. In addition, the CSIR gives technical assistance to the DST in the implementation plan for the Global Earth Observation System of Systems (GEOSS).

- **The Digital Doorway to boost computer literacy**

The Digital Doorway, an initiative between the DST and the CSIR, uses the concept of minimally invasive education to promote large-scale computer literacy. Mr Mosibudi Mangena, Minister of Science and Technology, opened the first Digital Doorway installation in Gauteng at the end of June 2004.

- **Boosting manufacturing technology**

The DST has established an implementation unit for its Advanced Manufacturing Technology Strategy (AMTS) at the CSIR.

- **Support for enterprise development**

The CSIR's Enterprise Development Centre key stakeholders are the DST, the Department of Trade and Industry and the Department of Arts and Culture. Specific projects include a feasibility study for the DST into the establishment of a wheelchair manufacturing

facility in South Africa; and a feasibility study into the establishment of a technology incubator at the Botswana Technology Centre.

- **Launch of a local fuel cell initiative**

The CSIR and a number of private sector companies, universities and semi-government organisations have formed a local fuel cell initiative. The DST provided support for this initiative by funding a South African fuel-cell baseline study.



Human Sciences Research Council
(HSRC)

The HSRC is an independent statutory organisation. As one of the Science Councils in South Africa it focuses its research on the social sciences. The HSRC has 11 national research programmes, initially called 'new priority areas' during an ongoing restructuring process. Seven of its programmes are based in Pretoria, while three are led from the Cape Town office, and one from Durban. The three programmes led from Cape Town are Knowledge Management, Social Aspects of HIV/Aids and Health, and Social Cohesion and Integration. Knowledge Management concerns itself with the way that organisational knowledge is harnessed toward innovation. Through this new programme, the HSRC is assisting government to better utilise its information resources towards more effective services. The programme also gives careful consideration to

science awareness in the public (especially at schools level) and provision of support for developing students, a critical mass of research expertise, and capacity in entrepreneurship, technological development, innovation and commercialisation. This approach led, amongst others, to

- o An increase in the total number of student grants from the core grant to 4 740, of which 2 810 (59%) went to blacks and 2310 (49%) to women;
 - o An increase in the grants to researchers to 1481, of which 387 (26%) went to blacks and 508 (34%) to women;
 - o A record number of 1100 doctoral students supported; and
 - o A record number of 210 grants for post-doctoral studies awarded.
- The first phase of the Shifting the Boundaries of Knowledge Initiative to promote Social Sciences, Humanities and Law was completed. The process entailed countrywide consultation to develop a national research agenda in order to stimulate research in these disciplines and promote the participation of researchers in NRF programmes.
- A report entitled Shaping the Future of Physics in South Africa, containing recommendations on how to promote Physics as a discipline, was issued in August 2004.
- The first six DST/NRF Centres of Excellence were established.
- Research funded by RISA through its Focus Areas resulted in the following scientific output by RISA stakeholders:

Outputs	Focus Area Programmes	Development Programmes	Total
Peer-reviewed	2 118	217	2 335
Books	143	–	143
Chapters in books	114	46	160
Patents, artefacts & products	56	36	92
Technical reports	381	60	441
Published	844	146	990

- The inclusion of the National Zoological Gardens in the NRF management portfolio creates unique opportunities for the development of an interactive Life Science Centre. The integration of a zoo, aquarium and reptile park with a science centre holds tremendous potential for raising the profile of science.
- Flagship programmes of the National Research Facilities reported continued progress. Programmes include, for example:
 - The Southern African Large Telescope (SALT);
 - Inkaba ye Africa (Earth Systems Science of Africa);



- The Antarctic Southern Hemisphere Auroral Radar Experiment (SHARE);
- The African Coelacanth Ecosystem Programme (ACEP);
- The first SAEON node, the Ndlovu Node of the Savanna, which was launched and established at Phalaborwa; and
- The National Astrophysics and Space Science Programme (NASSP), which draws students from all over Africa to be taught by top South African scientists. The programme is an initiative of SAAO, HartRAO and HMO in collaboration with local universities.

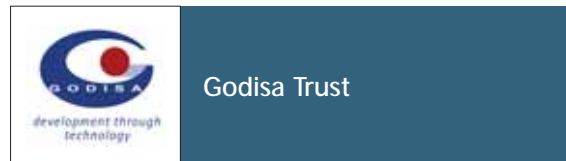
Finances

The NRF had a total budget of R914,3 million, which represented a 20% growth over the previous year. Government grants in the amount of R413,7 million were supplemented by other income to the amount of R500,6 million.



AISA is an independent research organisation and think-tank, focusing on Africa in its research, publications and resource library. The focus of its work is primarily political, socio economic, international and development issues in contemporary Africa. The Institute produces in-depth analysis and research with topicality and policy relevance, focusing on issues of African unity and the

New Partnership for Africa's Development (NEPAD). AISA aims to facilitate the development of research expertise, knowledge production, education, training and promotion of awareness on Africa, for Africans and the international community. Its programmes include work on sustainable development and peace and governance, focusing on Southern Africa, East Africa and the Indian Ocean, West Africa and North Africa and the Great Lakes. AISA's researchers work with research associates and research interns to form multi-disciplinary and multi-country teams.



The departments of Science and Technology (DST) and of Trade and Industry (dti), with the support of the European Union (EU), have launched the Godisa National Incubation Programme. The Godisa Programme aims at encouraging technology transfer and capacity to enable small business to compete in the global economy. Godisa aims to address outdated technologies employed by small, medium and micro businesses. Support is needed to overcome low engagement rates of SMMEs in value-adding activities, as well as their high start-up failure rate. A key element in an incubation programme is to provide access to facilities for testing and promoting innovative ideas in SMMEs. A wide range of incubation centres exist in several cities, providing facilities for software, mining,

biotechnology, horticulture, life science, and chemical technologies.



The Tshumisano Trust was established to increase the competitiveness of small, micro and medium enterprises (SMMEs) in targeted sectors in national, regional and global markets, as well as technological innovation activities and skills upgrading. Technikons (now becoming Institutes of Technology and merging with universities) offer increasing scope for innovation support, skills development and SMME support. They play a critical role in providing skilled manpower through the adoption of cooperative education strategies such as in-service training, combining learning in the classroom with learning on the job. Technikon departments are also engaging to a greater degree in direct support services to the SMME sector, such as customised short-term training, consultancy, testing and quality control, design and product development. Existing equipment is offered for technology demonstration, pilot production and contract-production jobs. The policy and practical challenge for the DST and the implementing institutions is to strengthen and accelerate this mutually beneficial link between technikons and SMMEs through an appropriate intermediary structure. The DST Technology Stations Programme provides support for innovation within

SMMEs through a system of using competent service providers for technology transfers and needs-oriented services. In addition the DST provides support for developing technikons' teaching and research, and technikon graduates and their R&D output are oriented towards the competitiveness and innovation capacity of SMMEs.

Academy of Science of South Africa (ASSAf)

The Academy of Science of South Africa was established in 1996. It is a member of the InterAcademy Panel (IAP) on which over 80 countries are represented, and has ties or agreements with some of the world's leading Science Academies. ASSAf is a member of the InterAcademy Council (IAC), which draws on the resources of all the Academies that are members of the IAP in order to produce authoritative reports on major issues for governments and international bodies such as the World Bank and United Nations. The ASSAf has over 200 members who have been elected on the basis of significant achievement in the advancement or the application of Science. The members are drawn from the full range of disciplines, including the applied natural sciences and technology as well as the human, social and economic sciences. The Academy is taking a place in South Africa's science system as an independent, merit-based, 'activist' body committed to assisting the nation to find science-based solutions for its problems and to create science-based opportunities for growth and prosperity.



OFFICIAL OVERSEAS VISITS UNDERTAKEN:

Mosibudi Mangena: 29 April 2004 until 31 March 2005

Visit to Kenya: 9 – 12 August 2004

Signed Science and Technology Cooperation (bilateral)

Visit to Poland & Romania: 11 – 16 September 2004

Signed Science and Technology Agreement - Poland. Accompanied Deputy President to Romania

Visit to Netherlands and Belgium: 15 – 17 November 2004

Participated in "IST 2004" Conference – Netherlands. Accompanied the President on State visit to Brussels

Visit to the United Kingdom: 29 January – 2 February 2005

Participated in & addressed Conference: "Building S&T capacity with Africa Partners"

Visit to Belgium: 14 – 18 February 2005

Addressed sessions at 3rd Earth Observation Summit and International Space Conference

Visit to Namibia: 7 – 9 March 2005

Signed Science and Technology Agreement (bilateral)



Report of the Accounting Officer

for the year ended 31 March 2005

Report by the Accounting Officer to the Executive Authority and Parliament of the Republic of South Africa.

1. General review of the state of financial affairs

The Department of Science and Technology seeks to realise the full potential of science and technology in social and economic development, through the development of human resources, research and innovation.

The Department has two major foci from the budget resource allocation point of view. The first, the resource allocation, entails the management of the Science Vote process leading to the science councils reporting to the Department, as well as those reporting to other departments. The second is the Department's own operational budget which is deployed in programmes tailored to address 'market failures' in the National System of Innovation.

Changes to key objectives /programmes

- Programme 1: Administration
- Programme 2: Technology for Development
- Programme 3: International Cooperation and Resources
- Programme 4: Government Science and Technology System
- Programme 5: Science and Technology for Competitiveness

Expenditure trends

The Department's expenditure of voted funds was 99,9% of the approved budget of R1 282 billion, in comparison with expenditure of 99,8% in the previous year. Expenditure on transfer payments increased from R929 198 million in 2003/04 to R1 149 billion in 2004/05. The table below gives a summary of the expenditure by budget reconciliation and the economic classification.





Budget reconciliation

	2004/2005 R'000
Amount voted	1 282 412
Actual expenditure	1 282 224
Surplus	188

Economic classification

	2004/2005 R'000
Current expenditure	124 813
Transfers and subsidies	1 149 122
Payments for capital assets	8 289
Total	1 282 224

Spending on transfer payments (90%) dominated the DST's Vote.

2. Services rendered by the Department

The Department does not provide any services to any institutions or persons on a recoverable basis.

3. Capacity constraints

During 2004 the Department lost two of its key employees; the Head of Legal Service (Director) and the Group Executive (Deputy Director General) of Programme 2, Technology for Development programme. To address the vacuum left by these employees and to ensure service delivery, a consultant was temporarily hired to head the Legal Service from the personnel expenditure that would have been utilised for this position. The post of the Group Executive



was left vacant because during 2004 the Department was reorganised, and the GE for this programme would therefore head a totally new programme that would require a different set of skills. A recruitment drive has been embarked upon to alleviate this problem.

4. Public entities

The following public entities were funded by the Department during the 2004/05 financial year, and the following amounts were appropriated to them:

Human Sciences Research Council (R83,3 million)

The Human Sciences Research Council (HSRC) supports development in South Africa and Africa by conducting applied social science research projects and coordinating research in terms of the Human Sciences Research Act (23 of 1968). The HSRC has aligned its research structures and activities with major development priorities, with focal areas covering: technology and education; democracy and governance; integrated rural and regional development; and the social aspects of HIV and Aids and health. The HSRC has made significant contributions to the debate on the impact of public sector programmes on poverty, playing a leading role in research for the Presidency's review of the last 10 years, amongst other important national research programmes.

National Research Foundation (R457,8 million)

As the government's national agency responsible for promoting and supporting research, the National Research Foundation (NRF), established in terms of the National Research Foundation Act (23 of 1998), aims to uphold excellence in its investments in knowledge, people, and infrastructure. The Foundation's task is to advance research in all fields of the humanities, the social and natural sciences, engineering, and technology. Since its establishment the NRF has successfully addressed many of its research and development strategy imperatives, which include science awareness and outreach, student support, scarce skills development and the creation of centres of excellence.

Africa Institute of South Africa (R16,3 million)

The Africa Institute of South Africa (AISA) is a statutory body that carries out in-depth analysis of Africa's current affairs and gathers intelligence on the future of Africa, the AU and NEPAD. It focuses primarily on political, socio-economic, international and development issues in contemporary Africa, and contributes to the goals of the national system of innovation because its research programmes have an impact on knowledge generation and human resource development.





Godisa Trust (R24,0 million)

Godisa is a Tswana word meaning growth through nurturing. The Trust's initiatives are co-financed by funding streams from the Department, the Department of Trade and Industry and the European Union. Godisa's development programme supports new (0 to 3 years old) SMMEs in achieving a competitive market position. By enhancing the competitiveness, productivity and sustainability of SMMEs, Godisa aims to promote long-term employment, economic growth and sustainable development. In June 2004, the Godisa Trust was listed as a public entity by National Treasury.

Tshumisano Trust (R18,0 million)

The Department has identified technological innovation and related skills upgrading as being of vital importance to the competitiveness of South African SMMEs. Tshumisano operates the technology stations programme with funding from the Department and the Gesellschaft für Technische Zusammenarbeit (GTZ). Technology stations are developed at technikons to service SMMEs, and also to improve market responsiveness in technikon programmes.

Academy of Science of South Africa (R2,5 million)

The Academy of Science of South Africa Act (67 of 2001) provides for the establishment of the Academy of Science of South Africa (ASSAf). Its objectives are: to promote common ground for scientific thinking across all disciplines; to encourage and promote innovative and independent scientific thinking; to promote the optimum development of the intellectual capacity of all people; and to link South Africa with scientific communities at the highest levels, in particular in Africa. The academy publishes scientific reports, investigates matters of public interest concerning science, and manages South African research journals.

National Energy Research Institute (R9,8 million)

The establishment of the National Energy Research Institute (NERI) is a joint mandate with the Department of Minerals and Energy. NERI's main focus is to build research capacity through funding research at universities and in science councils. In June 2004, Cabinet approved the governance model for NERI as a subsidiary of CEF (Pty) Ltd.

5. Other organisations to which transfer payments were made

The Department supports and promotes projects that aim to promote science and technology as well as addressing 'market failure' in the National System of Innovation. To accomplish this, the Department makes ad-hoc transfer payments to institutions, boards, communities or other public bodies. Various programme managers in their respective units evaluate project proposals received from various role-players and enter into an agreement with the parties by signing a memorandum of agreement once the decision has been made to fund a particular project. The following are



programmes and organisations that were funded by the Department; the purpose of the funding is explained in detail in the section: Programme Performance, of which these form a part:

Programme 2: Technology for Development

	Amount R'000
Transfer	
National Public Assets	35 000
Indigenous Knowledge System (IKS)	8 536
Technology Planning and Diffusion	5 900
Technology for Poverty Alleviation	24 185
Poverty Relief Programme	44 620
Learnerships	4 000
Total	122 241

Programme 3: International Cooperation and Resources

	Amount R'000
Transfer	
Global Science	5 411
Total	5 411





Programme 5: Science and Technology for Competitiveness

Transfer	Amount R'000
Biotechnology Strategy	124 549
Information and Communication Technology (ICT)	9 163
Natural Resources	10 020
Advanced Manufacturing	20 293
Innovation Fund	171 310
South African Aids Vaccine Initiative	15 000
Public Science and Youth	8 600
Centres of Excellence	2 500
Science Themes	19 104
Grant-in-aid	9 825
National Laser Centre	18 000
Total	408 364

6. Corporate Governance Arrangements

Resolution of the past financial year—matter of emphasis

The Department's audit report drew management's attention to Treasury Regulations, section 26, which deals with the responsibility of designated accounting officers over Schedule 3A and 3C public entities. Within 30 days of the end of each quarter, the Accounting Officer, through the office of the CFO, ensures that the Department's Schedule 3A Public Entities submit information on their actual revenue and expenditure up to the end of that quarter, as well as a projection of expected expenditure and revenue for the remainder of the financial year.



Risk Management/Fraud Prevention Policy

A risk assessment was done during the 2003/04 financial year by the Internal Auditors, SizweNtsaluba, VSP. Top Management (EXCO) took responsibility for managing the risks and during the course of the 2004/05 financial year it was determined that the risks for the Department did not vary greatly from those of 2003/04, and it was concluded that there were no serious operational risks for 2004/05. The Internal Audit Plan was therefore developed based on the risks assessed, and added to the performance audit of the science institutions. A policy on Whistle Blowing was approved by the Audit Committee.

Materiality Framework and Significance

Although this document is prescribed by both the PFMA and the Treasury Regulations for Public Entities only, the Department decided to adopt this document on the basis of good business practice. The Audit Committee supported the Department by approving this important document and it is now in operation.

Management process to minimise conflict of interest

The following are the measures that are put in place to reduce conflict of interest:

- i) All Senior Managers (i.e. SMS members) are required to complete a Disclosure of Information Form on appointment
- ii) Furthermore, the same members are required on an annual basis to declare their financial interest in terms of partnerships, directorships, etc.
- iii) All members of the Department Tender Committee and the Evaluation Team are required to complete a declaration of interest form before the evaluation or awarding of a tender.

Audit Committee

In order to comply with the Public Finance Management Act (PFMA of 1999), and the Treasury Regulations, the Department established an Audit Committee which meets four times a year. The chairperson of the Committee is Mr S Kajee, a Director at KPMG. The following are the members of the Department's Audit Committee:

Member	Institution	Position
Dr RM Adam	Department of Science and Technology	Director General
Mr SAH Kajee	Director of KPMG	Chairperson
Prof D Fourie	University of Pretoria: Public Admin	Professor
Mr M Gantsho	Gaming for Future	Executive Chairperson

New strategies

In its first 10 years, the previous Department of Arts, Culture, Science and Technology set up key enabling policies, informed by the national system of innovation (NSI). These form the basis of the current sector-specific strategies in biotechnology, advanced manufacturing technology and IT road-mapping adopted by Cabinet. The Department continues to develop strategies in new areas of knowledge and technology. During 2004, strategies for indigenous knowledge, nanotechnology, astronomy and intellectual property derived from publicly funded research have been developed.

A new strategic management framework

The Department and the innovation environment face many challenges. These include the large drop in spending on research and development in both the public and private sectors, inadequate intellectual property legislation and infrastructure, and fragmented governance structures for research institutions. To address these issues, the Department developed a new strategic management framework, which was approved by Cabinet in October 2004. The new framework classifies the technology-related services and research and development activities supported by government into three basic types:

- Early stage or highly cross-sectoral generic technology and associated human resources, for which the Department takes responsibility;
- Focused, sectoral and relatively mature technology domains, which are primarily the responsibility of sector-specific departments, with the Department's assistance;
- Standard technology-based services, for which sector-specific departments take responsibility.

The new strategic framework and the change in approach to the publicly funded portion of South Africa's science and technology system have led to a number of concrete organisational and operational changes, the final results of which have culminated in the restructuring of the Department's relevant programmes.

10. Other activities

Performance audit

During the financial year 2004/05 the Department commissioned the Internal Audit Unit to conduct performance audits at the Innovation Fund Trust and Godisa. Other areas will be targeted in the new financial year. Unlike a financial audit, which measures the financial health of an institution at a specific point in time and is done on a yearly basis, a performance



Report of the Auditor-General to Parliament on the Financial Statements of Vote 18

Department of Science and Technology for the Year ended 31 March 2005

1. Audit assignment

The financial statements as set out on pages 70 to 146 for the year ended 31 March 2005 have been audited in terms of section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), read with sections 4 and 20 of the Public Audit Act, 2004 (Act No. 25 of 2004). These financial statements, the maintenance of effective control measures and compliance with relevant laws and regulations are the responsibility of the accounting officer. My responsibility is to express an opinion on these financial statements, based on the audit.

2. Nature and scope

The audit was conducted in accordance with Statements of South African Auditing Standards. Those standards require that I plan and perform the audit to obtain reasonable assurance that the financial statements are free of material misstatement.

An audit includes:

- examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements,
- assessing the accounting principles used and significant estimates made by management, and
- evaluating the overall financial statement presentation.

Furthermore, an audit includes an examination, on a test basis, of evidence supporting compliance in all material respects with the relevant laws and regulations, which came to my attention and are applicable to financial matters.

The audit was completed in accordance with Auditor-General Directive No. 1 of 2005.

I believe that the audit provides a reasonable basis for my opinion.

3. Audit opinion

In my opinion, the financial statements fairly present, in all material respects, the financial position of the department of Science and Technology at 31 March 2005 and the results of its operations and cash flow for the year then ended in accordance with prescribed accounting practice and in the manner required by the Public Finance Management Act, 1999 (Act No. 1 of 1999)



Audit Committee's Report

for the year ended 31 March 2005

Report of the Audit Committee

We are pleased to present our report for the financial year ended 31 March 2005.

Audit Committee members and attendance:

The Audit Committee consists of the members listed hereunder and meets at least two times per annum in terms of its approved terms of reference. During the current year four meetings were held.

Name of member	Number of meetings attended
Mr SAH Kajee (Chairperson)	4
Dr RM Adam (Accounting Officer)	4
Dr JM Stewart	3
Mr M Gantsho	3
Prof D Fourie	2

Audit Committee responsibility

The Audit Committee reports that it has complied with its responsibilities arising from section 38 (1)(a) of the PFMA and Treasury Regulation 3.1.13. The Audit Committee also reports that it has adopted appropriate formal terms of reference according to its Audit Committee Charter, and has regulated its affairs in compliance with the charter and discharged all its responsibilities as contained therein.

The effectiveness of internal control

The reports of the Auditor-General read together with the management letter, as well as the reports of the internal audit function have identified certain internal control deficiencies. This committee will monitor management's efforts to rectify these. However, the committee is satisfied that systems of internal control over the major financial risks are effective.



Accounting Policies

for the year ended 31 March 2005

The Annual Financial Statements have been prepared in accordance with the following policies, which have been applied consistently in all material aspects, unless otherwise indicated. However, where appropriate and meaningful, additional information has been disclosed to enhance the usefulness of the Annual Financial Statements and to comply with the statutory requirements of the Public Finance Management Act, Act 1 of 1999 (as amended by Act 29 of 1999), the Treasury Regulations for Departments and Constitutional Institutions issued in terms of the Act and the Division of Revenue Act, Act 5 of 2004. The following issued, but not yet effective Standards of Generally Recognised Accounting Practice have not been fully complied with in the Annual Financial Statements: GRAP 1, 2 and 3.

1. Basis of preparation

The Annual Financial Statements have been prepared on a modified cash basis of accounting, except where stated otherwise. The modified cash basis constitutes the cash basis of accounting supplemented with additional disclosure items. Under the cash basis of accounting transactions and other events are recognised when cash is received or paid. Under the accrual basis of accounting transactions and other events are recognised when incurred and not when cash is received or paid.

2. Revenue

Appropriated funds

Voted funds are the amounts appropriated to a department in accordance with the final budget known as the Adjusted Estimates of National/Provincial Expenditure. Unexpended voted funds are surrendered to the National/Provincial Revenue Fund, unless otherwise stated.

Departmental revenue

Tax revenue

A tax receipt is defined as compulsory, irrecoverable revenue collected by entities. Tax receipts are recognised as revenue in the statement of financial performance on receipt of the funds.

Sale of goods and services other than capital assets

This comprises the proceeds from the sale of goods and/or services produced by the entity. Revenue is recognised in the statement of financial performance on receipt of the funds.





Fines, penalties and forfeits

Fines, penalties and forfeits are compulsory receipts imposed by a court or quasi-judicial body. Revenue is recognised in the statement of financial performance on receipt of the funds.

Interest, dividends and rent on land

Interest and dividends received are recognised upon receipt of the funds, and no provision is made for interest or dividends receivable from the last receipt date to the end of the reporting period. They are recognised as revenue in the Statement of Financial Performance of the DST and then transferred to the National/Provincial Revenue Fund. Revenue received from the rent of land is recognised in the statement of financial performance on receipt of the funds.

Sale of capital assets

The proceeds from the sale of capital assets is recognised as revenue in the statement of financial performance on receipt of the funds.

Financial transactions in assets and liabilities

Repayments of loans and advances previously extended to employees and public corporations for policy purposes are recognised as revenue in the statement of financial performance on receipt of the funds.

Cheques issued in previous accounting periods that expire before being banked are recognised as revenue in the statement of financial performance when the cheque becomes stale. When the cheque is reissued the payment is made from Revenue.

Local and foreign aid assistance

Local and foreign aid assistance is recognised in the statement of financial performance on receipt of funds. Where amounts are expensed before funds are received, a receivable is raised. Where amounts have been inappropriately expensed using Local and Foreign aid assistance, a payable is raised. In the situation where the DST is allowed to retain surplus funds, these funds are shown as a reserve.

3. Expenditure

Compensation of employees

Salaries and wages comprise payments to employees. Salaries and wages are recognised as an expense in the statement of financial performance when the final authorisation for payment is effected on the system. The expenditure is classified



as capital where the employees were involved, on a full-time basis, on capital projects during the financial year. All other payments are classified as current expense.

Social contributions include the entities' contribution to social insurance schemes paid on behalf of the employee. Social contributions are recognised as an expense in the Statement of Financial Performance when the final authorisation for payment is effected on the system.

Short-term employee benefits

The cost of short-term employee benefits is expensed in the Statement of Financial Performance in the reporting period when the final authorisation for payment is effected on the system. Short-term employee benefits that give rise to a present legal or constructive obligation are disclosed as a disclosure note to the Annual Financial Statements and are not recognised in the Statement of Financial Performance.

Long-term employee benefits and other post employment benefits

Termination benefits

Termination benefits are recognised and expensed only when the final authorisation for payment is effected on the system.

Medical benefits

The DST provides medical benefits for its employees through defined benefit plans. Employer contributions to the fund are incurred when the final authorisation for payment is effected on the system. No provision is made for medical benefits in the Annual Financial Statements of the DST.

Post employment retirement benefits

The DST provides retirement benefits for certain of its employees through a defined benefit plan for government employees. These benefits are funded by both employer and employee contributions. Employer contributions to the fund are expensed when the final authorisation for payment to the fund is effected on the system. No provision is made for retirement benefits in the Annual Financial Statements of the DST. Any potential liabilities are disclosed in the Annual Financial Statements of the National/Provincial Revenue Fund and not in the Annual Financial Statements of the employer department.



Other employee benefits

Obligations arising from leave entitlement, thirteenth cheque and performance bonus that are reflected in the disclosure notes have not been paid for at year-end.

Goods and services

Payments made for goods and/or services are recognised as an expense in the Statement of Financial Performance when the final authorisation for payment is effected on the system. The expense is classified as capital if the goods and services were used on a capital project.

Interest and rent on land

Interest and rental payments resulting from the use of land are recognised as an expense in the Statement of Financial Performance when the final authorisation for payment is effected on the system. This item excludes rental on the use of buildings or other fixed structures.

Financial transactions in assets and liabilities

Financial transactions in assets and liabilities include bad debts written off. Debts are written off when identified as irrecoverable. Debts written-off are limited to the amount of savings and/or under spending available to the DST. The write-off occurs at year-end or when funds are available. No provision is made for irrecoverable amounts.

4. Transfers and subsidies

Transfers and subsidies include all irrecoverable payments made by the entity. Transfers and subsidies are recognised as an expense when the final authorisation for payment is effected on the system.

5. Expenditure for capital assets

Capital assets are assets that can be used repeatedly and continuously in production for more than one year. Payments made for capital assets are recognised as an expense in the Statement of Financial Performance when the final authorisation for payment is effected on the system.

6. Receivables

Receivables are not normally recognised under the modified cash basis of accounting. However, receivables included in the Statement of Financial Position arise from cash payments that are recoverable from another party, when the payments are made.



Receivables for services delivered are not recognised in the Statement of Financial Position as a current asset or as income in the Statement of Financial Performance, as the Annual Financial Statements are prepared on a modified cash basis of accounting, but are disclosed separately as part of the disclosure notes to enhance the usefulness of the Annual Financial Statements.

7. Cash and cash equivalents

Cash and cash equivalents consists of cash on hand and balances with banks, short term investments in money market instruments and demand deposits. Cash equivalents are short term, highly liquid investments that are readily convertible to known amounts of cash and that are subject to an insignificant risk of changes in value.

8. Payables

Payables are not normally recognised under the modified cash basis of accounting. However, payables included in the Statement of Financial Position arise from advances received that are due to the Provincial/National Revenue Fund or another party.

9. Lease commitments

Lease commitments for the period remaining from the reporting date until the end of the lease contract are disclosed as part of the disclosure notes to the Annual Financial Statements. These commitments are not recognised in the Statement of Financial Position as a liability or as expenditure in the Statement of Financial Performance as the Annual Financial Statements are prepared on the cash basis of accounting. Operating lease expenditure is expensed when the payment is made.

Finance lease expenditure is expensed when the payment is made, but results in the acquisition of the asset under the lease agreement. A finance lease is not allowed in terms of the Public Finance Management Act.

10. Accruals

This amount represents goods/services that have been received, but no for which invoice has been received from the supplier at the reporting date, OR an invoice for which has been received but final authorisation for payment has not been effected on the system. These amounts are not recognised in the Statement of Financial Position as a liability or as expenditure in the Statement of Financial Performance as the Annual Financial Statements are prepared on a modified cash basis of accounting, but are however disclosed as part of the disclosure notes.



11. Contingent liability

This 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 wholly within the control of the DST; or

a present obligation that arises from past events but is not recognised because:

- it is not probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation; or
- the amount of the obligation cannot be measured with sufficient reliability

Contingent liabilities are not recognised in the Statement of Financial position, but the information is disclosed as part of the disclosure notes.

12. Commitments

This amount represents goods/services that have been approved and/or contracted, but no delivery has taken place at the reporting date. These amounts are not recognised in the Statement of financial position as a liability or as expenditure in the Statement of Financial Performance as the Annual Financial Statements are prepared on a modified cash basis of accounting, but are however disclosed as part of the disclosure notes.

13. Recoverable revenue

Recoverable revenue represents payments made and recognised in the Statement of Financial Performance as an expense in previous years, which have now, due to non-performance in accordance with an agreement, which have now become recoverable from a debtor. Repayments are transferred to the Revenue Fund as and when the repayment is received.

14. Comparative figures

Where necessary, comparative figures have been restated to conform to the changes in the presentation in the current year. The comparative figures shown in these Annual Financial Statements are limited to the figures shown in the previous year's audited Annual Financial Statements and such other comparative figures that the DST may reasonably have available for reporting. Reclassification of expenditure has occurred due to the implementation of the Standard Chart of Accounts. It is not practical to present comparative amounts in the Cash Flow Statements as this would involve reclassification of amounts dating back to the 2002/03 year-end.



Appropriation Statement

for the year ended 31 March 2005

Appropriation per Programme

	2004/05							2003/04	
	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. Administration									
Current payment	64 690	(956)	(3 153)	60 581	55 986	4 595	92.4	51 688	51 593
Transfers and subsidies	77	61	-	138	138	-	100.0	-	-
Expenditure for capital assets	354	895	-	1 249	5 803	(4 554)	464.6	1 590	1 590
2. Technology for Development									
Current payment	15 186	18	(2 254)	12 950	13 396	(446)	103.4	10 260	10 210
Transfers and subsidies	249 466	(18)	(938)	248 510	247 680	830	99.7	190 013	190 012
Expenditure for capital assets	145	-	-	145	487	(342)	335.9	274	275



Appropriation Statement

for the year ended 31 March 2005

Appropriation per Programme (continued)

	2004/05							2003/04	
	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. Science and Technology for Competitiveness									
Current payment	16 195	-	1 682	17 877	18 089	(212)	101.2	9 349	10 291
Transfers & subsidies	873 724	-	2 957	876 681	876 078	603	99.9	718 784	717 283
Expenditure capital assets	192	-	-	192	511	(319)	266.1	1 235	246
Subtotal	1 282 412	-	-	1 282 412	1 282 224	188	99.99	1 037 795	1 036 058
Statutory Appropriation									
Current payments	-	-	-	-	-	-	-	-	-
Transfers & subsidies	-	-	-	-	-	-	-	-	-
Payment for capital assets	-	-	-	-	-	-	-	-	-
Total	1 282 412	-	-	1 282 412	1 282 224	188	99.99	1 037 795	1 036 058

Appropriation Statement

for the year ended 31 March 2005

Appropriation per Programme (continued)

	2004/05							2003/04	
	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
Prior year fruitless and wasteful expenditure condoned					-	-	-	-	-
Actual amounts per Statement of Financial Performance Expenditure					1 286 984	-	-	-	1 037 074



Appropriation Statement

for the year ended 31 March 2005

Appropriation Statement per Economic Classification (continued)

	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Departmental agencies & accounts	1 009 207	(276 116)	(938)	732 153	730 448	1 705	99.8	538 974	537 473
Universities & technikons	3 000	13 288	-	16 288	16 289	(1)	100.0	8 418	8 418
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-
Public corporations & private enterprises	-	121 860	1 001	122 861	122 858	3	100.0	34 828	34 827
Non-profit institutions	125 000	139 346	-	264 346	263 526	820	99.7	344 363	344 363
Households	9 700	(1 626)	-	8 074	7 900	174	97.8	4 117	4 117

Appropriation Statement

for the year ended 31 March 2005

Statutory Appropriation

Direct charge against National Revenue Fund	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
List all direct charges against the Revenue Fund	-	-	-	-	-	-	-	-	-
President and Deputy President salaries	-	-	-	-	-	-	-	-	-
Minister and deputy ministers salaries	-	-	-	-	-	-	-	-	-
Member of executive committee/ parliamentary officers	-	-	-	-	-	-	-	-	-
Judges salaries	-	-	-	-	-	-	-	-	-

Detail per programme 1 - Administration

for the year ended 31 March 2005

Programme per subprogramme	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
1.1 Minister									
Current payment	791	22		813	813	-	100.0	767	792
Transfers and subsidies	-	-	-	-	-	-	-	-	-
Expenditure for capital assets	-	-	-	-	-	-	-	-	-
1.2 Deputy Minister									
Current payment	643	137		780	780	-	100.0	619	616
Transfers and subsidies	-	-	-	-	-	-	-	-	-
Expenditure for capital assets	-	-	-	-	-	-	-	-	-

Detail per programme 1 - Administration (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Current payments									
Compensation to employees	27 528	(175)	(3 153)	24 200	24 182	18	99.9	21 875	21 845
Goods and services	37 162	(781)	-	36 381	31 609	4 772	86.9	29 490	29 425
Interest and rent on land	-	-	-	-	-	-	-	-	-
Financial transactions in assets and liabilities	-	-	-	-	195	(195)	-	257	257
Transfers & subsidies									
Provinces & municipalities	77	-	-	77	72	5	93.5	61	61
Departmental agencies & accounts	-	-	-	-	-	-	-	-	-
Universities & technikons	-	-	-	-	-	-	-	-	-
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-





Detail per programme 1 - Administration (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Public corporations & private enterprises	-	-	-	-	-	-	-	-	-
Non-profit institutions	-	18	--	18	-	18	-	-	-
Households	-	-	-	-	-	-	-	-	-
Gifts and donations	-	43	-	43	66	(23)	153.5	5	5
Payments for capital assets									
Buildings & other fixed structures	-	-	-	-	-	-	-	-	-
Machinery & equipment	354	895	-	1 249	5 803	(4 554)	464.6	1 590	1 590
Biological or cultivated assets	-	-	-	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-	-
Land & subsoil assets	-	-	-	-	-	-	-	-	-
Total	65 121	-	(3 153)	61 968	61 927	41	99.93	53 278	53 183



Detail per programme 2 - Technology for Development

for the year ended 31 March 2005

Programme per subprogramme	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
2.1 Technology Transfer									
Current payment	2 383	9 221	(2 254)	9 350	9 326	24	99.7	9 509	6 690
Transfers and subsidies	102 630	(6 500)	(350)	95 780	95 527	253	99.7	88 718	88 718
Expenditure for capital assets	100	-	-	100	368	(268)	368.0	175	175
2.2 Poverty Reduction									
Current payment	12 803	(9 203)		3 600	4 070	(470)	113.1	751	3 520
Transfers and subsidies	146 836	6 482	(588)	152 730	152 153	577	99.6	101 295	101 294
Expenditure for capital assets	45	-	-	45	119	(74)	264.4	99	100
Total	264 797	-	(3 192)	261 605	261 563	42	99.98	200 547	200 497

Detail per programme 2 - Technology for Development (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-
Public corporations & private enterprises	-	43 927	-	43 927	43 927	-	100.0	22 104	22 103
Non-profit institutions	-	55 295	-	55 295	54 493	802	98.5	43 415	43 415
Households	9 700	(1 788)	-	7 912	7 900	12	99.8	3 862	3 862
Gifts and donations	-	82	-	82	82	-	100.0	16	16
Capital									
Buildings & other fixed structures	-	-	-	-	-	-	-	-	-
Machinery & equipment	145	-	-	145	487	(342)	335.9	274	274
Biological or Cultivated assets	-	-	-	-	-	-	-	-	-



Detail per programme 2 - Technology for Development (continued)
for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Software & other intangible assets	-	-	-	-	-	-	-	-	-
Land & subsoil assets	-	-	-	-	-	-	-	-	-
Total	264 797	-	(3 192)	261 605	261 563	42	99.98	200 547	200 497



Detail per programme 3 - International Co-operation and Resources

for the year ended 31 March 2005

Programme per subprogramme	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
3.1 International Co-operation									
Current payment	18 606	(2 068)	-	16 538	15 955	583	96.5	15 056	15 731
Transfers and subsidies	21 325	(498)	1 001	21 828	21 828	-	100.0	19 614	19 614
Expenditure for capital assets	100	-	-	100	673	(573)	673.0	298	299
3.2 International Resources									
Current payment	6 105	1 629	-	7 734	7 534	200	97.4	5 457	4 754
Transfers and subsidies	-	937	-	937	869	68	92.7	-	-
Expenditure for capital assets	50	-	-	50	312	(262)	624.0	110	110
Total	46 186	-	1 001	47 187	47 171	16	99.97	40 535	40 508

Detail per programme 3 - International Co-operation and Resources (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Current									
Compensation to employees	10 361	(530)	-	9 831	9 818	13	99.9	7 909	7 899
Goods and services	14 350	91	-	14 441	13 671	770	94.7	12 470	12 452
Interest and rent on land	-	-	-	-	-	-	-	-	-
Financial transactions in assets and liabilities	-	-	-	-	-	-	-	-	-
Transfers & subsidies									
Provinces & municipalities	35	-	-	35	28	7	80.0	23	23

Detail per programme 3 - International Co-operation and Resources (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Dept agencies & accounts	21 290	(4 010)	-	17 280	16 340	940	94.6	16 172	16 172
Universities & Technikons	-	1 576	-	1 576	1 576	-	100.0	594	594
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-
Public corporations & private enterprises	-	2 619	1 001	3 620	3 617	3	99.9	2 778	2 778
Non-profit institutions	-	204	-	204	204	-	100.0	70	70
Households	-	50	-	50	-	50	-	-	-
Gifts and donations	-	-	-	-	932	(932)	-	111	111



Detail per programme 3 - International Co-operation and Resources (continued)

for the year ended 31 March 2005

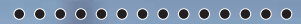
Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Capital									
Buildings & other fixed structures	-	-	-	-	-	-	-	-	-
Machinery & equipment	150	-	-	150	985	(835)	656.7	408	409
Biological or Cultivated assets	-	-	-	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-	-
Land & subsoil assets	-	-	-	-	-	-	-	-	-
Total	46 186	-	1 001	47 187	47 171	16	99.97	40 535	40 508



Detail per programme 4 - Government Science and Technology System

for the year ended 31 March 2005

Programme per subprogramme	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
4.1 Funding of Public Research Institutions									
Current payment	6 239	239	705	7 183	6 999	184	97.4	4 438	4 409
Transfers and subsidies	2 522	-	-	2 522	2 516	6	99.8	2 290	2 290
Expenditure for capital assets	100	-	-	100	283	(183)	283.0	15	15
4.2 Internal Governance									
Current payment	7 249	(239)	-	7 010	6 854	156	97.8	6 677	6 689
Transfers and subsidies	13	-	-	13	13	-	100.0	-	-
Expenditure for capital assets	74	-	-	74	220	(146)	297.3	647	647
Total	16 197	-	705	16 902	16 885	17	99.90	14 067	14 050



Detail per programme 4 - Government Science and Technology System (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Current									
Compensation to employees	10 758	(1 020)	-	9 738	9 725	13	99.9	6 171	6 163
Goods and services	2 730	1 020	705	4 455	4 116	339	92.4	4 901	4 892
Interest and rent on land	-	-	-	-	-	-	-	-	-
Financial transactions in assets and liabilities	-	-	-	-	12	(12)	-	25	25
Transfers & subsidies									
Provinces & municipalities	35	-	-	35	29	6	82.9	17	17
Dept agencies & accounts	2 500	(2 500)	-	-	-	-	-	2 290	2 290
Universities & Technikons	-	-	-	-	-	-	-	-	-



Detail per programme 4 - Government Science and Technology System (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-
Public corporations & private enterprises	-	-	-	-	-	-	-	-	-
Non-profit institutions	-	2 500	-	2 500	2 500	-	100.0	-	-
Households	-	-	-	-	-	-	-	-	-
Gifts and donations	-	-	-	-	-	-	-	1	1
Capital									
Buildings & other fixed structures	-	-	-	-	-	-	-	-	-
Machinery & equipment	174	-	-	174	503	(329)	289.1	662	662
Biological or Cultivated assets	-	-	-	-	-	-	-	-	-

Detail per programme 4 - Government Science and Technology System (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Software & other intangible assets	-	-	-	-	-	-	-	-	-
Land & subsoil assets	-	-	-	-	-	-	-	-	-
Total	16 197	-	705	16 902	16 885	17	99.90	14 067	14 050



Detail per programme 5 - Science and Technology for Competitiveness

for the year ended 31 March 2005

Programme per subprogramme	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
5.1 Technology Missions									
Current payment	5 641	-	4 481	10 122	10 140	(18)	100.2	5 973	5 994
Transfers and subsidies	379 333	-	(923)	378 410	378 133	277	99.9	303 877	303 877
Expenditure for capital assets	92	-	-	92	294	(202)	319.6	82	82
5.2 Science Missions and Human Capital									
Current payment	10 554	-	(2 799)	7 755	7 949	(194)	102.5	3 376	4 297
Transfers and subsidies	494 391	-	3 880	498 271	497 945	326	99.9	414 907	413 406
Expenditure for capital assets	100	-	-	100	217	(117)	217.0	1 153	164
Total	890 111	-	4 639	894 750	894 678	72	99.99	729 368	727 820

Detail per programme 5 - Science and Technology for Competitiveness (continued)

for the year ended 31 March 2005

Economic classification	2004/05							2003/04	
	Adjusted Appropriation	Shifting of Funds	Virement	Final Appropriation	Actual Payment	Variance	Payment as % of final appropriation	Final Appropriation	Actual Payment
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000
Foreign governments & international organisations	-	-	-	-	-	-	-	-	-
Public corporations & private enterprises	-	75 314	-	75 314	75 314	-	100.0	9 946	9 946
Non-profit institutions	125 000	81 329	-	206 329	206 329	-	100.0	300 878	300 878
Households	-	112	-	112	-	112	-	255	255
Gifts and donations	-	-	-	-	289	(289)	-	329	329
Capital									
Buildings & other fixed structures	-	-	-	-	-	-	-	-	-
Machinery & equipment	192	-	-	192	511	(319)	266.1	1 235	246

Notes to the Appropriation Statement

for the year ended 31 March 2005

1. Detail of transfers and subsidies as per Appropriation Act (after Virement):
Detail of these transactions can be viewed in note 11 (Transfers and subsidies) and Annexure 1 (A-K) to the annual financial statements.
2. Detail of specifically and exclusively appropriated amounts voted (after Virement):
Detail of these transactions can be viewed in note 1 (Annual Appropriation) to the annual financial statements.
3. Detail on financial transactions in assets and liabilities
Detail of these transactions per programme can be viewed in note 8 (Details of special functions (theft and losses)) to the annual financial statements.
4. Explanations of material variances from Amounts Voted (after virement):
 - 4.1 Per programme:

	Voted Funds after virement	Actual Expenditure	R'000	%
Administration	61 968	61 927	41	0.07
Technology for Development	261 605	261 563	42	0.02
International Co-operation and Resources	47 187	47 171	16	0.03
Government Science and Technology System	16 902	16 885	17	0.10
Science and Technology for Competitiveness	894 750	894 678	72	0.01

(In the case of surpluses on programmes, a detailed explanation must be given as to whether it is as a result of savings or underspending.)

4.2 Per economic classification:	R'000
Current expenditure	
Compensation of employees	58 204
Goods and services	66 401
Financial transactions in assets and liabilities	208
Transfers and subsidies	
Provinces and municipalities	6 732
Departmental agencies and accounts	730 761
Universities and technikons	16 288
Public corporations and private enterprises	122 876
Foreign governments and international organisations	11
Non-profit institutions	263 526
Households	8 928
Payments for capital assets	
Machinery and Equipment	8 289

Statement of Financial Performance

for the year ended 31 March 2005

	Note	2004/05 R'000	2003/04 R'000
REVENUE			
Annual appropriation	1.	1 282 412	1 037 795
Departmental revenue	2.	302	270
Local and foreign aid assistance	3.	4 728	1 229
TOTAL REVENUE		<u>1 287 442</u>	<u>1 039 294</u>
EXPENDITURE			
<i>Current expenditure</i>			
Compensation of employees	4.	58 204	45 711
Goods and services	5.	66 401	57 096
Financial transactions in assets and liabilities	6.	208	282
Local and foreign aid assistance	3.	4 760	1 016
<i>Total current expenditure</i>		<u>129 573</u>	<u>104 105</u>
Transfers and subsidies	7.	1 149 122	929 788
<i>Expenditure for capital assets</i>			
Machinery and Equipment	8.	8 289	3 181
<i>Total expenditure for capital assets</i>		<u>8 289</u>	<u>3 181</u>
TOTAL EXPENDITURE		<u>1 286 984</u>	<u>1 037 074</u>

Statement of Financial Position

as at 31 March 2005

	Note	2004/05 R'000	2003/04 R'000
ASSETS			
<i>Current assets</i>		775	2 053
Cash and cash equivalents	9.	(129)	1 256
Prepayments and advances	10.	296	348
Receivables	11.	576	449
Local and foreign aid assistance receivable	3.	32	-
TOTAL ASSETS		<u>775</u>	<u>2 053</u>
LIABILITIES			
<i>Current liabilities</i>		770	2 048
Voted funds to be surrendered to the Revenue Fund	12.	188	1 737
Departmental revenue to be surrendered to the Revenue Fund	13.	21	81
Payables	14.	561	17
Local and foreign aid assistance unutilised	3.	-	213
TOTAL LIABILITIES		<u>770</u>	<u>2 048</u>
NET ASSETS		5	5
<i>Represented by:</i>			
Recoverable revenue		5	5
TOTAL		<u>5</u>	<u>5</u>

Statement of Changes in Net Assets

for the year ended 31 March 2005

	Note	2004/05 R'000	2003/04 R'000
<i>Capitalisation reserve</i>			
Opening balance		-	-
Transfers		-	-
Closing balance		<u>-</u>	<u>-</u>
<i>Recoverable revenue</i>			
Opening balance		5	12
Debts written off	6.6	-	-
Debts recovered (included in departmental receipts)		-	(7)
Debts raised		-	-
Prior year adjustment		-	-
Closing balance		<u>5</u>	<u>5</u>
TOTAL		<u>5</u>	<u>5</u>



Cash Flow Statement

for the year ended 31 March 2005

	Note	2004/05 R'000
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts		1 287 154
Annual appropriated funds received		1 282 412
Departmental revenue received		302
Local and foreign aid assistance received	3.	4 515
Net (increase)/decrease in working capital		(75)
Surrendered to Revenue Fund		(2 099)
Current payments		(129 029)
Transfers and subsidies paid		(1 149 122)
Net cash flow available from operating activities	15.	<u>6 904</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Payments for capital assets		<u>(8 289)</u>
Net cash flows from investing activities		<u>(8 289)</u>
Net increase/(decrease) in cash and cash equivalents		(1 385)
Cash and cash equivalents at beginning of period		<u>1 256</u>
Cash and cash equivalents at end of period		<u>(129)</u>



Notes to the Annual Financial Statements (continued)

<i>2.1 Financial transactions in assets and liabilities</i>	2004/05	2003/04
Nature of loss recovered	R'000	R'000
Cheques written back	-	1
Material losses recovered	-	-
Other	285	206
	<u>285</u>	<u>207</u>

3. Local and foreign aid assistance

<i>3.1 Assistance received in cash</i>	Opening			Closing
Name of donor and purpose	Balance	Revenue	Expenditure	balance
Foreign				
European Donor Funded Project (GODISA Programme)	213	4 515	4 760	(32)
	<u>213</u>	<u>4 515</u>	<u>4 760</u>	<u>(32)</u>
Local and foreign aid receivable			32	-
Local and foreign aid unutilised			-	213
Closing balance			<u>(32)</u>	<u>213</u>

4. Compensation of employees

<i>4.1 Salaries and wages</i>	2004/05	2003/04
	R'000	R'000
Basic salary	38 653	28 561
Performance award	1 434	774
Service Based	273	1 259

Notes to the Annual Financial Statements (continued)

	Note	2004/05 R'000	2003/04 R'000
Bank charges and card fees		90	77
Bursaries (employees)		306	49
Communication		4 131	4 340
Computer services		5 458	2 830
Consultants, contractors and special services		15 424	11 387
Courier and delivery services		341	216
Drivers licenses and permits		1	-
Entertainment		857	670
External audit fees	5.1	740	659
Equipment less than R5 000		2 040	5 313
Government motor transport		-	76
Honoraria (Voluntary workers)		7	-
Inventory	5.2	5 645	1 879
Legal fees		-	1
Maintenance, repair and running costs		30	480
Operating leases		674	3
Personnel agency fees		515	-





Notes to the Annual Financial Statements (continued)

	Note	2004/05 R'000	2003/04 R'000
Photographic services		787	-
Plant flowers and other decorations		89	-
Printing and publications		449	470
Resettlement costs		219	1 001
Subscriptions		527	-
Travel and subsistence	5.3	17 296	20 036
Venues and facilities		4 981	4 229
Protective, special clothing & uniforms		43	79
Training & staff development		-	288
Previous years unallocated items		-	46
		<u>66 401</u>	<u>57 096</u>

	2004/05 R'000	2003/04 R'000
<i>5.1 External audit fees</i>		
Regulatory audits	711	659
Performance audits	-	-
Other audits	29	-
Total external audit fees	<u>740</u>	<u>659</u>



Notes to the Annual Financial Statements (continued)

Notes to the Annual Financial Statements

for the year ended 31 March 2005

<i>5.2 Inventory</i>	2004/05	2003/04
	R'000	R'000
Domestic Consumables	603	82
Fuel, oil and gas	115	56
Other consumables	1	-
Parts and other maint mat	225	-
Stationery and Printing	4 701	1,741
Total Inventory	<u>5 645</u>	<u>1 879</u>

<i>5.3 Travel and subsistence</i>	2004/05	2003/04
	R'000	R'000
Local	9 605	9 663
Foreign	7 691	10 373
Total travel and subsistence	<u>17 296</u>	<u>20 036</u>

6. Financial transactions in assets and liabilities

	Note	2004/05	2003/04
		R'000	R'000
Other material losses written off	6.1	208	169
Debts written off	6.2	-	113
		<u>208</u>	<u>282</u>

Notes to the Annual Financial Statements (continued)

6.1 <i>Other material losses written off in Statement of Financial</i>	2004/05	2003/04
Performance	R'000	R'000
Nature of losses		
Damages to hired vehicles	22	169
Accidents with hired vehicles	186	-
	208	169
6.2 <i>Bad debts written off</i>	2004/05	2003/04
Nature of debts written off	R'000	R'000
Unauthorised expenditure: Mrs. NW Madikizela-Mandela		
	-	113
	-	113
6.3 <i>Details of theft and losses</i>	2004/05	2003/04
	R'000	R'000
Programme 1 Administration		
	10	144
Programme 4: Government Science and Technology System		
	12	25
Programme 5: Science and Technology for Competitiveness		
	2	-
Objective: Theft and Losses		
Programme 1: Administration		
	184	-
	208	169



Notes to the Annual Financial Statements (continued)

<i>Transfers and subsidies</i>	Note	2004/05 R'000	2003/04 R'000
Provinces and municipalities	ANNEXURE 1B & 1C	6 732	128
Departmental agencies and accounts	ANNEXURE 1D	730 448	537 473
Universities and technikons	ANNEXURE 1E	16 289	8 418
Public corporations and private enterprises	ANNEXURE 1F	122 858	34 827
Non-profit institutions	ANNEXURE 1H	263 526	344 363
Households	ANNEXURE 1I	7 900	4 117
Gifts and donations	ANNEXURE 1K	1 369	462
		<u>1 149 122</u>	<u>929 788</u>

8. Expenditure for capital assets

	Note	2004/05 R'000	2003/04 R'000
	ANNEXURE 4	<u>8 289</u>	<u>3 181</u>
Machinery and equipment		<u>8 289</u>	<u>3 181</u>
Total			
The following amount for Compensation of employees has been included in Expenditure for capital assets		<u>-</u>	<u>-</u>





Notes to the Annual Financial Statements (continued)

9. Cash and cash equivalents

	2004/05 R'000	2003/04 R'000
Consolidated Paymaster General Account	(159)	1 221
Cash on hand	30	35
	<u>(129)</u>	<u>1 256</u>

Prepayments and advances

Description	2004/05 R'000	2003/04 R'000
Staff advances	2	21
Travel and subsistence	294	327
	<u>296</u>	<u>348</u>

11. Receivables

	Note	2004/05			2003/04	
		Less than one year	One to three years	Older than three years	Total	Total
					R'000	R'000
Amounts owing by other entities	ANNEXURE 6	57			57	-
Staff debtors	11.1	6			6	48
Clearing accounts	11.2	405			405	299
Other debtors	11.3	108			108	102
		<u>576</u>	-	-	<u>576</u>	<u>449</u>



Notes to the Annual Financial Statements (continued)

<i>11.1 Staff debtors</i>	2004/05	2003/04
	R'000	R'000
Travel and subsistence debt	6	45
Salary overpayment	3	3
	<u>9</u>	<u>48</u>

<i>11.2 Clearing accounts</i>	2004/05	2003/04
	R'000	R'000
Persal salaries and stoppages	23	8
Claims recoverable	439	147
Claims recoverable: Theft and Losses	-	144
	<u>462</u>	<u>299</u>

<i>11.3 Other debtors</i>	2004/05	2003/04
Nature of advances	R'000	R'000
Previous employees and other persons		
Travel and subsistence debt	96	89
Bursary debt	-	2
Income tax debt	2	-
Salary overpayment	3	-
Leave without pay	4	-
Other debt	-	11
	<u>105</u>	<u>102</u>

Notes to the Annual Financial Statements (continued)

12. Voted Funds to be surrendered to the Revenue Fund

	2004/05	2003/04
	R'000	R'000
Opening balance	1 737	9 878
Transfer from Statement of Financial Performance	188	1 737
Voted funds not requested/not received	-	-
Paid during the year	(1 737)	(9 878)
Closing balance	<u>188</u>	<u>1 737</u>

13. Departmental revenue to be surrendered to revenue fund

	2004/05	2003/04
	R'000	R'000
Opening balance	81	(1 761)
Transfer from Statement of Financial Performance	302	270
Transfer from local and foreign aid assistance**	-	1 771
Paid during the year	(362)	(199)
Closing balance	<u>21</u>	<u>81</u>

** Amount not used at end of project which donors allow department to retain should be paid over to the Revenue Fund.



Notes to the Annual Financial Statements (continued)

14. Payables – current

Description	Note	2004/05		2003/04
		30 Days	30+ Days	Total
				R'000
				R'000
Amounts owing to				
other departments	ANNEXURE 7			-
Clearing accounts	14.1		561	17
		-	561	17

14.1 Clearing accounts

Description	2004/05	2003/04
	R'000	R'000
(Identify major categories, but list material amounts)		
Persal salaries and stoppages	20	17
Claims recoverable	541	-
	<u>561</u>	<u>17</u>

15. Reconciliation of net cash flow from operating activities

	2004/05
to surplus/(deficit)	R'000
Net surplus/(deficit) as per Statement of Financial Performance	458
Non-cash movements	

Notes to the Annual Financial Statements (continued)

	2004/05
	R'000
(Increase)/decrease in receivables – current	(127)
(Increase)/decrease in prepayments and advances	52
(Increase)/decrease in other current assets	(32)
(Increase)/decrease in other non-current assets	-
Increase/(decrease) in payables – current	544
Surrenders	(2 099)
Capital expenditure	8 289
Other non cash items	(181)
Net cash flow generated by operating activities	<u>6 904</u>

16. Appropriated funds and departmental revenue surrendered

	2004/05	2003/04
	Total	Total
Appropriated funds surrendered	1 737	9 878
Departmental revenue surrendered	81	199
	<u>1 818</u>	<u>10 077</u>

These amounts are not recognised in the financial statements and are disclosed to enhance the usefulness of the financial statements.

Disclosures Notes to the Annual Financial Statements

for the year ended 31 March 2005

	Note	2004/05 R'000	2003/04 R'000
17. Contingent liabilities			
Liable to	Nature		
Motor vehicle guarantees	Employees	ANNEXURE 3	-
Housing loan guarantees	Employees	ANNEXURE 3	642
Other departments (unconfirmed balances)		ANNEXURE 7	76
Capped Leave Commitments			2 027
		<u>2 362</u>	<u>2 027</u>
		<u>3 080</u>	<u>2 880</u>

18. Commitments

	2004/05 R'000	2003/04 R'000
Current expenditure		
Approved and contracted	1	-
Approved but not yet contracted		
	<u>1</u>	<u>-</u>
Capital expenditure		
Approved and contracted	45	-
Approved but not yet contracted		
	<u>45</u>	<u>-</u>
Total Commitments	<u>46</u>	<u>-</u>



19. Accruals

			2004/05 R'000	2003/04 R'000
<i>By economic classification</i>	30 Days	30+ Days	Total	Total
Compensation of employees	41	73	114	-
Goods and services	3 434	367	3 801	-
Machinery and Equipment	6		6	-
			<u>3 921</u>	<u>-</u>
<i>Listed by programme level</i>				
Programme 1: Administration			1 903	-
Programme 2: Technology for Development			990	-
Programme 3: International Co-operation and Resources			790	-
Programme 4: Government Science and Technology System			162	-
Programme 5: Science and Technology for Competitiveness			76	-
			<u>3 921</u>	<u>-</u>
Confirmed balances with other departments		ANNEXURE 7	5	-
			<u>5</u>	<u>-</u>

20. Employee benefits

	2004/05 R'000	2003/04 R'000
Leave entitlement	534	550
Thirteenth cheque	1 313	1 048
	<u>1 847</u>	<u>1 598</u>



Disclosures Notes to the Annual Financial Statements (continued)

21. Leases

		2004/05	2003/04
		R'000	R'000
21.1 <i>Operating leases</i>	Buildings & other fixed structures	Machinery and equipment	Total
		Total	Total
Not later than 1 year	-	1 245	1 245
Later than 1 year and not later than 3 years	-	1 108	1 108
Later than three years	-	8	8
Total present value of lease liabilities	-	2 361	2 361
		864	864

22. Related party transactions

No related party transactions took place during the period under review, other than transactions that occur within a normal supplier/client relationship on terms and conditions no more or less favourable than those which it is reasonable to expect the DST would have adopted if dealing with that Individual or entity at arm's length in the same circumstances.

23. Senior management personnel

	2004/05	2003/04
	R'000	R'000
The Minister, Deputy Ministers, Director-General	2 287	2 415
Deputy Director Generals	2, 593	1 754
Chief Financial Officer	430	400
	5 310	4 569

No other remuneration and compensation was provided to key management other than that included in the approved remuneration structures and no loans were granted.

ANNEXURE 1C

STATEMENT OF CONDITIONAL GRANTS PAID TO MUNICIPALITIES

Name of Municipality	GRANT ALLOCATION				TRANSFER		SPENT			2003/04
	Division of Revenue Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Funds Transferred	Amount received by municipality	Amount spent by municipality	% of available funds spent by municipality	Division of Revenue Act
	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000	%	R'000
Regional Service Council Levies: Tshwane Metropolitan Municipality	205	-	(16)	189	171	90.5%	-	-	-	128
Buffalo City Municipality	-	-	5 611	5 611	5 561	99.1%	-	-	-	-
Fetakgomo Municipality	-	-	1 000	1 000	1 000	100.0%	-	-	-	-
TOTAL	205	-	6 595	6 800	6 732	-	-	-	-	128

ANNEXURE 1D

STATEMENT OF TRANSFERS TO DEPARTMENTAL AGENCIES AND ACCOUNTS

Agency/account	TRANSFER ALLOCATION				TRANSFER		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Funds Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Technology Planning and diffusion	47 900	-	(44 654)	3 246	3 246	100.0%	-
National Public Assets	35 000	-	-	35 000	35 000	100.0%	30 000
Indigenous Knowledge Systems	10 000	-	(9 456)	544	544	100.0%	2 500
Human Sciences Research Council	83 336	-	-	83 336	83 336	100.0%	74 530
Technology for Poverty Alleviation	24 200	-	(24 200)	-	-	-	13 450
Enabling Technology and Agro-processing	35 300	-	(28 874)	6 426	6 420	99.9%	-
Learnerships	4 000	-	(4 000)	-	-	-	3 366
Global Science	4 965	-	(4 010)	955	15	1.6%	12 713
Africa Institute of South Africa	16 325	-	-	16 325	16 325	100.0%	2 290
Academy of Science of South Africa	2 500	-	(2 500)	-	-	-	-
Information Communication Technology	9 000	-	(9 000)	-	-	-	-
Natural Resources	10 000	-	(8 000)	2 000	2 000	100.0%	-
Advanced Manufacturing	21 000	-	(20 183)	817	464	56.8%	7 750
Innovation Fund	171 313	-	(96 510)	74 803	74 800	100.0%	-

Agency/account	TRANSFER ALLOCATION				TRANSFER		200304
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Funds Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
National Laser Centre	18 000	-	(11 500)	6 500	6 500	100.0%	-
National Energy Research Institute	10 000	-	(10 000)	-	-	-	-
South African Aids Vaccine Initiative	15 000	-	-	15 000	15 000	100.0%	377 975
National Research Foundation	450 288	-	4 000	454 288	454 288	100.0%	171
Public Science and Youth	11 000	-	(4 050)	6 950	450	6.5%	1 728
Grant In Aid	5 899	-	(5 591)	308	-	-	9 000
Centres of Excellence	1 500	-	1 000	2 500	2 500	100.0%	2 000
Science themes	22 681	-	474	23 155	29 560	127.7%	-
TOTAL	1 009 207	-	(277 054)	732 153	730 448	-	537 473



ANNEXURE 1E

STATEMENT OF TRANSFERS TO UNIVERSITIES AND TECHNIKONS

University/technikon	TRANSFER ALLOCATION				EXPENDITURE			2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	Amount not Transferred	% of Available Funds Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000
North West University	-	-	1 160	1 160	1 160	-	100.0%	-
Tswane University of Technology	-	-	418	418	418	-	100.0%	-
University of Kwazulu-Natal	-	-	900	900	900	-	100.0%	-
University of Pretoria	-	-	100	100	100	-	100.0%	95
University of Free State	-	-	90	90	90	-	100.0%	-
University of Cape Town	-	-	888	888	888	-	100.0%	180
University of Fort Hare	-	-	1 090	1 090	1 090	-	100.0%	-
University of Randse Afrikaanse	-	-	298	298	298	-	100.0%	70
University of Rhodes	-	-	8	8	8	-	100.0%	-
University of Stellenbosch	-	-	3 400	3 400	3 400	-	100.0%	2 354
University of Venda	-	-	340	340	340	-	100.0%	93
University of Western Cape	-	-	2 252	2 252	2 253	(1)	100.0%	868
University of Witwatersrand	3 000	-	(126)	2 874	2 874	-	100.0%	52



University/technikon	TRANSFER ALLOCATION				EXPENDITURE			2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	Amount not Transferred	% of Available Funds Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	R'000	%	R'000
University of Zululand	-	-	70	70	70	-	100.0%	252
Technikon Witwatersrand	-	-	2 400	2 400	2 400	-	100.0%	3 750
University of Natal	-	-	-	-	-	-	-	501
University of the North	-	-	-	-	-	-	-	203
TOTAL	3 000	-	13 288	16 288	16 289	(1)	-	8 418



ANNEXURE 1F

STATEMENT OF TRANSFERS TO PUBLIC CORPORATIONS AND PRIVATE ENTERPRISES

(Name of Public Corporation /private Enterprise)	TRANSFER ALLOCATION				EXPENDITURE				2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Funds Transferred	Capital	Current	Total Available
	R'000	R'000	R'000	R'000	R'000	%	R'000	R'000	R'000
Private Enterprises	-	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-	-
Council for Scientific and Industrial Research	-	-	104 205	104 205	104 205	100.0%	-	104 205	31 074
Council for Mineral Technology	-	-	18 656	18 656	18 653	100.0%	-	18 653	1 390
SA Bureau of Standards	-	-	-	-	-	-	-	-	759
Foundation for Education Science and Technology	-	-	-	-	-	-	-	-	1 604
TOTAL	-	-	122 861	122 861	122 858	-	-	122 858	34 827



ANNEXURE 1H

STATEMENT OF TRANSFERS/SUBSIDIES TO NON-PROFIT INSTITUTIONS

Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Transfers	-	-	-	-	-	-	-
Academy of Science of SA	-	-	47	47	47	100.0%	-
Acorn Technologies	-	-	35	35	35	100.0%	3 000
Agama Bioenergy	-	-	1 600	1 600	1 600	100.0%	-
Bayworld Centre for Research and Education	-	-	55	55	55	100.0%	-
Beyond 2000	-	-	200	200	200	100.0%	-
Biopad Regional Innovation Centre Trust	34 183	-	-	34 183	34 183	100.0%	29 000
Boitjhorisong Science Resource Centre	-	-	90	90	90	100.0%	-
Capebiotech Trust	34 183	-	-	34 183	34 183	100.0%	29 000
Central Energy Fund	-	-	4 800	4 800	4 800	100.0%	-
Council for Geosciences	-	-	16	16	16	100.0%	20
Da Vinci Research Institute	-	-	500	500	500	100.0%	250
Durban Institute of Technology	-	-	500	500	500	100.0%	-



ANNEXURE 1H (continued)

East Coast Biotechnology Regional Innovation Centre Trust	34 183	-	-	34 183	34 183	100.0%	42 500
Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Egolibio Incubator	29	-	-	29	29	100.0%	3 400
Eskom Corporate	-	-	600	600	600	100.0%	-
Eskom Expo for Young Scientists	-	-	200	200	200	100.0%	-
Foundation of Tertiary Institutions of the Northern Metropolis	-	-	10	10	10	100.0%	-
Gateway Discovery Trust	-	-	120	120	120	100.0%	143
Giyani Science Centre	-	-	90	90	90	100.0%	-
GODISA Trust	-	-	24 855	24 855	24 225	97.5%	2 142
Grahamstown Foundation	-	-	200	200	200	100.0%	165
Hermanus Magnetic Observatory	-	-	7	7	7	100.0%	-
Horisane Bohane Marivate	-	-	23	23	23	100.0%	-
Imbaula cc	-	-	500	500	500	100.0%	-
Indigenous Knowledge Systems of SA Trust	-	-	1 500	1 500	1 500	100.0%	-
Innovation Trust	-	-	50 000	50 000	50 000	100.0%	161 450

ANNEXURE 1H (continued)

Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Interactive Science Foundation MTN Science Centre	-	-	84	84	84	100.0%	-
Ithemba Labs	-	-	33	33	33	100.0%	75
Kara Heritage Institute	-	-	500	500	500	100.0%	-
Kirkpatrick and Ass	-	-	1 388	1 388	1 388	100.0%	-
Medical Research Council	-	-	12 355	12 355	12 165	98.5%	-
MTN Science Centre	-	-	90	90	90	100.0%	157
National Bioinformatics Network Trust	13 260	-	-	13 260	13 260	100.0%	11 000
NC Songelwa	-	-	100	100	100	100.0%	-
Old Mutual MTN Science Centre	-	-	90	90	90	100.0%	183
Pediatric HIV Foundation	-	-	1 350	1 350	1 350	100.0%	-
PBMR (Pty) Ltd	-	-	5 000	5 000	5 000	100.0%	-
People Learning and Training online	-	-	200	200	200	100.0%	290
Plant Biotechnology Regional Innovation Centre	5 773	-	1 227	7 000	7 000	100.0%	-
SA Agency for Science and Technology Advancement	3 389	-	2 500	5 889	5 889	100.0%	10 857

ANNEXURE 1H (continued)

Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Sci-Bono Discovery Centre	-	-	90	90	90	100.0%	-
South African Astronomical Observatory	-	-	22	22	22	100.0%	-
Southern African Research and Innovation Management Assoc.	-	-	600	600	600	100.0%	200
Successful Events	-	-	114	114	114	100.0%	-
Sustainable Energy Africa	-	-	500	500	500	100.0%	-
TEMM International	-	-	800	800	800	100.0%	-
Tertiary Education Network (TENET)	-	-	3 000	3 000	3 000	100.0%	180
The Innovation Hub Management Company	-	-	9	9	9	100.0%	-
The SA institute of Aquatic Biodiversity	-	-	10	10	10	100.0%	-
Timbali Technology Incubator	-	-	35	35	35	100.0%	3 000
Tshumisano Trust	-	-	19 461	19 461	19 461	100.0%	18 966
Umgeni Water	-	-	12	12	12	100.0%	-
University of Limpopo	-	-	590	590	590	100.0%	-
Z-Coms	-	-	80	80	80	100.0%	-

ANNEXURE 1H (continued)

Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Brainworks Technology Incubators	-	-	-	-	-	-	3 000
Chemin Technology Incubator	-	-	-	-	-	-	2 910
ESPAG Hatting Trust	-	-	-	-	-	-	112
Onderstepoort Veterinary Institute	-	-	-	-	-	-	12
Rapid Design Tech	-	-	-	-	-	-	30
Softstart Technology Incubator Trust	-	-	-	-	-	-	1 700
South Africa RAI Event Organisers	-	-	-	-	-	-	123
Naledi 3D Factory	-	-	-	-	-	-	20
The Standards SA	-	-	-	-	-	-	250
Voxel ISC	-	-	-	-	-	-	1 800
Zenele Technology Demonstration Centre	-	-	-	-	-	-	3 000
Department of Foreign Affairs	-	-	-	-	-	-	434
Medunsa Trust	-	-	-	-	-	-	40
Natal Museum	-	-	-	-	-	-	200
National Laser Centre	-	-	-	-	-	-	11 540
Petroleum Agency SA	-	-	-	-	-	-	500
SA Institute for Civil Engineering	-	-	-	-	-	-	15

ANNEXURE 1H (continued)

Non Profit Organisation	TRANSFER ALLOCATION				EXPENDITURE		2003/04
	Adjusted Appropriation Act	Roll Overs	Adjustments	Total Available	Actual Transfer	% of Available Transferred	Final Appropriation Act
	R'000	R'000	R'000	R'000	R'000	%	R'000
Transfers							
SAVI Engineering Association	-	-	-	-	-	-	1 368
Thinking Tools	-	-	-	-	-	-	1 248
Vaal Education Trust	-	-	-	-	-	-	83
	125 000	-	136 846	261 846	261 026	-	344 363
Subsidies	-	-	-	-	-	-	-
Academy of Science of SA	-	-	2 500	2 500	2 500	100.0%	-
	-	-	2 500	2 500	2 500	-	-
TOTAL	125 000	-	139 346	264 346	263 526		344 363

ANNEXURE 1K

STATEMENT OF GIFTS, DONATIONS AND SPONSORSHIPS MADE AND REMISSIONS, REFUNDS AND PAYMENTS MADE AS AN ACT OF GRACE FOR THE YEAR ENDED 31 MARCH 2005

Nature of Gift, Donation or Sponsorship

(Group major categories but list material items including name of the organisation)

R'000

Paid in cash

Contribution towards the funeral cost of Ms N. Maqagi	6
Sponsorship of the National Science and Technology Forum	77
South African Women in Science Awards	200
South African Contribution to the International Square Kilometer Array (SKA) Steering Committee *	211
South African Contribution to the World Meteorological Organisation: (GEO Trust Fund) *	624
Corporate and promotional gifts	251

* These two items are not gifts per se but rather contributions towards the two organisations that the Department is closely involved with as part of its mandate.

** Gifts in this category are given to foreign and local dignitaries during official visits, to guest speakers at Departmental Conferences, to the general public during science and technology events, et cetera and it is not practical to list the beneficiaries individually.

Total

1 369

* These two items are not gifts per se but rather contributions towards the two organisations that the Department is closely involved

** Gifts in this category are given to foreign and local dignitaries during official visits, to guest speakers at Departmental Conferences, to the general public during science and technology events, et cetera and it is not practical to list the beneficiaries individually.

ANNEXURE 4

PHYSICAL ASSET MOVEMENT SCHEDULE AS AT 31 MARCH 2005

	Opening Balance	Additions	Disposals	Transfers in	Transfers Out	Closing Balance
	R'000	R'000	R'000	R'000	R'000	R'000
MACHINERY AND EQUIPMENT	11 183	8 289	-	-	-	19 472
Computer equipment	6 307	1 720				8 027
Furniture and office equipment	4 150	4 019				8 169
Other machinery and equipment	726	667				1 393
Transport assets	-	1 883				1 883
	11 183	8 289	-	-	-	19 472

MACHINERY AND EQUIPMENT	8 002	3 181	-	-	-	11 183
Computer equipment	4 378	1 929				6 307
Furniture and office equipment	2 985	1 165				4 150
Other machinery and equipment	639	87				726
	8 002	3 181	-	-	-	11 183

This is a movement schedule as at 1 March 2003

ANNEXURE 7

INTER-DEPARTMENTAL PAYABLES – CURRENT

Government Entity	Confirmed balance outstanding		Unconfirmed balance outstanding	
	31/03/2005	31/03/2004	31/03/2005	31/03/2004
	R'000	R'000	R'000	R'000
Department				
Amounts not included in Statement of financial position				
Current				
South African Police Service	5	-	-	-
National Department of Health	-	-	76	-
Subtotal	5	-	76	-
Non-current	-	-	-	-
Subtotal	-	-	-	-
Total	5	-	76	-

Include all amounts owing to National and Provincial Departments as well as all Public Entities, Constitutional Institutions and Trading Entities



Table 1.1 – Personnel costs by programme, 2004/05

Programme	Total Expenditure (R'000)	Personnel Expenditure (R'000)	Training Expenditure (R'000)	Professional and Special Services (R'000)	Personnel cost as a percent of total expenditure	Average personnel cost per employee (R'000)
Administration	61 927	24 182	2 092	5 339	39.05%	350
Technology for Development	261 563	7 423	164	406	2.84%	232
International Cooperation and Resources	47 171	9 818	97	4 906	20.81%	265
Government Science and Technology System	16 885	9 725	136	670	57.60%	249
Science and Technology for competitiveness	894 678	7 056	192	4 094	0.79%	221
Total	1 282 224	58 204	2 681	15 415	4.50%	279

Table 1.2 – Personnel costs by salary bands, 2004/05

Salary bands	Personnel Expenditure (R'000)	% of total personnel cost	Average personnel cost per employee (R'000)
Lower skilled (Levels 1-2)	201	0.34%	50
Skilled (Levels 3-5)	1 990	3.42%	87



Salary bands	Personnel Expenditure (R'000)	% of total personnel cost	Average personnel cost per employee
Highly skilled production (Levels 6-8)	7 750	13.32%	144
Highly skilled supervision (Levels 9-12)	21 550	37.02%	263
Senior management (Levels 13-16)	26 713	45.90%	581
Total	58 204	100.00%	279

The following Tables provide a summary per programme (Table 1.3) and salary bands (Table 1.4), of expenditure incurred as a result of salaries, overtime, home owners allowance and medical assistance. In each case, the Table provides an indication of the percentage of the personnel budget that was used for these items.

Table 1.3 – Salaries, Overtime, Home Owners Allowance and Medical Assistance by programme, 2004/05

Programme	SALARIES		OVERTIME		HOME OWNERS ALLOWANCE		MEDICAL ASSISTANCE	
	Amount (R'000)	Salaries as a % of personnel cost	Amount (R'000)	Overtime as a % of personnel cost	Amount (R'000)	HOA as a % of personnel cost	Amount (R'000)	Medical Assistance as a % of personnel cost
Administration	23 104	95.55%	315	1.30%	85	0.35%	678	2.80%
Technology for Development	7 189	96.85%	1	0.01%	16	0.22%	217	2.92%
International Cooperation and Resources	9 316	94.89%	91	0.93%	57	0.58%	354	3.60%



	Amount (R'000)	Salaries as a % of personnel cost	Amount (R'000)	Overtime as a % of personnel cost	Amount (R'000)	HOA as a % of personnel cost	Amount (R'000)	Medical Assistance as a % of personnel cost
Government Science and Technology System	9 148	94.07%	118	1.21%	80	0.82%	379	3.90%
Science and Technology for competitiveness	6 791	96.24%	-	-	30	0.43%	235	3.33%

Table 1.4 – Salaries, Overtime, Home Owners Allowance and Medical Assistance by salary bands, 2004/05

SALARY BANDS	SALARIES		OVERTIME		HOME OWNERS ALLOWANCE		MEDICAL ASSISTANCE	
	Amount (R'000)	Salaries as a % of personnel cost	Amount (R'000)	Overtime as a % of personnel cost	Amount (R'000)	HOA as a % of personnel cost	Amount (R'000)	Medical Assistance as a % of personnel cost
Lower skilled (Levels 1-2)	166	0.29%	13	0.02%	7	0.01%	46	0.08%
Skilled (Levels 3-5)	1 636	2.81%	89	0.15%	38	0.07%	261	0.45%
Highly skilled production (Levels 6-8)	6 956	11.95%	170	0.29%	88	0.15%	616	1.06%
Highly skilled supervision (Levels 9-12)	23 418	40.23%	253	0.43%	135	0.23%	940	1.62%

	Amount (R'000)	Salaries as a % of personnel cost	Amount (R'000)	Overtime as a % of personnel cost	Amount (R'000)	HOA as a % of personnel cost	Amount (R'000)	Medical
Senior management (Levels 13-16)	23 372	28.75%	-	-	-	-	-	-
1.1.1.1 Total	55 548	95.44%	525	0.89%	268	0.46%	1 863	3.21%

2. Employment and vacancies

The following Tables summarise the number of posts on the establishment, the number of employees, the vacancy rate, and whether there are any staff that are additional to the establishment. This information is presented in terms of three key variables: - programme (Table 2.1), salary band (Table 2.2) and critical occupations (Table 2.3). Departments have identified critical occupations that need to be monitored. Table 3.3 provides establishment and vacancy information for the key critical occupations of the department.

The vacancy rate reflects the percentage of posts that are not filled.

Table 2.1 – Employment and vacancies by programme, 31 March 2005

Programme	Number of posts	Number of posts filled	Vacancy Rate	Number of posts filled additional to the establishment
Administration	101	69	31.68%	-
Technology for Development	47	32	31.91%	-
International Cooperation and Resources	55	37	32.72%	-

Programme	Number of posts	Number of posts filled	Vacancy Rate	Number of posts filled additional to the establishment
Government Science and Technology System	56	39	30.36%	-
Science and Tecnology for Competitiveness	51	32	37.25%	-
Total	310	209	32.58%	-

Table 2.2 – Employment and vacancies by salary bands, 31 March 2005

Salary band	Number of posts	Number of posts filled	Vacancy Rate	Number of posts filled additional to the establishment
Lower skilled (Levels 1-2)	6	4	33.33%	-
Skilled (Levels 3-5)	39	23	41.02%	-
Highly skilled production (Levels 6-8)	73	54	26.02%	-
Highly skilled supervision (Levels 9-12)	133	81	39.09%	-
Senior management (Levels 13-16)	59	47	20.33%	-

The information in each case reflects the situation as at 31 March 2005. For an indication of changes in staffing patterns over the year under review, please refer to section 4 of this report.



3. Job evaluation

The Public Service Regulations, 1999, introduced job evaluation as a way of ensuring that work of equal value is remunerated equally. Within a nationally determined framework, executing authorities may evaluate or re-evaluate any job in their organisation. In terms of the Regulations all vacancies on salary levels 9 and higher must be evaluated before they are filled. This was complemented by a decision by the Minister for the Public Service and Administration that all SMS jobs must be evaluated before 31 December 2002.

The following Table (Table 3.1) summarises the number of jobs that were evaluated during the year under review. The Table also provides statistics on the number of posts that were upgraded or downgraded.

Table 3.1 – Job Evaluation, 1 April 2004 to 31 March 2005

Salary band	Number of posts	Number of Jobs Evaluated	% of posts evaluated by salary bands	Posts Upgraded		Posts downgraded	
				Number	% of posts evaluated	Number	% of posts evaluated
Lower skilled (Levels 1-2)	6		-		-	-	-
Skilled (Levels 3-5)	39	2	5.13%	1	50.00%	-	-
Highly skilled production (Levels 6-8)	73	7	9.59%	1	14.29%	-	-
Highly skilled supervision (Levels 9-12)	133	10	7.52%	3	30.00%	-	-
Senior Management Service Band A	43	8	18.60%	2	25.00%	-	-

Salary band	Number of posts	Number of Jobs Evaluated	% of posts evaluated by salary bands	Number	% of posts evaluated	Number	% of posts evaluated
Senior Management Service Band B	12	0	-	-	-	-	-
Senior Management Service Band C	3	0	-	-	-	-	-
Senior Management Service Band D	1	0	-	-	-	-	-
Total	310	27	8.71%	7	25.93%	-	-

The following Table provides a summary of the number of employees whose salary positions were upgraded due to their posts being upgraded. The number of employees might differ from the number of posts upgraded since not all employees are automatically absorbed into the new posts and some of the posts upgraded could also be vacant.

Table 3.2 – Profile of employees whose salary positions were upgraded due to their posts being upgraded, 1 April 2004 to 31 March 2005

Beneficiaries	African	Asian	Coloured	White	Total
Female	3	-	1	-	4
Male	2	-	-	1	3
Total	5	-	1	1	7
Employees with a disability					



4. Employment changes

This section provides information on changes in employment over the financial year.

Turnover rates provide an indication of trends in the employment profile of the department The following Tables provide a summary of turnover rates by salary band (Table 4.1) and by critical occupations (Table 4.2).

Table 4.1 – Annual turnover rates by salary band for the period 1 April 2004 to 31 March 2005

Salary Band	Number of employees per band as on 1 April 2004	Appointments and transfers into the department	Terminations and transfers out of the department	Turnover rate
Lower skilled (Levels 1-2)	4	1	-	-
Skilled (Levels 3-5)	27	10	10	37.04%
Highly skilled production (Levels 6-8)	42	18	9	21.43%
Highly skilled supervision (Levels 9-12)	78	26	25	32.05%
Senior Management Service Band A	23	9	3	13.04%
Senior Management Service Band B	12	1	-	-
Senior Management Service Band C	3	1	-	-
Senior Management Service Band D	1	-	-	-
Total	190	66	47	24.74%



Table 4.2 – Reasons why staff are leaving the department

Termination Type	Number	% of total
Death	2	4.26%
Resignation	11	23.40%
Expiry of contract	8	17.02%
Dismissal – operational changes	-	-
Dismissal – misconduct	1	2.13%
Dismissal – inefficiency	-	-
Discharged due to ill-health	1	2.13%
Retirement	-	-
Transfers to other Public Service Departments	24	51.06%
Other	-	-
Total	47	-
Total number of employees who left as a % of the total employment		22.49%

Table 4.3 – Promotions by salary band

Salary Band	Employees 1 April 2004	Promotions to another salary level	Salary bands promotions as a % of employees by salary level	Progressions to another notch within a salary level	Notch progressions as a % of employees by salary band
Lower skilled (Levels 1-2)	4	-	-	2	50.00%
Skilled (Levels 3-5)	27	-	-	10	37.04%



Salary Band	Employees 1 April 2004	Promotions to another salary level	Salary bands promotions as a % of employees by salary level	Progressions to another notch within a salary level	Notch progressions as a % of employees by salary band
Highly skilled production (Levels 6-8)	42	4	9.52%	20	47.62%
Highly skilled supervision (Levels 9-12)	78	3	3.85%	19	24.36%
Senior management (Levels 13-16)	39	3	7.69%	5	12.82%
Total	190	10	5.26%	56	29.47%



5. Employment equity

The Tables in this section are based on the formats prescribed by the Employment Equity Act, 55 of 1998.

5.1 – Total number of employees (including employees with disabilities) in each of the following occupational categories as on 31 March 2005

Occupational categories (SASCO)	Male				Female				Total
	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	
Management (Levels 13 – 16)	18	2	2	8	12	1	3	1	47
Middle management (Levels 9 -12)	25	1	5	4	33	2	3	8	81
Administrative (Levels 6 – 8)	13	1	-	2	25	5	-	8	54
Clerical (Levels 3 – 5)	2	2	-	-	15	2	1	1	23
Elementary occupations (Levels 1 – 2)	1	-	-	-	3	-	-	-	4
Total	59	6	7	14	88	10	7	18	209
Employees with disabilities	-	-	-	-	1	-	-	-	-

5.3 – Recruitment for the period 1 April 2004 to 31 March 2005

Occupational Bands	Male				Female				Total
	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	
Top Management (Levels 15 – 16)	-	-	-	1	-	-	-	-	1
Senior Management (Levels 13 – 14)	6	-	-	-	3	1	-	1	11
Professionally qualified and experienced specialists and mid- management (Levels 9 – 12)	10	-	1	1	9	2	1	2	26
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents (Levels 6 – 8)	7	-	-	-	7	3	-	1	18
Semi-skilled and discretionary decision making (Levels 3 – 5)	1	-	-	-	5	2	1	-	9
Unskilled and defined decision making (Levels 1 – 2)	-	-	-	-	1	-	-	-	1
Total	24	-	1	2	25	8	2	4	66

5.4 – Promotions for the period 1 April 2004 to 31 March 2005

Occupational Bands	Male				Female				Total
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Top Management (Levels 15 – 16)	-	-	-	-	-	-	-	-	-
Senior Management (Levels 13 – 14)	2	-	-	-	1	-	-	-	3
Professionally qualified and experienced specialists and mid- management (Levels 9 – 12)	1	-	-	-	2	-	-	-	3
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents (Levels 6 – 8)	-	-	-	-	4	-	-	-	4
Semi-skilled and discretionary decision making (Levels 3 – 5)	-	-	-	-	-	-	-	-	-
Unskilled and defined decision making (Levels 1 – 2)	-	-	-	-	-	-	-	-	-
Total	3	-	-	-	7	-	-	-	10



5.5 – Terminations for the period 1 April 2004 to 31 March 2005

Occupational Bands	Male				Female				Total
	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	<i>African</i>	<i>Coloured</i>	<i>Indian</i>	<i>White</i>	
Top Management (Levels 15 – 16)	-	-	-	-	-	-	-	-	-
Senior Management (Levels 13 – 14)	1	-	-	-	-	-	-	-	1
Professionally qualified and experienced specialists and mid-management (Levels 9 – 12)	5	-	1	-	2	2	-	-	10
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents (Levels 6 – 8)	1	-	-	-	-	-	-	2	3
Semi-skilled and discretionary decision making (Levels 3 – 5)	2	-	-	-	5	1	-	1	9
Unskilled and defined decision making (Levels 1 – 2)	-	-	-	-	-	-	-	-	-
Total	9		1		7	3		3	23
Employees with disabilities	1	-	-	-	-	-	-	-	1

6. Performance rewards

To encourage good performance, the department has granted the following performance rewards during the year under review. The information is presented in terms of race, gender, and disability (Table 6.1), salary bands (Table 6.2) and critical occupations (Table 6.3).

Table 6.1 – Performance Rewards by race, gender, and disability, 1 April 2004 to 31 March 2005

	Beneficiary Profile			Cost	
	<i>Number of beneficiaries</i>	<i>Total number of employees in group</i>	<i>% of total within group</i>	<i>Cost (R'000)</i>	<i>Average cost per employee</i>
African					
Male	30	59	50.85%	495	16.50
Female	41	87	47.13%	530	12.93
Asian					
Male	2	7	28.57%	73	36.50
Female	1	7	14.29%	33	33.00
Coloured					
Male	2	6	33.33%	31	15.50
Female	6	10	60.00%	87	14.50
White					
Male	6	14	42.86%	135	22.50
Female	14	18	77.78%	203	14.50
Employees with a disability	1	1	100.00%	3	3.00
Total	103	209	49.28%	1 590	15.44



Table 6.2 – Performance Rewards by salary bands for personnel below Senior Management Service, 1 April 2004 to 31 March 2005

Salary Bands	Beneficiary Profile			Cost		
	<i>Number of beneficiaries</i>	<i>Number of employees</i>	<i>% of total within salary bands</i>	<i>Total Cost (R'000)</i>	<i>Average cost per employee</i>	<i>Total cost as a % of the total personnel expenditure</i>
Lower skilled (Levels 1-2)	4	4	100.00%	16	4	0.03%
Skilled (Levels 3-5)	21	23	91.30%	126	6	0.22%
Highly skilled production (Levels 6-8)	33	54	61.11%	462	14	0.79%
Highly skilled supervision (Levels 9-12)	38	82	46.34%	798	21	1.37%
Total	96	163	58.90%	1 402	14.60	2.41%

Table 6.3 – Performance related rewards (cash bonus), by salary band, for Senior Management Service

Salary Band	Beneficiary Profile			Total Cost (R'000)	Average cost per employee	Total cost as a % of the total personnel expenditure
	<i>Number of beneficiaries</i>	<i>Number of employees</i>	<i>% of total within band</i>			
Band A	2	29	6.90%	32	16	0.05%

Salary Band	Beneficiary Profile			Total Cost (R'000)	Average cost per employee	Total cost as a % of the total personnel expenditure
	Number of beneficiaries	Number of employees	% of total within band			
Band B	1	13	7.69%	34	34	0.06%
Band C	2	3	66.67%	67	34	0.12%
Band D	1	1	100%	55	55	0.09%
Total	6	46	13.04%	188	31	0.32%

7. Leave utilisation for the period 1 January 2004 to 31 December 2004

The Public Service Commission identified the need for careful monitoring of sick leave within the public service. The following Tables provide an indication of the use of sick leave (Table 7.1) and disability leave (Table 7.2). In both cases, the estimated cost of the leave is also provided.

Table 7.1 – Sick leave, 1 January 2004 to 31 December 2004

Salary Band	Total days	% 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)	19	36.84%	4	100.00%	4.75	4
Skilled (Levels 3-5)	135	65.93%	20	86.96%	6.75	45
Highly skilled production (Levels 6-8)	257	85.60%	48	88.89%	5.35	142

Salary Band	Total days	% days with medical certification	Number of Employees using sick leave	% of total employees using sick leave	Average days per employee	Estimated Cost (R'000)
Highly skilled supervision (Levels 9-12)	307	94.14%	71	87.65%	4.32	309
Senior management (Levels 13-16)	124	96.77%	22	46.81%	5.64	276
Total	842	86.10%	165	78.95%	5.10	776

Table 7.2 – Disability leave (temporary and permanent), 1 January 2004 to 31 December 2004

Salary Band	Total days taken	% days with medical certification	Number of Employees using disability leave	% of total employees using disability leave	Average days per employee	Estimated Cost (R'000)
Lower skilled (Levels 1-2)	-	-	-	-	-	-
Skilled (Levels 3-5)	-	-	-	-	-	-
Highly skilled production (Levels 6-8)	64	100.00%	2	0.96%	32	35
Highly skilled supervision (Levels 9-12)	-	-	-	-	-	-
Senior management (Levels 13-16)	43	100.00%	1	0.48%	43	70
Total	107	100.00%	3	1.44%	36	59

Table 7.3 summarises the utilisation of annual leave. The wage agreement concluded with trade unions in the PSCBC in 2000 requires management of annual leave to prevent high levels of accrued leave being paid at the time of termination of service.

Table 7.3 – Annual Leave, 1 January 2004 to 31 December 2004

Salary Bands	Total days taken	Average per employee
Lower skilled (Levels 1-2)	69	17.25
Skilled Levels 3-5)	533	23.17
Highly skilled production (Levels 6-8)	791	14.65
Highly skilled supervision(Levels 9-12)	1 269	15.67
Senior management (Levels 13-16)	939	19.98
Total	3 601	17.23

Table 7.4 – Capped leave, 1 January 2004 to 31 December 2004

Salary Bands	Total days of capped leave taken	Average number of days taken per employee	Average capped leave per employee as at 31 December 2004
Lower skilled (Levels 1-2)	-	-	10.00
Skilled Levels 3-5)	-	-	31.40
Highly skilled production (Levels 6-8)	14	3.50	36.63
Highly skilled supervision(Levels 9-12)	-	-	39.76

Salary Bands	Total days of capped leave taken	Average number of days taken per employee	Average capped leave per employee as at 31 December 2004
Senior management (Levels 13-16)	-	-	41.42
Total	14	3.50	36.89

Table 7.5 – Leave payouts for the period 1 April 2004 to 31 March 2005

The following Table summarises payments made to employees as a result of leave that was not taken.

Reason	Total Amount (r'000)	Number of Employees	Average Payment per Employee
Leave payout for 2004/05 due to non-utilisation of leave for the previous cycle	108	19	5.68
Capped leave payouts on termination of service for 2004/05	-	-	-
Current leave payout on termination of service for 2004/05	167	16	10.44
Total	275	35	7.86

8. Hiv and Aids & Health Promotion programmes

Table 8.1 – Details of Health Promotion and HIV and AIDS (tick the applicable boxes and provide the required information)

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.	✓		Ms Nobubele Ngele General manager/ Human Resource
2. Does the department have a dedicated unit or has it designated specific staff members to promote the health and well being of your employees? If so, indicate the number of employees who are involved in this task and the annual budget that is available for this purpose.	✓		Special Programmes Unit: one employee. The budget for the HIV and AIDS programme is located within the Human Resource budget as Professional services.
3. Has the department introduced an Employee Assistance or Health Promotion Programme for your employees? If so, indicate the key elements/services of this Programme.	✓		The Employee Assistance Programme which has five areas of focus: HIV and AIDS, Addiction, Loss and trauma, Disability and Wellness. Services provided include: counselling, training, education & awareness.
4. Has the department established (a) committee(s) 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.	✓		HIV and AIDS committee
			1. Sheila Van Stryp (PSA Union Rep) 2 . Dorothy Lushaba (NEHAWU Union Rep) 3. Thuli Letsoalo 4. Mpho Ramosibudi 5. Garry Rabeng

Question	Yes	No	Details, if yes
			6. Tom Suchanandan 7. Mmaphuti Semenya 8. Mirranda Mohapi 9. Adelaide Simelane 10. Mpho Makgoba 11. Edward Nesamvuni 12. Helle Pretorius 13. Vivienne Gondwe 14. Sphiwe Mngomezulu 15. André Viljoen (EAP Service Provider)
5. Has the department reviewed its employment policies and practices to ensure that these do not unfairly discriminate against employees on the basis of their HIV status? If so, list the employment policies/practices so reviewed.	√		HIV and AIDS policy
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.	√		1. Conducted education and awareness session with managers and employees 2. Distributed awareness material to create an environment of acceptance for infected and affected employees.
7. Does the department encourage its employees to undergo Voluntary Counselling and Testing? If so, list the results that you have you achieved.	√		We conducted Voluntary Counselling and Testing (VCT) promotion. A VCT drive was held, 80 employees participated.



Question	Yes	No	Details, if yes
8. Has the Department developed measures/indicators to monitor & evaluate the impact of its health promotion programme? If so, list these measures/indicators.	√		<p>The committee developed a programme with clear indicators and these were monitored on a monthly basis by the committee.</p> <p>The programme was also monitored through the interdepartmental Committee on HIV and AIDS based at the Department Health.</p>

9. Skills development

This section highlights the efforts of the Department with regard to skills development.

9.1 – Training needs identified 1 April 2004 to 31 March 2005

Occupational Categories	Gender	Number of employees as at 1 April 2004	Training needs identified at start of reporting period			
			<i>Learnerships</i>	<i>Skills Programmes & other short courses</i>	<i>Other forms of training</i>	<i>Total</i>
Legislators, senior officials and managers (Level 13-16)	Female	17	-	11	1	12
	Male	30	-	10	4	14
Professionals (Level 9-12)	Female	47	-	6	2	8
	Male	39	-	10	3	13
Technicians and associate professionals (Level 6-8)	Female	37	-	8	2	10
	Male	16	-	6	-	6



Occupational Categories	Gender	Number of employees as at 1 April 2004	Training needs identified at start of reporting period			
			<i>Learnerships</i>	<i>Skills Programmes & other short courses</i>	<i>Other forms of training</i>	<i>Total</i>
Clerks (Level 3-5)	Female	17	-	5	-	5
	Male	3	-	3	-	3
Elementary occupations (Level 1-2)	Female	3	-	1	-	1
	Male	-	-	-	-	-
Sub Total	Female	121	-	31	5	36
	Male	88	-	29	7	36
1.1.1.1 Total		209	-	60	12	72

9.2 – Training provided 1 April 2004 to 31 March 2005

Occupational Categories	Gender	Number of employees as at 1 April 2005	Training provided within the reporting period			
			<i>Learnerships</i>	<i>Skills Programmes & other short courses</i>	<i>Other forms of training</i>	<i>Total</i>
Legislators, senior officials and managers (Level 13-16)	Female	17	-	9	1	10
	Male	30	-	10	4	14
Professionals (Level 9-12)	Female	47	-	6	2	8
	Male	39	-	9	3	12



Occupational Categories	Gender	Number of employees as at 1 April 2005	Training provided within the reporting period			
			<i>Learnerships</i>	<i>Skills Programmes & other short courses</i>	<i>Other forms of training</i>	<i>Total</i>
Technicians and associate professionals (Level 6-8)	Female	37	-	8	2	10
	Male	16	-	6		6
Clerks (Level 3-5)	Female	17	-	5		5
	Male	3	-	3		3
Elementary occupations (Level 1-2)	Female	3	-	3		3
	Male	-	-	10	-	10
Sub Total	Female	121	-	29	5	34
	Male	88	-	28	7	35
1.1.1.2 Total		209	-	57	12	69



Table 10.1 – Report on consultant appointments using appropriated funds

Project Title	Total number of consultants that worked on the project	Duration: Working days	Contract value in Rand
Appointment of an Event Management Company to organise and coordinate the activities leading to the holding of the International Technology and Science (ITS) Fair to celebrate the 10th year of democracy in South Africa.	6	300	R 3,456,555.75
Appointment of a consultant to do a follow-up study to determine the Science and Technology profiles of all African and International countries with existing and intended bilateral and multilateral S & T agreements.	1	90	R 425,242.80
Appointment of a consultant/service provider to provide coaching for 40 members of senior management.	7	120	R 493,620.00
Appointment of a service provider to produce a Science and Technology magazine titled Innovation for development.	3	68	R 183,032.00
Appointment of a service provider to produce a Science and Technology coffee-table book.	4	62	R 406,769.00
Appointment of a consultant to do an investigation into the status of industrial design in SA.	4	125	R 426,228.90
Appointment of a consultant to undertake the design, Layout and printing of the 2003/04 Annual Report.	11	22	R 255,322.26
Consultative study on Women in SET- Part 1- One-on-one interviews.	5	134	R 330,051.66
Consultative study on Women in SET- Part 5- Develop a Gender Equity Policy and overall project Management.	5	80	R 149,410.00

Project Title	Total number of consultants that worked on the project	Duration: Working days	Contract value in Rand
Consultative study on Women in SET- Part 4- Consultative Conferences.	3	50	R 403,500.00
Consultative study on Women in SET- Part 5- Develop a Gender Equity Policy and overall project management.	5	200	R 499,997.00
Appointment of a service provider to conduct a desktop study of South Africa's strengths and successes in biotechnology innovation.	2	80	R 243,872.22
Appointment of a consultant to conduct a quantitative and qualitative assessment of the participation of women in Industrial Science, Engineering and Technology in South Africa and determine the factors promoting or inhibiting this participation.	6	150	R 501,353.00
Appointment of a consultant to provide inserts for the SABC 'Take 5' programme based on Science and Technology for a period.	4	120	R 271,548.00
Development of Phase 2 of the International Technology Information Platform (ITIP) project.	11	51	R 1,910,000.00
Study on the role of parents in their children's science, engineering and technology career choices.	5	120	R 494,064.60
Appointment of a service provider to facilitate the strategy planning process of the biotechnology instruments.	5	90	R 499,890.00
Appointment of a facilitator to facilitate the restructuring process for DST.	1	40	R 381,672.00



Project Title	Total number of consultants that worked on the project	Duration: Working days	Contract value in Rand
Appointment of a service provider to conduct the planning and implementation of media communication during the bioscience month.	8	60	R 263,340.00
Appointment of a service provider to undertake the upgrading and maintenance of the NACI Innovation Portal.	5	30	R 416,670.00
Appointment of a service provider to undertake a study into the factors impacting on the career choices of girls in the Limpopo Province	8	50	R 587,124.00
Executive monitoring and evaluation framework to benchmark the performance of women in, and the contribution of the respective genders to, the SA National System of Innovation (NSI).	6	122	R 676,604.00
Total number of projects	Total individual consultants	Total duration: Working days	Total contract value in Rand
22	115	2 164	R 13,275,867.19



Table 10.2 - Analysis of consultant appointments using appropriated funds, in terms of Historically Disadvantaged Individuals (HDIs)

Project title	Percentage ownership by HDI groups	Percentage management by HDI groups	Number of consultants from HDI groups that work on the project
Appointment of an Event Management Company to organise and coordinate the activities leading to the holding of the International Technology and Science (ITS) Fair to celebrate the 10th year of democracy in South Africa.	67	25	5
Appointment of a consultant to do a follow-up study to determine the Science and Technology profiles of all African and International countries with existing and intended bilateral and multilateral S & T agreements.	100	100	1
Appointment of a consultant/service provider to provide coaching for 40 members of senior management.	0	0	1
Appointment of a service provider to produce a Science and Technology magazine titled Innovation for development.	0	0	3
Appointment of a service provider to produce a Science and Technology coffee-table book.	51	51	2
Appointment of a consultant to do an investigation into the status of industrial design in SA.	100	100	2
Appointment of a consultant to undertake the design, layout and printing of the 2003/04 Annual Report.	34	34	7
Consultative study on Women in SET- Part 1- One-on-one interviews.	70	100	3
Consultative study on Women in SET- Part 2- E-mail discussion forum(s)	0	100	5

Project title	Percentage ownership by HDI groups	Percentage management by HDI groups	Number of consultants from HDI groups that work on the project
Consultative study on Women in SET- Part 4- Consultative Conferences	51	51	1
Consultative study on Women in SET- Part 5- Develop a Gender Equity Policy and overall project management.	0	100	5
Appointment of a service provider to conduct a desktop study of South Africa strengths and successes in biotechnology innovation.	0	0	0
Appointment of a consultant to conduct a quantitative and qualitative assessment of the participation of women in Industrial Science, Engineering and Technology in South Africa and determine the factors promoting or inhibiting this participation.	0	100	6
Appointment of a consultant to provide inserts for the SABC (Take 5) programme based on Science and Technology.	100	100	4
Development of Phase 2 of the International Technology Information Platform (ITIP) project.	0	40	2
Study on the role of parents in their children's science, engineering and technology career choices	0	0	4
Appointment of a service provider to facilitate the strategy planning process of the biotechnology instruments.	50	50	1
Appointment of a facilitator to facilitate the restructuring process for DST.	0	0	0
Appointment of a service provider to conduct the planning and implementation of media communication during the bioscience month.	100	100	8



Project title	Percentage ownership by HDI groups	Percentage management by HDI groups	Number of consultants from HDI groups that work on the project
Appointment of a service provider to undertake the upgrading and maintenance of the NACI Innovation Portal,	74	50	3
Appointment of a service provider to undertake a study into the factors impacting on the career choices of girls in the Limpopo Province.	100	100	6
Executive monitoring and evaluation framework to benchmark the performance of women in, and the contribution of the respective genders to, the SA National System of Innovation (NSI).	0	0	3





List of Abbreviations

ACEP	African Coelacanth Ecosystem Programme
ACP	African Caribbean and Pacific
AIDS	Acquired Immuno-deficiency Syndrome
AISA	African Institute of South Africa
AMCOST	African Minister's Council for Science and Technology
AMTS	Advanced Manufacturing Technology Strategy
ARC	Agricultural Research Council
ASSAF	Academy of Science of South Africa
AU	Africa Union
BRICs	Biotechnology Regional Innovation Centres
CFO	Chief Financial Officer
CPF	Country Programme Framework
CSIR	Council for Scientific and Industrial Research
DPSA	Department of Public Service and Administration
DST	Department of Science and Technology
DTI	Department of Trade and Industry
EC	European Commission

EDCTP	European Developing Countries' Clinical Trials Partnership
ESASTAP	European South African Science and Technology Advancement Programme
EXCO	Executive Committee
EXSA	Exhibition Association of Southern Africa
FABI	Forestry Agriculture Biotechnology Institute
FP6	Sixth Framework Programme
GDP	Gross Domestic Product
GE	Group Executive
GEANT	Pan European Research Network
GEO	Group on Earth Observation
GEOSS	Global Earth Observation System of Systems
GTZ	Gesellschaft für Technische Zusammenarbeit
HartRAO	Hartbeeshoek Radio Astronomy Observatory
HIV	Human Immuno-deficiency Virus
HMO	Hermanus Magnetic Observatory
HSRC	Human Sciences Research Council
IAEA	International Atomic Energy Agency

IAP	InterAcademy Panel
IBSA	India-Brazil-South Africa
ICGEB	International Centre for Genetic Engineering and Biotechnology
ICT	Information and Communication Technology
IGTR	Indo-German Toolroom
IKS	Indigenous Knowledge Systems
INSITE	International Innovation and Science and Technology Exhibition
ITIP	International Technology Information Platform
KAT	Karoo Array Telescope
KNP	Kruger National Park
KPI	Key Performance Indicator
KPIs	Key Performance Indicators
Mintek	Council for Mineral Technology
MRC	Medical Research Council
MTEF	Medium Term Expenditure Framework
NACI	National Advisory Council on Innovation
NASA	National Aeronautical and Space Administration
NASSP	National Astrophysics and Space Science Programme

NCPs	National Contact Points
NECSA	Nuclear Energy Council of South Africa
NEPAD	New Partnership for Africa's Development
NERI	National Energy Research Institute
NIS	National Innovation Survey
NISL	National Information-Society Learnership
NISTEP	National Institute for Science and Technology Policy
NR&DS	National Research and Development Strategy
NRDS	National R&D Survey
NRF	National Research Foundation
NSI	National System of Innovation
OECD	Organisation for Economic Cooperation and Development
OEMs	Original Equipment Manufacturers
PAMTS	Provincial Advanced Manufacturing Technology strategy
PFMA	Public Finance Management Act
PRMB	Post Retirement Medical Benefit
R&D	Research and Development
RISA	Research and Innovation Support and Advancement





S&T	Science and Technology
SAAO	South African Astronomical Observatory
SAASTA	South African Agency for Science and Technology Advancement
SAAVI	South African Aids Vaccine Initiative
SABI	South African Biosystematics Initiative
SABIF	South Africa's Biodiversity Information Network Facility
SADC	Southern African Development Community
SAEON	South African Environmental Observation Network
SA-EU	South Africa – European Union
SALT	Southern African Large Telescope
SANAP	South African National Antarctic Programme
SANBI	South African Biodiversity Institute
SANCOR	South African Coastal and Oceanic Research Network
SANPARKS	South African National Parks
SETA	Sector Education and Training
SHARE	The Antarctic Southern Hemisphere Auroral Radar Experiment
SKA	Square Kilometre Array

SMEs	small and medium enterprises
SRI	Schonland Research Institute
STAF	Science and Technology Agreements Fund
SWSTP	Science and Technology Sector Programme
TAI	Technology Achievement Index
TB	Tuberculosis
TC	Technical Cooperation
TENET	Tertiary Education Network
TT100	Technology Top 100
UCT	University of Cape Town
UNCSTD	United Nations Commission on Science and Technology for Development
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
Wits	University of the Witwatersrand
WRC	Water Research Commission



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