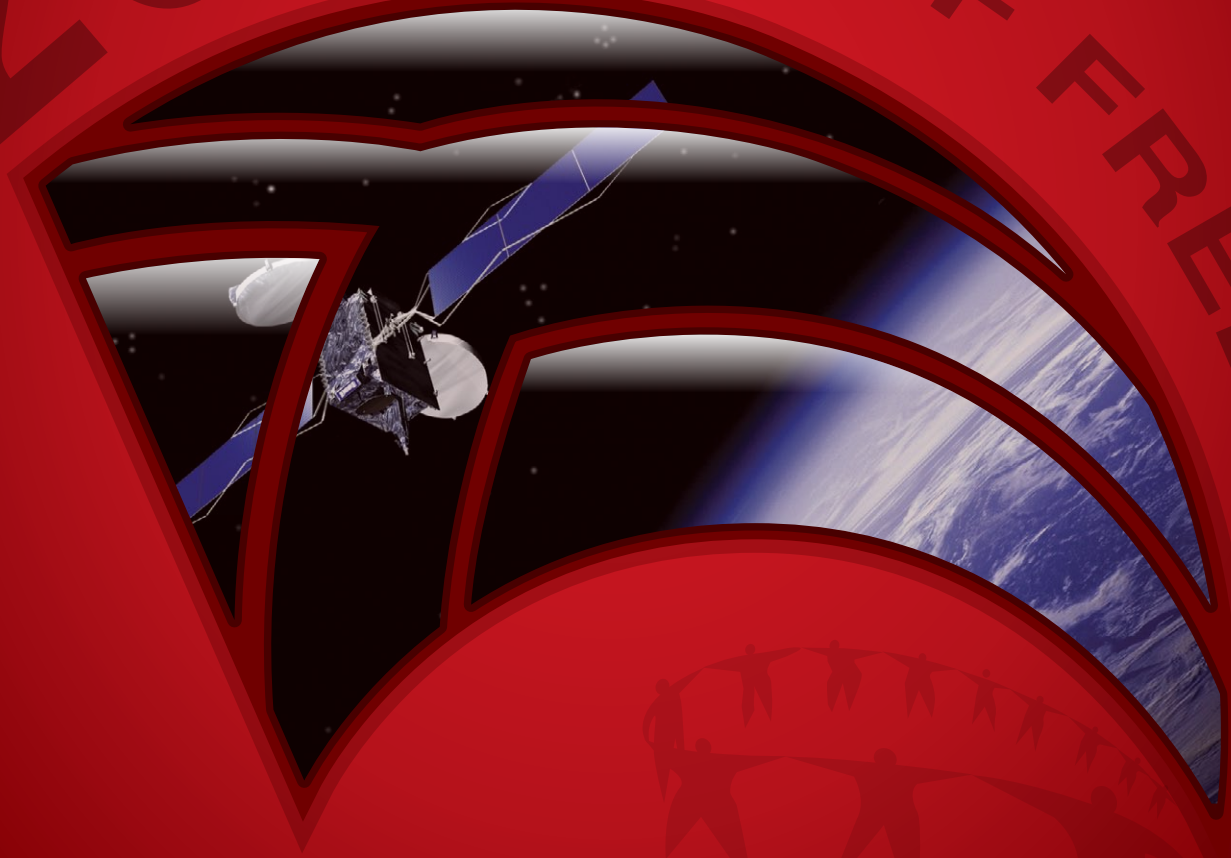
20 YEARS OF FREEDOM



BUDGET *2014*

ESTIMATES OF NATIONAL EXPENDITURE

VOTE 34 SCIENCE AND TECHNOLOGY

national treasury
Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

Estimates of National Expenditure

2014

National Treasury

Republic of South Africa

26 February 2014

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The Estimates of National Expenditure 2014 e-publications are compiled with the latest available information from departmental and other sources. Some of this information is unaudited or subject to revision.

The Estimates of National Expenditure e-publications for individual votes are available on www.treasury.gov.za.

Compared to the abridged version of the Estimates of National Expenditure, which includes all national government budget votes, in respect of individual votes these e-publications contain more comprehensive coverage of goods and services, transfers and subsidies, and public entities. Additional tables are also included containing information on the main and adjusted appropriation, with revised spending estimates for the current financial year, on skills training, conditional grants to provinces and municipalities, public private partnerships and information on donor funding. Expenditure information at the level of service delivery is also included, where appropriate.

"We know it well that none of us acting alone can achieve success. We must therefore act together as a united people, for national reconciliation, for nation building, for the birth of a new world. Let there be justice for all. Let there be peace for all. Let there be work, bread, water and salt for all. Let each know that for each the body, the mind and the soul have been freed to fulfil themselves."

UNION BUILDINGS, PRETORIA, 10 MAY 1994

national treasury
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National Treasury
REPUBLIC OF SOUTH AFRICA

Foreword

The national development plan, Vision 2030 of the government of South Africa, states that 'Alongside hard work and effort, capabilities and the opportunities that flow from development enable individuals to live the lives to which they aspire.' The 2014 Budget has been prepared in the spirit of this statement.

While the medium term expenditure framework (MTEF) contained in the 2014 Budget ushers in the new administration after the May elections, the country faces a markedly different situation from that of 2009. In 2006/07 and 2007/08, South Africa achieved budget surpluses. In 2008, however, the worldwide economic crisis meant budget deficit forecasts were inevitable. It is now clear that the recovery in real economic growth has been less robust than initially anticipated. Despite this, the economy is growing and government revenue collection is broadly on target. The 2009 Budget announced a 'haircut' and reprioritisation within budget baselines. At that stage, the reassignment of R19 billion comprised 12 per cent of the total monetary value of amendments to budgets made, of R160.6 billion. By contrast, the reassignment of the R19.6 billion in the 2014 Budget comprises 51 per cent of the total of R38.8 billion in amendments to budgets. The quantum of amendments to the total budget that can be made has clearly decreased substantially over time.

Despite the fiscal environment becoming increasingly constrained, National Treasury has been able to sustain the intensity of the pursuit for budget efficiencies, with most of the fiscal space for improvements to service delivery being made through reprioritisation. This will be reinforced by procurement reform and expenditure review initiatives. While the current fiscal position no longer automatically creates room by making additional funding available, progress towards our country objectives of inclusive economic growth and employment creation must be made in the face of a tough fiscal environment. Therefore the main budget non-interest aggregate expenditure ceiling established in the 2013 Budget remains intact. New priorities and the expansion of existing programmes must be achieved through reprioritisation within the existing resource envelope.

The current fiscal context is necessitating hard trade-offs: difficult choices will need to be made in choosing between spending priorities and in deciding on the sequencing of programme implementation. Given the constraints brought to bear by the expenditure ceiling, all government institutions need to manage any cost pressures that may be related to changes in the inflation rate, exchange rate or any other factors affecting input prices with great efficiency. This means that not everything that we believe must be done, can be done at once. In the reprioritisation of existing funds, certain outputs will have to be delayed, or discontinued.

The issue is what goods and services tax-payers' monies 'buy'. In keeping with the ongoing endeavour to improve transparency and reinforce accountability, the focus of the sections on budget programme expenditure trends within each vote in the 2014 Estimates of National Expenditure (ENE) publications has shifted, to an explanation of the interrelationship between the significant changes in spending, performance outputs and outcomes, and in personnel.

National Treasury teams have worked closely with policy and budget teams of national and provincial departments, as well as with public entities and local government, ensuring the alignment of policy developments with the national development plan and scrutinising spending trends and cost drivers, ever mindful of service delivery. Without this cooperation and commitment across government, it would not be possible to submit the credible and comprehensive institutional budgets contained in this publication. The political guidance of the Minister of Finance, his Deputy and the members of the ministers' committee on the budget, has been indispensable to the medium term expenditure committee of accounting officers of departments at the centre of government, in its task of providing the strategic direction in formulating the budget. I thank you all for your assistance.

Lungisa Fuzile
Director-General: National Treasury

Introduction

The Estimates of National Expenditure publications

The Estimates of National Expenditure (ENE) publications are important accountability documents, which set out the details of planned expenditure and planned performance at the time the Budget is tabled. The 2014 ENE publications largely retain the same layout of information as presented in previous years' publications. This allows information to be easily compared across publications and financial years. As in the past, information is presented for a seven-year period and contains details of all national departmental programmes and subprogrammes. Information is presented in a similar way for the national public entities related to each department. For the first time in the ENE publications, in 2014, information on changes in finances, personnel and performance is brought together with the focus on the significant interrelationships between these changes. This discussion, in the expenditure trends sections of the budget programmes in each chapter, allows the reader to assess the effectiveness of past, as well as of planned, spending.

When compared to the abridged version of the ENE, which includes all national government votes, the ENE e-publications provide more detailed expenditure information for individual votes on goods and services as well as transfers and subsidies. While the abridged version of the ENE contains one additional table at the end of each vote which has information on infrastructure spending, the ENE e-publications' additional tables also contain summaries of: the budgeted expenditure and revised estimate for 2013/14, and the audited outcome for 2012/13, by programme and economic classification; expenditure on training; conditional grants to provinces and municipalities; departmental public private partnerships; and donor funding. In selected cases more detailed information at the level of the site of service delivery is included. Budget information is also provided for the public entities that are simply listed in the abridged publication.

A separate ENE Overview e-publication is also available, which contains a description at the main budget non-interest level, summarising the Estimates of National Expenditure publication information across votes. The Overview contains this narrative explanation and summary tables; and also has a write-up on interpreting the information that is contained in each section of the publications.

Science and Technology

National Treasury

Republic of South Africa

Contents

Vote 34

Science and Technology

Budget summary

R million	2014/15 Total	Current payments	Transfers and subsidies	Payments for capital assets	2015/16 Total	2016/17 Total
MTEF allocation						
Administration	291.0	276.6	12.1	2.3	309.2	311.2
Technology Innovation	991.6	63.9	927.7	–	1 018.5	1 023.1
International Cooperation and Resources	119.7	65.1	54.6	–	125.2	126.2
Research, Development and Support	3 503.8	37.7	3 466.1	–	4 300.1	4 323.7
Socio-Economic Innovation Partnerships	1 564.1	43.5	1 520.7	–	1 801.3	1 850.6
Total expenditure estimates	**6 470.2**	**486.7**	**5 981.2**	**2.3**	**7 554.3**	**7 634.8**
Executive authority	Minister of Science and Technology					
Accounting officer	Director General of Science and Technology					
Website address	www.dst.gov.za					

The Estimates of National Expenditure e-publications for individual votes are available on www.treasury.gov.za. These publications provide more comprehensive coverage of vote specific information, particularly about goods and services, transfers and subsidies, public entities, donor funding, public private partnerships, conditional grants to provinces and municipalities, expenditure on skills training, a revised spending estimate for the current financial year, and expenditure information at the level of service delivery, where appropriate.

Aim

Realise the full potential of science and technology in social and economic development by developing human resources, research and innovation.

Mandate

The Department of Science and Technology executes its mandate through the implementation of the 1996 White Paper on Science and Technology, the national research and development strategy and the 10-year innovation plan. The plan aims to make science and technology a driving force in enhancing productivity, economic growth and socioeconomic development.

Strategic goals

The department's strategic goals over the medium term are to:

- develop the innovation capacity of the national system of innovation in order to contribute to socioeconomic development
- enhance South Africa's capacity for generating knowledge to produce world class research outputs and turn some advanced findings into innovation products and processes
- develop appropriate human capital in the science, technology and innovation sector to meet the needs of society
- build world class infrastructure in the science, technology and innovation sector to extend the frontiers of knowledge, train the next generation of researchers, and enable technology development and transfer as well as knowledge exchange
- position South Africa as a strategic international research and development and innovation partner and destination through the exchange of knowledge, capacity and resources between South Africa and its regional and other international partners, thus strengthening the national system of innovation.

Programme purposes

Programme 1: Administration

Purpose: Overall management of the department. Ensure that organisations funded by the department comply with good corporate governance and that their activities are aligned with the strategic focus of the national system of innovation. Monitor and evaluate the performance of the science councils.

Programme 2: Technology Innovation

Purpose: Promote the realisation of commercial products, processes and services from research and development outputs, through the implementation of enabling policy instruments.

Programme 3: International Cooperation and Resources

Purpose: Develop, promote and manage international relationships, opportunities and science and technology agreements that both strengthen the national system of innovation and enable an exchange of knowledge, capacity and resources between South Africa and its regional and international partners.

Programme 4: Research Development and Support

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

Programme 5: Socio-Economic Innovation Partnerships

Purpose: Enhance the growth and development priorities of government through targeted science, technology and innovation interventions and the development of strategic partnerships with all levels of government, industry, research institutions, and communities.

Selected performance indicators

Table 34.1 Science and Technology

Indicator	Programme	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the intellectual property portfolio through fully funded or co-funded research initiatives per year	Socio Economic Innovation Partnerships	Outcome 5: A skilled and capable workforce to support an inclusive growth path	59	14	26	17	21	27	37
Total number of postgraduate research students awarded bursaries, as reflected in the National Research Foundation's project reports	Research Development and Support		5 644	7 083	8 379	11 208	11 440	14 880	14 880

Table 34.1 Science and Technology

Indicator	Programme	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Total number of researchers awarded research grants through National Research Foundation managed programmes, as reflected in the foundation project reports	Research Development and Support	Outcome 5: A skilled and capable workforce to support an inclusive growth path	2 519	2 886	3 076	3 822	3 876	4 539	4 539
Value of foreign science, technology and innovative funds secured for knowledge production, technology transfer, enhanced innovation and science, technology and innovative human capital development from international partners through agreed instruments per year	International Cooperation and Resources		R196.3m	R285m	R241.2m	R300m	R354.6m	R388.6m	R414.2m
Number of South African researchers and students participating in international research and innovation opportunities per year	International Cooperation and Resources		–[1]	–[1]	–[1]	–[1]	1 456	1 571	1 962
Number of innovation support interventions developed/supported in key strategic areas per year	Technology Innovation	Outcome 4: Decent employment through inclusive economic growth	20	14	37	50	285	140	149
Number of new technology innovation products developed /supported in key strategic areas	Technology Innovation		24	26	37	72	6	3	5

1. There is no historical data because this is a new indicator.

The national development plan

The national development plan considers science, technology and innovation to be key aspects of the South African developmental agenda. Science and technology are crucial to equitable economic growth because advances in these fields underpin economic advances, education and improvements in health systems and all infrastructure. In order to realise the potential of technology as an engine of growth, investment needs to be made in scientific and technological education; and the population empowered to use technology efficiently, through access to knowledge and skills.

The department will continue to align its strategies and plans with the priorities and key drivers of the national development plan through ongoing investment in human capital development in various programmes, including the provision of financial support for research and development initiatives to improve education, training and innovation. The plan proposes that the country should double its number of first rate scientists by 2030 and the department addresses this through a number of its programmes. The department is also, in conjunction with the Department of Higher Education and Training, a key source of research funding for universities. The

department's funding of research and innovation infrastructure is a vital source of financial support for public research institutions and universities for research equipment and facilities.

The strategic goals of the department directly address this research imperative through the provision of support for human capital development, the provision of research and innovation infrastructure and the promotion of knowledge generation. With respect to human capital development, for example, the national development plan recommends that South Africa should produce more than 100 doctoral graduates per million population per year by 2030 (the number is currently 33), produce double the number of postgraduate and first rate scientists, increase the number of African and women postgraduates and especially PhDs, and improve the qualifications of academic staff by increasing the percentage of PhD qualified staff in the higher education sector from the current 43 per cent to over 75 per cent by 2030. The department is currently implementing several interventions that seek to address the persisting systemic challenges of access, participation, and success rate across all levels of education (especially postgraduate); the ageing and unrepresentative nature of the scientific workforce and relatively low publication and patenting rates. These interventions include human capital capacity development; the senior researcher programme, the South African Research Chairs Initiative; and the bursary programme for postgraduate studies in innovation.

The department also provides research infrastructure to enable technological innovation through platforms such as the Centre for High Performance Computing and the South African National Research Network. The department stimulates technological innovation within industry and small business through its business support programmes. These include the research and development tax incentive programme, and technology assistance packages to small, medium and micro enterprises (SMMEs), thus contributing to employment creation and economic growth. Research within the department contributes to industrial development opportunities in a variety of niche areas, such as global change and earth systems sciences, advanced manufacturing, advanced metals and ICT.

Expenditure estimates

Table 34.2 Science and Technology

Programme	Audited outcome			Adjusted appropri-ation	Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R million	2010/11	2011/12	2012/13	2013/14		2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	188.9	195.6	225.3	245.7	245.7	9.2%	4.4%	291.0	309.2	311.2	8.2%	4.2%
Technology Innovation	893.4	945.7	1 033.2	1 122.1	1 122.1	7.9%	20.4%	991.6	1 018.5	1 023.1	-3.0%	14.9%
International Cooperation and Resources	100.8	99.8	102.9	110.2	110.2	3.0%	2.1%	119.7	125.2	126.2	4.6%	1.7%
Research, Development and Support	1 768.5	2 003.3	2 366.6	3 233.8	3 233.8	22.3%	47.8%	3 503.8	4 300.1	4 323.7	10.2%	55.1%
Socio-Economic Innovation Partnerships	1 100.4	1 159.1	1 245.4	1 486.4	1 486.4	10.5%	25.4%	1 564.1	1 801.3	1 850.6	7.6%	24.1%
Total	**4 051.9**	**4 403.5**	**4 973.3**	**6 198.2**	**6 198.2**	**15.2%**	**100.0%**	**6 470.2**	**7 554.3**	**7 634.8**	**7.2%**	**100.0%**
Change to 2013 Budget estimate				–	–			(130.0)	(90.0)	(50.0)		
Economic classification												
Current payments	**331.7**	**345.9**	**386.8**	**414.1**	**414.1**	**7.7%**	**7.5%**	**486.7**	**510.0**	**516.8**	**7.7%**	**6.9%**
Compensation of employees	190.6	207.2	221.8	251.4	251.4	9.7%	4.4%	283.8	300.5	303.7	6.5%	4.1%
Goods and services	140.7	138.3	164.6	162.7	162.7	4.9%	3.1%	202.9	209.5	213.1	9.4%	2.8%
of which:												
Administration fees	*3.1*	*3.3*	*6.6*	*3.8*	*3.8*	*7.5%*	*0.1%*	*5.7*	*5.9*	*6.0*	*16.2%*	*0.1%*
Advertising	*14.2*	*14.0*	*15.0*	*3.9*	*3.9*	*-34.9%*	*0.2%*	*15.0*	*16.1*	*16.7*	*62.0%*	*0.2%*
Assets less than the capitalisation threshold	*0.4*	*0.4*	*0.2*	*0.9*	*0.9*	*28.7%*	*0.0%*	*0.5*	*0.6*	*0.6*	*-12.5%*	*0.0%*
Audit costs: External	*3.0*	*2.7*	*3.3*	*5.8*	*5.8*	*24.4%*	*0.1%*	*6.0*	*6.4*	*6.4*	*3.3%*	*0.1%*
Bursaries: Employees	*1.2*	*1.4*	*1.2*	*2.4*	*2.4*	*28.0%*	*0.0%*	*2.4*	*2.5*	*2.5*	*0.9%*	*0.0%*

Table 34.2 Science and Technology

Economic classification	Audited outcome			Adjusted appropri-ation	Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R million	2010/11	2011/12	2012/13	2013/14		2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Catering: Departmental activities	*1.4*	*1.2*	*3.2*	*2.7*	*2.7*	*25.7%*	*0.0%*	*2.6*	*2.7*	*2.7*	*-0.2%*	*0.0%*
Communication	*8.0*	*6.2*	*4.5*	*9.2*	*9.2*	*4.7%*	*0.1%*	*9.8*	*10.2*	*10.1*	*3.1%*	*0.1%*
Computer services	*5.3*	*5.7*	*7.8*	*7.4*	*7.4*	*12.3%*	*0.1%*	*7.8*	*8.1*	*8.2*	*3.1%*	*0.1%*
Consultants and professional services: Business and advisory services	*9.7*	*3.9*	*3.8*	*16.1*	*16.1*	*18.6%*	*0.2%*	*18.0*	*18.5*	*18.6*	*4.8%*	*0.3%*
Consultants and professional services: Legal costs	*1.9*	*0.3*	*0.2*	*1.2*	*1.2*	*-13.8%*	*0.0%*	*1.3*	*0.8*	*0.8*	*-13.2%*	*0.0%*
Contractors	*6.7*	*4.9*	*5.0*	*9.1*	*9.1*	*10.8%*	*0.1%*	*11.6*	*11.0*	*11.0*	*6.6%*	*0.2%*
Agency and support / outsourced services	*16.6*	*24.8*	*22.0*	*11.7*	*11.7*	*-11.1%*	*0.4%*	*17.7*	*17.8*	*17.9*	*15.2%*	*0.2%*
Entertainment	*0.5*	*0.8*	*0.9*	*3.1*	*3.1*	*88.7%*	*0.0%*	*6.1*	*6.3*	*6.1*	*24.8%*	*0.1%*
Inventory: Food and food supplies	*–*	*0.1*	*–*	*–*	*–*	*–*	*0.0%*	*–*	*–*	*–*	*–*	*–*
Inventory: Fuel, oil and gas	*0.0*	*–*	*–*	*0.1*	*0.1*	*126.4%*	*0.0%*	*0.1*	*0.1*	*0.1*	*3.6%*	*0.0%*
Inventory: Materials and supplies	*0.0*	*1.2*	*0.4*	*–*	*–*	*-100.0%*	*0.0%*	*–*	*–*	*–*	*–*	*–*
Inventory: Other supplies	*0.6*	*0.1*	*2.8*	*1.6*	*1.6*	*40.8%*	*0.0%*	*1.1*	*1.2*	*1.2*	*-8.9%*	*0.0%*
Consumable supplies	*–*	*0.2*	*–*	*–*	*–*	*–*	*0.0%*	*–*	*–*	*–*	*–*	*–*
Consumable: Stationery, printing and office supplies	*6.6*	*6.1*	*8.0*	*7.4*	*7.4*	*3.8%*	*0.1%*	*3.7*	*5.0*	*5.0*	*-12.1%*	*0.1%*
Operating leases	*2.5*	*1.9*	*4.4*	*4.4*	*4.4*	*20.8%*	*0.1%*	*3.5*	*3.7*	*3.7*	*-5.4%*	*0.1%*
Property payments	*3.4*	*2.9*	*2.6*	*5.9*	*5.9*	*19.8%*	*0.1%*	*6.2*	*7.2*	*7.0*	*6.2%*	*0.1%*
Transport provided: Departmental activity	*–*	*–*	*0.1*	*–*	*–*	*–*	*0.0%*	*–*	*–*	*–*	*–*	*–*
Travel and subsistence	*38.6*	*34.2*	*39.5*	*36.1*	*36.1*	*-2.2%*	*0.8%*	*48.3*	*48.3*	*50.8*	*12.1%*	*0.7%*
Training and development	*2.8*	*4.2*	*6.1*	*5.2*	*5.2*	*23.3%*	*0.1%*	*5.0*	*5.3*	*5.3*	*0.5%*	*0.1%*
Operating payments	*4.8*	*4.5*	*7.1*	*6.4*	*6.4*	*10.0%*	*0.1%*	*7.0*	*7.3*	*7.3*	*4.5%*	*0.1%*
Venues and facilities	*9.6*	*13.2*	*18.0*	*18.1*	*18.1*	*23.6%*	*0.3%*	*23.5*	*24.6*	*25.3*	*11.7%*	*0.3%*
Rental and hiring	*–*	*0.1*	*1.9*	*–*	*–*	*–*	*0.0%*	*–*	*–*	*–*	*–*	*–*
Interest and rent on land	0.3	0.5	0.4	–	–	-100.0%	0.0%	–	–	–	–	–
Transfers and subsidies	**3 709.6**	**4 050.4**	**4 580.0**	**5 754.4**	**5 754.4**	**15.8%**	**92.2%**	**5 981.2**	**7 041.9**	**7 115.6**	**7.3%**	**92.9%**
Departmental agencies and accounts	2 233.2	2 599.3	3 011.9	4 170.1	4 170.1	23.1%	61.2%	4 349.9	5 368.2	5 394.2	9.0%	69.2%
Higher education institutions	173.2	151.1	153.6	20.0	20.0	-51.3%	2.5%	15.0	15.0	15.1	-9.0%	0.2%
Public corporations and private enterprises	1 246.3	1 245.8	1 350.5	1 034.2	1 034.2	-6.0%	24.8%	1 178.6	1 196.9	1 243.1	6.3%	16.7%
Non-profit institutions	56.0	53.6	63.3	530.1	530.1	111.6%	3.6%	437.6	461.9	463.2	-4.4%	6.8%
Households	1.0	0.6	0.6	–	–	-100.0%	0.0%	–	–	–	–	–
Payments for capital assets	**10.6**	**6.9**	**6.5**	**29.7**	**29.7**	**40.9%**	**0.3%**	**2.3**	**2.4**	**2.4**	**-56.6%**	**0.1%**
Machinery and equipment	10.6	6.9	6.5	29.7	29.7	40.9%	0.3%	2.3	2.4	2.4	-56.6%	0.1%
Payments for financial assets	**0.0**	**0.2**	**0.0**	**–**	**–**	**-100.0%**	**0.0%**	**–**	**–**	**–**	**–**	**–**
Total	**4 051.9**	**4 403.5**	**4 973.3**	**6 198.2**	**6 198.2**	**15.2%**	**100.0%**	**6 470.2**	**7 554.3**	**7 634.8**	**7.2%**	**100.0%**

Personnel information

Table 34.3 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment												Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17				2013/14 - 2016/17	
Science and Technology			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**480**	**–**	**405**	**221.8**	**0.5**	**415**	**251.4**	**0.6**	**480**	**283.8**	**0.6**	**480**	**300.5**	**0.6**	**480**	**303.7**	**0.6**	**5.0%**	**100.0%**
1 – 6	66	–	66	9.2	0.1	61	11.3	0.2	66	12.4	0.2	66	13.2	0.2	66	13.3	0.2	2.7%	14.0%
7 – 10	139	–	124	47.4	0.4	121	54.5	0.5	139	59.7	0.4	139	65.6	0.5	139	64.1	0.5	4.7%	29.0%
11 – 12	152	–	121	72.1	0.6	131	83.0	0.6	152	97.2	0.6	152	97.9	0.6	152	99.2	0.7	5.1%	31.6%
13 – 16	123	–	94	93.1	1.0	102	102.7	1.0	123	114.5	0.9	123	123.8	1.0	123	127.0	1.0	6.4%	25.4%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Expenditure trends

The spending focus over the medium term will be on developing human capital, generating and exploring knowledge, investing in research and development infrastructure, and encouraging South African innovation by funding marketable products emerging from research and incubation. This will be done primarily through the funds allocated to the *Research, Development and Support* programme.

In addition, to support the goal of improving competitiveness through investing in science and technology, the department will make significant transfer payments over the medium term to the Council for Industrial and Scientific Research and the National Research Foundation. These transfers are expected to fund 11 440 bursaries in 2014/15 and 14 880 in 2015/16 and 2016/17 for postgraduate research students at honours, masters and doctoral levels, and increase the number of MeerKAT antennae installed at the Square Kilometre Array from 4 in 2014/15 to 27 in 2015/16 and to 31 in 2016/17.

Expenditure on transfers and subsidies increased between 2010/11 and 2013/14 due to the additional funding needed for the Square Kilometre Array's 64-dish antennae radio telescope, MeerKAT. R1.4 billion has been allocated over the medium term from the economic competitiveness and support package for industrial partnerships, research into satellite development, titanium and nanotechnology, and for the internship programme.

As part of Cabinet approved reductions, the department's budget will be reduced by R130 million in 2014/15, R90 million in 2015/16 and R50 million in 2016/17. Due to slower than expected spending, the department will reduce expenditure on transfers and subsidies to the Technology Innovation Agency, the Council for Science and Industrial Research and industrial partnerships. These include partnerships with domestic and foreign companies in the fields of ICT, nanotechnology and green industries. The budget reductions are not expected to impact on service delivery.

The department has a funded establishment of 480 posts, 65 of which were vacant at the end of November 2013. The vacancies were as a result of natural attrition and are expected to be filled over the medium term. The planned increase in the staff complement is aimed at addressing the expected growth in the industrial partnerships research and development programmes, with a focus on stimulating innovative businesses.

A change to the programme budget structure in 2013/14 affects the *Technology Innovation*, *Research Development and Support* and *Socio-Economic Innovation Partnerships* programmes. More details are provided in the expenditure trends sections of these programmes.

Infrastructure spending

Mega project: Square Kilometre Array

The Square Kilometre Array Organisation awarded a large portion of the final Square Kilometre Array project to South Africa and its eight African partner countries. While the construction of the Square Kilometre Array telescope is only expected to begin in 2017/18, work has begun on the 64-dish antennae radio telescope, MeerKAT. The first two MeerKAT antennae are scheduled to be completed by the end of 2013/14 and will be qualified and tested in 2014/15, with the entire system expected to be operational in 2016/17. R2.1 billion has been allocated over the medium term toward the Square Kilometre Array project, including MeerKAT.

Large project: Research and development infrastructure

R683 million has been allocated for research infrastructure over the medium term to provide the scientific community with equipment and facilities to ensure the country's global competitiveness in research, development and innovation. The department will continue to strategically use the research and development infrastructure budget to support five infrastructure categories: cyber infrastructure, scientific equipment, specialised facilities, high end infrastructure, and global infrastructure.

The primary allocations of the research and development infrastructure budget over the medium term are: R159 million for the scientific equipment category implemented by the National Research Foundation through the national equipment and nanotechnology equipment programmes, R105 million towards specialised facilities and R91 million to the national facilities of the National Research Foundation. A further R24 million has been made available in the high end infrastructure category for lithium battery development and titanium additive manufacturing laboratories and a primary titanium pilot plant.

The department will support cyber infrastructure by continuing to develop the High Performance Computing Centre, where the user community has grown from less than 20 in 2007 to more than 500 in 2013, and the continued rollout of broadband connectivity to all research and academic institutions, through the South African National Research Network programme. 40 research and academic sites were connected to the network in 2013/14 and all major campuses of the 23 higher education institutions, science councils, national facilities and publicly supported research institutions are now connected to the high speed national backbone. R632.4 million is allocated to cyber infrastructure over the medium term with the focus being on increasing the average bandwidth per South African National Research Network site to 3 500Mbps and increasing the user base, uptake and knowledge outputs of high performance computing by 2016/17.

Departmental receipts

Table 34.4 Receipts

	Audited outcome			Adjusted estimate	Revised estimate	Average growth rate (%)	Receipt/ total: Average (%)	Medium-term receipts estimate			Average growth rate (%)	Receipt/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14		2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Departmental receipts	**468**	**1 365**	**1 219**	**1 792**	**1 792**	**56.4%**	**100.0%**	**116**	**121**	**121**	**-59.3%**	**100.0%**
Sales of goods and services produced by department	**35**	**56**	**64**	**28**	**28**	**-7.2%**	**3.8%**	**28**	**29**	**29**	**1.2%**	**5.3%**
Other sales	35	56	64	28	28	-7.2%	3.8%	28	29	29	1.2%	5.3%
of which:												
Service rendered: Commission on insurance	*32*	*56*	*64*	*28*	*28*	*-4.4%*	*3.7%*	*27*	*28*	*28*	*–*	*5.2%*
Replacement of security cards	*3*	*–*	*–*	*–*	*–*	*-100.0%*	*0.1%*	*1*	*1*	*1*	*–*	*0.1%*
Interest, dividends and rent on land	**8**	**7**	**81**	**12**	**12**	**14.5%**	**2.2%**	**8**	**8**	**8**	**-12.6%**	**1.7%**
Interest	8	7	81	12	12	14.5%	2.2%	8	8	8	-12.6%	1.7%
Sales of capital assets	**–**	**257**	**577**	**–**	**–**	**–**	**17.2%**	**–**	**–**	**–**	**–**	**–**
Transactions in financial assets and liabilities	**425**	**1 045**	**497**	**1 752**	**1 752**	**60.3%**	**76.8%**	**80**	**84**	**84**	**-63.7%**	**93.0%**
Total	**468**	**1 365**	**1 219**	**1 792**	**1 792**	**56.4%**	**100.0%**	**116**	**121**	**121**	**-59.3%**	**100.0%**

Programme 1: Administration

Expenditure estimates

Table 34.5 Administration

Subprogramme	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Ministry	3 303	3 453	2 790	3 853	5.3%	1.6%	4 065	4 252	4 274	3.5%	1.4%
Management	64 812	63 703	65 852	86 254	10.0%	32.8%	102 198	107 052	107 588	7.6%	34.8%
Corporate Services	113 204	119 666	146 897	143 882	8.3%	61.2%	170 737	183 277	184 652	8.7%	59.0%
Governance	5 425	5 858	6 594	8 755	17.3%	3.1%	9 281	9 708	9 756	3.7%	3.2%
Office Accommodation	2 114	2 876	3 137	2 914	11.3%	1.3%	4 679	4 894	4 918	19.1%	1.5%
Total	**188 858**	**195 556**	**225 270**	**245 658**	**9.2%**	**100.0%**	**290 960**	**309 183**	**311 188**	**8.2%**	**100.0%**
Change to 2013 Budget estimate				(22 500)			–	–	459		
Economic classification											
Current payments	**179 481**	**189 740**	**219 803**	**229 929**	**8.6%**	**95.7%**	**276 564**	**293 972**	**295 901**	**8.8%**	**94.8%**
Compensation of employees	94 254	102 915	111 328	120 222	8.4%	50.1%	137 041	147 437	148 175	7.2%	47.8%
Goods and services	85 016	86 544	108 232	109 707	8.9%	45.5%	139 523	146 535	147 726	10.4%	47.0%
of which:											
Administration fees	*2 601*	*3 045*	*4 557*	*3 332*	*8.6%*	*1.6%*	*5 123*	*5 358*	*5 384*	*17.3%*	*1.7%*
Advertising	*12 098*	*12 944*	*13 754*	*3 053*	*-36.8%*	*4.9%*	*13 706*	*14 831*	*15 363*	*71.4%*	*4.1%*
Assets less than the capitalisation threshold	*215*	*219*	*103*	*718*	*49.5%*	*0.1%*	*549*	*576*	*579*	*-6.9%*	*0.2%*
Audit costs: External	*2 931*	*2 715*	*3 316*	*5 757*	*25.2%*	*1.7%*	*6 021*	*6 351*	*6 383*	*3.5%*	*2.1%*
Bursaries: Employees	*1 156*	*1 366*	*1 248*	*2 218*	*24.3%*	*0.7%*	*2 351*	*2 459*	*2 471*	*3.7%*	*0.8%*
Catering: Departmental activities	*677*	*595*	*2 430*	*1 315*	*24.8%*	*0.6%*	*1 394*	*1 459*	*1 466*	*3.7%*	*0.5%*
Communication	*4 485*	*3 198*	*2 374*	*5 528*	*7.2%*	*1.8%*	*5 860*	*6 130*	*6 161*	*3.7%*	*2.0%*
Computer services	*3 738*	*3 908*	*7 603*	*6 777*	*21.9%*	*2.6%*	*7 403*	*7 744*	*7 783*	*4.7%*	*2.6%*
Consultants and professional services: Business and advisory services	*4 930*	*2 226*	*1 940*	*10 341*	*28.0%*	*2.3%*	*10 961*	*11 465*	*11 522*	*3.7%*	*3.8%*
Consultants and professional services: Legal costs	*234*	*147*	*100*	*698*	*44.0%*	*0.1%*	*740*	*774*	*778*	*3.7%*	*0.3%*

Table 34.5 Administration

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Contractors	*5 906*	*4 802*	*2 813*	*7 371*	*7.7%*	*2.4%*	*11 619*	*10 975*	*11 030*	*14.4%*	*3.5%*
Agency and support / outsourced services	*9 943*	*13 375*	*13 197*	*6 862*	*-11.6%*	*5.1%*	*7 804*	*8 163*	*8 204*	*6.1%*	*2.7%*
Entertainment	*241*	*148*	*429*	*563*	*32.7%*	*0.2%*	*597*	*525*	*532*	*-1.9%*	*0.2%*
Inventory: Food and food supplies	*–*	*126*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*
Inventory: Fuel, oil and gas	*10*	*–*	*–*	*116*	*126.4%*	*–*	*123*	*128*	*129*	*3.6%*	*–*
Inventory: Learner and teacher support material	*–*	*–*	*5*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*
Inventory: Materials and supplies	*10*	*–*	*341*	*–*	*-100.0%*	*–*	*–*	*–*	*–*	*–*	*–*
Inventory: Other supplies	*538*	*90*	*2 819*	*1 288*	*33.8%*	*0.6%*	*835*	*874*	*878*	*-12.0%*	*0.3%*
Consumable: Stationery, printing and office supplies	*4 648*	*4 436*	*6 278*	*4 498*	*-1.1%*	*2.3%*	*3 682*	*4 990*	*5 015*	*3.7%*	*1.6%*
Operating leases	*1 743*	*755*	*2 129*	*3 305*	*23.8%*	*0.9%*	*3 496*	*3 731*	*3 749*	*4.3%*	*1.2%*
Property payments	*1 707*	*2 488*	*2 503*	*5 430*	*47.1%*	*1.4%*	*5 726*	*6 165*	*6 196*	*4.5%*	*2.0%*
Travel and subsistence	*17 413*	*16 467*	*17 863*	*16 754*	*-1.3%*	*8.0%*	*25 032*	*25 745*	*25 874*	*15.6%*	*8.1%*
Training and development	*2 789*	*4 199*	*5 940*	*4 761*	*19.5%*	*2.1%*	*5 047*	*5 279*	*5 303*	*3.7%*	*1.8%*
Operating payments	*3 779*	*3 227*	*4 676*	*4 902*	*9.1%*	*1.9%*	*5 207*	*5 463*	*5 490*	*3.8%*	*1.8%*
Venues and facilities	*3 224*	*6 056*	*9 911*	*14 120*	*63.6%*	*3.9%*	*16 247*	*17 350*	*17 436*	*7.3%*	*5.6%*
Rental and hiring	*–*	*12*	*1 903*	*–*	*–*	*0.2%*	*–*	*–*	*–*	*–*	*–*
Interest and rent on land	211	281	243	–	-100.0%	0.1%	–	–	–	–	–
Transfers and subsidies	**1 425**	**1 036**	**930**	**13 551**	**111.9%**	**2.0%**	**12 087**	**12 796**	**12 860**	**-1.7%**	**4.4%**
Higher education institutions	80	264	–	–	-100.0%	–	–	–	–	–	–
Public corporations and private enterprises	284	–	500	–	-100.0%	0.1%	–	–	–	–	–
Non-profit institutions	636	698	329	13 551	177.2%	1.8%	12 087	12 796	12 860	-1.7%	4.4%
Households	425	74	101	–	-100.0%	0.1%	–	–	–	–	–
Payments for capital assets	**7 940**	**4 780**	**4 526**	**2 178**	**-35.0%**	**2.3%**	**2 309**	**2 415**	**2 427**	**3.7%**	**0.8%**
Machinery and equipment	7 940	4 780	4 526	2 178	-35.0%	2.3%	2 309	2 415	2 427	3.7%	0.8%
Payments for financial assets	**12**	**–**	**11**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**188 858**	**195 556**	**225 270**	**245 658**	**9.2%**	**100.0%**	**290 960**	**309 183**	**311 188**	**8.2%**	**100.0%**
Proportion of total programme expenditure to vote expenditure	**4.7%**	**4.4%**	**4.5%**	**4.0%**			**4.5%**	**4.1%**	**4.1%**		
Details of transfers and subsidies											
Non-profit institutions											
Current	**636**	**698**	**329**	**13 551**	**177.2%**	**1.8%**	**12 087**	**12 796**	**12 860**	**-1.7%**	**4.4%**
Institutional and programme support	636	698	329	13 551	177.2%	1.8%	12 087	12 796	12 860	-1.7%	4.4%
Higher education institutions											
Current	**80**	**264**	**–**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Institutional and programme support	80	264	–	–	-100.0%	–	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	**284**	**–**	**500**	**–**	**-100.0%**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Institutional and programme support	284	–	500	–	-100.0%	0.1%	–	–	–	–	–
Households											
Social benefits											
Current	**425**	**74**	**101**	**–**	**-100.0%**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Households	425	74	101	–	-100.0%	0.1%	–	–	–	–	–

Personnel information

Table 34.6 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17	2013/14 - 2016/17	
Administration			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**263**	**–**	**222**	**111.3**	**0.5**	**225**	**120.2**	**0.5**	**263**	**137.0**	**0.5**	**263**	**147.4**	**0.6**	**263**	**148.2**	**0.6**	**5.3%**	**100.0%**
1 – 6	48	–	48	7.5	0.2	44	8.1	0.2	48	9.0	0.2	48	9.7	0.2	48	9.7	0.2	2.9%	18.5%
7 – 10	93	–	80	30.7	0.4	78	33.3	0.4	93	37.1	0.4	93	41.9	0.5	93	40.1	0.4	6.0%	35.2%
11 – 12	65	–	51	31.9	0.6	58	33.5	0.6	65	41.2	0.6	65	42.0	0.6	65	42.2	0.6	3.9%	25.0%
13 – 16	57	–	43	41.2	1.0	45	45.4	1.0	57	49.8	0.9	57	53.9	0.9	57	56.2	1.0	8.2%	21.3%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term will continue to be on the overall management of the department and the provision of centralised support services to ensure good corporate governance practices. Expenditure in the *Corporate Services* and *Management* subprogrammes is projected to increase over the medium term, following the centralisation of certain activities within these subprogrammes in 2012/13 to realise the benefits of strategic sourcing. These include communications, asset management, information services, knowledge management, and inventory and facilities management. The department's office accommodation requirements are also expected to increase over the medium term.

The introduction of the ministerial public participation programme's hosting of international conferences such as the German–South Africa test of science both in South Africa and in Germany, and the marketing of the Square Kilometre Array project in 2012/13 resulted in increased spending on venues, facilities and catering between 2010/11 and 2013/14. In addition, spending on consultants increased over the same period due to the increased use of management advisory services, the testing of the implementation of the business continuity plan, and increased maintenance performed on the department's facilities. Spending on consultants is expected to increase over the medium term due to the lack of management advisory services skills in the department.

The programme had a funded establishment of 263 posts, of which 38 were vacant at the end of November 2013 as a result of natural attrition. These are expected to be filled over the medium term. The expected growth in the number of filled posts between 2013/14 and 2014/15 is aimed at enhancing management capacity to improve oversight on programmes and to ensure their strategic alignment with the department's overall goals.

Programme 2: Technology Innovation

Objectives

- Lead, inform and influence policy development in strategic science and technology innovation areas of focus through:
  - developing and implementing 29 policy instruments
  - providing oversight of projects carried out by recipients of funding
  - monitoring and regulating 15 institutional arrangements
  - supporting 574 innovation interventions in these key strategic areas by the end of March 2017.
- Coordinate and support research and high end skills development in the strategic and emerging fields of the science and technology of space science energy, and the bioeconomy by:
  - bioeconomy, intellectual property management transfer and technology commercialisation
  - supporting 1 146 masters and doctoral students and 42 postgraduates financially
  - enabling training for 1 290 trainees
  - supporting 98 research output publications financially in these key strategic areas by the end of March 2017.
- Support, promote and advocate for the development and transition of scientific research and development outputs, processes and services by:
  - supporting 14 new technology innovation products
  - pursuing the registration of 9 new patents and 3 trademarks
  - ensuring 850 disclosures reported by publicly-funded institutions
  - commercialising 3 new technologies in the key strategic areas by the end of March 2017.
- Oversee, monitor and regulate key policy instruments and support interventions in the strategic and emerging science and technology of space science, energy, biotechnology, nanotechnology, robotics, photonics, indigenous knowledge systems, intellectual property management, technology transfer and transfer end technology commercialisation.

Subprogrammes

- *Space Science* is a cross-cutting and user driven subprogramme that supports the creation of an environment conducive to the implementation of the national space and South African earth observation strategies. In 2012/13, 164 841 earth observation data scenes were distributed through targeted programmes aimed at various stakeholders. In 2013/14, 11 technology solutions were supported, including the time series applications for the forest and carbon tracking portal, the geohazard atlas and funding for the calibration and validation site used to conduct pre-campaign activities. In addition, 40 postgraduate students were supported, with 20 graduating, and 240 trainees received instruction. This subprogramme had a staff complement of 9 in 2013/14.
- *Hydrogen and Energy* plays a key role in developing a sustainable and globally competitive South African energy knowledge base and industry, especially as it relates to the nascent global hydrogen economy. In 2012/13, 3 research chairs in the energy sector were supported. In 2013/14, 10 research and development initiatives were supported, including the Hydrogen South Africa Centre of Competence, the Renewable Energy Hub and 3 research chairs in clean coal technology and biofuels. This subprogramme had a staff complement of 9 in 2013/14.
- *Bioeconomy* leads the department's implementation of the National Bioeconomy Strategy that was approved by Cabinet in 2013. It strengthens research and innovation competencies to enable projects and product development to be commercialised. In 2012/13, 4 research chairs in biotechnology and health innovation were supported. In 2013/14, financial support was provided for strategic health innovation partnership initiatives that concern malaria, tuberculosis, HIV and AIDS, and non-communicable diseases, and for the bioscience research chairs. In addition, 50 PhD students were supported and 310 bio-entrepreneurs were trained. This subprogramme had a staff complement of 12 in 2013/14.
- *Innovation Priorities and Instruments* supports and strengthens the innovation policy package and related programmatic interventions aimed at creating and sustaining an enabling environment for innovation, technology development and commercialisation of publicly funded research and development initiatives. In 2012/13, 3 technology based enterprises were established with the support of the Technology Innovation Agency. 58 products, processes and services were developed for commercialisation with 3 being commercialised by the agency. In 2013/14, 1 investment was commercialised through agency funding and 1 technology product/process was developed. This subprogramme had a staff complement of 6 in 2013/14.
- *National Intellectual Property Management Office* ensures compliance by recipients of publicly financed research and development opportunities with the Intellectual Property from Publicly Financed Research and Development Act (2008) and regulations; provides funding through the intellectual property fund for the protection and commercialisation of intellectual property emanating from publicly financed research and development in higher education institutions and science councils; and provides incentives to intellectual property creators to disclose, protect and commercialise their inventions. In 2012/13, 378 South African candidates were trained in intellectual property and technology transfer through workshops and the World Intellectual Property Organisation South African summer school on intellectual property and technology transfer. In 2013/14, 11 proposals were received and were in the process of being finalised in terms of supporting organisation and technology transfers at institutions. This subprogramme had a staff complement of 11 in 2013/14.

Expenditure estimates

Table 34.7 Technology Innovation

Subprogramme	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Space Science	74 213	115 743	170 269	203 386	39.9%	14.1%	169 939	173 870	175 212	-4.8%	17.4%
Hydrogen and Energy	130 844	145 641	131 881	146 237	3.8%	13.9%	146 430	153 054	153 307	1.6%	14.4%
Bioeconomy	169 034	107 352	125 728	132 069	-7.9%	13.4%	132 869	138 905	139 232	1.8%	13.1%
Innovation Priorities and Instruments	519 288	550 293	574 128	611 491	5.6%	56.5%	517 277	527 028	529 060	-4.7%	52.6%
National Intellectual Property Management Office	–	26 661	31 180	28 879	–	2.2%	25 108	25 654	26 294	-3.1%	2.5%
Total	**893 379**	**945 690**	**1 033 186**	**1 122 062**	**7.9%**	**100.0%**	**991 623**	**1 018 511**	**1 023 105**	**-3.0%**	**100.0%**
Change to 2013 Budget estimate				(505 083)			(612 228)	(683 516)	(687 432)		
Economic classification											
Current payments	**40 740**	**44 642**	**49 129**	**47 378**	**5.2%**	**4.6%**	**63 923**	**66 350**	**67 416**	**12.5%**	**5.9%**
Compensation of employees	24 637	29 452	30 086	35 129	12.6%	3.0%	41 976	43 047	43 064	7.0%	3.9%
Goods and services	16 058	15 144	19 013	12 249	-8.6%	1.6%	21 947	23 303	24 352	25.7%	2.0%
of which:											
Administration fees	*103*	*59*	*391*	*118*	*4.6%*	–	*125*	*131*	*131*	*3.5%*	–
Advertising	*458*	*160*	*24*	*95*	*-40.8%*	–	*409*	*427*	*428*	*65.2%*	–
Assets less than the capitalisation threshold	*156*	*27*	*34*	*91*	*-16.4%*	–	–	–	–	*-100.0%*	–
Bursaries: Employees	–	–	–	*22*	–	–	*23*	*24*	*24*	*2.9%*	–
Catering: Departmental activities	*262*	*116*	*192*	*160*	*-15.2%*	–	*160*	*166*	*173*	*2.6%*	–
Communication	*920*	*927*	*820*	*621*	*-12.3%*	*0.1%*	*655*	*680*	*692*	*3.7%*	*0.1%*
Computer services	*403*	*580*	*156*	*310*	*-8.4%*	–	–	–	–	*-100.0%*	–
Consultants and professional services: Business and advisory services	*1 440*	*1 199*	*1 012*	*653*	*-23.2%*	*0.1%*	*1 594*	*1 634*	*1 643*	*36.0%*	*0.1%*
Contractors	*145*	*18*	*2 169*	*843*	*79.8%*	*0.1%*	–	–	–	*-100.0%*	–
Agency and support / outsourced services	*3 057*	*3 826*	*4 492*	*3 611*	*5.7%*	*0.4%*	*7 859*	*8 157*	*8 199*	*31.4%*	*0.7%*
Entertainment	*14*	*19*	*39*	*1 613*	*386.6%*	–	*4 483*	*4 898*	*4 627*	*42.1%*	*0.4%*
Inventory: Materials and supplies	–	*23*	–	–	–	–	–	–	–	–	–
Inventory: Medical supplies	–	*1*	–	–	–	–	–	–	–	–	–
Inventory: Other supplies	*7*	*9*	*6*	*64*	*109.1%*	–	*36*	*69*	*70*	*3.0%*	–
Consumable supplies	–	*129*	–	–	–	–	–	–	–	–	–
Consumable: Stationery, printing and office supplies	*502*	*846*	*751*	*580*	*4.9%*	*0.1%*	–	–	–	*-100.0%*	–
Operating leases	*426*	*131*	*1 357*	*154*	*-28.8%*	*0.1%*	–	–	–	*-100.0%*	–
Property payments	*1 542*	*123*	*91*	–	*-100.0%*	–	*34*	*530*	*345*	–	–
Transport provided: Departmental activity	–	–	*91*	–	–	–	–	–	–	–	–
Travel and subsistence	*4 669*	*4 665*	*4 728*	*2 321*	*-20.8%*	*0.4%*	*4 795*	*4 703*	*5 941*	*36.8%*	*0.4%*
Training and development	–	–	*106*	*468*	–	–	–	–	–	*-100.0%*	–
Operating payments	*331*	*297*	*1 152*	*173*	*-19.4%*	–	*294*	*309*	*310*	*21.5%*	–
Venues and facilities	*1 623*	*1 922*	*1 398*	*352*	*-39.9%*	*0.1%*	*1 480*	*1 575*	*1 769*	*71.3%*	*0.1%*
Rental and hiring	–	*67*	*4*	–	–	–	–	–	–	–	–
Interest and rent on land	45	46	30	–	-100.0%	–	–	–	–	–	–
Transfers and subsidies	**851 029**	**900 373**	**983 489**	**1 047 184**	**7.2%**	**94.7%**	**927 700**	**952 161**	**955 689**	**-3.0%**	**93.4%**
Departmental agencies and accounts	516 968	658 745	741 922	740 789	12.7%	66.6%	635 639	647 966	650 944	-4.2%	64.4%
Higher education institutions	128 774	101 891	83 216	20 000	-46.2%	8.4%	15 000	15 000	15 075	-9.0%	1.6%
Public corporations and private enterprises	198 591	126 015	135 149	–	-100.0%	11.5%	–	–	–	–	–
Non-profit institutions	6 684	13 722	23 110	286 395	249.9%	8.3%	277 061	289 195	289 670	0.4%	27.5%
Households	12	–	92	–	-100.0%	–	–	–	–	–	–
Payments for capital assets	**1 604**	**675**	**568**	**27 500**	**157.9%**	**0.8%**	**–**	**–**	**–**	**-100.0%**	**0.7%**
Machinery and equipment	1 604	675	568	27 500	157.9%	0.8%	–	–	–	-100.0%	0.7%
Payments for financial assets	**6**	**–**	**–**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**893 379**	**945 690**	**1 033 186**	**1 122 062**	**7.9%**	**100.0%**	**991 623**	**1 018 511**	**1 023 105**	**-3.0%**	**100.0%**
Proportion of total programme expenditure to vote expenditure	**22.0%**	**21.5%**	**20.8%**	**18.1%**			**15.3%**	**13.5%**	**13.4%**		
Details of transfers and subsidies											
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	**516 225**	**646 337**	**725 861**	**740 789**	**12.8%**	**65.8%**	**635 639**	**647 966**	**650 944**	**-4.2%**	**64.4%**
Biofuels	5 000	5 000	–	–	-100.0%	0.3%	–	–	–	–	–
Biotechnology strategy	15 840	19 450	24 020	–	-100.0%	1.5%	–	–	–	–	–
Energy grand challenge	200	11 803	32 010	41 728	493.1%	2.1%	33 796	35 240	34 904	-5.8%	3.5%
Health innovation	12 386	28 529	28 915	–	-100.0%	1.7%	–	–	–	–	–
HIV and AIDS prevention and treatment technologies	18 206	4 298	3 963	21 317	5.4%	1.2%	22 596	23 635	23 753	3.7%	2.2%
Hydrogen strategy	17 199	16 897	15 000	–	-100.0%	1.2%	–	–	–	–	–
Innovation projects	5 462	–	–	17 019	46.1%	0.6%	28 640	29 957	30 107	20.9%	2.5%

Table 34.7 Technology Innovation

Details of transfers and subsidies	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
International Centre for Generic Engineering and Biotechnology	9 900	–	–	10 936	3.4%	0.5%	11 592	12 125	12 186	3.7%	1.1%
Space science	6 104	–	19 620	45 000	94.6%	1.8%	40 000	37 466	37 653	-5.8%	3.9%
Indigenous knowledge systems	11 800	1 325	–	–	-100.0%	0.3%	–	–	–	–	–
Technology Innovation Agency	410 628	433 816	456 325	481 081	5.4%	44.6%	380 717	385 188	387 364	-7.0%	39.3%
South African National Space Agency	–	106 719	126 008	123 708	–	8.9%	118 298	124 355	124 977	0.3%	11.8%
Emerging research areas	3 500	18 500	20 000	–	-100.0%	1.1%	–	–	–	–	–
Capital	**743**	**12 408**	**16 061**	**–**	**-100.0%**	**0.7%**	**–**	**–**	**–**	**–**	**–**
Technology transfer offices support	–	11 658	16 061	–	–	0.7%	–	–	–	–	–
Indigenous knowledge systems	743	750	–	–	-100.0%	–	–	–	–	–	–
Non-profit institutions											
Current	**6 684**	**8 697**	**18 999**	**183 228**	**201.5%**	**5.4%**	**176 514**	**184 476**	**184 873**	**0.3%**	**17.5%**
Biofuels	–	–	–	5 854	–	0.1%	6 205	6 490	6 522	3.7%	0.6%
Biotechnology strategy	–	–	3 504	37 728	–	1.0%	34 156	35 618	35 505	-2.0%	3.4%
Energy grand challenge	–	2 500	1 000	–	–	0.1%	–	–	–	–	–
Health innovation	–	2 800	100	43 725	–	1.2%	41 706	43 625	43 610	-0.1%	4.2%
Hydrogen strategy	–	200	–	32 479	–	0.8%	34 428	36 012	36 192	3.7%	3.3%
Innovation projects	–	–	–	–	–	–	–	–	–	–	–
International Centre for Generic Engineering and Biotechnology	–	–	10 395	–	–	0.3%	–	–	–	–	–
Space science	759	–	–	–	-100.0%	–	–	–	–	–	–
Technology transfer offices support	–	197	–	–	–	–	–	–	–	–	–
Indigenous knowledge systems	–	–	–	3 575	–	0.1%	3 790	4 364	4 385	7.0%	0.4%
Technology top 100	–	–	–	3 163	–	0.1%	3 353	3 507	3 525	3.7%	0.3%
Emerging research areas	5 925	3 000	4 000	56 704	112.3%	1.7%	52 876	54 860	55 134	-0.9%	5.3%
Capital	**–**	**5 025**	**4 111**	**103 167**	**–**	**2.8%**	**100 547**	**104 719**	**104 797**	**0.5%**	**9.9%**
Hydrogen strategy	–	–	–	57 332	–	1.4%	60 772	63 568	63 886	3.7%	5.9%
Technology transfer offices support	–	5 025	4 111	–	–	0.2%	–	–	–	–	–
National nanotechnology	–	–	–	45 835	–	1.1%	39 775	41 151	40 911	-3.7%	4.0%
Higher education institutions											
Current	**89 775**	**49 991**	**28 718**	**20 000**	**-39.4%**	**4.7%**	**15 000**	**15 000**	**15 075**	**-9.0%**	**1.6%**
Biotechnology strategy	41 980	10 590	3 200	–	-100.0%	1.4%	–	–	–	–	–
Energy grand challenge	18 758	21 821	2 415	–	-100.0%	1.1%	–	–	–	–	–
Health innovation	11 850	–	2 785	–	-100.0%	0.4%	–	–	–	–	–
Hydrogen strategy	9 000	8 600	15 318	–	-100.0%	0.8%	–	–	–	–	–
Innovation projects	4 187	–	–	–	-100.0%	0.1%	–	–	–	–	–
Technology transfer offices support	–	2 984	–	20 000	–	0.6%	15 000	15 000	15 075	-9.0%	1.6%
Square Kilometre Array	–	495	–	–	–	–	–	–	–	–	–
Emerging research areas	4 000	5 501	5 000	–	-100.0%	0.4%	–	–	–	–	–
Capital	**38 999**	**51 900**	**54 498**	**–**	**-100.0%**	**3.6%**	**–**	**–**	**–**	**–**	**–**
Hydrogen strategy	38 999	51 900	54 498	–	-100.0%	3.6%	–	–	–	–	–
Space science	–	–	–	–	–	–	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	**124 822**	**78 048**	**87 642**	**–**	**-100.0%**	**7.3%**	**–**	**–**	**–**	**–**	**–**
Biofuels	–	300	–	–	–	–	–	–	–	–	–
Biotechnology strategy	18 164	5 350	9 800	–	-100.0%	0.8%	–	–	–	–	–
Energy grand challenge	23 000	12 503	3 540	–	-100.0%	1.0%	–	–	–	–	–
Health innovation	13 636	6 964	6 088	–	-100.0%	0.7%	–	–	–	–	–
HIV and AIDS prevention and treatment technologies	–	15 000	16 300	–	–	0.8%	–	–	–	–	–
Hydrogen strategy	11 800	4 659	354	–	-100.0%	0.4%	–	–	–	–	–
Innovation projects	1 094	4 727	6 001	–	-100.0%	0.3%	–	–	–	–	–
Space science	21 628	–	16 380	–	-100.0%	1.0%	–	–	–	–	–
Emerging research areas	35 500	28 545	29 179	–	-100.0%	2.3%	–	–	–	–	–

Table 34.7 Technology Innovation

Details of transfers and subsidies	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Capital	**73 769**	**42 400**	**44 500**	**–**	**-100.0%**	**4.0%**	**–**	**–**	**–**	**–**	**–**
Space science	35 432	–	–	–	-100.0%	0.9%	–	–	–	–	–
National nanotechnology	38 337	42 400	44 500	–	-100.0%	3.1%	–	–	–	–	–
Households											
Social benefits											
Current	**12**	**–**	**92**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Households	12	–	92	–	-100.0%	–	–	–	–	–	–
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	**–**	**5 567**	**3 007**	**–**	**–**	**0.2%**	**–**	**–**	**–**	**–**	**–**
Innovation projects	–	273	–	–	–	–	–	–	–	–	–
Technology top 100 awards programme	–	5 294	3 007	–	–	0.2%	–	–	–	–	–

Personnel information

Table 34.8 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17	2013/14 - 2016/17	
Technology Innovation			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**56**	**–**	**34**	**30.1**	**0.9**	**32**	**35.1**	**1.1**	**56**	**42.0**	**0.7**	**56**	**43.0**	**0.8**	**56**	**43.1**	**0.8**	**20.5%**	**100.0%**
1 – 6	7	–	6	0.3	0.0	4	0.3	0.1	7	0.4	0.1	7	0.4	0.1	7	0.4	0.1	20.5%	12.5%
7 – 10	7	–	4	3.9	1.0	4	5.3	1.3	7	5.9	0.8	7	6.2	0.9	7	6.2	0.9	20.5%	12.5%
11 – 12	23	–	14	12.1	0.9	13	10.5	0.8	23	14.6	0.6	23	12.2	0.5	23	12.3	0.5	20.9%	41.0%
13 – 16	19	–	10	13.8	1.4	11	18.9	1.7	19	21.1	1.1	19	24.3	1.3	19	24.2	1.3	20.0%	34.0%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term will be on the *Innovation Priorities and Instruments* subprogramme to support the policy of creating an enabling environment for innovation, technology development and commercialising publicly funded research and development initiatives. The significant spending on the *Innovation Priorities and Instruments* subprogramme between 2010/11 and 2013/14 has contributed to the establishment of 4 technology based enterprises through the Technology Innovation Agency, and the development of 99 technology innovation products, processes and services, such as geospatial information, for commercialisation. Transfers to the Technology Innovation Agency are projected to decrease by R30 million in 2014/15, R50 million in 2015/16 and R50 million in 2016/17 due to Cabinet approved reductions that are to be effected on account of slower than expected spending. These reductions are not expected to impact on service delivery.

Expenditure on payments for capital assets for machinery and equipment increased between 2010/11 and 2013/14 due to the acquisition of Sunspace intellectual property in 2013/14 and the creation of the South African National Space Agency in 2011/12 to enable the country to launch its own communication satellites. Expenditure on transfers and subsidies is expected to decrease over the medium term as a result of the budget structure realignment that will take effect from 2014/15. The decrease is mainly due to the movement of the radio astronomy advances function from this programme to the *Research, Development and Support* programme. The programme had 24 vacancies in its funded establishment of 56 posts at the end of November 2013 as a result of natural attrition. These posts are expected to be filled over the medium term.

Programme 3: International Cooperation and Resources

Objectives

- Stimulate knowledge production, international technology transfer and enhanced innovation by securing R1.2 million in foreign science technology and human capital development funds for science, technology and innovation based socioeconomic development in South Africa by the end of March 2017.
- Increase international exposure for South African researchers and students to global knowledge and science, technology, and innovation networks through facilitating their participation in 116 specialist or joint technical workshops, policy dialogues, symposia or conferences by the end of March 2017.
- Contribute towards the shaping of global science, technology and innovation discourse, decision making and policy formulation, through leading 54 regional, continental and global initiatives by the end of March 2017.
- Support science technology and innovation capacity on the African continent to create conditions for the development of a knowledge based economy in Africa, through supporting 16 regional, continental and multilateral governance systems by the end of March 2017.
- Increase participation by South Africans in international human capital development opportunities to strengthen the South African national system of innovation, by:
  - enabling participation in 152 international research and innovation opportunities
  - supporting the participation of 4 989 South African researchers and students in international human capital development opportunities by the end of March 2017.

Subprogrammes

- *Multilateral Cooperation and Africa* seeks to advance and facilitate South Africa's participation in strategic international partnerships in science, technology and innovation to achieve shared economic and social development in the region and the continent. In 2012/13, South Africa's science, technology and innovation cooperation on multilateral platforms, especially those in the region and the continent, was enhanced. This work continued in 2013/14 through various projects and working groups. This subprogramme had a staff complement of 22 in 2013/14.
- *International Resources* works to increase the flow of international resources into the country by creating conditions for access to international science, technology and innovation skills and global projects. The focus will continue to be on managing the engagement with the European Union (EU) in pursuit of significant new financial support through the EU sector budget support and EU research and innovation programmes. In 2012/13, the department played an active role at the South Africa-EU Summit in Brussels. In 2013/14, R300 million in science, technology and innovation funds was secured from international partners for knowledge production, technology transfer, enhanced innovation and human capital development through agreed instruments. This subprogramme had a staff complement of 22 in 2013/14.
- *Overseas Bilateral Cooperation* promotes collaborative activities and secures resources in support of the national system of innovation from countries outside Africa, with a specific focus on accelerating the development of a knowledge driven economy. The key output for 2012/13, which continued into 2013/14, was the German-South Africa Year of Science programme, in which cooperation between the two countries was celebrated. Contact for cooperation with China and India was also initiated in 2013/14. This subprogramme had a staff complement of 20 in 2013/14.

Expenditure estimates

Table 34.9 International Cooperation and Resources

Subprogramme	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Multilateral Cooperation and Africa	27 642	26 692	24 790	25 045	-3.2%	25.2%	27 486	28 733	29 335	5.4%	23.0%
International Resources	39 853	42 610	44 716	50 948	8.5%	43.1%	54 983	57 494	57 782	4.3%	46.0%
Overseas Bilateral Cooperation	33 295	30 534	33 369	34 200	0.9%	31.8%	37 230	38 924	39 119	4.6%	31.1%
Total	**100 790**	**99 836**	**102 875**	**110 193**	**3.0%**	**100.0%**	**119 699**	**125 151**	**126 236**	**4.6%**	**100.0%**
Change to 2013 Budget estimate				(38 237)			(37 487)	(39 211)	(38 948)		
Economic classification											
Current payments	**51 118**	**48 222**	**56 550**	**58 640**	**4.7%**	**51.9%**	**65 095**	**64 102**	**64 882**	**3.4%**	**52.5%**
Compensation of employees	31 154	31 836	33 934	37 959	6.8%	32.6%	43 418	45 415	45 642	6.3%	35.8%
Goods and services	19 924	16 324	22 580	20 681	1.3%	19.2%	21 677	18 687	19 240	-2.4%	16.7%
of which:											
Administration fees	*191*	*76*	*1 101*	*129*	*-12.3%*	*0.4%*	*137*	*144*	*144*	*3.7%*	*0.1%*
Advertising	*341*	*116*	*627*	*415*	*6.8%*	*0.4%*	*490*	*511*	*514*	*7.4%*	*0.4%*
Assets less than the capitalisation threshold	*29*	*29*	*29*	*47*	*17.5%*	*–*	*–*	*–*	*–*	*-100.0%*	*–*
Catering: Departmental activities	*271*	*369*	*285*	*409*	*14.7%*	*0.3%*	*432*	*351*	*353*	*-4.8%*	*0.3%*
Communication	*1 150*	*956*	*565*	*1 674*	*13.3%*	*1.1%*	*1 775*	*1 557*	*1 565*	*-2.2%*	*1.4%*
Computer services	*425*	*354*	*54*	*146*	*-30.0%*	*0.2%*	*156*	*163*	*164*	*4.0%*	*0.1%*
Consultants and professional services: Business and advisory services	*143*	*158*	*848*	*231*	*17.3%*	*0.3%*	*245*	*256*	*257*	*3.6%*	*0.2%*
Consultants and professional services: Legal costs	*1 703*	*174*	*134*	*474*	*-34.7%*	*0.6%*	*502*	*–*	*–*	*-100.0%*	*0.2%*
Contractors	*25*	*74*	*–*	*502*	*171.8%*	*0.1%*	*–*	*–*	*–*	*-100.0%*	*0.1%*
Agency and support / outsourced services	*794*	*684*	*812*	*789*	*-0.2%*	*0.7%*	*1 287*	*621*	*624*	*-7.5%*	*0.7%*
Entertainment	*98*	*111*	*383*	*803*	*101.6%*	*0.3%*	*852*	*740*	*744*	*-2.5%*	*0.7%*
Inventory: Materials and supplies	*–*	*1 168*	*24*	*–*	*–*	*0.3%*	*–*	*–*	*–*	*–*	*–*
Inventory: Other supplies	*12*	*8*	*–*	*183*	*148.0%*	*–*	*195*	*204*	*205*	*3.9%*	*0.2%*
Consumable: Stationery, printing and office supplies	*415*	*259*	*537*	*678*	*17.8%*	*0.5%*	*–*	*–*	*–*	*-100.0%*	*0.1%*
Operating leases	*226*	*–*	*323*	*608*	*39.1%*	*0.3%*	*–*	*–*	*–*	*-100.0%*	*0.1%*
Property payments	*157*	*250*	*–*	*427*	*39.6%*	*0.2%*	*453*	*474*	*476*	*3.7%*	*0.4%*
Travel and subsistence	*10 000*	*8 235*	*10 303*	*9 508*	*-1.7%*	*9.2%*	*10 364*	*8 904*	*9 406*	*-0.4%*	*7.9%*
Operating payments	*317*	*821*	*1 042*	*945*	*43.9%*	*0.8%*	*1 003*	*1 050*	*1 055*	*3.7%*	*0.8%*
Venues and facilities	*3 627*	*2 471*	*5 502*	*2 713*	*-9.2%*	*3.5%*	*3 786*	*3 712*	*3 733*	*11.2%*	*2.9%*
Rental and hiring	*–*	*11*	*11*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*
Interest and rent on land	40	62	36	–	-100.0%	–	–	–	–	–	–
Transfers and subsidies	**49 192**	**51 112**	**45 707**	**51 553**	**1.6%**	**47.8%**	**54 604**	**61 049**	**61 354**	**6.0%**	**47.5%**
Departmental agencies and accounts	20 274	19 838	16 574	–	-100.0%	13.7%	–	–	–	–	–
Higher education institutions	6 417	5 612	13 788	–	-100.0%	6.2%	–	–	–	–	–
Public corporations and private enterprises	18 235	22 545	12 453	–	-100.0%	12.9%	–	–	–	–	–
Non-profit institutions	4 251	2 886	2 892	51 553	129.7%	14.9%	54 604	61 049	61 354	6.0%	47.5%
Households	15	231	–	–	-100.0%	0.1%	–	–	–	–	–
Payments for capital assets	**480**	**502**	**618**	**–**	**-100.0%**	**0.4%**	**–**	**–**	**–**	**–**	**–**
Machinery and equipment	480	502	618	–	-100.0%	0.4%	–	–	–	–	–
Total	**100 790**	**99 836**	**102 875**	**110 193**	**3.0%**	**100.0%**	**119 699**	**125 151**	**126 236**	**4.6%**	**100.0%**
Proportion of total programme expenditure to vote expenditure	**2.5%**	**2.3%**	**2.1%**	**1.8%**			**1.9%**	**1.7%**	**1.7%**		
Details of transfers and subsidies											
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	**20 274**	**19 838**	**16 574**	**–**	**-100.0%**	**13.7%**	**–**	**–**	**–**	**–**	**–**
Global science: Bilateral cooperation	9 500	11 500	9 600	–	-100.0%	7.4%	–	–	–	–	–
Global science: International resources	4 686	3 138	3 174	–	-100.0%	2.7%	–	–	–	–	–
Global science: African multilateral agreements	6 088	5 200	3 800	–	-100.0%	3.6%	–	–	–	–	–
Non-profit institutions											
Current	**4 251**	**2 886**	**2 892**	**51 553**	**129.7%**	**14.9%**	**54 604**	**61 049**	**61 354**	**6.0%**	**47.5%**
Global science: Bilateral cooperation	–	–	–	12 203	–	2.9%	12 935	13 530	13 598	3.7%	10.9%
Global science: International resources	4 143	2 886	2 892	31 650	96.9%	10.0%	33 549	39 025	39 220	7.4%	29.8%
Global science: African multilateral agreements	108	–	–	7 700	314.7%	1.9%	8 120	8 494	8 536	3.5%	6.8%
Higher education institutions											
Current	**6 417**	**5 612**	**13 788**	**–**	**-100.0%**	**6.2%**	**–**	**–**	**–**	**–**	**–**
Global science: International resources	4 549	3 112	10 188	–	-100.0%	4.3%	–	–	–	–	–
Global science: African multilateral agreements	1 868	2 500	3 600	–	-100.0%	1.9%	–	–	–	–	–

Table 34.9 International Cooperation and Resources

Details of transfers and subsidies	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	**18 235**	**22 037**	**12 453**	**–**	**-100.0%**	**12.7%**	**–**	**–**	**–**	**–**	**–**
Global science: Bilateral cooperation	1 700	1 500	2 000	–	-100.0%	1.3%	–	–	–	–	–
Global science: International resources	11 527	16 937	10 453	–	-100.0%	9.4%	–	–	–	–	–
Global science: African multilateral agreements	5 008	3 600	–	–	-100.0%	2.1%	–	–	–	–	–
Households											
Social benefits											
Current	**15**	**231**	**–**	**–**	**-100.0%**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Households	15	231	–	–	-100.0%	0.1%	–	–	–	–	–
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	**–**	**508**	**–**	**–**	**–**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Global science: International resources	–	508	–	–	–	0.1%	–	–	–	–	–

Personnel information

Table 34.10 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17		
International Cooperation and Resources			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	2013/14 - 2016/17	
Salary level	**56**	**–**	**53**	**33.9**	**0.6**	**56**	**38.0**	**0.7**	**56**	**43.4**	**0.8**	**56**	**45.4**	**0.8**	**56**	**45.6**	**0.8**	**–**	**100.0%**
1 – 6	2	–	2	0.3	0.2	2	0.6	0.3	2	0.7	0.3	2	0.7	0.3	2	0.7	0.4	–	3.6%
7 – 10	22	–	22	5.1	0.2	22	11.0	0.5	22	11.6	0.5	22	12.1	0.6	22	12.2	0.6	–	39.3%
11 – 12	16	–	14	10.1	0.7	16	12.4	0.8	16	13.1	0.8	16	13.7	0.9	16	13.8	0.9	–	28.6%
13 – 16	16	–	15	18.3	1.2	16	14.0	0.9	16	18.0	1.1	16	18.8	1.2	16	18.9	1.2	–	28.6%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term continues to be on engagement with the EU in pursuit of its sector budget support and research and innovation programmes; and managing bilateral relations and Africa-to-Africa engagements as well as multilateral engagements. The bulk of spending over the medium term will go towards transfers and subsidies to agencies and non-profit institutions. The aim is to increase South African participation in international human capital development opportunities, strengthen the national system of innovation by accessing 152 international research and innovation opportunities, and support the participation of 4 989 South African researchers and students in these opportunities. Funding for these activities is provided throughout all of the subprogrammes. To access the benefits of strategic sourcing, the following amounts were reprioritised from this programme to the *Administration* programme in 2012/13: R1.2 million from the *Multilateral Cooperation and Africa* subprogramme, R1.2 million from the *International Resources* subprogramme and R1.2 million from the *Overseas Bilateral Cooperation* subprogramme.

Overall expenditure increased between 2010/11 and 2013/14 to enhance projects aimed at strengthening bilateral and multilateral cooperation and leverage international resources for transfers for global science in the *International Resources* subprogramme. The programme had a funded and filled establishment of 56 posts at the end of November 2013.

Programme 4: Research Development and Support

Objectives

- Contribute to the development of demographically representative, high-level human capital capable of pursuing locally relevant, globally competitive research and innovation activities by:
  - increasing the total number of postgraduate research students awarded bursaries, as reflected in National Research Foundation reports, from 11 440 in 2014/15 to 14 880 in 2015/16 and to 14 880 in 2016/17
- Place 1000 graduates and students in department-funded work preparation programmes in scientific, engineering and technological institutions over the medium term.
- Ensure access to internationally comparable research and innovation infrastructure to generate new knowledge and train new researchers by:
  - increasing the number of research infrastructure grants from 60 in 2014/15 and 2015/16, to 70 in 2016/17
  - increasing the availability of bandwidth per South African National Research Network site from 2 800Mbps in 2014/15 to 3 500Mbps in 2015/16 and 2016/17.
- Support and promote research productivity through new knowledge and relevant training opportunities by:
  - increasing the total number of researchers awarded research grants through National Research Foundation managed programmes from 3 876 in 2014/15 to 4 539 in 2015/16 and 2016/17
  - increasing the number of Institute for Science accredited research articles published by National Research Foundation funded researchers from 5 700 in 2014/15 to 7 000 in 2015/16 and 2016/17.
- Strategically develop priority science areas in which South Africa enjoys a competitive advantage by increasing the number of MeerKAT antennae, as per Square Kilometre Array specification, by 4 in 2014/15, 27 in 2015/16 and 31 in 2016/17.
- Promote public engagement in science, technology and innovation by increasing the number of participants in science awareness and engagement programmes from 942 160 in 2014/15 to 979 000 in 2015/16 and to 1 200 000 in 2016/17.

Subprogrammes

- *Human Capital and Science Promotions* is discussed in more detail below.
- *Science Missions* promotes the development of research, production of scientific knowledge and human capital development in science areas in which South Africa enjoys a geographic advantage. In 2013/14, the Minister of Science and Technology launched the Bioprospecting and Product Development Consortium, comprising 16 institutions ranging from science councils to universities and civil society organisations. In 2014/15, the earth systems science unit within the subprogramme and the National Research Foundation will jointly host the second national conference on global change. This subprogramme had a staff complement of 13 in 2013/14.
- *Basic Science and Infrastructure* facilitates the strategic implementation of research and innovation equipment and infrastructure to promote knowledge production in areas of national priority to sustain research and development led innovation and promote the development of basic or foundational sciences such as physics, chemistry, biological and life sciences, geographic and geological sciences and human and social sciences. In 2012/13, more than 50 research infrastructure grants were awarded across a range of infrastructure categories, giving approximately 250 researchers and 2 500 students access to advanced scientific equipment and infrastructure. In 2013/14, approximately 60 research grants were awarded across the infrastructure categories. This subprogramme had a staff complement of 10 in 2013/14.
- *Astronomy* supports the development of astronomical sciences around a multi-wavelength research strategy and provides strategic guidance and support to relevant astronomy institutions in the implementation of the department's astronomy programmes. Of particular relevance are the Southern African Large Telescope, the MeerKAT, the High Energy Stereoscopic System, the African Very Long Baseline Interferometry Network, and the Square Kilometre Array projects. Funding for astronomy initiatives is channelled through the National Research Foundation. In 2013/14, 2 MeerKAT antennae were installed as per Square Kilometre Array specification. This subprogramme had a staff complement of 3 in 2013/14.

Expenditure estimates

Table 34.11 Research, Development and Support

Subprogramme	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Human Capital and Science Promotions	1 184 150	1 357 863	1 413 926	1 693 615	12.7%	60.3%	1 874 660	2 364 171	2 377 790	12.0%	54.1%
Science Missions	84 238	107 492	147 749	160 878	24.1%	5.3%	176 804	184 672	185 666	4.9%	4.6%
Basic Science and Infrastructure	476 481	510 764	561 350	723 497	14.9%	24.2%	774 088	1 018 309	1 023 421	12.3%	23.0%
Astronomy	23 642	27 212	243 598	655 842	202.7%	10.1%	678 210	732 974	736 790	4.0%	18.3%
Total	**1 768 511**	**2 003 331**	**2 366 623**	**3 233 832**	**22.3%**	**100.0%**	**3 503 762**	**4 300 126**	**4 323 667**	**10.2%**	**100.0%**
Change to 2013 Budget estimate				757 011			820 225	882 290	888 742		
Economic classification											
Current payments	**33 404**	**32 564**	**28 878**	**37 264**	**3.7%**	**1.4%**	**37 670**	**40 330**	**41 091**	**3.3%**	**1.0%**
Compensation of employees	22 016	21 619	21 179	26 165	5.9%	1.0%	27 502	29 150	29 352	3.9%	0.7%
Goods and services	11 380	10 899	7 677	11 099	-0.8%	0.4%	10 168	11 180	11 739	1.9%	0.3%
of which:											
Administration fees	*83*	*57*	*261*	*118*	*12.4%*	–	*173*	*186*	*190*	*17.2%*	–
Advertising	*609*	*343*	*457*	*59*	*-54.1%*	–	*37*	*39*	*39*	*-12.9%*	–
Assets less than the capitalisation threshold	*4*	*103*	*9*	*2*	*-20.6%*	–	–	–	–	*-100.0%*	–
Audit costs: External	*79*	–	*2*	*40*	*-20.3%*	–	–	–	–	*-100.0%*	–
Bursaries: Employees	–	–	–	*186*	–	–	–	–	–	*-100.0%*	–
Catering: Departmental activities	*63*	*59*	*231*	*560*	*107.1%*	–	*395*	*423*	*415*	*-9.5%*	–
Communication	*704*	*412*	*307*	*560*	*-7.3%*	–	*624*	*674*	*664*	*5.8%*	–
Computer services	*289*	*366*	–	*154*	*-18.9%*	–	*135*	*144*	*146*	*-1.8%*	–
Consultants and professional services: Business and advisory services	*2 451*	*184*	*5*	*1 047*	*-24.7%*	–	*1 046*	*1 059*	*1 151*	*3.2%*	–
Consultants and professional services: Infrastructure and planning	–	–	–	*4*	–	–	–	–	–	*-100.0%*	–
Consultants and professional services: Laboratory services	–	–	–	*22*	–	–	–	–	–	*-100.0%*	–
Consultants and professional services: Legal costs	–	–	–	*70*	–	–	*32*	*33*	*35*	*-20.6%*	–
Contractors	*339*	*7*	*17*	*271*	*-7.2%*	–	–	–	–	*-100.0%*	–
Agency and support / outsourced services	*337*	*2 382*	*860*	*373*	*3.4%*	–	*617*	*656*	*659*	*20.9%*	–
Entertainment	*101*	*522*	*8*	*56*	*-17.8%*	–	*74*	*87*	*54*	*-1.2%*	–
Inventory: Other supplies	–	–	–	*15*	–	–	*16*	*17*	*17*	*4.3%*	–
Consumable: Stationery, printing and office supplies	*927*	*235*	*312*	*1 317*	*12.4%*	–	–	–	–	*-100.0%*	–
Operating leases	*36*	*980*	*176*	*170*	*67.8%*	–	–	–	–	*-100.0%*	–
Property payments	–	*10*	–	–	–	–	–	–	–	–	–
Travel and subsistence	*4 174*	*2 717*	*3 907*	*5 120*	*7.0%*	*0.2%*	*5 401*	*6 194*	*6 426*	*7.9%*	*0.2%*
Operating payments	*344*	*176*	*70*	*368*	*2.3%*	–	*413*	*429*	*431*	*5.4%*	–
Venues and facilities	*840*	*2 346*	*1 054*	*587*	*-11.3%*	*0.1%*	*1 205*	*1 239*	*1 512*	*37.1%*	–
Rental and hiring	–	–	*1*	–	–	–	–	–	–	–	–
Interest and rent on land	8	46	22	–	-100.0%	–	–	–	–	–	–
Transfers and subsidies	**1 734 824**	**1 970 417**	**2 337 445**	**3 196 568**	**22.6%**	**98.6%**	**3 466 092**	**4 259 796**	**4 282 576**	**10.2%**	**99.0%**
Departmental agencies and accounts	1 417 268	1 615 337	1 961 364	2 915 975	27.2%	84.4%	3 168 155	3 947 479	3 968 697	10.8%	91.1%
Higher education institutions	30 687	31 138	52 005	–	-100.0%	1.2%	–	–	–	–	–
Public corporations and private enterprises	249 248	294 456	293 113	101 943	-25.8%	10.0%	204 045	213 479	214 546	28.2%	4.8%
Non-profit institutions	37 377	29 236	30 545	178 650	68.4%	2.9%	93 892	98 838	99 333	-17.8%	3.1%
Households	244	250	418	–	-100.0%	–	–	–	–	–	–
Payments for capital assets	**283**	**350**	**289**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Machinery and equipment	283	350	289	–	-100.0%	–	–	–	–	–	–
Payments for financial assets	**–**	**–**	**11**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**1 768 511**	**2 003 331**	**2 366 623**	**3 233 832**	**22.3%**	**100.0%**	**3 503 762**	**4 300 126**	**4 323 667**	**10.2%**	**100.0%**
Proportion of total programme expenditure to vote expenditure	**43.6%**	**45.5%**	**47.6%**	**52.2%**			**54.2%**	**56.9%**	**56.6%**		

Table 34.11 Research, Development and Support

Details of transfers and subsidies	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Households											
Other transfers to households											
Current	**200**	**250**	**418**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Households	–	–	22	–	–	–	–	–	–	–	–
Human and social development dynamics	200	125	125	–	-100.0%	–	–	–	–	–	–
Human resources development	–	125	245	–	–	–	–	–	–	–	–
Indigenous Knowledge System	–	–	26	–	–	–	–	–	–	–	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	**1 215 875**	**1 401 731**	**1 487 674**	**1 775 565**	**13.5%**	**62.7%**	**1 968 434**	**2 460 548**	**2 474 332**	**11.7%**	**56.5%**
Square Kilometre Array	12 624	10 787	11 842	12 458	-0.4%	0.5%	13 205	13 812	13 881	3.7%	0.3%
Astronomy	9 248	12 175	11 673	12 673	11.1%	0.5%	13 319	13 999	14 069	3.5%	0.4%
Human and social development dynamics	26 006	17 059	10 096	11 298	-24.3%	0.7%	9 976	10 435	10 487	-2.5%	0.3%
Human resources development	335 332	146 209	190 983	410 585	7.0%	11.6%	470 736	892 237	896 262	29.7%	17.4%
National Research Foundation	749 142	1 099 035	1 063 869	1 112 879	14.1%	42.9%	851 186	892 603	880 236	-7.5%	24.3%
Science awareness	33 924	32 859	48 733	–	-100.0%	1.2%	–	–	–	–	–
South African Research Chairs Initiative	–	19 400	60 385	74 045	–	1.6%	451 879	472 664	493 775	88.2%	9.7%
Strategic science platforms	49 264	64 207	90 093	141 627	42.2%	3.7%	158 133	164 798	165 622	5.4%	4.1%
Women in science	335	–	–	–	-100.0%	–	–	–	–	–	–
Capital	**201 393**	**213 606**	**473 690**	**1 140 410**	**78.2%**	**21.6%**	**1 199 721**	**1 486 931**	**1 494 365**	**9.4%**	**34.6%**
Square Kilometre Array	–	–	218 738	628 107	–	9.0%	647 793	701 082	704 587	3.9%	17.5%
Research and development infrastructure	201 393	213 606	254 952	512 303	36.5%	12.6%	551 928	785 849	789 778	15.5%	17.2%
Non-profit institutions											
Current	**34 377**	**29 236**	**30 545**	**88 211**	**36.9%**	**1.9%**	**93 892**	**98 838**	**99 333**	**4.0%**	**2.5%**
Academy of Science of South Africa	10 554	13 952	16 284	20 744	25.3%	0.7%	21 577	22 991	23 106	3.7%	0.6%
Human resources development	3 710	7 926	8 320	–	-100.0%	0.2%	–	–	–	–	–
Learnerships	3 029	–	–	–	-100.0%	–	–	–	–	–	–
Science awareness	4 231	4 893	5 150	61 467	144.0%	0.8%	65 955	69 195	69 541	4.2%	1.7%
Strategic science platforms	12 853	2 465	791	6 000	-22.4%	0.2%	6 360	6 652	6 686	3.7%	0.2%
Capital	**3 000**	**–**	**–**	**90 439**	**211.2%**	**1.0%**	**–**	**–**	**–**	**-100.0%**	**0.6%**
Cyber infrastructure	–	–	–	90 439	–	1.0%	–	–	–	-100.0%	0.6%
Research and development infrastructure	3 000	–	–	–	-100.0%	–	–	–	–	–	–
Higher education institutions											
Current	**15 116**	**23 526**	**39 508**	**–**	**-100.0%**	**0.8%**	**–**	**–**	**–**	**–**	**–**
Human resources development	7 087	590	1 198	–	-100.0%	0.1%	–	–	–	–	–
Science awareness	3 000	8 500	8 099	–	-100.0%	0.2%	–	–	–	–	–
Strategic science platforms	4 679	14 436	30 211	–	-100.0%	0.5%	–	–	–	–	–
Women in science	350	–	–	–	-100.0%	–	–	–	–	–	–
Capital	**15 571**	**7 612**	**12 497**	**–**	**-100.0%**	**0.4%**	**–**	**–**	**–**	**–**	**–**
Research and development infrastructure	15 571	7 612	12 497	–	-100.0%	0.4%	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	**28 490**	**19 921**	**15 017**	**–**	**-100.0%**	**0.7%**	**–**	**–**	**–**	**–**	**–**
Human and social development dynamics	2 000	–	–	–	-100.0%	–	–	–	–	–	–
Human resources development	6 500	4 001	–	–	-100.0%	0.1%	–	–	–	–	–
Science awareness	13 200	–	–	–	-100.0%	0.1%	–	–	–	–	–
Strategic science platforms	6 790	15 920	15 017	–	-100.0%	0.4%	–	–	–	–	–
Capital	**220 488**	**252 684**	**278 096**	**101 943**	**-22.7%**	**9.1%**	**204 045**	**213 479**	**214 546**	**28.2%**	**4.8%**
Cyber infrastructure	170 803	186 680	216 014	101 943	-15.8%	7.2%	204 045	213 479	214 546	28.2%	4.8%
Research and development infrastructure	49 685	66 004	62 082	–	-100.0%	1.9%	–	–	–	–	–
Households											
Social benefits											
Current	**44**	**–**	**–**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Households	44	–	–	–	-100.0%	–	–	–	–	–	–
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	**270**	**8 000**	**–**	**–**	**-100.0%**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Technology top 100 awards programme	270	–	–	–	-100.0%	–	–	–	–	–	–
Science awareness	–	8 000	–	–	–	0.1%	–	–	–	–	–
Capital	**–**	**13 851**	**–**	**–**	**–**	**0.1%**	**–**	**–**	**–**	**–**	**–**
Research and development infrastructure	–	13 851	–	–	–	0.1%	–	–	–	–	–

Personnel information

Table 34.12 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment														Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate								Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17			2013/14 - 2016/17
Research, Development and Support			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**47**	**–**	**41**	**21.2**	**0.5**	**44**	**26.2**	**0.6**	**47**	**27.5**	**0.6**	**47**	**29.2**	**0.6**	**47**	**29.4**	**0.6**	**2.2%**	**100.0%**
1 – 6	2	–	5	0.3	0.1	4	0.7	0.2	2	0.7	0.4	2	0.7	0.4	2	0.8	0.4	-20.6%	5.4%
7 – 10	7	–	6	5.9	1.0	7	1.5	0.2	7	1.6	0.2	7	1.6	0.2	7	1.7	0.2	–	15.1%
11 – 12	24	–	20	6.6	0.3	20	13.8	0.7	24	14.7	0.6	24	15.7	0.7	24	15.9	0.7	6.3%	49.7%
13 – 16	14	–	10	8.3	0.8	13	10.2	0.8	14	10.5	0.8	14	11.0	0.8	14	11.1	0.8	2.5%	29.7%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term will be on increasing the bursary amounts awarded to postgraduate students and on attracting more students, especially in the fields of astronomy, archaeology and palaeontology, as part of the policy to stimulate scientific research. The spending focus will also be on upgrading the national system of innovation infrastructure and equipment to increase the level of interest in research and development.

Over the same period, expenditure on transfers and subsidies is expected to increase significantly due to the modernisation of the science councils' infrastructure, and for the National Research Foundation's astronomy initiatives. There are also increases in the programme spending as a result of the budget programme structure realignment, which transferred the radio astronomy advances function from the *Technology Innovation* programme and the social development analysis function from the *Socio-Economic Innovation Partnerships* programme to this programme.

The programme had 3 vacancies in its funded establishment of 47 posts at the end of November 2013 as a result of natural attrition. The posts are expected to be filled over the medium term.

Subprogramme: Human Capital and Science Promotion

This subprogramme formulates and implements policies and strategies that address the availability of human capital for science, technology and innovation, and fundamental support for research activities. The subprogramme provides strategic direction and support to institutions mandated with human capital development and increased knowledge production, as well as interfacing with relevant stakeholders in this regard. The department has increased the number of postgraduate students funded through bursaries and the per capita level of support. Departmental bursary values increased by more than 30 per cent between 2008/09 and 2012/13, and this was accompanied by a 20 per cent rise in student numbers. In 2012/13, 3 076 researchers were funded as research grant-holders against a target of 2 600. By the end of September 2013, 2 896 had been funded against a target of 3 822. In addition, support for 33 science centres, the key infrastructure for driving science awareness and engagement, will increase over the medium term. This subprogramme had a staff complement of 17 and a budget of R1.7 billion in 2013/14.

Expenditure estimates

Table 34.13 Human Capital and Science Promotions

Economic classification	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Current payments	**13 375**	**12 339**	**10 581**	**13 895**	**1.3%**	**0.9%**	**13 327**	**14 481**	**14 870**	**2.3%**	**0.7%**
Compensation of employees	9 303	8 727	7 730	9 412	0.4%	0.6%	9 713	10 143	10 089	2.3%	0.5%
Goods and services	4 070	3 596	2 843	4 483	3.3%	0.3%	3 614	4 338	4 781	2.2%	0.2%
of which:											
Administration fees	*12*	*13*	*105*	*8*	*-12.6%*	–	*42*	*48*	*47*	*80.4%*	–
Advertising	*464*	*246*	*239*	*59*	*-49.7%*	–	*37*	*39*	*39*	*-12.9%*	–
Assets less than the capitalisation threshold	–	–	–	*2*	–	–	–	–	–	*-100.0%*	–
Catering: Departmental activities	*18*	*15*	*163*	*335*	*165.0%*	–	*249*	*259*	*260*	*-8.1%*	–
Communication	*262*	*127*	*136*	*257*	*-0.6%*	–	*273*	*285*	*284*	*3.4%*	–
Computer services	*134*	*185*	–	*88*	*-13.1%*	–	*67*	*70*	*72*	*-6.5%*	–
Consultants and professional services: Business and advisory services	*53*	–	–	*330*	*84.0%*	–	–	–	–	*-100.0%*	–
Contractors	*105*	*3*	–	*235*	*30.8%*	–	–	–	–	*-100.0%*	–
Agency and support / outsourced services	*215*	*2*	*83*	–	*-100.0%*	–	*164*	*172*	*173*	–	–
Entertainment	*15*	*13*	*2*	*11*	*-9.8%*	–	*12*	*14*	*14*	*8.4%*	–
Inventory: Other supplies	–	–	–	*15*	–	–	*16*	*17*	*17*	*4.3%*	–
Consumable: Stationery, printing and office supplies	*676*	*50*	*205*	*1 188*	*20.7%*	–	–	–	–	*-100.0%*	–
Operating leases	*10*	–	*56*	*97*	*113.3%*	–	–	–	–	*-100.0%*	–
Travel and subsistence	*1 174*	*873*	*1 279*	*1 635*	*11.7%*	*0.1%*	*1 859*	*2 490*	*2 598*	*16.7%*	*0.1%*
Operating payments	*289*	*9*	*61*	*158*	*-18.2%*	–	*166*	*189*	*190*	*6.3%*	–
Venues and facilities	*643*	*2 060*	*514*	*65*	*-53.4%*	*0.1%*	*729*	*755*	*1 087*	*155.7%*	–
Interest and rent on land	2	16	8	–	-100.0%	–	–	–	–	–	–
Transfers and subsidies	**1 170 708**	**1 345 490**	**1 403 266**	**1 679 720**	**12.8%**	**99.1%**	**1 861 333**	**2 349 690**	**2 362 920**	**12.0%**	**99.3%**
Departmental agencies and accounts	1 118 733	1 297 503	1 363 970	1 597 509	12.6%	95.2%	1 773 801	2 257 504	2 270 273	12.4%	95.1%
Higher education institutions	10 437	9 090	9 297	–	-100.0%	0.5%	–	–	–	–	–
Public corporations and private enterprises	19 970	12 001	–	–	-100.0%	0.6%	–	–	–	–	–
Non-profit institutions	21 524	26 771	29 754	82 211	56.3%	2.8%	87 532	92 186	92 647	4.1%	4.3%
Households	44	125	245	–	-100.0%	–	–	–	–	–	–
Payments for capital assets	**67**	**34**	**72**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Machinery and equipment	67	34	72	–	-100.0%	–	–	–	–	–	–
Payments for financial assets	**–**	**–**	**7**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**1 184 150**	**1 357 863**	**1 413 926**	**1 693 615**	**12.7%**	**100.0%**	**1 874 660**	**2 364 171**	**2 377 790**	**12.0%**	**100.0%**
Proportion of total subprogramme expenditure to programme expenditure	**67.0%**	**67.8%**	**59.7%**	**52.4%**			**53.5%**	**55.0%**	**55.0%**		

Personnel information

Table 34.14 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17		
Human Capital and Science Promotions			**Number**	**Cost**	**Unit Cost**	**Number**	**Cost**	**Unit Cost**	**Number**	**Cost**	**Unit Cost**	**Number**	**Cost**	**Unit Cost**	**Number**	**Cost**	**Unit Cost**	**2013/14 - 2016/17**	
Salary level	**17**	**–**	**17**	**7.7**	**0.6**	**17**	**9.4**	**0.6**	**17**	**9.7**	**0.6**	**17**	**10.1**	**0.6**	**17**	**10.1**	**0.6**	**–**	**100.0%**
1 – 6	2	–	2	0.1	0.1	2	0.1	0.1	2	0.1	0.1	2	0.1	0.1	2	0.1	0.16	–	11.8%
7 – 10	2	–	2	0.5	0.2	2	0.5	0.2	2	0.5	0.2	2	0.5	0.2	2	0.5	0.2	–	11.8%
11 – 12	9	–	9	4.0	0.5	9	5.7	0.6	9	6.0	0.7	9	5.7	0.6	9	5.7	0.6	–	52.9%
13 – 16	4	–	4	3.0	0.8	4	3.1	0.8	4	3.1	0.8	4	3.8	1.0	4	3.8	1.0	–	23.5%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term will be on increasing the value of bursaries awarded and increasing the number of students supported, as part of the policy goal to invest in human resources and train researchers. Expenditure on transfers and subsidies to the National Research Foundation in the medium term is expected to

increase at an average annual rate of 12.4 per cent, with the increase in spending expected to see the numbers of students supported increase from 11 440 in 2014/15 to 14 880 in 2016/17, as part of an active strategy to fund deserving students. Effective spending on the human capital programme is expected to yield benefits to the scientific community in respect of national competitiveness, entrepreneurship and scientific innovation.

Between 2010/11 and 2013/14, spending in the *Human Capital and Science Promotions* subprogramme was mainly on transfers for human resources development to support researchers and students pursuing postgraduate studies at honours, masters, doctoral and postdoctoral levels. Doctoral graduations rose by 59 per cent, from 1 181 in 2010 to 1 878 in 2012, through funding from the National Research Foundation. Spending on the Centre for High Performance Computing, the South African National Research Network, research and development infrastructure, and cyber infrastructure also increased due to an additional allocation provided in the 2013 Budget.

The subprogramme had a filled and funded establishment of 17 posts at the end of November 2013. The department is reviewing its human resource plan to align it with the service delivery model. Expenditure on compensation of employees is expected to increase at an average annual rate of 2.3 per cent over the medium term.

Programme 5: Socio Economic Innovation Partnerships

Objectives

- Inform and influence how science and technology can be used to transform and enhance rural and socioeconomic development, government planning and service delivery and the building of sustainable human settlements by creating, sustaining or improving 420 livelihood opportunities by the end of March 2016.
- Sustain niche high-potential research and development capabilities that improve the competitiveness of existing and emerging economic sectors and facilitate the development of new targeted industries with growth potential in aerospace, advanced manufacturing, chemicals, mining, advanced metals and ICT through:
  - funding or co-funding 255 masters and doctoral students in designated niche areas by the end of March 2015
  - funding or co-funding 150 interns in designated niche areas by the end of March 2015
  - funding or co-funding the development of 20 knowledge and innovation products (patents, prototypes, technology demonstrators and technology transfer packages) by the end of March 2015
  - funding 5 instruments in support of increased localisation, competitiveness and research and development led industry development by the end of March 2015.
- Identify, grow and sustain niche high potential science and technology investment capabilities for sustainable development and the greening of society and the economy.
- Enhance understanding and analysis that supports improvement in the functioning and performance of the national system of innovation through publishing reports and policy briefings by 31 March 2015.

Subprogrammes

- *Sector Innovation and Green Economy* provides support for research and development-led growth in strategic sectors of the economy to support a transition to a green economy by facilitating the implementation of high impact science and technology interventions; identifying and initiating science and technology programmes that support the growth of the environmental technologies and services sector in South Africa; and facilitating policy and strategy development on research and development interventions that support the growth of the ICT sector. In 2012/13, 294 masters and PhD students were funded or co-funded; there were 2 additions to the intellectual property portfolio; and 132 scientific and technical papers were accepted for publication. This subprogramme had a staff complement of 19 in 2013/14.
- *Innovation for Inclusive Development* supports the experimentation of technology and science based innovations for tackling poverty. It focuses on mature technologies that do not yet have widespread

applications but are seen as having the potential to achieve government's broad development objectives. In 2012/13, 23 learning interventions were generated, including seminars, briefs and papers. By the end of November 2013, the knowledge product for government planning and service delivery improvement through innovation in water had been identified. This subprogramme had a staff complement of 15 in 2013/14.

- *Science and Technology Investment* leads and supports the development of science and technology indicators; monitors the performance of national science and technology expenditure and planning; and leads the implementation of section 11D of the Income Tax Act (1962). This entails conducting an annual research and development survey, measuring innovation; developing science and technology indicators; developing databases and information systems, such as the research information management system and national science and technology expenditure tables; and implementing section 11D of the Income Tax Act (1962) to promote private sector research and development investment. 5 policy briefings or reports had been finalised by the end of March 2013/14. One such report was the 2011/12 report on performance of research and development tax incentives. This subprogramme had a staff complement of 17 in 2013/14.
- *Technology Localisation, Beneficiation and Advanced Manufacturing* advances strategic medium and long term sustainable economic growth and sector development priorities and government service delivery through investing in the long term knowledge generation capabilities of the national system of innovation in targeted innovation areas and undertaking focused efforts that exploit knowledge capabilities for economic benefit. In 2012/13, the technology localisation programme provided 50 technology assistance packages; 227 masters and doctoral students were supported in the niche areas of advanced manufacturing, chemicals, advanced metals, mining and ICT; 16 patents, prototypes, technology demonstrators and technology transfer packages were added to the intellectual property portfolio; and 1 769 small and medium enterprises (SME) and potential entrepreneurs received technology support through the technology stations programme and institutes for advanced tooling. By the end of November 2013, 132 interns and 226 masters and PhD students were being funded or co-funded. This subprogramme had a staff complement of 14 in 2013/14.

Expenditure estimates

Table 34.15 Socio-Economic Innovation Partnerships

Subprogramme	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Sector Innovation and Green Economy	703 593	713 315	769 742	813 646	5.0%	60.1%	856 361	859 437	903 630	3.6%	51.2%
Innovation for Inclusive Development	254 134	287 461	315 974	332 309	9.4%	23.8%	353 919	370 422	372 004	3.8%	21.3%
Science and Technology Investment	32 446	30 935	31 976	24 646	-8.8%	2.4%	28 341	29 537	29 685	6.4%	1.7%
Technology Localisation, Beneficiation and Advanced Manufacturing	110 191	127 348	127 669	315 809	42.0%	13.6%	325 525	541 953	545 317	20.0%	25.8%
Total	**1 100 364**	**1 159 059**	**1 245 361**	**1 486 410**	**10.5%**	**100.0%**	**1 564 146**	**1 801 349**	**1 850 636**	**7.6%**	**100.0%**
Change to 2013 Budget estimate				(191 191)			(300 510)	(249 563)	(210 531)		
Economic classification											
Current payments	**26 955**	**30 749**	**32 398**	**40 863**	**14.9%**	**2.6%**	**43 471**	**45 206**	**47 510**	**5.2%**	**2.6%**
Compensation of employees	18 568	21 342	25 240	31 928	19.8%	1.9%	33 881	35 428	37 422	5.4%	2.1%
Goods and services	8 358	9 372	7 113	8 935	2.3%	0.7%	9 590	9 778	10 088	4.1%	0.6%
of which:											
Administration fees	*78*	*30*	*272*	*103*	*9.7%*	*–*	*112*	*116*	*116*	*4.0%*	*–*
Advertising	*698*	*471*	*98*	*301*	*-24.4%*	*–*	*330*	*339*	*341*	*4.2%*	*–*
Assets less than the capitalisation threshold	*1*	*19*	*7*	*6*	*81.7%*	*–*	*–*	*–*	*–*	*-100.0%*	*–*
Catering: Departmental activities	*83*	*75*	*104*	*250*	*44.4%*	*–*	*253*	*261*	*267*	*2.2%*	*–*
Communication	*747*	*690*	*448*	*809*	*2.7%*	*0.1%*	*933*	*1 122*	*980*	*6.6%*	*0.1%*
Computer services	*409*	*501*	*–*	*62*	*-46.7%*	*–*	*66*	*69*	*69*	*3.6%*	*–*
Consultants and professional services: Business and advisory services	*716*	*165*	*–*	*3 875*	*75.6%*	*0.1%*	*4 131*	*4 103*	*4 035*	*1.4%*	*0.2%*
Contractors	*288*	*2*	*–*	*130*	*-23.3%*	*–*	*–*	*–*	*–*	*-100.0%*	*–*
Agency and support / outsourced services	*2 498*	*4 515*	*2 617*	*61*	*-71.0%*	*0.2%*	*177*	*187*	*187*	*45.3%*	*–*
Entertainment	*9*	*16*	*11*	*76*	*103.6%*	*–*	*68*	*67*	*95*	*7.7%*	*–*
Inventory: Other supplies	*–*	*–*	*1*	*6*	*–*	*–*	*6*	*5*	*5*	*-5.9%*	*–*
Consumable supplies	*–*	*23*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*
Consumable: Stationery, printing and office supplies	*104*	*370*	*164*	*299*	*42.2%*	*–*	*–*	*–*	*–*	*-100.0%*	*–*

Table 34.15 Socio-Economic Innovation Partnerships

Economic classification	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Operating leases	*84*	*11*	*379*	*196*	*32.6%*	–	–	–	–	*-100.0%*	–
Travel and subsistence	*2 315*	*2 079*	*2 745*	*2 391*	*1.1%*	*0.2%*	*2 671*	*2 718*	*3 146*	*9.6%*	*0.2%*
Training and development	–	–	*4*	–	–	–	–	–	–	–	–
Operating payments	*48*	*20*	*138*	*34*	*-10.9%*	–	*36*	*39*	*39*	*4.7%*	–
Venues and facilities	*280*	*385*	*125*	*336*	*6.3%*	–	*807*	*752*	*808*	*34.0%*	–
Interest and rent on land	29	35	45	–	-100.0%	–	–	–	–	–	–
Transfers and subsidies	**1 073 112**	**1 127 488**	**1 212 474**	**1 445 547**	**10.4%**	**97.3%**	**1 520 675**	**1 756 143**	**1 803 126**	**7.6%**	**97.4%**
Departmental agencies and accounts	278 644	305 331	292 067	513 291	22.6%	27.8%	546 139	772 706	774 570	14.7%	38.9%
Higher education institutions	7 241	12 188	4 633	–	-100.0%	0.5%	–	–	–	–	–
Public corporations and private enterprises	779 922	802 791	909 326	932 256	6.1%	68.6%	974 536	983 437	1 028 556	3.3%	58.5%
Non-profit institutions	7 023	7 103	6 429	–	-100.0%	0.4%	–	–	–	–	–
Households	282	75	19	–	-100.0%	–	–	–	–	–	–
Payments for capital assets	**296**	**639**	**489**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Machinery and equipment	296	639	489	–	-100.0%	–	–	–	–	–	–
Payments for financial assets	**1**	**183**	**–**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**1 100 364**	**1 159 059**	**1 245 361**	**1 486 410**	**10.5%**	**100.0%**	**1 564 146**	**1 801 349**	**1 850 636**	**7.6%**	**100.0%**
Proportion of total programme expenditure to vote expenditure	**27.2%**	**26.3%**	**25.0%**	**24.0%**			**24.2%**	**23.8%**	**24.2%**		
Details of transfers and subsidies											
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	**278 644**	**305 331**	**292 067**	**513 291**	**22.6%**	**27.8%**	**546 139**	**772 706**	**774 570**	**14.7%**	**38.9%**
Advanced manufacturing technology strategy	23 181	25 526	–	–	-100.0%	1.0%	–	–	–	–	–
Human Sciences Research Council	224 887	238 609	247 820	258 867	4.8%	19.4%	276 010	288 706	290 149	3.9%	16.6%
Information Communication Technology	1 000	–	–	–	-100.0%	–	–	–	–	–	–
Local manufacturing capacity	6 050	8 166	7 000	101 947	156.4%	2.5%	113 264	224 334	225 456	30.3%	9.9%
Local systems of innovation	–	–	–	108 022	–	2.2%	107 563	208 003	209 043	24.6%	9.4%
Quality of life nuclear technologies	660	660	–	–	-100.0%	–	–	–	–	–	–
Resource based industries	500	–	–	–	-100.0%	–	–	–	–	–	–
Research information management system	13 870	10 606	14 010	4 519	-31.2%	0.9%	6 850	7 165	7 201	16.8%	0.4%
Science and technology indicators	7 900	8 494	9 019	9 488	6.3%	0.7%	10 057	10 520	10 573	3.7%	0.6%
Technology for poverty alleviation	596	2 192	4 180	30 448	271.1%	0.7%	32 395	33 978	32 148	1.8%	1.9%
Technology for sustainable livelihoods	–	11 078	10 038	–	–	0.4%	–	–	–	–	–
Non-profit institutions											
Current	**7 023**	**7 103**	**6 429**	**–**	**-100.0%**	**0.4%**	**–**	**–**	**–**	**–**	**–**
Advanced manufacturing technology strategy	–	80	–	–	–	–	–	–	–	–	–
Local manufacturing capacity	917	–	–	–	-100.0%	–	–	–	–	–	–
Local systems of innovation	5 150	6 000	5 000	–	-100.0%	0.3%	–	–	–	–	–
Resource based industries	956	1 023	1 429	–	-100.0%	0.1%	–	–	–	–	–
Higher education institutions											
Current	**7 241**	**12 188**	**4 633**	**–**	**-100.0%**	**0.5%**	**–**	**–**	**–**	**–**	**–**
Advanced manufacturing technology strategy	–	1 505	550	–	–	–	–	–	–	–	–
Local manufacturing capacity	5 606	–	–	–	-100.0%	0.1%	–	–	–	–	–
Local systems of innovation	1 535	1 700	2 568	–	-100.0%	0.1%	–	–	–	–	–
Resource based industries	100	515	1 515	–	-100.0%	–	–	–	–	–	–
Technology for sustainable livelihoods	–	8 468	–	–	–	0.2%	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	**94 138**	**104 464**	**166 574**	**150 260**	**16.9%**	**10.3%**	**148 796**	**155 733**	**156 513**	**1.4%**	**9.1%**
Advanced manufacturing technology strategy	22 234	12 262	42 444	42 548	24.2%	2.4%	48 281	50 502	50 755	6.1%	2.9%
Information Communication Technology	11 200	18 352	17 270	21 168	23.6%	1.4%	19 258	20 144	20 245	-1.5%	1.2%
Local manufacturing capacity	907	14 377	13 862	10 000	122.6%	0.8%	–	–	–	-100.0%	0.1%
Local systems of innovation	650	–	–	–	-100.0%	–	–	–	–	–	–
Resource based industries	35 941	36 980	44 070	41 043	4.5%	3.2%	43 506	45 507	45 735	3.7%	2.6%
Technology for poverty alleviation	9 544	16 136	23 366	–	-100.0%	1.0%	–	–	–	–	–
Technology for sustainable livelihoods	13 662	6 357	25 562	35 501	37.5%	1.6%	37 751	39 580	39 778	3.9%	2.3%

Table 34.15 Socio-Economic Innovation Partnerships

Details of transfers and subsidies	Audited outcome			Adjusted appropri-ation	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Households											
Social benefits											
Current	**282**	**75**	**19**	**–**	**-100.0%**	**–**	**–**	**–**	**–**	**–**	**–**
Households	282	75	19	–	-100.0%	–	–	–	–	–	–
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	**–**	**11 158**	**–**	**–**	**–**	**0.2%**	**–**	**–**	**–**	**–**	**–**
Advanced manufacturing technology strategy	–	9 414	–	–	–	0.2%	–	–	–	–	–
Local systems of innovation	–	1 203	–	–	–	–	–	–	–	–	–
Resource based industries	–	541	–	–	–	–	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Public corporations - subsidies on products and production											
Current	**685 784**	**687 169**	**742 752**	**781 996**	**4.5%**	**58.1%**	**825 740**	**827 704**	**872 043**	**3.7%**	**49.3%**
Council for Scientific and Industrial Research	685 784	687 169	742 752	781 996	4.5%	58.1%	825 740	827 704	872 043	3.7%	49.3%

Personnel information

Table 34.16 Details of approved establishment and personnel numbers according to salary level[1]

	Number of posts estimated for 31 March 2014		Number and cost[2] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17	2013/14 - 2016/17	
Socio-Economic Innovation Partnerships			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**58**	**–**	**55**	**25.2**	**0.5**	**58**	**31.9**	**0.6**	**58**	**33.9**	**0.6**	**58**	**35.4**	**0.6**	**58**	**37.4**	**0.6**	**–**	**100.0%**
1 – 6	7	–	5	0.8	0.2	7	1.5	0.2	7	1.6	0.2	7	1.7	0.2	7	1.8	0.3	–	12.1%
7 – 10	10	–	12	1.8	0.1	10	3.4	0.3	10	3.6	0.4	10	3.7	0.4	10	4.0	0.4	–	17.2%
11 – 12	24	–	22	11.2	0.5	24	12.8	0.5	24	13.6	0.6	24	14.2	0.6	24	15.0	0.6	–	41.4%
13 – 16	17	–	16	11.5	0.7	17	14.2	0.8	17	15.1	0.9	17	15.8	0.9	17	16.7	1.0	–	29.3%

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.
2. Rand million.

Expenditure trends

The spending focus over the medium term will be on providing support for research and development led growth of strategic sectors of the economy to support a transition to a green economy. This is done mainly through the *Sector Innovation and Green Economy* subprogramme. Spending is expected to facilitate the implementation of high impact science and technology interventions; identify and initiate science and technology programmes that support the growth of the environmental technologies and services sector in South Africa; and facilitate policy and strategy development on research and development interventions that support the growth of the ICT sector. Investment in the environmental sector is crucial to attaining a competitive advantage in nascent industries. The potential to develop domestic industry and grow export earnings is significant.

Over the medium term, expenditure is expected to increase due to the expansion of the activities in the *Technology Localisation Beneficiation and Advanced Manufacturing* subprogramme, which is funded through the economic competitiveness support package.

As part of an active strategy to maximise the involvement of the private sector, expenditure increased significantly between 2010/11 and 2013/14, with additional allocations of R59 million in 2012/13, and R260 million in 2013/14 from the economic competitiveness support package for industrial partnerships to plan for ICT industry innovation partnerships to strengthen support for SMMEs. Transfers to industrial partnerships are set to decrease by R100 million in 2014/15 and transfers to the Council for Scientific and Industrial

Research are also set to decrease by R40 million in 2015/16 due to Cabinet approved reductions as a result of slow spending. These budget reductions are not expected to impact negatively on service delivery because of departmental realignment. The programme had a funded and filled establishment of 58 posts at the end of November 2013.

Public entities and other agencies

Council for Scientific and Industrial Research

Mandate and goals

The Council for Scientific and Industrial Research was established in terms of the Scientific Research Council Act (1988) and is mandated to foster industrial and scientific development in the national interest through multidisciplinary research and technological innovation.

The council's strategic goals over the medium term are to:

- build a track record of the demonstrable impact in research and development through an established programme of relevant research and development in impact areas and flagship programmes
- build and transform human capital to ensure adequate capacity, and contribute to the national skills base
- strengthen the science, engineering and technology base and perform relevant research and development
- transfer technology to entrepreneurs, the private sector and public sector stakeholders, and build skilled human capital
- enhance financial sustainability and ensure good corporate governance and corporate citizenship.

Selected performance indicators

Table 34.17 Council for Scientific and Industrial Research

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Percentage of science engineering and technology staff who are black per year	Built environment	Outcome 5: A skilled and capable workforce to support an inclusive growth path	52.6% (1 560)	54.4% (1 537)	48% (1 540)	49% (1 557)	50% (1 575)	50.2% (1 620)	55% (1 645)
Total number of staff with doctorates	Meraka Institute		299	293	301	310	328	340	355
Number of publication equivalents per year	Centres and implementation units		576	530	503	555	575	595	620
Number of new technology demonstrator equivalents per year	Materials science and manufacturing	Outcome 4: Decent employment through inclusive economic growth	37	37	33	28	29	31	32
Private sector and international income per year	Meraka Institute		R328m	R320m	R365m	R401m	R428m	R456m	R485m
Number of new patents granted per year	Materials science and manufacturing		14	34	35	16	17	18	19

Programmes/activities/objectives

Table 34.18 Council for Scientific and Industrial Research

	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	257 993	245 536	259 397	289 021	3.9%	13.3%	305 940	327 774	349 582	6.5%	12.5%
Biosciences	127 921	136 295	121 233	139 557	2.9%	6.6%	146 007	156 331	166 743	6.1%	6.0%
Built environment	136 029	137 994	164 791	188 398	11.5%	7.8%	197 590	211 610	225 720	6.2%	8.1%
Centres and implementation units	418 662	425 972	442 353	514 736	7.1%	22.7%	536 486	574 457	612 870	6.0%	22.0%
Defence, peace, safety and security	347 484	376 348	420 184	482 427	11.6%	20.4%	505 211	541 149	577 362	6.2%	20.7%
Materials science and manufacturing	169 144	170 139	217 993	252 543	14.3%	10.1%	263 624	282 278	301 126	6.0%	10.8%
Meraka Institute	158 897	209 324	219 335	252 607	16.7%	10.5%	264 253	283 118	302 141	6.2%	10.8%
Natural resources and the environment	144 721	154 594	181 270	209 327	13.1%	8.6%	218 765	234 314	250 008	6.1%	9.0%
Total expense	**1 760 851**	**1 856 202**	**2 026 556**	**2 328 616**	**9.8%**	**100.0%**	**2 437 876**	**2 611 031**	**2 785 552**	**6.2%**	**100.0%**

Expenditure estimates

Table 34.19 Council for Scientific and Industrial Research

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**1 259 389**	**1 364 949**	**1 485 342**	**1 535 271**	6.8%	69.3%	**1 662 780**	**1 798 858**	**1 930 458**	7.9%	66.7%
Sale of goods and services other than capital assets	1 195 817	1 280 289	1 408 837	1 479 930	7.4%	65.8%	1 625 768	1 761 561	1 892 137	8.5%	65.1%
of which:											
Sales by market establishment	*1 195 817*	*1 280 289*	*1 408 837*	*1 479 930*	*7.4%*	*65.8%*	*1 625 768*	*1 761 561*	*1 892 137*	*8.5%*	*65.1%*
Other non-tax revenue	63 572	84 660	76 505	55 341	-4.5%	3.5%	37 012	37 297	38 321	-11.5%	1.6%
Transfers received	**535 357**	**556 837**	**594 478**	**838 996**	**16.2%**	**30.7%**	**825 740**	**867 703**	**913 693**	**2.9%**	**33.3%**
Total revenue	**1 794 746**	**1 921 786**	**2 079 820**	**2 374 266**	**9.8%**	**100.0%**	**2 488 520**	**2 666 561**	**2 844 151**	**6.2%**	**100.0%**
Expenses											
Current expenses	**1 760 851**	**1 856 202**	**2 026 556**	**2 328 616**	**9.8%**	**100.0%**	**2 437 876**	**2 611 031**	**2 785 552**	**6.2%**	**100.0%**
Compensation of employees	946 485	1 015 735	1 110 208	1 199 279	8.2%	53.7%	1 284 173	1 378 945	1 472 713	7.1%	52.5%
Goods and services	768 236	794 189	866 732	1 077 133	11.9%	43.9%	1 099 411	1 175 622	1 254 117	5.2%	45.4%
Depreciation	42 067	41 859	44 940	52 204	7.5%	2.3%	54 292	56 464	58 722	4.0%	2.2%
Interest, dividends and rent on land	4 063	4 419	4 676	–	-100.0%	0.2%	–	–	–	–	–
Total expenses	**1 760 851**	**1 856 202**	**2 026 556**	**2 328 616**	**9.8%**	**100.0%**	**2 437 876**	**2 611 031**	**2 785 552**	**6.2%**	**100.0%**
Surplus/(Deficit)	**33 895**	**65 584**	**53 264**	**45 650**	**10.4%**		**50 644**	**55 530**	**58 598**	**8.7%**	
Statement of financial position											
Carrying value of assets	392 498	428 960	482 007	501 485	8.5%	26.7%	532 598	564 879	600 759	6.2%	33.8%
of which:											
Acquisition of assets	*91 308*	*101 132*	*99 474*	*71 682*	*-7.7%*	*5.3%*	*85 405*	*88 745*	*94 602*	*9.7%*	*5.2%*
Investments	1 419	5 372	6 940	5 372	55.9%	0.3%	5 372	5 372	5 372	–	0.3%
Inventory	89 549	67 501	112 231	79 390	-3.9%	5.1%	94 569	103 589	113 937	12.8%	6.0%
Receivables and prepayments	118 509	179 250	303 192	195 841	18.2%	11.6%	207 592	223 047	237 768	6.7%	13.3%
Cash and cash equivalents	1 009 403	969 095	1 001 874	760 372	-9.0%	54.9%	756 539	753 925	751 002	-0.4%	46.6%
Non-current assets held for sale	94 890	–	–	–	-100.0%	1.4%	–	–	–	–	–
Taxation	400	–	–	–	-100.0%	0.0%	–	–	–	–	–
Total assets	**1 706 668**	**1 650 178**	**1 906 244**	**1 542 460**	**-3.3%**	**100.0%**	**1 596 670**	**1 650 812**	**1 708 838**	**3.5%**	**100.0%**
Accumulated surplus/(deficit)	540 267	580 158	633 422	679 072	7.9%	36.0%	729 716	785 246	843 846	7.5%	46.7%
Capital and reserves	763	–	–	–	-100.0%	0.0%	–	–	–	–	–
Deferred income	57 365	49 639	56 999	–	-100.0%	2.3%	–	–	–	–	–
Trade and other payables	1 097 803	1 012 121	1 205 476	854 141	-8.0%	61.1%	856 967	855 003	853 997	-0.0%	52.7%
Provisions	10 470	8 260	10 347	9 247	-4.1%	0.6%	9 987	10 563	10 995	5.9%	0.6%
Total equity and liabilities	**1 706 668**	**1 650 178**	**1 906 244**	**1 542 460**	**-3.3%**	**100.0%**	**1 596 670**	**1 650 812**	**1 708 838**	**3.5%**	**100.0%**

Personnel information

Table 34.20 Council for Scientific and Industrial Research

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17	2013/14 - 2016/17	
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**2 491**	**2 491**	**2 414**	**1 110.2**	**0.5**	**2 491**	**1 199.3**	**0.5**	**2 504**	**1 284.2**	**0.5**	**2 539**	**1 378.9**	**0.5**	**2 553**	**1 472.7**	**0.6**	**7.1%**	**100.0%**
1 – 6	264	264	264	28.9	0.1	264	31.3	0.1	264	33.5	0.1	264	36.0	0.1	264	38.4	0.1	7.1%	10.5%
7 – 10	883	883	857	216.7	0.3	883	234.1	0.3	888	250.7	0.3	901	269.2	0.3	905	287.5	0.3	7.1%	35.5%
11 – 12	813	813	777	386.2	0.5	813	417.1	0.5	817	446.7	0.5	836	479.6	0.6	844	512.2	0.6	7.1%	32.8%
13 – 16	519	519	504	452.0	0.9	519	488.3	0.9	523	522.9	1.0	526	561.4	1.1	528	599.6	1.1	7.1%	20.8%
17 – 22	12	12	12	26.3	2.2	12	28.5	2.4	12	30.5	2.5	12	32.7	2.7	12	35.0	2.9	7.1%	0.5%

1. Rand million.

Expenditure trends

The Council for Scientific and Industrial Research derives its revenue from budget and ring fenced grants from the Department of Science and Technology, contract research and development income from local and

international public and private sectors, and income from intellectual property and technology transfer efforts. Contract income is projected to increase over the medium term through additional research and development work. Due to Cabinet approved reductions brought about by slow spending, transfers to the council will decrease by R40 million in 2015/16. However, these reductions are not expected to impact on service delivery.

The spending focus over the medium term will be on strengthening the council's science, engineering, and technology base, building and transforming human capital, performing relevant research and development, and transferring skills and technology. R800.4 million has been invested in scientific equipment and infrastructure since 2008/09, and this is set to continue, albeit at marginally decreased levels because of the Cabinet approved reductions.

With its mandate to strengthen the science, engineering and technology base and perform relevant research and development, the council's work is labour intensive. Expenditure on compensation of employees therefore constitutes 52.5 per cent of the total budget allocation over the medium term, with expenditure on goods and services making up 45.4 per cent of the total. The council had a funded and filled establishment of 2 491 posts at the end of November 2013 and this is expected to grow to 2 553 over the medium term as candidates with specialised science, engineering and technology skills are recruited. Expenditure on consultants is dependent on the nature of research contracts secured and whether or not particular scientific or engineering skills are present within the organisation.

In 2013/14, the council introduced flagships as a vehicle for implementing its growth and impact strategy. Flagships are large scale, impact driven, complementary projects in the development and implementation stages, and are directed at the needs of a particular stakeholder who has invested R75 million in the projects.

National Research Foundation

Mandate and goals

The National Research Foundation was established in terms of the National Research Foundation Act (1998), which mandates the foundation to promote and support research in all fields of humanities, the social and natural sciences, engineering and technology, and indigenous knowledge. The foundation provides research funding and platforms through national facilities and science engagement activities. It also performs an agency function on behalf of the Department of Science and Technology, and is a service provider to several other government departments in matters related to research.

The foundation's strategic goals over the medium term are to:

- promote internationally competitive research as the basis for a knowledge economy
- grow a representative science and technology workforce in South Africa
- provide cutting edge research, technology and innovation platforms
- operate world class evaluation and funding systems
- contribute to a vibrant national innovation system.

Selected performance indicators

Table 34.21 National Research Foundation

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Percentage of South African global international science index outputs per year	Research and innovation support and advancement	Outcome 5: A skilled and capable workforce to support an inclusive growth path	52% (9 228)	57% (10 918)	58% (12 553)	59% (12 000)	60% (12 500)	65% (13 000)	67% (13 200)
Total number of international science index outputs in publications published by the foundation's funded researchers	Research and innovation support and advancement		3 935	4 777	5 188	5 500	5 700	6 000	6 200
Number of doctoral graduations per million of the population per year	Science engagement and corporate relations	Outcome 1: Improved quality of basic education	21 286	27 608	33 356	32 185	33 863	33 313	34 421
Number of grant and rating applications processed through NRF Online per year	Research and innovation support and advancement	Outcome 5: A skilled and capable workforce to support an inclusive growth path	220	233	210	217	228	241	267

Table 34.21 National Research Foundation

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of rated researchers funded by the National Research Foundation per year	Research and innovation support and advancement	Outcome 5: A skilled and capable workforce to support an inclusive growth path	523	494	523	596	626	640	685
Number of postgraduate students supported per year	National research facilities: Nuclear, biodiversity, conservation and environment		8 626	7 668	8 839	11 208	11 440	11 580	11 600
Number of learners reached through science advancement activities per year	National research facilities: Nuclear, biodiversity, conservation and environment	Outcome 1: Improved quality of basic education	284 137	269 092	659 635	641 777	664 247	673 197	680 000
Number of educators reached through science advancement per year	National research facilities: Nuclear, biodiversity, conservation and environment		179 829	188 679	42 973	18 185	19 863	21 313	22 000
Number of international science index publications emanating from the facilities[1] per year	National research facilities: Nuclear, biodiversity, conservation and environment	Outcome 5: A skilled and capable workforce to support an inclusive growth path	220	233	271	240	250	260	270
Number of postgraduate students making use of facilities[1] for training per year	National research facilities: Nuclear, biodiversity, conservation and environment		523	494	491	555	565	570	575

1. Refers to the National Research Foundation's facilities.

Programmes/activities/objectives

Table 34.22 National Research Foundation

	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	43 395	78 513	56 839	77 091	21.1%	2.9%	79 490	83 112	88 327	4.6%	2.6%
Science engagement and corporate relations	58 489	64 229	106 798	156 091	38.7%	4.3%	153 635	157 086	126 837	-6.7%	4.8%
Research and innovation support and advancement	1 271 029	1 173 441	1 211 876	1 930 836	15.0%	63.2%	2 011 873	2 042 493	2 107 156	3.0%	65.3%
National research facilities: Nuclear, biodiversity, conservation and environment	330 251	331 785	316 446	371 180	4.0%	15.7%	371 419	379 044	398 207	2.4%	12.3%
National research facilities: Astronomy	246 450	319 782	271 689	385 724	16.1%	14.0%	468 035	501 489	509 708	9.7%	15.0%
Total expense	**1 949 614**	**1 967 750**	**1 963 648**	**2 920 922**	**14.4%**	**100.0%**	**3 084 452**	**3 163 224**	**3 230 235**	**3.4%**	**100.0%**

Expenditure estimates

Table 34.23 National Research Foundation

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**1 269 703**	**1 085 906**	**1 236 839**	**2 032 958**	17.0%	58.5%	**1 604 110**	**1 258 099**	**1 247 864**	-15.0%	47.6%
Sale of goods and services other than capital assets	917 034	929 682	1 188 846	1 810 761	25.5%	50.1%	1 523 607	1 153 625	1 170 734	-13.5%	43.9%
of which:											
Sales by market establishment	*39 496*	*37 796*	*48 542*	*51 189*	*9.0%*	*1.9%*	*53 330*	*54 780*	*56 002*	*3.0%*	*1.7%*
Other sales	*877 538*	*891 886*	*1 140 304*	*1 759 572*	*26.1%*	*48.2%*	*1 470 277*	*1 098 845*	*1 114 732*	*-14.1%*	*42.2%*
Other non-tax revenue	352 669	156 224	47 993	222 197	-14.3%	8.5%	80 503	104 474	77 130	-29.7%	3.7%
Transfers received	**769 513**	**895 661**	**918 290**	**1 370 644**	**21.2%**	**41.5%**	**1 565 365**	**1 856 110**	**1 905 247**	**11.6%**	**52.4%**
Total revenue	**2 039 216**	**1 981 567**	**2 155 129**	**3 403 602**	**18.6%**	**100.0%**	**3 169 475**	**3 114 209**	**3 153 111**	**-2.5%**	**100.0%**
Expenses											
Current expenses	**739 534**	**801 025**	**838 208**	**1 058 536**	**12.7%**	**39.4%**	**1 131 565**	**1 196 966**	**1 227 548**	**5.1%**	**37.2%**
Compensation of employees	388 703	404 977	439 788	533 368	11.1%	20.3%	612 608	651 548	694 026	9.2%	20.1%
Goods and services	311 619	355 778	354 552	472 657	14.9%	17.1%	460 693	484 628	470 092	-0.2%	15.2%
Depreciation	38 718	39 999	43 521	52 451	10.6%	2.0%	58 232	60 758	63 398	6.5%	1.9%
Interest, dividends and rent on land	494	271	347	60	-50.5%	0.0%	32	32	32	-18.9%	0.0%
Transfers and subsidies	**1 210 080**	**1 166 725**	**1 125 440**	**1 862 386**	**15.5%**	**60.6%**	**1 952 887**	**1 966 258**	**2 002 687**	**2.5%**	**62.8%**
Total expenses	**1 949 614**	**1 967 750**	**1 963 648**	**2 920 922**	**14.4%**	**100.0%**	**3 084 452**	**3 163 224**	**3 230 235**	**3.4%**	**100.0%**
Surplus/(Deficit)	**89 602**	**13 817**	**191 481**	**482 680**	**75.3%**		**85 023**	**(49 015)**	**(77 124)**	**-154.3%**	

Table 34.23 National Research Foundation

Statement of financial position	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Carrying value of assets	507 429	557 216	749 537	1 220 061	34.0%	35.8%	1 641 876	1 944 868	2 237 758	22.4%	59.2%
of which:											
Acquisition of assets	*119 000*	*112 852*	*239 600*	*522 975*	*63.8%*	*11.2%*	*480 048*	*363 750*	*356 288*	*-12.0%*	*15.1%*
Investments	38 157	35 054	32 650	32 650	-5.1%	1.7%	32 650	32 650	32 650	–	1.1%
Inventory	3 684	3 384	5 253	5 800	16.3%	0.2%	6 000	6 500	6 500	3.9%	0.2%
Receivables and prepayments	540 282	720 328	807 330	710 528	9.6%	34.2%	704 528	700 832	696 418	-0.7%	24.2%
Cash and cash equivalents	795 424	360 062	605 774	522 808	-13.1%	28.0%	473 404	398 404	352 401	-12.3%	15.3%
Defined benefit plan assets	–	183	–	–	–	0.0%	–	–	–	–	–
Total assets	**1 884 976**	**1 676 227**	**2 200 544**	**2 491 847**	**9.8%**	**100.0%**	**2 858 458**	**3 083 254**	**3 325 727**	**10.1%**	**100.0%**
Accumulated surplus/(deficit)	64 549	152	(8 110)	4 054	-60.3%	0.8%	2 467	1 084	277	-59.1%	0.1%
Capital and reserves	38 150	44 947	52 357	52 357	11.1%	2.3%	52 357	52 357	52 357	–	1.8%
Capital reserve fund	506 329	556 112	748 445	1 218 961	34.0%	35.7%	1 640 776	1 943 768	2 236 658	22.4%	59.2%
Finance lease	1 617	1 728	1 785	1 713	1.9%	0.1%	1 308	1 200	1 050	-15.1%	0.0%
Deferred income	1 095 956	1 001 702	1 328 473	1 136 635	1.2%	56.0%	1 084 770	1 008 847	960 523	-5.5%	36.3%
Trade and other payables	68 175	71 586	74 921	78 127	4.6%	3.6%	76 780	75 998	74 862	-1.4%	2.6%
Provisions	110 200	–	2 673	–	-100.0%	1.5%	–	–	–	–	–
Total equity and liabilities	**1 884 976**	**1 676 227**	**2 200 544**	**2 491 847**	**9.8%**	**100.0%**	**2 858 458**	**3 083 254**	**3 325 727**	**10.1%**	**100.0%**
Contingent liabilities	1 599 599.0	1 710 109.0	2 815 758.0	2 900 000.0			2 900 000.0	2 900 000.0	2 900 000.0		

Personnel information

Table 34.24 National Research Foundation

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment														Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate								Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17			2013/14 - 2016/17	
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**1 461**	**1 461**	**1 236**	**439.8**	**0.4**	**1 270**	**533.4**	**0.4**	**1 270**	**612.6**	**0.5**	**1 270**	**651.5**	**0.5**	**1 270**	**694.0**	**0.5**	**9.2%**	**100.0%**
1 – 6	266	266	271	28.3	0.1	239	29.3	0.1	239	33.7	0.1	239	35.8	0.1	239	38.1	0.2	9.2%	18.8%
7 – 10	594	594	490	123.9	0.3	483	148.8	0.3	483	170.9	0.4	483	181.7	0.4	483	193.6	0.4	9.2%	38.0%
11 – 12	411	411	338	157.2	0.5	365	185.3	0.5	365	212.8	0.6	365	226.3	0.6	365	241.1	0.7	9.2%	28.7%
13 – 16	183	183	130	109.2	0.8	176	154.7	0.9	176	177.7	1.0	176	189.0	1.1	176	201.4	1.1	9.2%	13.9%
17 – 22	7	7	7	21.1	3.0	7	15.3	2.2	7	17.5	2.5	7	18.6	2.7	7	19.9	2.8	9.2%	0.6%

1. Rand million.

Expenditure trends

The National Research Foundation receives approximately 45 per cent of its revenue from contract income and sales and interest, while 55 per cent is received in the form of government transfers over the medium term. The foundation's own revenue increased between 2010/11 and 2013/14, due to an increase in contract income. If one excludes the Square Kilometre Array funding, contract income will remain stable in 2014/15 as the figures are based on confirmed agreements only.

The spending focus over the medium term will be on increasing the number of postgraduate students and researchers in science, technology and innovation through the human capacity development excellence pipeline; and continuing modernisation of infrastructure, particularly high quality national facilities to attract international researchers. Additional funding of R300 million in 2014/15 and R540 million in 2015/16 is allocated for the Square Kilometre Array project as this was not included in the MTEF allocation before 2013/14 as designated income. Approximately 78 per cent of the foundation's total capital expenditure over the medium term will go towards the completion of the construction of the MeerKAT antennae, a major part of the current phase of the Square Kilometre Array project. Work on the MeerKAT entails designing, testing, constructing and commissioning 64 Gregorian dishes with the costs including appropriate systems, land and infrastructure, site operations and the telescope array. The installation of the dishes is expected to be completed by 2016/17.

Expenditure on compensation of employees increased at an average annual rate of 11.1 per cent between 2010/11 and 2013/14, primarily due to the expansion of directed initiatives and programmes, including the South African Research Chairs Initiative, which receives approximately R400 million per year through the *Research and Innovation Support and Advancement* programme; the advancement of the Square Kilometre Array project; and additional contract funding allocated by the Department of Science and Technology through a single agreement over three years for human capacity building. Other factors influencing increased expenditure included spending on urgent infrastructure needs such as MeerKAT dish installation and human capital development, national research equipment, and human capacity bursaries and assistance for needy students. Where appropriate, the Square Kilometre Array project makes use of the foundation's own specialist expertise. Appropriate additional services have been procured for the remainder of the project to ensure timeous delivery.

The foundation has a funded establishment of 1 461 posts, of which 191 were vacant at the end of November 2013 due to a scarcity of the requisite skills. Of these, 60 vacancies exist in the Square Kilometre Array due to newly created, mainly technical posts introduced for the ramp up of MeerKAT. The number of posts filled is expected to remain at 1 270 over the medium term. R359 million has been allocated over the medium term for spending on consultants who provide specialist services, mainly relating to the Square Kilometre Array project.

Academy of Science of South Africa

Mandate and goals

The Academy of Science of South Africa was established under the Academy of Science of South Africa Act (2001). Its mandate is to promote outstanding achievements in all fields of scientific enquiry, grant recognition for excellence and provide evidence based scientific advice to government and other stakeholders.

The academy's strategic goals over the medium term are to:

- recognise scholarly achievement and excellence in the application of scientific thinking for the benefit of society
- mobilise members to contribute their expertise in the service of society
- conduct systematic and evidence based studies on issues of national importance and produce authoritative reports that have significant impact on policy making
- promote the development of an indigenous system of South African research publications, increasing their quality, visibility, accessibility and impact
- publish science focused periodicals that will showcase the best of Southern African research to a wide national and international audience
- develop productive partnerships with national, regional and international organisations with a view to building capacity in science and its application within the national system of innovation
- create diversified sources of funding for sustainable functioning and the growth of a national academy
- communicate effectively with relevant stakeholders through various media and forums.

Performance indicators

Table 34.25 Academy of Science of South Africa

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of council meetings held per year	Administration	Outcome 9: A responsive, accountable, effective and efficient local government system	4	4	4	4	4	4	4
Number of national scholarly editors forums held per year	Administration	Outcome 6: An efficient, competitive and responsive economic infrastructure network	1	1	1	1	1	1	1
Number of exhibitions at science events per year	Communication	Outcome 1: Improved quality of basic education	7	14	8	8	8	8	8
Number of collaborative activities with other science academies per year	Liaison	Outcome 11: Create a better south Africa and contribute to a better and safer Africa and better world	8	10	10	12	12	12	12

Table 34.25 Academy of Science of South Africa

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of evidence-based reports produced per year	Policy advisory programme	Outcome 2: A long and healthy life for all South Africans	5	5	3	3	3	3	3
Number of issues of South African Journal of Science published per year	Publications	Outcome 5: A skilled and capable workforce to support an inclusive growth path	6	6	6	6	6	6	6
Number of issues of Quest magazine published per year	Publications	Outcome 1: Improved quality of basic education	4	4	4	4	4	4	4
Number of new journal titles added to open access platforms per year	Scholarly publishing programme	Outcome 5: A skilled and capable workforce to support an inclusive growth path	10	7	6	10	10	10	10

Programmes/activities/objectives

Table 34.26 Academy of Science of South Africa

	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	3 987	4 171	4 532	4 507	4.2%	21.0%	4 883	5 118	5 322	5.7%	21.3%
Communication	1 354	1 327	1 210	1 429	1.8%	6.5%	1 508	1 589	1 674	5.4%	6.6%
Liaison	3 970	3 054	3 268	3 503	-4.1%	16.8%	3 603	3 798	3 906	3.7%	15.9%
Policy advisory programme	4 527	3 932	2 904	2 607	-16.8%	17.1%	2 695	2 863	3 060	5.5%	12.0%
Publications	2 990	4 208	3 925	3 661	7.0%	18.1%	3 858	4 016	4 089	3.8%	16.8%
Scholarly publishing programme	3 799	3 390	3 807	6 000	16.5%	20.6%	6 000	6 600	6 960	5.1%	27.4%
Total expense	**20 627**	**20 082**	**19 646**	**21 707**	**1.7%**	**100.0%**	**22 547**	**23 984**	**25 011**	**4.8%**	**100.0%**

Expenditure estimates

Table 34.27 Academy of Science of South Africa

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**3 438**	**2 084**	**1 863**	**746**	-39.9%	9.9%	**750**	**754**	**756**	0.4%	3.2%
Sale of goods and services other than capital assets	2 765	1 549	758	328	-50.9%	6.6%	332	336	338	1.0%	1.4%
of which:											
Administrative fees	*82*	*105*	*72*	*78*	*-1.7%*	*0.4%*	*82*	*86*	*88*	*4.1%*	*0.4%*
Sales by market establishment	*2 683*	*1 444*	*686*	*250*	*-54.7%*	*6.2%*	*250*	*250*	*250*	–	*1.1%*
Other non-tax revenue	673	535	1 105	418	-14.7%	3.4%	418	418	418	–	1.8%
Transfers received	**17 455**	**18 058**	**17 703**	**20 964**	**6.3%**	**90.1%**	**21 797**	**23 231**	**24 255**	**5.0%**	**96.8%**
Total revenue	**20 892**	**20 142**	**19 566**	**21 710**	**1.3%**	**100.0%**	**22 547**	**23 985**	**25 011**	**4.8%**	**100.0%**
Expenses											
Current expenses	**20 627**	**20 082**	**19 646**	**21 707**	**1.7%**	**100.0%**	**22 547**	**23 984**	**25 011**	**4.8%**	**100.0%**
Compensation of employees	7 867	9 103	9 070	9 425	6.2%	43.3%	10 090	10 634	11 198	5.9%	44.3%
Goods and services	12 760	10 979	10 576	12 282	-1.3%	56.7%	12 457	13 350	13 813	4.0%	55.7%
Total expenses	**20 627**	**20 082**	**19 646**	**21 707**	**1.7%**	**100.0%**	**22 547**	**23 984**	**25 011**	**4.8%**	**100.0%**
Surplus/(Deficit)	**265**	**60**	**(80)**	**3**	**-77.5%**		**–**	**1**	**–**	**-100.0%**	
Tax payment	–	–	–	–	-4.1%	16.5%	–	–	–	3.7%	16.1%
Statement of financial position											
Carrying value of assets	1 190	857	602	602	-20.3%	6.8%	304	201	201	-30.6%	2.9%
of which:											
Acquisition of assets	*83*	*55*	*16*	*23*	*-34.8%*	*0.4%*	*80*	*56*	*60*	*37.7%*	*0.5%*
Loans	145	145	–	–	-100.0%	0.6%	–	–	–	–	–
Accrued investment interest	416	1 074	2 700	32	-57.5%	8.5%	32	32	32	–	0.3%
Receivables and prepayments	–	62	458	3 097	–	6.9%	–	–	–	-100.0%	5.9%
Cash and cash equivalents	9 717	9 065	9 294	9 323	-1.4%	77.1%	9 792	9 792	9 792	1.6%	90.9%
Total assets	**11 469**	**11 203**	**13 054**	**13 054**	**4.4%**	**100.0%**	**10 128**	**10 025**	**10 025**	**-8.4%**	**100.0%**
Accumulated surplus/(deficit)	5 028	5 088	5 008	–	-100.0%	31.9%	–	–	–	–	–
Capital and reserves	5 390	5 390	5 390	10 407	24.5%	54.0%	9 403	9 300	9 300	-3.7%	89.5%
Deferred income	496	–	1 264	–	-100.0%	3.5%	–	–	–	–	–
Trade and other payables	77	362	1 020	2 284	209.6%	7.3%	–	–	–	-100.0%	4.4%
Provisions	478	363	372	363	-8.8%	3.3%	725	725	725	25.9%	6.1%
Total equity and liabilities	**11 469**	**11 203**	**13 053**	**13 054**	**4.4%**	**100.0%**	**10 128**	**10 025**	**10 025**	**-8.4%**	**100.0%**

Personnel information

Table 34.28 Academy of Science of South Africa

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment														Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate								Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17			2013/14 - 2016/17	
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**21**	**21**	**21**	**9.1**	**0.4**	**21**	**9.4**	**0.4**	**22**	**10.1**	**0.5**	**23**	**10.6**	**0.5**	**23**	**11.2**	**0.5**	**5.9%**	**100.0%**
1 – 6	1	1	–	–	–	1	0.1	0.1	1	0.1	0.1	1	0.1	0.1	1	0.1	0.1	5.1%	4.5%
7 – 10	8	8	8	1.7	0.2	8	2.0	0.3	8	2.1	0.3	8	1.9	0.2	8	2.0	0.2	-0.4%	36.0%
11 – 12	7	7	11	5.7	0.5	7	3.4	0.5	7	3.0	0.4	8	3.6	0.4	8	3.8	0.5	3.5%	33.7%
13 – 16	5	5	2	1.6	0.8	5	3.9	0.8	6	4.8	0.8	6	5.1	0.8	6	5.3	0.9	10.8%	25.8%

1. Rand million.

Expenditure trends

The Academy of Science of South Africa's main source of revenue is transfers from government, with a small amount of income generated from short term contract funding, membership fees, subscription fees and interest.

The spending focus over the medium term will be on the academy's administration and governance, liaison, evidence based policy advisory work, publications, and scholarly publishing programmes. The academy aims to develop an indigenous system of high quality, visible, accessible and impactful South African research publications. 18 South African Journal of Science issues, 12 Quest magazine editions and 9 evidence based reports are expected to be published over the medium term. The academy expects to sustain good corporate governance practices and achieve clean unqualified audits, implement an open access platform and recognise and promote excellence in science through fundamental and applied research. The bulk of the allocation over this period will go towards compensation of employees and related goods and services, as it did between 2010/11 and 2013/14, in order to sustain good corporate governance practices and provide evidence based scientific advice to government and other stakeholders.

The academy had a funded and filled establishment of 21 posts in 2013/14. The number of posts is expected to grow to 23 over the medium term to meet the expected labour demands of policy advisory programmes and administration and liaison.

Human Sciences Research Council

Mandate and goals

The Human Sciences Research Council was established in 1968 to undertake, promote and coordinate research in the human and social sciences, and operates in terms of the Human Sciences Research Council Act (2008).

The council is mandated to:

- initiate, undertake and foster strategic, basic and applied research in human sciences, address developmental challenges in South Africa and elsewhere by gathering, analysing and publishing data relevant to such challenges, especially through projects linked to public sector oriented collaborative programmes
- inform the effective formulation and monitoring of policy, and evaluate how it is implemented
- stimulate public debate through the effective dissemination of fact based research results
- help to build research capacity and infrastructure for the human sciences
- foster research collaboration, networks and institutional linkages
- respond to the needs of vulnerable and marginalised groups in society through research and analysis of developmental issues, thus contributing to the improvement of the quality of their lives
- develop and make available data sets underpinning research, policy development and public discussion of developmental issues
- develop new and improved methodologies for use in the development of this kind of data set

- undertake or commission research on any subject in the field of the human sciences, and to charge fees for research conducted or services rendered at the request of others.

The council serves as a knowledge hub for research based solutions to inform human and social development, and is one of the statutory research councils operating in the national system of innovation. It also has a cross-cutting responsibility, addressing priorities of several other government departments. The council's priorities are thus aligned with broader national and governmental objectives.

The council's strategic goals over the medium term are to:

- advance social sciences and humanities for public use by initiating, undertaking and fostering basic and applied research in human and social sciences, and geopolitical issues
- contribute to development and social progress in Africa by conducting research, and analysing and publishing data that aims to address developmental challenges locally, regionally and globally
- contribute to the development of a skilled and capable workforce in South Africa and elsewhere in Africa by providing opportunities for masters and doctoral candidates as well as postdoctoral fellows on attachment from universities
- preserve its library holdings through digitisation and preserved data sets from data collected by its researchers and share it with others for further analysis
- effect transformation at senior levels of the organisation in terms of gender and race to reflect the national demographic
- improve and implement effective and efficient systems of financial management and good corporate governance.

Selected performance indicators

Table 34.29 Human Sciences Research Council

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of peer reviewed publications in an internationally accredited scientific journal, per senior researcher per year	Research, development and innovation	Outcome 5: A skilled and capable workforce to support an inclusive growth path	2	2	2	2	2	2	2
Number of non-peer reviewed journal articles produced by the council researchers per year	Research, development and innovation		–[1]	4	5	5	7	8	9
Number of recognised books with at least one council researcher listed as author or co-author published per year	Research, development and innovation		–[1]	20	33	45	45	50	50
Number of book chapters published from commissioning per year	Research, development and innovation		4	4	4	4	6	6	8
Number of policy briefs produced by council researchers and published by the council per year	Research, development and innovation		5	5	8	14	15	18	20

1. There is no historical data because this is a new indicator.

Programmes/activities/objectives

Table 34.30 Human Sciences Research Council

R thousand	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure			Average growth rate (%)	Expen-diture/ total: Average (%)
	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	167 688	176 489	179 928	163 934	-0.8%	44.0%	215 953	226 925	237 724	13.2%	45.4%
Research, development and Innovation	189 106	203 839	251 501	237 954	8.0%	56.0%	248 710	254 949	266 677	3.9%	54.6%
Total expense	**356 794**	**380 328**	**431 429**	**401 888**	**4.0%**	**100.0%**	**464 663**	**481 874**	**504 401**	**7.9%**	**100.0%**

Expenditure estimates

Table 34.31 Human Sciences Research Council

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**151 804**	**172 172**	**210 778**	**178 258**	5.5%	45.2%	**188 652**	**193 168**	**200 510**	4.0%	41.2%
Sale of goods and services other than capital assets	127 964	146 885	183 430	156 289	6.9%	38.9%	160 359	163 239	168 837	2.6%	35.2%
of which:											
Administrative fees	*81*	*87*	*155*	–	*-100.0%*	*0.0%*	*181*	*192*	*204*	–	*0.0%*
Sales by market establishment	*125 315*	*144 188*	*180 728*	*152 971*	*6.9%*	*38.2%*	*156 545*	*159 247*	*164 631*	*2.5%*	*34.4%*
Other sales	*2 568*	*2 610*	*2 547*	*3 318*	*8.9%*	*0.7%*	*3 633*	*3 800*	*4 002*	*6.4%*	*0.8%*
Other non-tax revenue	23 840	25 287	27 348	21 969	-2.7%	6.3%	28 293	29 929	31 674	13.0%	6.0%
Transfers received	**201 028**	**213 290**	**221 518**	**223 630**	**3.6%**	**54.8%**	**276 010**	**288 706**	**303 890**	**10.8%**	**58.8%**
Total revenue	**352 832**	**385 462**	**432 296**	**401 888**	**4.4%**	**100.0%**	**464 662**	**481 874**	**504 401**	**7.9%**	**100.0%**
Expenses											
Current expenses	**356 794**	**380 328**	**431 428**	**374 425**	**1.6%**	**98.3%**	**435 370**	**451 234**	**472 351**	**8.1%**	**93.5%**
Compensation of employees	185 038	189 275	214 153	192 716	1.4%	49.8%	225 394	236 090	247 371	8.7%	48.6%
Goods and services	155 182	178 262	203 795	170 943	3.3%	45.0%	197 561	202 197	211 477	7.4%	42.2%
Depreciation	11 997	13 280	9 384	9 100	-8.8%	2.8%	10 665	11 117	11 589	8.4%	2.3%
Interest, dividends and rent on land	4 577	(489)	4 096	1 666	-28.6%	0.6%	1 750	1 830	1 914	4.7%	0.4%
Transfers and subsidies	**–**	**–**	**–**	**27 463**	**–**	**1.7%**	**29 293**	**30 640**	**32 050**	**5.3%**	**6.5%**
Total expenses	**356 794**	**380 328**	**431 428**	**401 888**	**4.0%**	**100.0%**	**464 663**	**481 874**	**504 401**	**7.9%**	**100.0%**
Surplus/(Deficit)	**(3 962)**	**5 134**	**868**	**–**	**-100.0%**		**(1)**	**–**	**–**	**–**	
Statement of financial position											
Carrying value of assets	185 721	191 661	188 661	189 711	0.7%	67.2%	194 997	201 952	217 512	4.7%	66.8%
of which:											
Acquisition of assets	*4 433*	*9 277*	*6 449*	*712*	*-45.6%*	*1.8%*	*5 565*	*6 722*	*17 048*	*188.2%*	*2.4%*
Investments	1 070	1 198	100	106	-53.8%	0.2%	111	117	124	5.4%	0.0%
Inventory	4 413	4 844	6 149	6 035	11.0%	1.9%	6 325	6 630	6 997	5.1%	2.2%
Receivables and prepayments	31 248	32 633	42 777	45 375	13.2%	13.5%	47 699	50 228	52 884	5.2%	16.3%
Cash and cash equivalents	32 928	73 554	46 512	40 346	7.0%	16.9%	42 768	44 703	49 103	6.8%	14.7%
Taxation	–	4 064	–	–	–	0.3%	–	–	–	–	–
Total assets	**255 380**	**307 954**	**284 199**	**281 573**	**3.3%**	**100.0%**	**291 901**	**303 630**	**326 619**	**5.1%**	**100.0%**
Accumulated surplus/(deficit)	20 614	25 748	24 825	18 267	-3.9%	7.9%	24 082	24 402	25 850	12.3%	7.7%
Capital and reserves	144 404	154 925	154 925	154 925	2.4%	54.1%	154 925	159 589	174 591	4.1%	53.5%
Finance lease	4 978	1 404	975	544	-52.2%	0.7%	573	604	636	5.4%	0.2%
Deferred income	40 828	74 383	48 736	51 465	8.0%	18.9%	54 244	57 174	60 204	5.4%	18.5%
Trade and other payables	24 268	32 131	29 224	29 296	6.5%	10.2%	29 784	32 274	34 409	5.5%	10.4%
Taxation	2 400	–	837	884	-28.3%	0.4%	932	982	1 034	5.4%	0.3%
Provisions	17 888	19 363	24 677	26 192	13.6%	7.8%	27 361	28 605	29 895	4.5%	9.3%
Total equity and liabilities	**255 380**	**307 954**	**284 199**	**281 573**	**3.3%**	**100.0%**	**291 901**	**303 630**	**326 619**	**5.1%**	**100.0%**

Personnel information

Table 34.32 Human Sciences Research Council

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17		
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	2013/14 - 2016/17	
Salary level	**570**	**571**	**563**	**214.2**	**0.4**	**558**	**214.1**	**0.4**	**568**	**225.4**	**0.4**	**568**	**236.1**	**0.4**	**568**	**247.4**	**0.4**	**4.9%**	**100.0%**
1 – 6	172	172	170	19.3	0.1	170	17.5	0.1	170	18.2	0.1	170	19.0	0.1	170	20.0	0.1	4.6%	30.1%
7 – 10	174	174	174	44.6	0.3	167	47.1	0.3	174	49.5	0.3	174	51.9	0.3	174	54.4	0.3	5.0%	30.5%
11 – 12	144	145	140	72.6	0.5	142	72.7	0.5	144	76.5	0.5	144	80.1	0.6	144	83.9	0.6	4.9%	25.4%
13 – 16	78	78	77	75.0	1.0	77	72.8	0.9	78	76.5	1.0	78	80.0	1.0	78	83.8	1.1	4.8%	13.7%
17 – 22	2	2	2	2.6	1.3	2	4.1	2.1	2	4.8	2.4	2	5.0	2.5	2	5.3	2.6	8.7%	0.4%

1. Rand million.

Expenditure trends

The Human Sciences Research Council is funded by a government grant, which makes up just under 60 per cent of its income, and by revenue from research contracts in fields in which the council has widely recognised expertise.

The spending focus over the medium term will be on funding research that serves the public, contributes to good governance and public service delivery, and helps to address the challenges of poverty and inequality. Spending will also be focused on upgrading and maintaining the council's building and infrastructure upgrades to improve the quality of research facilities. Research and administrative expenses are expected to support more large scale, longitudinal and cross sectional studies to support government's monitoring and evaluation mandate; more innovative and collaborative research dissemination work; infrastructure, including staff, for data curation and dissemination; and activities aimed at enhancing inter-institutional collaboration and capacity enhancement nationally and globally.

Total expenditure is set to increase over the medium term due to the promotion of an African research agenda, following the incorporation of the Africa Institute of South Africa into the Human Sciences Research Council. Spending on consultants is mainly due to the entity using community members for survey research work to ensure local capacity development and employment creation, and because of cultural and language factors.

Between 2010/11 and 2013/14, spending on compensation of employees comprised 49.9 per cent of the total expenditure and increased in line with inflation. This enabled the council, as a research driven organisation, to supply researchers, and research capacity development to the government and to take part in funded cooperation agreements. The council had a funded and filled establishment of 506 posts at the end of November 2013. This staff complement is expected to remain constant over the medium term.

South African National Space Agency

Mandate and goals

The South African National Space Agency was established under the South African National Space Agency Act (2008) and became operational in December 2010. The agency is broadly required to promote the peaceful use of space, foster international cooperation in space related activities and facilitate the creation of an environment that is conducive to space technology and industrial development. The agency's strategic priorities are aligned with those of the Department of Science and Technology, and it derives its mandate from the national space strategy, as approved by Cabinet in 2008.

The agency's strategic goals over the medium term are to:

- deliver world class and efficient services that yield social and economic benefits
- conduct cutting edge research and development and innovation in space science, communications, navigation and space physics
- develop human capital and promote transformation in the sector
- contribute to a globally competitive national space industry
- advance scientific, engineering and technological competencies and capabilities through human capital development, outreach programmes and infrastructure development
- strengthen South Africa's presence in the global space arena.

Selected performance indicators

Table 34.33 South African National Space Agency

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Amount of data acquired and archived in all forms (scenes) per year	Earth observation	Outcome 5: A skilled and capable workforce to support an inclusive growth path	–[1]	4 000	4 200	4 000	4 000	4 500	5 000
Amount of data distributed (scenes) per year	Earth observation		–[1]	40 000	42 000	44 000	70 000	75 000	80 000
Number of mission launch activities supported per year	Space operation		–[1]	20	20	24	27	31	33
Number of international science index articles published per researcher per year	Space science		–[2]	–[2]	–[2]	2	2	3	4

Table 34.33 South African National Space Agency

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of students or interns financially supported and/or trained per year	Space science	Outcome 5: A skilled and capable workforce to support an inclusive growth path	–[1]	15	25	25	40	40	40
Number of short courses conducted per year	Space science		–[2]	–[2]	–[2]	8	10	10	10
Number of learners reached through direct and specific engagement per year	Space science		–[1]	4 000	5 200	7 000	5 000	7 000	7 000
Number of active multinational projects per year	Space science		–[1]	7	7	9	6	8	8
Number of jobs directly supported by the satellite build programmes per year	Space engineering		–[2]	–[2]	–[2]	30	50	60	70

1. There is no data for 2010/11 because the agency came into existence at the end of 2010.
2. There is no historical data because the indicator began in 2013/14.

Programmes/activities/objectives

Table 34.34 South African National Space Agency

	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	4 862	46 242	33 573	34 855	92.8%	40.5%	36 911	38 802	40 858	5.4%	11.9%
Earth observation	–	–	50 275	59 432	–	12.8%	66 221	65 142	69 677	5.4%	20.5%
Space operation	–	80 899	57 132	52 669	–	26.1%	55 876	59 383	63 324	6.3%	18.2%
Space science	–	28 195	35 775	33 548	–	12.8%	36 371	34 447	33 904	0.4%	10.9%
Space engineering	–	–	–	82 200	–	7.8%	150 000	165 246	105 760	8.8%	38.5%
Total expense	**4 862**	**155 336**	**176 755**	**262 704**	**278.1%**	**100.0%**	**345 379**	**363 020**	**313 523**	**6.1%**	**100.0%**

Expenditure estimates

Table 34.35 South African National Space Agency

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**48**	**61 359**	**78 216**	**54 792**	942.8%	22.1%	**59 576**	**60 408**	**64 032**	5.3%	18.5%
Sale of goods and services other than capital assets	–	56 705	72 322	54 638	–	20.6%	59 396	60 238	63 842	5.3%	18.5%
of which:											
Sales by market establishment	*–*	*56 705*	*72 322*	*54 638*	*–*	*20.6%*	*59 396*	*60 238*	*63 842*	*5.3%*	*18.5%*
Other non-tax revenue	48	4 654	5 894	154	47.2%	1.5%	180	170	190	7.3%	0.1%
Transfers received	**9 528**	**128 659**	**128 986**	**253 236**	**198.4%**	**77.9%**	**272 604**	**292 626**	**236 956**	**-2.2%**	**81.5%**
Total revenue	**9 576**	**190 018**	**207 202**	**308 028**	**218.0%**	**100.0%**	**332 180**	**353 034**	**300 988**	**-0.8%**	**100.0%**
Expenses											
Current expenses	**4 946**	**149 613**	**170 171**	**256 593**	**273.0%**	**97.6%**	**345 380**	**363 020**	**313 523**	**6.9%**	**99.4%**
Compensation of employees	2 539	55 353	62 398	82 124	218.6%	38.4%	87 366	92 947	96 695	5.6%	28.3%
Goods and services	2 305	80 145	92 294	174 469	323.0%	54.2%	258 014	270 073	216 828	7.5%	71.2%
Depreciation	18	14 073	15 476	–	-100.0%	4.5%	–	–	–	–	–
Interest, dividends and rent on land	84	41	3	–	-100.0%	0.4%	–	–	–	–	–
Transfers and subsidies	**–**	**5 761**	**6 587**	**6 111**	**–**	**2.4%**	**–**	**–**	**–**	**-100.0%**	**0.6%**
Total expenses	**4 946**	**155 374**	**176 758**	**262 704**	**275.9%**	**100.0%**	**345 380**	**363 020**	**313 523**	**6.1%**	**100.0%**
Surplus/(Deficit)	**4 631**	**34 644**	**30 445**	**45 324**	**113.9%**		**(13 200)**	**(9 986)**	**(12 535)**	**-165.2%**	
Statement of financial position											
Carrying value of assets	3 819	83 226	99 956	214 169	282.8%	51.5%	366 658	507 055	507 055	33.3%	98.2%
of which:											
Acquisition of assets	*685*	*1 287*	*1 082*	*7 729*	*124.3%*	*1.9%*	*7 218*	*8 579*	*5 629*	*-10.0%*	*2.1%*
Inventory	–	314	431	326	–	0.1%	345	366	366	3.9%	0.1%
Receivables and prepayments	893	19 834	18 081	5 800	86.6%	6.5%	5 927	6 168	6 168	2.1%	1.7%
Cash and cash equivalents	20 300	73 292	96 107	–	-100.0%	41.9%	–	–	–	–	–
Total assets	**25 012**	**176 666**	**214 575**	**220 295**	**106.5%**	**100.0%**	**372 930**	**513 589**	**513 589**	**32.6%**	**100.0%**

Table 34.35 South African National Space Agency

Statement of financial position	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Accumulated surplus/(deficit)	4 715	127 198	157 645	185 466	240.1%	62.3%	303 703	397 935	397 935	29.0%	80.1%
Capital reserve fund	18 416	16 540	24 033	–	-100.0%	23.5%	–	–	–	–	–
Borrowings	–	292	–	–	–	0.0%	–	–	–	–	–
Finance lease	–	–	426	105	–	0.1%	–	–	–	-100.0%	0.0%
Trade and other payables	1 882	27 262	27 260	27 260	143.8%	12.0%	63 657	109 828	109 828	59.1%	18.1%
Provisions	–	5 375	4 813	5 232	–	1.9%	5 570	5 826	5 826	3.6%	1.5%
Derivatives financial instruments	–	–	398	–	–	0.0%	–	–	–	–	–
Total equity and liabilities	**25 013**	**176 666**	**214 575**	**218 063**	**105.8%**	**100.0%**	**372 930**	**513 589**	**513 589**	**33.0%**	**99.7%**

Personnel information

Table 34.36 South African National Space Agency

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17		
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	2013/14 - 2016/17	
Salary level	**229**	**230**	**166**	**62.4**	**0.4**	**214**	**82.1**	**0.4**	**228**	**87.4**	**0.4**	**228**	**92.9**	**0.4**	**228**	**96.7**	**0.4**	**5.6%**	**100.0%**
1 – 6	44	44	26	2.7	0.1	43	4.3	0.1	44	8.3	0.2	44	8.6	0.2	44	9.0	0.2	28.0%	19.5%
7 – 10	93	93	74	18.0	0.2	90	22.5	0.2	92	23.3	0.3	92	24.7	0.3	92	26.4	0.3	5.5%	40.8%
11 – 12	54	55	40	19.6	0.5	45	24.5	0.5	54	25.1	0.5	54	28.3	0.5	54	28.4	0.5	5.0%	23.0%
13 – 16	37	37	26	22.1	0.9	35	29.3	0.8	37	28.9	0.8	37	29.5	0.8	37	30.9	0.8	1.9%	16.3%
17 – 22	1	1	–	–	–	1	1.6	1.6	1	1.7	1.7	1	1.9	1.9	1	2.0	2.0	7.0%	0.4%

1. Rand million.

Expenditure trends

The South African National Space Agency derives its revenue largely from government grants, which constitute 81.5 per cent of the agency's income over the medium term. The agency also receives contract revenue from the Department of Defence. Total revenue is expected to decrease over the medium term due to Cabinet approved reductions effected on the transfer from the department.

The spending focus over the medium term will be on space research, space systems development and in particular, the development of an earth observation satellite; and the acquisition, maintenance and distribution of satellite imagery and space weather data. Expenditure on goods and services is projected to decrease over the medium term as the SPOT 5 satellite is being phased out and a new agreement for SPOT 6 and SPOT 7 satellites is being concluded. Expenditure on compensation of employees is set to increase over the medium term and at the end of November 2013, the agency had 195 filled and funded posts. There were 16 vacancies, mainly relating to managing the space engineering programme. Personnel numbers are expected to remain stable at around 211 over the medium term.

The new satellite agreement is expected to ensure the continued supply of geospatial information products from the SPOT mission; and will support 91 launch activities, as well as human capital development through the financial support and co-supervision of 120 postgraduate students and interns over the medium term. Consultants are used primarily for specific support functions where internal capacity is not available. These activities relate to the establishment of the agency, provision of IT equipment and software support.

Technology Innovation Agency

Mandate and goals

The Technology Innovation Agency is a national public entity that draws its mandate from the Technology Innovation Agency Act (2008). The agency serves as the key institutional intervention to bridge the innovation chasm between research and development outcomes from higher education institutions, science councils and

public entities on the one hand, and private companies on the other thus intensifying the impact of technological innovation in the economy. The agency's overarching objective is to enable and support technological innovation across different sectors of the economy to achieve socioeconomic benefits through structured financial and non-financial interventions.

The agency's strategic goals over the medium term are to:

- stimulate the development and demonstration of technology based services, processes and products
- support the commercialisation of technology innovations
- develop an enabling environment for technology innovation in South Africa
- develop an enabling internal environment to successfully execute its strategy
- facilitate the development of innovation skills to support technology innovation and commercialisation
- build a culture of technology innovation.

Selected performance indicators

Table 34.37 Technology Innovation Agency

Indicator	Programme/Activity/Objective	Outcome	Past			Current	Projections		
			2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Number of technologies, products, processes and services developed per year	Stimulate the development and demonstration of technology based products, processes and services	Outcome 5: A skilled and capable workforce to support an inclusive growth path	–[1]	–[1]	–[1]	–[1]	11	14	20
Number of technologies deployed in the market per year	Stimulate the development and demonstration of technology based products, processes and services		–[1]	–[1]	–[1]	–[1]	9	9	12
Amount of third party funding attracted to the Technology Innovation Agency's portfolio per year	Stimulate the development and demonstration of technology based products, processes and services		–[1]	–[1]	–[1]	–[1]	R78m	R25m	R80m
Total number of entrepreneurs and SMMEs assisted	Develop an enabling environment for technology innovation and commercialisation in South Africa	Outcome 4: Decent employment through inclusive economic growth	–[1]	–[1]	–[1]	–[1]	2 323	2 325	2 528
Number of agency technologies, products and services adopted by industries per year	Develop an enabling environment for technology innovation and commercialisation in South Africa	Outcome 5: A skilled and capable workforce to support an inclusive growth path	–[1]	–[1]	–[1]	–[1]	305	357	369

1. Data collection for this new indicator will begin in 2014/15.

Programmes/activities/objectives

Table 34.38 Technology Innovation Agency

	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Administration	100 722	120 563	146 483	134 149	10.0%	21.9%	210 863	215 650	223 250	18.5%	37.0%
To provide customer-centric early stage commercialisation for technology development	446 026	340 687	400 781	550 802	7.3%	74.4%	126 686	38 868	149 692	-35.2%	35.0%
To provide an enabling environment for technology innovation	26 133	17 090	28 581	14 060	-18.7%	3.8%	184 231	215 670	149 688	120.0%	28.0%
Total expense	**572 881**	**478 340**	**575 845**	**699 011**	**6.9%**	**100.0%**	**521 780**	**470 188**	**522 630**	**-9.2%**	**100.0%**

Expenditure estimates

Table 34.39 Technology Innovation Agency

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Revenue											
Non-tax revenue	**66 417**	**61 111**	**65 756**	**98 762**	14.1%	13.0%	**73 948**	**85 000**	**8 000**	-56.7%	13.2%
Sale of goods and services other than capital assets	50 677	46 389	26 062	67 274	9.9%	8.4%	58 948	75 000	–	-100.0%	10.1%
of which:											
Administrative fees	*–*	*2 143*	*2 000*	*40 000*	*–*	*1.9%*	*45 000*	*75 000*	*–*	*-100.0%*	*8.2%*
Sales by market establishment	*50 677*	*44 246*	*24 062*	*27 274*	*-18.7%*	*6.5%*	*13 948*	*–*	*–*	*-100.0%*	*1.9%*
Other non-tax revenue	15 740	14 722	39 694	31 488	26.0%	4.6%	15 000	10 000	8 000	-36.7%	3.1%
Transfers received	**544 189**	**442 688**	**456 350**	**481 081**	**-4.0%**	**85.4%**	**380 717**	**385 188**	**514 630**	**2.3%**	**86.8%**
Total revenue	**610 606**	**539 210**	**522 106**	**579 843**	**-1.7%**	**100.0%**	**454 665**	**470 188**	**522 630**	**-3.4%**	**100.0%**

Table 34.40 Technology Innovation Agency

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expen-diture/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expen-diture/ total: Average (%)
R thousand	2010/11	2011/12	2012/13	2013/14	2010/11 - 2013/14		2014/15	2015/16	2016/17	2013/14 - 2016/17	
Expenses											
Current expenses	**256 027**	**255 290**	**250 932**	**240 711**	**-2.0%**	**44.0%**	**255 146**	**262 590**	**272 678**	**4.2%**	**47.8%**
Compensation of employees	85 203	101 107	113 274	125 610	13.8%	18.4%	130 198	134 104	138 127	3.2%	24.5%
Goods and services	165 226	145 332	126 844	106 067	-13.7%	24.1%	113 806	116 675	122 115	4.8%	21.3%
Depreciation	5 597	8 801	10 700	8 939	16.9%	1.5%	11 037	11 699	12 319	11.3%	2.1%
Interest, dividends and rent on land	1	50	114	95	356.3%	0.0%	105	112	117	7.2%	0.0%
Transfers and subsidies	**316 854**	**223 050**	**324 913**	**458 300**	**13.1%**	**56.0%**	**266 634**	**207 598**	**249 952**	**-18.3%**	**52.2%**
Total expenses	**572 881**	**478 340**	**575 845**	**699 011**	**6.9%**	**100.0%**	**521 780**	**470 188**	**522 630**	**-9.2%**	**100.0%**
Surplus/(Deficit)	**37 725**	**60 870**	**(53 739)**	**(119 168)**	**-246.7%**		**(67 115)**	**–**	**–**	**-100.0%**	
Statement of financial position											
Carrying value of assets	42 731	24 156	23 746	23 472	-18.1%	8.3%	23 473	23 473	23 473	0.0%	16.5%
of which:											
Acquisition of assets	*20 711*	*7 835*	*10 631*	*8 929*	*-24.5%*	*3.5%*	*11 037*	*11 699*	*12 320*	*11.3%*	*8.0%*
Investments	31 924	18 532	17 386	24 500	-8.4%	6.8%	66 342	66 342	66 342	39.4%	43.3%
Loans	–	52 967	55 864	61 000	–	12.6%	28 164	28 164	28 164	-22.7%	22.5%
Receivables and prepayments	49 490	3 698	4 371	3 100	-60.3%	4.4%	2 236	2 370	2 512	-6.8%	1.7%
Cash and cash equivalents	223 814	287 789	228 712	196 848	-4.2%	67.9%	–	–	–	-100.0%	15.9%
Total assets	**347 959**	**387 142**	**330 079**	**308 920**	**-3.9%**	**100.0%**	**120 215**	**120 349**	**120 491**	**-26.9%**	**100.0%**
Accumulated surplus/(deficit)	260 642	322 992	307 098	158 179	-15.3%	80.3%	73 000	73 000	73 000	-22.7%	58.3%
Capital and reserves	(4 949)	–	–	–	-100.0%	-0.4%	–	–	–	–	–
Capital reserve fund	29 274	44 310	27 274	13 948	-21.9%	8.6%	–	–	–	-100.0%	1.1%
Borrowings	2 171	–	–	–	-100.0%	0.2%	–	–	–	–	–
Finance lease	335	246	114	52	-46.3%	0.1%	547	547	547	119.1%	0.3%
Deferred income	1 869	180	–	–	-100.0%	0.1%	–	–	–	–	–
Trade and other payables	20 139	18 547	30 634	25 500	8.2%	7.9%	30 178	30 178	30 178	5.8%	20.9%
Taxation	910	–	–	–	-100.0%	0.1%	2 170	2 170	2 170	–	1.4%
Provisions	2 157	–	–	–	-100.0%	0.2%	–	–	–	–	–
Derivatives financial instruments	35 411	867	1 972	1 650	-64.0%	2.9%	372	372	372	-39.1%	0.4%
Total equity and liabilities	**347 959**	**387 142**	**367 092**	**199 329**	**-16.9%**	**100.0%**	**106 267**	**106 267**	**106 267**	**-18.9%**	**82.4%**

Personnel information

Table 34.41 Technology Innovation Agency

	Number of posts estimated for 31 March 2014		Number and cost[1] of personnel posts filled / planned for on funded establishment													Number	
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate							Average growth rate (%)	Salary level/total: Average (%)
			2012/13			2013/14			2014/15			2015/16			2016/17	2013/14 - 2016/17	
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
Salary level	**230**	**230**	**227**	**113.3**	**0.5**	**230**	**125.6**	**0.5**	**230**	**130.2**	**0.6**	**230**	**134.1**	**0.6**	**230**	**138.1**	**0.6**	**3.2%**	**100.0%**
1 – 6	35	35	32	3.9	0.1	35	4.2	0.1	35	4.6	0.1	35	4.9	0.1	35	5.1	0.1	6.8%	15.2%
7 – 10	65	65	65	16.5	0.3	65	17.9	0.3	65	18.9	0.3	65	19.9	0.3	65	21.0	0.3	5.3%	28.3%
11 – 12	74	74	74	36.2	0.5	74	39.3	0.5	74	38.2	0.5	74	36.8	0.5	74	35.3	0.5	-3.6%	32.2%
13 – 16	53	53	53	51.1	1.0	53	58.1	1.1	53	62.0	1.2	53	65.7	1.2	53	69.6	1.3	6.2%	23.0%
17 – 22	3	3	3	5.5	1.8	3	6.0	2.0	3	6.5	2.2	3	6.8	2.3	3	7.2	2.4	6.4%	1.3%

1. Rand million.

Expenditure trends

The Technology Innovation Agency's revenue is generated mainly from transfers received from government and other income made up of royalties, interest from loans to investees, and dividends received on investments.

The agency's spending focus over the medium term will be on stimulating the development and commercialisation of technology based services, processes and products; supporting the establishment and development of technology based commercially viable enterprises; leveraging off agency funds for co-investment; optimising the implementation of statutory requirements; facilitating the development of human capital for technology commercialisation and innovation; and building a culture conducive to technology innovation. This will support the policy goal of involving the private sector in technology research for commercial development.

Expenditure on project grant funding and goods and services is expected to decrease over the medium term as a result of Cabinet approved budget reductions of R130 million over the same period. These reductions are not expected to impact on service delivery. The agency will continue to support the commercialisation of technology based products, services and processes by investing in projects and technology development initiatives and supporting these investments, and in developing technology driven industries.

Expenditure between 2010/11 and 2013/14 increased to meet costs incurred in establishing the new entity and the transfer of programmes from the department to the agency. Four technology companies were established and 59 products, processes and services were researched and developed, of which three were subsequently commercialised.

The agency had a funded and filled establishment of 230 posts at the end of November 2013 with personnel numbers expected to remain constant over the medium term. Spending on compensation of employees grows at an average annual rate of 5.2 per cent over the same period, mainly to provide for inflationary adjustments.

Additional tables

Table 34.A Summary of expenditure trends and estimates per programme and economic classification

Programme	Appropriation		Audited	Appropriation			Revised
	Main	Adjusted	outcome	Main	Adjustments	Adjusted	estimate
R thousand	2012/13		2012/13	2013/14			2013/14
Administration	202 651	229 429	225 270	268 158	(22 500)	245 658	245 658
Technology Innovation	1 156 372	1 142 807	1 033 186	1 088 062	34 000	1 122 062	1 122 062
International Cooperation and Resources	141 226	139 317	102 875	113 193	(3 000)	110 193	110 193
Research, Development and Support	2 035 896	2 064 673	2 366 623	3 242 332	(8 500)	3 233 832	3 233 832
Socio-Economic Innovation Partnerships	1 419 785	1 423 384	1 245 361	1 486 410	–	1 486 410	1 486 410
Total	**4 955 930**	**4 999 610**	**4 973 315**	**6 198 155**	**–**	**6 198 155**	**6 198 155**
Economic classification							
Current payments	**393 493**	**409 315**	**386 758**	**454 074**	**(40 000)**	**414 074**	**414 074**
Compensation of employees	242 302	247 588	221 767	260 733	(9 330)	251 403	251 403
Goods and services	151 191	161 727	164 615	193 341	(30 670)	162 671	162 671
Interest and rent on land	–	–	376	–	–	–	–
Transfers and subsidies	**4 559 018**	**4 587 720**	**4 580 045**	**5 741 903**	**12 500**	**5 754 403**	**5 754 403**
Departmental agencies and accounts	3 076 203	3 063 391	3 011 927	4 166 055	4 000	4 170 055	4 170 055
Higher education institutions	–	–	153 642	20 000	–	20 000	20 000
Public corporations and private enterprises	972 641	1 015 740	1 350 541	1 034 199	–	1 034 199	1 034 199
Non-profit institutions	510 174	508 589	63 305	521 649	8 500	530 149	530 149
Households	–	–	630	–	–	–	–
Payments for capital assets	**3 419**	**2 575**	**6 490**	**2 178**	**27 500**	**29 678**	**29 678**
Machinery and equipment	3 419	2 575	6 490	2 178	27 500	29 678	29 678
Payments for financial assets	**–**	**–**	**22**	**–**	**–**	**–**	**–**
Total	**4 955 930**	**4 999 610**	**4 973 315**	**6 198 155**	**–**	**6 198 155**	**6 198 155**

Table 34.B Summary of expenditure on training

	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Compensation of employees (R thousand)	190 629	207 164	221 767	251 403	283 818	300 477	303 655
Training expenditure (R thousand)	2 789	4 199	6 050	5 229	5 543	5 798	5 827
Training spend as percentage of compensation	1.5%	2.0%	2.7%	2.1%	2.0%	1.9%	1.9%
Total number trained (headcount)	117	209	110	245			
of which:							
Employees receiving bursaries (headcount)	*185*	*121*	*124*	*104*			
Internships (headcount)	*22*	*22*	*34*	*29*			

Table 34.C Summary of donor funding

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
R thousand							2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Foreign													
In cash													
Canadian International Development Agency	Epidemiological modelling for HIV and AIDS policy in South Africa	Technology Innovation	5 years	20 000	Foreign governments and international organisations	Improved region, age and gender specific epidemiological measures incorporated into routine surveillance. South African Centre for Epidemiological Modelling and Analysis' long relationship with the Department of Health and South African National AIDS Council impacts key policy decisions, such as the evaluation and redrafting of the national space programme. Increased capacity of young South Africans to perform gender sensitive, policy impacting epidemiological research	4 870	4 251	4 717	–	–	–	–
European Union	Innovation for poverty alleviation	Socio-Economic Innovation Partnerships	3 years	300 000	Departmental agencies and accounts	Contribute to South Africa's sustainable economic and social development through programmes and measures designed to reduce poverty and encourage economic growth which benefits the poor	71 235	78 655	10 000	–	–	–	–
Finland	Cooperative financial institute of South Africa	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Support the development of provincial and local systems of innovation, especially in Eastern Cape, Gauteng and Western Cape	–	–	–	–	–	–	–
Finland	South Africa-Finland knowledge partnership on information communication technology	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Narrow the digital divide by introducing interventions that will help South Africa become an inclusive knowledge society with a strong ICT brand, reflecting research excellence and demonstrating improvements in quality of life and economic competitiveness	10 000	768	9 232	–	–	–	–
Finland	Southern African-Finland partnership on biosciences	International Cooperation and Resources	3 years	30 000	Foreign governments and international organisations	Strengthen the Southern Africa Biosciences Network secretariat; develop the operating environment; capacity development; network creation and dissemination; and identification, development and implementation of projects by the network	10 000	7 608	2 392	–	–	–	–

Table 34.C Summary of donor funding

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
United States Agency for International Development	Science centre manager training	Research, Development and Support	1 year	862	Departmental agencies and accounts	Train 20 South African and 5 Lesotho science centre managers in South Africa initially and then further train 5 South Africa and 2 Lesotho participants in Australia in a certificate course for science centre managers	–	–	–	–	–	–	–
United States Agency for International Development	SADC capacity building in relation to the risk and vulnerability atlas	Socio-Economic Innovation Partnerships	4 years	3 097	Departmental agencies and accounts	Build capacity in the SADC member states in understanding information on climate change impact and risk in the context of the SADC early warning mechanisms	584	355	965	–	–	–	–
United States Agency for International Development	Development of propagation of pathogen free potato seed for yield improvement in Malawi	Technology Innovation	2 years	488	Departmental agencies and accounts	Provide technical assistance to Malawi government and higher education sector in the proposed project that aims at increased production of good quality seed of high yielding potato varieties in Malawi	–	100	–	–	–	–	–
United States Agency for International Development	3rd SADC workshop on indigenous knowledge	Research, Development and Support	1 year	348	Foreign governments and international organisations	Establish regional guidelines and frameworks for the implementation of the 2007 to 2009 action plan	–	–	–	–	–	–	–
Canada	Research chair management training	Research, Development and Support	1 year	328	Foreign governments and international organisations	Research chair management training	–	–	–	–	–	–	–
Australia	Department of Science and Technology study tours to Australian research institutions	Research, Development and Support	1 year	182	Goods and services	Support to University of Cape Town for knowledge transfer on compound library and participation in the international mining processing congress	182	–	–	–	–	–	–
Australia	Regional support for science and technology policy training and the development of a science and technology climate change framework	International Cooperation and Resources	3 years	3 000	Goods and services	Regional support for science and technology policy training and the development of a science and technology climate change framework	450	794	1 756	–	–	–	–
France	South African Nuclear Energy Corporation trip to France	Technology Innovation	1 year	315	Goods and services	Assist the South African Nuclear Energy Corporation in the training of nuclear experts	315	–	–	–	–	–	–
United States Agency for International Development	Mozambique marine finfish sea cage farming project	Socio-Economic Innovation Partnerships	2 years	1 864	Goods and services	Provide technical assistance to the Mozambique government and higher education sector in the proposed project that aims at sustainable and competitive aquaculture in Mozambique	–	–	932	932	–	–	–

Table 34.C Summary of donor funding

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
United States Agency for International Development	Human health risks and coping mechanisms relating to environmental pollution in the Lower Olifants water catchment area	Technology Innovation	2 years	1 724	Goods and services	Determine the extent to which water and air pollution may impact on the health of 2 communities in the Lower Olifants water catchment area	–	–	862	–	–	–	–
European Union	Promoting Africa/EU research infrastructure	International Cooperation and Resources	2 years	450	Goods and services	Develop a database of African research infrastructure and influence policy dialogue in the region	–	–	225	–	–	–	–
European Union	Incontact-One World	International Cooperation and Resources	4 years	2 735	Goods and services	Cooperation with EU associated member states and Third World countries on science and technology innovation	684	942	684	425	–	–	–
European Union	Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science and Technology Cooperation Caastnet (Phase 1)	International Cooperation and Resources	4 years	2 055	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	514	74	–	–	–	–	–
European Union	SAccess	International Cooperation and Resources	4 years	2 055	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	220	64	–	–	–	–	–
European Union	European -South Africa science and technology advancement programme (Phase 1)	International Cooperation and Resources	3 years	5 000	Goods and services	Advance South Africa/EU collaboration	1 667	775	–	–	–	–	–
European Union	Information Society Technologies in Africa	Socio-Economic Innovation Partnerships	2 years	661	Goods and services	Improve overall ICT policies and create systems for each African country to ensure a consolidated, effective regional impact through information society in Africa	287	–	–	–	–	–	–
European Union	Europe research area: Africa	International Cooperation and Resources	3 years	2 345	Goods and services	Implement wide dialogue with the aim of reaching consensus among EU and African programme owners	–	–	782	782	–	–	–
European Union	Nanocode programme	Research, Development and Support	2 years	594	Goods and services	Facilitate close collaboration between South Africa and other national contact points throughout the world in the area of food, agriculture, fisheries and biotechnology	–	165	–	–	–	–	–
European Union	BioCircles2	International Cooperation and Resources	2 years	419	Higher education institutions	Increase the participation of researchers from outside Europe in research projects under the food, agriculture, fisheries and biotechnology theme	–	–	209	–	–	–	–
European Union	Science and technology opportunities for practical public policy	Socio-Economic Innovation Partnerships	3 years	143 500	Foreign governments and international organisations	Establish the link between science and technology opportunities for practical policy influence	–	–	35 900	47 800	59 800	–	–

Table 34.C Summary of donor funding

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
European Union	Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science and Technology Cooperation Caastnet (Phase 2)	International Cooperation and Resources	3 years	1 300	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	–	–	–	450	450	400	–
World Wide Fund for Nature South Africa	Energy Access to rural communities	Socio-Economic Innovation Partnerships	3 years	1 700	Goods and services	Develop a social infrastructure lead approach to addressing lack of access to energy through renewable or clean technologies	–	–	–	485	485	486	–
Argentina	Argentinian Bureau for enhancing cooperation with the European community in the science, technology and innovation area phase 2	International Cooperation and Resources	3 years	196	Goods and services	Support the enhancement of cooperation with the European community in the areas of science, technology and innovation	–	–	196	–	–	–	–
European Union	EU/South Africa science and technology advancement programme (Phase 2)	International Cooperation and Resources	3 years	2 500	Goods and services	Extension of advancement of South Africa/EU collaboration	–	–	833	833	833	–	
European Union	Technology localisation programme	Socio-Economic Innovation Partnerships	3 years	26 000	Higher education institutions	Develop and implement a benchmarking programme that forms the basis of a technology capability assessment of companies	–	–	–	–	–	–	
European Union	Information Communication Technology innovation to support government service delivery	Socio-Economic Innovation Partnerships	3 years	120 000	Departmental agencies and accounts	To demonstrate newly developed local technologies and implement such with the aim of improving service delivery	–	–	–	–	42 700	42 100	
In kind													
Japan	Senior technical assistance	International Cooperation and Resources	4 years	6 800	Foreign governments and international organisations	Assist in creating, implementing and designing joint initiatives. Improve bilateral relationships with the Japanese national system of innovation	2 000	–	–	–	–	–	
Japan	Science centre senior volunteers to provinces	Research, Development and Support	4 years	12 402	Foreign governments and international organisations	Support science centres in developing teaching material for science and mathematics education, and develop exhibitions. Systematise the newly developed exhibitions to ensure knowledge gain by science centres	1 850	–	2 300	2 100	–	–	
Japan	Productivity training	Research, Development and Support	2 years	1 100	Goods and services	Increase the employability level of science and technology graduates	400	–	–	–	–	–	
Japan	Hitachi scholarships	Research, Development and Support	4 years	2 400	Goods and services	3 Hitachi scholarships for South African engineers in the area of electricity generation and transmission	900	–	900	–	–	–	
Japan	Climate simulation and projections for adaptation impact in Southern Africa	Socio-Economic Innovation Partnerships	3 years	30 000	Foreign governments and international organisations	Build capacity in ocean atmosphere coupled circulation models in Southern Africa and translate this to an early warning system	10 000	–	10 000	–	–	–	

Table 34.C Summary of donor funding

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
Japan	Observational study to mitigate seismic risks in mines	Socio-Economic Innovation Partnerships	5 years	16 000	Foreign governments and international organisations	Improve the accuracy of predicting and control of seismicity and earthquakes	3 200	–	3 200	3 200	3 200	–	
Germany	Technical assistant	International Cooperation and Resources	2 years	1 089	Goods and services	Improve bilateral relationships with the German national system of innovation	600	–	–	–	–	–	
Germany	Financial assistance towards the Academy of Sciences for the Developing World conference	International Cooperation and Resources	1 year	1 000	Departmental agencies and accounts	Host the multilateral conference, which aims at the promotion of scientific excellence in the South, focusing on science based sustainability	–	–	–	–	–	–	
France	Extension of the contract of the scientific director on the Franco-South African Institute in Electronics programme at Tshwane University of Technology and Cape Peninsula University of Technology	Research, Development and Support	3 years	14 850	Foreign governments and international organisations	Extension of the contract of the scientific director on the Franco-South African Institute in electronics programme at Tshwane University of Technology and Cape Peninsula University of Technology	4 950	–	1 764	–	–	–	
United States Agency for International Development	Tenofovir microbicide gel for HIV prevention	Technology Innovation	3 years	127 800	Foreign governments and international organisations	FACTS 001 study: Confirmation of the results of Centre for the AIDS Programme of Research in South Africa through a phase 3 clinical trial	–	–	60 000	7 800	–	–	–
Canadian International Development Agency	South African participation in the grand challenge call on point of care diagnostics	Technology Innovation	3 years	6 892	Higher education institutions	Support the development of new technology in improving existing point of care diagnostic tests	–	–	2 424	1 970	–	–	–
Japan	Short term training programme	Technology Innovation	1 year	108	Goods and services	Technical training in the field of the management of electric power pools	–	–	108	–	–	–	–
Bill and Melinda Gates Foundation	Training of the next generation of African researchers in legume sciences	Technology Innovation	5 years	10 000	Higher education institutions	Train the next generation of African researchers in legume sciences	–	–	2 000	2 000	2 000	2 000	–
United Kingdom Department for International Development	Human Sciences Research Council longitudinal study on lone mothers in South Africa	Socio-Economic Innovation Partnerships	1 year	395	Departmental agencies and accounts	Improve understanding of the role of social security in respecting and protecting dignity	–	–	395	–	–	–	–
Total				**964 554**			**124 908**	**94 551**	**152 776**	**68 777**	**109 468**	**44 986**	**29 200**

Table 34.D Summary of expenditure on infrastructure

Project name	Service delivery outputs	Current project stage	Total project cost	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
R thousand				2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Infrastructure transfers to other spheres, agencies and departments										
Square Kilometre Array	Construction of telescopes	Construction	1 649 195	–	218 738	218 738	328 107	647 793	701 082	704 587
Space infrastructure	Satellite construction	Construction	290 791	51 390	–	36 000	45 000	40 000	37 466	37 653
Hydrogen strategy	Purchase of equipment	Various	440 714	48 361	51 900	54 498	57 223	60 772	63 568	63 886
National nanotechnology centres	Equipping centres	Various	309 954	38 337	42 400	44 500	46 835	39 775	41 151	40 911
Cyber Infrastructure	Broadband network connectivity and high performance computing	Various	833 190	98 783	104 710	129 946	101 943	204 045	213 479	214 546
Total			**3 523 844**	**236 871**	**417 748**	**483 682**	**579 108**	**992 385**	**1 056 746**	**1 061 583**

BUDGET *2014*

ESTIMATES OF NATIONAL EXPENDITURE

Private Bag X115, Pretoria, 0001, **Tel:** +27 12 395 6697, **Fax:** +27 12 315 5126

national treasury
Department:
National Treasury
REPUBLIC OF SOUTH AFRICA