

Vote 35

Science and Innovation

Budget summary

R million	2022/23				2023/24	2024/25
	Current payments	Transfers and subsidies	Payments for capital assets	Total	Total	Total
MTEF allocation						
Administration	316.4	15.7	3.0	335.1	333.3	348.3
Technology Innovation	76.2	1 707.8	–	1 784.1	1 793.3	1 873.9
International Cooperation and Resources	73.5	76.4	–	149.9	149.5	156.2
Research, Development and Support	56.3	5 048.8	–	5 105.0	5 203.4	5 436.9
Socioeconomic Innovation Partnerships	55.2	1 704.0	–	1 759.2	1 765.1	1 844.6
Total expenditure estimates	577.6	8 552.7	3.0	9 133.3	9 244.6	9 659.8

Executive authority: Minister of Science and Innovation
 Accounting officer: Director-General of Science and Innovation
 Website: www.dst.gov.za

The Estimates of National Expenditure is available at www.treasury.gov.za. Additional tables in Excel format can be found at www.treasury.gov.za and www.vulekamali.gov.za.

Vote purpose

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 Innovation derives its mandate from the 1996 White Paper on Science and Technology, which introduced the concept of the national system of innovation – a set of interacting organisations and policies through which South Africa creates, acquires, diffuses and puts into practice new knowledge to help achieve individual and collective goals. A coordinated and efficient national system of innovation will help the country achieve its national development priorities by promoting change through innovation. This will enable all South Africans to enjoy the economic, sociopolitical and intellectual benefits of science, technology and innovation.

Selected performance indicators

Table 35.1 Performance indicators by programme and related priority

Indicator	Programme	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of commercial outputs in designated areas per year	Technology Innovation	Priority 2: Economic transformation and job creation	7	11	15	4	5	5	5
Number of technology demonstrations, prototypes, products and services developed per year	Technology Innovation		–1	–1	18	10	20	25	30
Funds invested by international partners in their own organisations and initiatives targeted at cooperation with South African partners in the areas of research, innovation, science, technology and innovation human capital development as part of cooperation initiatives implemented by the department per year	International Cooperation and Resources	Priority 7: A better Africa and world	R3.3bn	R300m	R300m	R300m	R300m	R400m	R400m

Table 35.1 Performance indicators by programme and related priority

Indicator	Programme	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of doctoral students awarded bursaries per year, as reflected in reports from the National Research Foundation and relevant entities	Research, Development and Support	Priority 3: Education, skills and health	3 380	3 100	3 100	3 200	3 200	3 200	3 200
Number of pipeline postgraduate students (BTech, honours and masters students) awarded bursaries per year, as reflected in reports from the National Research Foundation and relevant entities	Research, Development and Support		9 774	10 800	10 800	10 800	10 800	10 900	10 900
Number of researchers awarded research grants per year through programmes managed by the National Research Foundation, as reflected in the foundation's project reports	Research, Development and Support		4 633	4 500	4 600	4 700	4 700	4 700	4 700
Number of knowledge and innovation products added to the industrial development and green economy intellectual property portfolio per year through fully funded or co-funded research initiatives	Socioeconomic Innovation Partnerships	Priority 2: Economic transformation and job creation	42	57	70	70	70	70	70
Number of knowledge products on innovation for inclusive development published per year	Socioeconomic Innovation Partnerships		8	6	5	5	5	5	5

1. No historical data available.

Expenditure overview

Over the medium term, the department will focus on developing human capital, ensuring the effective use of publicly funded intellectual property, implementing the national space strategy, and implementing the national integrated cyberinfrastructure system.

Expenditure is expected to increase at an average annual rate of 2.4 per cent, from R9 billion in 2021/22 to R9.7 billion in 2024/25. Transfers to entities account for an estimated 93.7 per cent (R26.3 billion) of the department's expenditure over the MTEF period. The second-largest cost driver is compensation of employees, spending on which is set to increase at an average annual rate of 1 per cent, from R363.3 million in 2021/22 to R374.5 million in 2024/25.

The department recognises human capital as key to the development of a national system of innovation that is globally competitive and responsive to South Africa's developmental needs. For this purpose, it has allocated R8.5 billion over the MTEF period in the *Human Capital and Science Promotions* subprogramme in the *Research, Development and Support* programme to provide postgraduate bursaries and scholarships; internships; and support for emerging and established researchers, including strategic instruments such as the South African research chairs initiative, and the centres of excellence. To date, the department has awarded 252 research chairs and will continue to support the 14 established centres of excellence that serve as hubs that draw together a range of universities and science councils to tackle challenges in health, food security, human development, energy and biodiversity, among other things.

The department will continue to work towards identifying, protecting, using and commercialising intellectual property and technology. Over the MTEF period, this includes generating a targeted 365 knowledge products (including peer-reviewed scientific articles and applications for or the registration/granting of intellectual property rights); developing and approving 12 science, technology and innovation strategic policy directives; and developing and/or maintaining 9 interventions to improve the delivery of government services or functions. These activities are expected to contribute to spending of R5.5 billion in the *Technology Innovation* programme over the medium term.

The national space strategy is intended to ensure, through activities such as Earth observation, navigation and

meteorological monitoring, that South Africa captures a reasonable share of the global space market. To this end, R642.2 million is allocated over the medium term to the *Space Science* subprogramme in the *Technology Innovation* programme. In addition, as the department seeks to contribute to a reduction in greenhouse gas emissions and air pollution through more diverse and sustainable energy solutions, R598 million in the *Hydrogen and Energy* subprogramme, in the same programme, will be invested in the development of technologies such as hydrogen fuel cells, renewable energy and carbon capture.

The national integrated cyberinfrastructure system is expected to enable the successful and sustainable implementation of national projects such as MeerKAT and the Square Kilometre Array. To this end, R3.7 billion is allocated over the medium term to the *Basic Science and Infrastructure* subprogramme in the *Research, Development and Support* programme for the Council for Scientific and Industrial Research to implement the system. The MeerKAT telescope, for example, is expected to add 20 antennae to its current array of 64 at a projected cost of R800 million over the period ahead.

Expenditure trends and estimates

Table 35.2 Vote expenditure trends and estimates by programme and economic classification

Programmes											
1. Administration											
2. Technology Innovation											
3. International Cooperation and Resources											
4. Research, Development and Support											
5. Socioeconomic Innovation Partnerships											
Programme											
R million	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
Programme 1	379.5	352.1	262.2	334.7	-4.1%	4.1%	335.1	333.3	348.3	1.3%	3.6%
Programme 2	1 149.0	1 236.7	1 379.8	1 705.3	14.1%	17.0%	1 784.1	1 793.3	1 873.9	3.2%	19.3%
Programme 3	145.2	136.0	114.2	144.4	-0.2%	1.7%	149.9	149.5	156.2	2.6%	1.6%
Programme 4	4 520.4	4 578.4	3 731.0	4 995.6	3.4%	55.4%	5 105.0	5 203.4	5 436.9	2.9%	56.0%
Programme 5	1 755.2	1 778.2	1 678.0	1 825.6	1.3%	21.9%	1 759.2	1 765.1	1 844.6	0.3%	19.4%
Total	7 949.3	8 081.4	7 165.3	9 005.6	4.2%	100.0%	9 133.3	9 244.6	9 659.8	2.4%	100.0%
Change to 2021 Budget estimate				72.3			5.3	-	-		
Economic classifications											
Current payments	602.0	558.7	429.0	569.3	-1.8%	6.7%	577.6	573.1	598.8	1.7%	6.3%
Compensation of employees	358.8	336.7	321.9	363.3	0.4%	4.3%	363.7	358.4	374.5	1.0%	3.9%
Goods and services ¹	243.2	222.1	107.0	206.0	-5.4%	2.4%	213.9	214.7	224.4	2.9%	2.3%
of which:											
Advertising	25.1	13.2	4.3	13.2	-19.3%	0.2%	13.5	13.6	14.2	2.5%	0.1%
Consultants: Business and advisory services	16.4	12.4	10.3	21.8	9.9%	0.2%	22.3	22.4	23.4	2.5%	0.2%
Agency and support/outsourced services	12.0	9.2	10.2	15.9	9.8%	0.1%	16.3	16.4	17.1	2.5%	0.2%
Property payments	11.8	42.3	13.3	17.1	13.2%	0.3%	14.5	14.5	15.2	-3.9%	0.2%
Travel and subsistence	65.9	61.9	7.3	55.6	-5.5%	0.6%	62.2	62.4	65.2	5.5%	0.7%
Venues and facilities	26.6	17.5	1.5	14.1	-19.2%	0.2%	16.5	16.6	17.3	7.1%	0.2%
Transfers and subsidies¹	7 336.9	7 514.8	6 729.7	8 431.0	4.7%	93.2%	8 552.7	8 668.3	9 057.6	2.4%	93.7%
Departmental agencies and accounts	5 003.6	5 165.3	4 721.3	6 520.6	9.2%	66.5%	6 562.3	6 651.6	6 947.0	2.1%	72.0%
Higher education institutions	-	-	252.9	-	0.0%	0.8%	-	-	-	0.0%	0.0%
Public corporations and private enterprises	1 850.4	1 811.7	1 495.8	1 512.3	-6.5%	20.7%	1 583.0	1 604.4	1 679.7	3.6%	17.2%
Non-profit institutions	481.4	533.6	259.1	398.1	-6.1%	5.2%	407.4	412.3	430.8	2.7%	4.5%
Households	1.5	4.2	0.5	-	-100.0%	0.0%	-	-	-	0.0%	0.0%
Payments for capital assets	10.3	7.8	6.1	5.4	-19.5%	0.1%	3.0	3.1	3.3	-15.0%	0.0%
Machinery and equipment	10.3	7.8	6.1	5.4	-19.5%	0.1%	3.0	3.1	3.3	-15.0%	0.0%
Payments for financial assets	0.1	0.1	0.5	-	-100.0%	0.0%	-	-	-	0.0%	0.0%
Total	7 949.3	8 081.4	7 165.3	9 005.6	4.2%	100.0%	9 133.3	9 244.6	9 659.8	2.4%	100.0%

1. Tables with expenditure trends, annual budget, adjusted appropriation and audited outcome are available at www.treasury.gov.za and www.vulekamali.gov.za.

Transfers and subsidies expenditure trends and estimates

Table 35.3 Vote transfers and subsidies trends and estimates

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21	2021/22	2018/19 - 2021/22	2021/22	2022/23	2023/24	2024/25	2021/22 - 2024/25	2021/22 - 2024/25
Households											
Social benefits											
Current	851	2 739	478	–	-100.0%	–	–	–	–	–	–
Households	851	2 739	478	–	-100.0%	–	–	–	–	–	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	3 760 432	4 070 309	3 941 266	4 744 133	8.1%	55.0%	4 870 454	4 885 218	5 101 330	2.4%	56.5%
Various institutions: Institutional and programme support research	1 231	1 838	315	–	-100.0%	–	–	–	–	–	–
Various institutions: Biofuels research	–	2 000	7 889	–	–	–	–	–	–	–	–
Various institutions: Technology transfer offices: Support of research units	2 073	2 188	3 646	–	-100.0%	–	–	–	–	–	–
Various institutions: Implementation of bioeconomy strategy	30 851	31 258	47 080	–	-100.0%	0.4%	–	–	–	–	–
Various institutions: Energy grand challenge research	–	–	47 232	43 318	–	0.3%	44 451	44 622	46 626	2.5%	0.5%
Various institutions: Health innovation research	72 800	49 020	52 686	–	-100.0%	0.6%	–	–	–	–	–
Various institutions: HIV and AIDS prevention and treatment technologies research	24 588	27 866	29 205	30 225	7.1%	0.4%	31 019	31 139	32 537	2.5%	0.4%
Various institutions: Hydrogen strategy research	–	–	43 776	–	–	0.1%	–	–	–	–	–
Various institutions: Innovation projects research	–	14 868	125 000	402 405	–	1.8%	519 394	521 389	544 804	10.6%	5.7%
Various institutions: Space science research: Economic competitiveness and support package	13 200	54 400	36 202	63 329	68.7%	0.6%	33 291	33 419	34 920	-18.0%	0.5%
National Research Foundation: Research and development in indigenous knowledge systems	9 650	1 623	500	6 599	-11.9%	0.1%	6 765	6 792	7 097	2.5%	0.1%
Technology Innovation Agency	420 322	440 929	408 825	447 703	2.1%	5.7%	458 370	460 131	480 795	2.4%	5.3%
South African National Space Agency	138 036	143 464	161 196	202 193	13.6%	2.1%	162 439	163 063	170 386	-5.5%	2.0%
Medical Research Council: Social impact bond	–	–	33 422	–	–	0.1%	–	–	–	–	–
Various institutions: Emerging research areas	3 400	–	–	–	-100.0%	–	–	–	–	–	–
National Research Foundation: Bilateral cooperation for global science development	14 793	15 876	2 583	16 670	4.1%	0.2%	17 077	17 143	17 913	2.4%	0.2%
Various institutions: Global science: International multilateral agreements	9 532	18 279	25 949	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Global science: African multilateral agreements	5 200	–	6 764	–	-100.0%	–	–	–	–	–	–
Academy of Science of South Africa	25 668	26 983	24 840	33 210	9.0%	0.4%	33 839	33 970	35 496	2.2%	0.4%
Various institutions: Astronomy research and development	30 639	32 789	32 469	25 623	-5.8%	0.4%	41 715	41 876	43 757	19.5%	0.4%
Various institutions: Policy development on human and social development dynamics	25 619	27 116	28 266	36 946	13.0%	0.4%	37 944	38 090	39 801	2.5%	0.4%
National Research Foundation: Human resources development for science and engineering	851 898	922 337	762 252	1 002 897	5.6%	11.8%	1 006 850	1 010 719	1 056 110	1.7%	11.7%
National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package	–	–	23 057	18 607	–	0.1%	19 104	19 178	20 039	2.5%	0.2%
National Research Foundation	904 752	943 385	859 469	962 587	2.1%	12.2%	997 408	1 001 295	1 046 051	2.8%	11.5%
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	58 137	64 273	30 000	91 643	16.4%	0.8%	94 066	94 428	98 669	2.5%	1.1%
National Research Foundation: South African research chairs initiative to develop human resources in science	530 274	566 305	544 508	588 550	3.5%	7.4%	602 902	605 218	632 398	2.4%	7.0%

Table 35.3 Vote transfers and subsidies trends and estimates

	Audited outcome			Adjusted appropriation	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	Average Expenditure/ Total (%)
	2018/19	2019/20	2020/21		2021/22	2018/19 - 2021/22	2022/23	2023/24	2024/25		
R thousand											
Various institutions: Strategic science platforms for research and development	188 883	191 335	166 154	170 171	-3.4%	2.4%	241 332	242 258	253 138	14.2%	2.6%
Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support	-	33 823	-	-	-	0.1%	-	-	-	-	-
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project	-	39 565	-	-	-	0.1%	-	-	-	-	-
Various institutions: Advanced manufacturing technology strategy implementation	269	904	752	-	-100.0%	-	-	-	-	-	-
Various institutions: Innovative research and development	19 106	24 829	30 446	77 158	59.2%	0.5%	49 593	49 784	52 020	-12.3%	0.7%
Human Sciences Research Council	303 733	324 155	289 325	314 394	1.2%	4.1%	321 098	322 332	336 808	2.3%	3.7%
Various institutions: Local manufacturing capacity research and technical support	57 544	28 689	75 672	81 217	12.2%	0.8%	86 574	82 897	83 550	0.9%	1.0%
Various institutions: Local systems of innovation for the cold chain technologies project	-	-	-	15 047	-	0.1%	15 453	15 513	16 210	2.5%	0.2%
National Research Foundation: Research information management system	4 000	8 448	6 232	10 750	39.0%	0.1%	-	-	-	-100.0%	-
Human Science Research Council: Develop and monitor science and technology indicators	9 984	12 404	11 252	15 221	15.1%	0.2%	15 557	15 617	16 318	2.3%	0.2%
Various institutions: Environmental innovation	4 250	19 360	24 302	87 670	174.3%	0.5%	34 213	34 345	35 887	-25.8%	0.6%
Capital	1 243 198	1 094 997	780 060	1 776 454	12.6%	16.3%	1 691 825	1 766 390	1 845 718	1.3%	20.4%
Various institutions: Hydrogen strategy (capital)	-	-	48 693	-	-	0.2%	-	-	-	-	-
Various institutions: Infrastructure projects for research and development	533 991	408 023	253 712	758 280	12.4%	6.5%	861 609	899 583	939 983	7.4%	10.0%
National Research Foundation: Square Kilometre Array: Capital contribution to research	709 207	686 974	477 655	1 018 174	12.8%	9.6%	830 216	866 807	905 735	-3.8%	10.4%
Households											
Other transfers to households											
Current	650	1 510	50	-	-100.0%	-	-	-	-	-	-
Households	650	150	-	-	-100.0%	-	-	-	-	-	-
Various institutions: Policy development on human and social development dynamics	-	280	-	-	-	-	-	-	-	-	-
National Research Foundation: Human resources development for science and engineering	-	1 080	-	-	-	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	-	-	50	-	-	-	-	-	-	-	-
Public corporations and private enterprises											
Other transfers to public corporations											
Current	456 371	456 766	445 033	296 753	-13.4%	5.5%	299 002	304 105	321 044	2.7%	3.5%
Various institutions: Technology transfer offices: Support of research units	7 652	8 353	5 059	-	-100.0%	0.1%	-	-	-	-	-
Various institutions: Implementation of bioeconomy strategy	6 000	7 100	1 000	-	-100.0%	-	-	-	-	-	-
Various institutions: Energy grand challenge research	10 153	3 550	-	-	-100.0%	-	-	-	-	-	-
Various institutions: Hydrogen strategy research	4 860	25 884	-	-	-100.0%	0.1%	-	-	-	-	-
Various institutions: Hydrogen strategy (capital)	23 999	13 086	-	-	-100.0%	0.1%	-	-	-	-	-
Various institutions: Innovation projects research	4 916	450	3 383	-	-100.0%	-	-	-	-	-	-
Various institutions: Space science research: Economic competitiveness and support package	-	5 000	22 600	-	-	0.1%	-	-	-	-	-

Table 35.3 Vote transfers and subsidies trends and estimates

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2018/19 - 2021/22	2022/23		
National Research Foundation: Research and development in indigenous knowledge systems	1 500	3 200	1 000	–	-100.0%	–	–	–	–	–	–
Various institutions: Emerging research areas	67 800	80 700	80 500	108 989	17.1%	1.1%	119 750	120 210	125 609	4.8%	1.4%
Various institutions: Global science: International multilateral agreements	4 400	3 636	393	–	-100.0%	–	–	–	–	–	–
Various institutions: Global science: African multilateral agreements	4 002	4 380	2 785	–	-100.0%	–	–	–	–	–	–
National Research Foundation: Human resources development for science and engineering	–	41 234	42 000	–	–	0.3%	–	–	–	–	–
National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package	41 040	22 000	–	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Strategic science platforms for research and development	6 355	14 900	20 100	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: Science awareness	2 356	–	–	–	-100.0%	–	–	–	–	–	–
Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support	–	46 178	–	–	–	0.2%	–	–	–	–	–
Various institutions: Advanced manufacturing technology strategy implementation	41 245	58 356	56 737	45 214	3.1%	0.7%	36 000	38 000	40 000	-4.0%	0.5%
Various institutions: Innovative research and development	–	1 000	–	–	–	–	–	–	–	–	–
Various institutions: Local manufacturing capacity research and technical support	48 320	–	40 574	–	-100.0%	0.3%	–	–	–	–	–
Council for Scientific and Industrial Research: Mining research and development	–	21 139	43 863	63 506	–	0.4%	65 073	65 323	68 257	2.4%	0.8%
Various institutions: Local systems of innovation for the cold chain technologies project	31 600	6 793	29 495	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Resource-based industries research and development	107 391	52 852	45 884	37 223	-29.8%	0.8%	35 250	37 478	42 149	4.2%	0.4%
Various institutions: Environmental innovation	16 545	9 000	15 745	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: ICT	26 237	27 975	33 915	41 821	16.8%	0.4%	42 929	43 094	45 029	2.5%	0.5%
Capital	416 992	376 282	142 555	237 121	-17.2%	3.9%	281 770	294 188	307 400	9.0%	3.2%
Council for Scientific and Industrial Research: Cyberinfrastructure research and development	236 339	251 686	60 218	237 121	0.1%	2.6%	281 770	294 188	307 400	9.0%	3.2%
Various institutions: Infrastructure projects for research and development	180 653	124 596	82 337	–	-100.0%	1.3%	–	–	–	–	–
Higher education institutions											
Current	–	–	131 948	–	–	0.4%	–	–	–	–	–
Various institutions: Institutional and programme support research	–	–	9 384	–	–	–	–	–	–	–	–
Various institutions: Technology transfer offices: Support of research units	–	–	27 412	–	–	0.1%	–	–	–	–	–
Various institutions: Implementation of the bioeconomy strategy	–	–	600	–	–	–	–	–	–	–	–
Various institutions: Energy grand challenge research	–	–	–	–	–	–	–	–	–	–	–
Various institutions: Health innovation research	–	–	–	–	–	–	–	–	–	–	–
Various institutions: Hydrogen strategy research	–	–	7 966	–	–	–	–	–	–	–	–
Various institutions: Innovation projects research	–	–	–	–	–	–	–	–	–	–	–

Table 35.3 Vote transfers and subsidies trends and estimates

	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R thousand											
Various institutions: Space science research: Economic competitiveness and support package	–	–	13 657	–	4.7%	–	–	–	–	2.4%	–
National Research Foundation: Research and development in indigenous knowledge systems	–	–	23 615	–	–	0.1%	–	–	–	–	–
Various institutions: Emerging research areas	–	–	18 100	–	–	0.1%	–	–	–	–	–
National Research Foundation: Bilateral cooperation for global science development	–	–	4 349	–	–	–	–	–	–	–	–
Various institutions: Global science: International multilateral agreements	–	–	6 356	–	–	–	–	–	–	–	–
Various institutions: Global science: African multilateral agreements	–	–	602	–	–	–	–	–	–	–	–
Various institutions: Policy development on human and social development dynamics	–	–	2 139	–	–	–	–	–	–	–	–
National Research Foundation: Human resources development for science and engineering	–	–	2 000	–	–	–	–	–	–	–	–
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	–	–	3 498	–	–	–	–	–	–	–	–
Various institutions: Strategic science platforms for research and development	–	–	12 210	–	–	–	–	–	–	–	–
Various institutions: Astronomy research and development	–	–	60	–	–	–	–	–	–	–	–
Various institutions: Innovative research and development	–	–	–	–	–	–	–	–	–	–	–
Capital	–	–	121 000	–	–	0.4%	–	–	–	–	–
Various institutions: Hydrogen strategy (capital)	–	–	20 613	–	–	0.1%	–	–	–	–	–
Various institutions: Infrastructure projects for research and development	–	–	100 387	–	–	0.3%	–	–	–	–	–
Non-profit institutions											
Current	327 324	316 900	110 012	316 885	-1.1%	3.6%	323 268	324 510	339 084	2.3%	3.8%
Various institutions: Institutional and programme support research	11 567	18 484	5 896	15 264	9.7%	0.2%	15 665	15 726	16 432	2.5%	0.2%
Various institutions: Biofuels research	7 245	5 640	–	9 130	8.0%	0.1%	9 365	9 401	9 823	2.5%	0.1%
Various institutions: Implementation of the bioeconomy strategy	891	2 200	7 895	43 431	265.3%	0.2%	44 512	44 683	46 690	2.4%	0.5%
Various institutions: Energy grand challenge research	26 895	37 396	–	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Health innovation research	2 597	50	–	87 511	223.0%	0.3%	54 986	55 197	57 676	-13.0%	0.7%
Various institutions: Hydrogen strategy research	35 347	16 574	–	42 580	6.4%	0.3%	43 630	43 797	45 764	2.4%	0.5%
Various institutions: Innovation projects research	4 501	4 135	31 946	–	-100.0%	0.1%	–	–	–	–	–
International Centre for Genetic Engineering and Biotechnology	31 249	40 815	14 981	16 135	-19.8%	0.3%	16 562	16 626	17 373	2.5%	0.2%
Various institutions: Space science research: Economic competitiveness and support package	5 299	10 000	–	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: Technology transfer offices: Support for research units	37 434	27 369	1 630	45 000	6.3%	0.4%	44 073	44 242	46 229	0.9%	0.5%
National Research Foundation: Research and development in indigenous knowledge systems	16 921	9 100	900	–	-100.0%	0.1%	–	–	–	–	–
Medical Research Council: Social impact bond	–	–	–	–	–	–	35 125	35 260	36 844	–	0.3%
Various institutions: Emerging research areas	25 202	31 900	–	–	-100.0%	0.2%	–	–	–	–	–
National Research Foundation: Bilateral cooperation for global science development	–	–	3 783	–	–	–	–	–	–	–	–

Table 35.3 Vote transfers and subsidies trends and estimates

	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)	
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24			2024/25
R thousand												
Various institutions: Global science: International multilateral agreements	28 784	21 162	5 136	47 341	18.0%	0.3%	48 581	48 768	50 958	2.5%	0.6%	
Various institutions: Global science: African multilateral agreements	186	3 652	200	10 493	283.5%	-	10 769	10 810	11 295	2.5%	0.1%	
Various institutions: Policy development on human and social development dynamics	-	1 500	1 582	-	-	-	-	-	-	-	-	
National Research Foundation: Human resources development for science and engineering	4 568	11 157	1 800	-	-100.0%	0.1%	-	-	-	-	-	
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	16 760	17 020	-	-	-100.0%	0.1%	-	-	-	-	-	
National Research Foundation: Square Kilometre Array: Capital contribution to research	205	-	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Strategic science platforms for research and development	11 051	15 930	1 000	-	-100.0%	0.1%	-	-	-	-	-	
Various institutions: Astronomy research and development	-	-	4 985	-	-	-	-	-	-	-	-	
Various institutions: Policy development on basic science development and support	1 780	-	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project	-	17 524	-	-	-	0.1%	-	-	-	-	-	
Various institutions: Advanced manufacturing technology strategy implementation	400	100	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Innovative research and development	6 734	13 076	3 954	-	-100.0%	0.1%	-	-	-	-	-	
Various institutions: Local systems of innovation for the cold chain technologies project	39 991	-	17 424	-	-100.0%	0.2%	-	-	-	-	-	
Various institutions: Resource-based industries research and development	800	800	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Environmental innovation	10 917	1 042	2 900	-	-100.0%	-	-	-	-	-	-	
Various institutions: ICT	-	17 274	4 000	-	-	0.1%	-	-	-	-	-	
Capital	154 043	216 690	149 105	81 199	-19.2%	2.0%	84 103	87 810	91 753	4.2%	1.0%	
Various institutions: Hydrogen strategy (capital)	46 972	61 859	-	81 199	20.0%	0.6%	84 103	87 810	91 753	4.2%	1.0%	
Various institutions: Infrastructure projects for research and development	107 071	154 831	149 105	-	-100.0%	1.4%	-	-	-	-	-	
Public corporations and private enterprises												
Other transfers to private enterprises												
Current	13 847	12 796	14 614	-	-100.0%	0.1%	-	-	-	-	-	
Various institutions: Institutional and programme support research	1 415	-	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Technology transfer offices: Support of research units	605	2 625	4 421	-	-100.0%	-	-	-	-	-	-	
Various institutions: Implementation of bioeconomy strategy	-	1 069	-	-	-	-	-	-	-	-	-	
Various institutions: Health innovation research	300	2 161	-	-	-100.0%	-	-	-	-	-	-	
Various institutions: Innovation projects research	-	-	-	-	-	-	-	-	-	-	-	
National Research Foundation: Research and development in indigenous knowledge systems	-	1 200	-	-	-	-	-	-	-	-	-	

Table 35.3 Vote transfers and subsidies trends and estimates

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
National Research Foundation: Bilateral cooperation for global science development	-	-	-	-	-	-	-	-	-	-	-
Various institutions: Global science: International multilateral agreements	378	669	3 264	-	-100.0%	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	-	-	2 000	-	-	-	-	-	-	-	-
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project	-	4 900	-	-	-	-	-	-	-	-	-
Various institutions: Advanced manufacturing technology strategy implementation	10 748	172	87	-	-100.0%	-	-	-	-	-	-
Various institutions: Local manufacturing capacity research and technical support	-	-	-	-	-	-	-	-	-	-	-
Various institutions: Local systems of innovation for the cold chain technologies project	401	-	4 842	-	-100.0%	-	-	-	-	-	-
Public corporations and private enterprises											
Subsidies on products and production (pc)											
Current	963 164	965 823	893 581	978 449	0.5%	12.7%	1 002 269	1 006 119	1 051 303	2.4%	11.6%
Council for Scientific and Industrial Research	963 164	965 823	893 581	978 449	0.5%	12.7%	1 002 269	1 006 119	1 051 303	2.4%	11.6%
Total	7 336 872	7 514 812	6 729 702	8 430 994	4.7%	100.0%	8 552 691	8 668 340	9 057 632	2.4%	100.0%

Personnel information

Table 35.4 Vote personnel numbers and cost by salary level and programme¹

Programmes		Number and cost ² of personnel posts filled/planned for on funded establishment												Average growth rate (%)	Average: Salary level/ Total (%)				
Number of posts estimated for 31 March 2022		Actual			Revised estimate			Medium-term expenditure estimate											
Number of funded posts	Number of posts additional to the establishment	2020/21			2021/22			2022/23		2023/24		2024/25		2021/22 - 2024/25					
		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost						
Science and Innovation																			
Salary level	497	6	386	321.9	0.8	444	363.3	0.8	435	363.7	0.8	427	358.4	0.8	427	374.5	0.9	-1.3%	100.0%
1 – 6	71	2	51	12.3	0.2	66	17.4	0.3	65	17.5	0.3	63	16.2	0.3	63	16.9	0.3	-1.5%	14.8%
7 – 10	145	3	110	50.7	0.5	131	60.9	0.5	125	59.3	0.5	123	57.0	0.5	123	59.6	0.5	-2.2%	28.9%
11 – 12	154	-	128	123.8	1.0	137	129.0	0.9	136	130.4	1.0	133	126.9	1.0	133	132.4	1.0	-1.1%	31.1%
13 – 16	125	1	95	131.5	1.4	110	156.0	1.4	109	156.5	1.4	108	158.4	1.5	108	165.5	1.5	-0.5%	25.1%
Other	2	-	2	3.6	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Programme	497	6	386	321.9	0.8	444	363.3	0.8	435	363.7	0.8	427	358.4	0.8	427	374.5	0.9	-1.3%	100.0%
Programme 1	249	6	195	151.6	0.8	233	172.5	0.7	230	172.7	0.8	227	170.2	0.8	227	177.8	0.8	-0.8%	52.9%
Programme 2	62	-	47	40.3	0.9	65	52.4	0.8	64	52.5	0.8	63	51.7	0.8	62	54.0	0.9	-1.1%	14.6%
Programme 3	69	-	53	47.3	0.9	55	54.0	1.0	53	54.1	1.0	50	53.3	1.1	50	55.7	1.1	-2.9%	12.0%
Programme 4	55	-	45	40.6	0.9	44	39.4	0.9	43	39.5	0.9	42	38.9	0.9	42	40.6	1.0	-1.8%	9.9%
Programme 5	62	-	46	42.2	0.9	47	45.0	0.9	46	45.0	1.0	45	44.4	1.0	45	46.4	1.0	-1.7%	10.6%

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

2. Rand million.

Departmental receipts

Table 35.5 Departmental receipts by economic classification

	Audited outcome			Adjusted estimate	Revised estimate	Average growth rate (%)	Average: Receipt item/ Total (%)	Medium-term receipts estimate			Average growth rate (%)	Average: Receipt item/ Total (%)
	2018/19	2019/20	2020/21					2021/22	2022/23	2023/24		
R thousand												
Departmental receipts	32 749	19 416	2 241	897	897	-69.9%	100.0%	633	683	733	-6.5%	100.0%
Sales of goods and services produced by department	64	67	69	60	60	-2.1%	0.5%	60	60	60	-	8.1%
Other sales	64	67	69	60	60	-2.1%	0.5%	60	60	60	-	8.1%
of which:												
Services rendered:	64	67	69	60	60	-2.1%	0.5%	60	60	60	-	8.1%
Commission on insurance												
Sales of scrap, waste, arms and other used current goods	-	2	2	5	5	-	-	3	3	3	-15.7%	0.5%
of which:												
Sales: Scrap, waste and other goods	-	2	2	5	5	-	-	3	3	3	-15.7%	0.5%
Interest, dividends and rent on land	27	13	13	32	32	5.8%	0.2%	20	20	20	-14.5%	3.1%
Interest	27	13	13	32	32	5.8%	0.2%	20	20	20	-14.5%	3.1%
Sales of capital assets	217	-	-	250	250	4.8%	0.8%	-	-	-	-100.0%	8.5%
Transactions in financial assets and liabilities	32 441	19 334	2 157	550	550	-74.3%	98.5%	550	600	650	5.7%	79.8%
Total	32 749	19 416	2 241	897	897	-69.9%	100.0%	633	683	733	-6.5%	100.0%

Programme 1: Administration

Programme purpose

Provide strategic leadership, management and support services to the department.

Expenditure trends and estimates

Table 35.6 Administration expenditure trends and estimates by subprogramme and economic classification

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R million											
Ministry	8.9	2.9	4.9	5.6	-14.5%	1.7%	5.6	5.6	5.8	1.2%	1.7%
Institutional Planning and Support	201.4	170.1	113.2	170.3	-5.4%	49.3%	172.5	171.5	179.2	1.7%	51.3%
Corporate Services	167.0	144.2	134.9	153.3	-2.8%	45.1%	151.3	150.5	157.3	0.9%	45.3%
Office Accommodation	2.2	34.8	9.2	5.6	37.1%	3.9%	5.7	5.7	6.0	2.5%	1.7%
Total	379.5	352.1	262.2	334.7	-4.1%	100.0%	335.1	333.3	348.3	1.3%	100.0%
Change to 2021 Budget estimate				6.5			2.5	-	-		
Economic classification											
Current payments	354.6	321.5	239.9	314.1	-4.0%	92.6%	316.4	314.4	328.5	1.5%	94.2%
Compensation of employees	179.7	161.4	151.6	172.5	-1.4%	50.1%	172.7	170.2	177.8	1.0%	51.3%
Goods and services	174.8	160.1	88.3	141.6	-6.8%	42.5%	143.7	144.2	150.7	2.1%	42.9%
of which:											
Advertising	23.6	11.4	4.3	12.0	-20.2%	3.9%	12.3	12.3	12.9	2.5%	3.7%
Consultants: Business and advisory services	7.3	9.0	5.2	15.5	28.4%	2.8%	15.9	15.9	16.7	2.5%	4.7%
Agency and support/outsourced services	7.7	7.2	7.8	7.1	-2.8%	2.2%	7.3	7.3	7.6	2.5%	2.2%
Property payments	11.6	42.3	13.3	13.1	4.2%	6.1%	13.5	13.5	14.1	2.5%	4.0%
Travel and subsistence	33.8	33.7	4.5	35.9	2.0%	8.1%	36.8	36.9	38.6	2.5%	11.0%
Operating payments	6.2	4.7	3.2	6.7	2.8%	1.6%	6.9	6.9	7.2	2.5%	2.1%
Transfers and subsidies	14.6	22.7	15.8	15.3	1.5%	5.1%	15.7	15.7	16.4	2.5%	4.7%
Departmental agencies and accounts	1.2	1.8	0.3	-	-100.0%	0.3%	-	-	-	-	-
Higher education institutions	-	-	9.4	-	-	0.7%	-	-	-	-	-
Public corporations and private enterprises	1.4	-	-	-	-100.0%	0.1%	-	-	-	-	-

Table 35.6 Administration expenditure trends and estimates by subprogramme and economic classification

Economic classification	Audited outcome			Adjusted appropriation 2021/22	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average Expenditure/ Total (%)
	2018/19	2019/20	2020/21		2018/19	2021/22	2022/23	2023/24	2024/25		
R million											
Non-profit institutions	11.6	18.5	5.9	15.3	9.7%	3.9%	15.7	15.7	16.4	2.5%	4.7%
Households	0.4	2.4	0.2	–	-100.0%	0.2%	–	–	–	–	–
Payments for capital assets	10.2	7.8	6.1	5.4	-19.4%	2.2%	3.0	3.1	3.3	-15.0%	1.1%
Machinery and equipment	10.2	7.8	6.1	5.4	-19.4%	2.2%	3.0	3.1	3.3	-15.0%	1.1%
Payments for financial assets	0.1	0.1	0.5	–	-100.0%	0.1%	–	–	–	–	–
Total	379.5	352.1	262.2	334.7	-4.1%	100.0%	335.1	333.3	348.3	1.3%	100.0%
Proportion of total programme expenditure to vote expenditure	4.8%	4.4%	3.7%	3.7%	–	–	3.7%	3.6%	3.6%	–	–
Details of transfers and subsidies											
Households											
Social benefits											
Current	0.4	2.4	0.2	–	-100.0%	0.2%	–	–	–	–	–
Households	0.4	2.4	0.2	–	-100.0%	0.2%	–	–	–	–	–
Households											
Other transfers to households											
Current	–	–	–	–	–	–	–	–	–	–	–
Households	–	–	–	–	–	–	–	–	–	–	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	1.2	1.8	0.3	–	-100.0%	0.3%	–	–	–	–	–
Various institutions: Institutional and programme support research	1.2	1.8	0.3	–	-100.0%	0.3%	–	–	–	–	–
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	1.4	–	–	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: Institutional and programme support research	1.4	–	–	–	-100.0%	0.1%	–	–	–	–	–
Non-profit institutions											
Current	11.6	18.5	5.9	15.3	9.7%	3.9%	15.7	15.7	16.4	2.5%	4.7%
Various institutions: Institutional and programme support research	11.6	18.5	5.9	15.3	9.7%	3.9%	15.7	15.7	16.4	2.5%	4.7%
Higher education institutions											
Current	–	–	9.4	–	–	0.7%	–	–	–	–	–
Various institutions: Institutional and programme support research	–	–	9.4	–	–	0.7%	–	–	–	–	–

Personnel information

Table 35.7 Administration personnel numbers and cost by salary level¹

Number of posts estimated for 31 March 2022			Number and cost ² of personnel posts filled/planned for on funded establishment									Average growth rate (%)	Average: Salary level/ Total (%)						
Number of funded posts	Number of posts additional to the establishment		Actual			Revised estimate			Medium-term expenditure estimate										
			2020/21		2021/22		2022/23		2023/24		2024/25		2021/22 - 2024/25						
Salary level			Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost					
Administration	249	6	195	151.6	0.8	233	172.5	0.7	230	172.7	0.8	227	170.2	0.8	227	177.8	0.8	-0.8%	100.0%
1 – 6	51	2	36	8.3	0.2	49	12.5	0.3	49	12.8	0.3	49	12.3	0.3	49	12.8	0.3	–	21.4%
7 – 10	84	3	63	27.4	0.4	82	36.4	0.4	80	36.3	0.5	79	35.2	0.4	79	36.9	0.5	-1.1%	35.0%
11 – 12	62	–	52	51.0	1.0	55	52.7	1.0	55	53.6	1.0	53	51.5	1.0	53	53.7	1.0	-1.3%	23.4%
13 – 16	50	1	42	61.3	1.5	47	70.9	1.5	46	70.0	1.5	46	71.2	1.5	46	74.4	1.6	-0.7%	20.2%
Other	2	–	2	3.6	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–

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

2. Rand million.

Programme 2: Technology Innovation

Programme purpose

Enable research and development in space science and technology, energy security and the bioeconomy, and in the emerging and converging areas of nanotechnology, robotics, photonics and indigenous knowledge systems, to promote the realisation of commercial products, processes and services. Promote the protection and use of intellectual property, technology transfer and technology commercialisation through the implementation of enabling policies and interventions along the entire innovation value chain.

Objectives

- Facilitate and make strategic investments in space science and technology, energy, the bioeconomy, nanotechnology, robotics, photonics, indigenous knowledge systems, intellectual property management, technology transfer and technology commercialisation by the end of 2024/25 by:
 - funding and/or maintaining 59 instruments to support the use of knowledge
 - generating 365 knowledge products (including published peer-reviewed scientific articles and the filing of applications for or the registration/granting of intellectual property rights)
 - developing and approving 12 science, technology and innovation strategic policy directives to enhance understanding and analyses that support the implementation of relevant interventions
 - developing and/or maintaining 9 decision support interventions to improve the delivery of government services or functions
 - providing recommendations for all permit applications for genetically modified organisms to support government decision-making.
- Oversee, monitor and regulate key policy initiatives in the strategic areas of space science and technology, energy, bio-innovation, nanotechnology, robotics and photonics by the end of 2024/25 by overseeing 620 new disclosures reported by publicly funded institutions.

Subprogrammes

- *Space Science* supports the creation of an environment conducive to the implementation of the national space strategy and the South African Earth observation strategy, and one that addresses the development of innovative applications and human capital to respond to national priorities and support socioeconomic development.
- *Hydrogen and Energy* supports a reduction in greenhouse gas emissions and air pollution while contributing to a more diverse and sustainable energy mix by enabling the widespread commercialisation of battery, fuel cell, renewable and net-zero carbon technologies. The implementation of the energy research development and innovation strategies also supports the penetration of clean and alternative energy technologies – through research, development and validation efforts – to be competitive with current technologies in terms of cost and performance. It also encourages the fostering of strategic partnerships between the public and private sectors to reduce institutional and market barriers to the commercialisation of these technologies.
- *Bio-innovation* leads the implementation of the national bioeconomy strategy approved by Cabinet in 2013. This aids projects, programmes and initiatives in support of bio-innovation in agriculture, health, industry, the environment and indigenous knowledge systems with the goal of growing the South African bioeconomy.
- *Innovation Priorities and Instruments* supports and strengthens the innovation policy package aimed at creating and sustaining an enabling environment for innovation, technology and development, and the commercialisation of publicly funded research and development initiatives.
- *National Intellectual Property Management Office* provides for the more effective use of intellectual property that emanates from publicly financed research and development.
- *Office of the Deputy Director-General: Technology Innovation* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R million											
Space Science	170.1	225.2	241.7	280.2	18.1%	16.8%	210.5	211.1	220.6	-7.7%	12.9%
Hydrogen and Energy	164.8	176.9	184.5	188.3	4.5%	13.1%	193.7	197.7	206.6	3.1%	11.0%
Bio-innovation	215.3	194.9	227.0	204.1	-1.8%	15.4%	209.3	209.9	219.3	2.4%	11.8%
Innovation Priorities and Instruments	531.4	578.1	671.9	971.2	22.3%	50.3%	1 109.7	1 113.9	1 163.9	6.2%	60.9%
National Intellectual Property Management Office	62.1	55.2	51.0	56.8	-2.9%	4.1%	56.0	56.0	58.5	1.0%	3.2%
Office of the Deputy Director-General: Technology Innovation	5.2	6.4	3.6	4.8	-3.3%	0.4%	4.8	4.8	5.0	1.6%	0.3%
Total	1 149.0	1 236.7	1 379.8	1 705.3	14.1%	100.0%	1 784.1	1 793.3	1 873.9	3.2%	100.0%
Change to 2021 Budget estimate				(74.9)			0.8	-	-		
Economic classification											
Current payments	65.6	67.4	47.2	75.5	4.8%	4.7%	76.2	75.5	78.9	1.5%	4.3%
Compensation of employees	45.4	43.8	40.3	52.4	4.9%	3.3%	52.5	51.7	54.0	1.0%	2.9%
Goods and services	20.1	23.6	6.9	23.2	4.8%	1.3%	23.8	23.8	24.9	2.5%	1.3%
<i>of which:</i>											
Communication	0.7	0.9	1.1	1.1	14.6%	0.1%	1.1	1.1	1.2	2.5%	0.1%
Consultants: Business and advisory services	5.2	2.5	3.5	1.8	-29.3%	0.2%	1.9	1.9	2.0	2.5%	0.1%
Agency and support/outsourced services	0.8	0.7	1.5	6.8	104.7%	0.2%	7.0	7.0	7.4	2.5%	0.4%
Entertainment	0.0	0.0	-	3.5	736.3%	0.1%	3.6	3.6	3.8	2.5%	0.2%
Travel and subsistence	10.6	9.4	0.6	5.4	-20.1%	0.5%	5.5	5.6	5.8	2.5%	0.3%
Venues and facilities	1.1	6.4	0.1	2.6	31.2%	0.2%	2.6	2.6	2.7	2.5%	0.1%
Transfers and subsidies	1 083.4	1 169.2	1 332.6	1 629.7	14.6%	95.3%	1 707.8	1 717.8	1 794.9	3.3%	95.7%
Departmental agencies and accounts	714.9	767.6	1 045.4	1 195.8	18.7%	68.1%	1 255.7	1 260.6	1 317.2	3.3%	70.3%
Higher education institutions	-	-	112.0	-	-	2.0%	-	-	-	-	-
Public corporations and private enterprises	127.8	154.4	118.0	109.0	-5.2%	9.3%	119.8	120.2	125.6	4.8%	6.6%
Non-profit institutions	240.6	247.0	57.4	325.0	10.5%	15.9%	332.4	337.0	352.2	2.7%	18.8%
Households	0.1	0.2	-	-	-100.0%	-	-	-	-	-	-
Payments for financial assets	0.0	0.0	-	-	-100.0%	-	-	-	-	-	-
Total	1 149.0	1 236.7	1 379.8	1 705.3	14.1%	100.0%	1 784.1	1 793.3	1 873.9	3.2%	100.0%
Proportion of total programme expenditure to vote expenditure	14.5%	15.3%	19.3%	18.9%	-	-	19.5%	19.4%	19.4%	-	-
Details of transfers and subsidies											
Households											
Social benefits											
Current	0.1	0.1	-	-	-100.0%	-	-	-	-	-	-
Households	0.1	0.1	-	-	-100.0%	-	-	-	-	-	-
Households											
Other transfers to households											
Current	-	0.2	-	-	-	-	-	-	-	-	-
Households	-	0.2	-	-	-	-	-	-	-	-	-
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	714.9	767.6	996.7	1 195.8	18.7%	67.2%	1 255.7	1 260.6	1 317.2	3.3%	70.3%
Various institutions: Biofuels research	-	2.0	7.9	-	-	0.2%	-	-	-	-	-
Various institutions: Technology transfer offices: Support of research units	2.1	2.2	3.6	-	-100.0%	0.1%	-	-	-	-	-
Various institutions: Implementation of bioeconomy strategy	30.9	31.3	47.1	-	-100.0%	2.0%	-	-	-	-	-
Various institutions: Energy grand challenge research	-	-	47.2	43.3	-	1.7%	44.5	44.6	46.6	2.5%	2.5%
Various institutions: Health innovation research	72.8	49.0	52.7	-	-100.0%	3.2%	-	-	-	-	-

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/Total (%)
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
	R million										
Various institutions: HIV and AIDS prevention and treatment technologies research	24.6	27.9	29.2	30.2	7.1%	2.0%	31.0	31.1	32.5	2.5%	1.7%
Various institutions: Hydrogen strategy research	–	–	43.8	–	–	0.8%	–	–	–	–	–
Various institutions: Innovation projects research	–	14.9	125.0	402.4	–	9.9%	519.4	521.4	544.8	10.6%	27.8%
Various institutions: Space science research: Economic competitiveness and support package	13.2	54.4	36.2	63.3	68.7%	3.1%	33.3	33.4	34.9	-18.0%	2.3%
National Research Foundation: Research and development in indigenous knowledge systems	9.7	1.6	0.5	6.6	-11.9%	0.3%	6.8	6.8	7.1	2.5%	0.4%
Technology Innovation Agency	420.3	440.9	408.8	447.7	2.1%	31.4%	458.4	460.1	480.8	2.4%	25.8%
South African National Space Agency	138.0	143.5	161.2	202.2	13.6%	11.8%	162.4	163.1	170.4	-5.5%	9.8%
Medical Research Council: Social impact bond	–	–	33.4	–	–	0.6%	–	–	–	–	–
Various institutions: Emerging research areas	3.4	–	–	–	-100.0%	0.1%	–	–	–	–	–
Capital	–	–	48.7	–	–	0.9%	–	–	–	–	–
Various institutions: Hydrogen strategy (capital)	–	–	48.7	–	–	0.9%	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	126.9	147.3	113.5	109.0	-4.9%	9.1%	119.8	120.2	125.6	4.8%	6.6%
Various institutions: Technology transfer offices: Support of research units	7.7	8.4	5.1	–	-100.0%	0.4%	–	–	–	–	–
Various institutions: Implementation of bioeconomy strategy	6.0	7.1	1.0	–	-100.0%	0.3%	–	–	–	–	–
Various institutions: Energy grand challenge research	10.2	3.6	–	–	-100.0%	0.3%	–	–	–	–	–
Various institutions: Hydrogen strategy research	4.9	25.9	–	–	-100.0%	0.6%	–	–	–	–	–
Various institutions: Hydrogen strategy (capital)	24.0	13.1	–	–	-100.0%	0.7%	–	–	–	–	–
Various institutions: Innovation projects research	4.9	0.5	3.4	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Space science research: Economic competitiveness and support package	–	5.0	22.6	–	–	0.5%	–	–	–	–	–
National Research Foundation: Research and development in indigenous knowledge systems	1.5	3.2	1.0	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: Emerging research areas	67.8	80.7	80.5	109.0	17.1%	6.2%	119.8	120.2	125.6	4.8%	6.6%
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
Current	0.9	7.1	4.4	–	-100.0%	0.2%	–	–	–	–	–
Various institutions: Technology transfer offices: Support of research units	0.6	2.6	4.4	–	-100.0%	0.1%	–	–	–	–	–
Various institutions: Implementation of bioeconomy strategy	–	1.1	–	–	–	–	–	–	–	–	–
Various institutions: Health innovation research	0.3	2.2	–	–	-100.0%	–	–	–	–	–	–
National Research Foundation: Research and development in indigenous knowledge systems	–	1.2	–	–	–	–	–	–	–	–	–
Non-profit institutions											
Current	193.6	185.2	57.4	243.8	8.0%	12.4%	248.3	249.2	260.4	2.2%	14.0%
Various institutions: Biofuels research	7.2	5.6	–	9.1	8.0%	0.4%	9.4	9.4	9.8	2.5%	0.5%
Various institutions: Implementation of the bioeconomy strategy	0.9	2.2	7.9	43.4	265.3%	1.0%	44.5	44.7	46.7	2.4%	2.5%

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies											
R million	Audited outcome			Adjusted appropriation 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Various institutions: Energy grand challenge research	26.9	37.4	-	-	-100.0%	1.2%	-	-	-	-	-
Various institutions: Health innovation research	2.6	0.1	-	87.5	223.0%	1.6%	55.0	55.2	57.7	-13.0%	3.6%
Various institutions: Hydrogen strategy research	35.3	16.6	-	42.6	6.4%	1.7%	43.6	43.8	45.8	2.4%	2.5%
Various institutions: Innovation projects research	4.5	4.1	31.9	-	-100.0%	0.7%	-	-	-	-	-
International Centre for Genetic Engineering and Biotechnology	31.2	40.8	15.0	16.1	-19.8%	1.9%	16.6	16.6	17.4	2.5%	0.9%
Various institutions: Space science research: Economic competitiveness and support package	5.3	10.0	-	-	-100.0%	0.3%	-	-	-	-	-
Various institutions: Technology transfer offices: Support for research units	37.4	27.4	1.6	45.0	6.3%	2.0%	44.1	44.2	46.2	0.9%	2.5%
National Research Foundation: Research and development in indigenous knowledge systems	16.9	9.1	0.9	-	-100.0%	0.5%	-	-	-	-	-
Medical Research Council: Social impact bond	-	-	-	-	-	-	35.1	35.3	36.8	-	1.5%
Various institutions: Emerging research areas	25.2	31.9	-	-	-100.0%	1.0%	-	-	-	-	-
Capital	47.0	61.9	-	81.2	20.0%	3.5%	84.1	87.8	91.8	4.2%	4.8%
Various institutions: Hydrogen strategy (capital)	47.0	61.9	-	81.2	20.0%	3.5%	84.1	87.8	91.8	4.2%	4.8%
Higher education institutions											
Current			91.4			1.7%					
Various institutions: Technology transfer offices: Support of research units	-	-	27.4	-	-	0.5%	-	-	-	-	-
Various institutions: Implementation of the bioeconomy strategy	-	-	0.6	-	-	-	-	-	-	-	-
Various institutions: Hydrogen strategy research	-	-	8.0	-	-	0.1%	-	-	-	-	-
Various institutions: Innovation projects research	-	-	-	-	-	-	-	-	-	-	-
Various institutions: Space science research: Economic competitiveness and support package	-	-	13.7	-	-	0.2%	-	-	-	-	-
National Research Foundation: Research and development in indigenous knowledge systems	-	-	23.6	-	-	0.4%	-	-	-	-	-
Various institutions: Emerging research areas	-	-	18.1	-	-	0.3%	-	-	-	-	-
Capital			20.6			0.4%					
Various institutions: Hydrogen strategy (capital)	-	-	20.6	-	-	0.4%	-	-	-	-	-

Personnel information

Table 35.9 Technology Innovation personnel numbers and cost by salary level¹

Number of posts estimated for 31 March 2022		Number and cost ² of personnel posts filled/planned for on funded establishment												Average growth rate (%) 2021/22 - 2024/25	Average: Salary level/ Total (%)				
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate											
		2020/21	2021/22	2022/23	2023/24	2024/25	2022/23	2023/24	2024/25	2022/23	2023/24	2024/25							
Technology Innovation		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost			
Salary level	62	-	47	40.3	0.9	65	52.4	0.8	64	52.5	0.8	63	51.7	0.8	62	54.0	0.9	-1.1%	100.0%
1-6	6	-	5	1.2	0.2	7	1.9	0.3	7	1.9	0.3	7	1.8	0.3	7	1.9	0.3	-	11.1%
7-10	12	-	6	2.7	0.4	14	6.4	0.5	14	6.5	0.5	14	6.3	0.5	14	6.6	0.5	-0.2%	21.4%
11-12	25	-	20	17.0	0.8	25	20.8	0.8	24	20.3	0.8	23	19.3	0.8	23	20.2	0.9	-2.8%	37.5%
13-16	19	-	16	19.4	1.2	19	23.4	1.2	19	23.8	1.3	19	24.2	1.3	19	25.3	1.3	-	30.0%

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

2. Rand million.

Programme 3: International Cooperation and Resources

Programme purpose

Strategically develop, promote and manage international partnerships that strengthen the national system of innovation. Enable an exchange of knowledge, capacity and resources between South Africa and its international partners, with a focus on building capacity to support science, technology and innovation in Africa. Support South African foreign policy through science diplomacy.

Objectives

- Maximise South Africa's strategic interests in science, technology and innovation through international cooperation and promote a transformed, inclusive, responsive and coherent national system of innovation by leveraging resources through 129 projects with donor funders over the MTEF period.
- Develop human capabilities and skills for the economy and development by securing opportunities for 978 South African students to participate in international programmes over the medium term.
- Revitalise existing industries and stimulate research to lead industrial development by participating in 45 initiatives targeting the objectives of the African Union's Agenda 2063, and 51 initiatives focused on the Southern African Development Community's regional indicative strategic development plan by March 2024.
- Support innovation within a capable state by engaging with 36 science, technology and innovation leaders in multilateral forums by March 2024.

Subprogrammes

- *Multilateral Cooperation and Africa* advances and facilitates South Africa's participation in bilateral science, technology and innovation cooperation initiatives with other African partners; in African multilateral programmes, especially those of the Southern African Development Community and the African Union; and in broader multilateral science, technology and innovation partnerships, with a strategic focus on South-South cooperation.
- *International Resources* works to increase the flow of international funding into South African science, technology and innovation initiatives, as well as African regional and continental programmes, to promote foreign investment and the fostering of strategic partnerships with partners such as the European Union, philanthropic foundations and organisations, and the multinational private sector.
- *Overseas Bilateral Cooperation* promotes and facilitates South Africa's bilateral cooperation on science, technology and innovation with partners in Europe, the Americas, Asia and Australasia, especially for human capital development and collaborative research and innovation; and secures support for cooperation with other African partners.
- *Office of the Deputy Director-General: International Cooperation and Resources* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.10 International Cooperation and Resources expenditure trends and estimates by subprogramme and economic classification

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R million					2018/19 - 2021/22					2021/22 - 2024/25	
Multilateral Cooperation and Africa	36.1	30.5	26.4	29.3	-6.8%	22.7%	32.7	32.6	34.0	5.2%	21.4%
International Resources	61.9	61.5	57.7	67.1	2.7%	46.0%	68.4	68.4	71.5	2.1%	45.9%
Overseas Bilateral Cooperation	41.9	37.4	24.4	43.0	0.9%	27.2%	43.7	43.5	45.4	1.8%	29.3%
Office of the Deputy Director-General: International Cooperation and Resources	5.3	6.7	5.8	5.0	-1.8%	4.2%	5.1	5.0	5.2	1.5%	3.4%
Total	145.2	136.0	114.2	144.4	-0.2%	100.0%	149.9	149.5	156.2	2.6%	100.0%
Change to 2021 Budget estimate				(2.2)			0.8	-	-		

Table 35.10 International Cooperation and Resources expenditure trends and estimates by subprogramme and economic classification

Economic classification	Audited outcome			Adjusted appropriation 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average Expenditure/ Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
R million											
Current payments	77.0	68.1	51.9	69.9	-3.2%	49.5%	73.5	72.7	76.0	2.8%	48.7%
Compensation of employees	51.8	48.4	47.3	54.0	1.4%	37.3%	54.1	53.3	55.7	1.0%	36.2%
Goods and services	25.2	19.8	4.6	15.9	-14.2%	12.1%	19.4	19.5	20.4	8.6%	12.5%
<i>of which:</i>											
<i>Communication</i>	1.3	1.1	1.9	1.7	8.2%	1.1%	1.7	1.7	1.8	2.5%	1.2%
<i>Agency and support/outourced services</i>	–	0.1	–	0.8	–	0.2%	0.8	0.8	0.8	2.5%	0.5%
<i>Entertainment</i>	0.2	0.2	0.0	0.9	71.7%	0.2%	0.9	0.9	1.0	2.5%	0.6%
<i>Travel and subsistence</i>	10.7	8.3	1.3	5.3	-21.0%	4.7%	7.5	7.5	7.8	14.1%	4.7%
<i>Operating payments</i>	0.5	2.7	0.5	1.4	38.3%	0.9%	1.4	1.4	1.5	2.5%	0.9%
<i>Venues and facilities</i>	7.9	6.5	0.1	3.1	-26.8%	3.2%	4.2	4.2	4.4	12.5%	2.6%
Transfers and subsidies	68.2	67.9	62.2	74.5	3.0%	50.5%	76.4	76.7	80.2	2.5%	51.3%
Departmental agencies and accounts	29.5	34.2	35.3	16.7	-17.3%	21.4%	17.1	17.1	17.9	2.4%	11.5%
Higher education institutions	–	–	11.3	–	–	2.1%	–	–	–	–	–
Public corporations and private enterprises	8.8	8.7	6.4	–	-100.0%	4.4%	–	–	–	–	–
Non-profit institutions	29.0	24.8	9.1	57.8	25.9%	22.4%	59.4	59.6	62.3	2.5%	39.8%
Households	0.9	0.2	0.1	–	-100.0%	0.2%	–	–	–	–	–
Payments for capital assets	0.0	–	–	–	-100.0%	–	–	–	–	–	–
Machinery and equipment	0.0	–	–	–	-100.0%	–	–	–	–	–	–
Payments for financial assets	–	–	0.1	–	–	–	–	–	–	–	–
Total	145.2	136.0	114.2	144.4	-0.2%	100.0%	149.9	149.5	156.2	2.6%	100.0%
Proportion of total programme expenditure to vote expenditure	1.8%	1.7%	1.6%	1.6%	–	–	1.6%	1.6%	1.6%	–	–
Details of transfers and subsidies											
Households											
Social benefits											
Current	0.2	0.2	0.1	–	-100.0%	0.1%	–	–	–	–	–
Households	0.2	0.2	0.1	–	-100.0%	0.1%	–	–	–	–	–
Other transfers to households											
Current	0.7	–	–	–	-100.0%	0.1%	–	–	–	–	–
Households	0.7	–	–	–	-100.0%	0.1%	–	–	–	–	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	29.5	34.2	35.3	16.7	-17.3%	21.4%	17.1	17.1	17.9	2.4%	11.5%
National Research Foundation: Bilateral cooperation for global science development	14.8	15.9	2.6	16.7	4.1%	9.2%	17.1	17.1	17.9	2.4%	11.5%
Various institutions: Global science: International multilateral agreements	9.5	18.3	25.9	–	-100.0%	10.0%	–	–	–	–	–
Various institutions: Global science: African multilateral agreements	5.2	–	6.8	–	-100.0%	2.2%	–	–	–	–	–
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current	8.4	8.0	3.2	–	-100.0%	3.6%	–	–	–	–	–
Various institutions: Global science: International multilateral agreements	4.4	3.6	0.4	–	-100.0%	1.6%	–	–	–	–	–
Various institutions: Global science: African multilateral agreements	4.0	4.4	2.8	–	-100.0%	2.1%	–	–	–	–	–
Private enterprises											
Other transfers to private enterprises											

Table 35.10 International Cooperation and Resources expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies		Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/Total (%)
		2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R million												
Current		0.4	0.7	3.3								
National Research Foundation: Bilateral cooperation for global science development		–	–	–	–	–	–	–	–	–	–	–
Various institutions: Global science: International multilateral agreements		0.4	0.7	3.3	–	-100.0%	0.8%	–	–	–	–	–
Non-profit institutions												
Current		29.0	24.8	9.1	57.8	25.9%	22.4%	59.4	59.6	62.3	2.5%	39.8%
National Research Foundation: Bilateral cooperation for global science development		–	–	3.8	–	–	0.7%	–	–	–	–	–
Various institutions: Global science: International multilateral agreements		28.8	21.2	5.1	47.3	18.0%	19.0%	48.6	48.8	51.0	2.5%	32.6%
Various institutions: Global science: African multilateral agreements		0.2	3.7	0.2	10.5	283.5%	2.7%	10.8	10.8	11.3	2.5%	7.2%
Higher education institutions												
Current		–	–	10.7	–	–	2.0%	–	–	–	–	–
National Research Foundation: Bilateral cooperation for global science development		–	–	4.3	–	–	0.8%	–	–	–	–	–
Various institutions: Global science: International multilateral agreements		–	–	6.4	–	–	1.2%	–	–	–	–	–

Personnel information

Table 35.11 International Cooperation and Resources personnel numbers and cost by salary level¹

Number of posts estimated for 31 March 2022		Number and cost ² of personnel posts filled/planned for on funded establishment															Average growth rate (%)	Average: Salary level/Total (%)	
		Actual			Revised estimate			Medium-term expenditure estimate											
Number of funded posts	Number of posts additional to the establishment	2020/21			2021/22			2022/23			2023/24			2024/25			2021/22 - 2024/25		
		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost			
International Cooperation and Resources																			
Salary level	69	–	53	47.3	0.9	55	54.0	1.0	53	54.1	1.0	50	53.3	1.1	50	55.7	1.1	-2.9%	100.0%
1 – 6	4	–	4	1.2	0.3	4	1.3	0.3	4	1.3	0.3	2	0.6	0.3	2	0.7	0.3	-20.6%	5.8%
7 – 10	27	–	24	13.1	0.5	20	11.0	0.6	18	10.3	0.6	17	9.8	0.6	17	10.3	0.6	-4.6%	35.0%
11 – 12	18	–	15	16.6	1.1	15	16.3	1.1	15	16.5	1.1	15	16.5	1.1	15	17.3	1.2	–	28.8%
13 – 16	20	–	10	16.4	1.6	16	25.4	1.6	16	25.8	1.6	16	26.3	1.7	16	27.4	1.7	–	30.5%

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

2. Rand million.

Programme 4: Research, Development and Support

Programme purpose

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

Objectives

- Contribute to the development of representative, high-level human capital who can pursue locally relevant, globally competitive research and innovation activities over the medium term by:
 - awarding 7 200 bursaries to doctoral students
 - awarding 13 900 bursaries to pipeline postgraduate (BTech, honours and masters) students

- placing 2 250 graduates and students in department-funded work preparation programmes in science, engineering and technology institutions.
- Ensure the availability of and 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 25 in 2022/23 to 30 in 2024/25
 - increasing the total available broadband capacity provided by the South African National Research Network from 6 200 Gbps in 2022/23 to 7 100 Gbps in 2024/2025.
- Increasing knowledge generation and innovation output by:
 - ensuring that 14 100 researchers over the medium term are awarded research grants through programmes managed by the National Research Foundation
 - ensuring that 22 500 research articles over the medium term are published by researchers funded by the National Research Foundation and cited in the Web of Science citation database
 - completing the production of the L-band receivers for the additional 20 MeerKAT antennae by 2022/23 and installing the receivers by 2023/24
 - installing 20 MeerKAT extension antennae by 2022/23 and 4 SKA1-molded interconnect device antennae by 2024/25
 - conducting 42 initiatives to promote public awareness of and engagement with science over the medium term, and publishing the first South African public relationship with science survey report by 2023/24
 - maintaining the number of strategic and technical engagements with the National Research Foundation, Academy of Science of South Africa and the South African Council for Natural Scientific Professions at 36 to ensure alignment with national priorities by 2024/25.

Subprogrammes

- *Human Capital and Science Promotions* formulates and implements policies and strategies that address the availability of human capital for science, technology and innovation; provides fundamental support for research activities; and contributes to the development of a society that is scientifically literate, knowledgeable about science and critically engaged.
- *Science Missions* promotes the development of research and the production of scientific knowledge and human capital in scientific areas in which South Africa enjoys a geographic advantage.
- *Basic Science and Infrastructure* facilitates the strategic implementation of research and innovation equipment and facilities to promote knowledge production in national priority areas and sustain innovation led by research and development.
- *Astronomy* supports the development of astronomical sciences around a new multi-wavelength astronomy strategy, and provides strategic guidance and support to relevant astronomy institutions for the implementation of strategic astronomy programmes.
- *Office of the Deputy Director-General: Research, Development and Support* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.12 Research, Development and Support expenditure trends and estimates by subprogramme and economic classification

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21				2021/22	2022/23	2023/24		
R million											
Human Capital and Science Promotions	2 447.2	2 629.8	2 305.8	2 711.5	3.5%	56.6%	2 770.3	2 780.8	2 905.5	2.3%	53.8%
Science Missions	223.3	239.2	215.7	184.9	-6.1%	4.8%	256.2	257.0	268.5	13.2%	4.7%
Basic Science and Infrastructure	1 095.3	978.7	687.2	1 041.8	-1.7%	21.3%	1 190.8	1 241.3	1 297.0	7.6%	23.0%
Astronomy	750.8	728.4	520.2	1 053.4	11.9%	17.1%	883.7	920.4	961.7	-3.0%	18.4%
Office of the Deputy Director-General: Research, Development and Support	3.8	2.3	2.1	4.0	1.5%	0.1%	4.0	4.0	4.2	1.3%	0.1%
Total	4 520.4	4 578.4	3 731.0	4 995.6	3.4%	100.0%	5 105.0	5 203.4	5 436.9	2.9%	100.0%
Change to 2021				46.4			11.8	11.3	-		
Budget estimate											
Economic classification											
Current payments	53.2	52.7	42.9	51.8	-0.8%	1.1%	56.3	55.8	58.3	4.0%	1.1%
Compensation of employees	37.9	39.9	40.6	39.4	1.4%	0.9%	39.5	38.9	40.6	1.0%	0.8%
Goods and services	15.3	12.8	2.3	12.4	-6.8%	0.2%	16.8	16.9	17.7	12.5%	0.3%
<i>of which:</i>											
Administrative fees	0.5	0.4	0.0	0.7	10.2%	-	0.7	0.7	0.7	2.5%	-
Communication	0.6	0.7	0.5	0.8	13.0%	-	0.8	0.8	0.9	2.5%	-
Consultants: Business and advisory services	1.3	0.7	0.6	1.3	0.7%	-	1.4	1.4	1.4	2.5%	-
Agency and support/outsourced services	0.7	0.3	0.0	1.0	14.9%	-	1.1	1.1	1.1	2.5%	-
Travel and subsistence	8.5	8.3	0.7	5.3	-14.7%	0.1%	8.5	8.5	8.9	19.1%	0.2%
Venues and facilities	1.8	1.0	0.1	1.4	-8.0%	-	2.4	2.4	2.5	23.1%	-
Transfers and subsidies	4 467.3	4 525.7	3 688.0	4 943.8	3.4%	98.9%	5 048.8	5 147.6	5 378.6	2.8%	98.9%
Departmental agencies and accounts	3 859.1	3 869.5	3 202.4	4 706.7	6.8%	87.7%	4 767.0	4 853.4	5 071.2	2.5%	93.5%
Higher education institutions	-	-	120.3	-	-	0.7%	-	-	-	-	-
Public corporations and private enterprises	466.7	454.4	206.7	237.1	-20.2%	7.7%	281.8	294.2	307.4	9.0%	5.4%
Non-profit institutions	141.4	200.4	158.5	-	-100.0%	2.8%	-	-	-	-	-
Households	0.0	1.4	0.2	-	-100.0%	-	-	-	-	-	-
Payments for capital assets	0.0	-	-	-	-100.0%	-	-	-	-	-	-
Machinery and equipment	0.0	-	-	-	-100.0%	-	-	-	-	-	-
Payments for financial assets	0.0	0.0	0.0	-	-100.0%	-	-	-	-	-	-
Total	4 520.4	4 578.4	3 731.0	4 995.6	3.4%	100.0%	5 105.0	5 203.4	5 436.9	2.9%	100.0%
Proportion of total programme expenditure to vote expenditure	56.9%	56.7%	52.1%	55.5%	-	-	55.9%	56.3%	56.3%	-	-
Details of transfers and subsidies											
Households											
Social benefits											
Current	0.0	-	0.2	-	-100.0%	-	-	-	-	-	-
Households	0.0	-	0.2	-	-100.0%	-	-	-	-	-	-
Households											
Other transfers to households											
Current	-	1.4	0.1	-	-	-	-	-	-	-	-
Various institutions: Policy development on human and social development dynamics	-	0.3	-	-	-	-	-	-	-	-	-
National Research Foundation: Human resources development for science and engineering	-	1.1	-	-	-	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	-	-	0.1	-	-	-	-	-	-	-	-

Table 35.12 Research, Development and Support expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies				Adjusted appropriation	Average growth rate (%)		Average Expenditure/ Total (%)			Average growth rate (%)		
R million	Audited outcome				2021/22	2018/19 - 2021/22		Medium-term expenditure estimate			2021/22 - 2024/25	
	2018/19	2019/20	2020/21	2021/22		2018/19	2021/22	2022/23	2023/24	2024/25	2021/22	2024/25
Departmental agencies and accounts												
Departmental agencies (non-business entities)												
Current	2 615.9	2 774.5	2 471.0	2 930.2	3.9%	60.5%	3 075.2	3 087.0	3 225.5	3.3%	59.4%	
Academy of Science of South Africa	25.7	27.0	24.8	33.2	9.0%	0.6%	33.8	34.0	35.5	2.2%	0.7%	
Various institutions: Astronomy research and development	30.6	32.8	32.5	25.6	-5.8%	0.7%	41.7	41.9	43.8	19.5%	0.7%	
Various institutions: Policy development on human and social development dynamics	25.6	27.1	28.3	36.9	13.0%	0.7%	37.9	38.1	39.8	2.5%	0.7%	
National Research Foundation: Human resources development for science and engineering	851.9	922.3	762.3	1 002.9	5.6%	19.9%	1 006.9	1 010.7	1 056.1	1.7%	19.7%	
National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package	–	–	23.1	18.6	–	0.2%	19.1	19.2	20.0	2.5%	0.4%	
National Research Foundation	904.8	943.4	859.5	962.6	2.1%	20.6%	997.4	1 001.3	1 046.1	2.8%	19.3%	
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	58.1	64.3	30.0	91.6	16.4%	1.4%	94.1	94.4	98.7	2.5%	1.8%	
National Research Foundation: South African research chairs initiative to develop human resources in science	530.3	566.3	544.5	588.6	3.5%	12.5%	602.9	605.2	632.4	2.4%	11.7%	
Various institutions: Strategic science platforms for research and development	188.9	191.3	166.2	170.2	-3.4%	4.0%	241.3	242.3	253.1	14.2%	4.4%	
Capital	1 243.2	1 095.0	731.4	1 776.5	12.6%	27.2%	1 691.8	1 766.4	1 845.7	1.3%	34.1%	
Various institutions: Infrastructure projects for research and development	534.0	408.0	253.7	758.3	12.4%	11.0%	861.6	899.6	940.0	7.4%	16.7%	
National Research Foundation: Square Kilometre Array: Capital contribution to research	709.2	687.0	477.7	1 018.2	12.8%	16.2%	830.2	866.8	905.7	-3.8%	17.5%	
Public corporations and private enterprises												
Public corporations												
Other transfers to public corporations												
Current	49.8	78.1	62.1	–	-100.0%	1.1%	–	–	–	–	–	
National Research Foundation: Human resources development for science and engineering	–	41.2	42.0	–	–	0.5%	–	–	–	–	–	
National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package	41.0	22.0	–	–	-100.0%	0.4%	–	–	–	–	–	
Various institutions: Strategic science platforms for research and development	6.4	14.9	20.1	–	-100.0%	0.2%	–	–	–	–	–	
Various institutions: Science awareness	2.4	–	–	–	-100.0%	–	–	–	–	–	–	
Capital	417.0	376.3	142.6	237.1	-17.2%	6.6%	281.8	294.2	307.4	9.0%	5.4%	
Council for Scientific and Industrial Research: Cyberinfrastructure research and development	236.3	251.7	60.2	237.1	0.1%	4.4%	281.8	294.2	307.4	9.0%	5.4%	
Various institutions: Infrastructure projects for research and development	180.7	124.6	82.3	–	-100.0%	2.2%	–	–	–	–	–	
Public corporations and private enterprises												
Private enterprises												
Other transfers to private enterprises												

Table 35.12 Research, Development and Support expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies	Audited outcome			Adjusted appropriation 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
	R million										
Current	-	-	2.0	-	-	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	-	-	2.0	-	-	-	-	-	-	-	-
Non-profit institutions											
Current	34.4	45.6	9.4	-	-100.0%	0.5%	-	-	-	-	-
Various institutions: Policy development on human and social development dynamics	-	1.5	1.6	-	-	-	-	-	-	-	-
National Research Foundation: Human resources development for science and engineering	4.6	11.2	1.8	-	-100.0%	0.1%	-	-	-	-	-
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	16.8	17.0	-	-	-100.0%	0.2%	-	-	-	-	-
National Research Foundation: Square Kilometre Array: Capital contribution to research	0.2	-	-	-	-100.0%	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	11.1	15.9	1.0	-	-100.0%	0.2%	-	-	-	-	-
Various institutions: Astronomy research and development	-	-	5.0	-	-	-	-	-	-	-	-
Various institutions: Policy development on basic science development and support	1.8	-	-	-	-100.0%	-	-	-	-	-	-
Capital	107.1	154.8	149.1	-	-100.0%	2.3%	-	-	-	-	-
Various institutions: Infrastructure projects for research and development	107.1	154.8	149.1	-	-100.0%	2.3%	-	-	-	-	-
Higher education institutions											
Current	-	-	19.9	-	-	0.1%	-	-	-	-	-
Various institutions: Policy development on human and social development dynamics	-	-	2.1	-	-	-	-	-	-	-	-
National Research Foundation: Human resources development for science and engineering	-	-	2.0	-	-	-	-	-	-	-	-
Various institutions: Science awareness, research and initiatives to encourage youth participation in science	-	-	3.5	-	-	-	-	-	-	-	-
Various institutions: Strategic science platforms for research and development	-	-	12.2	-	-	0.1%	-	-	-	-	-
Various institutions: Astronomy research and development	-	-	0.1	-	-	-	-	-	-	-	-
Capital	-	-	100.4	-	-	0.6%	-	-	-	-	-
Various institutions: Infrastructure projects for research and development	-	-	100.4	-	-	0.6%	-	-	-	-	-

Personnel information

Table 35.13 Research, Development and Support personnel numbers and cost by salary level¹

Number of posts estimated for 31 March 2022		Number and cost ² of personnel posts filled/planned for on funded establishment												Average growth rate (%)	Average: Salary level/ Total (%)				
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate			Medium-term expenditure estimate											
		2020/21			2021/22			2022/23		2023/24		2024/25		2021/22 - 2024/25					
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	55	–	45	40.6	0.9	44	39.4	0.9	43	39.5	0.9	42	38.9	0.9	42	40.6	1.0	-1.8%	100.0%
1 – 6	4	–	4	1.1	0.3	4	1.1	0.3	3	0.9	0.3	3	0.8	0.3	3	0.9	0.3	-9.1%	7.6%
7 – 10	10	–	7	2.9	0.4	6	2.7	0.4	6	2.4	0.4	6	2.4	0.4	6	2.5	0.4	-4.3%	13.5%
11 – 12	24	–	20	18.9	0.9	20	17.5	0.9	20	17.8	0.9	20	17.7	0.9	20	18.5	0.9	-0.0%	46.8%
13 – 16	17	–	14	17.8	1.3	14	18.1	1.3	14	18.4	1.3	13	17.9	1.3	13	18.7	1.4	-1.3%	32.1%

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

2. Rand million.

Programme 5: Socioeconomic Innovation Partnerships

Programme purpose

Enhance government's growth and development priority areas through targeted science and technology-based innovation interventions, and the development of strategic partnerships with other government departments, industry, research institutions and communities.

Objectives

- Inform and influence how science and technology can be used to achieve inclusive development through knowledge, evidence and learning over the medium term by:
 - publishing 28 knowledge products on innovation for inclusive development
 - maintaining and improving 11 decision support systems
 - generating 47 learning interventions.
- Identify, grow and sustain niche, high-potential science, technology and innovation capabilities for sustainable development and the greening of society and the economy by fully funding and co-funding 380 honours, masters and doctoral students, and adding 26 knowledge and innovation products to the intellectual property portfolio over the medium term.
- Identify, grow and sustain niche high-potential science, technology and innovation capabilities that improve the competitiveness of existing industries with growth potential in aerospace, advanced manufacturing, chemicals, advanced metals, mining and within sector innovation funds, and facilitate the development of new industries led by research and development over the medium term.
- Identify, grow and sustain niche, high-potential science, technology and innovation capabilities that improve the competitiveness of existing industries with growth potential in aerospace, advanced manufacturing, chemicals, advanced metals, mining, ICT and within sector innovation funds; and facilitate the development of new targeted industries over the medium term by:
 - fully funding or co-funding 1 461 masters and doctoral students, and 602 interns
 - adding 140 knowledge and innovation products to South Africa's intellectual property portfolio
 - funding 12 instruments in support of increased localisation, competitiveness and industry development led by research and development.
- Introduce and manage interventions and incentive programmes that increase the level of private sector investment in scientific or technological research and development by providing preapproval decisions within 90 days of the date of receipt of applications for the research and development tax incentive over the medium term.

Subprogrammes

- *Sector Innovation and Green Economy* provides policy, strategy and direction for growth in strategic sectors of the economy led by research and development, and supports the transition to a green economy.
- *Innovation for Inclusive Development* supports the development of science and technology-based innovations for tackling poverty, including the creation of sustainable jobs and human settlements, and the enhanced delivery of basic services.
- *Science and Technology Investment* leads and supports the development of indicators and instruments for monitoring investments in science and technology, the performance of the national system of innovation, and ways of strengthening policy in relation to the national system of innovation.
- *Technology Localisation, Beneficiation and Advanced Manufacturing* funds development programmes for technology and innovation to advance strategic and sustainable economic growth, sector development priorities, and service delivery over the medium and long terms.
- *Office of the Deputy Director-General: Socioeconomic Innovation Partnership* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)		
	2018/19	2019/20	2020/21		2021/22	2018/19	2021/22	2022/23	2023/24	2024/25	2021/22	2024/25
R million												
Sector Innovation and Green Economy	1 031.3	1 042.7	984.3	1 120.5	2.8%	59.4%	1 092.0	1 096.1	1 145.3	0.7%	61.9%	
Innovation for Inclusive Development	340.0	373.1	332.6	403.9	5.9%	20.6%	383.1	384.3	401.6	-0.2%	21.9%	
Science and Technology Investment	29.9	34.0	30.7	35.5	5.8%	1.8%	25.1	25.1	26.2	-9.6%	1.6%	
Technology Localisation, Beneficiation and Advanced Manufacturing	350.1	323.6	325.7	259.4	-9.5%	17.9%	255.6	256.3	268.0	1.1%	14.4%	
Office of the Deputy Director-General: Socioeconomic Innovation Partnership	4.0	4.9	4.7	6.4	16.9%	0.3%	3.4	3.4	3.5	-17.8%	0.2%	
Total	1 755.2	1 778.2	1 678.0	1 825.6	1.3%	100.0%	1 759.2	1 765.1	1 844.6	0.3%	100.0%	
Change to 2021				96.5			(10.5)	(11.3)	-			
Budget estimate												
Economic classification												
Current payments	51.7	49.0	47.0	57.9	3.8%	2.9%	55.2	54.6	57.1	-0.5%	3.1%	
Compensation of employees	44.0	43.2	42.2	45.0	0.7%	2.5%	45.0	44.4	46.4	1.0%	2.5%	
Goods and services	7.7	5.8	4.8	12.9	18.7%	0.4%	10.2	10.3	10.7	-6.1%	0.6%	
<i>of which:</i>												
Advertising	-	0.0	-	0.2	-	-	0.2	0.3	0.3	2.5%	-	
Catering: Departmental activities	0.0	0.0	-	0.3	104.7%	-	0.4	0.4	0.4	2.5%	-	
Communication	0.7	0.8	2.4	1.2	22.0%	0.1%	1.2	1.2	1.3	2.5%	0.1%	
Consultants: Business and advisory services	0.7	0.2	1.0	2.8	62.9%	0.1%	2.9	2.9	3.0	2.5%	0.2%	
Travel and subsistence	2.3	2.2	0.1	3.8	17.7%	0.1%	3.9	3.9	4.1	2.5%	0.2%	
Venues and facilities	0.0	0.1	0.0	0.9	243.2%	-	1.0	1.0	1.0	2.5%	0.1%	
Transfers and subsidies	1 703.5	1 729.2	1 631.0	1 767.7	1.2%	97.1%	1 704.0	1 710.5	1 787.5	0.4%	96.9%	
Departmental agencies and accounts	398.9	492.2	438.0	601.5	14.7%	27.4%	522.5	520.5	540.8	-3.5%	30.4%	
Public corporations and private enterprises	1 245.7	1 194.2	1 164.7	1 166.2	-2.2%	67.8%	1 181.5	1 190.0	1 246.7	2.3%	66.5%	
Non-profit institutions	58.8	42.8	28.3	-	-100.0%	1.8%	-	-	-	-	-	
Households	0.1	0.1	-	-	-100.0%	-	-	-	-	-	-	
Payments for financial assets	0.0	-	-	-	-100.0%	-	-	-	-	-	-	
Total	1 755.2	1 778.2	1 678.0	1 825.6	1.3%	100.0%	1 759.2	1 765.1	1 844.6	0.3%	100.0%	
Proportion of total programme expenditure to vote expenditure	22.1%	22.0%	23.4%	20.3%	-	-	19.3%	19.1%	19.1%	-	-	

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies											
R million	Audited outcome			Adjusted appropriation 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Households											
Social benefits											
Current											
	0.1	0.1	–	–	-100.0%	–	–	–	–	–	–
Households	0.1	0.1	–	–	-100.0%	–	–	–	–	–	–
Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current											
	398.9	492.2	437.2	601.5	14.7%	27.4%	522.5	520.5	540.8	-3.5%	30.4%
Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support	–	33.8	–	–	–	0.5%	–	–	–	–	–
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project	–	39.6	–	–	–	0.6%	–	–	–	–	–
Various institutions: Advanced manufacturing technology strategy implementation	0.3	0.9	–	–	-100.0%	–	–	–	–	–	–
Various institutions: Innovative research and development	19.1	24.8	30.4	77.2	59.2%	2.2%	49.6	49.8	52.0	-12.3%	3.2%
Human Sciences Research Council	303.7	324.2	289.3	314.4	1.2%	17.5%	321.1	322.3	336.8	2.3%	18.0%
Various institutions: Local manufacturing capacity research and technical support	57.5	28.7	75.7	81.2	12.2%	3.5%	86.6	82.9	83.6	0.9%	4.6%
Various institutions: Local systems of innovation for the cold chain technologies project	–	–	–	15.0	–	0.2%	15.5	15.5	16.2	2.5%	0.9%
National Research Foundation: Research information management system	4.0	8.4	6.2	10.8	39.0%	0.4%	–	–	–	-100.0%	0.1%
Human Science Research Council: Develop and monitor science and technology indicators	10.0	12.4	11.3	15.2	15.1%	0.7%	15.6	15.6	16.3	2.3%	0.9%
Various institutions: Environmental innovation	4.3	19.4	24.3	87.7	174.3%	1.9%	34.2	34.3	35.9	-25.8%	2.7%
Public corporations and private enterprises											
Public corporations											
Other transfers to public corporations											
Current											
	271.3	223.3	266.2	187.8	-11.5%	13.5%	179.3	183.9	195.4	1.3%	10.4%
Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support	–	46.2	–	–	–	0.7%	–	–	–	–	–
Various institutions: Advanced manufacturing technology strategy implementation	41.2	58.4	56.7	45.2	3.1%	2.9%	36.0	38.0	40.0	-4.0%	2.2%
Various institutions: Innovative research and development	–	1.0	–	–	–	–	–	–	–	–	–
Various institutions: Local manufacturing capacity research and technical support	48.3	–	40.6	–	-100.0%	1.3%	–	–	–	–	–
Council for Scientific and Industrial Research: Mining research and development	–	21.1	43.9	63.5	–	1.8%	65.1	65.3	68.3	2.4%	3.6%
Various institutions: Local systems of innovation for the cold chain technologies project	31.6	6.8	29.5	–	-100.0%	1.0%	–	–	–	–	–
Various institutions: Resource-based industries research and development	107.4	52.9	45.9	37.2	-29.8%	3.5%	35.3	37.5	42.1	4.2%	2.1%
Various institutions: Environmental innovation	16.5	9.0	15.7	–	-100.0%	0.6%	–	–	–	–	–
Various institutions: ICT	26.2	28.0	33.9	41.8	16.8%	1.8%	42.9	43.1	45.0	2.5%	2.4%
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

Details of transfers and subsidies			Adjusted appropriation	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)			
											2018/19	2019/20	2020/21
R million													
Current			10.7	5.1	4.9	–	–100.0%	0.3%	–	–	–		
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project			–	4.9	–	–	–	0.1%	–	–	–		
Various institutions: Advanced manufacturing technology strategy implementation			10.7	0.2	0.1	–	–100.0%	0.2%	–	–	–		
Various institutions: Local manufacturing capacity research and technical support			–	–	–	–	–	–	–	–	–		
Various institutions: Local systems of innovation for the cold chain technologies project			–	–	4.8	–	–	0.1%	–	–	–		
Public corporations and private enterprises													
Public corporations													
Public corporations (subsidies on products and production)													
Current			963.2	965.8	893.6	978.4	0.5%	54.0%	1 002.3	1 006.1	1 051.3	2.4%	56.1%
Council for Scientific and Industrial Research			963.2	965.8	893.6	978.4	0.5%	54.0%	1 002.3	1 006.1	1 051.3	2.4%	56.1%
Non-profit institutions													
Current			58.4	42.7	28.3	–	–100.0%	1.8%	–	–	–	–	–
Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project			–	17.5	–	–	–	0.2%	–	–	–	–	–
Various institutions: Innovative research and development			6.7	13.1	4.0	–	–100.0%	0.3%	–	–	–	–	–
Various institutions: Local systems of innovation for the cold chain technologies project			40.0	–	17.4	–	–100.0%	0.8%	–	–	–	–	–
Various institutions: Resource-based industries research and development			0.8	0.8	–	–	–100.0%	–	–	–	–	–	–
Various institutions: Environmental innovation			10.9	1.0	2.9	–	–100.0%	0.2%	–	–	–	–	–
Various institutions: ICT			–	10.3	4.0	–	–	0.2%	–	–	–	–	–
Higher education institutions													
Current			–	–	–	–	–	–	–	–	–	–	–
Various institutions: Innovative research and development			–	–	–	–	–	–	–	–	–	–	–
Various institutions: Local manufacturing capacity research and technical support			–	–	–	–	–	–	–	–	–	–	–

Personnel information

Table 35.15 Socioeconomic Innovation Partnerships personnel numbers and cost by salary level¹

Number of posts estimated for 31 March 2022		Number and cost ² of personnel posts filled/planned for on funded establishment												Average growth rate (%)	Average: Salary level/ Total (%)				
		Actual			Revised estimate			Medium-term expenditure estimate											
Number of funded posts	Number of posts additional to the establishment	2020/21			2021/22			2022/23		2023/24		2024/25		2021/22 - 2024/25					
		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost				
Socioeconomic Innovation Partnerships																			
Salary level	62	–	46	42.2	0.9	47	45.0	0.9	46	45.0	1.0	45	44.4	1.0	45	46.4	1.0	–1.7%	100.0%
1–6	6	–	2	0.5	0.3	2	0.6	0.3	2	0.6	0.3	2	0.6	0.3	2	0.6	0.3	–	4.4%
7–10	12	–	10	4.7	0.5	9	4.3	0.5	8	3.7	0.5	7	3.2	0.5	7	3.3	0.5	–8.6%	16.7%
11–12	25	–	21	20.3	1.0	22	21.8	1.0	22	22.2	1.0	22	21.8	1.0	22	22.7	1.0	–0.4%	48.5%
13–16	19	–	13	16.6	1.3	14	18.2	1.3	14	18.5	1.3	14	18.8	1.3	14	19.7	1.4	–	30.5%

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

2. Rand million.

Entities

Academy of Science of South Africa

Selected performance indicators

Table 35.16 Academy of Science of South Africa performance indicators by programme/objective/activity and related priority

Indicator	Programme/Objective/Activity	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of special lectures per year	Liaison	Priority 3: Education, skills and health	5	3	3	5	5	5	5
Number of activities supported with other African academies per year	Liaison	Priority 1: A capable, ethical and developmental state	4	1	1	4	4	4	4
Number of young scientist activities supported per year	Liaison	Priority 3: Education, skills and health	3	1	1	4	4	4	4
Number of strategic partnerships per year	Liaison	Priority 1: A capable, ethical and developmental state	-1	-1	-1	4	4	4	4
Number of proceedings reports, policy-maker booklets and statements per year	Science advisory programme	Priority 3: Education, skills and health	2	2	2	8	8	8	8
Number of new journal titles on the Scientific Electronic Library Online open-access platform per year	Scholarly publishing programme		5	7	7	2	2	2	2
Number of South African Journal of Science articles published per year	Scholarly publishing programme		6	6	6	6	6	6	6
Number of Quest: Science for South Africa magazines produced per year	Scholarly publishing programme		4	4	4	4	4	4	4

1. No historical data available.

Entity overview

The Academy of Science of South Africa was established in terms of the Academy of Science of South Africa Act (2001), as amended, to promote outstanding achievements in all fields of scientific inquiry, recognise excellence, and provide evidence-based scientific advice to government and other stakeholders.

Over the medium term, the academy aims to enhance national capacity to produce and publish research, provide evidence-based policy advice to government, and increase the quality and visibility of South African research publications. This will entail undertaking various studies in the areas of health; education; climate change; energy; the science-policy nexus; biosafety and biosecurity; poverty reduction; gender responsive issues; and, where possible, young people and people living with disabilities.

Expenditure is expected to decrease at an average annual rate of 4.7 per cent, from R43 million in 2021/22 to R37.2 million in 2024/25. This is mainly a result of the academy using digital platforms, which are more cost effective than physical venues, for most of its activities since the onset of the COVID-19 pandemic. Transfers from the department account for an estimated 95.6 per cent (R103.3 million) of the academy's total revenue over the period ahead, also decreasing at an average annual rate of 4.9 per cent, from R41.3 million in 2021/22 to R35.5 million in 2024/25.

Programmes/Objectives/Activities**Table 35.17 Academy of Science of South Africa expenditure trends and estimates by programme/objective/activity**

R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21		2018/19	2021/22	2022/23	2023/24	2024/25		
Administration	20.7	22.7	16.8	12.7	-15.1%	38.9%	12.8	12.9	13.4	2.0%	34.5%
Liaison	17.0	13.9	6.9	12.3	-10.2%	25.9%	6.4	6.4	6.7	-18.2%	20.7%
Science advisory programme	6.1	6.0	3.3	6.2	0.5%	11.4%	4.8	4.8	5.0	-7.0%	13.7%
Scholarly publishing programme	14.3	10.5	8.2	11.8	-6.2%	23.8%	11.5	11.5	12.0	0.5%	31.1%
Total	58.1	53.2	35.1	43.0	-9.6%	100.0%	35.5	35.6	37.2	-4.7%	100.0%

Statements of financial performance, cash flow and financial position**Table 35.18 Academy of Science of South Africa statements of financial performance, cash flow and financial position**

Statement of financial performance											
R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21		2018/19	2021/22	2022/23	2023/24	2024/25		
Revenue											
Non-tax revenue	2.7	2.7	1.6	1.6	-14.9%	4.5%	1.7	1.7	1.7	0.2%	4.4%
Sale of goods and services other than capital assets	1.3	0.5	0.5	0.4	-31.3%	1.4%	0.4	0.4	0.4	0.8%	1.1%
<i>of which:</i>											
Administrative fees	0.1	0.1	0.1	0.1	0.9%	0.2%	0.1	0.1	0.1	3.0%	0.3%
Sales by market establishment	1.2	0.4	0.4	0.3	-36.2%	1.1%	0.3	0.3	0.3	-	0.8%
Other non-tax revenue	1.4	2.2	1.1	1.2	-4.4%	3.2%	1.2	1.2	1.2	-	3.3%
Transfers received	53.5	50.5	34.1	41.3	-8.3%	95.5%	33.8	34.0	35.5	-4.9%	95.6%
Total revenue	56.2	53.2	35.6	43.0	-8.6%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Expenses											
Current expenses	58.1	53.2	35.1	43.0	-9.6%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Compensation of employees	26.3	28.3	26.9	20.6	-7.8%	55.8%	21.4	22.4	23.4	4.3%	58.5%
Goods and services	31.7	24.7	8.0	22.3	-11.0%	43.9%	14.1	13.2	13.8	-14.9%	41.5%
Depreciation	-	0.2	0.2	-	-	0.2%	-	-	-	-	-
Total expenses	58.1	53.2	35.1	43.0	-9.6%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Surplus/(Deficit)	(1.9)	-	-	-	-100.0%	-	-	-	-	-	-
Cash flow statement											
Cash flow from operating activities	(10.8)	2.2	0.7	-	-100.0%	-	-	-	-	-	-
Receipts											
Non-tax receipts	3.4	2.1	1.9	1.6	-21.6%	4.8%	1.7	1.7	1.7	0.2%	4.4%
Sales of goods and services other than capital assets	2.1	0.7	0.9	0.4	-39.9%	2.1%	0.5	0.5	0.5	0.7%	1.2%
Administrative fees	-	0.1	0.1	0.1	-	0.2%	0.1	0.1	0.1	3.0%	0.3%
Sales by market establishment	0.1	0.4	0.7	0.3	39.4%	0.9%	0.3	0.3	0.3	-	0.8%
Other sales	2.0	0.1	0.1	0.0	-72.7%	1.0%	0.0	0.0	0.0	-	0.1%
Other tax receipts	1.4	1.4	1.0	1.2	-4.0%	2.7%	1.2	1.2	1.2	-	3.2%
Transfers received	52.1	50.5	34.7	41.3	-7.4%	95.2%	33.8	34.0	35.5	-4.9%	95.6%
Total receipts	55.5	52.6	36.6	43.0	-8.2%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Payment											
Current payments	66.3	50.4	36.0	43.0	-13.5%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Compensation of employees	26.3	28.2	26.9	20.6	-7.8%	54.6%	21.4	22.4	23.4	4.3%	58.5%
Goods and services	39.9	22.2	9.0	22.3	-17.6%	45.4%	14.1	13.2	13.8	-14.9%	41.5%
Total payments	66.3	50.4	36.0	43.0	-13.5%	100.0%	35.5	35.6	37.2	-4.7%	100.0%
Net cash flow from investing activities	(3.6)	(1.0)	(0.9)	(0.7)	-42.0%	100.0%	(0.8)	(0.8)	(0.8)	4.6%	100.0%
Acquisition of property, plant, equipment and intangible assets	(0.1)	(0.0)	(0.1)	(0.2)	24.4%	10.5%	(0.3)	(0.3)	(0.3)	14.5%	35.3%
Other flows from investing activities	(3.5)	(1.0)	(0.8)	(0.5)	-47.7%	89.5%	(0.5)	(0.5)	(0.5)	-	64.7%
Net increase/(decrease) in cash and cash equivalents	(14.4)	1.2	(0.2)	(0.7)	-63.5%	-6.2%	(0.8)	(0.8)	(0.8)	4.6%	-2.1%
Statement of financial position											
Carrying value of assets	0.4	0.2	0.1	0.1	-37.0%	1.0%	0.1	0.1	0.1	7.8%	0.6%
Acquisition of assets	(0.1)	(0.0)	(0.1)	(0.2)	24.4%	100.0%	(0.3)	(0.3)	(0.3)	14.5%	100.0%
Investments	12.2	13.1	13.8	14.0	4.8%	65.3%	14.0	14.0	14.0	-	71.6%
Receivables and prepayments	2.5	2.3	1.3	0.3	-53.5%	7.8%	0.3	0.3	0.3	1.5%	1.3%
Cash and cash equivalents	4.6	5.8	5.6	5.2	4.3%	25.9%	5.2	5.2	5.2	-	26.5%
Total assets	19.6	21.4	20.9	19.5	-0.1%	100.0%	19.6	19.6	19.6	0.1%	100.0%

Table 35.18 Academy of Science of South Africa statements of financial performance, cash flow and financial position

Statement of financial position	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2018/19 - 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
R million											
Capital and reserves	7.8	7.8	8.3	8.8	4.4%	40.2%	8.8	8.8	8.8	-	45.2%
Capital reserve fund	8.6	8.1	9.5	8.0	-2.5%	42.1%	8.0	8.0	8.0	-	40.9%
Trade and other payables	1.9	1.8	0.2	0.2	-54.5%	5.1%	0.2	0.2	0.2	-	0.9%
Provisions	1.3	3.8	2.8	2.5	24.7%	12.7%	2.5	2.5	2.5	0.4%	13.0%
Total equity and liabilities	19.6	21.4	20.9	19.5	-0.1%	100.0%	19.6	19.6	19.6	0.1%	100.0%

Personnel information

Table 35.19 Academy of Science of South Africa personnel numbers and cost by salary level

Academy of Science of South Africa	Number of posts estimated for 31 March 2022		Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%) 2021/22 - 2024/25	Average: Salary level/ Total (%) 2021/22 - 2024/25			
	Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate										
			2020/21		2021/22		2022/23		2023/24		2024/25								
Salary level	30	30	41	26.9	0.7	30	20.6	0.7	30	21.4	0.7	30	22.4	0.7	30	23.4	0.8	4.3%	100.0%
1 – 6	4	4	5	0.9	0.2	4	0.8	0.2	4	0.9	0.2	4	0.9	0.2	4	1.0	0.2	4.3%	4.1%
7 – 10	20	20	27	14.2	0.5	20	11.2	0.6	20	11.6	0.6	20	12.1	0.6	20	12.7	0.6	4.3%	54.3%
11 – 12	2	2	4	3.8	0.9	2	2.0	1.0	2	2.1	1.1	2	2.2	1.1	2	2.3	1.2	4.3%	9.8%
13 – 16	4	4	5	8.1	1.6	4	6.6	1.6	4	6.8	1.7	4	7.1	1.8	4	7.4	1.9	4.3%	31.8%

1. Rand million.

Council for Scientific and Industrial Research

Selected performance indicators

Table 35.20 Council for Scientific and Industrial Research performance indicators by programme/objective/activity and related priority

Indicator	Programme/Objective/Activity	MITSF priority	Audited performance			Estimated performance 2021/22	MTEF targets		
			2018/19	2019/20	2020/21		2022/23	2023/24	2024/25
Number of journal articles published per year	Science, engineering and technology operating units and centres	Priority 3: Education, skills and health	310	300	310	315	320	320	320
Number of conference papers delivered per year	Science, engineering and technology operating units and centres		335	330	335	337	338	340	342
Number of new technology demonstrators per year	Science, engineering and technology operating units and centres	Priority 2: Economic transformation and job creation	50	66	63	63	64	69	69
Amount of contract research and development income per year	Science, engineering and technology operating units and centres		R1.7bn	R2.2bn	R2.3bn	R2.3bn	R2.4bn	R2.5bn	R2.6bn
Number of science, engineering and technology staff per year	Science, engineering and technology operating units and centres	Priority 3: Education, skills and health	1 860	1 619	1 410	1 497	1 572	1 651	1 733
Percentage of black science, engineering and technology staff per year	Science, engineering and technology operating units and centres		62% (1 452/ 2 342)	62% (1 452/ 2 342)	63% (1 465/ 2 342)	66%	66%	67%	67%
Number of science, engineering and technology staff with doctorates per year	Science, engineering and technology operating units and centres		369	356	310	344	369	396	424
Number of new patents granted per year	Science, engineering and technology operating units and centres		15	13	10	8	16	18	19

Entity overview

The Council for Scientific and Industrial Research was established in 1945 and is governed in terms of the Scientific Research Council Act (1988). The council fosters industrial and scientific development in the national interest through multidisciplinary research and technological innovation to improve the ability of the state to efficiently deliver basic services in fields such as health, education, social security, energy and shelter to all South Africans. Through these activities, it aims to reduce inequality.

Over the medium term, the council will focus on conducting high-quality and relevant research, pursuing technological innovation to foster industrial and scientific development, and furthering industrial development opportunities in fields such as pharmaceutical innovation and agro-processing.

The council's ability to generate revenue is directly related to its ability to attract and retain the requisite expertise to deliver favourable research outcomes. Competitive remuneration is a vital enabling factor for the retention of critical skills. As such, spending on compensation of employees accounts for an estimated 54.1 per cent (R5.9 billion) of the council's total expenditure, increasing at an average annual rate of 7 per cent, from R1.7 billion in 2021/22 to R2 billion in 2024/25. To retain a high calibre of staff and strengthen its value proposition, the council also offers non-monetary employee benefits such as training and exchange programmes.

The council generates revenue mainly through the services it renders, such as contract research and development, income from intellectual property, proceeds from technology transfer, and royalties. Transfers from the department account for an estimated 21.6 per cent (R2.3 billion) of its projected total revenue of R10.9 billion over the MTEF period.

The council expects to post a net profit of R2 million in 2022/23, which it anticipates increasing to R3 million by the end of the MTEF period. These profits will be invested in resources and capabilities such as property, plant and equipment.

Programmes/Objectives/Activities

Table 35.21 Council for Scientific and Industrial Research expenditure trends and estimates by programme/objective/activity

R million	Audited outcome			Revised estimate	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21	2021/22	2018/19 - 2021/22		2022/23	2023/24	2024/25	2021/22 - 2024/25	
Administration	566.0	602.3	525.3	539.6	-1.6%	20.4%	598.5	625.8	651.4	6.5%	17.3%
Science, engineering and technology operating units and centres	2 055.8	2 156.7	1 989.1	2 588.9	8.0%	79.6%	2 868.4	2 987.0	3 116.8	6.4%	82.7%
Total	2 621.7	2 759.0	2 514.4	3 128.5	6.1%	100.0%	3 466.9	3 612.8	3 768.2	6.4%	100.0%

Statements of financial performance, cash flow and financial position

Table 35.22 Council for Scientific and Industrial Research statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21	2021/22	2018/19 - 2021/22		2022/23	2023/24	2024/25	2021/22 - 2024/25	
Revenue											
Non-tax revenue	1 667.2	1 907.7	1 783.0	2 306.9	11.4%	68.8%	2 727.6	2 874.7	2 993.3	9.1%	78.4%
Sale of goods and services other than capital assets	1 615.9	1 838.5	1 741.0	2 142.3	9.9%	65.9%	2 561.2	2 705.6	2 818.4	9.6%	73.5%
<i>of which:</i>											
<i>Sales by market establishment</i>	1 615.9	1 838.5	1 741.0	2 142.3	9.9%	65.9%	2 561.2	2 705.6	2 818.4	9.6%	73.5%
Other non-tax revenue	51.3	69.2	42.0	164.6	47.5%	2.9%	166.3	169.1	174.9	2.0%	4.9%
Transfers received	962.7	920.2	827.6	725.5	-9.0%	31.2%	741.6	744.5	777.9	2.4%	21.6%
Total revenue	2 629.9	2 827.9	2 610.6	3 032.4	4.9%	100.0%	3 469.2	3 619.1	3 771.2	7.5%	100.0%
Expenses											
Current expenses	2 621.7	2 759.0	2 514.4	3 000.9	4.6%	99.0%	3 336.9	3 480.8	3 631.1	6.6%	96.2%
Compensation of employees	1 585.9	1 453.7	1 434.5	1 672.0	1.8%	55.9%	1 878.2	1 960.9	2 047.2	7.0%	54.1%
Goods and services	970.7	1 241.7	1 026.2	1 156.5	6.0%	40.0%	1 286.0	1 343.9	1 404.4	6.7%	37.1%
Depreciation	65.1	62.1	52.5	170.9	37.9%	3.1%	172.6	176.1	179.6	1.7%	5.0%
Interest, dividends and rent on land	-	1.5	1.1	1.5	-	-	-	-	-	-100.0%	-
Transfers and subsidies	-	-	-	127.6	-	1.0%	130.0	132.0	137.1	2.4%	3.8%
Total expenses	2 621.7	2 759.0	2 514.4	3 128.5	6.1%	100.0%	3 466.9	3 612.8	3 768.2	6.4%	100.0%
Surplus/(Deficit)	8.2	68.9	96.3	(96.1)	-327.1%		2.3	6.3	3.0	-131.5%	
Cash flow statement											
Cash flow from operating activities	181.3	56.3	220.2	73.1	-26.1%	100.0%	174.6	206.5	207.9	41.7%	100.0%
Receipts											

Table 35.22 Council for Scientific and Industrial Research statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Tax receipts	–	–	–	127.6	–	1.1%	130.0	132.0	137.1	2.4%	3.8%
Non-tax receipts	1 886.2	1 970.4	1 945.7	2 177.9	4.9%	72.4%	2 597.5	2 742.6	2 856.2	9.5%	74.6%
Sales of goods and services other than capital assets	1 836.6	1 919.0	1 903.5	2 142.3	5.3%	70.8%	2 561.2	2 705.6	2 818.4	9.6%	73.5%
<i>Sales by market establishment</i>	1 836.6	1 919.0	1 903.5	2 142.3	5.3%	70.8%	2 561.2	2 705.6	2 818.4	9.6%	73.5%
Other tax receipts	49.7	51.4	42.2	35.6	-10.5%	1.6%	36.3	37.0	37.8	2.0%	1.1%
Transfers received	760.1	758.1	670.0	725.5	-1.5%	26.5%	741.6	744.5	777.9	2.4%	21.6%
Financial transactions in assets and liabilities	1.1	–	–	–	-100.0%	–	–	–	–	–	–
Total receipts	2 647.4	2 728.5	2 615.8	3 031.0	4.6%	100.0%	3 469.2	3 619.1	3 771.2	7.6%	100.0%
Payment											
Current payments	2 466.1	2 672.2	2 395.5	2 830.3	4.7%	98.9%	3 164.6	3 280.6	3 426.2	6.6%	96.0%
Compensation of employees	1 586.8	1 453.7	1 370.5	1 672.0	1.8%	58.1%	1 878.2	1 960.9	2 047.2	7.0%	57.1%
Goods and services	879.3	1 218.3	1 024.1	1 158.3	9.6%	40.8%	1 286.3	1 319.7	1 379.1	6.0%	38.9%
Interest and rent on land	–	0.1	0.9	–	–	–	–	–	–	–	–
Transfers and subsidies	–	–	–	127.6	–	1.1%	130.0	132.0	137.1	2.4%	4.0%
Total payments	2 466.1	2 672.2	2 395.5	2 957.9	6.2%	100.0%	3 294.6	3 412.6	3 563.4	6.4%	100.0%
Net cash flow from investing activities	(40.4)	(43.3)	(36.2)	(122.3)	44.7%	100.0%	(120.1)	(118.8)	(118.6)	-1.0%	100.0%
Acquisition of property, plant, equipment and intangible assets	(40.2)	(44.0)	(36.2)	(122.3)	44.9%	100.3%	(120.1)	(118.8)	(118.6)	-1.0%	100.0%
Proceeds from the sale of property, plant, equipment and intangible assets	1.8	0.8	–	–	-100.0%	-1.6%	–	–	–	–	–
Other flows from investing activities	(2.1)	–	–	–	-100.0%	1.3%	–	–	–	–	–
Net cash flow from financing activities	–	(0.7)	(2.7)	–	–	–	–	–	–	–	–
Other flows from financing activities	–	(0.7)	(2.7)	–	–	–	–	–	–	–	–
Net increase/(decrease) in cash and cash equivalents	140.9	12.4	181.3	(49.2)	-170.4%	2.9%	54.4	87.7	89.3	-222.0%	1.2%
Statement of financial position											
Carrying value of assets	758.7	774.0	753.7	705.2	-2.4%	30.9%	652.6	596.5	418.1	-16.0%	24.7%
Acquisition of assets	(40.2)	(44.0)	(36.2)	(122.3)	44.9%	100.0%	(120.1)	(118.8)	(118.6)	-1.0%	100.0%
Investments	5.1	2.4	2.4	2.4	-22.2%	0.1%	2.4	2.4	2.4	–	0.1%
Inventory	124.8	115.2	143.2	114.8	-2.7%	5.1%	99.1	103.5	108.2	-1.9%	4.4%
Receivables and prepayments	196.0	312.0	293.5	344.3	20.7%	11.8%	396.3	414.0	432.8	7.9%	16.4%
Cash and cash equivalents	1 241.5	1 248.8	1 435.1	1 125.9	-3.2%	52.0%	1 246.2	1 344.4	1 573.7	11.8%	54.5%
Total assets	2 326.0	2 452.5	2 628.0	2 292.6	-0.5%	100.0%	2 396.6	2 460.9	2 535.2	3.4%	100.0%
Accumulated surplus/(deficit)	1 002.5	1 071.4	1 167.6	1 063.4	2.0%	44.4%	1 065.7	1 072.0	1 084.9	0.7%	44.3%
Finance lease	–	13.9	8.8	8.0	–	0.3%	7.2	6.4	5.8	-10.0%	0.3%
Trade and other payables	1 301.4	1 343.0	1 438.6	1 208.2	-2.4%	54.5%	1 310.6	1 369.2	1 431.1	5.8%	54.9%
Provisions	22.1	24.3	12.9	13.0	-16.2%	0.7%	13.1	13.3	13.4	1.0%	0.5%
Total equity and liabilities	2 326.0	2 452.5	2 628.0	2 292.6	-0.5%	100.0%	2 396.6	2 460.9	2 535.2	3.4%	100.0%

Personnel information**Table 35.23 Council for Scientific and Industrial Research personnel numbers and cost by salary level**

Number of posts estimated for 31 March 2022			Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%)	Average: Salary level/ Total (%)			
Number of funded posts	Number of posts on approved establishment	2020/21	Actual			Revised estimate			Medium-term expenditure estimate										
			2021/22			2022/23			2023/24		2024/25		2021/22 - 2024/25						
Council for Scientific and Industrial Research			Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost		
Salary level	2 330	2 330	2 336	1 434.5	0.6	2 330	1 672.0	0.7	2 447	1 878.2	0.8	2 570	1 960.9	0.8	2 697	2 047.2	0.8	7.0%	100.0%
1 – 6	292	292	354	37.6	0.1	292	46.0	0.2	310	51.7	0.2	322	54.0	0.2	337	56.4	0.2	7.0%	2.8%
7 – 10	1 201	1 201	1 171	494.2	0.4	1 201	588.3	0.5	1 262	660.8	0.5	1 327	689.9	0.5	1 393	720.2	0.5	7.0%	35.2%
11 – 12	455	455	431	359.2	0.8	455	420.7	0.9	476	472.5	1.0	501	493.3	1.0	522	515.0	1.0	7.0%	25.2%
13 – 16	357	357	353	467.2	1.3	357	533.0	1.5	374	598.8	1.6	393	625.1	1.6	417	652.6	1.6	7.0%	31.9%
17 – 22	25	25	27	76.4	2.8	25	84.0	3.4	25	94.4	3.8	27	98.5	3.6	28	102.9	3.7	7.0%	5.0%

1. Rand million.

Human Sciences Research Council**Selected performance indicators****Table 35.24 Human Sciences Research Council performance indicators by programme/objective/activity and related priority**

Indicator	Programme/Objective/Activity	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of Human Sciences Research Council research articles that achieved a citation count of at least 10 within 5 years of initial publication per year	Administration	Priority 1: A capable, ethical and developmental state	171	313	179	160	165	170	170
Number of curated datasets downloaded for secondary use per year	Administration		661	608	556	546	574	603	605
Number of historically disadvantaged institutions with which the Human Sciences Research Council has actively collaborated per year	Administration	Priority 3: Education, skills and health	- ¹	- ¹	6	4	6	7	7
Percentage of researchers (excluding trainees) with PhDs per year	Administration		- ¹	- ¹	78%	76%	77%	78%	78%
Number of PhD trainees per year	Administration		54	47	31	27	28	30	32
Number of peer-reviewed journal articles published per Human Sciences Research Council researcher per year	Research, development and innovation	Priority 1: A capable, ethical and developmental state	1.06	0.78	1.17	1	1.1	1.1	1.1
Number of scholarly book chapters published by council researchers per year	Research, development and innovation		93	86	118	47	48	49	50
Number of policy briefs and/or evidence reviews completed and published per year	Research, development and innovation		13	12	12	19	12	12	13
Number of community innovations supported or enabled by Human Sciences Research Council research per year	Research, development and innovation		- ¹	- ¹	1	1	1	1	1
Number of incoming international exchange visits or fellowships active per year	Research, development and innovation		9	7	4	4	6	8	8

1. No historical data available.

Entity overview

The Human Sciences Research Council was established in 1968 to undertake, promote and coordinate research

in the human and social sciences. The council is mandated to initiate, undertake and foster strategic, basic and applied research in human sciences; and address developmental challenges by gathering, analysing and publishing relevant data, especially through projects linked to collaborative programmes oriented towards the public sector. The council's research outputs are widely disseminated to support policy development at all levels of government. As such, over the medium term, the council will continue to focus on producing research that serves the public; contributing to good governance and public service delivery; helping to address the challenges of poverty and inequality; facilitating inclusive development; and building the capacity of scholars and researchers.

As a research institute, human capital plays a central role in the council's work. As such, spending on compensation of employees accounts for an estimated 49.6 per cent (R893.5 million) of the council's budget, increasing at an average annual rate of 4.4 per cent, from R273.4 million in 2021/22 to R311 million in 2024/25. The council is set to receive 56.6 per cent (R980.2 million) of its revenue over the period ahead through transfers from the department, decreasing at an average annual rate of 1.5 per cent, from R352.4 million in 2021/22 to R336.8 million in 2024/25. The remaining revenue is generated by research contracts and grants from national and international agencies, government departments and private sector foundations.

Programmes/Objectives/Activities

Table 35.25 Human Sciences Research Council expenditure trends and estimates by programme/objective/activity

R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2018/19 - 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Administration	188.0	124.5	117.8	281.0	14.3%	36.0%	259.3	271.3	275.5	-0.7%	46.2%
Research and development	275.7	-	-	-	-100.0%	14.2%	-	-	-	-	-
Africa Institute of South Africa	21.8	-	-	-	-100.0%	1.1%	-	-	-	-	-
Research, development and innovation	-	296.8	271.7	339.2	-	48.7%	299.7	299.6	331.6	-0.7%	53.8%
Total	485.5	421.3	389.5	620.2	8.5%	100.0%	558.9	570.9	607.2	-0.7%	100.0%

Statements of financial performance, cash flow and financial position

Table 35.26 Human Sciences Research Council statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2018/19 - 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Revenue											
Non-tax revenue	220.9	160.7	160.3	267.8	6.6%	41.2%	237.9	248.6	270.3	0.3%	43.4%
Sale of goods and services other than capital assets of which:	180.7	119.7	123.8	236.0	9.3%	33.2%	204.7	214.0	235.1	-0.1%	37.7%
<i>Sales by market establishment</i>	180.6	119.7	118.8	230.8	8.5%	32.7%	199.2	208.2	229.2	-0.2%	36.8%
Other sales	0.0	-	5.0	5.3	407.1%	0.5%	5.5	5.8	5.9	3.8%	1.0%
Other non-tax revenue	40.2	41.0	36.5	31.7	-7.6%	7.9%	33.1	34.6	35.3	3.6%	5.7%
Transfers received	264.1	272.9	251.6	352.4	10.1%	58.8%	321.1	322.3	336.8	-1.5%	56.6%
Total revenue	485.0	433.6	411.9	620.2	8.5%	100.0%	558.9	570.9	607.2	-0.7%	100.0%
Expenses											
Current expenses	485.5	421.3	344.6	574.2	5.7%	95.3%	510.5	521.8	557.1	-1.0%	91.8%
Compensation of employees	293.2	291.8	231.6	273.4	-2.3%	58.3%	284.9	297.6	311.0	4.4%	49.6%
Goods and services	176.7	118.7	103.2	284.0	17.1%	34.2%	207.9	205.3	226.9	-7.2%	39.1%
Depreciation	14.4	9.4	9.3	15.4	2.3%	2.5%	16.2	17.3	17.6	4.7%	2.8%
Interest, dividends and rent on land	1.3	1.4	0.5	1.4	5.0%	0.2%	1.5	1.6	1.6	4.3%	0.3%
Transfers and subsidies	-	-	44.9	46.0	-	4.7%	48.4	49.1	50.1	2.9%	8.2%
Total expenses	485.5	421.3	389.5	620.2	8.5%	100.0%	558.9	570.9	607.2	-0.7%	100.0%
Surplus/(Deficit)	(0.6)	12.3	22.5	-	-100.0%	-	-	-	-	-	-

Table 35.26 Human Sciences Research Council statements of financial performance, cash flow and financial position

Cash flow statement	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2018/19 - 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
R million											
Cash flow from operating activities	108.6	108.6	60.2	61.4	-17.3%	100.0%	27.6	77.1	39.7	-13.6%	100.0%
Receipts											
Non-tax receipts	172.2	322.4	327.1	344.8	26.1%	45.2%	379.0	408.3	390.4	4.2%	54.2%
Sales of goods and services other than capital assets	134.7	314.1	320.6	336.1	35.6%	42.8%	370.3	399.2	381.1	4.3%	52.9%
<i>Sales by market establishment</i>	134.7	119.7	118.8	230.8	19.7%	23.3%	246.1	257.2	258.1	3.8%	35.3%
<i>Other sales</i>	–	194.4	201.7	105.3	–	19.4%	124.2	142.0	123.0	5.3%	17.6%
Other tax receipts	37.5	8.3	6.5	8.7	-38.5%	2.4%	8.7	9.1	9.3	2.1%	1.3%
Transfers received	325.7	313.9	319.2	314.4	-1.2%	49.4%	321.1	322.3	328.8	1.5%	45.8%
Financial transactions in assets and liabilities	138.5	–	–	–	-100.0%	5.4%	–	–	–	–	–
Total receipts	636.3	636.3	646.3	659.2	1.2%	100.0%	700.1	730.6	719.2	2.9%	100.0%
Payment											
Current payments	488.1	508.8	565.7	551.7	4.2%	94.4%	624.2	603.0	634.4	4.8%	92.7%
Compensation of employees	285.6	285.6	252.0	273.4	-1.5%	49.2%	279.2	280.7	282.2	1.1%	42.9%
Goods and services	202.5	223.2	313.7	278.3	11.2%	45.2%	344.9	322.2	352.3	8.2%	49.7%
Transfers and subsidies	39.6	18.9	20.4	46.1	5.2%	5.6%	48.3	50.5	45.1	-0.8%	7.3%
Total payments	527.7	527.7	586.1	597.8	4.2%	100.0%	672.5	653.5	679.5	4.4%	100.0%
Net cash flow from investing activities	(2.0)	(2.0)	(7.2)	–	-100.0%	–	(7.8)	(8.1)	(8.1)	–	–
Acquisition of property, plant, equipment and intangible assets	(2.0)	(2.0)	(7.2)	–	-100.0%	–	(7.8)	(8.1)	(8.1)	–	–
Proceeds from the sale of property, plant, equipment and intangible assets	0.0	0.0	–	–	-100.0%	–	–	–	–	–	–
Net increase/(decrease) in cash and cash equivalents	106.6	106.6	53.0	61.4	-16.8%	17.7%	19.8	69.1	31.6	-19.9%	7.7%
Statement of financial position											
Carrying value of assets	425.7	414.5	274.1	290.7	-11.9%	63.7%	299.2	305.1	311.0	2.3%	61.2%
Acquisition of assets	(2.0)	(2.0)	(7.2)	–	-100.0%	–	(7.8)	(8.1)	(8.1)	–	–
Inventory	4.9	4.8	3.4	3.5	-10.6%	0.7%	3.5	3.0	3.1	-3.8%	0.7%
Receivables and prepayments	64.5	39.4	84.4	38.3	-16.0%	10.3%	47.9	36.5	34.7	-3.3%	8.0%
Cash and cash equivalents	44.8	151.4	204.4	154.0	50.9%	25.2%	164.0	132.0	145.0	-2.0%	30.1%
Taxation	–	–	1.2	0.1	–	0.1%	0.1	0.1	0.1	26.0%	–
Total assets	539.9	610.2	567.5	486.5	-3.4%	100.0%	514.7	476.7	493.9	0.5%	100.0%
Accumulated surplus/(deficit)	59.2	70.6	93.0	35.2	-15.9%	11.5%	37.5	33.4	38.5	3.0%	7.3%
Capital and reserves	392.8	392.8	255.1	255.1	-13.4%	58.6%	255.1	255.1	255.1	–	51.8%
Deferred income	36.2	90.9	158.8	145.0	58.9%	19.8%	167.0	132.0	143.2	-0.4%	29.7%
Trade and other payables	43.4	28.5	41.4	32.9	-8.8%	6.7%	36.0	36.7	37.2	4.2%	7.2%
Taxation	5.9	7.6	–	–	-100.0%	0.6%	–	–	–	–	–
Provisions	2.5	17.4	16.7	15.6	84.1%	2.4%	16.4	16.8	17.1	3.0%	3.3%
Derivatives financial instruments	–	2.3	2.4	2.6	–	0.3%	2.6	2.6	2.7	1.7%	0.5%
Total equity and liabilities	539.9	610.2	567.5	486.5	-3.4%	100.0%	514.7	476.7	493.9	0.5%	100.0%

Personnel information

Table 35.27 Human Sciences Research Council personnel numbers and cost by salary level

Number of posts estimated for 31 March 2022		Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%)	Average Salary level/ Total (%)				
Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate											
		2020/21		2021/22		2022/23		2023/24		2024/25		2021/22 - 2024/25							
Human Sciences Research Council		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost			
Salary level	420	420	420	231.6	0.6	420	273.4	0.7	420	284.9	0.7	420	297.6	0.7	420	311.0	0.7	4.4%	100.0%
1 – 6	128	128	128	22.3	0.2	128	27.3	0.2	128	27.3	0.2	128	30.1	0.2	128	34.2	0.3	7.9%	10.2%
7 – 10	216	216	216	121.6	0.6	216	135.9	0.6	216	142.0	0.7	216	146.3	0.7	216	152.9	0.7	4.0%	49.5%
11 – 12	50	50	50	51.0	1.0	50	59.2	1.2	50	62.6	1.3	50	66.3	1.3	50	67.5	1.4	4.5%	21.9%
13 – 16	26	26	26	36.7	1.4	26	51.0	2.0	26	53.0	2.0	26	54.8	2.1	26	56.4	2.2	3.4%	18.4%

1. Rand million.

National Research Foundation

Selected performance indicators

Table 35.28 National Research Foundation performance indicators by programme/objective/activity and related priority

Indicator	Programme/Objective/Activity	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of grants awarded per year that are directed towards science engagement	Science engagement	Priority 3: Education, skills and health	-1	-1	-1	55	120	130	140
Number of science engagement interventions implemented by research and science engagement infrastructure facilities across the national system of innovation per year	Science engagement		15	19	9	21	22	22	22
Number of postgraduate students funded by the National Research Foundation per year	Research and innovation support and advancement		12 732	11 167	11 093	7 414	6 308	5 554	5 466
Number of researchers funded by the National Research Foundation per year	Research and innovation support and advancement		5 441	3 985	3 000	4 521	4 118	4 119	4 119
Foreign income derived from the National Research Foundation's activities or operations	National research infrastructure platforms	Priority 2: Economic transformation and job creation	-1	-1	R61.8m	R63.8m	R171.7m	R248.3m	R329.9m
Number of patient doses generated from radioisotopes produced by iThemba Labs per year	National research infrastructure platforms	Priority 3: Education, skills and health	-1	-1	147 000	167 500	225 000	300 000	350 000
Number of active intellectual property products per year	National research infrastructure platforms	Priority 2: Economic transformation and job creation	-1	-1	-1	10	8	10	8
Number of technical/ policy briefs produced by the National Research Foundation per year	National research infrastructure platforms		-1	-1	-1	30	28	29	28

1. No historical data available.

Entity overview

The National Research Foundation was established in terms of the National Research Foundation Act (1998), as amended. It is mandated to fund research, develop human resources, promote indigenous knowledge, and provide research facilities to enable knowledge creation, innovation and development in all fields of science and technology.

Over the MTEF period, the foundation will focus on implementing its 10-year strategy: Vision 2030. This entails interventions to catalyse transformation in the science and technology system through measures such as creating grant funding instruments that focus on women and black researchers, and fast-tracking black women doctoral graduates towards obtaining their foundation rating.

To procure specialised equipment at iThemba Labs, the Square Kilometre Array and the extension of the MeerKAT telescope, capital expenditure of R5 billion over the MTEF period is allocated in the *National Research*

Infrastructure Platforms programme.

The foundation receives funding primarily through a parliamentary grant, which accounts for an estimated 89 per cent (R12.4 billion) of its projected revenue over the MTEF period. Other revenue is derived through transfers from the department, contract funding for specific projects and programmes from other government departments and entities, and income generated by sales and interest earned. Transfers from the department are expected to decrease at an average annual rate of 3.6 per cent, from R4.5 billion in 2021/22 to R4.1 billion in 2024/25, due to the completion of phase 1 of the Square Kilometre Array.

Programmes/Objectives/Activities**Table 35.29 National Research Foundation expenditure trends and estimates by programme/objective/activity**

R million	Audited outcome				Revised estimate	Average growth rate (%)	Average: Expenditure/Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/Total (%)
	2018/19	2019/20	2020/21	2021/22				2022/23	2023/24	2024/25		
Administration	101.3	100.9	90.5	135.0	10.0%	2.6%	153.3	152.6	158.8	5.6%	3.3%	
Science engagement	119.7	121.0	110.4	112.7	-2.0%	2.9%	116.6	116.7	121.5	2.5%	2.6%	
Research and innovation support and advancement	2 638.3	2 471.3	2 225.8	2 634.4	-	61.1%	2 500.3	2 736.0	2 650.1	0.2%	57.6%	
National research infrastructure platforms	1 251.4	1 296.9	1 233.9	1 713.8	11.1%	33.5%	1 533.2	1 671.8	1 763.2	1.0%	36.6%	
Total	4 110.7	3 990.2	3 660.7	4 595.9	3.8%	100.0%	4 303.4	4 677.0	4 693.6	0.7%	100.0%	

Statements of financial performance, cash flow and financial position**Table 35.30 National Research Foundation statements of financial performance, cash flow and financial position**

Statement of financial performance												
R million	Audited outcome				Revised estimate	Average growth rate (%)	Average: Expenditure/Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/Total (%)
	2018/19	2019/20	2020/21	2021/22				2022/23	2023/24	2024/25		
Revenue												
Non-tax revenue	608.7	447.7	407.7	413.1	-12.1%	11.5%	509.5	552.5	608.4	13.8%	11.0%	
Sale of goods and services other than capital assets	60.4	82.1	69.8	71.7	5.9%	1.7%	124.4	159.2	231.9	47.9%	3.1%	
<i>of which:</i>												
<i>Sales by market establishment</i>	57.1	82.1	69.8	71.7	7.9%	1.7%	124.4	159.2	231.9	47.9%	3.1%	
Other sales	3.4	-	-	-	-100.0%	-	-	-	-	-	-	
Other non-tax revenue	548.3	365.6	337.9	341.4	-14.6%	9.8%	385.1	393.3	376.5	3.3%	7.9%	
Transfers received	3 504.8	3 496.5	3 157.1	4 517.4	8.8%	88.5%	4 320.7	4 048.3	4 051.5	-3.6%	89.0%	
Total revenue	4 113.5	3 944.3	3 564.8	4 930.4	6.2%	100.0%	4 830.2	4 600.7	4 659.9	-1.9%	100.0%	
Expenses												
Current expenses	1 537.8	1 590.5	1 533.5	2 022.8	9.6%	40.8%	1 820.0	1 967.0	2 079.8	0.9%	43.2%	
Compensation of employees	729.4	763.3	822.7	944.4	9.0%	20.0%	1 026.3	1 101.8	1 152.4	6.9%	23.1%	
Goods and services	544.9	553.5	437.7	769.8	12.2%	14.0%	476.4	523.5	559.5	-10.1%	12.7%	
Depreciation	263.5	273.7	273.1	308.6	5.4%	6.9%	317.3	341.6	367.9	6.0%	7.3%	
Interest, dividends and rent on land	0.0	0.0	0.0	-	-100.0%	-	-	-	-	-	-	
Transfers and subsidies	2 572.9	2 399.7	2 127.2	2 573.1	-	59.2%	2 483.4	2 710.1	2 613.8	0.5%	56.8%	
Total expenses	4 110.7	3 990.2	3 660.7	4 595.9	3.8%	100.0%	4 303.4	4 677.0	4 693.6	0.7%	100.0%	
Surplus/(Deficit)	2.8	(45.9)	(95.9)	334.6	392.6%		526.8	(76.3)	(33.7)	-146.5%		
Cash flow statement												
Cash flow from operating activities	467.0	403.9	167.7	366.6	-7.8%	100.0%	794.1	165.3	314.2	-5.0%	100.0%	
Receipts												
Non-tax receipts	138.1	129.9	109.7	89.7	-13.4%	2.8%	141.4	176.2	248.9	40.5%	3.5%	
Sales of goods and services other than capital assets	85.1	71.4	74.3	71.7	-5.5%	1.8%	124.4	159.2	231.9	47.9%	3.2%	
<i>Sales by market establishment</i>	57.1	71.4	74.3	71.7	7.9%	1.7%	124.4	159.2	231.9	47.9%	3.2%	
<i>Other sales</i>	28.0	-	-	-	-100.0%	0.2%	-	-	-	-	-	
Other tax receipts	53.1	58.5	35.4	18.0	-30.2%	1.0%	17.0	17.0	17.0	-1.9%	0.4%	
Transfers received	3 504.8	3 737.4	3 111.1	3 856.2	3.2%	85.7%	3 804.1	4 013.5	4 081.6	1.9%	84.8%	
Financial transactions in assets and liabilities	797.1	340.0	141.9	722.8	-3.2%	11.4%	846.0	315.3	300.6	-25.4%	11.7%	
Total receipts	4 440.0	4 207.2	3 362.7	4 668.7	1.7%	100.0%	4 791.6	4 505.0	4 631.1	-0.3%	100.0%	

Table 35.30 National Research Foundation statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%) 2018/19 - 2021/22	Average: Expenditure/ Total (%) 2021/22	Medium-term expenditure estimate			Average growth rate (%) 2021/22 - 2024/25	Average: Expenditure/ Total (%) 2021/22 - 2024/25
	2018/19	2019/20	2020/21				2022/23	2023/24	2024/25		
Payment											
Current payments	1 283.8	1 411.3	1 220.4	1 729.0	10.4%	37.0%	1 514.1	1 629.6	1 703.1	-0.5%	38.8%
Compensation of employees	754.2	767.5	805.0	944.4	7.8%	21.6%	1 026.3	1 101.8	1 152.4	6.9%	24.9%
Goods and services	529.5	643.8	415.3	784.7	14.0%	15.4%	487.8	527.8	550.7	-11.1%	13.8%
Interest and rent on land	0.0	-	0.0	-	-100.0%	-	-	-	-	-	-
Transfers and subsidies	2 689.2	2 392.0	1 974.7	2 573.1	-1.5%	63.0%	2 483.4	2 710.1	2 613.8	0.5%	61.2%
Total payments	3 973.0	3 803.3	3 195.0	4 302.1	2.7%	100.0%	3 997.4	4 339.7	4 316.8	0.1%	100.0%
Net cash flow from investing activities	(252.9)	(200.6)	(196.2)	(649.1)	36.9%	100.0%	(844.1)	(265.3)	(334.2)	-19.9%	100.0%
Acquisition of property, plant, equipment and intangible assets	(250.7)	(173.9)	(173.0)	(643.1)	36.9%	93.3%	(839.1)	(263.2)	(332.1)	-19.8%	99.3%
Acquisition of software and other intangible assets	(2.6)	(27.3)	(23.3)	(6.0)	32.0%	6.9%	(5.0)	(2.1)	(2.1)	-29.8%	0.7%
Proceeds from the sale of property, plant, equipment and intangible assets	0.4	0.6	0.1	-	-100.0%	-0.1%	-	-	-	-	-
Net cash flow from financing activities	(19.8)	(0.0)	-	-	-100.0%	-	-	-	-	-	-
Repayment of finance leases	(0.1)	(0.0)	-	-	-100.0%	-	-	-	-	-	-
Other flows from financing activities	(19.7)	-	-	-	-100.0%	-	-	-	-	-	-
Net increase/(decrease) in cash and cash equivalents	194.4	203.3	(28.5)	(282.6)	-213.3%	0.7%	(50.0)	(100.0)	(20.0)	-58.6%	-2.5%
Statement of financial position											
Carrying value of assets	2 630.8	2 553.9	2 470.6	2 805.1	2.2%	59.6%	3 332.0	3 255.7	3 221.9	4.7%	69.6%
Acquisition of assets	(250.7)	(173.9)	(173.0)	(643.1)	36.9%	100.0%	(839.1)	(263.2)	(332.1)	-19.8%	100.0%
Investments	13.8	12.6	7.4	5.0	-28.7%	0.2%	4.0	3.0	1.0	-41.5%	0.1%
Inventory	4.5	5.1	7.9	8.0	21.2%	0.1%	8.3	8.4	8.5	2.0%	0.2%
Receivables and prepayments	1 195.2	1 024.3	964.8	940.0	-7.7%	23.5%	920.0	900.0	850.0	-3.3%	20.0%
Cash and cash equivalents	657.8	861.1	832.6	550.0	-5.8%	16.5%	500.0	400.0	380.0	-11.6%	10.1%
Defined benefit plan assets	2.0	2.2	2.4	2.5	6.9%	0.1%	2.6	2.8	2.8	3.8%	0.1%
Total assets	4 504.1	4 459.2	4 285.8	4 310.6	-1.5%	100.0%	4 766.8	4 569.8	4 464.2	1.2%	100.0%
Accumulated surplus/(deficit)	2.4	5.6	3.2	-	-100.0%	0.1%	-	-	-	-	-
Capital and reserves	86.7	114.4	104.2	90.0	1.3%	2.3%	75.0	68.0	60.0	-12.6%	1.6%
Capital reserve fund	2 630.8	2 553.9	2 470.6	2 805.1	2.2%	59.6%	3 332.0	3 255.7	3 221.9	4.7%	69.6%
Finance lease	0.0	-	-	-	-100.0%	-	-	-	-	-	-
Deferred income	1 662.4	1 667.5	1 566.7	1 290.5	-8.1%	35.2%	1 241.9	1 136.1	1 077.3	-5.8%	26.2%
Trade and other payables	111.5	117.8	141.1	125.0	3.9%	2.8%	118.0	110.0	105.0	-5.6%	2.5%
Provisions	10.4	-	-	-	-100.0%	0.1%	-	-	-	-	-
Total equity and liabilities	4 504.1	4 459.2	4 285.8	4 310.6	-1.5%	100.0%	4 766.8	4 569.8	4 464.2	1.2%	100.0%

Personnel information**Table 35.31 National Research Foundation personnel numbers and cost by salary level**

Number of posts estimated for 31 March 2022		Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%)	Average: Salary level/ Total (%)				
		Actual			Revised estimate			Medium-term expenditure estimate											
Number of funded posts	Number of posts on approved establishment	2020/21		2021/22		2022/23		2023/24		2024/25		2021/22 - 2024/25							
		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost						
National Research Foundation		1 386	1 386	1 386	822.7	0.6	1 386	944.4	0.7	1 386	1 026.3	0.7	1 386	1 101.8	0.8	1 386	1 152.4	0.8	
Salary level																			
1 - 6	210	210	210	37.5	0.2	210	51.0	0.2	210	56.0	0.3	210	60.1	0.3	210	62.9	0.3	7.2%	5.4%
7 - 10	851	851	851	404.1	0.5	851	430.8	0.5	851	474.3	0.6	851	509.2	0.6	851	532.5	0.6	7.3%	46.1%
11 - 12	213	213	213	198.4	0.9	213	242.5	1.1	213	262.9	1.2	213	282.3	1.3	213	295.2	1.4	6.8%	25.6%
13 - 16	107	107	107	165.1	1.5	107	208.9	2.0	107	220.9	2.1	107	237.1	2.2	107	248.0	2.3	5.9%	21.7%
17 - 22	5	5	5	17.5	3.5	5	11.1	2.2	5	12.2	2.4	5	13.1	2.6	5	13.7	2.7	7.3%	1.2%

1. Rand million.

South African National Space Agency

Selected performance indicators

Table 35.32 South African National Space Agency performance indicators by programme/objective/activity and related priority

Indicator	Programme/Objective/Activity	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of students and interns supported for formalised training per year	Space science	Priority 1: A capable, ethical and developmental state	52	54	60	50	70	90	90
Number of activities initiated through formal international partnerships per year	Earth observation	Priority 7: A better Africa and world	-1	-1	-1	9	9	9	15
Number of activities initiated through formal national partnerships per year	Earth observation		-1	-1	-1	12	13	13	15
Number of awareness and training interventions to key users of space-based products and services per year	Earth observation	Priority 3: Education, skills and health	-1	-1	9	5	5	5	8
Total income generated from space operations activities per year	Space operation	Priority 2: Economic transformation and job creation	R80m	R100m	R75.65m	R69m	R70m	R72m	R73m

1. No historical data available.

Entity overview

The South African National Space Agency was established in terms of the South African National Space Agency Act (2008), as amended, to promote the peaceful use of space, foster international cooperation in space-related activities, and facilitate the creation of an environment conducive to space technology and industrial development. Over the medium term, the agency will focus on broadening the suite of products and services available in the space sector, and contributing to promoting socioeconomic development across Africa. This will be achieved by building adequate space capacity; improving geospatial information; developing key infrastructure in support of the sector; and providing technical skills interventions, research capacity, and knowledge-management tools.

As the agency relies on highly skilled professionals to fulfil its mandate, compensation of employees accounts for an estimated 52.8 per cent (R475 million) of its planned spending, increasing at an average annual rate of 0.8 per cent, from R163.7 million in 2021/22 to R167.4 million in 2024/25. Expenditure is expected to decrease at an average annual rate of 8.5 per cent, from R363.8 million in 2021/22 to R278.8 in 2024/25, particularly in administration-related activities, as a result of an anticipated decrease in revenue, mainly from the parliamentary grant.

Transfers from the department account for an estimated 72.6 per cent (R611 million) of the agency's revenue over the MTEF period. Additional revenue is generated by services rendered to government institutions and other organisations, mainly international clients in the space sector.

Programmes/Objectives/Activities

Table 35.33 South African National Space Agency expenditure trends and estimates by programme/objective/activity

R million	Audited outcome			Revised estimate	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2018/19	2019/20	2020/21		2021/22	2018/19 - 2021/22	2021/22 - 2024/25	2022/23	2023/24	2024/25	2021/22 - 2024/25
Administration	51.7	51.0	60.1	69.0	10.1%	20.6%	51.9	55.1	57.5	-5.9%	19.2%
Earth observation	66.4	68.1	66.1	91.1	11.1%	25.8%	90.4	41.5	43.3	-21.9%	21.2%
Space operation	76.5	88.9	82.0	77.7	0.5%	29.4%	74.8	78.4	81.9	1.8%	25.9%
Space science	44.6	54.5	50.2	87.8	25.3%	20.5%	70.1	62.8	65.7	-9.2%	23.3%
Space engineering	-	5.8	4.6	38.2	-	3.6%	29.0	29.3	30.4	-7.4%	10.4%
Total	239.2	268.3	263.1	363.8	15.0%	100.0%	316.2	267.2	278.8	-8.5%	100.0%

Statements of financial performance, cash flow and financial position**Table 35.34 South African National Space Agency statements of financial performance, cash flow and financial position**

Statement of financial performance											
R million	Audited outcome			Revised estimate	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2018/19	2019/20	2020/21		2021/22	2018/19 - 2021/22	2022/23	2023/24	2024/25	2021/22 - 2024/25	Average: Expenditure/ Total (%)
Revenue											
Non-tax revenue	101.0	112.9	81.8	78.9	-7.9%	30.5%	79.8	84.1	87.4	3.5%	27.4%
Sale of goods and services other than capital assets	90.4	102.9	75.6	75.6	-5.8%	28.0%	76.3	80.5	83.8	3.5%	26.3%
<i>Sales by market establishment</i>	<i>90.4</i>	<i>102.9</i>	<i>75.6</i>	<i>75.6</i>	<i>-5.8%</i>	<i>28.0%</i>	<i>76.3</i>	<i>80.5</i>	<i>83.8</i>	<i>3.5%</i>	<i>26.3%</i>
Other non-tax revenue	10.6	10.0	6.1	3.3	-32.2%	2.5%	3.5	3.6	3.6	3.4%	1.2%
Transfers received	179.9	205.3	200.8	284.9	16.6%	69.5%	236.5	183.1	191.4	-12.4%	72.6%
Total revenue	280.9	318.2	282.5	363.8	9.0%	100.0%	316.2	267.2	278.8	-8.5%	100.0%
Expenses											
Current expenses	234.7	263.0	255.8	344.5	13.7%	97.0%	293.3	267.1	278.6	-6.8%	96.8%
Compensation of employees	115.2	125.1	130.5	163.7	12.4%	47.3%	153.6	154.0	167.4	0.8%	52.8%
Goods and services	92.0	115.6	101.1	180.8	25.2%	42.4%	139.7	113.1	111.2	-15.0%	44.0%
Depreciation	27.5	22.3	24.1	-	-100.0%	7.2%	-	-	-	-	-
Transfers and subsidies	4.6	5.3	7.3	19.3	61.9%	3.0%	22.9	0.2	0.2	-80.0%	3.2%
Total expenses	239.2	268.3	263.1	363.8	15.0%	100.0%	316.2	267.2	278.8	-8.5%	100.0%
Surplus/(Deficit)	41.7	49.9	19.4	-	-100.0%		-	-	-	-	
Cash flow statement											
Cash flow from operating activities	43.5	122.3	74.0	47.6	3.0%	100.0%	28.8	30.2	8.8	-43.1%	100.0%
Receipts											
Non-tax receipts	98.9	113.8	81.8	78.9	-7.3%	30.4%	79.8	84.1	87.4	3.5%	28.1%
Sales of goods and services other than capital assets	91.1	105.0	77.3	76.0	-5.9%	28.5%	76.7	80.9	84.3	3.5%	27.1%
<i>Sales by market establishment</i>	<i>90.4</i>	<i>104.2</i>	<i>75.6</i>	<i>75.6</i>	<i>-5.8%</i>	<i>28.2%</i>	<i>76.3</i>	<i>80.5</i>	<i>83.8</i>	<i>3.5%</i>	<i>26.9%</i>
<i>Other sales</i>	<i>0.7</i>	<i>0.8</i>	<i>1.7</i>	<i>0.4</i>	<i>-17.2%</i>	<i>0.3%</i>	<i>0.4</i>	<i>0.4</i>	<i>0.5</i>	<i>7.1%</i>	<i>0.1%</i>
Other tax receipts	7.8	8.8	4.4	2.9	-28.1%	2.0%	3.0	3.2	3.2	2.8%	1.0%
Transfers received	179.9	205.3	200.8	284.9	16.6%	69.6%	236.5	183.1	169.0	-16.0%	71.9%
Total receipts	278.8	319.0	282.5	363.8	9.3%	100.0%	316.2	267.2	256.4	-11.0%	100.0%
Payment											
Current payments	235.3	196.7	208.6	316.3	10.4%	100.0%	287.4	237.0	247.6	-7.8%	100.0%
Compensation of employees	115.2	125.1	130.5	164.2	12.5%	56.8%	153.6	153.6	167.4	0.7%	59.4%
Goods and services	120.1	71.6	78.0	152.1	8.2%	43.2%	133.8	83.4	80.2	-19.2%	40.6%
Total payments	235.3	196.7	208.6	316.3	10.4%	100.0%	287.4	237.0	247.6	-7.8%	100.0%
Net cash flow from investing activities	(19.6)	(40.4)	(15.1)	(47.6)	34.4%	100.0%	(28.8)	(30.2)	(8.8)	-43.1%	100.0%
Acquisition of property, plant, equipment and intangible assets	(19.2)	(32.9)	(13.7)	(47.6)	35.4%	92.5%	(28.8)	(30.2)	(8.8)	-43.1%	100.0%
Acquisition of software and other intangible assets	(0.4)	(7.4)	(1.4)	-	-100.0%	7.5%	-	-	-	-	-
Net increase/(decrease) in cash and cash equivalents	23.9	81.9	58.8	0.0	-100.0%	15.7%	-	0.0	(0.0)	-197.1%	-
Statement of financial position											
Carrying value of assets	438.8	489.5	480.2	473.2	2.5%	69.4%	474.5	495.8	495.8	1.6%	74.5%
Acquisition of assets	(19.2)	(32.9)	(13.7)	(47.6)	35.4%	100.0%	(28.8)	(30.2)	(8.8)	-43.1%	100.0%
Inventory	0.3	0.4	0.4	0.5	16.9%	0.1%	0.5	0.5	0.5	1.5%	0.1%
Receivables and prepayments	36.4	38.9	24.7	10.4	-34.1%	4.1%	10.4	10.9	10.9	1.5%	1.6%
Cash and cash equivalents	121.1	203.0	261.8	151.2	7.7%	26.5%	151.2	158.0	158.0	1.5%	23.8%
Total assets	596.6	731.9	767.1	635.2	2.1%	100.0%	636.5	665.1	665.1	1.5%	100.0%
Accumulated surplus/(deficit)	526.4	609.6	629.0	483.6	-2.8%	82.4%	489.9	512.0	512.0	1.9%	76.8%
Borrowings	-	-	0.2	1.0	-	-	1.0	1.1	1.1	1.5%	0.2%
Deferred income	44.3	90.3	101.2	132.9	44.2%	13.5%	132.9	138.9	138.9	1.5%	20.9%
Trade and other payables	17.5	23.4	26.0	10.0	-17.1%	2.8%	5.0	5.2	5.2	-19.5%	1.0%
Provisions	8.2	8.5	10.8	7.6	-2.5%	1.3%	7.6	8.0	8.0	1.5%	1.2%
Derivatives financial instruments	0.1	-	-	-	-100.0%	-	-	-	-	-	-
Total equity and liabilities	596.6	731.9	767.1	635.2	2.1%	100.0%	636.5	665.1	665.1	1.5%	100.0%

Personnel information**Table 35.35 South African National Space Agency personnel numbers and cost by salary level**

Number of posts estimated for 31 March 2022		Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%)	Average Salary level/ Total (%)				
Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate						2021/22 - 2024/25					
		2020/21		2021/22		2022/23		2023/24		2024/25									
		Number	Unit cost	Number	Unit cost	Number	Unit cost	Number	Unit cost	Number	Unit cost								
South African National Space Agency		199	130.5	0.7	205	163.7	0.8	196	153.6	0.8	203	154.0	0.8	202	67.4	0.8	0.8%	100.0%	
Salary level	205	204	199	130.5	0.7	205	163.7	0.8	196	153.6	0.8	203	154.0	0.8	202	67.4	0.8	0.8%	100.0%
1 – 6	27	27	26	4.8	0.2	27	8.1	0.3	21	7.4	0.4	26	7.8	0.3	24	8.1	0.3	-0.2%	4.9%
7 – 10	110	109	109	55.1	0.5	110	65.6	0.6	109	62.0	0.6	109	62.0	0.6	110	67.5	0.6	1.0%	40.3%
11 – 12	28	28	28	24.1	0.9	28	29.7	1.1	28	29.8	1.1	28	29.8	1.1	28	31.1	1.1	1.5%	18.9%
13 – 16	39	39	35	44.1	1.3	39	57.5	1.5	37	51.7	1.4	39	51.7	1.3	39	57.9	1.5	0.2%	34.2%
17 – 22	1	1	1	2.4	2.4	1	2.7	2.7	1	2.7	2.7	1	2.7	2.7	1	2.8	2.8	1.5%	1.7%

1. Rand million.

Technology Innovation Agency**Selected performance indicators****Table 35.36 Technology Innovation Agency performance indicators by programme/objective/activity and related priority**

Indicator	Programme/Objective/Activity	MTSF priority	Audited performance			Estimated performance	MTEF targets		
			2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Number of licensed or assigned technologies per year	Provide customer-centric, early-stage commercialisation for technology development	Priority 2: Economic transformation and job creation	- ¹	- ¹	1	9	11	15	15
Number of successfully diffused technologies per year	Provide customer-centric, early-stage commercialisation for technology development		- ¹	- ¹	1	9	8	10	10
Number of products launched per year	Provide customer-centric, early-stage commercialisation for technology development		- ¹	- ¹	13	22	23	30	30
Total rand value leveraged through signed agreements entered into with other parties per year	Provide an enabling environment for technology innovation		- ¹	- ¹	R700m	R239m	R194m	R237.5m	R237.5m
Number of new technology transfer centres providing science, engineering and technology support in targeted regions per year	Technology development stations	Priority 2: Economic transformation and job creation	- ¹	- ¹	1	3	8	12	12
Number of small, medium and micro enterprises and cooperatives receiving technology support per year	Technology development stations		3 272	3 269	1 990	3 500	3 800	4 000	4 000
Number of honours, masters and postdoctoral students admitted within the technology station activities per year	Technology development stations	Priority 3: Education, skills and health	- ¹	- ¹	- ¹	95	121	130	130
Number of patents, publication outputs and knowledge-based products (such as prototypes, technology demonstrators and technology assistance packages) produced per year	Provide an enabling environment for technology innovation	Priority 2: Economic transformation and job creation	- ¹	- ¹	- ¹	130	140	165	165

1. No historical data available.

Entity overview

The Technology Innovation Agency draws its mandate from the Technology Innovation Agency Act (2008), as amended. The agency serves as the key institutional intervention to bridge the innovation gap between research and development outcomes from higher education institutions, science councils, public entities and private companies to maximise the potential of technological innovation to invigorate the economy.

Over the medium term, the agency will continue to focus on: bridging the innovation gap between research and development; supporting technologies within the national system of innovation; scaling up all strategic programmes by increasing the pace at which applications and internal processes take place; and creating a conducive environment for engaging with innovators, stakeholders and suppliers. Accordingly, the agency plans to license 41 new technologies, provide technology development funding and support in strategic high-impact areas to 83 innovators, and ensure that at least 470 patents, publication outputs and knowledge-based products are produced. To fund these initiatives, expenditure is expected to increase at an average annual rate of 2.1 per cent, from R572.2 million in 2021/22 to R608.3 million in 2024/25. Compensation of employees accounts for an estimated 19.7 per cent (R348.1 million) of expenditure over the period ahead.

The agency derives the bulk of its revenue through transfers from the department. These are set to increase at an average annual rate of 2.4 per cent, from R447.7 million in 2021/22 to R480.8 million in 2024/25 as the agency aims to increase the number of technologies it licenses and commercialises.

Programmes/Objectives/Activities

Table 35.37 Technology Innovation Agency expenditure trends and estimates by programme/objective/activity

R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2018/19	2019/20	2020/21		2018/19 - 2021/22	Average: Expenditure/ Total (%)	2022/23	2023/24	2024/25	2021/22 - 2024/25	Average: Expenditure/ Total (%)
Administration	175.6	166.3	149.4	165.6	-1.9%	28.6%	166.7	167.4	169.4	0.8%	28.5%
Provide customer-centric, early-stage commercialisation for technology development	78.0	84.0	79.6	72.3	-2.5%	13.6%	72.6	72.9	76.9	2.1%	12.6%
Provide an enabling environment for technology innovation	28.0	43.0	28.1	37.7	10.4%	5.9%	44.4	44.4	48.3	8.6%	7.4%
Provide bioeconomy programmes and platforms	161.0	228.5	197.2	205.7	8.5%	34.3%	212.0	212.7	224.4	2.9%	36.4%
Technology development stations	102.0	98.0	114.4	91.0	-3.7%	17.6%	87.1	87.3	89.4	-0.6%	15.1%
Total	544.6	619.7	568.7	572.2	1.7%	100.0%	582.9	584.6	608.3	2.1%	100.0%

Statements of financial performance, cash flow and financial position

Table 35.38 Technology Innovation Agency statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate 2021/22	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2018/19	2019/20	2020/21		2018/19 - 2021/22	Average: Expenditure/ Total (%)	2022/23	2023/24	2024/25	2021/22 - 2024/25	Average: Expenditure/ Total (%)
Revenue											
Non-tax revenue	146.4	162.8	173.8	124.5	-5.2%	26.1%	124.5	124.5	127.5	0.8%	21.3%
<i>of which:</i>											
Other non-tax revenue	146.4	162.8	173.8	124.5	-5.2%	26.1%	124.5	124.5	127.5	0.8%	21.3%
Transfers received	420.3	440.9	408.8	447.7	2.1%	73.9%	458.4	460.1	480.8	2.4%	78.7%
Total revenue	566.7	603.8	582.6	572.2	0.3%	100.0%	582.9	584.6	608.3	2.1%	100.0%
Expenses											
Current expenses	175.6	166.3	149.4	165.6	-1.9%	28.6%	166.7	167.4	169.4	0.8%	28.5%
Compensation of employees	105.1	109.0	101.1	114.9	3.0%	18.7%	115.7	116.2	116.2	0.4%	19.7%
Goods and services	61.2	51.1	43.9	43.8	-10.6%	8.7%	43.8	43.7	45.4	1.2%	7.5%
Depreciation	9.4	6.2	4.5	6.9	-9.8%	1.2%	7.2	7.5	7.8	4.4%	1.2%
Transfers and subsidies	369.0	453.5	419.2	406.6	3.3%	71.4%	416.1	417.2	438.9	2.6%	71.5%
Total expenses	544.6	619.7	568.7	572.2	1.7%	100.0%	582.9	584.6	608.3	2.1%	100.0%
Surplus/(Deficit)	22.1	(16.0)	14.0	-	-100.0%		-	-	-	-	
Cash flow statement											
Cash flow from operating activities	51.1	(16.1)	36.0	(87.2)	-219.5%	100.0%	(78.3)	(75.2)	73.7	-194.6%	100.0%
Receipts											
Non-tax receipts	10.4	10.5	6.5	10.5	0.3%	1.8%	10.5	10.5	10.5	-	2.2%
Other tax receipts	10.4	10.5	6.5	10.5	0.3%	1.8%	10.5	10.5	10.5	-	2.2%
Transfers received	530.4	587.0	569.7	447.7	-5.5%	97.2%	458.4	460.1	460.1	0.9%	97.8%
Financial transactions in assets and liabilities	19.7	3.5	1.4	-	-100.0%	1.1%	-	-	-	-	-
Total receipts	560.5	601.1	577.6	458.2	-6.5%	100.0%	468.9	470.6	470.6	0.9%	100.0%

Table 35.38 Technology Innovation Agency statements of financial performance, cash flow and financial position

Statement of financial performance											
R million	Audited outcome			Revised estimate	Average growth rate (%)	Average: Expenditure/ Total (%)	Medium-term expenditure estimate			Average growth rate (%)	Average: Expenditure/ Total (%)
	2018/19	2019/20	2020/21	2021/22	2018/19 - 2021/22	2022/23	2023/24	2024/25	2021/22 - 2024/25		
Payment											
Current payments	185.7	241.1	133.4	158.7	-5.1%	32.3%	159.6	159.9	159.6	0.2%	31.9%
Compensation of employees	105.1	109.0	101.1	114.9	3.0%	19.5%	115.7	116.2	116.2	0.4%	23.2%
Goods and services	80.6	132.1	32.4	43.8	-18.4%	12.8%	43.8	43.7	43.4	-0.3%	8.7%
Transfers and subsidies	323.7	376.0	408.2	386.7	6.1%	67.7%	387.6	385.9	237.4	-15.0%	68.1%
Total payments	509.4	617.2	541.6	545.4	2.3%	100.0%	547.1	545.8	396.9	-10.0%	100.0%
Net cash flow from investing activities	(3.7)	2.6	(0.4)	(2.6)	-10.9%	100.0%	(2.6)	(2.7)	(2.7)	1.5%	100.0%
Acquisition of property, plant, equipment and intangible assets	(5.1)	(1.9)	(1.3)	(1.1)	-40.2%	111.1%	(1.1)	(1.1)	(1.2)	1.5%	42.3%
Acquisition of software and other intangible assets	(2.3)	(0.7)	(0.2)	(1.5)	-13.5%	35.7%	(1.5)	(1.6)	(1.6)	1.5%	57.7%
Other flows from investing activities	3.8	5.1	1.1	-	-100.0%	-46.8%	-	-	-	-	-
Net cash flow from financing activities	(7.2)	(8.1)	58.8	89.8	-332.4%	100.0%	80.9	77.9	(71.0)	-192.5%	100.0%
Deferred income	106.4	154.3	58.8	89.8	-5.5%	-795.9%	80.9	77.9	(71.0)	-192.5%	100.0%
Borrowing activities	(113.5)	(162.4)	-	-	-100.0%	895.9%	-	-	-	-	-
Net increase/(decrease) in cash and cash equivalents	40.3	(21.7)	94.4	-	-100.0%	5.1%	-	-	-	-	-
Statement of financial position											
Carrying value of assets	18.6	13.1	8.5	18.6	-	7.8%	18.6	20.6	23.0	7.3%	15.8%
Acquisition of assets	(5.1)	(1.9)	(1.3)	(1.1)	-40.2%	100.0%	(1.1)	(1.1)	(1.2)	1.5%	100.0%
Investments	33.4	9.3	12.5	6.8	-41.2%	7.0%	3.0	3.0	3.0	-23.9%	3.1%
Loans	15.9	34.7	25.4	23.3	13.5%	12.4%	23.3	23.3	23.3	-	18.3%
Receivables and prepayments	4.1	4.8	4.5	4.1	-	2.2%	4.1	4.3	4.5	3.1%	3.4%
Cash and cash equivalents	169.2	147.5	242.0	76.9	-23.1%	70.6%	71.9	75.1	78.9	0.9%	59.4%
Total assets	241.3	209.5	293.0	129.8	-18.7%	100.0%	121.0	126.4	132.7	0.8%	100.0%
Accumulated surplus/(deficit)	97.5	66.2	80.1	76.3	-7.8%	39.5%	72.5	75.8	79.6	1.4%	59.7%
Capital reserve fund	81.1	88.4	147.2	31.1	-27.3%	37.5%	26.1	27.3	28.7	-2.7%	22.2%
Finance lease	0.2	0.3	0.2	0.5	31.5%	0.2%	0.5	0.6	0.6	3.1%	0.4%
Trade and other payables	61.8	53.9	65.0	21.4	-29.8%	22.5%	21.4	22.4	23.5	3.1%	17.4%
Derivatives financial instruments	0.6	0.7	0.4	0.3	-18.9%	0.3%	0.3	0.4	0.4	3.1%	0.3%
Total equity and liabilities	241.3	209.5	293.0	129.8	-18.7%	100.0%	121.0	126.4	132.7	0.8%	100.0%

Personnel information**Table 35.39 Technology Innovation Agency personnel numbers and cost by salary level**

Number of posts estimated for 31 March 2022		Number and cost ¹ of personnel posts filled/planned for on funded establishment												Average growth rate of personnel posts (%)	Average: Salary level/ Total (%)							
Number of funded posts	Number of posts on approved establishment	Actual			Revised estimate			Medium-term expenditure estimate						2021/22 - 2024/25								
		2020/21		2021/22		2022/23		2023/24		2024/25												
		Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost	Number	Cost	Unit cost						
Technology Innovation Agency		162			163	101.1	0.6	162	114.9	0.7	161	115.7	0.7	157	116.2	0.7	156	116.2	0.7	0.4%	100.0%	
Salary level																						
1 – 6	26	26	30	3.1	0.1	26	2.8	0.1	21	2.3	0.1	21	2.3	0.1	21	2.3	0.1	21	2.3	0.1	-5.7%	2.1%
7 – 10	75	75	74	37.5	0.5	75	40.0	0.5	75	37.1	0.5	68	34.9	0.5	68	34.9	0.5	68	34.9	0.5	-4.4%	31.7%
11 – 12	34	34	29	24.0	0.8	34	32.9	1.0	32	26.6	0.8	34	29.4	0.9	34	29.4	0.9	34	29.4	0.9	-3.7%	25.6%
13 – 16	26	26	28	35.0	1.3	26	37.0	1.4	30	41.8	1.4	32	43.7	1.4	31	43.7	1.4	31	43.7	1.4	5.7%	35.9%
17 – 22	1	1	2	1.4	0.7	1	2.3	2.3	3	7.9	2.6	2	5.8	2.9	2	5.8	2.9	2	5.8	2.9	36.8%	4.7%

1. Rand million.