

# Vote 35

## Science and Innovation

### Adjusted budget summary

R thousand	2021/22			
	Appropriation	Adjustments appropriation		Adjusted appropriation
		Decrease	Increase	
<b>Amount to be appropriated</b>	<b>8 933 315</b>	–	<b>72 323</b>	<b>9 005 638</b>
<i>of which:</i>				
Current payments	566 468	–	2 823	569 291
Transfers and subsidies	8 363 994	–	67 000	8 430 994
Payments for capital assets	2 853	–	2 500	5 353
Executive authority	Minister of Science and Innovation			
Accounting officer	Director-General of Science and Innovation			
Website	www.dst.gov.za			

### Vote purpose

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

### Performance

Indicator	Programme	MTSF priority	Annual performance		
			Projected for 2021/22	Achieved in the first half of 2021/22 (April to September)	Changed target for 2021/22
Number of commercial outputs in designated areas per year	Technology Innovation	Priority 2: Economic transformation and job creation	4	0	–
Number of international resource leveraging engagements undertaken by the department per year	International Cooperation and Resource	Priority 7: A better Africa and world	43	22	–
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	2 000	2 373	–
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		6 200	4 920	–
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		3 000	2 550	–
Number of knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the intellectual property portfolio through fully funded or co-funded research initiatives per year	Socioeconomic Innovation Partnerships		60	9	–

### Progress

The annual target for the number of commercial outputs in designated areas is expected to be achieved in the second half of 2021/22. Because administrative delays in 2020/21 resulted in funds being carried over to 2021/22, the National Research Foundation was able to support more doctoral students, postgraduate students and researchers than anticipated in the first half of 2021/22. By mid-year, only 9 knowledge and

innovation products had been added to the intellectual property portfolio against an annual target of 60. This slow progress was due to a lack of industrially relevant knowledge and innovation products in the market over the period.

## Adjusted estimates

Programme		2021/22							Adjusted appropriation
R thousand	Appropriation	Adjustments appropriation					Total adjustments appropriation		
		Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds		Other adjustments	
Administration	328 196	–	–	4 000	–	–	2 528	6 528	334 724
Technology Innovation	1 780 222	–	–	(75 700)	–	–	767	(74 933)	1 705 289
International Cooperation and Resources	146 625	–	–	(3 000)	–	–	791	(2 209)	144 416
Research, Development and Support	4 949 244	–	–	45 810	–	–	578	46 388	4 995 632
Socioeconomic Innovation Partnerships	1 729 028	–	67 000	28 890	–	–	659	96 549	1 825 577
<b>Total</b>	<b>8 933 315</b>	<b>–</b>	<b>67 000</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>5 323</b>	<b>72 323</b>	<b>9 005 638</b>
<b>Economic classification</b>									
<b>Current payments</b>	<b>566 468</b>	<b>–</b>	<b>–</b>	<b>(2 500)</b>	<b>–</b>	<b>–</b>	<b>5 323</b>	<b>2 823</b>	<b>569 291</b>
Compensation of employees	358 003	–	–	–	–	–	5 323	5 323	363 326
Goods and services	208 465	–	–	(2 500)	–	–	–	(2 500)	205 965
<b>Transfers and subsidies</b>	<b>8 363 994</b>	<b>–</b>	<b>67 000</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>67 000</b>	<b>8 430 994</b>
Departmental agencies and accounts	6 374 258	–	67 000	79 329	–	–	–	146 329	6 520 587
Public corporations and private enterprises	1 593 652	–	–	(81 329)	–	–	–	(81 329)	1 512 323
Non-profit institutions	396 084	–	–	2 000	–	–	–	2 000	398 084
<b>Payments for capital assets</b>	<b>2 853</b>	<b>–</b>	<b>–</b>	<b>2 500</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2 500</b>	<b>5 353</b>
Machinery and equipment	2 853	–	–	2 500	–	–	–	2 500	5 353
<b>Total</b>	<b>8 933 315</b>	<b>–</b>	<b>67 000</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>5 323</b>	<b>72 323</b>	<b>9 005 638</b>

## Programme 1: Administration

Subprogramme		2021/22							Adjusted appropriation
R thousand	Appropriation	Adjustments appropriation					Total adjustments appropriation		
		Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds		Other adjustments	
Ministry	5 515	–	–	–	–	–	82	82	5 597
Institutional Planning and Support	169 004	–	–	–	–	–	1 288	1 288	170 292
Corporate Services	148 119	–	–	4 000	–	–	1 158	5 158	153 277
Office Accommodation	5 558	–	–	–	–	–	–	–	5 558
<b>Total</b>	<b>328 196</b>	<b>–</b>	<b>–</b>	<b>4 000</b>	<b>–</b>	<b>–</b>	<b>2 528</b>	<b>6 528</b>	<b>334 724</b>
<b>Economic classification</b>									
<b>Current payments</b>	<b>310 079</b>	<b>–</b>	<b>–</b>	<b>1 500</b>	<b>–</b>	<b>–</b>	<b>2 528</b>	<b>4 028</b>	<b>314 107</b>
Compensation of employees	170 010	–	–	–	–	–	2 528	2 528	172 538
Goods and services	140 069	–	–	1 500	–	–	–	1 500	141 569
<b>Transfers and subsidies</b>	<b>15 264</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>15 264</b>
Non-profit institutions	15 264	–	–	–	–	–	–	–	15 264
<b>Payments for capital assets</b>	<b>2 853</b>	<b>–</b>	<b>–</b>	<b>2 500</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2 500</b>	<b>5 353</b>
Machinery and equipment	2 853	–	–	2 500	–	–	–	2 500	5 353
<b>Total</b>	<b>328 196</b>	<b>–</b>	<b>–</b>	<b>4 000</b>	<b>–</b>	<b>–</b>	<b>2 528</b>	<b>6 528</b>	<b>334 724</b>

**Programme 2: Technology Innovation**

Subprogramme		2021/22								
		Adjustments appropriation								
R thousand	Appropriation	Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments	Total adjustments appropriation	Adjusted appropriation	
Space Science	249 162	-	-	30 890	-	-	168	31 058	280 220	
Hydrogen and Energy	188 159	-	-	-	-	-	118	118	188 277	
Bio-innovation	203 875	-	-	-	-	-	204	204	204 079	
Innovation Priorities and Instruments	1 079 649	-	-	(108 590)	-	-	94	(108 496)	971 153	
National Intellectual Property Management Office	54 671	-	-	2 000	-	-	138	2 138	56 809	
Office of the Deputy Director-General: Technology Innovation	4 706	-	-	-	-	-	45	45	4 751	
<b>Total</b>	<b>1 780 222</b>	<b>-</b>	<b>-</b>	<b>(75 700)</b>	<b>-</b>	<b>-</b>	<b>767</b>	<b>(74 933)</b>	<b>1 705 289</b>	
<b>Economic classification</b>										
<b>Current payments</b>	<b>74 775</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>767</b>	<b>767</b>	<b>75 542</b>	
Compensation of employees	51 623	-	-	-	-	-	767	767	52 390	
Goods and services	23 152	-	-	-	-	-	-	-	23 152	
<b>Transfers and subsidies</b>	<b>1 705 447</b>	<b>-</b>	<b>-</b>	<b>(75 700)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(75 700)</b>	<b>1 629 747</b>	
Departmental agencies and accounts	1 265 772	-	-	(70 000)	-	-	-	(70 000)	1 195 772	
Public corporations and private enterprises	116 689	-	-	(7 700)	-	-	-	(7 700)	108 989	
Non-profit institutions	322 986	-	-	2 000	-	-	-	2 000	324 986	
<b>Total</b>	<b>1 780 222</b>	<b>-</b>	<b>-</b>	<b>(75 700)</b>	<b>-</b>	<b>-</b>	<b>767</b>	<b>(74 933)</b>	<b>1 705 289</b>	

**Programme 3: International Cooperation and Resources**

Subprogramme		2021/22								
		Adjustments appropriation								
R thousand	Appropriation	Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments	Total adjustments appropriation	Adjusted appropriation	
Multilateral Cooperation and Africa	32 057	-	-	(3 000)	-	-	225	(2 775)	29 282	
International Resources	66 843	-	-	-	-	-	239	239	67 082	
Overseas Bilateral Cooperation	42 756	-	-	-	-	-	272	272	43 028	
Office of the Deputy Director-General: International Cooperation and Resources	4 969	-	-	-	-	-	55	55	5 024	
<b>Total</b>	<b>146 625</b>	<b>-</b>	<b>-</b>	<b>(3 000)</b>	<b>-</b>	<b>-</b>	<b>791</b>	<b>(2 209)</b>	<b>144 416</b>	
<b>Economic classification</b>										
<b>Current payments</b>	<b>72 121</b>	<b>-</b>	<b>-</b>	<b>(3 000)</b>	<b>-</b>	<b>-</b>	<b>791</b>	<b>(2 209)</b>	<b>69 912</b>	
Compensation of employees	53 217	-	-	-	-	-	791	791	54 008	
Goods and services	18 904	-	-	(3 000)	-	-	-	(3 000)	15 904	
<b>Transfers and subsidies</b>	<b>74 504</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>74 504</b>	
Departmental agencies and accounts	16 670	-	-	-	-	-	-	-	16 670	
Non-profit institutions	57 834	-	-	-	-	-	-	-	57 834	
<b>Total</b>	<b>146 625</b>	<b>-</b>	<b>-</b>	<b>(3 000)</b>	<b>-</b>	<b>-</b>	<b>791</b>	<b>(2 209)</b>	<b>144 416</b>	

**Programme 4: Research, Development and Support**

Subprogramme	2021/22									
	R thousand	Appropriation	Adjustments appropriation						Total adjustments appropriation	Adjusted appropriation
			Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments		
Human Capital and Science Promotions	2 693 344	–	–	18 000	–	–	170	18 170	2 711 514	
Science Missions	249 773	–	–	(65 000)	–	–	168	(64 832)	184 941	
Basic Science and Infrastructure	1 147 623	–	–	(105 957)	–	–	107	(105 850)	1 041 773	
Astronomy	854 553	–	–	198 767	–	–	87	198 854	1 053 407	
Office of the Deputy Director-General: Research, Development and Support	3 951	–	–	–	–	–	47	47	3 998	
<b>Total</b>	<b>4 949 244</b>	<b>–</b>	<b>–</b>	<b>45 810</b>	<b>–</b>	<b>–</b>	<b>578</b>	<b>46 388</b>	<b>4 995 632</b>	
<b>Economic classification</b>										
<b>Current payments</b>	<b>55 245</b>	<b>–</b>	<b>–</b>	<b>(4 000)</b>	<b>–</b>	<b>–</b>	<b>578</b>	<b>(3 422)</b>	<b>51 823</b>	
Compensation of employees	38 853	–	–	–	–	–	578	578	39 431	
Goods and services	16 392	–	–	(4 000)	–	–	–	(4 000)	12 392	
<b>Transfers and subsidies</b>	<b>4 893 999</b>	<b>–</b>	<b>–</b>	<b>49 810</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>49 810</b>	<b>4 943 809</b>	
Departmental agencies and accounts	4 621 878	–	–	84 810	–	–	–	84 810	4 706 688	
Public corporations and private enterprises	272 121	–	–	(35 000)	–	–	–	(35 000)	237 121	
<b>Total</b>	<b>4 949 244</b>	<b>–</b>	<b>–</b>	<b>45 810</b>	<b>–</b>	<b>–</b>	<b>578</b>	<b>46 388</b>	<b>4 995 632</b>	

**Programme 5: Socioeconomic Innovation Partnerships**

Subprogramme	2021/22									
	R thousand	Appropriation	Adjustments appropriation						Total adjustments appropriation	Adjusted appropriation
			Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments		
Sector Innovation and Green Economy	1 065 992	–	57 000	(2 661)	–	–	129	54 468	1 120 460	
Innovation for Inclusive Development	374 883	–	–	28 836	–	–	170	29 006	403 889	
Science and Technology Investment	35 626	–	–	(285)	–	–	114	(171)	35 455	
Technology Localisation, Beneficiation and Advanced Manufacturing	249 180	–	10 000	–	–	–	206	10 206	259 386	
Office of the Deputy Director-General: Socioeconomic Innovation Partnership	3 347	–	–	3 000	–	–	39	3 039	6 386	
<b>Total</b>	<b>1 729 028</b>	<b>–</b>	<b>67 000</b>	<b>28 890</b>	<b>–</b>	<b>–</b>	<b>659</b>	<b>96 549</b>	<b>1 825 577</b>	
<b>Economic classification</b>										
<b>Current payments</b>	<b>54 248</b>	<b>–</b>	<b>–</b>	<b>3 000</b>	<b>–</b>	<b>–</b>	<b>659</b>	<b>3 659</b>	<b>57 907</b>	
Compensation of employees	44 300	–	–	–	–	–	659	659	44 959	
Goods and services	9 948	–	–	3 000	–	–	–	3 000	12 948	
<b>Transfers and subsidies</b>	<b>1 674 780</b>	<b>–</b>	<b>67 000</b>	<b>25 890</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>92 890</b>	<b>1 767 670</b>	
Departmental agencies and accounts	469 938	–	67 000	64 519	–	–	–	131 519	601 457	
Public corporations and private enterprises	1 204 842	–	–	(38 629)	–	–	–	(38 629)	1 166 213	
<b>Total</b>	<b>1 729 028</b>	<b>–</b>	<b>67 000</b>	<b>28 890</b>	<b>–</b>	<b>–</b>	<b>659</b>	<b>96 549</b>	<b>1 825 577</b>	

## Details of adjustments to the 2021 Estimates of National Expenditure

### Appropriation of expenditure earmarked in the 2021 Budget speech for future allocation

#### Programme 5: Socioeconomic Innovation Partnerships

An additional R67 million is allocated as part of the presidential youth employment intervention. Of this: R25 million is to provide training to 450 graduates and 50 community mentors as environmental champions to conduct door-to-door community education and awareness campaigns in partnership with the Duzi Umngezi Conversation Trust; R32 million is to appoint 900 unemployed graduates through the Water Research Commission's water graduate employment programme, aimed at improving employment readiness in the water sector; and R10 million is to provide training to 250 graduates at the Council for Scientific and Industrial Research, who will support the council in various fields.

#### Virements and shifts within the vote

<b>Programmes</b>					
1. Administration					
2. Technology Innovation					
3. International Cooperation and Resources					
4. Research, Development and Support					
5. Socioeconomic Innovation Partnerships					
<b>From:</b>			<b>To:</b>		
<b>Programme by economic classification</b>	<b>Motivation</b>	<b>R thousand</b>	<b>Programme by economic classification</b>	<b>Motivation</b>	<b>R thousand</b>
<b>Programme 2</b>		<b>(142 453)</b>	<b>Programme 2</b>		<b>64 753</b>
Non-profit institutions	Medical Research Council <sup>1</sup>	(33 863)	Non-profit institutions	Network for Genomic Surveillance and mRNA technology transfer hub <sup>1</sup>	33 863
Departmental agencies and accounts	Technology Innovation Agency	(30 890)	Departmental agencies and accounts	South African National Space Agency (Space Weather Centre) <sup>2</sup>	30 890
		(70 000) <sup>1</sup>	<b>Programme 4</b>		<b>70 000</b>
Public corporations and private enterprises	Council for Scientific and Industrial Research <sup>2</sup>	(2 000)	<b>Programme 2</b>		<b>2 000</b>
			Non-profit institutions	Technology utilisation initiative programme <sup>2</sup>	2 000
	Green nanochemistry (University of the Western Cape), nanomedicine platform (Tshwane University of Technology/Nelson Mandela University) <sup>1</sup>	(5 700)	<b>Programme 4</b>		<b>5 700</b>
			Departmental agencies and accounts	National Research Foundation (Square Kilometre Array) <sup>1</sup>	5 700
Shifts within the programme as a percentage of the programme budget		<b>3.7%</b>			
Virements to other programmes as a percentage of the programme budget		<b>4.3%</b>			
<b>Programme 3</b>		<b>(3 000)</b>	<b>Programme 5</b>		<b>3 000</b>
Goods and services	Postponement of science forum	(3 000)	<b>Goods and services</b>	Enterprise project management office	3 000
Shifts within the programme as a percentage of the programme budget		<b>0%</b>			
Virements to other programmes as a percentage of the programme budget		<b>2%</b>			

**Virements and shifts within the vote (continued)**

From:			To:		
Programme by economic classification	Motivation	R thousand	Programme by economic classification	Motivation	R thousand
<b>Programme 4</b>			<b>Programme 1</b>		
Good and services	Travel and subsistence	(1 500)	Goods and services	Audit costs	1 500
		(2 500)	Machinery and equipment	Computers, vehicles	2 500
			<b>Programme 4</b>		
Departmental agencies and accounts	National Research Foundation <sup>1</sup>	(105 067)	Departmental agencies and accounts	National Research Foundation (Square Kilometre Array) <sup>1</sup>	105 067
		(20 000) <sup>2</sup>	Departmental agencies and accounts	Human resource development (centres of excellence) <sup>2</sup>	20 000
		(25 890) <sup>2</sup>	<b>Programme 5</b>		
			Departmental agencies and accounts	Innovation for inclusive development <sup>2</sup>	25 890
Public corporations and private enterprises	Council for Scientific and Industrial Research <sup>1</sup>	(35 000)	Departmental agencies and accounts	National Research Foundation (Square Kilometre Array) <sup>1</sup>	35 000
Shifts within the programme as a percentage of the programme budget		3.2%			
<b>Virements to other programmes as a percentage of the programme budget</b>		<b>0.6%</b>			
<b>Programme 5</b>			<b>Programme 5</b>		
Departmental agencies and accounts	National Research Foundation <sup>2</sup>	(2 946)	Departmental agencies and accounts	Technology product development, prototyping, commercialisation and market entry <sup>2</sup>	2 946
Public corporations and private enterprises	Council for Scientific and Industrial Research <sup>2</sup>	(38 629) <sup>2</sup>	Departmental agencies and accounts	Technology stations programme <sup>2</sup>	38 629
Shifts within the programme as a percentage of the programme budget		2.4%			
<b>Virements to other programmes as a percentage of the programme budget</b>		<b>0%</b>			
<b>Total</b>		<b>(376 985)</b>	<b>376 985</b>		

1. Only the legislature may approve this virement in terms of the Public Finance Management Act, (Act 1 of 1999).

2. National Treasury approval has been obtained.

**Other adjustments – R5.323 million****Significant and unforeseeable economic and financial events**

An additional R5.323 million is allocated for higher salary increases than the main budget provided for:

Programme 1: Administration

R2.528 million

Programme 2: Technology Innovation

R767 000

Programme 3: International Cooperation and Resources

R791 000

Programme 4: Research, Development and Support

R578 000

Programme 5: Socioeconomic Innovation Partnership

R659 000

## Expenditure outcome for 2020/21 and actual expenditure for 2021/22

Programme	2020/21					2021/22			
	Adjusted appropriation	Outcome			Adjusted appropriation	Adjusted appropriation/Total (%)	Actual expenditure		
		Apr 20 - Sep 20	Apr 20 - Sep 20 % of adjusted appropriation	Apr 20 - Mar 21			Apr 20 - Mar 21 % of adjusted appropriation	Apr 21 - Sep 21	Apr 21 - Sep 21 % of adjusted appropriation
R thousand									
Administration	304 107	107 641	35.4	262 240	86.2	334 724	3.7	127 681	38.1
Technology Innovation	1 378 321	653 262	47.4	1 379 841	100.1	1 705 289	18.9	490 142	28.7
International Cooperation and Resources	116 802	30 558	26.2	114 229	97.8	144 416	1.6	37 123	25.7
Research, Development and Support	3 745 248	2 056 241	54.9	3 730 976	99.6	4 995 632	55.5	3 024 290	60.5
Socioeconomic Innovation Partnerships	1 733 809	864 306	49.9	1 677 979	96.8	1 825 577	20.3	926 749	50.8
<b>Total</b>	<b>7 278 287</b>	<b>3 712 008</b>	<b>51.0</b>	<b>7 165 265</b>	<b>98.4</b>	<b>9 005 638</b>	<b>100.0</b>	<b>4 605 985</b>	<b>51.1</b>
<b>Economic classification</b>									
<b>Current payments</b>	<b>506 974</b>	<b>196 080</b>	<b>38.7</b>	<b>428 954</b>	<b>84.6</b>	<b>569 291</b>	<b>6.3</b>	<b>217 910</b>	<b>38.3</b>
Compensation of employees	361 993	155 192	42.9	321 938	88.9	363 326	4.0	163 535	45.0
Goods and services	144 981	40 888	28.2	107 016	73.8	205 965	2.3	54 375	26.4
<b>Transfers and subsidies</b>	<b>6 767 909</b>	<b>3 514 799</b>	<b>51.9</b>	<b>6 729 702</b>	<b>99.4</b>	<b>8 430 994</b>	<b>93.6</b>	<b>4 386 030</b>	<b>52.0</b>
Departmental agencies and accounts	5 131 832	2 839 772	55.3	4 721 326	92.0	6 520 587	72.4	3 684 103	56.5
Higher education institutions	–	–	–	252 948	–	–	–	47 589	–
Public corporations and private enterprises	1 256 636	520 010	41.4	1 495 783	119.0	1 512 323	16.8	545 724	36.1
Non-profit institutions	379 441	154 703	40.8	259 117	68.3	398 084	4.4	108 247	27.2
Households	–	314	–	528	–	–	–	367	–
<b>Payments for capital assets</b>	<b>3 404</b>	<b>1 061</b>	<b>31.2</b>	<b>6 062</b>	<b>178.1</b>	<b>5 353</b>	<b>0.1</b>	<b>1 964</b>	<b>36.7</b>
Machinery and equipment	3 404	1 061	31.2	–	–	5 353	0.1	1 964	36.7
Software and other intangible assets	–	–	–	6 062	–	–	–	–	–
<b>Payments for financial assets</b>	<b>–</b>	<b>68</b>	<b>–</b>	<b>547</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>81</b>	<b>–</b>
<b>Total</b>	<b>7 278 287</b>	<b>3 712 008</b>	<b>51.0</b>	<b>7 165 265</b>	<b>98.4</b>	<b>9 005 638</b>	<b>100.0</b>	<b>4 605 985</b>	<b>51.1</b>

### Expenditure trends

Total expenditure in 2020/21 was R7.2 billion, 98.4 per cent of the adjusted appropriation for the year. Mid-year expenditure in 2020/21 was R3.7 billion, 51 per cent of the adjusted appropriation, whereas expenditure in the first half of 2021/22 was R4.6 billion, 51.1 per cent of the adjusted appropriation of R9 billion. Compared to the first half of 2020/21, expenditure over the same period in 2021/22 increased by R894 million, 24.1 per cent. This was mainly due to an increase in the number of research and development initiatives conducted as COVID-19 lockdown restrictions were eased.

## Departmental receipts

R thousand	2020/21					2021/22				
	Adjusted estimate	Outcome				Budget estimate	Adjusted estimate	Adjusted receipts estimate/ Total (%)	Actual receipts	
		Apr 20 - Sep 20	Apr 20 - Sep 20 % of adjusted estimate	Apr 20 - Mar 21	Apr 20 - Mar 21 % of adjusted estimate				Apr 21 - Sep 21	Apr 21 - Sep 21 % of adjusted estimate
<b>Departmental receipts</b>	<b>2 076</b>	<b>1 570</b>	<b>75.6</b>	<b>2 241</b>	<b>107.9</b>	<b>583</b>	<b>897</b>	<b>100.0</b>	<b>508</b>	<b>56.6</b>
Sales of goods and services produced by department	60	34	56.7	69	115.0	60	60	6.7	35	58.3
Sales of scrap, waste, arms and other used current goods	3	2	66.7	2	66.7	3	5	0.6	2	40.0
Interest, dividends and rent on land	10	1	10.0	13	130.0	20	32	3.6	19	59.4
Transactions in financial assets and liabilities	2 003	1 533	76.5	2 157	107.7	500	550	61.3	218	39.6
<b>Total</b>	<b>2 076</b>	<b>1 570</b>	<b>75.6</b>	<b>2 241</b>	<b>107.9</b>	<b>583</b>	<b>897</b>	<b>100.0</b>	<b>508</b>	<b>56.6</b>

### Revenue trends

Mid-year revenue in 2020/21 was R1.6 million, 75.6 per cent of the adjusted estimate, whereas revenue for the first half of 2021/22 was R508 000, 56.6 per cent of the adjusted estimate of R897 000. Compared to the first half of 2020/21, revenue over the same period in 2021/22 decreased by R1.1 million, 67.6 per cent. This was mainly due to a decrease in revenue from projects run by entities as a result of COVID-19. Entities spent more of their ring-fenced funds in 2021/22 for projects undertaken on behalf of the department than they did in 2020/21, resulting in fewer surplus funds being surrendered to the department.

## Changes to transfers and subsidies, including conditional grants

### Summary of changes to transfers and subsidies per programme

R thousand	Appropriation	2021/22						Total adjustments appropriation	Adjusted appropriation
		Adjustments appropriation							
		Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments		
<b>Technology Innovation Departmental agencies and accounts</b>									
<b>Departmental agencies (non-business entities)</b>									
<b>Current</b>	<b>535 734</b>	–	–	<b>(70 000)</b>	–	–	<b>(70 000)</b>	<b>465 734</b>	
Various institutions: Innovation projects research	503 295	–	–	(100 890)	–	–	(100 890)	402 405	
Various institutions: Space science research: Economic competitiveness and support package	32 439	–	–	30 890	–	–	30 890	63 329	
<b>Public corporations and private enterprises</b>									
<b>Public corporations</b>									
<b>Other transfers</b>									
<b>Current</b>	<b>116 689</b>	–	–	<b>(7 700)</b>	–	–	<b>(7 700)</b>	<b>108 989</b>	
Various institutions: Emerging research areas	116 689	–	–	(7 700)	–	–	(7 700)	108 989	



## Summary of changes to transfers and subsidies per programme (continued)

		2021/22							
		Adjustments appropriation							
R thousand	Appropriation	Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments	Total adjustments appropriation	Adjusted appropriation
<b>Non-profit institutions</b>									
<b>Current</b>									
	<b>130 511</b>	–	–	<b>2 000</b>	–	–	–	<b>2 000</b>	<b>132 511</b>
Various institutions: Health innovation research	53 648	–	–	33 863	–	–	–	33 863	87 511
Various institutions: Technology transfer offices: Support for research units	43 000	–	–	2 000	–	–	–	2 000	45 000
Medical Research Council: Social Impact Bond	33 863	–	–	(33 863)	–	–	–	(33 863)	–
<b>Research, Development and Support</b>									
<b>Departmental agencies and accounts</b>									
<b>Departmental agencies (non-business entities)</b>									
<b>Current</b>									
	<b>1 258 691</b>	–	–	<b>(60 000)</b>	–	–	–	<b>(60 000)</b>	<b>1 198 691</b>
Various institutions: Astronomy research and development	40 623	–	–	(15 000)	–	–	–	(15 000)	25 623
National Research Foundation: Human resources development for science and engineering	982 897	–	–	20 000	–	–	–	20 000	1 002 897
Various institutions: Strategic science platforms for research and development	235 171	–	–	(65 000)	–	–	–	(65 000)	170 171
<b>Capital</b>									
	<b>1 631 644</b>	–	–	<b>144 810</b>	–	–	–	<b>144 810</b>	<b>1 776 454</b>
Various institutions: Infrastructure projects for research and development	829 237	–	–	(70 957)	–	–	–	(70 957)	758 280
National Research Foundation: Square Kilometre Array: Capital contribution to research	802 407	–	–	215 767	–	–	–	215 767	1 018 174
<b>Public corporations and private enterprises</b>									
<b>Public corporations</b>									
<b>Other transfers</b>									
<b>Capital</b>									
	<b>272 121</b>	–	–	<b>(35 000)</b>	–	–	–	<b>(35 000)</b>	<b>237 121</b>
Council for Scientific and Industrial Research: Cyberinfrastructure research and development	272 121	–	–	(35 000)	–	–	–	(35 000)	237 121

## Summary of changes to transfers and subsidies per programme (continued)

		2021/22							
		Adjustments appropriation							
R thousand	Appropriation	Roll-overs	Amounts announced in the budget	Virements and shifts	Shifts between votes	Declared unspent funds	Other adjustments	Total adjustments appropriation	Adjusted appropriation
<b>Socioeconomic Innovation Partnerships</b>									
<b>Departmental agencies and accounts</b>									
<b>Departmental agencies (non-business entities)</b>									
<b>Current</b>									
	<b>125 276</b>	–	<b>67 000</b>	<b>64 519</b>	–	–	–	<b>131 519</b>	<b>256 795</b>
Various institutions: Innovative research and development	48 322	–	–	28 836	–	–	–	28 836	77 158
Various institutions: Local manufacturing capacity research and technical support	32 588	–	10 000	38 629	–	–	–	48 629	81 217
National Research Foundation: Research information management system	11 035	–	–	(285)	–	–	–	(285)	10 750
Various institutions: Environmental innovation	33 331	–	57 000	(2 661)	–	–	–	54 339	87 670
<b>Public corporations and private enterprises</b>									
<b>Public corporations</b>									
<b>Other transfers</b>									
<b>Current</b>									
	<b>121 066</b>	–	–	<b>(38 629)</b>	–	–	–	<b>(38 629)</b>	<b>82 437</b>
Various institutions: Advanced manufacturing technology strategy implementation	63 343	–	–	(18 129)	–	–	–	(18 129)	45 214
Various institutions: Resource-based industries research and development	57 723	–	–	(20 500)	–	–	–	(20 500)	37 223