

# Vote 34

## Science and Technology

### Adjusted budget summary

R thousand	2011/12			
	Main appropriation	Adjusted appropriation	Decrease	Increase
<b>Amount to be appropriated</b>	<b>4 404 618</b>	<b>4 407 003</b>	–	2 385
<b>of which:</b>				
Current payments	369 713	365 303	(4 410)	–
Transfers and subsidies	4 031 647	4 038 442	–	6 795
Payments for capital assets	3 258	3 258	–	–
Executive authority	Minister of Science and Technology			
Accounting officer	Director-General of Science and Technology			
Website address	www.dst.gov.za			

### Aim

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

### Mid-year performance status

Indicator	Programme	Annual Performance		
		Projected for 2011/12 as published in the 2011 ENE	Achieved in the first six months of 2011/12 (April to September)	Changed estimate for 2011/12
As published in the 2011 ENE	Programme linked to the indicator			
Number of patents, patents applications and trademarks resulting from policy funded research	Socio-Economic Partnerships	19	0	
Number of companies provided with a technology assistance package per year to facilitate successful participation in infrastructure public procurement process	Socio-Economic Partnerships	24	23	
Total number of postgraduate students supported	Human Capital and Knowledge Systems	6 600	3 103	
Total number of postgraduate students financially supported	Socio-Economic Partnerships	80	153	
Value of foreign funds leveraged per year in support of science, technology and innovation cooperation	International Cooperation and Resources	R199.3m	R9.6m	
Number of researchers supported financially per year	Human Capital and Knowledge Systems	2 500	1 775	
Number of technologies in development per year	Research, Development and Innovation	9	0	
Number of joint science and technology projects initiated between the Department of Science and Technology and other departments per year	Socio-Economic Partnerships	13	0	
Number of households benefiting from technology based interventions per year	Socio-Economic Partnerships	300	0	
Total number of institutions implementing the research information management system	Socio-Economic Partnerships	25	0	

### Mid-year progress

In the six months under review, the number of companies provided with a technology assistance package per year to facilitate successful participation in infrastructure public procurement process the annual target has nearly been reached.

## Adjusted Estimates of National Expenditure 2011

Programme	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
R thousand							
Administration	192 116	–	–	1 200	2 385	3 585	195 701
Research, Development and Innovation	854 610	–	–	–	–	–	854 610
International Cooperation and Resources	137 194	–	–	–	–	–	137 194
Human Capital and Knowledge Systems	1 950 427	–	–	–	–	–	1 950 427
Socio-Economic Partnerships	1 270 271	–	–	(1 200)	–	(1 200)	1 269 071
<b>Total</b>	<b>4 404 618</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2 385</b>	<b>2 385</b>	<b>4 407 003</b>
<b>Economic classification</b>							
<b>Current payments</b>	<b>369 713</b>	<b>–</b>	<b>–</b>	<b>(6 795)</b>	<b>2 385</b>	<b>(4 410)</b>	<b>365 303</b>
Compensation of employees	225 251	–	–	–	2 385	2 385	227 636
Goods and services	144 462	–	–	(6 795)	–	(6 795)	137 667
<b>Transfers and subsidies</b>	<b>4 031 647</b>	<b>–</b>	<b>–</b>	<b>6 795</b>	<b>–</b>	<b>6 795</b>	<b>4 038 442</b>
Departmental agencies and accounts	2 619 942	–	–	13 606	–	13 606	2 633 548
Public corporations and private enterprises	924 764	–	–	–	–	–	924 764
Non-profit institutions	486 941	–	–	(6 811)	–	(6 811)	480 130
<b>Payments for capital assets</b>	<b>3 258</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>3 258</b>
Machinery and equipment	3 258	–	–	–	–	–	3 258
<b>Total</b>	<b>4 404 618</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2 385</b>	<b>2 385</b>	<b>4 407 003</b>

## Programme 1: Administration

Subprogramme	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
R thousand							
Ministry	3 494	–	–	–	–	–	3 494
Management	72 085	–	–	–	–	–	72 085
Corporate Services	104 523	–	–	1 200	2 385	3 585	108 108
Governance	8 022	–	–	–	–	–	8 022
Office Accommodation	3 992	–	–	–	–	–	3 992
<b>Total</b>	<b>192 116</b>	<b>–</b>	<b>–</b>	<b>1 200</b>	<b>2 385</b>	<b>3 585</b>	<b>195 701</b>
<b>Economic classification</b>							
<b>Current payments</b>	<b>189 144</b>	<b>–</b>	<b>–</b>	<b>1 200</b>	<b>2 385</b>	<b>3 585</b>	<b>192 729</b>
Compensation of employees	111 008	–	–	–	2 385	2 385	113 393
Goods and services	78 136	–	–	1 200	–	1 200	79 336
<b>Transfers and subsidies</b>	<b>1 000</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>1 000</b>
Non-profit institutions	1 000	–	–	–	–	–	1 000
<b>Payments for capital assets</b>	<b>1 972</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>1 972</b>
Machinery and equipment	1 972	–	–	–	–	–	1 972
<b>Total</b>	<b>192 116</b>	<b>–</b>	<b>–</b>	<b>1 200</b>	<b>2 385</b>	<b>3 585</b>	<b>195 701</b>

**Programme 2: Research, Development and Innovation**

Subprogramme	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
R thousand							
Space Science	116 298	-	-	13 136	-	13 136	129 434
Hydrogen and Energy	142 373	-	-	(1 795)	-	(1 795)	140 578
Biotechnology and Health	124 261	-	-	(11 341)	-	(11 341)	112 920
Innovation Planning and Instruments	471 678	-	-	-	-	-	471 678
<b>Total</b>	<b>854 610</b>	-	-	-	-	-	<b>854 610</b>
<b>Economic classification</b>							
<b>Current payments</b>	<b>54 323</b>	-	-	<b>(3 495)</b>	-	<b>(3 495)</b>	<b>50 828</b>
Compensation of employees	31 676	-	-	-	-	-	31 676
Goods and services	22 647	-	-	(3 495)	-	(3 495)	19 152
<b>Transfers and subsidies</b>	<b>800 067</b>	-	-	<b>3 495</b>	-	<b>3 495</b>	<b>803 562</b>
Departmental agencies and accounts	632 221	-	-	4 606	-	4 606	636 827
Non-profit institutions	167 846	-	-	(1 111)	-	(1 111)	166 735
<b>Payments for capital assets</b>	<b>220</b>	-	-	-	-	-	<b>220</b>
Machinery and equipment	220	-	-	-	-	-	220
<b>Total</b>	<b>854 610</b>	-	-	-	-	-	<b>854 610</b>

**Programme 3: International Cooperation and Resources**

Subprogramme	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
R thousand							
Multilateral Cooperation and Africa	59 955	-	-	-	-	-	59 955
International Resources	47 212	-	-	-	-	-	47 212
Overseas Bilateral Cooperation	30 027	-	-	-	-	-	30 027
<b>Total</b>	<b>137 194</b>	-	-	-	-	-	<b>137 194</b>
<b>Economic classification</b>							
<b>Current payments</b>	<b>55 308</b>	-	-	<b>(1 500)</b>	-	<b>(1 500)</b>	<b>53 808</b>
Compensation of employees	30 531	-	-	-	-	-	30 531
Goods and services	24 777	-	-	(1 500)	-	(1 500)	23 277
<b>Transfers and subsidies</b>	<b>81 372</b>	-	-	<b>1 500</b>	-	<b>1 500</b>	<b>82 872</b>
Departmental agencies and accounts	32 440	-	-	-	-	-	32 440
Non-profit institutions	48 932	-	-	1 500	-	1 500	50 432
<b>Payments for capital assets</b>	<b>514</b>	-	-	-	-	-	<b>514</b>
Machinery and equipment	514	-	-	-	-	-	514
<b>Total</b>	<b>137 194</b>	-	-	-	-	-	<b>137 194</b>

**Programme 4: Human Capital and Knowledge Systems**

Subprogramme	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
R thousand							
Human Capital and Science Platforms	1 395 844	-	-	10 000	-	10 000	1 405 844
Indigenous Knowledge Systems	27 132	-	-	(10 000)	-	(10 000)	17 132
Emerging Research Areas and Infrastructure	527 451	-	-	-	-	-	527 451
<b>Total</b>	<b>1 950 427</b>	-	-	-	-	-	<b>1 950 427</b>

## Programme 4: Human Capital and Knowledge Systems (continued)

2011/12							
R thousand	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
<b>Economic classification</b>							
<b>Current payments</b>	<b>26 221</b>	-	-	-	-	-	<b>26 221</b>
Compensation of employees	19 743	-	-	-	-	-	19 743
Goods and services	6 478	-	-	-	-	-	6 478
<b>Transfers and subsidies</b>	<b>1 924 095</b>	-	-	-	-	-	<b>1 924 095</b>
Departmental agencies and accounts	1 550 222	-	-	7 200	-	7 200	1 557 422
Public corporations and private enterprises	104 710	-	-	-	-	-	104 710
Non-profit institutions	269 163	-	-	(7 200)	-	(7 200)	261 963
<b>Payments for capital assets</b>	<b>111</b>	-	-	-	-	-	<b>111</b>
Machinery and equipment	111	-	-	-	-	-	111
<b>Total</b>	<b>1 950 427</b>	-	-	-	-	-	<b>1 950 427</b>

## Programme 5: Socio-Economic Partnerships

2011/12							
R thousand	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
<b>Economic classification</b>							
<b>Current payments</b>	<b>44 717</b>	-	-	(3 000)	-	(3 000)	<b>41 717</b>
Compensation of employees	32 293	-	-	-	-	-	32 293
Goods and services	12 424	-	-	(3 000)	-	(3 000)	9 424
<b>Transfers and subsidies</b>	<b>1 225 113</b>	-	-	<b>1 800</b>	-	<b>1 800</b>	<b>1 226 913</b>
Departmental agencies and accounts	405 059	-	-	1 800	-	1 800	406 859
Public corporations and private enterprises	820 054	-	-	-	-	-	820 054
<b>Payments for capital assets</b>	<b>441</b>	-	-	-	-	-	<b>441</b>
Machinery and equipment	441	-	-	-	-	-	441
<b>Total</b>	<b>1 270 271</b>	-	-	<b>(1 200)</b>	-	<b>(1 200)</b>	<b>1 269 071</b>

## Details of adjustments to Estimates of National Expenditure 2011

### Virements and shifts

Programmes					
1. Administration					
2. Research, Development and Innovation					
3. International Cooperation and Resources					
4. Human Capital and Knowledge Systems					
5. Socio Economic Partnerships					
FROM:			TO:		
Programme by economic classification	Motivation	R thousand	Programme by economic classification	Motivation	R thousand
<b>Programme 2</b>			<b>Programme 2</b>		
			<b>15 706</b>		
Goods and services	Reduced scope of work <sup>1</sup>	(5 430)	Departmental agencies and accounts	Additional funding on existing contracts	3 000
				Additional funding requirement for Technology Top 100 awards	2 430
Non-profit institutions	Slow spending activities <sup>1</sup>	(3 541)	Departmental agencies and accounts	Additional funding on existing contracts	3 541
Departmental agencies and accounts	Funds incorrectly classified in the 2011 ENE were reclassified <sup>1</sup>	(1 935)	Goods and services	Reallocation to fund feasibility study for electronics hub	1 935
Percentage of programme budget		<b>1.3%</b>			
<b>Programme 3</b>			<b>Programme 3</b>		
			<b>1 500</b>		
Goods and services	Funds incorrectly classified in the 2011 ENE were reclassified <sup>1</sup>	(1 500)	Non-profit institutions	Funds incorrectly classified in the 2011 ENE were reclassified	1 500
Percentage of programme budget		<b>1.1%</b>			
<b>Programme 4</b>			<b>Programme 4</b>		
			<b>12 800</b>		
Non-profit institutions	Funds incorrectly classified in the 2011 ENE were reclassified <sup>1</sup>	(10 000)	Departmental agencies and accounts	Funds incorrectly classified in the 2011 ENE were reclassified	10 000
Departmental agencies and accounts	Slow spending activities <sup>1</sup>	(2 800)	Non-profit institutions	To support the scholarly publishing programme	2 800
Percentage of programme budget		<b>0.7%</b>			
<b>Programme 5</b>			<b>Programme 1</b>		
			<b>1 200</b>		
Goods and services	Slow spending activities	(1 200)	Goods and services	To fund the ministerial participation programme	1 200
			<b>Programme 5</b>		
	Slow spending activities <sup>1</sup>	(1 800)	Departmental agencies and accounts	Shortfall in research information management systems	1 800
Percentage of programme budget		<b>0.2%</b>			
<b>Total</b>		<b>(28 206)</b>	<b>28 206</b>		

1. National Treasury approval has been obtained.

### Other adjustments – R2.385 million

#### **Adjustments due to significant and unforeseeable economic and financial events**

##### Programme 1: Administration

An additional R2.385 million has been allocated for higher personnel remuneration increases than the main budget provided for.

**Expenditure for 2010/11 and preliminary expenditure for 2011/12**

Programme	2010/11 Expenditure outcome					2011/12 Preliminary expenditure		
	Adjusted appropriation	Apr 10 - Sep 10	% of adjusted appropriation	Apr 10 - Mar 11	% of adjusted appropriation	Adjusted appropriation	Apr 11 - Sep 11	% of adjusted appropriation
R thousand								
Administration	185 683	81 265	43.8	188 858	101.7	195 701	87 223	44.6
Research, Development and Innovation	826 848	70 363	8.5	802 774	97.1	854 610	493 027	57.7
International Cooperation and Resources	135 978	60 422	44.4	131 384	96.6	137 194	68 059	49.6
Human Capital and Knowledge Systems	1 763 964	856 188	48.5	1 754 144	99.4	1 950 427	1 186 034	60.8
Socio Economic Partnerships	1 215 510	616 326	50.7	1 174 742	96.6	1 269 071	653 726	51.5
<b>Total</b>	<b>4 127 983</b>	<b>1 684 564</b>	<b>40.8</b>	<b>4 051 902</b>	<b>98.2</b>	<b>4 407 003</b>	<b>2 488 069</b>	<b>56.5</b>
<b>Economic classification</b>								
<b>Current payments</b>	<b>370 089</b>	<b>149 936</b>	<b>40.5</b>	<b>331 698</b>	<b>89.6</b>	<b>365 303</b>	<b>156 545</b>	<b>42.9</b>
Compensation of employees	223 691	95 386	42.6	190 629	85.2	227 636	98 955	43.5
Goods and services	146 398	54 550	37.3	140 736	96.1	137 667	57 377	41.7
Interest and rent on land	-	-	0.0	333	0.0	-	213	0.0
<b>Transfers and subsidies</b>	<b>3 752 822</b>	<b>1 532 498</b>	<b>40.8</b>	<b>3 709 582</b>	<b>98.8</b>	<b>4 038 442</b>	<b>2 328 451</b>	<b>57.7</b>
Departmental agencies and accounts	2 266 593	855 007	37.7	2 233 154	98.5	2 633 548	1 506 665	57.2
Universities and technikons	32 880	18 203	55.4	173 199	526.8	-	64 125	0.0
Public corporations and private enterprises	1 002 445	648 261	64.7	1 246 280	124.3	924 764	719 124	77.8
Non-profit institutions	450 904	10 562	2.3	55 971	12.4	480 130	38 537	8.0
Households	-	465	0.0	978	0.0	-	-	0.0
<b>Payments for capital assets</b>	<b>5 072</b>	<b>2 116</b>	<b>41.7</b>	<b>10 603</b>	<b>209.0</b>	<b>3 258</b>	<b>2 890</b>	<b>88.7</b>
Machinery and equipment	5 072	2 116	41.7	10 603	209.0	3 258	2 890	88.7
<b>Payments for financial assets</b>	<b>-</b>	<b>14</b>	<b>-</b>	<b>19</b>	<b>-</b>	<b>-</b>	<b>183</b>	<b>-</b>
<b>Total</b>	<b>4 127 983</b>	<b>1 684 564</b>	<b>40.8</b>	<b>4 051 902</b>	<b>98.2</b>	<b>4 407 003</b>	<b>2 488 069</b>	<b>56.5</b>

**Main expenditure trends for the first half of 2011/12**

Total expenditure for 2010/11 was 98.2 per cent of the 2010/11 adjusted appropriation. Expenditure in the first six months of 2011/12 was R2.488 billion, or 56.5 per cent of the adjusted appropriation of R4.407 billion for the year as a whole. In comparison, mid-year expenditure in 2010/11 was R1.685 billion, or 40.8 per cent of the 2010/11 adjusted appropriation. Expenditure in the first six months of 2011/12 increased by R803.505 million or 47.7 per cent, compared to expenditure in the first six months of 2010/11.

The main expenditure increase compared to 2010/11 is due to transfers to the Technology Innovation Agency, the South African National Space Agency and the payment of funds for the Energy Grand Challenge.

## Departmental receipts

R thousand	2010/11					2011/12			
	Adjusted estimate	Audited outcome			Actual receipts				
		Apr 10 - Sep 10	Apr 10 - Sep 10 % of adjusted estimate	Apr 10 - Mar 11	Apr 10 - Mar 11 % of adjusted estimate	Budget estimate	Adjusted estimate	Apr 11 - Sep 11	Apr 11 - Sep 11 % of adjusted estimate
<b>Departmental receipts</b>	<b>385</b>	<b>385</b>	<b>100.0</b>	<b>468</b>	<b>121.6</b>	<b>112</b>	<b>350</b>	<b>291</b>	<b>83.1</b>
Sales of goods and services produced by department	17	17	100.0	35	205.9	26	40	34	85.0
Interest, dividends and rent on land	-	-	-	8	-	7	10	2	20.0
Transactions in financial assets and liabilities	368	368	100.0	425	115.5	79	300	255	85.0
<b>Total</b>	<b>385</b>	<b>385</b>	<b>100.0</b>	<b>468</b>	<b>121.6</b>	<b>112</b>	<b>350</b>	<b>291</b>	<b>83.1</b>

### Main departmental revenue trends for the first half of 2011/12

Departmental revenue collection in the first six months of 2011/12 was R291 000, or 83.1 per cent of the adjusted revenue estimate of R350 000 for the year as a whole. In comparison, mid-year revenue collection in 2010/11 was R385 000, or 100 per cent of the 2010/11 adjusted estimate. Departmental revenue collection in the first six months of 2011/12 decreased by R94 000, or 24.4 per cent, compared to revenue in the first six months of 2010/11.

The main revenue decrease compared to 2010/11 is because there was no auction of assets in the period under review, and this is the main source of revenue from the department.

### Changes to transfers and subsidies, including conditional grants

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

R thousand	2011/12						
	Main appropriation	Adjustments appropriation				Total adjustments appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments		
<b>Research, Development and Innovation</b>							
<b>Departmental agencies and accounts</b>							
<b>Departmental agencies (non-business entities)</b>							
<b>Current</b>	<b>161 195</b>	-	-	<b>4 606</b>	-	<b>4 606</b>	<b>165 801</b>
Energy Grand Challenge	44 495	-	-	(1 795)	-	(1 795)	42 700
International Centre for Genetic Engineering and Biotechnology	9 900	-	-	(4 800)	-	(4 800)	5 100
Square Kilometer Array	13 217	-	-	(1 935)	-	(1 935)	11 282
South African National Space Agency	93 583	-	-	13 136	-	13 136	106 719
<b>Non-profit institutions</b>							
<b>Current</b>	<b>80 287</b>	-	-	<b>(1 111)</b>	-	<b>(1 111)</b>	<b>79 176</b>
For Biotechnology Strategy	37 771	-	-	(2 341)	-	(2 341)	35 430
For Health Innovation	39 652	-	-	(1 200)	-	(1 200)	38 452
For Technology Top 100	2 864	-	-	2 430	-	2 430	5 294
<b>International Cooperation and Resources</b>							
<b>Non-profit institutions</b>							
<b>Current</b>	<b>11 500</b>	-	-	<b>1 500</b>	-	<b>1 500</b>	<b>13 000</b>
Global Science - Bilateral cooperation	11 500	-	-	1 500	-	1 500	13 000
<b>Human Capital and Knowledge Systems</b>							
<b>Departmental agencies and accounts</b>							
<b>Departmental agencies (non-business entities)</b>							
<b>Current</b>	<b>1 248 485</b>	-	-	<b>7 200</b>	-	<b>7 200</b>	<b>1 255 685</b>
Human Resources Development	159 450	-	-	(2 800)	-	(2 800)	156 650
National Research Foundation	1 089 035	-	-	10 000	-	10 000	1 099 035

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

		2011/12					
		Adjustments appropriation					
R thousand	Main appropriation	Roll-overs	Unforeseeable/unavoidable	Virements and shifts	Other adjustments	Total adjustments appropriation	Adjusted appropriation
<b>Non-profit institutions</b>							
<b>Current</b>	<b>29 878</b>	-	-	(7 200)	-	(7 200)	<b>22 678</b>
Academy of Science of South Africa	11 152	-	-	2 800	-	2 800	13 952
Indigenous Knowledge System	18 726	-	-	(10 000)	-	(10 000)	8 726
<b>Socio Economic Partnerships</b>							
<b>Departmental agencies and accounts</b>							
<b>Departmental agencies (non-business entities)</b>							
<b>Current</b>	<b>43 756</b>	-	-	1 800	-	1 800	<b>45 556</b>
Human and Social Development Dynamics	15 194	-	-	2 768	-	2 768	17 962
Quality of Life Nuclear Technologies	4 938	-	-	(4 278)	-	(4 278)	660
Research Information Management System	2 296	-	-	6 310	-	6 310	8 606
Technology for Poverty Alleviation	21 328	-	-	(3 000)	-	(3 000)	18 328