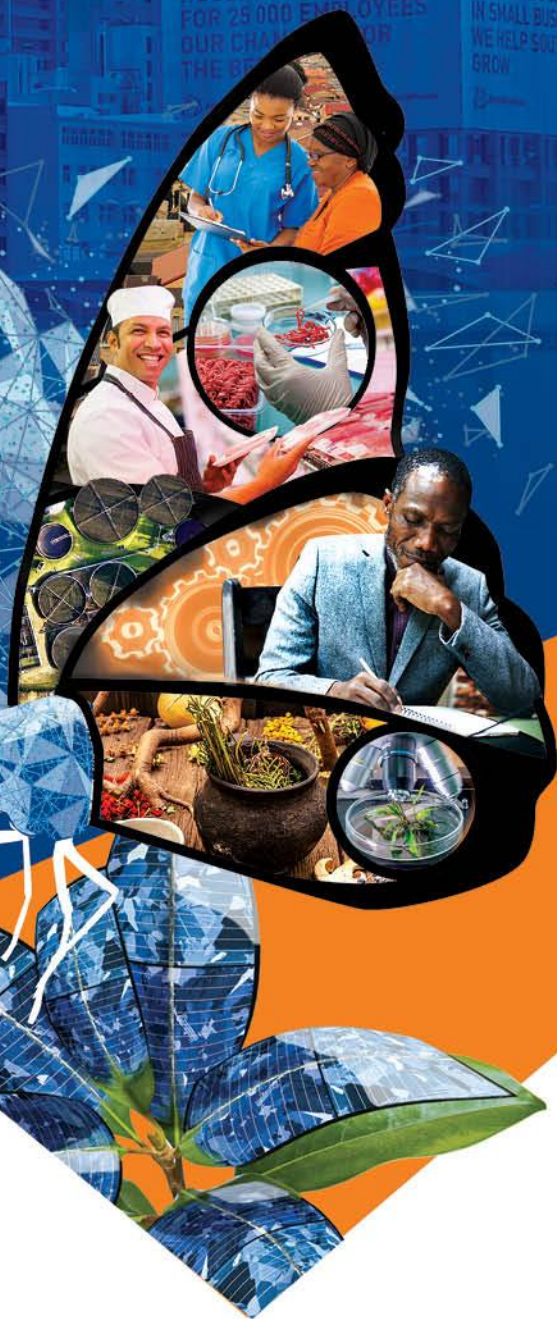


ADDENDUM REVISIONS TO THE ANNUAL PERFORMANCE PLAN 2020 - 2021



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



**technology innovation
A G E N C Y**
Innovating Tomorrow Together

Summary of amendments

This document serves to provide the revised changes applied to the Annual Performance Plan 2020/2021 tabled to the Parliamentary Portfolio Committee on Higher Education, Science and Technology on the 19 May 2020 for consideration. The amendments effected reflect the review undertaken by the Board and Executive Management.

Situational Analysis

On page 16 additional narrative is added at the end of the “Situational Analysis” to read as follows:

The year 2020 saw South Africa experiencing the onslaught of the COVID 19 pandemic, accompanied by a mandatory national lockdown that saw many company closures, retrenchments and general loss of income by both rich and poor. Briefly put, this placed South Africa in an economic and health crisis that continues to this day. This also came on the back of the country’s credit rating by Moody’s being downgraded from Ba1 to Baa3 on account of low economic growth rate and rapid increase in government debt, expected to reach an estimated 91% of GDP by 2023. The Department of Science and Innovation has, in response to these challenges, identified a three-pronged approach around which to mobilise the Science, Technology and Innovation sector. These include, a focus on health directly connected to urgent responses to the pandemic; prioritising interventions to promote economic recovery and a special attention to addressing challenges of societal distress. TIA’s Strategy has thus been revised to ensure that in executing the strategic pillars, special emphasis is placed on these perspectives. TIA will support the three-pronged approach of the DSI in the following manner.

i) Health

- Provide financial and non-financial support to technological innovations that will contribute to South Africa’s response to COVID-19.
- Support the development of innovative technologies and take advantage of the fourth industrial revolution (4IR) and the green economy.

ii) Economic recovery

- Translation of publicly-funded research into commercial technology products and services to revitalise existing industries and establish new ones.
- Implement sector master plans by investing in emerging and advanced technologies to enhance the competitiveness of TIA-funded innovations.

iii) Societal distress

- Expand the use of scientific knowledge in support of innovation for societal benefit.
- Promote and encourage participation in the technology innovation value chain by historically disadvantaged institutions.

Budget allocation for 2020/21

Changes to the MTEF budget are reflected in the table below contained in 49 of the APP

Technology Innovation Agency: APP budget for 2020/21

	Budget 2020/21 R' 000	Budget 2021/22 R' 000	Budget 2022/23 R' 000
Administration	165 558	163 369	171 538
Support and infrastructure cost	56 220	54 031	56 732
Human Resources	109 338	109 338	114 805
Investments	396 614	419 917	433 288
Bio-economy	180 054	201 225	208 542
Technology stations	92 442	94 364	96 382
Commercialisation	76 368	74 978	79 014
Innovation Enabling	47 750	49 350	49 350
Total Expenditure	562 172	583 286	604 825
Total funding received	562 172	583 286	604 825
Allocation from DSI	410 272	430 786	452 325
Baseline (Other than Bio-economy and Technology stations)	195 683	205 468	215 741
Bio-economy	176 147	184 954	194 202
Technology stations	38 442	40 364	42 382
Additional income target	142 000	142 000	142 000
Interest	9 900	10 500	10 500
Surplus/Deficit	-	-	-

Page 49:

Staff and administrative costs

Staff Costs - Replace "R112,9 million" with "R109.3 million"

Support and infrastructure - Replace "R60.2million" with "R56.2 million"

Savings - Replace "R58 million" with "R65.4 million"

Investment Funding

Bio – economy

Replace "R206.5 million" with "R176.2 million"

Technology Stations

Total Allocation – Replace “R96.7million” with “R92.4 million”

Sector Funding (Commercialisation)

Replace – “R85 million” with “R76.4 million”

Innovation and Enabling

Replace – “R59 million” with “R47.8 million”

Other Income

Replace “R154 million” with “R142 million”

Part C: Measuring Performance

Institutional programme performance information

Outcome 1: Commercialised innovations

Three main revisions have been effected under this Outcome.

- a) Output and Output Indicators 1.1 has been changed to, “Number of licensed or assigned technologies”. Associated with this outcome are targets for the MTEF as indicated in Table 1 Below.
- b) Output and Output Indicators 1.2 has been changed to, “Number of projects involving industry in execution”. Associated with this outcome are targets for the MTEF as indicated in Table 1 Below.
- c) Output and Output Indicators 1.3 has been changed to, “Products launched by start-ups or existing companies”. Associated with this outcome are targets for the MTEF as indicated in Table 1 Below.
- d) Output and Output Indicator 1.5 Leveraged funds has been retained. However, MTEF targets have been increased as follows: 2020/21 (R174m to R174.2m); 2021/22 (R160m to R168.4m) and 2022/23 (R195m to R204.6m).

Outcome	Outputs	Output Indicators	Annual Targets						
			Audited /Actual Performance			Estimated Performance	MTEF Period		
			2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
1. Commercialised innovations	1.1 Technologies licensed or assigned	Number of licensed or assigned technologies	-	-	-	-	1	7	11

	1.2 Joint collaborations between academia and industry	Number of projects involving industry in execution	-	-	-	-	6	12	15
	1.3 Technologies diffused for inclusive development	Number of successfully diffused technologies	-	-	-	-	1	5	8
	1.4 Products launched by start-ups or existing companies	Number of products launched	-	-	-	-	13	18	23
	1.5 Leveraged funds (co-investment with other parties, in-kind and (or) financial and (or) follow-on funding)	Total value of signed agreements entered into with other parties	-	-	-	-	R147.2m	R168.4m	R204.6m

* New indicators, hence no historical data available.

In line with the changes in the Outcome Indicators table above, the Annual Targets for the Financial Year 2020/21 have been stipulated as indicated in the table below.

Output indicators, and annual and quarterly targets for 2020/21

Output indicators	Annual target	Q1	Q2	Q3	Q4
1.1 Number of licensed or assigned technologies	1	0	0	0	1
1.2 Number of projects involving industry in execution	6	0	1	3	2
1.3 Number of successfully diffused technologies	1	0	0	0	1
1.4 Number of start-ups or existing companies that have launched at least one product	13	0	0	4	9
1.5 Total value of signed agreements entered into with third parties	R147.2m	R0m	R46.1m	R44.8m	R56.3m

Outcome 2: Delivering on the Bio-economy Strategy

Purpose: Support the translation of South Africa’s knowledge resources into sustainable bio-based solutions that address societal challenges while contributing to sustainable economic growth.

Outcomes, outputs, performance indicators and targets for 2020/21

Three main revisions have been effected under this Outcome.

- a) Output and Output Indicators 2.1 has been changed to, “Number of successfully demonstrated bio-based technologies”. Associated with this outcome are targets for the MTEF as indicated in Table 1 Below.
- b) Output and Output Indicator 2.2 has been retained. Only targets for the MTEF period have been reduced as indicated in Table 1 Below.
- c) Output and Output Indicator 2.3 has been retained. Only targets for the MTEF period have been reduced as indicated in Table 1 Below

Outcome	Outputs	Output indicators	Annual targets						
			Audited/Actual performance			Estimated performance		MTEF period	
			2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
2. Delivering on the Bio-economy Strategy	2.1 Bio-based technologies developed	Number of successfully demonstrated bio-based technologies**	-	-	-	-	9	12	15
	2.2 Existing Technology Platforms managed and supported	Number of existing Technology Platforms that are operational and functional	9	9	9	9	7	8	8

	2.3 New Technology Platforms established and supported	Number of new Technology Platforms in targeted regions**	-	-	-	-	0	1	0
	2.4 Technology Innovation Clusters managed and supported	Number of existing Technology Innovation Clusters that are operational and functional	8	8	8	8	5	6	6

** New indicators, hence no historical data available.

Indicators, and annual and quarterly targets for 2020/21

In line with the changes in the Outcome Indicators table above, the Annual Targets for the Financial Year 2020/21 have been stipulated as indicated in the table below.

Output indicators	Annual target	Q1	Q2	Q3	Q4
2.1 Number of successfully demonstrated bio-based technologies	9	1	2	2	4
2.2 Number of existing Technology Platforms that are operational and functional	7	7	7	7	7
2.3 Number of new Technology Platforms established in targeted regions	0	0	0	0	0
2.4 Number of operational and functional Technology Innovation Clusters	5	5	5	5	5

Outcome 3: Small, medium and micro enterprises supported through strategically informed and regionally distributed Technology Stations

Purpose: Provide access to science, engineering and technology body of knowledge and expertise in technology innovation, process improvements and product development to innovators and small, medium and micro enterprises to enable them to become competitive.

Outcomes, outputs, performance indicators and targets for 2020/21

Outcome	Outputs	Output indicators	Annual targets						
			Audited /Actual performance			Estimated performance	MTEF period		
			2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
3. Small, medium and micro enterprises supported through strategically informed and regionally distributed Technology Stations	3.1 Existing Technology Stations and other centres managed and supported	Number of existing Technology Stations and centres providing science, engineering and technology support that are operational and functional	18	18	18	18	18	19	20
	3.2 New centres established and supported	Number of new centres providing science, engineering and technology support in targeted regions***	-	-	-	-	1	1	1

*** New indicator, hence no historical data available.

Output indicators, and annual and quarterly targets for 2020/21

Output indicators	Annual target	Q1	Q2	Q3	Q4
3.1 Number of existing Technology Stations and centres providing science, engineering and technology support that are operational and functional	18	18	18	18	18
3.1 Number of new centres providing science, engineering and technology support in targeted regions	1	0	0	0	1

Explanation of planned performance over the medium term

Outcome 1 – Innovations commercialised

Under paragraph (a) reference had been added to TIA intention to contribute to economic recovery and addressing the COVID 16 pandemic and societal distress.

Over the medium term, focus will be placed on fully developing and commercialising the 22 projects that are currently between technology readiness levels 7 and 9, resulting in revenue generation and job creation, [thereby stimulating economic recovery](#). This will, in turn, address South Africa's triple challenge of poverty, unemployment and inequality. This is also in support of TIA's mandate, which emphasises the development and exploitation of technological innovations. During this period, TIA will ensure there is a deliberate focus to support participation by women, youth and people with disabilities. Through this output, TIA will be responding to Priority 2 (economic transformation and job creation) of government's 2019-2024 Medium-Term Strategic Framework, in which the DSI has identified the commercialisation of intellectual property from publicly-funded research institutions as an important sub-outcome. [TIA will also contribute to addressing the impact of COVID-19, societal distress, geographic disparities, rural development, transformation and inclusive development.](#)

Contribution of output to achieving impact

By catalysing the bridge over the innovation chasm, TIA will be able to de-risk the development of technological innovations by leveraging existing and new partnerships. This will enable the agency to support and commercialise many innovations that will result in greater social impact and improving the quality of life of many South Africans.

Outcome 2 – Delivering on the Bio-economy Strategy

Contribution to the National Development Plan/Medium-Term Strategic Framework

TIA's activities and outputs over the medium term are meant to give effect to the implementation of the Bio-economy Strategy, which will contribute to increased productivity across the four sectors identified in the strategy (agriculture, health, industry and environment); and indigenous knowledge-based innovation. One of the critical issues for the achievement of the programme's strategic outcomes will be sourcing appropriate investment opportunities and providing support to ensure that they contribute to a thriving South African bio-economy. With the need to transform the South African economy, TIA will dedicate its resources to targeted programmes aimed at building quality opportunities, and attracting participation from black people, women, youth and people with disabilities.

Contribution of output to achieving impact

It is critical to note that the indigenous knowledge-based innovation focus area starts from a relatively lower base than agriculture, health, and industry and the environment. As such, medium-term targets reflect this while ensuring that TIA demonstrates serious intent to balance its portfolio.

Outcome 3 – Small, medium and micro enterprises supported through strategically informed and regionally distributed Technology Stations

Contribution to the National Development Plan/Medium-Term Strategic Framework

Through this outcome, TIA will contribute to Priority 2 (economic transformation and job creation) of government's 2019-2024 Medium-Term Strategic Framework by investing in new forms of technology development infrastructure. This will be done in partnership with other role players in the National System of Innovation with the aim of increasing access to science, engineering and technology for innovators across the country. The Technology Stations Programme will be closely aligned with relevant industrial sectors to promote innovation-led industrialisation, localisation and the promotion of exports. This will be in line with sectoral master plans that are under development, led by the Department of Trade, Industry and Competition.

Contribution of outcome to achieving impact

Through the provision of technology infrastructure, the ability of innovators and small, medium and micro enterprises to commercialise technologies and improve the competitiveness of products that are developed will lead to job creation and localised economic growth.

Part D: Technical Indicator Descriptions

Outcome 1: Commercialised innovations

[New Technical Indicator Description has been added for Outcome Indicator 1.1](#)

Indicator title	1.1 Number of licensed or assigned technologies
Definition	Intellectual property that have been either licensed, assigned or sold to a third party for the purpose of commercialisation. This includes both registrable and non-registrable IP.
Source of data	Programme/Project database(s)
Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	Intellectual property has been created
Disaggregation of beneficiaries	Women (30%) Youth (20%) People with disabilities (10%)
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.
Indicator responsibility	Executive: Commercialisation Executive: Bioeconomy Executive: Innovation Enabling

[New Technical Indicator Description has been added for Outcome Indicator 1.2](#)

Indicator title	1.2 Number of projects involving industry in execution
Definition	Number of projects/businesses or initiatives/programmes that collaborate with the private sector in developing and (or) commercialising the technology. The collaboration can be financial or non-financial.
Source of data	Programme/Project database(s)

Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	Projects/businesses or initiatives/programmes have existing or new partnerships with the private sector
Disaggregation of beneficiaries	Women (30%) Youth (50%) People with disabilities (10%)
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.
Indicator responsibility	Executive: Commercialisation Executive: Bioeconomy Executive: Innovation Enabling

Indicator title	1.3 Number of successfully diffused technologies
Definition	Number of technologies that have been introduced into the market (community structures; small, medium and micro enterprises; cooperatives; and other business formations) for social gain, directly or indirectly (products, processes or services)
Source of data	Programme/Project database(s)
Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	Availability and approval of funding. Innovation outputs developed successfully to demonstration stage (or higher) where there is a market for social diffusion.
Disaggregation of beneficiaries	Women (30%) Youth (50%) People with disabilities (10%)
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI
Calculation type	Cumulative
Reporting cycle	Quarterly

Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.
Indicator responsibility	Executive: Commercialisation Executive: Bioeconomy Executive: Innovation Enabling
New Technical Indicator Description for has been added for Outcome Indicator 1.4	
Indicator title	1.4 Number of products launched
Definition	The number of products that have been successfully launched in the market
Source of data	Programme/Project database(s)
Method of calculation/assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	The product is fully developed and ready for market entry
Disaggregation of beneficiaries	Women (30%) Youth (50%) People with disabilities (10%)
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.
Indicator responsibility	Executive: Commercialisation Executive: Bioeconomy Executive: Innovation Enabling

Indicator title	1.5 Total value of signed agreements entered into with other parties
Definition	The amount of funds contributed by other parties for the purposes of funding technology development, technology commercialisation and related support activities. This includes in-kind contributions.
Source of data	Programme/Project database(s)
Method of calculation/assessment	Simple count
Means of verification	Verification of supporting documentation

Assumptions	Other partners will continue to have available funds to spend on innovation
Disaggregation of beneficiaries	Not applicable
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.
Indicator responsibility	Executive: Commercialisation Executive: Bioeconomy Executive: Innovation Enabling

Outcome 2: Delivering on the Bio-economy Strategy

[New Technical Indicator Description has been added for Outcome Indicator 2.1](#)

Indicator title	2.1 Number of successfully demonstrated bio-based technologies
Definition	Bio-based technologies, products or services that have reached demonstration stage in agriculture, health, industrial biotechnology, indigenous knowledge systems and other bio-based domains
Source of data	Programme/Project database(s)
Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	Availability and approval of funding
Disaggregation of beneficiaries	Women (30%) Youth (20%) People with disabilities (10%)
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Performance equal to or greater than planned target. Achievement of 90% of the target will be deemed acceptable.

Indicator responsibility	Executive: Bio-economy
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Reduction in the percentage of Desired Performance from 90% to 80%

Indicator title	2.2 Number of existing Technology Platforms that are operational and functional
Definition	The number of Technology Platforms that are operational and/or functional that are supported by TIA to meet the needs of beneficiaries and stakeholders and develop into high-performing and capable facilities
Source of data	Programme/Project database(s)
Method of calculation/assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	That adequate funding and resources are made available or obtained from third parties to assist with the funding of such facilities
Disaggregation of beneficiaries	N/A
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Facilities are functional and operational. Achievement of 80% of the agreed targets towards being functional or operational will be deemed acceptable.
Indicator responsibility	Executive: Bio-economy

Indicator title	2.3 Number of new Technology Platforms in targeted regions
Definition	The establishment of new Technology Platforms in targeted geographic or technology areas based on the government's priorities
Source of data	Programme/Project database(s)
Method of calculation/assessment	Simple count. Once established, new Technology Platforms will be counted under indicator 2.2 (existing Technology Platforms) in the following financial year.
Means of verification	Verification of supporting documentation

Assumptions	That adequate funding and resources are made available or obtained from third parties to assist with the funding and establishment of such facilities. That willing hosts, champions and shareholders (including the DSI) commit and agree to the establishment of such facilities.
Disaggregation of beneficiaries	N/A
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Facilities are operational
Indicator responsibility	Executive: Bio-economy

Revisions to the Indicator Definition and Desired Performance have been effected

Indicator title	2.4 Number of existing Technology Innovation Clusters that are operational and functional
Definition	The number of Technology Innovation Clusters that are operational and/or functional supported by TIA to undertake relevant innovation projects and activities in support of targeted industries and regions
Source of data	Programme/Project database(s)
Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	That adequate funding and resources are made available or obtained from third parties to assist with the funding and establishment of such facilities
Disaggregation of beneficiaries	N/A
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Facilities are functional and operational

	Achievement of 80% of the agreed targets towards being functional or operational will be deemed acceptable.
Indicator responsibility	Executive: Bio-economy

Outcome 3: Small, medium and micro enterprises supported through strategically informed and regionally distributed Technology Stations

Indicator title	3.1 Number of existing Technology Stations and centres providing science, engineering and technology support that are operational and functional
Definition	High-performing and capable Technology Stations or other centres providing science, engineering and technology support, responding to the needs of beneficiaries in targeted regions
Source of data	Programme/Project database(s)
Method of calculation/ assessment	Simple count
Means of verification	Verification of supporting documentation
Assumptions	That adequate funding and resources are made available or obtained from third parties to assist with the funding and establishment of such facilities
Disaggregation of beneficiaries	N/A
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI Model)
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Facilities are functional and operational
Indicator responsibility	Executive: Innovation Enabling

Indicator title	3.2 Number of new centres providing science, engineering and technology support in targeted regions
Definition	The establishment of new centres (Technology Stations or other centres providing a similar service) in targeted regions based on government's spatial development priorities
Source of data	Programme/Project database(s)

Method of calculation/ assessment	Simple count. Once established, new centres will be counted under indicator 3.1 (existing Technology Stations and centres) in the following financial year.
Means of verification	Verification of supporting documentation
Assumptions	That adequate funding and resources are made available or obtained from third parties to assist with the funding and establishment of such facilities. That willing hosts, champions and shareholders (including the DSI) commit and agree to the establishment of such facilities.
Disaggregation of beneficiaries	N/A
Spatial transformation (District Development Model)	To be informed by and aligned with the priorities of government's 2019-2024 Medium-Term Strategic Framework, as guided by the DSI
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Facilities are operational
Indicator responsibility	Executive: Innovation Enabling