



# ANNUAL PERFORMANCE PLAN

2024  
2025



**science & innovation**

Department:  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA

**NACi**  
NATIONAL ADVISORY COUNCIL ON INNOVATION

# Annual Performance Plan 2024/25

*Innovation for a better future*

# OFFICIAL SIGN-OFF

It is hereby certified that this Annual Performance Plan –

- was developed by the management of the National Advisory Council on Innovation (NACI) under the guidance of its Chief Executive Officer (CEO);
- covers all relevant policies, legislation and other mandates for which NACI is responsible; and
- accurately reflects the impact and outcomes that NACI will endeavour to achieve, given the resources made available in the budget for 2024/25.

Signature: \_\_\_\_\_

**Mr Tilson Mphathi Manyoni: Chairperson: NACI**

Signature: \_\_\_\_\_

**Dr Mlungisi Cele: Chief Executive Officer: NACI**

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**Mr Robert Shaku: Chief Financial Officer: DSI**

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**Ms Gugulethu Zwane: Acting Director General**

Approved by:

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**Dr Blade Nzimande: Executive Authority**

# CONTENTS

<b>ACCOUNTING AUTHORITY STATEMENT</b>	<b>6</b>
<b>PART A: MANDATE</b>	<b>7</b>
1. Constitutional mandate	8
2. Legislative mandate	8
3. Policy mandates	8
3.1 The relationship between the National Development Plan (NDP) and the National System of Innovation (NSI)	8
3.2 Medium-Term Strategic Framework (MTSF), 2020–2025	9
3.3 Science, technology and innovation (STI) policy mix	9
4. Policies and strategies governing the five-year planning period	11
5. Organisational mandate	12
5.1 Strategic outcomes	12
6. Relevant court rulings	12
<b>PART B: STRATEGIC FOCUS</b>	<b>13</b>
1. Vision	14
2. Mission	14
3. Values	14
4. Updated situational analysis	14
<b>PART C: MEASURING PERFORMANCE</b>	<b>22</b>
1. Outcomes, indicators and targets for the 2024/25 financial year	22
2. Quarterly targets for 2024/25	25
3. Planned performance over the medium-term period	26
4. Resource considerations	26
4.1 Human resource requirements	26
4.2 Expenditure estimates	27
5. Key risks and mitigations	27
<b>PART D: TECHNICAL INDICATOR DESCRIPTIONS</b>	<b>28</b>
<b>REFERENCES</b>	<b>33</b>

# LIST OF TABLES

Table 1: Digital competitiveness ranking comparison with BRICS	17
Table 2: NACI's performance outcomes, indicators, and targets for the 2024/25 financial year	22
Table 3: NACI's quarterly targets for the 2024/25 financial year	25
Table 4: NACI's expenditure estimates	27
Table 5: NACI's technical indicator descriptions	29

# LIST OF ABBREVIATIONS AND ACRONYMS

APP	annual performance plan
ASSAf	Academy of Science of South Africa
CoPs	communities of practice
CSIR	Council for Scientific and Industrial Research
DPME	Department of Planning, Monitoring and Evaluation
DSI	Department of Science and Innovation
GVA	gross value added
HSRC	Human Sciences Research Council
IMC	Inter-Ministerial Committee
IMD	International Institute for Management and Development
IP	intellectual property
M&E	monitoring and evaluation
MTSF	Medium-Term Strategic Framework
NACI	National Advisory Council on Innovation
NDP	National Development Plan
NHI	National Health Insurance
NRF	National Research Foundation
NSI	national system of innovation
NSTIIP	National Science, Technology and Innovation Information Portal
OECD	Organisation for Economic Co-operation and Development
PPI	process performance indicator
R&D	research and development
S&T	science and technology
SAForSTI	South Africa Foresight Exercise for STI 2030
SET	science, engineering and technology
SGCs	societal grand challenges
STEM	science, technology, engineering, and mathematics
STI	science, technology and innovation
TID	technical indicator description

# ACCOUNTING AUTHORITY STATEMENT

On behalf of the National Advisory Council on Innovation (NACI) and in the context of policy reflection and renewal in South Africa, I am honoured to present NACI's 2024/25 APP.

NACI's five-year (2020/21-2024/25) strategic plan identifies strategic outcomes to contribute to the realisation of the National Development Plan (NDP) and the 2019 White Paper on Science, Technology and Innovation (STI). Recent outputs include studies on the following:

- The Role of the National System of Innovation in Implementing National Health Insurance
- Assessing the Viability of Utility-scale Energy Storage
- Assessing the Effectiveness of Mathematics and Science Education Initiatives in Schools
- The 2023 South African Science, Technology and Innovation Indicators Report.

NACI will continue to improve the quality, relevance, and efficacy of its advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet. NACI generates advice proactively, or at the behest of the Minister of Higher Education, Science and Innovation.

NACI recognises the importance of focusing on the foundations of STI (disciplines or knowledge domains, infrastructure, and human resources) and the role of STI in addressing the challenges of education, health, food security, and global change in a sluggish economy. For NACI to achieve its objective of providing evidence-based science advice, access to good-quality data, analytical capability, strong partnerships, and healthy relationships with recipients of advice are critical. Some of NACI's strengths include the ability to mobilise national system of innovation (NSI) stakeholders and access local and international experts to complement its limited resources.

NACI will continue to build on its previous efforts to strengthen the planning, monitoring, and evaluation capabilities in the NSI. Working with partners, it will continue to enhance Phase 1 of the National Science, Technology and Innovation Information Portal (NSTIIP) and develop Phase 2.

NACI values the importance of good corporate governance, communication, and international engagement, and we are confident that NSI role players and South African citizens will benefit from the work we have planned for the 2024/25 financial year.



**Mr Tilson Mphathi Manyoni**

Chairperson: NACI



# **PART A:** **MANDATE**

# PART A: MANDATE

## 1. Constitutional mandate

There are no specific constitutional provisions for NACI.

## 2. Legislative mandate

The National Council on Innovation Act, 1997 (Act No. 55 of 1997), provides the mandate for NACI. The Act mandates NACI to advise the Minister for Higher Education, Science and Innovation and, through the Minister, the Cabinet, on the role and contribution of science, mathematics, innovation and technology, including indigenous technologies, in promoting and achieving national objectives, namely, to improve and sustain the quality of life of all South Africans, develop human resources for science and technology (S&T), build the economy, and strengthen the country's competitiveness in the international arena.

## 3. Policy mandates

### 3.1. The relationship between the National Development Plan and the national system of innovation

The National Development Plan (NDP) highlights the centrality of science, technology and innovation (STI) in creating sustainable socio-economic development and addressing societal challenges in education, health, food and water security, and climate change. The difference between countries tackling poverty effectively by growing and developing their economies, and those that cannot, is the extent of their ability to grasp and apply insights from STI and use them creatively (NDP, 2011).

The NDP acknowledges that economic development is a long-term project, and that innovation should grow in importance over time. In the first phase (2012-2017), the focus was on "intensifying research and development spending, emphasising opportunities linked to existing industries". In the second phase (2018-2023), the country was expected to "lay the foundations for more intensive improvements in productivity", and "innovation across the state, business and social sectors" was to start becoming pervasive. As the country approaches 2030, the emphasis is to be on "consolidating the gains of the second phase, with greater emphasis on innovation, improved productivity, the more intensive pursuit of a knowledge economy, and better utilisation of comparative and competitive advantages in an integrated continent".

The NDP is clear that achieving a competitive and sustainable economy will require a strong and effective national system of innovation (NSI), which must contribute to transformation. It views the NSI as the principal tool for creating new knowledge, applying knowledge in production processes, and disseminating knowledge through teaching and research collaboration. The NDP further acknowledges that advances in technological innovation and the production of new knowledge are critical to growth and development.

Having identified the potential contribution of the NSI to socio-economic development, the NDP proposes two actions for the NSI. Firstly, a common, overarching framework should be created to address pressing challenges in the NSI (involving higher and further education systems, state-owned enterprises, and private industries). The NSI should function in a coordinated manner with

objectives being aligned to national priorities. Secondly, the size and effectiveness of the NSI should be increased.

### 3.2. Medium-Term Strategic Framework (MTSF) 2020-2025

Science, technology and innovation are fundamental in advancing preparedness for emerging threats and leading a comprehensive recovery of the economy, as well as addressing South Africa's long-standing legacy of exclusion and dispossession.

They are also necessary to deal with poverty, hunger, inequality and unemployment. South Africa needs economic growth that outstrips population growth, the increased employment of young people, improved educational outcomes at schools, and significantly reduced crime.

In pursuit of these goals, the following seven priorities have been identified to guide the government over the MTSF period:

- Priority 1: A capable, ethical, and developmental state.
- Priority 2: Economic transformation and job creation.
- Priority 3: Education, skills, and health.
- Priority 4: Consolidating the social wage through reliable and quality basic services.
- Priority 5: Spatial development, human settlements, and local government.
- Priority 6: Social cohesion and safe communities.
- Priority 7: A better Africa and world.

The achievement of these priorities requires improved coordination and alignment (both vertical and horizontal) between various policies (including STI policies) and leadership, human and financial resources, infrastructure, etc. The key challenge will be to align the implementation of the MTSF with other policies, including the NDP, the 2019 White Paper on STI and the 2014 White Paper for Post-School Education and Training.

In executing its mandate, NACI indirectly contributes to the implementation of the MTSF, through its NSI-related initiatives. These include the ongoing monitoring and evaluation of systemic initiatives (including those of the DSI) and the production of advice, proactively and at the behest of the Minister of Higher Education, Science and Innovation. The assessment of mathematics and physical science interventions, the monitoring of the state of innovation in technical and vocational education and training colleges, the performance of the NSI, and the role of the NSI in implementing the NHI scheme can be linked to MTSF Priority 3, as can the project on industrialisation and science and innovation policy.

### 3.3. STI policy mix

#### 3.3.1. 2019 White Paper on STI

The 2019 White Paper on STI was informed by the NDP, which identifies STI as critical for addressing the country's socio-economic challenges. It sets out a long-term policy approach for the government to ensure a growing role for STI in a more prosperous and

inclusive society. It advocates a strong national system of innovation, with partnerships and networks involving government, the private sector, civil society, and academia, among other stakeholders. The system should contribute to transformation and recognise knowledge production sites beyond higher education. The White Paper calls for the sharing of knowledge and the expansion of STI outputs. It recognises that this will require increased expenditure on research and development (R&D). It proposes a range of actions to address policy coherence, stimulate innovation in all regions of the country, develop human capacity, and expand knowledge and innovation performance.

In response to the 2019 White Paper on STI, the DSI developed the following six outcomes for the period 2020–2025:

- Outcome 1: A transformed, inclusive, responsive, and coherent NSI.
- Outcome 2: Human capabilities and skills for the economy and for development.
- Outcome 3: Increase knowledge generation and innovation outputs.
- Outcome 4: Knowledge utilisation for economic development.
- Outcome 5: Knowledge utilisation for inclusive development.
- Outcome 6: Innovation in support of a capable and developmental state.

NACI's 2024/25 activities will contribute to the DSI strategic plan outcomes by assisting the DSI to reflect on its contributions to and support of national priorities, among other things. In partnership with the DSI, NACI is developing a transformation programme for the NSI. At the heart of this programme is the development of the measurement framework for the transformation progress of the NSI.

### **3.3.2. STI Decadal Plan**

The vision of the 2019 White Paper on STI – enabling inclusive and sustainable South African development in a changing world – is to be implemented through decadal plans. The first of these is the 2022 STI Decadal Plan, which is intended to pivot the NSI so that it has an increasingly positive impact on South Africa's socio-economic and environmental priorities, while maintaining equilibrium between impact (for example, inclusive innovation) and continued investment in and development of the NSI (for example, systemic enablers such as human resource development, institution building, infrastructure, knowledge production, and international collaboration).

The Decadal Plan sets out three societal grand challenges (SGCs), namely, climate change, future-proofing education and skills, and the future of society, as well as two STI priorities, which are innovation for a healthy population, and innovation for energy security. It also set priorities to modernise existing economic sectors (such as agriculture, manufacturing, and mining) and serve as new sources of growth (circular and digital economies).

The Decadal Plan further proposes a new strategic management model, budget coordination mechanism, and innovation compact as critical components of the new NSI governance architecture. In so doing, it identifies a role for NACI.



## 4. Policies and strategies governing the five-year planning period.

The 2019 White Paper on STI has proposed strategic actions for NACI. These include the following:

- 4.1. NACI will be reconfigured to act as the national STI monitoring and evaluation (M&E) institution, charged with analysing STI information and undertaking work to inform government planning on STI. NACI will convene a high-level forum to develop a framework of indicators to monitor South Africa's NSI performance.
- 4.2. NACI will be strengthened to facilitate ongoing stakeholder engagement to support the Interministerial Committee (IMC) on STI in carrying out its mandate, for example by following up on matters discussed at the STI Plenary. Policy reports from relevant NSI institutions and think-tanks, for example the Academy of Science of South Africa (ASSAf), the Human Sciences Research Council (HSRC) and the DSI-NRF Centres of Excellence, will also be used.
- 4.3. The IMC will require expert studies and up-to-date performance and environmental information to support its decisions. To advise the IMC, a strengthened NACI will undertake such studies.
- 4.4. NACI will implement knowledge management systems to enhance the analysis of NSI performance and support evaluation work that informs strategies. In this, NACI will draw on the work of existing specialist centres that collect STI-related information. Existing institutional arrangements for data collection, for example innovation and R&D surveys, will be maintained and strengthened and, where necessary, expanded.
- 4.5. NACI and the DSI will develop a public STI investment framework to support the commitment of public resources for STI by the IMC. NACI's role will be to undertake foresight studies and provide an independent STI M&E function, including regular analysis of public STI spending. The framework is based on an analysis of STI funding requirements in line with strategic and sovereign priorities, as well as consultation across government through an interdepartmental, director-general-level STI budget committee, which will include national and provincial governments with significant STI mandates. NACI will work with the DSI, the Department of Planning, Monitoring and Evaluation (DPME) and the National Treasury to ensure that the framework information is actionable and comparable in informing the management and funding of NSI initiatives.
- 4.6. Appropriate links will also be established between NACI and the DPME to help integrate STI into transversal government planning by the DPME and to support funding prioritisation by the DPME and National Treasury, for example via the annual budget mandate paper). For instance, based on its new M&E function and regular environmental scanning, NACI will prepare reports on the implications of geopolitical and demographic shifts, technological changes, environmental sustainability imperatives, and other megatrends for government STI planning.

To give effect to these proposals, a process to amend the NACI Act has begun. The Minister of Higher Education, Science and Innovation and NACI have agreed on the new mandate and functions. Also, NACI has developed and submitted a business case for the new NACI Act to the Minister of Higher Education, Science and Innovation, which will serve as an input into the process of drafting legislative amendments.

## 5. Organisational mandate

NACI derives its mandate from an Act of parliament promulgated in 1997 and amended in 2011. The legislation requires NACI to offer advice to the government on the role and contribution of STI in meeting national imperatives, such as the creation of sustainable quality of life, sustainable development, and economic growth, and developing human capital for STI. The Act sets out several specific areas in which NACI is expected to provide advice, which are as follows:

- (a) Coordination and stimulation of the NSI.
- (b) Strategies for the promotion of technology innovation, development, acquisition, transfer, and implementation in all sectors.
- (c) Coordination of S&T policy and strategies with policies and strategies in other environments.
- (d) Identification of R&D priorities and their incorporation in the process of government funding of R&D.
- (e) Promotion of mathematics, the natural sciences, and technology in the education sector.
- (f) Establishment and maintenance of information systems that support the monitoring and evaluation of the management and functioning of the NSI.
- (g) International liaison and cooperation in STI.
- (h) Developments in STI that may require new legislation

### 5.1. Strategic outcomes

The 2020–25 Strategic Plan identifies the following four strategic outcomes, which were designed to support the NACI mandate, vision, and mission:

- (a) To learn from previous experience to improve efficacy and ensure evidence-based, informed, confidential, and timely policy advice to the Minister of Higher Education, Science and Innovation and, through the Minister, to the Cabinet.
- (b) To contribute to the building of NSI monitoring, evaluation and learning capability, to assess the health of the NSI and its contribution to sustainable and inclusive development.
- (c) To contribute to the building of a well-coordinated, responsive, and effective NSI by exploring and proposing solutions to the long-standing STI policy questions of coordination, prioritisation, financing, size and shape, human resources, knowledge production and diffusion.
- (d) To transform NACI into a smart and efficient learning organisation. This goal is intended to address current internal operational inefficiencies; enhance quality, turnaround times, and knowledge management and communication; and exploit the benefits of digitisation. Skills, knowledge, and competency development will be critical.

## 6. Relevant court rulings

None.



**PART B:**

**STRATEGIC  
FOCUS**

## PART B: STRATEGIC FOCUS



### 1. Vision

A leading advisory body for the government on STI within a well-coordinated, responsive, and functioning national system of innovation (NSI).



### 2. Mission

To provide evidence-based advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet, on science, technology and innovation (STI) matters, through research expertise and engagement with stakeholders.



### 3. Values

NACI's values are:

- Professionalism.
- Integrity.
- Innovation and knowledge sharing.
- Transparency and Accountability

## 4. Updated situational analysis

This APP was developed and will be implemented in the context of SGCs such as climate change, inequality, poverty, and unemployment. In implementing its APP, NACI will, among other things, assess the role played by the NSI in using STI to address societal challenges and create an inclusive and sustainable socio-economic development.

### 4.1. External environment analysis

#### (a) Environmental sustainability and climate change

South Africa's commitment to balancing economic growth and development with environmental protection is evident in both the 2019 White Paper on STI and the 2022 STI Decadal Plan. The White Paper highlights the importance of creating a green economy that includes circular economy principles, which is a crucial aspect of the DSI's efforts. The circular economy presents opportunities for socio-economic growth while preserving the environment, making it a cornerstone of the country's STI policies.

The Decadal Plan outlines SGCs that demand complex analysis, innovative solutions, and efficient implementation. SGCs include climate change and environmental sustainability, emphasising the country's goal of mitigating the impacts of climate change while promoting sustainable development. South Africa's commitment to addressing these challenges is evident in its investment in energy innovation, as it prepares for a sustainable future.

South Africa's recognition of the importance of climate change mitigation and sustainability also reflects its commitment to its international obligations. The country is a signatory to the Paris Agreement and is committed to limiting its carbon emissions and enhancing resilience to the effects of climate change. The country's focus on energy innovation and moving towards a green economy is a significant step towards achieving the commitments it made in the Paris Agreement under the United Nations Framework Convention on Climate Change.



## **(b) Innovation and economic development: Key Issues**

This section examines the role of innovation in economic development and employment. It elaborates on the nature of innovation policy and explains why policy for innovation requires a far wider scope than S&T. The evolution of innovation policy globally and in South Africa is outlined. Finally, a few implications that the most recent perspective on innovation has for how policy should be organised within government are briefly advanced.

## **(c) Innovation and employment**

A key issue is the impact of innovation on employment. In South Africa, there is a consensus that growing employment is the first-order objective of government policy.

The links between innovation and employment are complex. There are several ways in which innovation can lead to an increase in employment, but it can also lead to a decline in jobs. The introduction of new products and product innovation is generally associated with an increase in employment. However, increasing efficiency through process innovation will often result in the loss of employment unless accompanied by sufficient increased output leading to employment creation.

The impact of innovation on employment has been extensively studied, for both developed and developing countries, including several countries in sub-Saharan Africa.<sup>1</sup> Summarising extensive literature, the evidence is that product innovation has a clear positive impact on employment. However, the impact of process innovation on employment is more complex. Process innovation may lead to productivity improvements that result in labour displacement. However, particularly where a firm is engaged in exporting, productivity improvements may allow for an expansion in output that compensates for any labour displacement.

Four recent firm-level studies examined the relationship between innovation and employment in South Africa. The first study, which used data from the Business Innovation Surveys for the periods 2005-2007 and 2010-2012, found that, overall, innovation had a positive effect on employment growth (Naidoo et al., 2021). Both process and product innovations had larger positive effects on employment in exporting manufacturing firms than it did on service firms and those that did not export. This is probably because innovations in export-oriented manufacturing firms are more likely to result in higher demand from international markets. Firms introducing more radical innovations experience higher employment growth than firms introducing fewer novel products (products that are new to the firm but not necessarily new to the market).

The second study used data from the South African Revenue Service and National Treasury Firm-Level Panel dataset for the period 2000–2016 to examine the impacts of technological innovation on exports and employment in South African manufacturing firms (Naidoo, 2021). Overall, this study found a positive link between innovation and employment growth at firm level. The positive link between employment and innovation is strongest in exporting firms.

The third study used data from the South African Business Innovation Survey 2010-2012 (Buchana and Sithole, 2020). This study found that product innovation had a positive effect on employment in manufacturing, but not in services. Overall, process innovation

<sup>1</sup> A recent study of manufacturing firms in 27 African countries found that employment growth was positively associated with both product and process innovation. Employment growth depends on the quality of the business environment (Okumu, Bbaale and Guloba, 2019). A study of five sub-Saharan African countries found that product innovation was associated with the creation of both temporary and unskilled employment and permanent and skilled employment, with the latter outweighing the former (Avenyo, Konte and Mohnen, 2019). Neither of these studies included South Africa.

had a negative effect on employment. However, this may be a short-term effect, as workers that are laid off may get other work. In the longer term, process innovation might increase employment if output increases because of enhanced efficiency resulting from process innovation (Buchana and Sithole, 2020).

A fourth study examined the link between the importation of foreign technology and employment. Importing foreign technology leads to an increase in employment at firm level (Edwards, Baduel and Engel, 2022). One of the channels through which this linkage is established is the positive association between importing foreign technology and innovations and increased output for export.

The evidence clearly indicates that, for South Africa overall, innovation enhances employment. The data suggest that this positive relationship holds for both product and process innovations and is particularly evident where firms are engaged in exports.

However, there are two important qualifications to this conclusion. Firstly, this is the aggregate picture. There will be situations where innovation, particularly process innovation, will result in labour displacement. Where the workers who are displaced lack skills and have limited mobility, as is the case in South Africa, they will find it very difficult to obtain alternative employment. As a result, resistance to labour displacing innovation is likely to be strong. Secondly, the additional employment that follows from innovation is likely to require better-skilled labour, as innovation contributes to the skills intensity of employment. Where firms lack access to the skills required, innovation will be retarded. Finally, particularly where skills are in short supply, the growing demand for skills that arises because of innovation and technological change will result in higher earnings for those with skills, and will therefore exacerbate income inequality.

#### **4.1.1. Selected STI trends**

##### **(a) Digital infrastructure**

Digital infrastructure plays an important role in socio-economic development. It comprises the physical resources that are necessary to enable the use of data, computerised devices, methods, systems, and processes. Access to digital infrastructure has become indispensable to the functioning of society and citizens' quality of life. Digital capabilities are essential to ensure a country's growth and economic resilience and are key enablers of innovators and entrepreneurs.

This section presents selected indicators of South Africa's digital economy. These are digital competitiveness, infrastructure, access, and enablers.

##### **(b) Digital competitiveness of South Africa**

The International Institute for Management Development (IMD) World Digital Competitiveness Ranking was created to assess the capabilities and readiness of economies to undertake the process of digital transformation. Digital competitiveness is defined as the capacity of an economy to adopt and explore digital technologies leading to transformation in government practices, business models, and society in general.



As shown in Table 1, in 2022 South Africa was ranked 58th out of 63 countries, a slight improvement from 60th in the previous year. The country's best ranking was in 2019, when it was in 48th position. In 2022, compared to the other BRICS countries, South Africa ranked the lowest, far below the leading country, China (7th).

**Table 1: Digital competitiveness ranking comparison with BRICS**

	2018	2019	2020	2021	2012
<b>Brazil</b>	55	57	57	51	52
<b>China</b>	31	30	22	16	7
<b>India</b>	51	48	44	48	44
<b>Russia</b>	42	40	38	43	-
<b>South Africa</b>	49	48	60	60	58

*Source: IMD World Digital Competitiveness Ranking reports, 2016–2021*

To determine the competitiveness ranking, the IMD ranks countries according to how they fare in three factors, namely, knowledge, technology, and future readiness.

The knowledge factor refers to intangible infrastructure that enables the discovery, understanding and learning of new technologies, in turn leading to digital transformation. This is captured by indicators that measure the quality of human capital available in a country, as well as the level of investments in education and research, and their outcomes, for example registered patent grants in high-tech fields, and employment in the scientific and technological sectors.

The technology factor assesses the overall context facilitating the development of digital technologies. This includes criteria that assess the impact of regulation in encouraging innovation in the private sector, the availability of capital for investments, and the quality of the technological infrastructure.

The future readiness factor examines the degree to which technology is adopted by governments, businesses, and society at large. This factor includes indicators such as the diffusion of e-commerce, industrial robots, and data-analytics tools in the private sector, as well as the strength of those cybersecurity measures in place.

The public sector has the responsibility of ensuring conditions conducive to innovation in the private sector as well as performing and using innovations in the public service. This involves creating and implementing enabling STI policy, appropriate strategies, and framework conditions necessary for establishing and maintaining strategic STI institutions to generate knowledge including research, technology development, new product and process development, and commercialisation. Framework conditions must address the provision and retention of STI human capital, a well-functioning research system, and a positive environment for innovation.



### **(c) Research and development expenditure**

In South Africa, gross expenditure on R&D as a percentage of GDP (GERD/GDP ratio) decreased from 0,76% in 2017/18 to 0,61% in 2020/21. Business-sector expenditure on R&D has been on a declining trend over the past decade, with a further decline of 10,8% in 2020/21. The business sector's capacity to attract foreign funding is declining – overall and as a share of foreign funding.

### **(d) STI human resources and expansion of research capacity**

The proportion of staff over 60 years of age (men and women) increased from 7,3% in 2011 to 10,4% in 2020. This trend implies that public universities will lose about 10% of permanent staff with doctoral qualifications due to retirement within the next five years. Furthermore, the proportion of staff aged 20 to 29 declined from 7,9% in 2011 to 5,8% in 2020. Although there has been an increase in the proportion of staff aged 30 to 39, this increase is lower than that of staff over the age of 60. Therefore, there is a need to intensify support to young academic staff through instruments such as the New Generation of Academics Programme.

As a result of the Department of Higher Education and Training's implementation of various programmes aimed at developing future generations of academics and building staff capacity, the gender gap among academic staff is gradually closing. The proportions of male and female researchers are approaching parity.

The percentage of staff in science, technology, engineering, and mathematics (STEM) fields has remained consistent over time. In 2010, the proportion of STEM staff among all staff was 51,5%, and this rose slightly to 51,9% in 2021.

South African academics, once appointed on a permanent basis, cannot easily be replaced. Given that the typical academic career is around 40 years, universities have often been compared to large tankers that change course slowly and with difficulty. For the percentage of staff in the STEM fields to increase significantly in relation to non-STEM (social sciences, humanities, education, economic and management sciences) staff, it would require many universities to change their organisational design, creating more medical schools, engineering faculties and larger science faculties. The envisaged establishment of the University of Science and Technology in Ekurhuleni, Gauteng, is an example of the type of intervention that is required.

The goal of increasing the number of graduates in science, engineering and technology (SET) has been stated and repeated in multiple national policy documents since 1994. The 2019 White Paper on STI states that the country does not produce sufficient SET skills for the economy. Despite various initiatives over the years to increase the output of SET graduates, the percentage of SET graduates as a proportion of all graduates has remained unchanged over the past 12 years.

Since 2015, the proportion of female doctoral graduates in the STEM fields has surpassed those of male graduates.

Another positive development in the same domain has been the increase in the number of black doctoral graduates in STEM fields. From constituting about one-third of all doctoral graduates in 2010, the share of black doctoral students in STEM fields increased to 44% in 2020.



South African scientists have increased their research collaborations with the USA, Germany, UK, and Australia; all the other member states of BRICS; and a few other countries (Canada and several European countries).

#### **(e) STI outputs**

Despite various initiatives over the years to increase the output of SET graduates, the percentage thereof as a proportion of all graduates has remained low over the past 12 years (up from 27% in 2010 to 29% in 2021). However, since 2015, the relative percentage of female doctoral graduates in the STEM fields surpassed those of male graduates. There has also been an increase in black doctoral graduates in STEM fields.

South Africa's scientific publication output has seen a remarkable rise over the past two decades. The number of publications has increased from 3,693 in 2000 to 27,052 in 2021. However, despite this sustained increase in publications, the country's world share seems to have peaked at around 1% over the past five years.

There has been a significant increase in the number of female authors contributing to university publications, rising from 31% in 2005 to nearly 42% in 2021. However, in the field of biotechnology, South Africa's world share of publications peaked in 2019, and subsequently experienced a decline in 2020 and again in 2021.

South Africa has observed a significant increase in the number of domestic patents granted to residents in the country, yet it remains lower than a decade ago. There has been a steady decline in the number of South African patents granted at the European Patent Office in 2021. Regrettably, South Africa's world share of semiconductor patents decreased from 0,015% in 2012 to 0,006% in 2021.

In 2021, the sale of South African intellectual property (IP) increased compared to the previous year, but South Africa's share of receipts has significantly and consistently declined compared to all middle-income countries, dropping from 3,3% in 2016 to 0,8% in 2021. Payments abroad for the use of IP have also decreased since 2017, reflecting a slowdown in investment and economic growth. While there was an increase in payments abroad for the use of IP in 2021, it followed two years of decline and was still significantly lower than any year in the decade preceding 2018.

#### **(f) STI for socioeconomic impacts**

After a period of growth in the total number of researchers (by headcount), there has been a downward trend since 2018/19 (from 36,233 in 2017/18 to 34,072 in 2021/22). Between 2011/12 and 2017/18, the number of researchers in South Africa increased at a faster rate than the total employment in the country. Additionally, the number of researchers per thousand people employed also rose from 1,5 to 1,8 over this period. However, with the current decrease in the total number of researchers, this ratio is no longer increasing.

Most South African researchers are based in the higher education sector (86,3% in 2020/21) and this trend is continuing. In contrast, the business sector's share of total researchers in the country declined from 15,2% in 2011/12 to 7,3% in 2020/21.

Science councils have been on a downward spiral that began in 2017/18, with a decrease from 2,189 (3,9%) researchers in 2016/17 to 1,774 (2,9%) researchers in 2020/21.

There was a slight increase in manufacturing gross value added (GVA) and the proportion of medium and high-tech in manufacturing GVA in 2021. As a middle-income country, South Africa continues to confront socio-economic challenges, such as poverty, high income and wealth inequalities, and escalating unemployment rates. A significant percentage of the population, approximately 20%, qualified as “extremely poor” in 2021. Other types of poverty remained high too – lower-bound poverty at 29% and upper-bound poverty at 42%.

In this context, embedding innovative systems in the country’s policy agenda will require the development of solutions to these socio-economic challenges.

#### **(g) Employment of researchers**

Most South African researchers are based in the higher education sector (86,3% in 2020/21) and this trend is ongoing. In contrast, the business sector’s share of total researchers in the country declined from 15,2% in 2011/12 to 7,3% in 2020/21.

Science councils have been on a downward spiral that began in 2017/18, with a decrease from 2 189 (3,9%) researchers in 2016/17 to 1 774 (2,9%) researchers in 2020/21. Considering this downward spiral, stakeholder discussion is urgently needed to find solutions.



The background is a deep blue gradient. It features several 3D orange pyramids of varying sizes, some with white wireframe outlines. A perspective grid of small white squares recedes into the distance. Small white dots and lines are scattered throughout the scene.

# **PART C:** **MEASURING** **PERFORMANCE**

## PART C: MEASURING PERFORMANCE

### 1. Outcomes, indicators and targets for the 2024/25 financial year

Table 2: NACI's performance outcomes, indicators and targets for the 2024/25 financial year

Outcome	Outputs	Output Indicators	ANNUAL TARGET						
			AUDITED/ACTUAL PERFORMANCE			Estimated performance	MEDIUM-TERM TARGETS		
			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
To learn from previous experience to improve efficacy and ensure evidence-based, informed, confidential, and timely policy advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet	STI advice	Number of STI advice documents submitted to the Minister of Higher Education, Science and Innovation	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2022	Two STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2023	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2024	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2025	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2026	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2027	Three STI advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2028

Outcome	Outputs	Output Indicators	ANNUAL TARGET						
			AUDITED/ACTUAL PERFORMANCE			Estimated performance	MEDIUM-TERM TARGETS		
			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
To contribute to the building of NSI monitoring, evaluation (M&E) and learning capability to assess the health of the NSI and its contribution to sustainable and inclusive development	State of STI reports	STI Indicators Report finalised by 31 March 2021	STI Indicators Report produced by 31 March 2022	STI Indicators Report produced by 31 March 2023	STI Indicators Report produced by 31 March 2024	STI Indicators Report produced by 31 March 2025	STI Indicators Report produced by 31 March 2026	STI Indicators Report produced by 31 March 2027	STI Indicators Report produced by 31 March 2028
	NSI M&E reports	Two NSI M&E reports finalised by 31 March 2021	Two NSI M&E reports produced by 31 March 2022	Two NSI M&E reports produced by 31 March 2023	Two NSI M&E reports finalised by 31 March 2024	Two NSI M&E reports finalised by 31 March 2025	Two NSI M&E reports finalised by 31 March 2026	Two NSI M&E reports finalised by 31 March 2027	Two NSI M&E reports finalised by 31 March 2028
	National STI Information Portal (NSTIIP)	Successful implementation of NSTIIP	Directory of experts and communities of practice (CoPs) platforms/modules developed by 31 March 2022	Ongoing maintenance and implementation of the NSTIIP by 31 March 2023	Ongoing maintenance and implementation of the NSTIIP by 31 March 2024	Ongoing maintenance and implementation of the NSTIIP by 31 March 2025	Ongoing maintenance and implementation of the NSTIIP by 31 March 2026	Ongoing maintenance and implementation of the NSTIIP by 31 March 2027	Ongoing maintenance and implementation of the NSTIIP by 31 March 2028
To contribute towards building a well-coordinated, effective, and responsive NSI	Institutional foresight exercise capability	Foresight exercise capability institutionalised	One sectoral/provincial/regional foresight exercise conducted in partnership with relevant stakeholders by 31 December 2022			Review report on the design evaluation of the South Africa Foresight Exercise for STI 2030 (SAForSTI) by 15 March 2025	One sectoral/provincial/regional foresight exercise conducted in partnership with relevant stakeholders by 31 March 2026	One sectoral/provincial/regional foresight exercise conducted in partnership with relevant stakeholders by 31 March 2027	One sectoral/provincial/regional foresight exercise conducted in partnership with relevant stakeholders by 31 March 2028

Outcome	Outputs	Output Indicators	ANNUAL TARGET					
			AUDITED/ACTUAL PERFORMANCE			Estimated performance	MEDIUM-TERM TARGETS	
			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
To transform NACI into a smart and efficient learning organisation	Communication and branding strategy	Communication and branding strategy	Communication plan updated and implemented by 31 March 2022	Communication plan updated and implemented by 31 March 2023	Communication plan updated and implemented by 31 March 2024	Communication plan updated and implemented by 31 March 2025	Communication plan updated and implemented by 31 March 2026	Communication plan updated and implemented by 31 March 2027
	Internal corporate governance system	Internal corporate governance system implemented	Corporate governance system implemented (2021/22 APP, 2020/21 Annual Report) developed and approved by the Minister and submitted to Parliament by 31 March 2022	Corporate governance system implemented (2022/23 APP, 2021/22 Annual Report) developed and approved by minister and submitted to Parliament by 31 March 2023	Corporate governance system implemented (2023/24 APP, 2022/23 Annual Report) developed and approved by minister and submitted to Parliament by 31 March 2024	Corporate governance system implemented (2024/25 APP, 2023/24 Annual Report) developed and approved by minister and submitted to Parliament by 31 March 2025	Corporate governance system implemented (2025/26 APP, 2024/25 Annual Report) developed and approved by minister and submitted to Parliament by 31 March 2026	Corporate governance system implemented (2026/27 APP, 2025/26 Annual Report) developed and approved by minister and submitted to Parliament by 31 March 2027
	Knowledge management system	Knowledge management system implemented	Knowledge management system implemented by 31 March 2022	Knowledge management system implemented by 31 March 2023	Knowledge management system implemented by 31 March 2024	All NACI meetings recorded and transcripts for 2022/23 stored safely in knowledge management system by 31 March 2025	Knowledge management system implemented by 31 March 2026	Knowledge management system implemented by 31 March 2027
								Communication plan updated and implemented by 31 March 2028

## 2. Quarterly targets for 2024/25

Table 3: NACI's quarterly targets for the 2024/25 financial year

Output indicator	Annual target	QUARTERLY TARGETS			
		1st	2nd	3rd	4th
Number of STI policy advice documents submitted to the Minister of Higher Education, Science and Innovation	Three STI policy advice documents submitted to the Minister of Higher Education, Science and Innovation by 31 March 2025	Planning and data analysis by 30 June 2024	Data analysis, consultation, and reporting by 30 September 2024	One STI advice document by 20 December 2024	Two STI policy advice documents generated by 31 March 2025
Number of state of STI reports produced	STI Indicators Report finalised by 31 March 2025	Concept and work plan produced by 30 June 2024	Data collection completed by 30 September 2024	Data analysis and review by 20 December 2024	Final STI Indicators Report finalised by 31 March 2025
Number of NSI M&E reports	Two NSI M&E reports finalised by 31 March 2025	Finalise concept and data collection by 30 June 2024	Data analysis by 30 September 2024	Drafting M&E reports by 20 December 2024	Two NSI M&E reports finalised by 31 March 2025
Successful implementation of the NSTIIP	Ongoing maintenance and implementation of the NSTIIP by 31 March 2025	Directories of experts and CoPs data expanded by 30 June 2024	STI statistics section expanded by 30 September 2024	CoPs session for extending functionality conducted by 20 December 2024	STI statistics section completed by 31 March 2025
Foresight exercise capability institutionalised	Review report on the design evaluation of the SAForSTI by 15 March 2025	No target	Appointment of experts to conduct fieldwork by 30 September 2024	Data analysis and review by 20 December 2024	Review report on the design evaluation of the SAForSTI by 15 March 2025
Communication plan	Communication plan implemented by 31 March 2025	Communication plan refined and implemented by 30 June 2024	Communication plan implemented by 30 September 2024	Communication plan implemented by 20 December 2024	Communication plan implemented by 31 March 2025
Internal corporate governance system implemented		Annual report highlights submitted to the DSI by 30 May 2024	1st draft of 2023/24 Annual Report submitted to the DSI by 30 July 2024  2nd draft of 2023/24 Annual Report submitted to the DSI by 30 August 2024  2023/24 Annual Report ready for tabling in Parliament by 30 September 2024	1st draft of 2025/26 Annual Performance Plan submitted to the DSI by 15 October 2024	Final draft of 2025/26 Annual Performance Plan submitted to the DSI by 30 January 2025
Knowledge management system	Knowledge Management System Tools implemented by 31 March 2025	No target	Knowledge management system tools utilised to store ongoing NACI transcripts facilitated by 30 September 2024	Knowledge management system tools utilised to store ongoing NACI transcripts facilitated by 30 December 2024	Knowledge Management System Tools implemented by 31 March 2025

### 3. Planned performance over the medium-term period

- 3.1 *To learn from previous experience to improve efficacy and ensure evidence-based, confidential and timely policy advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet.*

Achieving this outcome will require better data and information analysis, more coordination and improved scientific advisory mechanisms. Building internal capability and exploiting new and established external networks will be critical.

- 3.2 *To contribute to the building of NSI monitoring, evaluation and learning capability to assess the health of the NSI and its contribution to sustainable and inclusive development.*

This outcome is intended partly to assist the government to learn from experience and bolster policy performance over time, and to help ensure that government meets its objectives efficiently at the lowest possible cost. To achieve this outcome, NACI will need the capacity to ensure that STI quantitative and qualitative indicators needed for monitoring, evaluation, planning and management are available and analysed.

- 3.3 *To contribute to the building of a well-coordinated, responsive and effective NSI.*

NACI will be seeking to explore and propose solutions to the long-standing STI policy questions like coordination, prioritisation, financing, size and shape, human resources, and knowledge production and diffusion.

- 3.4 *Building a capable, smart and effective organisation.*

For this outcome to be realised, current internal operational inefficiencies will have to be addressed, the quality and turnaround time for the production of advice enhanced, knowledge management and communication improved, and the benefits of digitisation optimally exploited. Skills, knowledge and competency development will be critical.

The majority of the STI institutions established after 1994 have evolved over the years in response to changes in the NSI. NACI has, however, remained constrained in terms of reach, impact, and growth. The challenges that NACI has faced over the years have negatively affected its corporate identity and brand. Thus, achieving this strategic objective requires the development of new strategic approaches to brand and position NACI as an independent entity reporting to the Minister of Higher Education, Science and Innovation, as well as new approaches to public and private-sector engagement.

## 4. Resource considerations

### 4.1. Human resource requirements

To implement its advisory work programme, NACI is supported by the NACI Secretariat. The secretariat comprises a small team of 15 members, including the CEO. In the 2023/24 financial year, two people were employed on fixed-term contracts to assist the team with their workload.

## 4.2. Expenditure estimates

Table 4 presents a summary of 2024/25 expenditure estimates for the total budget of R17,276 million, comprising compensation of employees (R11,460 million) and goods and services (R5,817 million).

**Table 4: NACI expenditure estimates**

Programme	Audited outcomes			Adjusted/ appropriation	Medium-term expenditure estimate		
R'000	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Compensation of employees	8,322	9,562	11,019	11,460	11,918	12,395	12,890
Goods and services	7,598	7,818	5,593	5,817	6,049	6,291	6,542
Transfers and subsidies	–	–	0	–	–	–	–
Payment for financial assets	–	–	0	–	–	–	–
<b>TOTAL</b>	<b>15,920</b>	<b>17,380</b>	<b>16,612</b>	<b>17,276</b>	<b>17,968</b>	<b>18,686</b>	<b>19,432</b>

## 5. Key risks and mitigations

Outcomes	Key risks	Risk mitigations
To learn from previous experience to improve efficacy and ensure evidence-based, informed, confidential, and timely policy advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet	<ul style="list-style-type: none"> <li>Low uptake of advice</li> <li>Failure to appoint highly capable and competent staff</li> </ul>	<ul style="list-style-type: none"> <li>Secretariat to undergo training to develop skills relating to drafting and delivering high-quality advice timeously</li> <li>Council to secure ministerial advice/direction/ approval for identified areas before the production of advice</li> <li>Council to robustly engage with the draft advice before submission to the Minister</li> </ul>
To contribute to the building of NSI monitoring, evaluation and learning capability to assess the health of the NSI and its contribution to sustainable and inclusive development	<ul style="list-style-type: none"> <li>Copyright infringements relating to STI data and information stored on the STI data and information portal</li> <li>Failure to appoint individuals with critical skills</li> </ul>	Continue negotiations with the service provider to determine the terms for using STI data and information
Building a capable, smart, and effective organisation	<ul style="list-style-type: none"> <li>Inaccurate, unreliable and incomplete reporting of actual achievements against predetermined objectives as indicated in the APP (qualified audit opinion on non-financial performance)</li> <li>Lack of funding to fill positions requiring critical and scarce skills</li> </ul>	<ul style="list-style-type: none"> <li>Conduct awareness sessions with all employees on the technical indicator description (TID) matrix (step-by-step training for the user on how to capture the indicator as indicated in the APP using the TID standard template prescribed by National Treasury)</li> <li>Implement and monitor quarterly the approved roles and responsibilities in Performance Information Reporting Guidelines</li> <li>Finalise the draft DSI Performance Information Reporting Guidelines</li> </ul>



## **PART D:**

# **TECHNICAL INDICATOR DESCRIPTIONS**

## PART D: TECHNICAL INDICATOR DESCRIPTIONS

Strategic outcomes are broad and focused on the long term. Short to medium-term objectives that can be pursued, implemented, and tracked are therefore needed. NACI's objectives are set out in Table 5, which also provides indicators and a baseline.

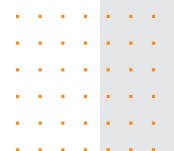
**Table 5: NACI technical indicator descriptions**

<b>Indicator title</b>	<b>PPI 1: Number of STI advice documents submitted to the Minister of Higher Education, Science and Innovation</b>
<b>Short definition</b>	Evidence-based, confidential and timely advice (proactive and reactive) will be generated
<b>Source/collection of data</b>	Primary data, secondary data (survey and literature review) and existing data (literature review)
<b>Method of calculation/assessment</b>	Quantitative and qualitative
<b>Data limitations/ assumptions</b>	Assumption 1: NACI will have access to readily available data that is relevant, up-to-date and of high quality. Assumption 2: NACI and its committees have readily available capacity to tackle all pertinent content issues
<b>Disaggregation of beneficiaries</b>	Different advice areas may target different beneficiaries on various recommendations
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	To learn from previous experience to improve efficacy and ensure the production of evidence-based, confidential and timely advice to the Minister of Higher Education, Science and Innovation and, through the Minister, the Cabinet
<b>Indicator responsibility</b>	Chief Senior Specialist and Senior Specialists

<b>Indicator title</b>	<b>PPI 2: Number of state of STI reports produced</b>
<b>Source/collection of data</b>	Secondary data
<b>Method of calculation/assessment</b>	Qualitative and quantitative
<b>Data limitations/ assumptions</b>	Assumption: NACI partners will be able to provide accurate, relevant and quality data since NACI conducts secondary data analysis. Limitation: The required data may not always be available in the form or of the quality that NACI would like
<b>Disaggregation of beneficiaries</b>	Disaggregated data will be required in all reports where this is possible
<b>Spatial transformation</b>	N/A
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	STI Indicators Report Different M&E reports
<b>Indicator responsibility</b>	Chief Senior Specialist, Senior Specialists and Senior Specialist: S&T Indicators and Measures

<b>Indicator title</b>	<b>PPI 3: Number of NSI M&amp;E reports produced</b>
<b>Short definition</b>	Generate research findings to inform policy recommendations
<b>Source/collection of data</b>	Primary data, secondary data (survey and literature review) and existing data (literature review)
<b>Method of calculation/ assessment</b>	Qualitative and quantitative
<b>Data limitations/ assumptions</b>	Assumption: NACI partners will be able to provide accurate, relevant and quality data since NACI conducts secondary data analysis. Limitation: The required data may not always be available in the form or of the quality that NACI would like
<b>Disaggregation of beneficiaries</b>	Generally, NACI's reports are intended to benefit all concerned, not targeted groups. In certain instances, M&E reports may be specific to certain groups
<b>Spatial transformation</b>	N/A
<b>Calculation type</b>	Non-cumulative and cumulative (long-term).
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Advice letters with policy recommendations based on research findings.
<b>Indicator responsibility</b>	Chief Senior Specialist and senior specialists

<b>Indicator title</b>	<b>PPI 4: Successful implementation of the NSTIIP.</b>
<b>Brief definition</b>	The central repository of all key STI data and information
<b>Source/collection of data</b>	Primary data (surveys, etc. from data collectors), secondary (linkages with other similar portals) and improvement of existing data (issues or challenges faced)
<b>Method of calculation/ assessment</b>	Qualitative and quantitative
<b>Data limitations/ assumptions</b>	Assumption: NACI partners will always be willing to cooperate and make primary data available as and when required. Limitation: NACI lacks the necessary authority to force sources to share their data
<b>Disaggregation of beneficiaries</b>	Disaggregated data will be required in all reports where this is possible
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Optimal functioning of the National STI Information Portal
<b>Indicator responsibility</b>	Senior Specialist: S&T Indicators and Measures



<b>Indicator title</b>	<b>PPI 5: Foresight exercise capability institutionalised</b>
<b>Short definition</b>	Design Evaluation of the SA Foresight Exercise for STI
<b>Source/collection of data</b>	Primary data, secondary data (survey and literature review) and existing data (literature review).
<b>Method of calculation/ assessment</b>	Qualitative and quantitative
<b>Data limitations/ assumptions</b>	Assumption: NACI partners will be able to provide accurate, relevant, and quality data since NACI conducts secondary data analysis Limitation: the required data may not always be available in the form or of the quality that NACI would like
<b>Disaggregation of beneficiaries</b>	Generally, NACI's reports are intended to benefit all concerned, as opposed to specific groups. In certain instances, M&E reports may be specific to certain groups
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Non-cumulative and cumulative (long-term)
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Advice letters with policy recommendations based on research findings
<b>Indicator responsibility</b>	Chief Senior Specialist and senior specialists

<b>Indicator title</b>	<b>PPI 6: Communication plan implemented</b>
<b>Short definition</b>	Using media engagement, electronic communications, branding, events management, internal and intergovernmental communications and outreach, ensure that stakeholders and citizens are aware of and can access information on the initiatives and programmes undertaken by NACI
<b>Source/collection of data</b>	<ul style="list-style-type: none"> <li>• On-site surveys at events</li> <li>• Attendance registers</li> <li>• Distribution of reports</li> <li>• Media analysis reports</li> <li>• Ministry and presidential speeches</li> <li>• Departmental advice</li> </ul>
<b>Method of calculation/ assessment</b>	<ul style="list-style-type: none"> <li>• Attendance registers</li> <li>• Public reports produced</li> <li>• Number of media/press clippings/inserts/interviews</li> </ul>
<b>Data limitations/ assumptions</b>	Assumption: NACI will generate enough useful material that can be communicated to the public and key stakeholders locally and internationally Limitation: It is difficult to translate scientific data and advice into easy-to-understand messages
<b>Disaggregation of beneficiaries</b>	Disaggregated data will be required in all reports where this is possible
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Awareness of and access to information about NACI programmes and initiatives by NSI stakeholders and the South African public
<b>Indicator responsibility</b>	Chief Senior Specialist



<b>Indicator title</b>	<b>PPI 7: Internal corporate governance system approved and implemented</b>
<b>Short definition</b>	To develop and implement monitoring and evaluation reports to inform planning and decision making
<b>Source/collection of data</b>	<ul style="list-style-type: none"> <li>• Strategic and APP</li> <li>• National Treasury Framework for Strategic Planning and APPs</li> <li>• DPME National Evaluation Policy Framework</li> </ul>
<b>Method of calculation/ assessment</b>	Quantitative
<b>Data limitations/ assumptions</b>	Assumption and limitation: NACI projects are not completed timeously
<b>Disaggregation of beneficiaries</b>	Disaggregated data will be required in all reports where this is possible
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Reports (four quarterly reports and one annual report) leading to informed decision-making that will ensure the attainment of the MTSF objectives
<b>Indicator responsibility</b>	DD: Administration and Coordination

<b>Indicator title</b>	<b>PPI 8: Knowledge management system implemented</b>
<b>Short definition</b>	To extract and harness historical organisational data to inform continued operations.
<b>Source/collection of data</b>	Primary data (surveys, interviews, etc. from data collectors) and secondary data (stored information in the registry)
<b>Method of calculation/ assessment</b>	Quantitative and qualitative
<b>Data limitations/ assumptions</b>	<p>Assumption: NACI partners will always be willing to cooperate and make primary data available as and when required.</p> <p>Limitation: NACI lacks the necessary authority to force sources to share their data</p>
<b>Disaggregation of beneficiaries</b>	Disaggregated data will be required in all reports where this is possible
<b>Spatial transformation</b>	n/a
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Knowledge system
<b>Indicator responsibility</b>	Senior Specialist

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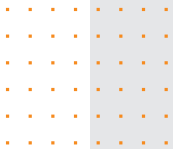
South African Science, Technology and Innovation Indicators Report 2022, August 2023

<https://www.naci.org.za/wp-content/uploads/2023/08/STI-Indicators-2023-Report.pdf>

## NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# NOTES



Lined area for notes, consisting of multiple horizontal lines.



## NOTES

[illegible]

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**science & innovation**

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