ANNUAL PERFORMANCE PLAN 2025/26



science, technology & innovation

Department: Science, Technology and Innovation REPUBLIC OF SOUTH AFRICA





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Annual Performance Plan 2025/26 Financial Year

Innovation for a better future

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FOREWORD



MR TILSON MANYONI CHAIRPERSON: NACI

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 2025–2026 Annual Performance Plan.

NACI's five-year (2025/26–2029/30) strategic plan identifies strategic outcomes to contribute to the realisation of the National Development Plan (NDP), the 2019 White Paper on Science, Technology and Innovation, and the Decadal Plan.

NACI will continue to improve the quality, relevance, and efficacy of its advice to the Minister of Science, Technology and Innovation (DSTI) and, through the minister, the Cabinet. NACI generates advice proactively or at the behest of the Minister of Science, Innovation and Technology.

NACI recognises the importance of focusing on the foundations of science, technology and innovation (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 high-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 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 2025/26 financial year.

Mr Tilson Manyoni *Chairperson: NACI*

OFFICIAL SIGN-OFF

It is hereby certified that this Annual Performance Plan:

- was developed by the management of NACI under the guidance 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 2025/26.

Dr Mlungisi Cele, CEO: NACI

Signature:

Mr Tilson Manyoni, Chairperson: NACI

Signature:

Signature:

Mr Robert Shaku, Chief Financial Officer: Department of Science, Technology and Innovation (DSTI)

Signature:

Ms Gugulethu Zwane, Accounting Officer

Approved by:

Signature:

Dr BE Nzimande, Executive Authority

LIST OF ABBREVIATIONS

4IR	Fourth Industrial Revolution
APP	annual performance plan
ASSAf	Academy of Science of South Africa
CSIR	Council for Scientific and Industrial Research
DPME	Department of Planning, Monitoring and Evaluation
DSTI	Department of Science, Technology and Innovation
GERD	gross domestic expenditure on research and development
GHG	greenhouse gas
HSRC	Human Sciences Research Council
ICT	Information and communication technology
IMC	Interministerial Committee
IMD	International Institute for Management Development
IP	intellectual property
M&E	monitoring and evaluation
MTDP	Medium-term Development Plan
MTSF	Medium-term Strategic Framework
NACI	National Advisory Council on Innovation
NDC	nationally determined contribution
NDP	National Development Plan
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
R&D	research and development
S&T	science and technology
SAForSTI	South Africa Foresight Exercise for Science Technology and Innovation
STI	science, technology and innovation
TID	technical indicator description
UNFCCC	United Nations Framework Convention on Climate Change

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PART A: MANDATE

1. Constitutional mandate

There are no specific constitutional provisions for NACI.

2. Legislative mandate

The National Advisory Council on Innovation Act, 1997 (Act No. 55 of 1997), provides the mandate for NACI. The Act mandates NACI to advise the Minister of Science, Technology 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. These objectives are to improve and sustain the quality of life of all South Africans, develop human resources for science, technology and innovation, build the economy, and strengthen the country's competitiveness in the international arena.

3. Policy mandates

3.1. The relationship between the NDP and the NSI

The National Development Plan (NDP) highlights the centrality of 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. The first phase (2012-2017) focused 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 will 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 aligned to national priorities. Secondly, the size and effectiveness of the NSI should be increased.

3.2. Medium-Term Development Plan (MTDP) 2024–2029

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

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

In pursuit of these goals, the following three strategic priorities have been identified to guide the government over the Medium-Term Development Plan (MTDP) period:

Priority 1: Inclusive economic growth and job creation.

Priority 2: Reduce poverty and tackle the high cost of living.

Priority 3: A capable, ethical and developmental state.

The three priorities are interlinked and interrelated. However, the MTDP recognises inclusive growth and job creation as an apex priority with STI for growth as one of its outcomes. The MTDP emphasises the need to grow and transform South Africa's STI capabilities, human resources and research infrastructure, and to invest in digital identity and payments, expand access to affordable broadband, and increase training for young people in digital skills (Department of Planning, Monitoring and Evaluation, 2024).

However, STI can serve as a cross-cutting enabler for all three priorities. This will require improved coordination and alignment (vertical and horizontal) between various policies (including STI policies) and leadership, human and financial resources, infrastructure, and so on. The key challenge will be aligning the implementation of the MTDP with other policies, including the NDP, the 2019 White Paper on STI, the 2014 White Paper for Post-School Education and Training, and the Decadal Plan.

In executing its mandate, NACI indirectly contributes to the implementation of the MTDP through its NSI-related initiatives. NACI's goals reflect support for these strategic priorities, particularly in facilitating innovation and developing human capacity in key sectors. These include the ongoing monitoring and evaluation of systemic initiatives (including those of the DSTI) and the production of advice, proactively and at the behest of the Minister of Science, Technology and Innovation.

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 NSI, 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.

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 – will 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 the continued investment in and development of the NSI (for example, systemic enablers like human resource development, institution building, infrastructure, knowledge production and international collaboration).

The Decadal Plan sets out three societal grand challenges, namely, climate change, future-proofing education and skills, and the future of society; and prioritises STI aligned with key sectors of the economy (agriculture, manufacturing, mining, health, energy, and the digital and circular economies.

The Decadal Plan also proposes a new strategic management model, a budget coordination mechanism and an innovation compact as critical components of the new NSI governance architecture. It also identifies a broader role for NACI.

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

The 2019 White Paper on STI proposes the following strategic actions for NACI:

- 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 Presidential 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 DSTI-National Research Foundation (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 DSTI will develop a public STI investment framework to support the IMC's commitment of public resources to STI. NACI will 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,

and 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 DSTI, 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 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 implement these proposals, a process to amend the NACI Act has begun. The Minister of Science, Technology 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, which will serve as 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 advise the government on the role and contribution of STI in meeting national imperatives, such as the creation of a sustainable quality of life, sustainable development, economic growth, and the development of human capital for STI.

The Act sets out the following specific areas in which NACI is expected to provide advice:

- (a) The coordination and stimulation of the NSI.
- (b) Strategies to promote technology innovation, development, acquisition, transfer and implementation in all sectors.
- (c) The coordination of STI policy and strategies with policies and strategies in other environments.
- (d) The identification of R&D priorities and their incorporation into government funding of R&D.
- (e) The promotion of mathematics, the natural sciences and technology in the education.
- (f) The 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 2025–30 Strategic Plan identifies the following four strategic outcomes, which were designed to support NACI's 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 Science, Technology 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 building a well-coordinated, responsive, and effective NSI by exploring and proposing solutions to the longstanding STI policy questions of coordination, prioritisation, financing, size and shape, human resources, and knowledge

production and diffusion; and

(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

1. Vision

For NACI to be a leading advisory body for the government on STI within a well-coordinated, responsive, and functioning NSI.

2. Mission

To provide evidence-based advice to the Minister of Science, Technology and Innovation and, through the minister, IMC and Presidential Plenary for STI, and the Cabinet, on STI matters, through research expertise and stakeholder engagement.

3. Values

NACI's values are as follows:

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

4. Situational analysis

The situational analysis examines the external and internal factors shaping the STI landscape. It explores global macro trends, environmental sustainability challenges, digital infrastructure, and national STI outputs and impacts. The analysis highlights critical opportunities and challenges, offering insights into how STI can be leveraged to address pressing socio-economic and environmental issues, including sustainable development and transformation objectives. It therefore informs this strategic plan.

4.1. External environmental analysis

4.1.1. Global macro trends

4.1.1.1. Profound global transformation

Internationally, there is growing recognition of STI as a "catalyst for a more inclusive, equitable, sustainable, and prosperous world for all, in which all human rights are fully respected" (UN, 2024). Recently, the heads of state and government stated:

We are at a time of profound global transformation. We are confronted by rising catastrophic and existential risks, many caused by the choices we make. Fellow human beings are enduring terrible suffering. If we do not change course, we risk tipping into a future of persistent crisis and breakdown. Yet this is also a moment of hope and opportunity. Global transformation is a chance for renewal and progress grounded in our common humanity. Advances in knowledge, science, technology and innovation could deliver a breakthrough to a better and more sustainable future for all (UN, 2024).

World systems are plagued by intersecting polycrises like inequality, development financing, the climate crisis, and the impact of new technologies. UN Secretary-General António Guterres has warned that, in many areas, "progress is slipping out of reach as our world becomes more unsustainable, unequal and unpredictable. Conflicts are raging, the climate crisis is accelerating, inequalities are growing, and new technologies have unprecedented potential for good – and bad" (Anadolu Ajansı, 2024).

According to the UN Pact for the Future, "billions of people, especially in developing countries, do not have meaningful access to critical life-changing technologies. If we are to make good on our promise to leave no one behind, sharing science, technology and innovation is essential. Innovations and scientific breakthroughs that can make our planet more sustainable and our countries more prosperous and resilient should be affordable and accessible to all" (2024).

Environmental sustainability and climate change

South Africa's climate technology innovation policies are a testament to its commitment to sustainable development and environmental conservation. These policies are articulated through a series of strategic documents, including the STI White Papers from 1996 and 2019, and the 2022 STI Decadal Plan. These documents set the long-term policy direction for the South African government, aiming to enhance the role of STI in achieving the vision outlined in the NDP 2030. This vision includes building a state capable of playing a developmental and transformative role, and balancing economic growth with environmental sustainability, in line with the principles of sustainable development and Section 24 of the South African Constitution.

The Ten-Year Innovation Plan (2008-2018) identifies energy supply, climate change and societal dynamics as key challenges, emphasising the need for innovative solutions. Complementing these efforts, the National Climate Change Response White Paper of 2011 and the Climate Change Act, 2024, provide a legislative framework for a just transition to a low-carbon and climate-resilient economy and society in the context of sustainable development. These policies prioritise climate change mitigation, adaptation, technology development, R&D, and innovation. They also encourage behavioural changes in resource use, particularly energy conservation, and support the growth of small and medium-sized enterprises engaged in low-carbon economic activities.

Climate change presents significant challenges to resource availability, threatening the sustainability of livelihoods and economic growth. This is particularly concerning as it could undermine the green economy's potential to create jobs and address social issues like inequality, poverty, and unemployment. The 2019 STI White Paper underscores the importance of addressing climate change within the framework of transitioning to a greener economy. This transition involves adopting a circular economy model, which aims to reduce greenhouse gas (GHG) emissions, open new markets, and create future employment opportunities.

The circular economy minimises waste and maximises resource efficiency. It supports environmental conservation while aligning with socio-economic growth objectives. It is particularly vital for South Africa, where the effects of climate change are expected to exacerbate vulnerabilities in key sectors like infrastructure, water, health, and agriculture. Transitioning to a green and circular economy is essential for mitigating these risks and achieving sustainable development goals.

However, South Africa faces significant transition risks as it moves towards a low-carbon economy. The Climate Policy Initiative estimates these risks could reach R2 trillion by 2035 (World Economic Forum, 2019), primarily affecting the coal sector, Eskom, and Sasol. Factors such as socio-economic inequality, limited economic size, and fossil fuel dependency complicate this transition. These challenges necessitate strategic planning to mitigate economic and social impacts. Addressing these intertwined economic and environmental challenges requires comprehensive economic reforms. These reforms are essential for reducing GHG emissions and enhancing resilience to the effects of climate change. By restructuring its economy, South Africa can unlock the potential for inclusive economic growth and development, which are crucial for addressing high unemployment and inequality levels.

South Africa's climate technology innovation policies highlight both strengths and weaknesses in addressing economic and environmental challenges. By integrating economic reforms and climate action, the country can enhance resilience and inclusivity, positioning itself as a leader in climate-responsive development. The focus on a move to low-carbon emissions, climate resilience and a just transition underscores the potential for sustainable growth. However, achieving these goals requires substantial investment, regulatory reforms and international support. By addressing these areas, South Africa can effectively navigate the intersection of economic and environmental priorities, fostering a more sustainable future. These challenges can be navigated by providing evidence-based recommendations to enhance the just transition framework, prioritise investments in green technologies, and address economic disparities through inclusive innovation policies.

Innovation and economic development

Innovation and employment

The relationship between innovation and employment is multifaceted. On one hand, product innovation is generally associated with increased employment. Introducing new products and services creates new opportunities and drives job growth. On the other hand, process innovation, aimed at improving efficiency, may lead to labour displacement unless accompanied by sufficient output growth. This complexity is evident in various studies examining the impact of innovation on employment in South Africa.

To better understand this complex dynamic, researchers have conducted numerous studies. For instance, Naidoo et al. (2021) found that innovation positively affected employment growth, particularly in exporting manufacturing firms, and that there was a positive link between innovation and employment growth in exporting manufacturing firms (ibid.). However, Buchana and Sithole (2020) noted that while product innovation had a positive effect on employment in manufacturing, process innovation had a negative effect on it. These findings highlight the varying impacts of different types of innovation and highlights the strengths and weaknesses of innovation in supporting employment and consequently economic development.

The strengths of innovation lie in its ability to drive productivity and economic growth, while its weaknesses may include the risk of widening inequality and job insecurity. Understanding these dynamics is essential for policymakers to harness innovation's potential while mitigating its adverse effects on the workforce and economy.

Further studies offer additional perspectives. Some research has found that importing foreign technology increases employment at firm level. A macro-level study examining the impact of 4th industrial revolution (4IR) technologies on sectoral employment in South Africa by Gonese and Ngepah (2024) indicated that information and communication technology (ICT) exports and imports, and high-tech exports, negatively affect sectoral employment. Conversely, R&D, fixed broadband, and Internet and mobile phone

usage positively affect sectoral employment in the short term and therefore highlights opportunities to booster employment in these sectors. Product innovation drives job growth, while the impact of process innovation is contingent on output growth. However, the introduction of 4IR technologies has varying effects on sectoral employment and can therefore bring both opportunities and threats.

Such insights into the dynamic relationship between innovation and employment have significant implications for policymakers. Effective policymaking must address the potential concerns surrounding innovation, particularly its impact on workers with limited skills and mobility. Policymakers must consider the risks of labour displacement and changing skills requirements, which can lead to resistance to progress. Innovation's contribution to the skills intensity of employment poses a threat to social equity, potentially exacerbating income inequality. To mitigate these concerns, policymakers must adopt a comprehensive approach that fosters skills development, encourages adaptive labour markets, and supports sectors with high employment potential, ensuring that innovation contributes to equitable economic growth.

Climate change and energy

South Africa, as a committed signatory to the Paris Agreement, uses the National GHG Inventory to meticulously track emissions and removals, ensuring alignment with the guidelines set forth by the UN Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change. The 2011 National Climate Change Response White Paper mandates annual updates to guide emission mitigation strategies and enhance economic resilience. The 9th National GHG Inventory Report, covering the period from 2000 to 2022, identifies the energy sector as the largest emitter, contributing 78% of total emissions in 2022. Other sectors, such as industrial processes and product use, agriculture, and waste, contributed 6,4%, 11%, and 4%, respectively. The land use sector has significantly increased its sink potential, underscoring its critical role in emission mitigation. This inventory is indispensable for informed climate policy and action.

As a signatory to the UNFCCC, South Africa has submitted a nationally determined contribution (NDC) that outlines the country's vision to transition to a low-carbon economy and a climate-resilient society within the framework of sustainable development. The NDC sets an economy-wide target and emphasises the role of STI in achieving these policy imperatives, in line with domestic and international commitments to combat climate change. A key policy action to address the intensity of the economy's GHG emissions is the implementation of sectoral emission targets.

In the energy sector, it is anticipated that reduced GHG emissions will be achieved by lowering fuel consumption, switching to nonrenewable fuels, and improving fugitive emissions management. Given the significant volume of GHG emissions from electricity generation, which is predominantly coal-fuelled, the electricity subsector is a primary focus for reducing national GHG emissions. Efforts to reduce emissions in this sector include the decommissioning of existing coal power plants and the development of new power-generation facilities fuelled by non-renewable sources.

Transitioning to a low-carbon sector requires comprehensive efforts on the supply and demand sides. On the supply side, this involves making necessary fuels (such as hydrogen) and technologies available while decommissioning existing GHG-emitting technologies. On the demand side, it involves improving energy efficiency and the production and consumption of goods. Specifically, in the electricity sector, transitioning from coal-based to non-GHG-emitting technologies necessitates a variety of efforts, including policy development (for example, National Energy Regulator of South Africa regulations), long-term planning (the Integrated Resource Plan), and the establishment of appropriate transmission infrastructure within the framework of a just transition.

A just transition in the energy sector must integrate findings from the International Energy Agency, which highlighted that nearly 50% of the necessary carbon dioxide reduction by 2050 relies on prototype technologies. To prevent carbon lock-in, significant investment in energy innovation is crucial over the next decade. The energy STI programme aims to support job growth in the clean energy industry, accelerate technology adoption by energy-intensive industries, and prepare for post-2030 transitions.

Key areas for increased government spending include electrification, hydrogen, bioenergy, and carbon capture. These efforts will ensure competitiveness and sustainability in the global market.

South Africa's climate change mitigation efforts are multifaceted and strategically aligned with international commitments. The focus on transitioning the energy sector, particularly electricity generation, from coal to cleaner technologies is central to reducing national GHG emissions and achieving the country's climate goals.

Selected STI trends

Digital infrastructure

Digital capabilities are essential to ensure a country's growth and economic resilience and are a key enabler to innovators and entrepreneurs. Access to affordable digital infrastructure has become indispensable to society's functioning and citizens' quality of life. Although there is no single definition of digital infrastructure, it comprises the physical resources necessary to enable the use of data, computerised devices, methods, systems, and processes.

The next section presents selected indicators of South Africa's digital competitiveness, including its ranking, access, and enablers.

Digital competitiveness of South Africa

South Africa's digital competitiveness has declined, dropping from 48th in 2019 to 58th in 2023 in the International Institute for Management Development's World Digital Competitiveness Ranking. This decline, especially when compared with China's position at 19, underscores the urgent need for strategic interventions. Enhancing digital infrastructure, supporting domestic digital firms, and improving access to high-speed broadband are critical. Despite advancements in 3G and 4G coverage, high ICT costs and limited access to computers hinder progress. Addressing these challenges is essential for South Africa to regain its competitive edge and foster a robust digital economy.

Despite these gains, challenges persist. ICT prices in South Africa are relatively high. The fixed broadband basket is 3,9% of per capita gross national income, which is five times more expensive than Russia's 0,7%. Mobile data and voice basket prices also exceed those of other BRICS countries. This affordability gap hinders digital adoption and limits access to computers, with only 27% of households owning one. By tackling these challenges, South Africa can revitalise its digital competitiveness and remain competitive in the global economy.

The decline in South Africa's digital competitiveness represents a **weakness** that hinders the country's ability to compete globally. Advocating for targeted investments in affordable digital infrastructure, support for local tech startups, and digital skills development programmes can transform the current challenge into an opportunity to foster a robust digital economy.

R&D expenditure

South Africa's R&D landscape faces significant challenges despite recent recovery signs. Gross domestic expenditure on research and development (GERD) peaked at R39 billion in 2017/18, dropped to R34 billion in 2020/21, and rose to R38 billion in 2021/22. The GERD/gross domestic product ratio mirrored this trend, declining from 0,83% to 0,60%, and then increasing slightly to 0,62%. The decline was driven by reduced business expenditure on R&D, though a 26,4% increase in 2021/22 was noted.

STI human resources

South Africa has made notable strides in human resource development. From 2011 to 2020, post-secondary education attainment increased by 0,5%, with half of the population over 20 completing secondary education by 2020. The 2023 National Senior Certificate results showed an 83% pass rate, with 40% achieving a bachelor pass.

Vocational education maintained stable enrolments at approximately 150 000 per year. Enrolments in artisanal (vocational) education and training grew from 21 849 in 2012 to 30 000 in 2018, indicating a growth in uptake.

Public universities in South Africa face challenges in expanding their academic staff capacity, especially in light of postgraduate student growth. Over the past decade, permanent academic staff grew at a compound average rate of 2,1%, while postgraduate enrolments increased by 2,7%. The proportion of staff over 60 years old rose from 7,3% in 2011 to 10,4% in 2020. There is a risk that staff capacity will be lost through retirement.

Comparatively, South Africa's ratio of R&D technicians to total employment stood at 125 per million from 2010 to 2017. Similar countries, such as Mauritius and Mexico, had 130 and 140 R&D technicians per million, respectively. Malaysia and Egypt boasted higher numbers, with 233 and 370 R&D technicians per million, respectively.

In 2020, South Africa had 33 903 registered engineering professionals and 42 992 engineering candidates. However, disparities remain in engineering demographics, with 92,5% of professionals being men, 71% being white and 21% black.

To address these challenges, the New Generation of Academics Programme supports young academic staff, narrowing the gender gap. Female permanent instructional research staff in South Africa rose from 46% in 2010 to 52% in 2021, achieving parity in 2016. Black African academic staff representation increased from 27% in 2010 to 43% in 2021, with black people constituting 60% of all academic staff.

National policies like the NDP 2030 aim for 75% of staff at universities and 40% at universities of technology to hold doctorates by 2030. Initiatives like the University of Science and Innovation in Ekurhuleni enhance science, technology, engineering and mathematics representation.

STI outputs

South Africa's publication output has grown significantly, from 3 693 in 2000 to 27 208 in 2022, yet its global share peaked at 1% in 2018 and has since stagnated. The number of single-author papers has decreased, while the number of publications resulting from international collaboration has increased, reaching 53% in 2022. Scientific publications grew at an annual rate of 7,4%, with female authorship rising to 45%. Biotechnology publications have declined, while nanotechnology and digitalisation have surged. Patenting activity has decreased, with domestic and international patent applications dropping, although intellectual property (IP) receipts rose by 53% in 2022.

Furthermore, South Africa's payments abroad for IP use have declined substantially since 2017. After a 21% increase in 2021, payments remained unchanged in 2022, significantly lower than a decade ago. Conversely, receipts from the sale of South African IP increased by 6,6% in 2021, following significant decreases in the two preceding years. Between 2021 to 2022, there was a 53% increase in receipts.

The growth in South Africa's publication and patent outputs is a **strength**, showcasing the country's advancing research capabilities. However, the decline in biotechnology publications and disparities in intellectual property usage require attention.

STI impacts

South Africa's manufacturing sector has shown significant growth, driven by advancements in STI. Manufacturing exports increased by 11,7% in 2021 and 11,2% in 2022, reaching R555,8 billion. Medium and high-tech exports rose by 12,2% from 2013 to 2022.

Despite these gains, socio-economic issues persist. South Africa has a Gini coefficient of 66,92. Youth unemployment is at 61,5% and poverty at 62,6%. Local innovation capacity varies. The average Municipal Innovation Maturity Index score is 2.0, with Mahikeng Local Municipality scoring highest at 3.7, followed by Ugu District Municipality at 3.0.

Notably, South Africa's investment in ICT has yielded positive outcomes. Its E-Government Development Index score has improved, and the Inclusive Internet Index score has risen. However, the country's Global Data Barometer score trails behind those of other BRICS countries, highlighting room for improvement in harnessing data for public good.

South Africa's achievements in manufacturing exports and increased global collaboration in research are **strengths** that enhance its STI ecosystem. However, high inequality, youth unemployment, and regional disparities in innovation capacity pose significant **threats**.

4.2. Internal environment analysis

Challenges and opportunities

The 1996 White Paper on Science and Technology and the 2002 National Research and Development Strategy note that the postapartheid government inherited an "ailing" science and technology system that was fragmented, uncoordinated, and not geared to help the government realise the imperatives of economic growth and enhanced quality of life for all citizens.

The need for greater coherence and coordination in the NSI has, therefore, been understood for a long time. A variety of statutory and voluntary mechanisms have been established¹ to transform the system. The idea of an NSI, introduced in the 1996 White Paper, was based on the notion of stakeholders working together for a common purpose. The NSI concept assumes the need for different players across the system (in the public and private sectors) to achieve coherence and complementarity in their functions so that the resources invested in the various entities can have the greatest impact.

In 2014, the minister at the time requested that the CEOs of the then Department of Science and Technology's public entities become ex officio members of NACI. He also asked NACI to develop and host the National STI Information Portal, which was launched in 2017. The NACI chairperson has been granted direct access to the minister to improve coordination and the collaboration of diverse stakeholders (for example, the DSTI-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy (SciSTIP); the Department of Higher Education and Training; the Higher Education Management Information System; the Research Information Management System; and the Centre for Science, Technology and Innovation Indicators).

The <u>Review of South Africa's Higher Education Science</u>, <u>Technology and Innovation Institutional Landscape</u> (DSI, 2020) also observed the lack of uptake of recommendations made in previous NSI review and assessment reports. Among others, it found that the apex and system-level advisory mechanism (NACI) was far from optimal in terms of its membership, capacity, authority and influence. Even when it conducted important studies with system-wide implications, its advisory role was limited to the entities in the DSI portfolio, thereby significantly confining its desired impact.

Minister Nzimande requested that NACI provide him with a business case for the renewal and repositioning of NACI in line with the White Paper. In turn, NACI produced and submitted a business case that was meant to serve as input into the government process of amending the NACI legislation. The minister and NACI have since agreed to a proposed new mandate and functions as the basis for legislative amendments.

NACI set strategic tasks over and above legislated and ministerial-directed ones in 2023. These include: (a) the renewal and repositioning agenda; (b) legislative amendments; (c) the establishment of the new NACI as an independent entity; (d) the development of M&E capability; (e) the resourcing and capacitating of the Secretariat; (f) communication, branding, and public engagement; (g) private-sector participation and engagement; and (h) transformation of the NSI.

Partnerships

NACI has established partnerships with organisations domestically and internationally and leverages them to strengthen its advisory capabilities, ensure the effective implementation of STI policies, and align the Decadal Plan with global, regional and local priorities. Its partners include the following:

• The Organisation for Economic Co-operation and Development – STI policy analysis, evaluation, country reviews, impact assessment, bibliometrics, and data and repository management.

¹ These include NACI, the Council on Higher Education and the National Science and Technology Forum. The government attempted to achieve coherence across departments or priority outcomes by first introducing a cluster system and then delivery forums. There are also numerous sectoral bodies such as Universities South Africa for higher-education institutions and the Committee of Heads of Organisations of Research and Technology, which is mainly for science councils. The contribution of these mechanisms to strengthening the NSI varies, but there is little doubt that much more could be achieved than is currently the case.

- The NRF, HSRC, ASSAf, South African Council for Natural Scientific Professions, Technology Innovation Agency, Accenture, the New Partnership for Africa's Development, the National Science and Technology Forum, the Science Policy Research Unit at the University of Sussex and SciSTIP at Stellenbosch University – Strengthening the system's monitoring, evaluation and learning capability; developing and operating the National STI Information Portal; and developing the next generation of STI policy analysts.
- The Institute for Statistical Studies and Economics of Knowledge in Moscow Leveraging the institute's foresight expertise to support long-term strategic planning for NACI and the Decadal Plan. Scenario planning and future-oriented research can help anticipate challenges and opportunities in achieving STI objectives.
- The Chinese Academy of Science and Technology for Development Policy collaboration with the academy enables exchanges in science and technology strategy and policy research, disciplines, for knowledge domains, infrastructure and human resources. The promotion of international, national and local cooperation on STI strategies and policies particularly in terms of STI theories, national systems of innovation, STI and the economy, institutional reforms, STI foresight and monitoring.
- BRICS institutions Provide a platform for constructive and dynamic engagement on the strategic importance and challenges
 of BRICS STI policy and foresight, advancing the establishment of institutional mechanisms on governance, funding and
 investment, technology and knowledge transfer, and STI human capital and training programmes.

The G20 Chief Science Advisers Roundtable provides a platform to discuss and devise common frameworks to address some of the pressing policy challenges through inclusive global science advice.

PART C: MEASURING PERFORMANCE

1. Institutional performance information

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S	2028/29	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2029	STI Indicators Report produced by 31 March 2029	Four NSI M&E reports finalised by 31 March 2029	Ongoing maintenance and implementation of the NSTIIP by 31 March 2029
edium-term target	2027/28	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2028	STI Indicators Report produced by 31 March 2028	Four NSI M&E reports finalised by 31 March 2028	Ongoing maintenance and implementation of the NSTIIP by 31 March 2028
W	2026/27	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2027	STI Indicators Report produced by 31 March 2027	M&E unit established by 31 March 2027 Two NSI M&E reports finalised by 31 March 2027	Ongoing maintenance and implementation of the NSTIIP by 31 March 2027
Estimated performance	2025/26	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2026	STI Indicators Report produced by 31 March 2026	Two NSI M&E reports finalised by 31 March 2026	Ongoing maintenance and implementation of the NSTIIP by 31 March 2026
ormance	2024/25	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2025	STI Indicators Report produced by 31 March 2025	Two NSI M&E reports finalised by 31 March 2025	Ongoing maintenance and implementation of the NSTIIP by 31 March 2025
udited/actual perf	2023/24	Three STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2024	STI Indicators Report produced by 31 March 2024	Two NSI M&E reports finalised by 31 March 2024	Ongoing maintenance and implementation of the NSTIIP by 31 March 2024
A	2022/23	Two STI advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2023	STI Indicators Report produced by 31 March 2023	Two NSI M&E reports produced by 31 March 2023	Ongoing maintenance and implementation of the NSTIIP by 31 March 2023
Output	indicators	Number of STI advice documents submitted to the Minister of Science, Technology and Innovation	STI Indicators Report finalised by 31 March 2021	Two NSI M&E reports finalised by 31 March 2021	Successful implemen- tation of the NSTIIP
Outnuts		STI advice	State of STI reports	M&E institutiona- lised	NSTIIP
Outrome		To learn from previous experience to improve efficacy and ensure evidence- based, informed, confidential, and timely policy advice to the Minister of Science, Technology and Innovation and, through the minister, the Cabinet	To contribute to the building of NSI M&E and learning capability to assess the	health of the NSI and its contribution to sustainable and inclusive development	

Outcome	Outputs	Output	A	udited/actual perf	formance	Estimated performance	Me	ədium-term target	Ø
		indicators	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
To contribute towards building a well-coordinated, effective, and responsive NSI	Foresight exercise capability institutiona- lised	Foresight exercise capability institutiona- lised			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	Trends analysis conducted by 31 July 2027 South African Foresight Exercises Hub established by 31 March 2027	Draft New SAForSTI Report generated by 31 March 2028	Final SAForSTI Report by 31 August 2029
To transform NACI into a smart and efficient learning organisation	Communi- cation and branding strategy	Communi- cation and branding strategy	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	Communication plan updated and implemented by 31 March 2028	Communication plan updated and implemented by 31 March 2029
	Internal corporate governance system	Internal corporate governance system implemented	Corporate governance system implemented (2022/23 APP, 2021/22 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2023	Corporate governance system implemented (2023/24 APP, 2022/23 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2024	Corporate governance system implemented (2024/25 APP, 2023/24 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2025	Corporate governance system implemented (2025/26 APP, 2024/25 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2026	Transitional Roadmap developed by 30 November 2027 Corporate governance system implemented (2026/27 APP, 2025/26 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2027	Independent NACI established by 31 March 2028 Corporate governance system implemented (2028/29 APP, 2027/28 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2029	Corporate governance system implemented (2028/29 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2029
	Knowledge management system	Knowledge management system implemented	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	Knowledge management system implemented by 31 March 2028	Knowledge management system implemented by 31 March 2029

Table 2: NACI's quarterly targets for the 2025/26 financial year • < 1.2.

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Output indicator Annual target		Quarterly targets				
	Annual target	1st	2nd	3rd	4th	
Number of STI policy advice documents submitted to the Minister of Science, Technology and Innovation	Three STI policy advice documents submitted to the Minister of Science, Technology and Innovation by 31 March 2026	Planning and data analysis by 30 June 2025	Data analysis, consultation, and reporting by 30 September 2025	One STI advice document by 20 December 2025	Two STI policy advice documents generated by 31 March 2026	
Number of state of STI reports produced	STI Indicators Report finalised by 31 March 2026	Concept and work plan produced by 30 June 2025	Inception report produced by 30 September 2025	Data collection and initial analysis commenced by 20 December 2025	Draft STI Indicators Report finalised by 31 March 2026	
Number of NSI M&E reports	Two NSI M&E reports finalised by 31 March 2026	Scoping and framing of the projects by 30 June 2025	Data collection commences	Data collection and initial analysis to commence by 20 December 2025	Draft two NSI M&E reports finalised by 31 March 2026	
Successful implementation of the NSTIIP	Ongoing maintenance and implementation of the NSTIIP by 31 March 2026	Directories of experts and communities of practice (COPs) data expanded by 30 June 2025	STI statistics section expanded by 30 September 2025	CoPs session for extending functionality conducted by 20 December 2025	STI statistics section completed by 31 March 2026	
Foresight exercise capability institutionalised	Review report on the design evaluation of the SAForSTI by 15 March 2026	No target	Appointment of experts to conduct fieldwork by 30 September 2025	Data analysis and review by 20 December 2025	Review report on the design evaluation of the SAForSTI by 15 March 2026	
Communication plan	Communication plan implemented by 31 March 2026	Communication plan updated and implemented by 30 June 2025	Communication plan implemented by 30 September 2025	Communication plan implemented by 20 December 2025	Communication plan implemented by 31 March 2026	
Internal corporate governance system implemented	2024/25 Annual Report) developed and approved by the minister and submitted to Parliament by 31 March 2026	Highlights of annual report submitted to the DSTI by 30 May 2025	First draft of 2024/25 annual report submitted to the DSTI by 30 July 2025 Second draft of 2024/25 annual report submitted to the DSTI by 30 August 2025 2024/25 annual report ready for tabling in Parliament by 30 September 2025	First draft of 2026/27 APP submitted to the DSTI by 15 October 2025	Final draft of 2026/27 APP submitted to the DSTI by 30 January 2026	
Knowledge management system	Knowledge management system tools implemented by 31 March 2026	Knowledge management system tools utilised to store ongoing NACI transcripts facilitated by 30 June 2025	Knowledge management system tools utilised to store ongoing NACI transcripts facilitated by 30 September 2025	Knowledge management system tools utilised to store ongoing NACI transcripts facilitated by 30 December 2025	Knowledge management system tools implemented by 31 March 2026	

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1.3. Planned performance over the medium- term period

1.3.1. To learn from previous experience to improve efficacy and ensure evidence-based, confidential, and timely policy advice to the Minister of Science, Technology 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.

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

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

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

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

1.3.4. 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. The development of skills, knowledge, and competency 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 Science, Technology and Innovation, as well as new approaches to public and private-sector engagement.

2. Resource considerations

2.1. Human resource requirements

To implement its advisory work programme, NACI is supported by the NACI Secretariat. The secretariat is composed of 15 members, including the CEO. In the 2024/25 financial year, two people were employed on fixed-term contracts to assist the team with their workload.

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2.2. Expenditure estimates

Table 3 presents a summary of 2025/26 expenditure estimates for the total budget of R18,550 million, comprising compensation of employees (R11,123 million) and goods and services (R7,427 million).

ltem	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	11,123	11,634	12,158
Goods and services	7,598	7,818	5,593	5,817	7,427	7,672	7,927
Transfers and subsidies	_	-	_	_	_	-	_
Payment for financial assets	_	_	_	_	_	_	_
Total	15,920	17,380	16,612	17,276	18,550	19,306	20,085

Table 3: NACI's expenditure estimates

3. Key risks

Outcomes	Key risks	Risk mitigation
To learn from previous experience to improve efficacy and ensure evidence- based, informed, confidential, and timely policy advice to the Minister of Science, Technology and Innovation and, through the minister, the Cabinet	 Low uptake of advice Failure to appoint highly capable and competent staff 	 Secretariat to undergo training to develop skills relating to drafting and delivering high-quality advice timeously Council to secure ministerial advice/ direction/approval for identified areas before the production of advice Council to robustly engage with the draft advice before submission to the minister
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	 Copyright infringements relating to STI data and information stored on the STI data and information portal Failure to appoint individuals with critical skills 	Continue negotiations with the service provider to determine the terms for using STI data and information
Building a capable, smart, and effective organisation	 Inaccurate, unreliable, and incomplete reporting of actual achievements against predetermined objectives as indicated in the annual performance plan (APP); qualified audit opinion on non-financial performance Lack of funding to fill positions requiring critical and scarce skills 	 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) Implement and monitor quarterly the approved roles and responsibilities in Performance Information Reporting Guidelines Finalise the draft DSTI Performance Information Reporting Guidelines

PART D: TECHNICAL INDICATOR DESCRIPTIONS

Strategic outcomes are broad and focused on the long term. Therefore, short- to medium-term objectives that can be pursued, implemented, and tracked are needed. NACI's objectives are set out in Table 4, which also provides indicators and a baseline.

Indicator title	Number of advice documents generated and submitted to the Minister of Science,
	Technology and Innovation.
Short definition	Evidence-based, confidential, and timely advice (proactive and reactive) will be generated
Source/collection of data	Primary data, secondary data (survey and literature review) and existing data (literature review)
Method of calculation/ assessment	Quantitative and qualitative
Data limitations/ assumptions	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
Disaggregation of beneficiaries	Different advice areas may target different beneficiaries on various recommendations
Spatial transformation	n/a
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	To learn from previous experience to improve efficacy and ensure the production of evidence- based, confidential, and timely advice to the Minister of Science, Technology and Innovation and, through the minister, the Cabinet
Indicator responsibility	Chief senior specialist and senior specialists

Table 4: NACI's technical indicator descriptions

Indicator title	Number of state of STI reports produced
Short definition	Generate research findings to inform policy recommendations
Source/collection of data	Primary data, secondary data (survey and literature review), and existing data (literature review)
Method of calculation/ assessment	Qualitative and quantitative
Data limitations/ assumptions	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
Disaggregation of beneficiaries	NACI's reports are intended for general benefit. Some M&E reports give specific data on race, age and gender.
Spatial transformation	n/a
Calculation type	Non-cumulative and cumulative (long-term)
Reporting cycle	Quarterly
Desired performance	Advice letters with policy recommendations based on research findings
Indicator responsibility	Chief senior specialist and senior specialists

Indicator title	Number of NSI M&E reports produced
Short definition	Generate research findings to inform policy recommendations
Source/collection of data	Primary data, secondary data (survey and literature review), and existing data (literature review)
Method of calculation/ assessment	Qualitative and quantitative
Data limitations/ assumptions	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
Disaggregation of beneficiaries	NACI's reports are intended for general benefit. Some M&E reports give specific data on race, age and gender.
Spatial transformation	n/a
Calculation type	Non-cumulative and cumulative (long-term)
Reporting cycle	Quarterly
Desired performance	Advice letters with policy recommendations based on research findings
Indicator responsibility	Chief senior specialist and senior specialists

Indicator title	PPI 4: Successful implementation of the NSTIIP.
Short definition	The central repository of all key STI data and information.
Source/collection of data	Primary data (surveys etc. from data collectors), secondary (linkages with other similar portals) and improvement of existing data (issues or challenges faced)
Method of calculation/ assessment	Qualitative and quantitative
Data limitations/ assumptions	NACI partners will always be willing to cooperate and avail primary data as and when required. However, NACI lacks the necessary authoritative power to compel data sources to share their data.
Disaggregation of beneficiaries	Yes. All reports will be required to provide disaggregated data where possible.
Spatial transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Optimal functioning of the NSTIIP
Indicator responsibility	Acting Senior Specialist: S&T Indicators and Measures

Indicator title	Foresight exercise capability institutionalised
Short definition	Design evaluation of the SAForSTI
Source/collection of data	Primary data, secondary data (survey and literature review), and existing data (literature review).
Method of calculation/ assessment	Qualitative and quantitative
Data limitations/ assumptions	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
Disaggregation of beneficiaries	NACI's reports are intended for general benefit. Some M&E reports give specific data on race, age and gender.
Spatial transformation	n/a
Calculation type	Non-cumulative and cumulative (long-term)
Reporting cycle	Quarterly
Desired performance	Advice letters with policy recommendations based on research findings
Indicator responsibility	Chief senior specialist and senior specialists

Indicator title	Communication plan implemented
Short definition	Using media engagement, electronic communications, branding, events management, and 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
Source/collection of data	On-site surveys at events Attendance registers Distribution of reports Media analysis reports Ministry and presidential speeches Departmental advice
Method of calculation/ assessment	Attendance registers Public reports produced Number of media/press clippings/inserts/interviews
Data limitations/ assumptions	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
Disaggregation of beneficiaries	Disaggregated data will be required in all reports where possible
Spatial transformation	n/a
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Awareness of and access to information about NACI programmes and initiatives by NSI stakeholders and the South African public
Indicator responsibility	Chief senior specialist

Indicator title	Internal corporate governance system approved and implemented
Short definition	To develop and implement monitoring and evaluation reports to inform planning and decision- making
Source/collection of data	Strategic and APP National Treasury Framework for Strategic Plans and APPs DPME National Evaluation Policy Framework
Method of calculation/ assessment	Quantitative
Data limitations/ assumptions	Assumption and limitation: NACI projects are not completed timeously
Disaggregation of beneficiaries	Disaggregated data will be required in all reports where possible
Spatial transformation	n/a
Calculation type	Cumulative
Reporting cycle	Quarterly
Desired performance	Reports (four quarterly reports and one annual report) leading to informed decision-making that will ensure the attainment of the MTSF objectives
Indicator responsibility	DD: administration and coordination

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Indicator title	Knowledge management system implemented
Short definition	To extract and harness historical organisational data to inform continued operations
Source/collection of data	Primary data (surveys, interviews, and so on from data collectors) and secondary data (stored information in the registry)
Method of calculation/ assessment	Quantitative and qualitative
Data limitations/ assumptions	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
Disaggregation of beneficiaries	Disaggregated data will be required in all reports where possible
Spatial transformation	n/a
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	Knowledge system
Indicator responsibility	Senior specialist

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