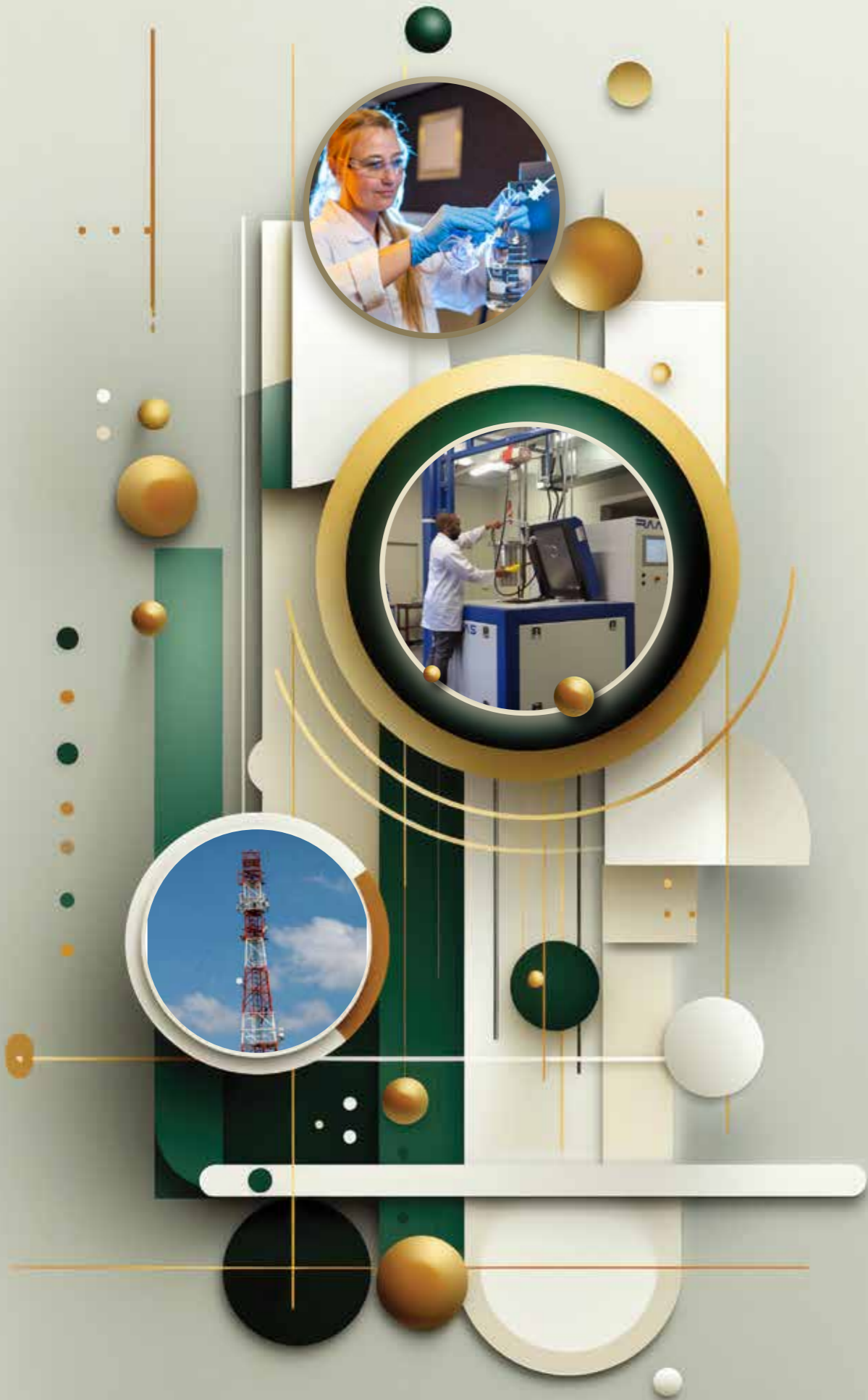




# STRATEGIC PLAN

## 2025/26–2029/30





## TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	3
EXECUTIVE AUTHORITY STATEMENT	4
FOREWORD BY THE DEPUTY MINISTER	5
OVERVIEW BY THE CHAIRPERSON	6
EXECUTIVE SUMMARY BY THE ACTING ACCOUNTING OFFICER (OR CEO)	8
OFFICIAL SIGN-OFF	9
<b>PART A: MANDATE</b>	<b>10</b>
1 CONSTITUTIONAL MANDATE	11
2 LEGISLATIVE AND POLICY MANDATES	11
3 INSTITUTIONAL POLICIES AND STRATEGIES OVER THE FIVE-YEAR PLANNING PERIOD	12
3.1 THE MEASUREMENT ACT	12
3.2 INTERNATIONAL MANDATES	12
3.3 NATIONAL MANDATES	12
4 REGULATIONS	13
5 RELEVANT COURT RULINGS	14
<b>PART B: STRATEGIC FOCUS</b>	<b>15</b>
6 VISION	16
7 MISSION	16
8 VALUES	16
9 SITUATIONAL ANALYSIS	17
9.1 EXTERNAL ENVIRONMENT ANALYSIS	17
9.2 INTERNAL ENVIRONMENT ANALYSIS	19
9.3 MANAGEMENT STRUCTURE	21
10 STRATEGIC OBJECTIVES	22

**PART C: MEASUREMENT OF ORGANISATIONAL PERFORMANCE 23**

<b>11 INSTITUTIONAL PERFORMANCE INFORMATION</b>	<b>24</b>
11.1 MEASURING THE IMPACT	24
11.2 MEASURING OUTCOMES	24
11.3 NMISA'S CONTRIBUTION TO THE DTIC BLUE SKY INTERVENTIONS	25
11.4 PLANNED PERFORMANCE OVER THE FIVE-YEAR PLANNING PERIOD	30
<b>12 KEY RISKS</b>	<b>31</b>
<b>13 PUBLIC-PRIVATE PARTNERSHIPS</b>	<b>32</b>

**PART D: TECHNICAL INDICATOR DESCRIPTION 33**

<b>14 NMISA TECHNICAL INDICATOR DESCRIPTIONS</b>	<b>34</b>
<b>15 NMISA CONTRIBUTIONS TO THE DTIC STRATEGIC INTERVENTIONS</b>	<b>40</b>

**ABBREVIATIONS AND ACRONYMS**

AfCFTA	African Continental Free Trade Area
AFRIMETS	Intra-Africa Metrology System
BIPM	International Bureau of Weights and Measures
CC	Consultative Committee
CEO	Chief Executive Officer
CIPM	International Committee for Weights and Measures
CMC	Calibration and Measurement Capabilities
ERP	Enterprise Resource Planning
IAEA	International Atomic Energy Agency
KCDB	Key Comparison Database
KPI	Key Performance Indicator
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRA	Mutual Recognition Arrangement
NIST	National Institute of Standards and Technology
NMI	National Metrology Institute
NMISA	National Metrology Institute of South Africa
NMS	National Measurement Standards
NRCS	National Regulator for Compulsory Specifications
PFMA	Public Finance Management Act
PMDS	Performance Management and Development System
PTS	Proficiency Testing Schemes
SADC	Southern African Development Community
SADCMET	SADC Cooperation in Measurement Traceability
SAHPRA	South African Health Products Regulatory Authority
SEZ	Special Economic Zones
SHEQ	Safety Health Environment and Quality
SI	International System of Units
SMME	Small, Medium and Micro Enterprises
SOE	State-Owned Enterprises
STEM	Science, Technology, Engineering and Mathematics
<b>the dtic</b>	Department of Trade, Industry and Competition
TI	Technical Infrastructure
UNIDO	United Nations Industrial Development Organization



## EXECUTIVE AUTHORITY STATEMENT

The National Metrology Institute of South Africa (NMISA) has prepared its Strategic 2025/26–2029/30, which I now submit to Parliament, as required by the legislation.

Decarbonisation is a priority for South Africa as the country transitions to a low-carbon economy. This transition is closely linked to the value addition of critical minerals such as platinum, manganese, vanadium, and lithium, which are essential for clean energy technologies like electric vehicles and renewable energy systems. Accurate measurement and analysis of these minerals, facilitated by advanced metrology, ensure that their extraction and processing meet environmental standards and efficiency benchmarks.

Metrology plays a key role in verifying the quality and sustainability of these minerals, thereby supporting their global acceptance and integration into green technologies. NMISA contributes to the local characterisation of critical minerals by offering high-accuracy analytical techniques and primary methods traceable to National Measurement standards.

Diversification aims to reduce reliance on a few key industries and foster resilience and long-term prosperity. Metrology ensures reliable measurements across sectors. By providing internationally equivalent measurement services and training, NMISA helps local manufacturers optimise production and ensure product quality. This is particularly important for the manufacturing industry, where precision and consistency are vital for competitiveness and meeting global market demands.

As we enter the next 5-year period, our commitment to decarbonisation, diversification, and digitalisation will guide our efforts to build a sustainable economy for South Africa. By leveraging our rich mineral resources and advanced metrological capabilities, we can drive economic growth while meeting global environmental standards. NMISA's role in providing high-accuracy measurement services and supporting local industries is essential for ensuring the quality and competitiveness of South African products internationally.

Together, we will harness these opportunities to create a resilient, diversified, and digitally advanced economy that benefits all South Africans.

**Mr Parks Tau, MP**

Minister of Trade, Industry and Competition

31 March 2025





“ **Demonstration of the equivalence of National Measurement Standards realised on the continent enables inter-continental trade and thereby supports the plans to start trading under the African Continental Free Trade Area. ”**

## OVERVIEW BY THE CHAIRPERSON

NMISA was established to be the link to the international measurement system for South Africa. Metrology, or the science of measurement, is fundamental to daily life. It establishes confidence in measurement results in many important areas such as trade, health, safety, consumer protection, environmental monitoring, manufacturing, food safety, law enforcement, research, and development.

A new board for NMISA was appointed in October 2023, which, with management, drafted the NMISA strategy for the next period. This resulted in the following objectives being formulated for the period 2025 to 2030:

- Ensure regional, continental, and international comparability of the South African measurement infrastructure to support economic growth and to enhance the quality of life for all.
- Improve financial stability and ensure sustainable growth.
- Maintain fast and efficient service delivery to clients.
- Develop and retain a capable workforce that is capable of utilising world-class infrastructure to deliver specialised and innovative measurement solutions.
- Effectively engage and collaborate with stakeholders to develop and strengthen mutually beneficial relationships in fulfilment of the NMISA mandate.

The Strategic Plan aligns with **the dtic** priorities for economic recovery through industrialisation, localisation, and trade. Local manufacturers rely on measurement traceability to internationally equivalent National Measurement Standards to calibrate the machinery and tooling that are used during the manufacturing process, which helps to ensure accurate and precise parts. Post-production quality control processes also rely on accurate measurement to ensure that product specifications and client expectations are met, especially for export markets. As manufacturing technology becomes more advanced globally, the demand for high-accuracy measurements increases, particularly in industries that depend on extreme precision, such as automotive manufacturing. The measurement products and services offered by NMISA are traceable to the associated National Measurement Standards.

Trade with the rest of Africa holds great potential to further economic growth for South Africa. Over time, NMISA has contributed significantly to the development, harmonisation, and growth of the African measurement system. Demonstration of the equivalence of National Measurement Standards realised on the continent enables inter-continental trade and thereby supports the plans to start trading under the AfCFTA.

The Board is looking forward to another year of leading a talented workforce in serving the local industry, engaging with our partners and stakeholders to enhance the competitiveness of local companies, especially small, medium and micro enterprises, working together to grow the economy.

**Dr Precious Motshwene**  
Accounting Authority  
31 January 2025



“Metrology is the science of measurement, embracing both experimental and theoretical determinations at any level of uncertainty in any field of science and technology providing harmonisation of measurement standards between trading countries that facilitates trade based on the principle of “Measured once, accepted everywhere”.”

## EXECUTIVE SUMMARY BY THE ACTING ACCOUNTING OFFICER (OR CEO)

South Africa is currently ensnared in a persistent low-growth trap that has affected the economy negatively for over a decade. Several factors have contributed including logistics infrastructure, surge in imports, fiscal consolidation, and lack of innovation and competitiveness. The new Government of National Unity is addressing these challenges by focusing on industrialisation, building domestic capacity, improving infrastructure, and nurturing innovation aimed at creating a more competitive economy.

For South Africa and our continent to achieve economic potential and move toward a future where local industries are more robust, exports increase, and the economy recovers, the country must have robust metrological systems in place. Accurate measurements are vital for trade, both within Africa and with global partners.

Metrology is often underestimated. Yet, it is the base upon which modern societies and economies are built. From the food we consume to the infrastructure we rely on; accurate and reliable measurements are indispensable. Metrology is foundational, not only to modern life but has also assisted human civilization throughout history and harmonized measurements ensure that products meet international standards, which build trust and competitiveness in the global market.

This is particularly important as we strive to implement the African Continental Free Trade Area (AfCFTA), which aims to create a single continental market for goods and services, with free movement of business, people, and investments.

Metrology will ensure that products from South Africa and Africa are measured against the same standards as those from other parts of the world and underpins all economic activities and is not only the focus of **the dtic** – but is NMISA’s mandate for South Africa.

As we enter the new five-year strategy cycle, and support efforts to sow the seeds of long-term growth, Metrology will be celebrating the 150<sup>th</sup> anniversary of the Metre Convention Treaty with celebrations starting on World Metrology Day (20 May 2025). The theme for WMD 2025 is “Measurement: for all times, for all people” and kicks off a combined assurance that South Africa’s measurement infrastructure is solid, is the foundation, and is here to stay.

**Dr Jayne de Vos**  
Acting Chief Executive Officer

31 January 2025

## OFFICIAL SIGN-OFF

It is hereby certified that this Strategic Plan:

- Was developed by the management of the National Metrology Institute of South Africa (NMISA) under the guidance of the Board.
- Takes into account all the relevant policies, legislation and other mandates for which the National Metrology Institute of South Africa is responsible.
- Accurately reflects the impact, outcomes, and outputs which the National Metrology Institute of South Africa will endeavour to achieve over the period 2025/26–2029/30.

**Dr Jayne de Vos**  
Acting Accounting Officer

**Dr Precious Motshwene**  
Accounting Authority

Approved by:

**Mr Parks Tau, MP**  
Executive Authority

# PART A

## MANDATE



## 1 CONSTITUTIONAL MANDATE

The National Metrology Institute of South Africa (NMISA) does not have an explicit mandate in the Constitution of South Africa. Instead, its establishment and functions are governed by the Measurement Units and Measurement Standards Act, Act No. 18 of 2006. NMISA has a legislative mandate derived from this Act, which provides for the use of measurement units of the International System of Units (SI), the designation of national measurement units and standards, and the establishment of NMISA (see section 2). Specifically, Section 8 of the Act establishes NMISA as a juristic person, and Section 9 outlines its functions, including maintaining national measurement standards and ensuring their international comparability.

## 2 LEGISLATIVE AND POLICY MANDATES

NMISA was established under the Measurement Units and Measurement Standards Act, No. 18 of 2006 (The Measurement Act):

**“ To provide for the use of measurement units of the International System of Units (SI) and certain other measurement units; to provide for the designation of national measurement units and standards; to provide for the keeping and maintenance of National Measurement Standards and units and to provide for the establishment and functions of the National Metrology Institute. ”**

NMISA sees to the application of the SI units in South Africa, coordinates the process to approve other measurement units for use, continuously improves and maintains the gazetted National Measurement Standards (NMS), and disseminates the NMS and specialised measurement units to society. NMISA provides reference measurements, reference standards and reference materials to industry and the region; this in turn shortens the traceability chain for South Africa and the region.

This role is further expanded to be the main advisor and consultant on measurement and trade issues to government departments, public entities, state-owned enterprises (SOEs) and the State. NMISA provides input to lawmakers and regulators to ensure the integrity of measurement issues. This role is further expanded to influence and drive regulation where accurate measurement should be enforced.

## 3 INSTITUTIONAL POLICIES AND STRATEGIES OVER THE FIVE-YEAR PLANNING PERIOD

### 3.1 THE MEASUREMENT ACT

The Measurement Act is under the auspices of the Department of Trade, Industry and Competition (**the dtic**), and NMISA has also been recognised as a research institution in line with the Scientific Research Council Act (Act No. 46 of 1988). The Measurement Act is under review and proposals for amendments include a requirement for the use of the services and certified reference materials produced by NMISA by laboratories of SOEs, public entities and law enforcement agencies. The redefinition of the SI in 2018 and its implementation since 20 May 2019 were considered in linking the national measurement system to the international system.

### 3.2 INTERNATIONAL MANDATES

South Africa is a signatory of the Metre Convention of 1875 that created the International Bureau of Weights and Measures (BIPM) to act in matters of world metrology, particularly concerning the demand for measurement standards of ever-increasing accuracy, range, and diversity, as well as to address the need to demonstrate equivalence between NMS. The SI was also established under the Metre Convention and underwent a major transformation with the Revised SI implemented on 20 May 2019.

South Africa signed the International Committee for Weights and Measures (CIPM) Mutual Recognition Arrangement (MRA) in 1999. The CIPM MRA provides an open, transparent and comprehensive scheme to give users reliable quantitative information on the comparability of national metrology services and provide the technical basis for wider agreements negotiated for *international trade, commerce and regulatory affairs*. It is the basis for the international acceptance of calibration and measurement certificates issued by NMIs and in turn provides the framework for the international recognition of conformity assessment and testing.

The procedures to establish the equivalence of NMS and ensure the correct application of the SI govern the activities of NMISA to ensure a proper measurement system for South Africa and provides regional integration in preparation for the AfCFTA.

### 3.3 NATIONAL MANDATES

NMISA prioritised its activities to support the development, accreditation, and enforcement of standards that can create, scale up and resuscitate industries while simultaneously contributing to broader social benefits.

## 4 REGULATIONS

### **Ionising radiation monitoring equipment**

Regulation No. R. 247, 26 February 1993, under the Hazardous Substances Act, No. 15 of 1973, requires equipment used for monitoring of ionising radiation to be calibrated. This places a requirement on NMISA to provide measurement traceability.

### **South African food labelling regulations**

On 1 March 2010, the Department of Health published new regulations relating to the labelling and advertising of foodstuffs as part of the Foodstuffs, Cosmetics and Disinfectant Act (Act No. 54 of 1972). According to the new regulations, no manufacturer may make a nutrition claim about their food product unless that food has been analysed in an accredited laboratory and the content of the specific nutrient or nutrients is greater than a specified amount per serving.

This, together with regulations under the Agricultural Product Standards Act (Act No. 119 of 1990), resulted in testing laboratories requesting NMISA to provide the necessary measurement assurance through proficiency testing and reference materials, and in some instances where no testing facilities exist, to provide the testing capability.

### **South African Health Products Regulatory Authority (SAHPRA)**

SAHPRA is the new regulatory authority that succeeds the Medicines Control Council (MCC). SAHPRA was originally established by Act No. 72 of 2008 that extended the original MCC mandate to include medical devices. Act No. 14 of 2015 extended the oversight of medical devices to in vitro devices. As a fellow Schedule 3A public entity, NMISA offers its metrology services to SAHPRA as a related party and offers expertise in the type testing of medical devices (as a National Regulator for Compulsory Specifications (NRCS) designated laboratory) and establishes calibration capabilities for medical devices.

## 5 RELEVANT COURT RULINGS

NMISA is impacted by court rulings on law enforcement issues such as speed trapping, breath alcohol analysis and any product specification issue in a South African law or regulation. For the period discussed, the following rulings and changes to laws will impact NMISA.

### Legal Metrology Act

The Legal Metrology Act No. 9 of 2014 makes provision for the regulation of measuring instrumentation used in the environment, health, and safety. This places an additional requirement on NMISA to provide measurement traceability for the calibration of equipment such as medical devices. It also creates opportunities for NMISA to assist the NRCS's Legal Metrology with type testing and verification activities for these instruments.

### Breathalysers

The Hendrik's judgement in the Western Cape High Court in September 2011 led to the newly revised SANS 1793: 2013 (the specification for evidential breath analysers). This meant that no evidential breathalysers were calibrated in South Africa since 2011. Based on this review, tests were completed on a new generation breathalyser required by the SANS regulations and NMISA now calibrates the new breathalysers.

### The dismissed speed camera court case

A recent court case relating to speed prosecution was the case in the Free State (Magisterial District of Bloemfontein) of the State vs Mr Mphande, which was concluded in January 2022. Mr Mphande was accused of driving at a speed of 156 km/h, which is in excess of the general speed limit of 100 km/h applying to that road, at a distance of 222,4 meters. The state could not prove specifically that the high-speed measuring instrument used to measure the vehicle's speed and calibrated by commercial calibration laboratories, provided accurate and reliable results.

Since then, NMISA has developed measurement capabilities to calibrate specific types of speed measurement devices. This service is being offered to law enforcement agencies, municipalities, and equipment suppliers, among others.



# PART B

## STRATEGIC FOCUS

## 6 VISION

To enable regional and global market access for our clients and enhance the quality of life for all South Africans, through internationally accepted measurement systems.

## 7 MISSION

To consistently deliver outstanding innovative and internationally accepted measurement systems that support regional and international trade, and people's quality of life, and enable the protection of the environment.

## 8 VALUES

- **Forward thinking**
  - Evolving and adapting with new technologies to deliver innovative measurement solutions for niche markets.
- **Trustworthy**
  - Inspiring confidence in stakeholders that our commitments are consistently met and that their satisfaction is our priority.
- **Knowledge sharing**
  - Achieving more through networking, collaboration, and partnerships to build a better future together.
- **Accountability**
  - Acting ethically and responsibly in all aspects of work and taking ownership of our actions and their outcomes.
- **Respect**
  - Embracing diversity and different perspectives, with consideration for our social and physical environment.

## 9 SITUATIONAL ANALYSIS

### 9.1 EXTERNAL ENVIRONMENT ANALYSIS

NMISA is represented at the highest level of scientific metrology decision-making and strives to ensure that the interests of the African NMIs/countries, specifically South Africa, are protected.

The CIPM coordinates metrology worldwide through 10 technical consultative committees (CCs). NMISA has membership of the 9 technical CCs of the CIPM. The CIPM Presidency is currently held by Dr. Wynand Louw from South Africa, a NMISA Board Member, until March 2027. Technical experts from NMISA participate in the CC working group activities and represent the region at the plenaries and the policy setting meetings. The interests of the Southern African Development Community (SADC) and Africa need to be protected at these meetings. The NMIs of Egypt, Kenya, and Tunisia have been gradually entering the CCs and it is expected that by 2025, there will be substantial representation from other African NMIs in the CCs.

The degree of equivalence and the comparability of the NMS are maintained through participation in comparisons between the NMS realised by other national metrology institutes, organised by the CIPM CCs and/or other NMIs within the regional metrology organisation networks. The results of these comparisons and the Calibration and Measurement Capabilities (CMC) claims based on the results are published in the BIPM's Key Comparison Database (KCDB), which is accessible for everybody to check and verify a country's capabilities.

INTERNATIONAL PARTNERSHIPS	NMISA'S ROLE
<b>SADCMET</b>	NMISA plays a leadership role in the development of accurate measurement and traceability in the sub-region and Africa. NMISA ensures the acceptance of the quality system (QS) fit-for-purpose for the CIPM MRA and assists other African Members of the BIPM and Associates of the General Conference on Weights and Measures to get their QSs accepted.
<b>AFRIMETS</b>	NMISA provides the traceability link to the SI and international standards to sub-Saharan Africa and is the main driving force behind the sub-regional metrology programme (SADCMET) and the intra-Africa metrology system (AFRIMETS).
<b>AOAC INTERNATIONAL (AOACI)</b>	NMISA participates in the activities of AOACI. It is an organisation dedicated to promoting and advancing the knowledge and best practices in the analytical sciences in our region. AOACI aims to achieve method alignment and harmonisation in analytical measurement to ensure accurate testing of food and commodities.

NMISA aligns activities to support the relevant **dtic** output targets, which include:

- Measurement services to entities within the designated special economic zones (SEZs).
- Products and services that assist local manufacturers with improving production efficiency and meeting quality standards for exports.
- Implementation of the AfCFTA by demonstration of the equivalence of the NMS on the continent to enhance inter-continental trade.
- Training courses related to quality assurance to small, medium and micro enterprises (SMMEs), women- and youth-owned businesses (*funding dependent*).
- Awareness campaigns and increased service delivery in districts outside the main metropolitan areas (*funding dependent*).
- Non-permanent job opportunities through internship programmes mainly in science, technology, engineering and mathematics (STEM) fields (*funding dependent*).
- Calibration, measurement, and testing services for verification of the photometric performance of energy-efficient lighting products (LEDs). Expansion of the capability to include testing to the full requirements of the new regulation (electrical and safety parameters) is dependent on the availability of funding.

- Finalisation of green hydrogen commercialisation framework – development of new metrology capabilities to support this initiative is dependent on availability of funding.
- Climate initiatives such as supporting infrastructure for electrical vehicles. Development of new measurement capabilities beyond the existing services (power and energy) and provision of certified gas reference mixtures are dependent on availability of funding.
- Red-tape reduction measures through digitalisation of operational system and automation of measurement systems.

Over the past three years, the grant allocation to NMISA has been reduced by over R170 million in response to the fiscal budget deficit and cost containment measures initiated by the National Treasury. Although NMISA has maintained an above-inflation increase in sales revenue over the past six years (with provision for the visible slowdown during the national lockdowns), the gains made are insufficient to negate repeated, severe cuts in grant allocations. The Strategic Plan for the next five years is therefore essentially a plan of measures to optimise operational efficiency within the available funding while achieving real annual revenue growth above inflation.

NMISA conducted a PESTLE analysis, informing the Strategic Plan, which considers the external factors that may impact its business operations and performance.

POLITICAL	ECONOMIC
<ul style="list-style-type: none"> <li>• 2023: Year of acceleration of AfCFTA implementation.</li> <li>• South Africa's eligibility of AGOA vital (\$2.7m contribution to economy).</li> <li>• Technical barriers to trade – export restrictions for South African goods.</li> <li>• Wage increase decisions.</li> <li>• Regulations for specific market sectors.</li> <li>• Absence of regulations in specific market sectors (traceable calibrations for medical equipment).</li> </ul>	<ul style="list-style-type: none"> <li>• State spending cuts to reduce budget deficit – NMISA grant allocation cuts.</li> <li>• Slow economic growth and high inflation rates negatively impacts spending (clients extend re-calibration intervals, companies downsizing operations).</li> <li>• International supply chains still recovering from lockdowns – delays in delivery of source materials (e.g. pure gasses for certified gas mixtures).</li> </ul>
SOCIAL	TECHNOLOGICAL
<ul style="list-style-type: none"> <li>• Social media shapes public opinion and consumer experiences – implications for brand management, consumer knowledge and information.</li> <li>• Demands for SMME support.</li> <li>• The NMISA Human Capital Development programme provides opportunities for young graduates in STEM fields to gain work experience and become market ready.</li> </ul>	<ul style="list-style-type: none"> <li>• Digital metrology (standards and tools for analysis of complex data sets to ensure reliability of information).</li> <li>• Advanced materials.</li> <li>• Advanced manufacturing.</li> <li>• Re-definition of the SI.</li> <li>• Cybersecurity.</li> <li>• Automation of measurement systems improves efficiency and shorter turn-around times for client services.</li> </ul>
LEGAL	ENVIRONMENTAL
<ul style="list-style-type: none"> <li>• Collaboration between technical infrastructure (TI) entities in accordance with their respective acts for quality assurance of imported/exported products.</li> <li>• Certified measurement results underpinned by appropriate governance processes to enable prosecution of offenders by law enforcement agencies.</li> <li>• Consumer protection laws – regulated by the NRCS, measurement traceability provided by NMISA.</li> <li>• Occupational Health and Safety Act.</li> <li>• Protection of Personal Information Act.</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental laws for pollution control (micro-plastics), waste management, and resource conservation (air quality monitoring).</li> <li>• Energy transition to renewable resources (energy efficiency, green hydrogen).</li> </ul>

## 9.2 INTERNAL ENVIRONMENT ANALYSIS



As one of **the dtic's** TI institutes, NMISA's activities are critical to the success of the other TIs. Standardisation, metrology, conformity assessment, and accreditation are key issues in the implementation of free trade agreements between countries/economic trade blocks. Together the TIs work towards '*measured once, accepted everywhere*'.

Measurements performed for regulatory/legal purposes require traceability through a national reference, as provided by NMISA. Regulations also apply to the use of measurement instruments in areas of trade, healthcare, environmental protection, traffic surveillance, and safety at work, and the calibration of these instruments have traceability to the NMS. NMISA therefore has a further role to play in providing technical support for many other acts and regulations, such as the Atomic Energy Act, Act No. 90 of 1967 and the Occupational Health and Safety Act, Act No. 85 of 1993.

**The dtic** has initiated a revision of the Measurement Act to align it with the latest international and local best practice. The main aspects to be addressed include: the role of NMISA in providing measurement services and traceability to existing measurement laboratories within government departments (police forensics, Department of Health forensic laboratories, Department of Transport law enforcement agencies, etc.); the provision of metrology shared services to SOEs; and metrology support for regulations.

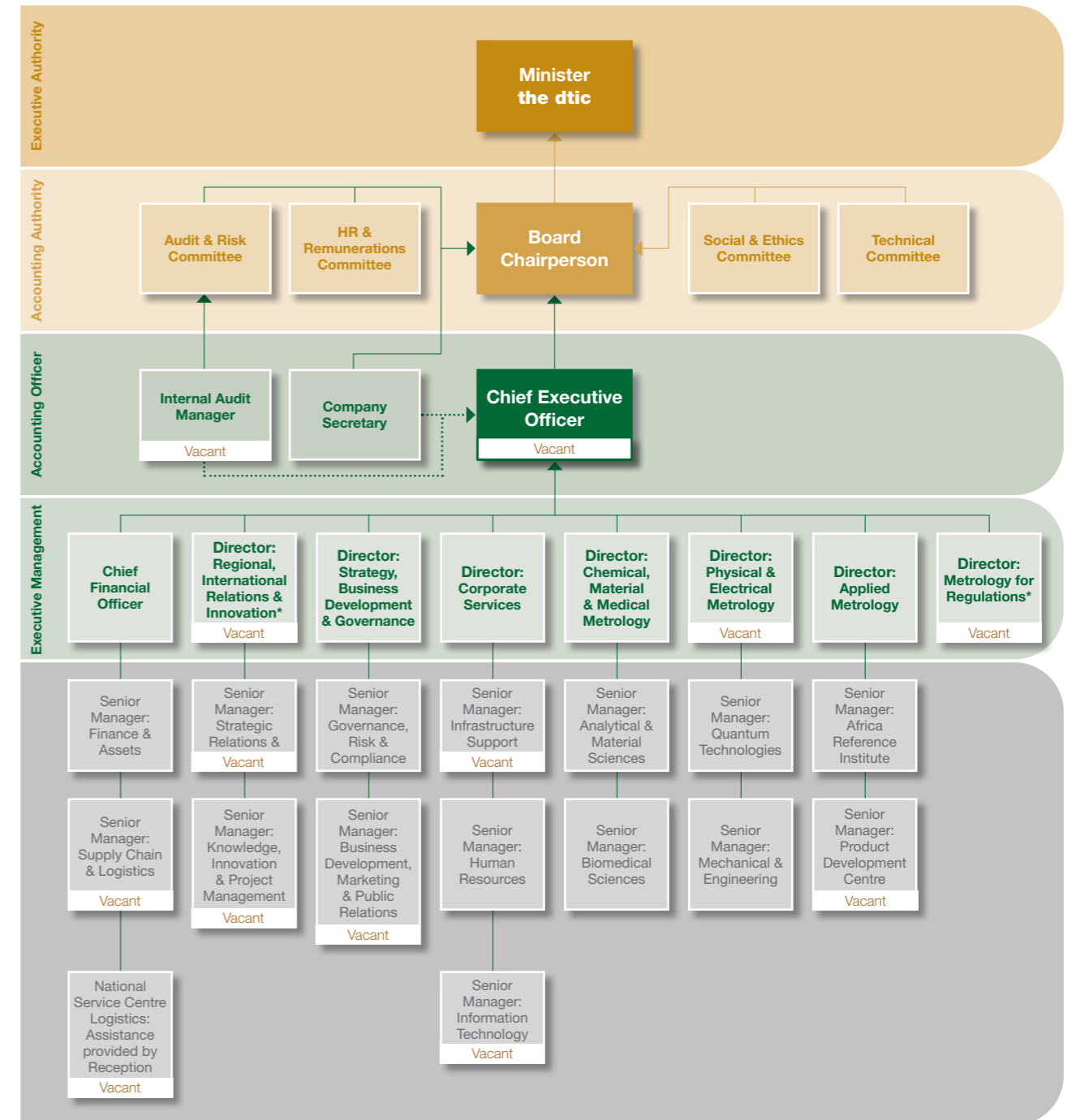
NMISA is a relatively small NMI in terms of size and budget which makes it difficult to conduct all research necessary to fulfil the national accurate measurement needs. As part of the solution, NMISA focused on research alliances and networks. Each research thrust identifies research excellence in South Africa and abroad and sets up alliances and a network for each. Universities and technical universities outside the main research stream are included in the networks to enable skills transfer and connect these institutes regionally and internationally.

NMISA, as a national institute, has designated iThimba LABS for Accelerator-Based Sciences to represent South Africa in medium and high energy neutron measurements. This lifts the profile of metrology in Africa and creates an opportunity to increase the sphere of influence internationally. Other such designations may be explored.

A SWOT analysis was performed to inform the strategic planning process.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>Highest authority in terms of measurement.</li> <li>Established institute with high-quality standards and internationally recognised calibration and measurement capabilities.</li> <li>Advanced technology and highly skilled workforce available within the institute.</li> <li>Offer niche services to industry.</li> <li><b>The dtic</b> relationship provides a springboard for marketing and exposure.</li> <li>Credibility within the Africa region (AFRIMETS, SADC MET).</li> <li>Strong relationships with donors who provide funding, e.g. PTB, UNIDO, IAEA, etc.</li> <li>Good corporate governance.</li> <li>Company support in terms of further education and training contributing to a skilled workforce. Strong internship programme and access to resources.</li> </ul>	<ul style="list-style-type: none"> <li>Some African NMIs still prefer to do business with European institutes.</li> <li>Communication efforts have limited success in relaying our messages to the diverse target markets.</li> <li>Public sector implementation of PFMA regulations require NMISA to tender to provide services to public entities even as sole provider for some services. Often calibration, maintenance, and repair of equipment is grouped with restrictions on sub-contracting.</li> <li>Delays in finalisation of the ERP system limit operational efficiency.</li> <li>Insufficient capacity to perform business analytics affects the institute's ability to expand the client base and encourage repeat purchases.</li> <li>Unfilled vacancies hamper increased demands in support of increased organisational efforts to increase sales revenue.</li> <li>Not all researchers are sufficiently client focused.</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>Promulgation of new regulations often demand calibration and testing services to demonstrate compliance.</li> <li>Environmental monitoring and protection measures rely on accurate data.</li> <li>Successful prosecution or settlement of legal disputes, traffic violations, criminal and fraud cases are dependent on indisputable, independently verified measurement results obtained in accordance with accepted methods and procedures.</li> <li>Water and electricity metering (smart meters) and billing are dependent on traceable measurement results.</li> <li>Effective treatment of patients depends on calibrated instrumentation delivering accurate doses of radiation.</li> <li>Interoperability of parts sourced from different supply locations and increasingly stringent tolerances in manufacturing, especially in the automotive industry, rely on highly accurate measurement results.</li> <li>The ability to analyse and reliably interpret large and complex data sets in the digital economy provides new opportunities for metrology.</li> <li>Food safety and security on the African continent is becoming increasingly important during global conflicts, especially with a growing population rate. It requires local reference materials for food and feed.</li> <li>Commercialisation of green hydrogen requires high accuracy purity testing and reference gas standards.</li> <li>Closer collaborations with tertiary institutes.</li> <li>New markets in South Africa and SADC/AFRIMETS and even other NMIs.</li> <li>Marketing of NMISA at strategic exhibitions and symposiums to generate leads and build awareness.</li> <li>Targeted government-to-government support should be leveraged.</li> <li>Donor funding available from PTB, UNIDO, IAEA, etc. should be fully utilised.</li> <li>Additional automation of measurement systems can decrease costs, improve efficiency and may result in the quick introduction of innovative services.</li> <li>Designing and developing laboratory setup and/or measurement tools through the mechanical workshop for regional market (NMIs).</li> </ul>	<ul style="list-style-type: none"> <li>Increasing staff turnover.</li> <li>Unfunded vacancies severely impact capacity.</li> <li>Substantial budget cuts are threatening the financial sustainability of the organisation.</li> <li>Availability of funding to develop or improve the NMS to meet economic demands.</li> <li>Availability of funds to support socio-economic initiatives – prioritisation of revenue earning activities.</li> <li>Economic factors force clients to reduce spending on calibration and testing services to save costs.</li> <li>Metrology (traceability to the NMS) often not considered in regulations.</li> <li>Client dissatisfaction due to long lead times in response to queries and low response rate to client satisfaction surveys. More in-depth analytics in terms of client relations are required.</li> <li>Insufficient budget for marketing and promotion activities weakens NMISA's ability to expand the client base and encourage repeat purchases.</li> <li>Increased competition. Foreign and domestic laboratories targeting niche industries and market segments.</li> <li>Insufficient resources to respond to new technological developments.</li> <li>Reduced investment in research and development activities aimed at developing and maintaining the NMS could lead to an inability to keep up with international scientific developments, resulting in an inability to participate in key comparisons and demonstrating international equivalence of the NMS.</li> </ul>

### 9.3 MANAGEMENT STRUCTURE



\* The organisational structure is currently under review by the NMISA Board

Vacancies are due to resignations, retirements, or new positions within the structure that have not yet been filled, mostly due to the cost-containment measures introduced in 2023/24.

## 10 STRATEGIC OBJECTIVES

For the period under review, NMISA has defined the following strategic objectives:

- Strategic objective 1:** Ensure regional, continental, and international comparability of the South African measurement infrastructure to support economic growth and to enhance the quality of life for all.
- Strategic objective 2:** Improve financial stability and ensure sustainable growth.
- Strategic objective 3:** Maintain fast and efficient service delivery to clients.
- Strategic objective 4:** Develop and retain a capable workforce that is able to utilise world-class infrastructure to deliver specialised and innovative measurement solutions.
- Strategic objective 5:** Effectively engage and collaborate with stakeholders to develop and strengthen mutually beneficial relationships in fulfilment of the NMISA mandate.



## PART C MEASUREMENT OF ORGANISATIONAL PERFORMANCE

# 11 INSTITUTIONAL PERFORMANCE INFORMATION

## 11.1 MEASURING THE IMPACT

### Impact statement

NMISA links the regional and national measurement systems to the international measurement system, thereby providing confidence in local measurement results. It impacts every aspect of modern life and underpins prosperity, quality of life, and global trade in locally produced commodities.

## 11.2 MEASURING OUTCOMES

OUTCOME	KPI #	OUTCOME INDICATOR	BASELINE	FIVE-YEAR TARGET
Ensure regional, continental, and international comparability of the South African measurement infrastructure to support economic growth and to enhance the quality of life for all	1	Realisation and maintenance of 6 SI Base units	SI base units: 5 realised and 1 maintained annually	Realisation of 6 SI Base units
	2	Percentage of metrological services offered covered by Calibration and Measurement Capabilities (CMCs)	86 % on average	80 %
	3	New and improved NMS and reference materials and reference methods	103 over 5 years	10
	4	Participate in ILCs and PTS	114	50
Improve financial stability and ensure sustainable growth	5	Achieve the annual real revenue growth rate (adjusted for inflation)	Revised KPI	Maintain $\geq 5$ % growth annually
	6	Maintain visibility of NMISA in South Africa and the region	Maintain AVE $\geq$ R1m. Increase social Media following $\geq 10$ %	Maintain AVE $\geq$ R 500k
Maintain fast and efficient service delivery to clients	7	Client Satisfaction Score (not absence of complaints)	$\geq 70$ % ( $\geq 3,5$ on a 5-point scale)	$\geq 70$ %
	8	Customer satisfaction rate for training courses presented	$\geq 70$ % ( $\geq 3,5$ on a 5-point scale)	$\geq 70$ %
Develop and retain a capable workforce that is able to utilise world-class infrastructure to deliver specialised and innovative measurement solutions	9	Staff turn-over rate	$\leq 7$ %	$\leq 5$ % (Achieved by year 5)
	10	Number of in-service trainees and interns hosted	101	72
	11	Number of new collaborative agreements led by NMISA	1 (new KPI)	8
Effectively engage and collaborate with stakeholders to develop and strengthen mutually beneficial relationships in fulfilment of the NMISA mandate.	12	Percentage of active service/collaboration agreements	$\geq 70$ %	$\geq 80$ %

## 11.3 NMISA'S CONTRIBUTION TO THE DTIC BLUE SKY INTERVENTIONS

### 11.3.1 Introduction

The Department of Trade, Industry and Competition (dtic) has requested that all entities, including NMISA, align their Strategic Plans, Annual Performance Plans (APPs), and Operational Plans with the Blue-Sky Interventions, Outcomes, and Indicators. This report presents a thorough analysis of the NMISA Strategic Plan (2025/26–2029/30) in relation to these interventions, identifies alignment areas, and provides recommendations where gaps or partial alignment exist.

### Alignment Matrix Summary

Below is a summary of the alignment between the Blue Sky Interventions and the NMISA Strategic Plan:

BLUE SKY FOCUS AREA	RELEVANT NMISA APP ACTIVITY	ALIGNMENT LEVEL	NOTES
Energy and Electricity	Energy efficiency metrology (LEDs), reference gases for energy sector, support to IPPs and Eskom	High	Supports tariff reduction, alternative energy sourcing, and infrastructure support objectives.
Digital Infrastructure and AI	Feasibility study for Digital Calibration Certificates (DCCs), SI Digital Framework participation	High	Direct alignment with digital transformation of Technical Infrastructure (TI).
Red Tape Reduction	Process digitisation, client satisfaction KPIs, ERP implementation, improved turnaround times	Moderate-High	Enables administrative streamlining and service delivery enhancements.
Access to Finance	Indirect focus via revenue growth strategies and diversified income	Low-Moderate	APP does not directly reference DFI engagement or financial unlocking mechanisms.
Market Access (Domestic and Export)	Support for export readiness through accredited services, SEZ involvement, AfCFTA contributions	High	Strong linkage to international trade, compliance, and regional development.
Illicit Trade and Border Control	Calibration for breathalysers, speed guns; metrology support to NRCS, SABS, RTMC	High	Measurement accuracy directly supports legal enforcement and anti-illicit trade efforts.
Workforce Readiness and Skills	Internship and HCD programmes, Training Centre delivery, public STEM education	High	Aligns fully with national skills development targets and job creation priorities.
Localisation and B-BBEE	Support to SMMEs, B-BBEE-compliant procurement, regional training delivery	Moderate-High	Enhanced by technical support to local producers; additional formal mechanisms could be explored.
Green Economy and Just Energy Transition	Metrology services for energy gases, LED testing, engagement with IPPs and municipalities	High	Substantively supports Just Energy Transition Investment Plan (JET IP) implementation.
Regional Integration and AfCFTA	Africa Reference Institute, leadership in AFRIMETS, support for harmonised African measurement systems	High	Anchors NMISA's role in enabling regional trade through standardisation and traceability.

### 11.3.2 NMISA's Role in Combating Illicit Trade

NMISA contributes to national efforts against illicit trade by enabling the scientific verification of product authenticity, quality, and compliance through traceable measurements and certified reference materials. In sectors where counterfeit or substandard goods are prevalent such as food, medical, and industrial materials, NMISA provides reference materials and calibration services that allow regulators and laboratories to confirm whether products meet declared specifications. This includes the production of reference materials for food composition, contaminants, and additives, as well as standards used in clinical and medical testing. These capabilities support regulators like NRCS, health inspectors, and customs authorities in identifying mislabelled, fake, or unsafe imports. NMISA also provides chemical metrology services for high-risk product categories such as batteries and industrial materials, enabling detection of substitution, misclassification, or fraud. These services are grounded in NMISA's responsibility to maintain the National Measurement Standards (NMS), which ensures that all measurements used in trade, regulation, and enforcement are accurate, traceable, and internationally recognised.



### 11.3.3 Direct Contribution to the dtic Blue Sky Interventions

DTIC OUTCOMES	NMISA OUTPUTS	OUTPUT INDICATORS	ANNUAL TARGETS					5-YEAR TARGET
			MTEF PERIOD					
			2025/26	2026/27	2027/28	2028/29	2029/30	
<b>Market Concentration and Economic Inclusion</b>								
<b>Reduced market concentration by ensuring that economic opportunities are accessible to a broader range of businesses, particularly focusing on the empowerment of historically disadvantaged groups</b>	Support the dtic objective of increasing the share of SMMEs in the economy, by providing support services to SMMEs to enhance their ability to compete in the local market.	D01: Number of SMMEs receiving technical support, training, or measurement services from NMISA annually	20	20	20	25	25	<b>110</b>
<b>Workforce Readiness and Skills for the Economy</b>								
<b>Ring-fencing funding programmes i.e. internship, and apprenticeships to increase practical work experience.</b>	Advance national goals for youth employment and skills development by securing funding and partnerships to train in-service interns or trainees annually, to deliver work-place ready, young professionals at the end of their terms, as part of NMISA's Human Capital Development (HCD) Programme.	D02: Number of in-service interns or trainees hosted annually through NMISA's HCD Programme <i>(same as NMISA KPI 10)</i>	6	13	15	18	20	<b>72</b>
<b>Red Tape Reduction</b>								
<b>Streamlined operations to reduce costs, improve time management, and enhance the overall effectiveness of service delivery</b>	Support national efforts to reduce regulatory burdens and improve the ease of doing business by delivering new or enhanced digital metrology solutions annually.	D03: Number of new/improved digital solutions implemented annually to increase operational efficiency and/or improve client experiences D04: Develop and implement digital calibration certificates (DCCs)	1	1	1	1	1	<b>5</b>
			Funding secured to initiate the development of DCCs	NMISA DCC prototype system designed and built	NMISA DCC prototype system demonstrated to at least 2 potential clients	Commercialisation of the DCC	DCCs developed and implemented in South Africa	<b>DCCs developed and implemented in South Africa</b>

### 11.3.4 Supporting Contributions to the dtic Blue Sky Interventions

DTIC OUTCOMES	NMISA OUTPUTS	OUTPUT INDICATORS	ANNUAL TARGETS					5-YEAR TARGET	
			MTEF PERIOD						
			2025/26	2026/27	2027/28	2028/29	2029/30		
<b>Green Economy</b>									
<b>R3 trillion invested in green industrialisation</b>	Support the implementation of the Just Energy Transition Investment Plan (JET IP) to position South Africa as an attractive investment destination in the green economy, by developing and delivering new or enhanced internationally benchmarked measurement capabilities annually.	D05: Number of new or improved measurement capabilities established and operationalised to support climate-related trade measures, energy efficiency standards, or green industrialisation initiatives.  <i>(included in NMISA KPI 3)</i>		1	1	1	1	1	<b>5</b>
	Collaborate with <b>the dtic</b> and investment partners to integrate metrology services into national industrial policy instruments.	D06: Metrology support services to be integrated (as part of the larger Technical Infrastructure framework) in the Masterplans during each review.		NMISA to participate in <b>the dtic</b> review of the Sugar Master Plan	NMISA to participate in <b>the dtic</b> reviews of the RCTLF and Poultry Master Plans	NMISA to participate in the review and/or drafting of Master Plans as scheduled by <b>the dtic</b>	NMISA to participate in the review and/or drafting of Master Plans as scheduled by <b>the dtic</b>	NMISA to participate in the review and/or drafting of Master Plans as scheduled by <b>the dtic</b>	<b>Metrological aspects considered in all Master Plans reviewed and/or drafted during the period</b>
<b>Increased Tourism</b>									
<b>Arrival of 15 million international tourists</b>	Conduct an increased number of high-impact international events hosted by NMISA to facilitate knowledge exchange and showcase South Africa's technical capabilities in measurement science.	D07: Number of international delegates hosted at NMISA-organised or co-hosted events per financial year.		20	40	30	120	10	<b>220</b>
<b>Industrial Parks and Special Economic Zones (SEZ) Impact</b>									
<b>Competitive and compliant industrial parks (and SEZs) for development of local industries</b>	Advance the transformation and competitiveness of Industrial Parks and SEZ-linked enterprises by delivering measurement and/or training services to new companies or SOEs annually located within SEZs, Industrial Parks, or outside major metropolitan areas. This will enable compliance with regulatory and performance standards, supporting decentralised industrial growth under the District Development Model.	D08: Number of new SOEs or companies within SEZs, Industrial Parks, or outside metropolitan areas supported annually through NMISA services.		5	7	7	7	9	<b>35</b>
<b>Exports for Global Markets</b>									
<b>Strengthen industrial policy sectors to boost production capabilities and enhance the competitiveness of South African industries in international markets</b>	Support the implementation of the AfCFTA agreement by providing metrology services and products to African countries, contributing to harmonisation of metrology systems for enhanced trade facilitation and industrial cooperation across the continent.	D09: Number of African countries contracting NMISA's metrology services and products annually.		5	7	10	11	12	<b>12</b>
		D10: Number of ILCs and PTS organised and completed within AFRIMETS.  <i>(included in NMISA KPI 4)</i>		3	3	3	3	3	<b>15</b>

## 11.4 PLANNED PERFORMANCE OVER THE FIVE-YEAR PLANNING PERIOD

The NMS impact on all aspects of the South African (and SADC) community, whether directly or indirectly. NMISA's activities support and contribute to the following key social, economic, and environmental needs:

- Health and safety
- Local manufacturing and industrialisation (especially automotive manufacturing)
- Power supply, green energy, and energy efficiency
- Environmental monitoring and protection
- Food safety and security
- Agricultural production and processing
- Pharmaceuticals and cosmetics
- Law enforcement and forensics
- Mining
- Telecommunication
- Digitalisation
- Science and technology

Consolidated measurement solutions and services are provided to these market sectors through the following programmes:

- Africa Reference Institute
- Quality of Life
  - Law enforcement
  - Health and safety
- Energy efficiency
- Manufacturing
- Strategic research
- Digital economy
- Mining and environmental monitoring
- Food and agriculture

## 12 KEY RISKS

RISK NAME	EXISTING CONTROLS	CORRECTIVE ACTION PLANS
<b>Reputational Risks</b>	Failure to uphold NMISA Governance Objectives (Failure to deliver on organisational mandate)	<ol style="list-style-type: none"> <li>1. Review and align the NMISA Organisational Structure with its Strategic Plan, ensuring the maintenance of clear governance structures.</li> <li>2. Develop, digitise, and implement the NMISA Governance Framework.</li> <li>3. Finalise the implementation of the Risk Management Framework.</li> <li>4. Promote a culture of integrity and ethics through training and awareness campaigns.</li> <li>5. Conduct a comprehensive review of organisational policies and procedures to identify and address any gaps.</li> </ol>
	Misalignment between stated organisational values and actual behaviours (Organisational Culture)	<ol style="list-style-type: none"> <li>1. Ensure that the NMISA values are communicated regularly and consistently across all levels of the organisation.</li> <li>2. Embed core values into everyday operations.</li> <li>3. Regularly assess alignment between the NMISA values and organisational culture.</li> </ol>
<b>Financial Risks</b>	Financial Sustainability	<ol style="list-style-type: none"> <li>1. Enhance cost control measures, optimising operational efficiency through process improvements and/or digitalisation.</li> <li>2. Identify and pursue additional revenue sources through contract research collaborations and strategic partnerships.</li> <li>3. Enhance stakeholder relationships and ensure transparent communication with the shareholder and other funding bodies to secure ongoing, effective support.</li> <li>4. Regularly engage with clients and ensure efficient service delivery.</li> <li>5. Align the Marketing Strategy with the newly developed 5-year Strategic Plan to effectively reach and attract new clients from diverse market sectors.</li> <li>6. Prioritise allocation of resources to projects and initiatives that align with the performance management targets and have the highest impact on achieving the five NMISA Strategic Objectives to continuously deliver on the NMISA mandate within the allocated budget.</li> <li>7. Align outcomes with <b>the dtic</b> Strategic Interventions to demonstrate the economic impact of the NMISA mandate within the budget constraints.</li> </ol>
<b>Compliance</b>	Non-compliance with legislative regulatory frameworks	<ol style="list-style-type: none"> <li>1. Conduct a comprehensive compliance and legal risk assessment.</li> <li>2. Implement internal training programmes and raise awareness on compliance management.</li> <li>3. Enhance legal compliance through executive training programmes.</li> </ol>

RISK NAME	EXISTING CONTROLS	CORRECTIVE ACTION PLANS
<b>People's Risks</b>	High Staff Turnover	<ol style="list-style-type: none"> <li>1. Review and update key HR policies, including the Remuneration Policy, and Performance Management and Development System (PMDS) Policy.</li> <li>2. Optimise workforce management by appointing temporary employees (funding dependent), considering lateral transfers, and aligning the organisational structure with the new 5-year Strategic Plan.</li> <li>3. Address employee feedback by analysing exit reports and creating action plans to resolve common reasons for leaving.</li> <li>4. Enhance managerial effectiveness through targeted training for proper induction and onboarding.</li> </ol>
<b>Cybersecurity</b>	Cyber insecurity	<ol style="list-style-type: none"> <li>1. Assemble a Cybersecurity Team to assist in implementing a comprehensive cybersecurity programme that significantly reduces the risk of data breaches.</li> <li>2. Network Penetration Tests to be conducted to assess the security posture of the IT infrastructure and web applications and to identify and remediate vulnerabilities that could be exploited by malicious actors.</li> </ol>
<b>Business Continuity/ Organisational Resilience</b>	Service Continuity Risk (in the context of Community Unrest, Natural Disasters, Epidemics, Cyber Attacks)	<ol style="list-style-type: none"> <li>1. Finalise and implement the existing Business Continuity Plan (BCP).</li> <li>2. Implement robust communication strategies by setting up multiple communication channels and finalising a Crisis Communication Plan.</li> <li>3. Conduct regular training and drills by educating employees on emergency response procedures and testing the effectiveness of response plans to improve readiness.</li> <li>4. Ensure that the organisation allocates sufficient resources to maintain an effective business continuity plan.</li> </ol>
<b>Health and Safety</b>	Compromised safety and wellbeing of employees	<ol style="list-style-type: none"> <li>1. Corrective plans identified during audits to be cleared timeously by the responsible sections, considering OHS hazards, risks, and mitigation measures.</li> <li>2. Maintain certification to SANS/ISO 45001: Occupational Health and Safety Management System Standard.</li> </ol>
<b>Fraud and Corruption</b>	Fraud and corruption	<ol style="list-style-type: none"> <li>1. Provide ethics management training for all management personnel.</li> <li>2. Conduct a thorough analysis of the declarations of interest completed by Board Members and Management.</li> <li>3. Conduct Fraud Risk Assessments at operational level.</li> <li>4. Enhance and implement the existing Fraud Prevention Plan and Strategy.</li> <li>5. Enforce effective consequence management in accordance with the Disciplinary Policy.</li> </ol>
<b>Infrastructure</b>	Adverse laboratory and environmental conditions	<ol style="list-style-type: none"> <li>1. Fill the Facilities Manager vacant position.</li> <li>2. Conduct a root cause analysis of the challenges within Facilities/Infrastructure.</li> <li>3. Re-negotiate the lease agreement to include maintenance, property management, and access control.</li> </ol>

## 13 PUBLIC-PRIVATE PARTNERSHIPS

NMISA is currently not undertaking or managing any public-private partnerships.



# PART D

## TECHNICAL INDICATOR DESCRIPTION

## 14 NMISA TECHNICAL INDICATOR DESCRIPTIONS

Indicators were defined according to the *Revised Framework for Strategic Plans and Annual Performance Plans* document, published by the Department of Planning Monitoring and Evaluation.

KPI 1: REALISATION OF THE SI BASE UNITS	
<b>Indicator title (Output)</b>	<b>Realisation and maintenance of the SI Base units</b>
<b>Definition</b>	As stipulated in the Measurement Units and Measurement Standards Act (No. 18 of 2006), NMISA must provide for the use of the SI measurement units (and other measurement units), and the designation of the units. In addition, NMISA must realise, maintain and disseminate the National Measurement Standards and ensure that these are internationally equivalent and accepted. The SI base units realised by NMISA includes that for Mass (kilogram), Time (second), Length (metre), Temperature (Kelvin), and Current (Ampere). Traceability for Luminous Intensity is imported, and the scale is maintained between calibration intervals. New primary realisation methods are to be phased in as these are developed.
<b>Source/collection of data</b>	Gazetted National Measurement Standards. New development and/or realisations of SI units performed annually. Maintenance of SI units reported quarterly. Certificates of Calibration from other NMIs.
<b>Method of calculation</b>	Simple count
<b>Means of verification</b>	Gazetted NMS, supporting plans and reports
<b>Assumption</b>	Equivalence to international standards, implementation of the Revised International System of Units (SI) as captured in the gazetted NMS.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	The South African National Measurement Standards as published in the Government Gazette must be realised and maintained as provided for in the Measurement Units and Measurement Standards Act (No. 18 of 2006).
<b>Indicator responsibility</b>	Physical and Electrical Metrology Division

KPI 2: PERCENTAGE OF METROLOGICAL SERVICES OFFERED COVERED BY CALIBRATION AND MEASUREMENT CAPABILITIES (CMCS)	
<b>Indicator title (Output)</b>	<b>Percentage of Metrological services utilised by clients covered by calibration and measurement capabilities (CMCs)</b>
<b>Definition</b>	To determine the percentage of services offered by NMISA, that are covered by CMCs in the KCDB. A measurement capability claim that has been reviewed and accepted by international peers, and then published in the BIPM international metrology database (KCDB, Appendix C), provides stakeholders with confidence that a claimed measurement capability is internationally accepted and internationally equivalent.
<b>Source/collection of data</b>	SHEQ report showing the number of CMCs in Appendix C of the international (BIPM) key comparison database (KCDB), published at <a href="http://www.bipm.org">www.bipm.org</a> , NMISA scopes of accreditation and calibration certificates.
<b>Method of calculation</b>	Number of services linked to the official number of active CMCs published in the KCDB for South Africa as of 31 March (screen print and date); simple calculation.
<b>Means of verification</b>	Official records of the Schedules of Accreditation and CMCs.
<b>Assumption</b>	Published CMCs have been accepted through the regional and international peer review processes and are therefore internationally accepted.  The list of CMCs maintained in the KCDB database are those required and utilised by industry through measurement products and services offered.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Calibration and Measurement Capabilities that meet stakeholders' needs
<b>Indicator responsibility</b>	Technical Divisions and SHEQ

KPI 3: NEW AND IMPROVED NMS, REFERENCE MATERIALS AND REFERENCE METHODS IN RESPONSE TO LOCAL INDUSTRIAL REQUIREMENTS	
<b>Indicator title (Output)</b>	<b>New and improved NMS and reference materials and reference methods</b>
<b>Definition</b>	The number of new and improved NMS, reference methods and reference materials developed. NMISA will develop and/or improve NMS for clients or industry, mainly on contract. The NMS do not necessarily increase each year, the organisation maintains and applies what has already been developed.
<b>Source/collection of data</b>	New NMS, improved NMS and/or procedure/method validation report; reference materials, measurements register and validation report/procedure.
<b>Method of calculation</b>	Simple count
<b>Means of verification</b>	Verification/validation report, procedures, NMI report, measurement register
<b>Assumption</b>	Implementation of the revised SI including NMISA adhering to legislative requirements.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Does not necessarily increase from year to year. This indicator is in response to periodic industry requirements for CRMs and reference methods to be developed and for NMS to be improved (expansion of NMISA offerings, extending the range).
<b>Indicator responsibility</b>	Technical divisions

<b>KPI 4: PARTICIPATE IN INTER-LABORATORY COMPARISONS (ILCS) AND PROFICIENCY TESTING SCHEMES (PTSS)</b>	
<b>Indicator title (Output)</b>	<b>Participation in ILCs and PTSS</b>
<b>Definition</b>	Interlaboratory comparisons (ILCs) or Proficiency Testing Scheme (PTS) initiated, administered, or participated in by NMISA to demonstrate international equivalence of its National Measurement Standards and/or to assist African NMIs to link their standards to the international measurement system, and/or to enable national or regional laboratories to establish confidence in the accuracy of their measurement capabilities and/or dosimetry audits provided to hospitals and other healthcare facilities. The ILCs, PTS and dosimetry (and comprehensive) audits may run over several financial years.
<b>Source/collection of data</b>	Project plans, progress reports and/or final reports (draft A, B and final report). Successful participation is confirmed in the final report.
<b>Method of calculation</b>	Simple count of ILCs, PTSSs and dosimetry audits concluded during the period.
<b>Means of verification</b>	Submission of project plans, progress reports, hospital audit results and/or draft A, B and final reports.
<b>Assumption</b>	Accuracy and confidence in measurement results for South Africa and the region.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Cumulative year end
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	International equivalence of the NMISA NMS successfully demonstrated. Regional measurement system linked to the international measurement system. The measurement capabilities of local and/or regional commercial laboratories validated. Harmonisation of national, regional and International Measurement Standards and capabilities facilitates trade.
<b>Indicator responsibility</b>	Technical divisions

<b>KPI 5: INCOME GENERATED FROM ALL SERVICES, SALES OF PRODUCTS AND OTHER KNOWLEDGE DISSEMINATION ACTIVITIES</b>	
<b>Indicator title</b>	<b>Achieve the annual real revenue growth rate (adjusted for inflation)</b>
<b>Definition</b>	Percentage growth in real revenue from the prior budgeted and approved year-end value, generated from all external income sources, excluding interest and adjusted for inflation.  External income (revenue) is generated through all products and services (including calibration, measurement, testing, PTSSs, reference values, certified measurement standards or mixtures, training, collaborative research and development, donor projects, consultation services, etc.).
<b>Source of data</b>	A report of income is downloadable from NMISA financial system and provided by Finance.
<b>Method of calculation/ Assessment</b>	Revenue is determined in line with GRAP  The annual target for the real revenue growth rate (RRGR) is calculated from the nominal revenue growth rate (NRGR) and BER average inflation rate forecast for the year:  For example (2024/25)  The Bureau for Economic Research (BER) forecast the following average inflation rates for South Africa for the next period:  2024: 4,78 % 2025: 4,50 % 2026: 4,50 % 2027: 4,50 %  A nominal revenue growth rate of 10 % therefore results in a real revenue growth rate of 5 % at an inflation rate of 4,78 %. A 10 % increase in the baseline revenue (budgeted and approved 2024/25 value) provides the revenue target for 2025/26, distributed over the financial year as per quarterly targets.
<b>Means of verification</b>	Finance report submitted every quarter
<b>Assumptions</b>	Measurement traceability to industry through calibration, measurement services, analysis, consultation, research grants and donor projects.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	None
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Meet and/or exceed annual financial revenue target for sustainability
<b>Indicator responsibility</b>	Technical Divisions and SBDG

<b>KPI 6: MAINTAIN MARKET VISIBILITY</b>	
<b>Indicator title (Output)</b>	<b>Maintain visibility of NMISA in South Africa and the region</b>
<b>Definition</b>	Ensure market visibility to amplify awareness of NMISA's metrology services, building on brand awareness and fostering trust and credibility within industries.
<b>Source/collection of data</b>	Calculations based on statistical report from external provider and social media statistics.
<b>Method of calculation</b>	Using Advertising Value Equivalence calculations done by a contracted service provider who list the total amount of print, online and broadcast media (not including paid advertising) for publication. Using social media analytical statistics to show increase in following.
<b>Means of verification</b>	Advertising Value Equivalence reports and social media statistics
<b>Assumption</b>	Increased visibility of the organisation
<b>Disaggregation</b>	Not applicable
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Maintain an AVE visibility of above R1mil per annum. Increase the following on social media platforms by 10 % annually.
<b>Indicator responsibility</b>	Strategy, Business Development and Governance (SGB) Division

<b>KPI 7: CLIENT SATISFACTION SCORE</b>	
<b>Indicator title (Output)</b>	<b>Client satisfaction score (not absence of compliants)</b>
<b>Definition</b>	Average satisfaction rating on a 5-point scale of the Client Satisfaction Survey against all surveys completed, calculated as a percentage. To provide industry with confidence in the quality of NMISA's service and the perceived commitment to meeting their needs.
<b>Source/collection of data</b>	Report on the review of Client Satisfaction Surveys received, taken from the quality system (Customer Action Requests).
<b>Method of calculation</b>	(Average client satisfaction rating/5) x 100
<b>Means of verification</b>	Completed client satisfaction surveys
<b>Assumption</b>	Clients accurately reflect their satisfaction with NMISA services on the surveys and that dissatisfied clients express their dissatisfaction by completing the survey. All clients were offered an opportunity to complete the survey after the service.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	None
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	NMISA aims to exceed the expectations of all clients. Zero customer complaints are ideal; any customer complaints received to be timeously addressed and cleared satisfactorily.
<b>Indicator responsibility</b>	SHEQ

<b>KPI 8: CUSTOMER SATISFACTION RATE FOR TRAINING COURSES PRESENTED</b>	
<b>Indicator title (Output)</b>	<b>Training courses that meet client requirements</b>
<b>Definition</b>	Percentage of courses with an average score of 3.5 or higher.
<b>Source/collection of data</b>	Course satisfaction survey ratings (training course evaluation form)
<b>Method of calculation</b>	Each course will receive an average score based on individual scoring. A percentage of the average scores $\geq 3$ will be calculated over total courses.
<b>Means of verification</b>	Independent satisfaction survey traceable to each attendee (training candidate).
<b>Assumption</b>	All trainees complete survey
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	None
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Increased number of clients (and maintaining existing clients)
<b>Indicator responsibility</b>	ARI Training Centre/Technical Divisions/SHEQ

KPI 9: INVEST IN TALENT TO DEVELOP, MAINTAIN, AND RETAIN KEY SKILLS	
<b>Indicator title (Output)</b>	<b>Staff turn-over rate</b>
<b>Definition</b>	The primary resource needed to execute our mandate is predicated upon highly skilled scientists, engineers, physicists and managerial/support skills. Investment in highly trained technical skills to upskill the talent in the field of accurate measurement (metrology). Practical training will ensure knowledge transfer (industry, commercial laboratories, regional NMIs and internally) to provide measurement support and to attract new talent and retain existing key skills.
<b>Source/collection of data</b>	HR records of resignations and appointments
<b>Method of calculation</b>	Turn-over rate for a specific period is calculated using the following formula:  $\text{Staff turn-over rate (\%)} = \left[ \frac{\text{Number of Separations}}{\text{Average number of employees}} \right] \times 100$ <p>Where:</p> <ul style="list-style-type: none"> <li>The average number of employees for the specific period is calculated by adding the number of permanent employees at the start of the period and the number of permanent employees at the end of the period and dividing by 2.</li> <li>The number of separations is the total number of permanent staff members that have left the organisation during that period.</li> <li>The period of interest is a quarter (3 months).</li> </ul>
<b>Means of verification</b>	Signed resignation letters
<b>Assumption</b>	A higher turnover rate than the given target indicates that the staff retention plan needs to be reviewed.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Talent maintained, developed and applying the knowledge gained to the benefit of NMISA.
<b>Indicator responsibility</b>	Corporate Services (Human Resources) and Division Directors

KPI 10: NUMBER OF INTERNS AND IN-SERVICE TRAINEES HOSTED	
<b>Indicator title (Output)</b>	<b>Number of in-service trainees and interns hosted</b>
<b>Definition</b>	Number of interns (minimum 3 months) and in-service trainees (work integrated learning) period as described by the academic institution, hosted. External funding to be sourced to fund expenses. NMISA to provide work experience for graduates in line with their studies and improve their employability. The aim is to build pipeline of skilled and competent professionals to address current and future skills needs and transform the organisation.
<b>Source/collection of data</b>	Internship contracts, training/work plans, certificates
<b>Method of calculation</b>	Simple count (total number of interns and in-service trainees hosted/trained during the financial year)
<b>Means of verification</b>	Appointment contracts
<b>Assumption</b>	A skilled, competent, and transformed workforce.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Quarterly
<b>Desired performance</b>	Well-trained interns who can be placed in NMISA or other organisations.
<b>Indicator responsibility</b>	Corporate Services (Human Resources) and Division Directors

KPI 11: NUMBER OF NEW COLLABORATIVE AGREEMENTS LED BY NMISA	
<b>Indicator title (Output)</b>	<b>Number of new collaborative agreements led by NMISA</b>
<b>Definition</b>	The number of new collaborative agreements with academic institutes, public and private entities, regional and international bodies, led by NMISA staff members as project leaders.
<b>Source/collection of data</b>	Signed agreements and approved project plans/charters
<b>Method of calculation</b>	Simple count (each staff member can only be counted once)
<b>Means of verification</b>	Signed agreements and approved project plans/charters
<b>Assumption</b>	Staff with specialised skills can attract contracts to deliver innovative measurement solutions to clients.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annual
<b>Desired performance</b>	Contract agreements with clients are successfully delivered.
<b>Indicator responsibility</b>	Technical Divisions

KPI 12: PERCENTAGE OF ACTIVE SERVICE AND COLLABORATIVE AGREEMENTS	
<b>Indicator title (Output)</b>	<b>Percentage of active service/collaborative agreements</b>
<b>Definition</b>	The number of collaborative or service agreements with clients and other stakeholders for multi-year services that are successfully delivering outputs against the total number of agreements.
<b>Source/collection of data</b>	Financial reports on invoiced services against contracts, and/or project reports with evidence of achieved outcomes.
<b>Method of calculation</b>	Simple count (percentage of the number of active agreements to the total number of agreements)
<b>Means of verification</b>	Signed contracts/SLAs/MOUs/CMS reports on client services/financial reports/project reports/evidence of delivery.
<b>Assumption</b>	Once an agreement is signed by both parties, work commences in accordance to plan to deliver outputs for mutual benefit.
<b>Disaggregation</b>	Not applicable
<b>Spatial transformation</b>	Not applicable
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Successful completion of all agreements and enhanced prospects for follow-up agreements and long-term partnerships.
<b>Indicator responsibility</b>	SBG Division in collaboration with Technical Divisions

## 15 NMISA CONTRIBUTIONS TO THE DTIC STRATEGIC INTERVENTIONS

### KPI D01: NUMBER OF SMMEs SERVED BY NMISA

<b>Indicator title (Output)</b>	<b>Number of SMMEs served by NMISA</b>
<b>Definition</b>	Number of SMMEs receiving technical support, training, or measurement services from NMISA annually.
<b>Source/collection of data</b>	Sales revenue data from the financial system and/or laboratory records of client services and/or Training Centre records of participants in training courses
<b>Method of calculation</b>	Simple count
<b>Means of verification</b>	Sales revenue records, attendance registers for training courses
<b>Assumption</b>	Measurement traceability and knowledge about metrology empowers SMMEs to improve their products and services
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Increasing numbers of SMMEs benefitting from NMISA's products and services
<b>Indicator responsibility</b>	SBG Division, Technical Divisions, Training Centre

KPI D02: Number of in-service interns or trainees hosted annually through NMISA's HCD Programme is the same as NMISA KPI 10 on page 10.

### KPI D03: NUMBER OF NEW/ IMPROVED DIGITAL SOLUTIONS IMPLEMENTED ANNUALLY

<b>Indicator title (Output)</b>	<b>Number of new/improved digital solutions implemented annually</b>
<b>Definition</b>	Number of new/improved digital solutions implemented annually to increase operational efficiency and/or improve client experiences.
<b>Source/collection of data</b>	Official project reports
<b>Method of calculation</b>	Simple count
<b>Means of verification</b>	Physical verification of systems and/or laboratory equipment records
<b>Assumption</b>	New or improved digital systems improve operational efficiency and/or client experiences
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Continuous improvement of the NMISA operational systems to the benefit of its clients
<b>Indicator responsibility</b>	Technical Divisions, System Design Group

### KPI D04: DEVELOP AND IMPLEMENT DIGITAL CALIBRATION CERTIFICATES (DCCs)

<b>Indicator title (Output)</b>	<b>Develop and implement digital calibration certificates (DCCs)</b>
<b>Definition</b>	Digital Calibration Certificates developed and implemented in South Africa.
<b>Source/collection of data</b>	Official project reports
<b>Method of calculation</b>	Confirmation of deliverables achieved in accordance with the project plan
<b>Means of verification</b>	Physical verification of systems and/or scientific project records
<b>Assumption</b>	Converting to Digital Calibration Certificates enables significant process improvements in the field of metrology
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Digital Calibration Certificate implemented in South Africa within the next 5 years
<b>Indicator responsibility</b>	Technical Divisions, System Design Group

KPI D05: Number of new or improved measurement capabilities established and operationalised to support climate-related trade measures, energy efficiency standards, or green industrialisation initiatives is included in NMISA KPI 3 on page 35.

### KPI D06: METROLOGY SUPPORT SERVICES TO BE INTEGRATED IN THE MASTERPLANS DURING EACH REVIEW

<b>Indicator title (Output)</b>	<b>Metrology support services to be integrated in the Masterplans during each review</b>
<b>Definition</b>	Metrology support services to be integrated (as part of the larger Technical Infrastructure framework) in the Masterplans during each review.
<b>Source/collection of data</b>	Records of submissions to <b>the dtic</b> , records of meetings related to the review of the Masterplans
<b>Method of calculation</b>	Confirmation of deliverables achieved in accordance with the supporting records/data.
<b>Means of verification</b>	Verification of supporting records/data
<b>Assumption</b>	Metrology services constitute part of the support provided by the dtic and its entities to various industrial sectors.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Non-cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	Metrology to be integrated into all the Masterplans reviewed.
<b>Indicator responsibility</b>	SBG Division, Technical Divisions

### KPI D07: NUMBER OF INTERNATIONAL DELEGATES HOSTED AT NMISA-ORGANISED OR CO-HOSTED EVENTS

<b>Indicator title (Output)</b>	<b>Number of international delegates hosted at NMISA-organised or co-hosted events</b>
<b>Definition</b>	Number of international delegates hosted at NMISA-organised or co-hosted events per financial year.
<b>Source/collection of data</b>	Attendance records of international events hosted or co-hosted by NMISA.
<b>Method of calculation</b>	Simple count
<b>Means of verification</b>	Attendance registers signed by international delegates at NMISA events.
<b>Assumption</b>	International delegates attending physical events at NMISA contribute to the total number of tourists visiting South Africa annually.
<b>Disaggregation</b>	None
<b>Spatial transformation</b>	NA
<b>Calculation type</b>	Cumulative
<b>Reporting cycle</b>	Annually
<b>Desired performance</b>	NMISA to showcase South Africa's technical capabilities in measurement science to an international audience.
<b>Indicator responsibility</b>	SBG Division, Technical Divisions



NOTES

A series of horizontal dotted lines for taking notes.





CSIR Campus, Building 5, Meiring Naudé Road, Brummeria, Pretoria, 0182, South Africa  
Private Bag X34, Lynnwood Ridge, Pretoria, 0040, South Africa

Reception: +27 12 947 2800 | Calibration Office: +27 12 947 2850 | [info@nmisa.org](mailto:info@nmisa.org) | [www.nmisa.org](http://www.nmisa.org)