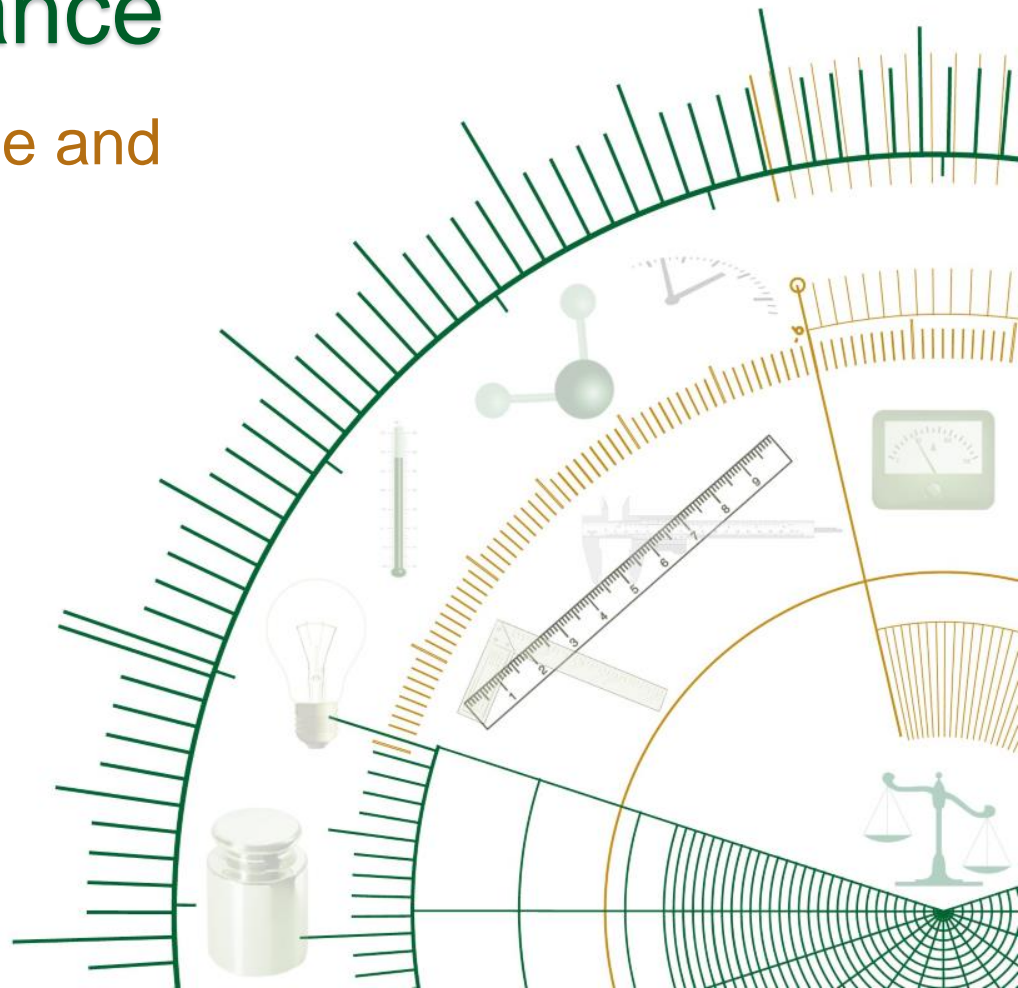


# NMISA Q3 Financial and Non-Financial Performance

Portfolio Committee on Trade and Industry

26 February 2020

**Your measure of excellence**



# Details of Delegation

## 1. Ms Jabu Mogadime

- Chairperson: NMISA Board

 [mogadime10@gmail.com](mailto:mogadime10@gmail.com)

 076 342 3554

## 2. Mr Ndwakhulu Mukhufhi

- NMISA CEO

 [nmukhufhi@nmisa.org](mailto:nmukhufhi@nmisa.org)

 0128413836       0837612785

## 3. Mr Mogau Sehlapelo

- NMISA CFO

 [csehlapelo@nmisa.org](mailto:csehlapelo@nmisa.org)

 012 841 3071       083 296 3350

# Presentation Outline

1. Legislative, Vision, Mission and Values
2. Our Mandate
3. Strategic Objectives
4. NMISA Laboratories
5. NMISA Programmes
6. Q3 Highlights
7. Q3 Achieved Targets
8. Q3 Unachieved Targets
9. Challenges and Constraints
10. Financial Report

# VISION, MISSION & VALUES

## Empowering Act

Measurement Units and Measurements Standards Act, No 18, 2006

---

## Vision

To be the leading Metrology and Measurement Centre of Excellence on the African Continent connecting Africa to the World

---

## Mission

To consistently deliver outstanding, innovative and internationally comparable measurement solutions that support, Regional and International Trade, people's quality of life and enable the protection of the Environment

---

## Values

Quality  
Measurement Excellence  
Social Responsibility  
Economic prosperity  
Governance

---

# Our mandate

To provide for the use of the SI units and approve other units for use in RSA; to develop and maintain primary scientific standards of physical quantities for RSA

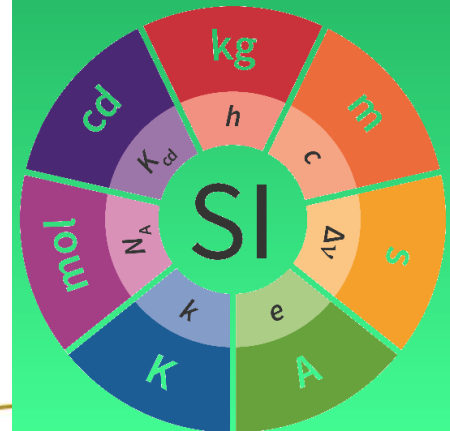
To compare those standards with other national standards to ensure global measurement equivalence

Perform reference analysis in the case of a measurement dispute

To maintain and develop primary methods for chemical analysis to certify reference materials for RSA and the region

To produce African specific matrix reference materials to enable accurate analysis and conformity assessment of feed and food products

To provide for the use of measurement units of the International System of Units (SI) and certain other measurement units



# STRATEGIC OBJECTIVES



Strategic Thrust 1:  
Metrology for  
Regulatory purposes  
and in support of  
government  
laboratories: for  
compliance and for  
development of  
regulations;

Strategic Thrust 3:  
Metrology for  
Industry including  
assistance to SMEs to  
provide appropriate  
services in support of  
manufacturing,  
beneficiation and  
export;

Strategic Thrust 2:  
Metrology  
consolidation for SOEs  
to provide efficient  
shared services;

Strategic Thrust 4:  
Location of  
Legal metrology under  
NMISA to effectively  
implement the Legal  
metrology act.

## Chemical, Medical & Material Metrology

### Analytical & Material Sciences

- Inorganic Chemistry
- Organic Chemistry
- Gas
- Surface Analysis
- Materials Characterisation
- Nano-metrology

### Biomedical Sciences

- Radioactivity
- Dosimetry
- Bioscience
- Audit Programme

## Physical & Electrical Metrology

### Quantum Technologies

- DC Low Frequency
- Optical Radiometry
- Length, Dimensional & Coordinate Metrology
- Photonics
- Quantum Standards

### Mechanics & Engineering

- Mass and Derived Quantities
- Force, Torque & Hardness
- Temperature & Pressure
- Flow, Vacuum & Hydrometry
- Acoustics, Ultrasound & Vibration

- **Quality System:** ISO/IEC 17025, ISO/IEC 17043, ISO 17034; ISO 14001 and OHSAS 18001



## Revision of the SI

- Shortening of the traceability chain for Africa Kibble (Watt) balance, Avogadro project, Quantum standards etc.

## Green economies

- Environmental monitoring, alternative energies, global warming etc.

## Advance manufacturing

- Accurate dimensional measurement, tool evaluation, additive manufacturing etc.

## Reference material programme

- African Food and Feed certified reference material programme

## Quality of life

- Traceability brachytherapy, medical devices calibration, law enforcement etc.

## Energy efficiency

- Energy saving technologies (supporting energy efficient lighting, electrical appliances, smart grids, etc.)



Regional and International Integration



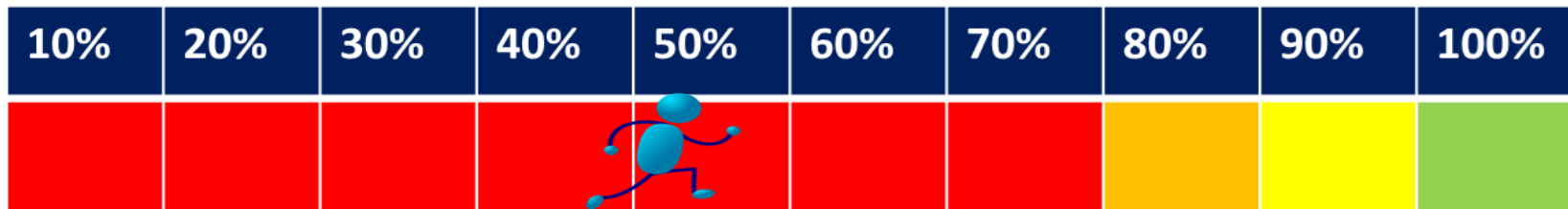
# Q3 Highlights

- Proficiency Testing Schemes
  - Mycotoxin in Maize
  - Aflatoxin in Peanut Butter
  - Over 20 Laboratories participating
    - 5 Local Laboratories
    - 10 laboratories from across the continent
    - 5 International laboratories
- Reference Material now available on the NMISA online purchasing platform
  - Aflatoxin certified reference standards
  - Mycotoxin in Maize Matrix Reference Material

# Q3 Highlights

- **SANAS Assessment for ISO/IEC 17025**
  - Laboratory recommended for continued accreditation in Q3
    - Time and Frequency Laboratory
    - Dosimetry Laboratory
  - A total of 24 Laboratories are Accredited for ISO/IEC 17025

# NMISA Q3 Performance



- 7 out of 15 targets were achieved for the Quarter
- It is Envisaged that all targets with the exception of the revenue target will be met by the end of Q4

# NMISA Quarter 3 Achievements

Performance Indicator	Annual target	Quarter 3 target	Q3 achievement
Realisation of the SI base units	6 SI base units realised	Progress reports on Realisation for 6 SI base units	6 progress reports were submitted
Number of memberships maintained	10 memberships maintained	10	10
Number of courses provided including SMEs	100 metrologist trained	30	70 metrologist trained (% calculated on Services rendered in Q3, only).
Number of interns and in-service trainees hosted	15 hosted	15	21

# NMISA Quarter 3 Achievements

Performance Indicator	Annual target	Quarter 3 target	Q3 achievement
Realisation of the SI base units	6 SI base units realised	Progress reports on Realisation for 6 SI base units	6 progress reports were submitted
Number of memberships maintained	10 memberships maintained	10	10
Number of courses provided including SMEs	100 metrologist trained	30	70 metrologist trained (% calculated on Services rendered in Q3, only).
Number of interns and in-service trainees hosted	15 hosted	15	21

# NMISA Quarter 3 Achievements

Performance Indicator	Annual target	Quarter 3 target	Q3 achievement
Revised measurement act to support and contribute to national regulation	Review and revise the measurement act	Revision of regulation linked to metrology. Draft act submitted to the board	Draft act submitted to the board
Percentage customer satisfaction	≥95%	≥95%	99%
Percentage Increase visibility of NMISA	20%	5%	43%

# Q3 Targets not Achieved

Indicator	Annual target	Quarter 3 Target	Q3 achievement
Number of new and improved National Measurement Standards and reference material and methods	20	8	1
Organise and complete 9 ILCs and Proficiency testing schemes	Organise and complete 9 ILCs and Proficiency testing schemes	4 out of 9 PTS and ILCs completed	1 Proficiency Testing Scheme was completed
Percentage metrological services covered by CMCs	80% of metrological services covered by CMCs	78%	64%



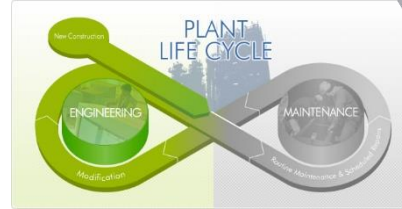
# Q3 Targets not Achieved

Indicator	Annual Target	Quarter 3 Target	Q3 Achievement
Number of accredited laboratories and new laboratory accreditations	21 Maintained 5 new accreditations	23 accreditations maintained and 1 new accreditations	22 maintained and 0 new accreditation (peer review)
Number of courses provided including SMEs	18 courses provided including SMEs	8	2 courses presented
Amount income generated	R38 018 270	R12 618 270	R6 330 651.12
Percentage actual expenditure to budget	98	60%	55%

# Q3 Targets not Achieved

Indicator	Annual Target	Quarter 3 Target	Q3 Achievement
Number of government departments and SOEs serviced by NMISA	3	1	0 (MoU were entered into with SABS and MINTEK paving the way for SLAs)

# CHALLENGES



- **Aged Infra-structure**  
Housed at the CSIR campus since 1950s, the buildings have reached their technical limit of modification
- **A “Fragmented” metrology service in South Africa**
  - Scientific (NMISA)
  - Legal (NRCS)
  - Applied and Industrial Metrology (SoEs)
- **Misalignment of Regulation to the QI, specifically the use of metrology**
- **Inefficient Implementation of Regulations requiring measurements and metrology by Regulators and Government Departments**

# An Example Using Sugar and Salt reduction regulations

- Sugar tax

- SARS National Health Promotion Levy
- BRIX standards for refractometer calibration
- Relevant reference materials for QC
- Reference measurement (disputes)



- Sodium reduction\*

- CGCSA-FSI
- Customized PT scheme for each food category
- Independently identify sources of measurement discrepancies between public and private sector laboratories
  - Representative sampling?
  - Sample preparation?
  - Methods of analysis?
- Advise/ amend regulation
- Reference Materials for continued quality control during measurement process on relevant materials

You cannot regulate what you cannot measure

\*Foodstuffs, Cosmetics & Disinfectants Act 54 of 1972-Regulation 214 and R1072 (Dept Non-communicable diseases)

# FINANCIAL REPORT

## Revenue and Expenditure Analysis

# Revenue Analysis

Description	Approved Budget	YTD Budget	Actual	% Variance
Transfer from the dti	245 036	245 036	245 036	-
Rendering of services	38 018	25 345	11 225	56%
Interest received	13 000	8 667	13 239	(53%)
	<b>296 054</b>	<b>279 048</b>	<b>269 500</b>	<b>3%</b>

## Analysis of material variances:

Revenue from rendering of services – Review of legislation still pending, Regulations from NRCS and other regulators, slow bureaucratic processes such as issuing of Drug Permits by SAHPRA, duplication of Metrology capabilities with SOEs, tough economic conditions.

Interest received – favourable variance due to transfer from **the dti** received fully in April instead of 12 monthly instalments as has been the practice in previous years.

# Expenditure Analysis

Description	Approved Budget	YTD Budget	Actual	% Variance
Compensation of employees	142 406	82 687	74 223	10%
Operating expenditure	80 040	52 695	48 182	8%
Capital Expenditure	73 608	49 045	36 307	26%
	296 054	184 427	158 712	14%

## Analysis of material variances:

- Compensation of employees – due to less than budgeted cost of living adjustments implemented.
- Capital Expenditure – 3 tenders above R 5 million approved by Board in current quarter
- NMISA has spent 100% of allocated budget in the last 5 financial years.

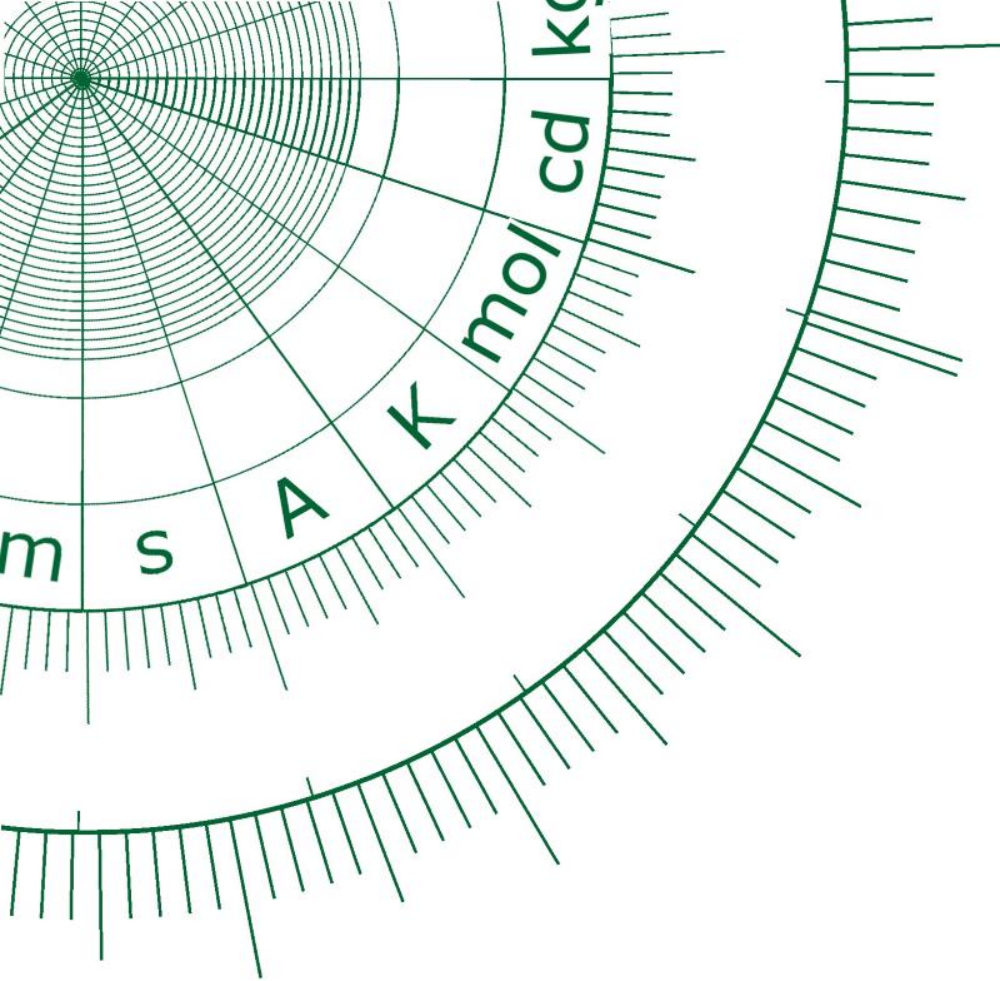


# Statutory Reporting

- No fruitless and wasteful expenditure incurred for the year
- No irregular expenditure incurred for the year
- 32 invoices paid after 30 days.
  - No SMMEs affected
  - Majority of the invoices related to large suppliers delivering good regularly (gases, etc) and delays due to reconciliation processes.
  - Solution for payment within 30 days in development
  - ERP system in implementation and to be deployed in the new financial year.

# Recapitalization for appropriate facilities

- The current committed capital contribution received from the dti of R139 million insufficient to cover the construction of a new campus.
- MTEF allocation continuously reduced year-year
- Estimated original costs from **unapproved** PPP process of R 1,7 bn as at 2017 will continue to escalate exponentially
- The current capital contribution received towards the recapitalisation of NMISA is utilized to cover the required continued upgrades, repairs and maintenance of the old facilities as well as costs to ensure operational readiness and implementation of strategy.
- Appropriate level of funding is critical for NMISA to successfully fulfil its mandate.



# Thank You

We measure what matters

# Annexure 1

## Summary of NMISA Strategic Plan

### National Metrology Institute of South Africa: Strategic Plan 2019-2023

Established under the Measurement Units and Measurement Standards Act, No 18 of 2006

- To provide for the use of measurement units of the international System of Units (SI)
- To designate other measurement units for use and to provide for the designation of the National Measurement Standards (NMS), and
- To develop, keep, maintain and disseminate the NMS
- To certify high-order reference materials/provide for national reference measurements or analysis traceable to high-order certified reference materials

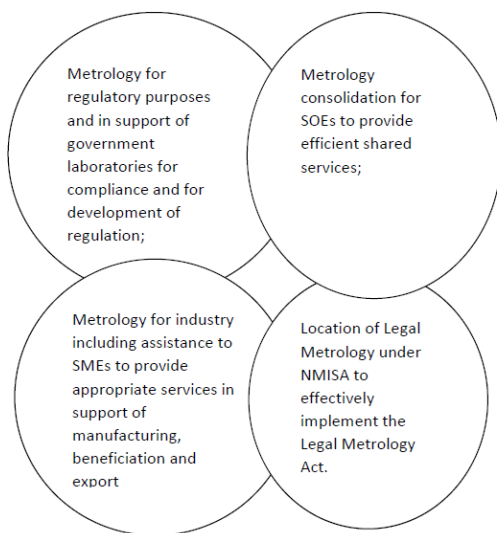
#### NMISA Vision

To be the leading metrology and measurement centre of excellence on the African continent connecting Africa to the world

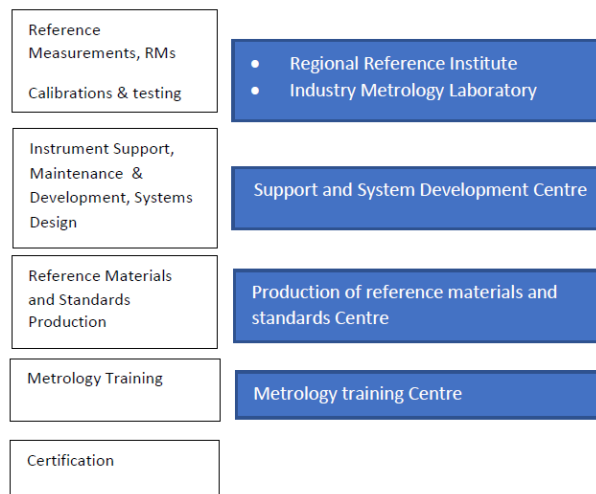
#### NMISA Mission

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

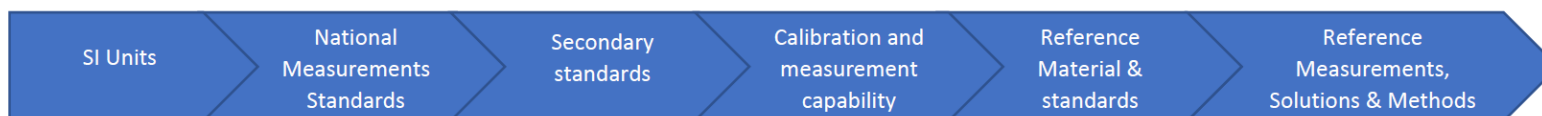
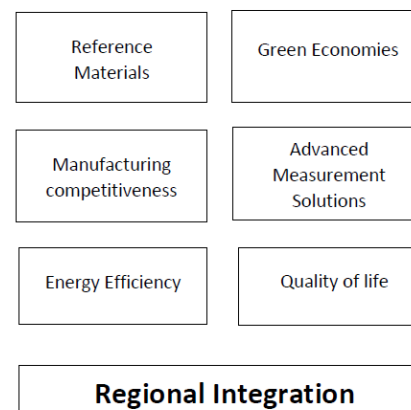
### NMISA Strategic Thrusts



### NMISA Offerings



### NMISA Programmes



#### Physical & Electrical Metrology

AUV  
Length, Pressure, Flow  
Force, Torque, Hardness  
Mass  
DC Low Frequency & Radio frequency  
Photometry & Radiometry  
RF Electrical  
TFFO  
Temperature & Humidity

#### Chemical, Material & Medical Metrology

Gases  
Inorganic analysis  
Organic Analysis  
Bio Sciences  
Materials Science  
Dosimetry  
Radioactivity Measurements  
Radiation therapy Dosimetry audit

Shortening the traceability Chain for South Africa and the Region