TC-QS Committee

Report on
(NMI)Quality Management System
to AFRIMETS TC-QS

By

Lerato Ntatamala

NMISA Quality Manager

Date: 8 July 2019

AFRIMETS
Intra-Africa Metrology System
Système Intra-Africain de Métrologie

Agenda

1. Information on the national metrology system (National Quality Infrastructure)
2. Quality policy.
3. Organogram of the NMI.
4. QMS processes and steering mechanisms in the organization.
5. Current accreditations/international recognition.
6. Current status of transition plan to ISO 17025:2017
7. List of updated calibration capabilities covered by the QMS
8. Continuous improvement
9. Audits / external review
10. Addressing weak and strong points
11. Addressing solutions for problems encountered

AFRIMETS
Intra-Africa Metrology System
Système Intra-Africain de Métrologie

Information on the national metrology system (National Quality Infrastructure)

- QI system in SA is responsible for the following:
- Enhancing quality
- Encouraging competitiveness in industry
- Supporting business
- Facilitating global trade
- Improving general socioeconomic conditions
- Protecting consumer health and safety and the environment

Our mandate

To maintain the SI units and develop primary scientific standards of physical quantities for RSA

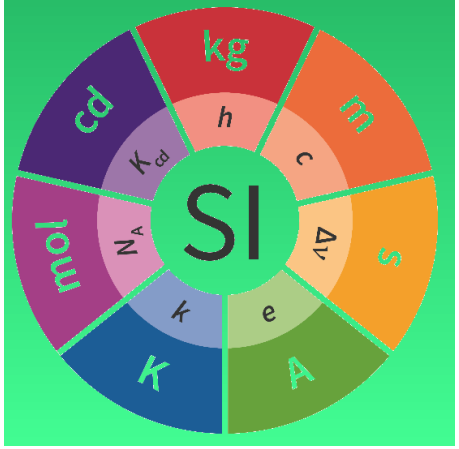
To compare those standards with other national standards to ensure global measurement equivalence

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

Traceability in chemical metrology is either to the mol or to the kilogram SI unit

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



The National Quality Infrastructure

The institutional framework that establishes and implements the practice of standardization, including conformity assessment services, metrology, and accreditation

QUALITY INFRASTRUCTURE OF SOUTH AFRICA

Policy, legislation and regulation

Measurement traceability (physical and industrial metrology)

Documentary standards, methods of test

Claims of conformity, verification, certification

Accreditation, peer assessment

Market surveillance

Parliament, Government Departments, Industry Associations, Consumer Groups

and other standards bodies and professional bodies

Audit, Calibrate, Evaluate, Examine, Inspect, Test

Government, inspections, certification and accreditation bodies and laboratories

Other Government Regulators

Technical outcomes that society can trust, and use in decision making

The National Quality Infrastructure

Metrology, standardization and conformity assessment are the three independent pillars of this essential national quality infrastructure.

Metrology

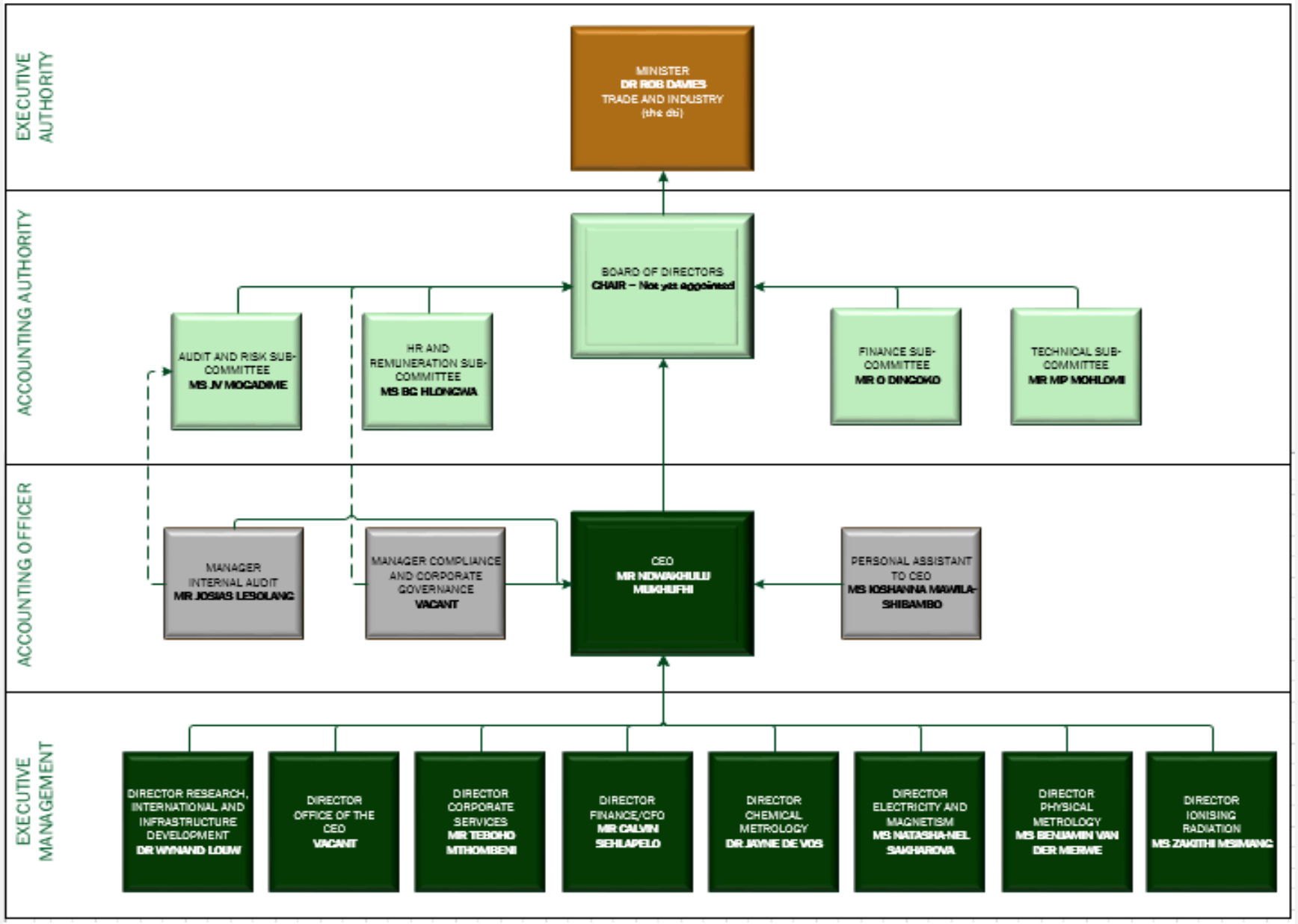
Standards

Conformity assessment

Accreditation

QUALITY POLICY

- The Quality Policy is signed by top management and committed to comply with the requirements of ISO 17025, ISO 17034, ISO 17043, ISO 14001, OHSAS 18001 (transition to ISO 45001)
- Quality objectives are reviewed during Management Review
- NMISA is committed to impartiality, good professional practice and to the quality of services to customers.
- NMISA technical personnel familiarize themselves with quality documents and the implementation of policies and procedure , through laboratory QC's.

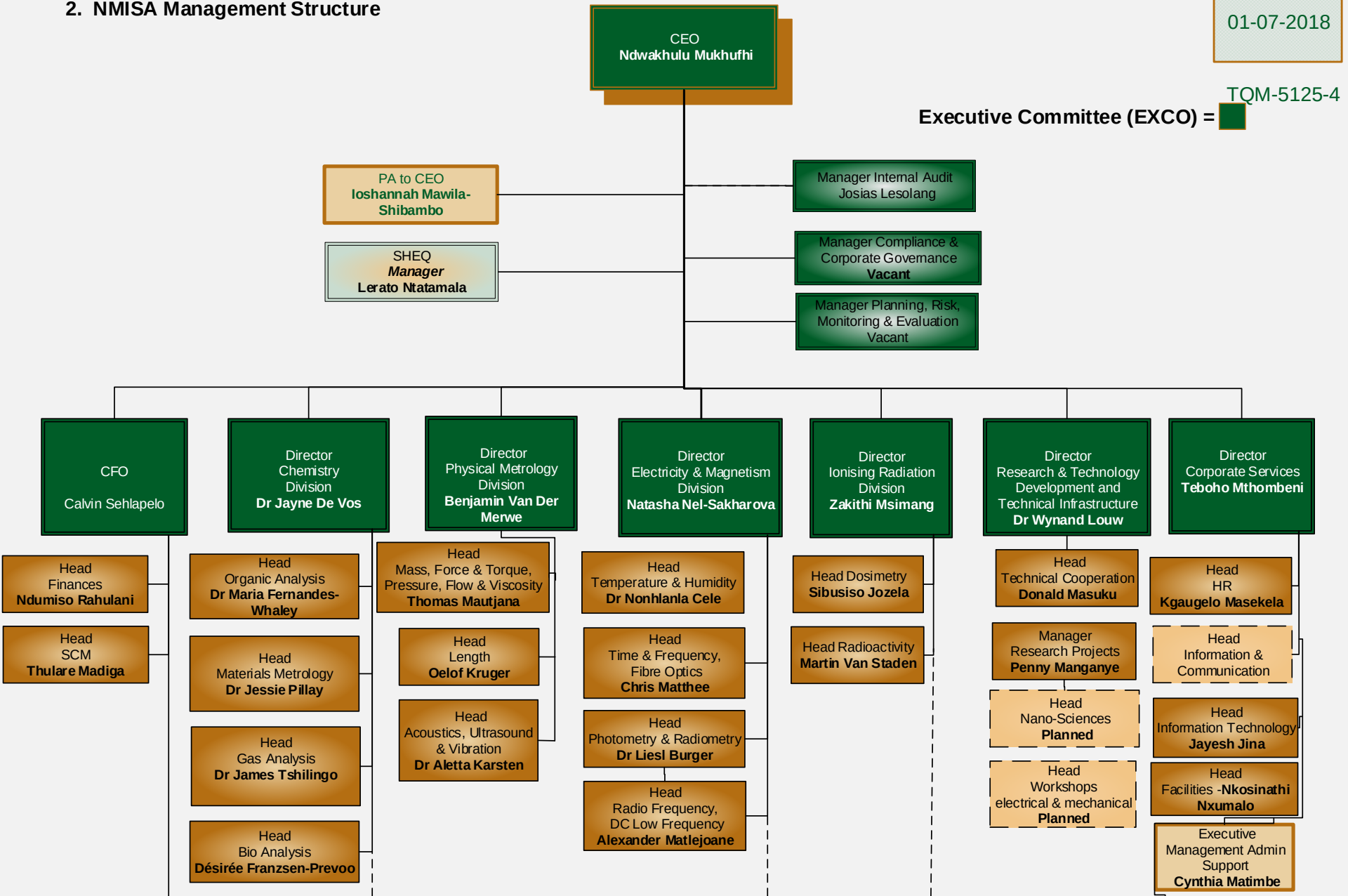

EXECUTIVE AUTHORITY
MINISTER
DR ROB DAVIES
TRADE AND INDUSTRY
(the dti)
ACCOUNTING AUTHORITY
BOARD OF DIRECTORS
CHAIR – Not yet appointed
AUDIT AND RISK SUB-COMMITTEE
MS JV MOCADIME
HR AND REMUNERATION SUB-COMMITTEE
MS BC HLONGWA
FINANCE SUB-COMMITTEE
MR O DINGOKO
TECHNICAL SUB-COMMITTEE
MR MP MOHLOMI
ACCOUNTING OFFICER
MANAGER INTERNAL AUDIT
MR JOSIAS LESOLANG
MANAGER COMPLIANCE AND CORPORATE GOVERNANCE
VACANT
CEO
MR NDWAKHULU MUKHUFHI
PERSONAL ASSISTANT TO CEO
MS IOSHANNA MAWILA-SHIBAMBO
EXECUTIVE MANAGEMENT
DIRECTOR RESEARCH, INTERNATIONAL AND INFRASTRUCTURE DEVELOPMENT
DR WYNAND LOUW
DIRECTOR OFFICE OF THE CEO
VACANT
DIRECTOR CORPORATE SERVICES
MR TEBOHO MTHOMBENI
DIRECTOR FINANCE/CFO
MR CALVIN SEHLAPELO
DIRECTOR CHEMICAL METROLOGY
DR JAYNE DE VOS
DIRECTOR ELECTRICITY AND MAGNETISM
MS NATASHA-NEL SAKHAROVA
DIRECTOR PHYSICAL METROLOGY
MS BENJAMIN VAN DER MERWE
DIRECTOR IONISING RADIATION
MS ZAKITHI MSIMANG

2. NMISA Management Structure

01-07-2018

TQM-5125-4

Executive Committee (EXCO) =



QMS PROCESSES AND STEERING MECHANISMS IN THE ORGANIZATION

- NMISA Level 1 documents (Policies, Quality Manual)
- NMISA Level 2 documents (NMISA General Procedures - Technical & Management)
- NMISA Level 3 documents (Laboratory Technical Procedures)
- Records

CURRENT ACCREDITATIONS/INTERNATIONAL RECOGNITION

1603 Temperature	
Surveillance assessment – Mr Mario Alveres SANAS	15 October 2018
1601 Gas Metrology **CRM 002** Gas Metrology - Producer of Certified Reference Material	
Re-assessment - Dr Paul Brewer NPL Bob Hayes SANAS	26-28 November 2018
1613 Humidity	
Surveillance Assessment G Snelling SANAS	16 October 2018
1618 Fibre Optics	
Re-assessment – JC Peterson – Danish National Metrology Institute	16 - 18 October 2018

CURRENT ACCREDITATIONS/INTERNATIONAL RECOGNITION

1600 AUV	
Re-assessment Dr G Ripper - INMETRO	
Scope Extension Zemar M. Defilippo Soares - INMETRO	
1606 Dosimetry	
Surveillance Assessment Charles Kros SANAS	
1610 Radioactivity Standard	
Surveillance Assessment Peane Maleka SANAS	

CURRENT ACCREDITATIONS/INTERNATIONAL RECOGNITION

1620 Flow	
12 months follow-up Assessment Dr Richard Högström -VTT Technical Research Centre of Finland Ltd, Centre for Metrology, MIKES	29 November 2018
1615 IPS	
Re-assessment H Goenaga-Infante - LGC Ltd., Teddington, UK	28 – 29 November 2018
1608 Radio Frequency	
Surveillance assessment S Sokolic - SANAS	15 - 16 October 2018

CURRENT STATUS OF TRANSITION PLAN TO ISO 17025:2017

The following 9 labs QMS is transited to ISO 17025:2017 and ISO 17034:2016 (12 O:

- DCLF (1612)
- Length (1606)
- Organic Analysis (1616)
- Organic Analysis (CRM001_ISO 17034:2016)
- Photometry & Radiometry (1611)
- Force (1602)
- IPS (T0555)
- Pressure (1614)
- Mass (1605)

NMISA ISO 17025:2017 Transition																							
	2018							2019												2020			
Activity	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr-Nov
Communication, Training and Awareness (EXCO)																							
Communication,Training and Awareness (MMC & QC (internal auditors), introduction to staff)																							
Policy and procedure review																							
Review of existing status and Gap analysis																							
Development of missing mechanisms and revision of existing mechanisms to align with new requirements																							
Implementation of newly developed and reviewed mechanisms																							
Communicate new and revised mechanism to staff																							
Internal Audit to check and monitor																							
Development of actions to address the non-conformances																							
Management Review																							
Notify AFRIMETS																							
SANAS accreditation assessments																							

LIST OF UPDATED CALIBRATION CAPABILITIES COVERED BY THE QMS

- 41 New CMC's published (AUV)
- CMC's increased from 494 to 535
- NMISA has a total of 535, CMC's,

LIST OF UPDATED CALIBRATION CAPABILITIES COVERED BY THE QMS

Fields and relevant AFRIMETS Technical committees		*Field covered by the QMS? (Y/N)*	*CMCs published? (Y/N)*	*CMCs in the review process? (Y/N)*	*CMCs in the review process covered by QMS? (Y/N)*
TC-M	Mass and Related Quantities	Y	Y	N	N
TC-F	Flow	Y	Y	N	N
TC-P	Pressure	Y	Y	N	N
TC- F,T,H	Force, Torque and Hardness	Y	Y	N	N
TC-L	Length	Y	Y	N	N
TC-AUV	Acoustics, Ultrasound and Vibration	Y	Y	N	N
TC-T	Temperature	Y	Y	N	N
TC-TF	Time and Frequency	Y	Y	N	N
TC-PR	Photometry and Radiometry	Y	Y	N	N
TC-IR	Ionizing Radiation	Y	Y	N	N
TC-RS	Radioactivity Standards	Y	Y	N	N
TC-EM	Direct Current, low Frequency (Voltage)	Y	Y	N	N
TC-MC	Metrology in Chemistry	Y	Y	N	N

CONTINUOUS IMPROVEMENT

- Organic Analysis (Proficiency Testing Scheme) 17043 accreditation
- Training on ISO 17025:2017, ISO 17034:2016, ISO 17043:2010
- Accreditation Scope Extension
- Technical Signatory (17025 & 17034)
- Risk and opportunities incorporation in TQMS
- Learning and improving from the non-conformances raised
- 75 ILC/PT – 15 labs, NMISA piloted 27 and 2 co-piloting with NIS.

AUDITS / EXTERNAL REVIEW

- Internal Technical Self-Audits
- QMS audits
- SANAS (3rd party assessments)
- Peer Review from International Institutes

ADDRESSING WEAK AND STRONG POINTS

- Weak Point: Customer Management System (CMS)
- Strong Points:
- NMISA has a succession plan in place that is supported by a strong human capital development programme
- Technical staff are sent to BIPM and major NMIs for training (NPL, NIST, KRISS, NMIJ, PTB, METAS, VSL, etc.)
- NMISA ensures that technical personnel are competent in many parameters and each parameter has more than one Technical Signatory

ADDRESSING SOLUTIONS FOR PROBLEMS ENCOUNTERED

- Enterprise Resource Planning (ERP) system implementation
- Business Continuity Management
- Transition to the new organisational structure

THANK YOU