



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



**TCL WG**  
**Length/dimensional feedback**  
**July 2023**

**O Kruger**



# TCL Meeting

The activities during the year focused on:

- Selection of new chair and vice-chair
- Supporting the CIPM MRA through
  - Comparisons
  - CMCs
  - Capacity projects building through training and
  - R&D to establish facilities



# Selection of chair and vice chair

During the meeting, a new chair and vice chair was selected:

**Chair:** Dr Osama Terra from NIS

**Vice chair:** Mr Bunhard Chanda from SIRDC



# Length Comparisons for 2021 – 23

## Comparisons currently running:

- **AFRIMETS LK 1:** End Standards, gauge blocks by interferometry – NMISA Pilot- In progress

- **AFRIMETS LS 5:** Hand-held measuring instruments – NIS pilot, Draft A and Draft B in progress

Artifacts:

External Micrometer 0-25 mm; DTI: 0-25mm; Caliper: 0-150 mm

Optional: Micrometer setting rods; Feeler Gauges; Pin Gauges

13 NMIs participating

- **SADCMET LS 5:** Hand-held measuring instruments – 4 NMIs pilot labs

Artifacts: Micrometer: 0-25 mm, 50-75 mm; Caliper: 0-150 mm, 0-500 mm; Tape: 30 m; DTI: 0-25mm, 9 NMIs participating

- **EAMET.DIM.S1:2020:** Digital Indicator (0-50 mm), Dial Gauge (0-5 mm) and External Micrometer (0-25mm), TBS pilot



# Length Comparisons for 2021 – 23

## **Comparisons planned:**

- **AFRIMETS LS 1:** End standards, gauge blocks by mechanical measurement – NMISA to pilot - planned
- **Levels and engineering square:** NIS pilot
- **Handheld Electronic Distance Meter:** NIS pilot
- **Sieves:** NIS pilot



# CMC submissions

**NIS** had more than 20 CMCs submitted and approved over the last two years.

Many other NMIs are ready to submitted awaiting the outcome of the previous mentioned comparisons.



# Capacity Building projects

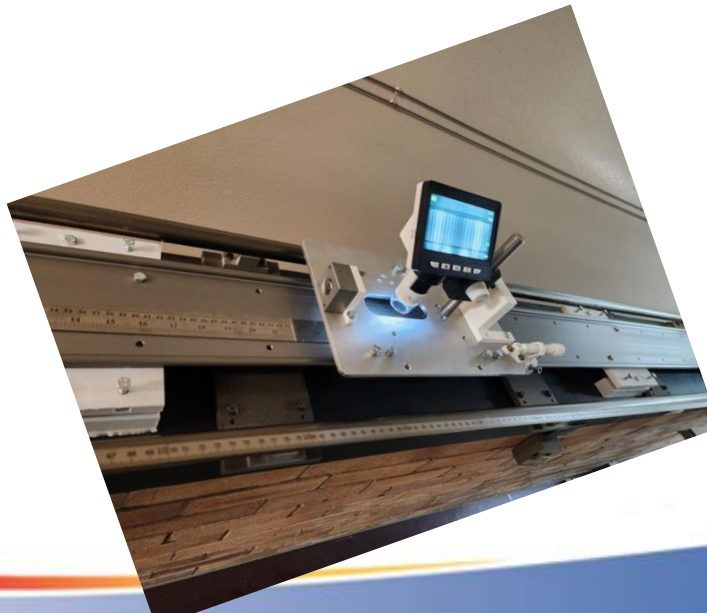
## PTB sponsored

- **Laser traceably workshop.** Due to COVID the physical workshop not yet held. Had a 2-day online theoretical workshop in March 2022. Physical workshop was held during Feb 2023 in Kenya.
- **Additive Manufacturing (3D printing) project;** Suppling of printers for 6 NMIs – Printers delivered to the NMIs, commissioned and training supplied.



# Capacity Building projects PTB sponsored

- Tape Tunnel project; design, building install and training for two Tape Tunnels Afrimets NMIs (KEBS, TBS) – Will be capable to calibrate Steel tapes, Rules, Theodolites and Handheld EDMs
- Did design and testing and start rolling out to the NMIs





# R&D Capacity Building project proposed

## Angle Standards

New project proposed and in discussion with the PTB for possible funding. Did an assessment of current capabilities and requirements.

From CCL needs to develop Guidance Documents for the practical realisation of the Unit, Radian, Level and True North.

Afrimets project will focus on Guidance Document for traceability to Level (MSL)  
But will also include capacity building in NMIs for the calibration services of:

- Bubble and electronic levels
- Laser levels
- Squares, blade and combination
- Dumpy levels
- Theodolites
- Gyroscopes



## Hosting of:

- Macroscale conference
- CCL WGs MRA/Nano/Strategy
- AFRIMETS TCL

Macroscale together with AFRIMETS TCL and CCL WG, was supposed to be in 2020. Due to COVID moved to 2025

## Pretoria, South Africa



The end

