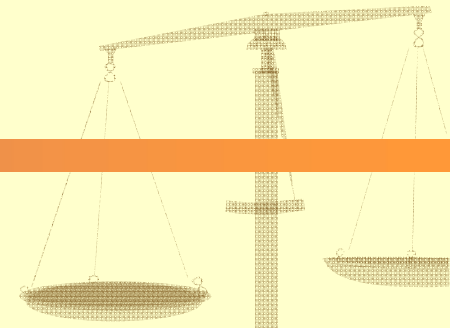




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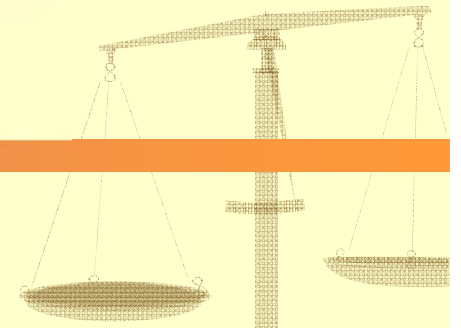
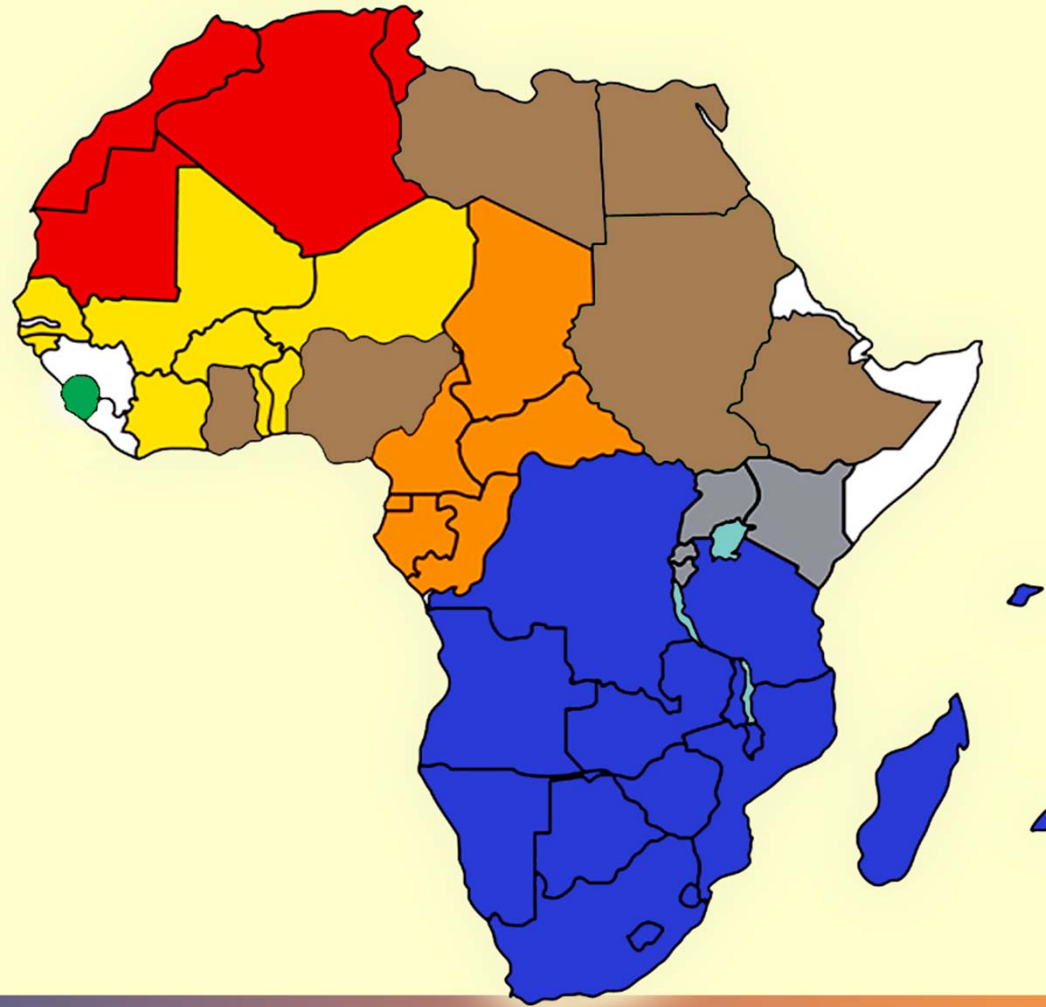
# **TCL- Length/dimensional feedback 2013 O Kruger**





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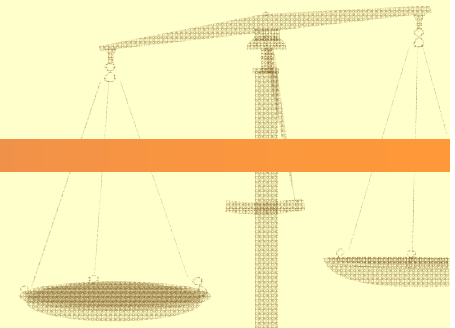




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## Length working group Roadmap (top priorities)

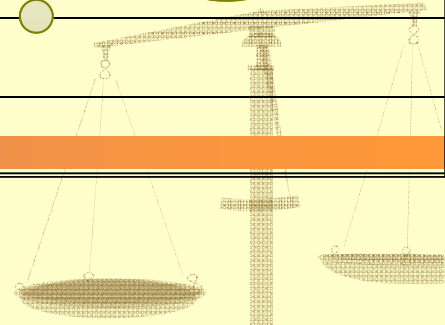
- Comparisons to support CMC submission
- Assist firstly NIS (and then other NMIs) to become CCL member, must first become associate member
- Assist with NMIs to become part of the WG
- Assist Countries entering CMCs in database, No CMC submission currently through Afrimets, NMISA CMCs through APMP and NIS CMCs through Euramet
- Sponsorship of road map activities:
  - Comparisons
  - R&D projects:
  - Training
- Start, together Mass and related, initiative to produce technical guidelines
- Better use of Web site



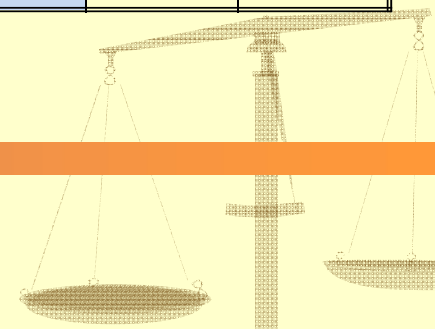


Number	AFRIMETS comparisons	Status	Phase	Pilot laboratory	2012	2013	2014	2015	2016	2017
Afrimets-L1, 2012	Gauge blocks, up to 100 mm	Received artifacts	1	NIS/NMISA						
Afrimets-LS7, 2014	Line scales up to 500 mm, 1 metre	Planned	0	NIS/NMISA						
Afrimets-LS?	Dial indicator	Planned	0	??						
Afrimets-LS?	External micrometer	Planned	0	??						
Afrimets-LS?	Calliper, vernier or digital	Planned	0	SIRDC/NIMSA?? ?						
Afrimets LS3, 2012	Gauge blocks, up to 100 mm	Measurements complete	2	Egypt						
Afrimets LS4, 2012	Gauge blocks, up to 100 mm	Measurements complete	2	Tumisia						
Afrimets-LS1, 2013	Gauge blocks, up to 100 mm	Planned	0	SA/Tumisia						
	<b>SADCMET comparisons</b>	Circulating	3	NMISA						
SADC-LS 1	Gauge blocks, up to 100 mm	5 labs completed measurements								
SADC-LS 7	Line scale, 1 m rule	Only 4 send in results								
SADC-LS 11	External micrometer, 0-25 mm & 25mm-50 mm and two micrometer setting pieces									

STUCK IN MALAWI /  
 Replace by Afrimets  
 comparison

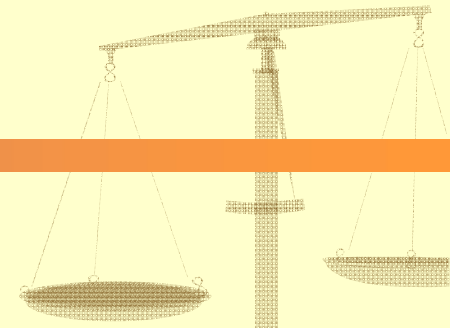


<b>Technical training</b>	2013	2014	2015	2016	2017
Basic length	ongoing				
Gauge block by interferometry, including basic distance interferometry					
Angle, levels, Protractor, squares					
Long distance base line, including GPS.					
<b>Other training</b>					
CMC submission					
Pilot of comparisons					



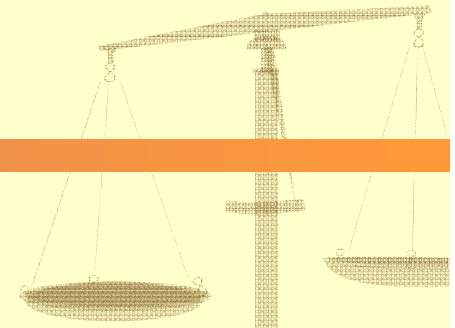


<b>Research projects</b>	2013	2014	2015	2016	2017
Double ended interferometer for use in gauge block calibrations					
Long base line, including GPS calibrations					
Compass, true north calibrations					





<b>Technical guidelines, procedures</b>	2013	2014	2015	2016	2017
Gauges by comparisons					
Micrometer and vernier calliper					
Thickness gauges					
Angle, levels, Protractor, squares					
Line scales					
Some of the research projects will lead to TG					



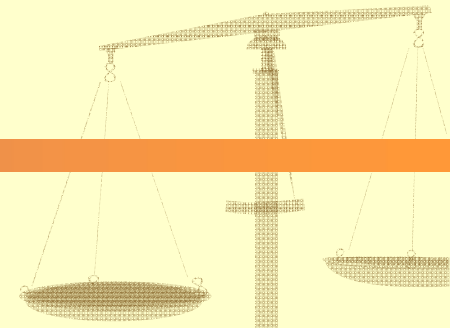


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## Web site

### To be on web site:

- Contact list
- Comparison lists
- Training available
- Training requirements
- R & D Projects





## •Comparisons:

1) SADC MET comparisons LS1, LS7 and LS11 was ended with only four NMIs submitting their results. Draft A results were send to NMIs.

2) Two new end standards (gauge blocks) comparisons registered on the BIPM website.

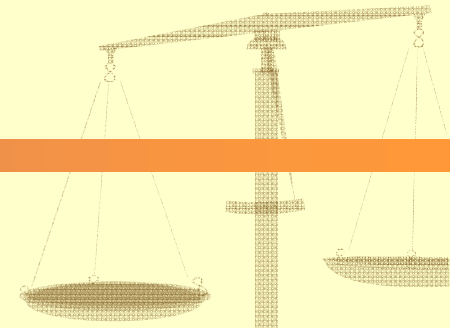
AFRIMETS .L- S3 and L- S4. Both for gauge blocks by mechanical measurements

3) UNIDO sponsored artifacts for gauge blocks by interferometry. Will use gauge blocks for new mechanical measurement comparison to include more NMIs

## •Research

South Africa and Egypt submitted a joint research project on interferometry measurements of gauge blocks, phase stepping technique.

Part of project is comparison of end standards (gauge blocks)





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Thank you

