

Role of AFRIMETS

(The Intra-Africa Metrology System)
(Système Intra-Africain de Metrologie)

Working Groups

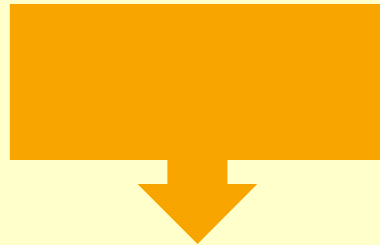
July 2009

Dr. Wynand Louw
Chairperson; AFRIMETS
Prof. Ahmed A. El Sayed
Chairperson: WG - QS

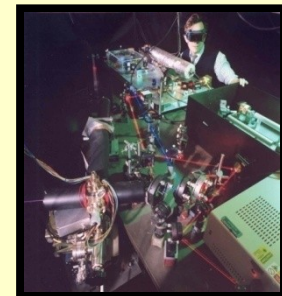


- Awareness creation & Training
- Identify Measurement gaps & Improve CMCs
- Regional Measurement Institutes
- Harmonization between SRMOs
- Earning Measurement Equivalence for African NMIs

Tools to Achieve Goals ?



Committees & Working Groups



- In addition to measurement equivalence and harmonization of Legal Metrology activities
 - Liaison with the AU/NEPAD
 - Liaison with other RMOs
 - Establishment of Metrology Infrastructure
 - Coordination of donor funding



Tools to Achieve Goals ?

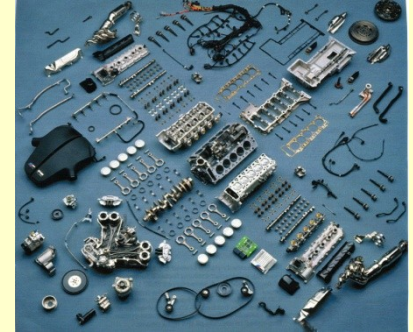


Committees & Working Groups



The AFRIMETS TC & WG structure

- TC 1A: Regional Technical Committee (RTC)
OR Simply Technical Committees (TC) on
CIPM MRA, BIPM and JCRB Issues
- Work Groups (WGs) Under TC 1A for each
parameter or group of parameters:
 - WG – AUV; *Acoustics, Ultra sound & Vibration*
 - WG – EM; *Electricity & Magnetism*
 - WG – L; *Length*
 - WG – M; *Mass & Related Quantities*
 - WG – Volume
 - WG – Pressure
 - WG – PR; *Photometry & Radiometry*
 - WG – QM; *Quantity of Substance*
 - WG – QS; *Quality Systems*
 - WG – RI; *Ionizing Radiation*
 - WG – TF; *Time & Frequency*



- Four major functions:
 - Assist the development of technical & QS capabilities at member NMIs
 - Assist established laboratories with Technical and Quality issues
 - Organise PT, Pilot and Key comparisons
 - PT schemes to test and improve capabilities
 - Pilot studies to determine the level of readiness to conduct a KC, NMIs and other laboratories
 - KCs to prove and underwrite capabilities, CMC claims
 - Conduct the intra RMO CMC review process



- Review and approval of Calibration and Measurement Capability (CMC) claims
 - RMO Quality system verification (CIPM MRA Par 7.3)
 - 3rd party accreditation –As in SADCMET
 - Or, quality system appraisal by RMO (self declaration)
 - Intra-regional screening of CMC submissions from member states
 - Technical Working Group chairs
 - Inter-regional evaluation of CMCs

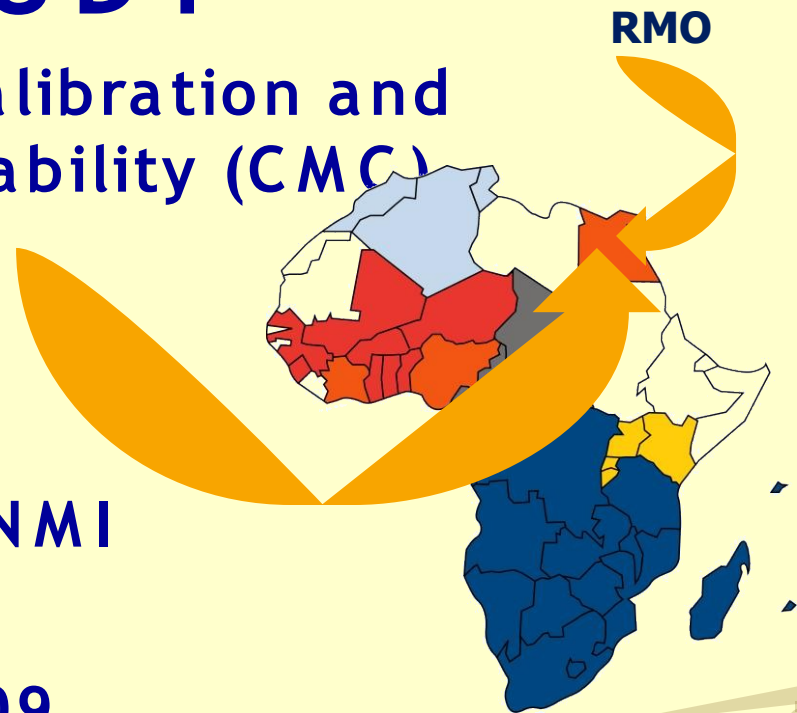


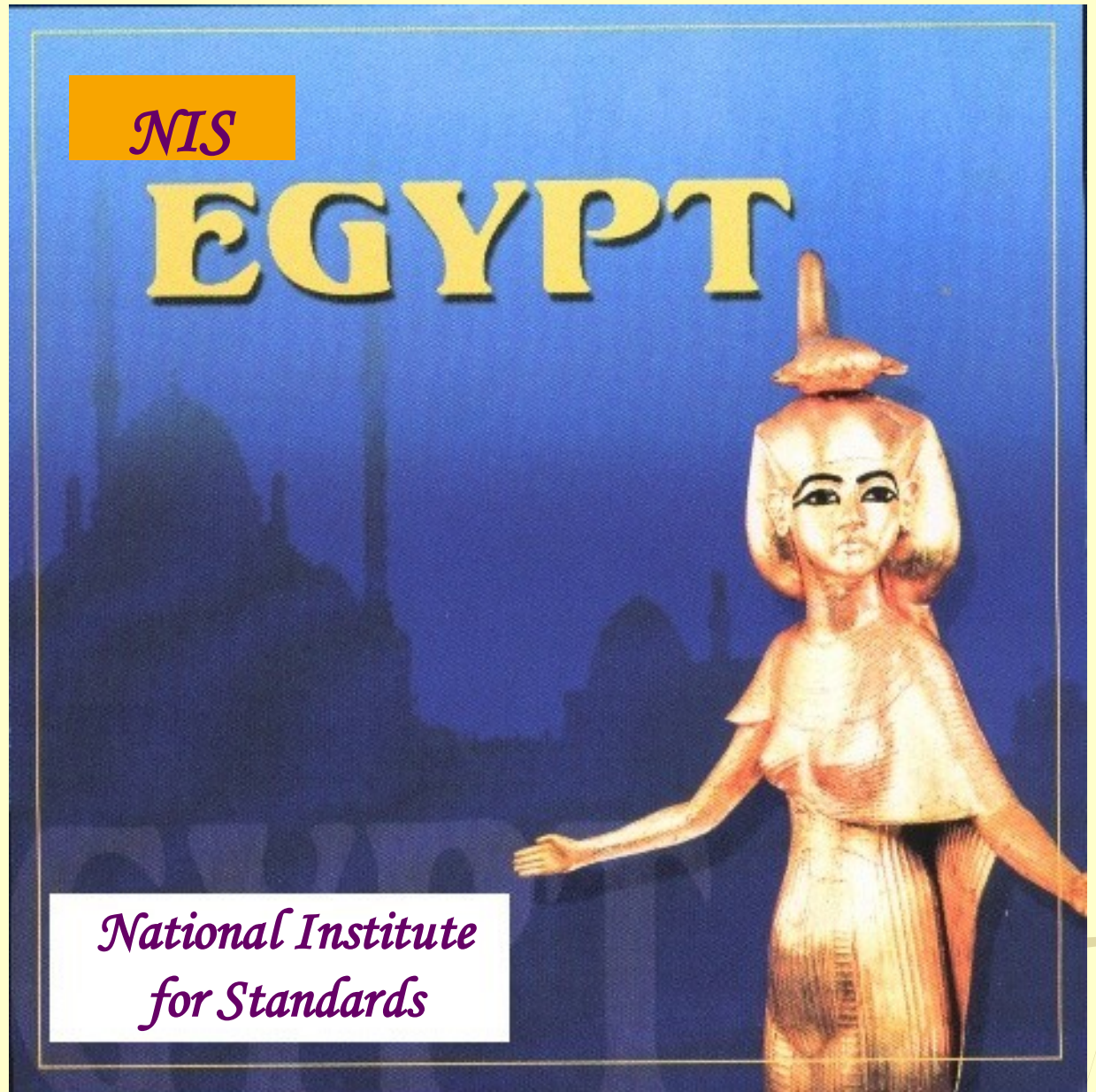
CASE STUDY

On the approval of Calibration and
Measurement Capability (CMC)
claims

By
An African NMI

2007 - 2009







National Institute for Standards (NIS)

CIPM MRA

Implementation Strategy

To Publish CMCs

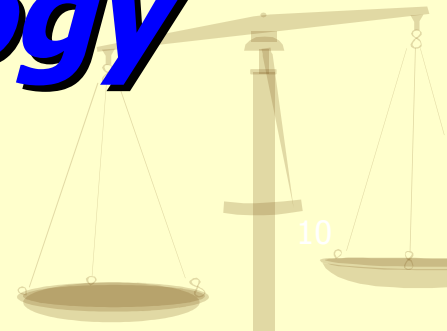
in

BIPM KCDB



Obstacles

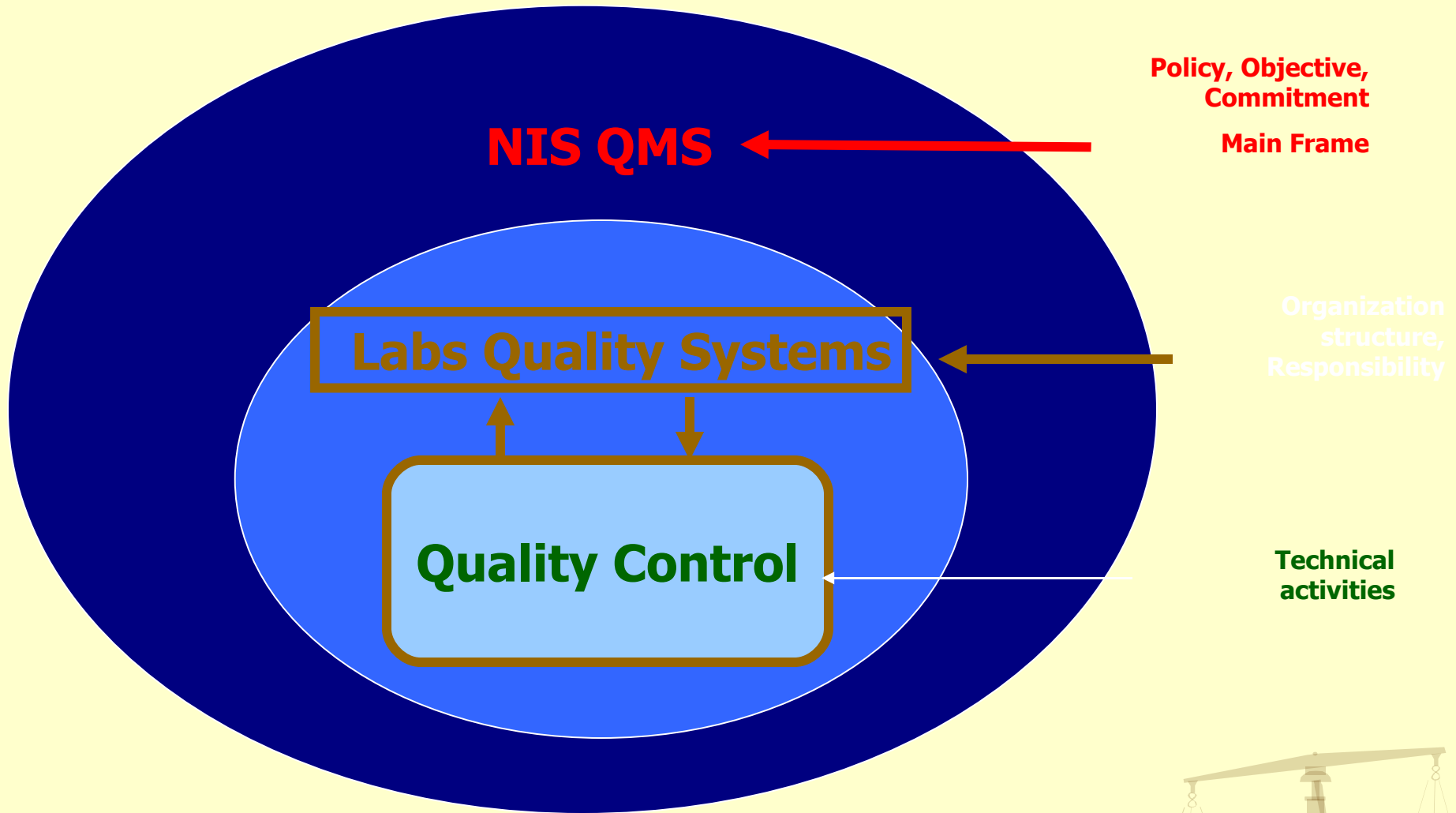
- 1. Peer Review of CMCs***
- 2. Support of Approved Quality System by Regional Metrology Body***



*NIS Actions to
overcome foreseen
obstacles*



Current Status of NIS Management System

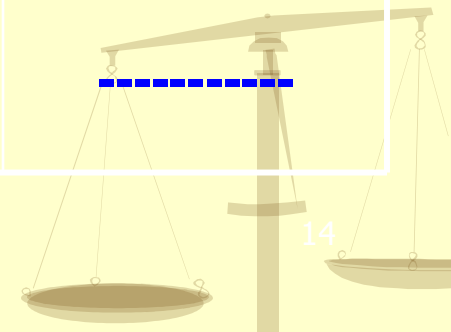


NIS Management System Development - 1

Activity Element	NIS	Mass	Force	Viscosity
Key Personnel	Technical & Quality Coordinators	Tech. & Quality Managers	Tech. & Quality Managers	Tech. & Quality Managers
Quality Manual	Main Frame Q.M.	Lab. Q.M.	Lab. Q.M.	Lab. Q.M.
Technical & Management Procedures	✓	✓	✓	✓
Accreditation Status	—	✓	Applied	Ready to Apply

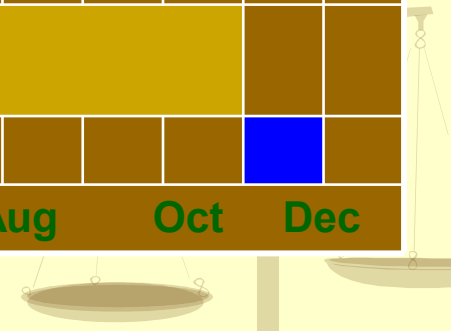
NIS Management System Development - 2

Activity Element	Time & Frequency	Electrical Quantities	Length
Key Personnel	Tech. & Quality Managers	Tech. & Quality Managers	Tech. & Quality Managers
Quality Manual	Under Preparation	Under Preparation	Under Preparation
Technical & Management Procedures	Under Preparation	Under Preparation	Under Preparation
Accreditation Status	-----	-----	-----

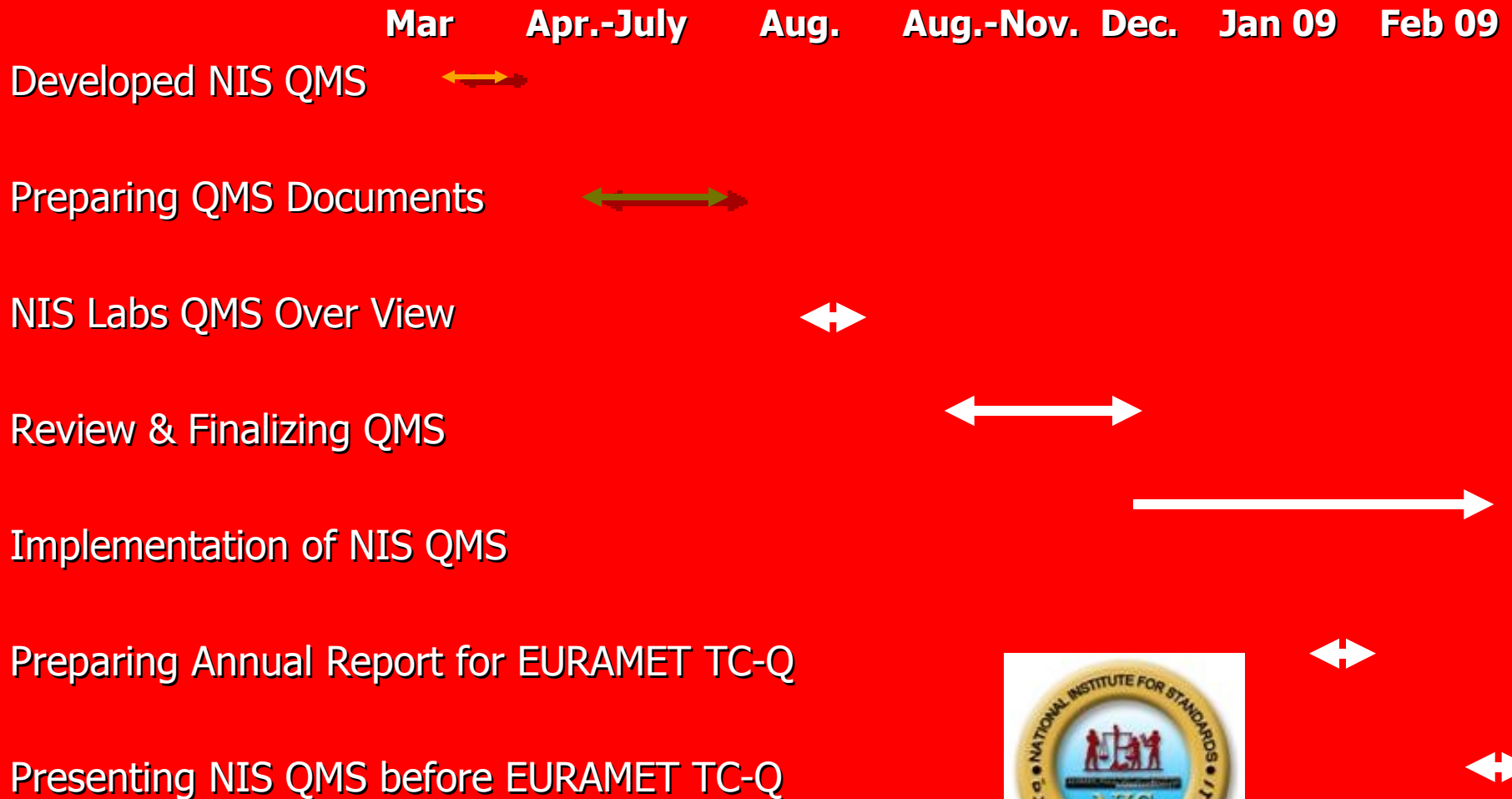


Implementation Plan for Mass, Pressure, Force and Viscosity

No.	Task Name	2007											
		Jan	Mar	May	July	Sep	Nov						
1	Application to EUROMET TCs Chairs with evidences from K & S comparisons results + Forms						15						
2	Submit NIS QMS to EUROMET TCQ									8			
3	On site Peer Review for CMCs & QMS (4 – 5 Assessors)											2 10 3	
No.	Task Name	2008											
		Jan	Mar	May	July	Sep	Nov						
4	Submit final QMS to EUROMET TCQ	8											
5	Oral presentation before the 3 rd EUROMET TCQ meeting.		21 to 22										
6	Finalizing CMCs to submit to JCRB												
7	Publication of CMCs												
		Feb	Apr	June	Aug	Oct	Dec						



3- Development Plan 2008 - 2009





National Institute for Standards (NIS) Participation in Inter-Comparisons - 1

Current Situation ; July 2009

CC : 9 (1 Force + 1 Time +7 Viscosity)

APMP : 7 (4 Pressure + 2 Mass + 1 Temperature)

EURAMET: 6 (1 Length + 1 Force + 1 Pressure + 1 Density + 2 EM)

SADCMET : 3 (1 Length + 2 Mass)

AFRIMETS: 1 (Temperature)

BIPM : 1 (Length)

Total : 27 Inter-Comparisons





National Institute for Standards (NIS) Participation in Inter-Comparisons - 2

Current Situation ; July 2009

Approved for Equivalence : 12

In progress : 13

Protocol Complete : 1

Planned : 1

Total : 27 Inter-Comparisons





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

**Thanks
for your Patience**

Prof. Ahmed A. El Sayed
Chairperson: WG - QS

