

Challenges for full integration of Designated Institutes within EURAMET

Lyngby, Denmark, 18 – 19 February 2016

EURAMET Structure of NMIs and DIs: Legal and Practical Aspects

Wolfgang Schmid, EURAMET Member Service Manager

## Outline

- EURAMET as European RMO
- Organisation of EURAMET
- Role of DIs in EURAMET
- Summary



# Outline



EURAMET as European RMO

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# **Evolution of RMOs**





### Worldwide

1980s first RMOs are established loose cooperation

1999 CIPM MRA RMOs getting responsibilities in implementation of MRA Europe

1987 EUROMET based on MoU

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# The CIPM MRA Mutual Recognition Arrangement



#### Reconnaissance mutuelle

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des étalons nationaux de mesure et des certificats d'étalonnage et de mesurage émis par les laboratoires nationaux de métrologie Paris, le 14 octobre 1999



#### Mutual recognition

of national measurement standards and of calibration and measurement certificates issued by national metrology institutes

Paris, 14 October 1999

Comité international des poids et mesures Bureau des poids et mesures du Mètre



- Establishes the degree of equivalence of national measurement standards
- Provides for mutual recognition of calibration and measurement certificates issued by NMIs
- Provides governments and other parties with a sound technical foundation for wider arrangements

#### **RMOs as key players:**

- Organising comparisons (KC/SC)
- Reviewing QMS of NMIs & DIs
- Reviewing CMC-claims

# **Evolution of RMOs**





#### **Worldwide Europe** 1980s first RMOs are established 1987 EUROMET loose cooperation based on MoU **1999 CIPM MRA** RMOs getting responsibilities in 2002 MERA Study implementation of MRA Analysing options for closer cooperation 2007 EURAMET e.V Legal Entity, replacing EUROMET 2008 Joint research programmes starting iMERA-Plus / EMRP / EMPIR DI-workshop: EURAMET Structure of NMIs & DIs / Lyngby, Denmark, 18 - 19 February 201

## Joint Metrology Research Programmes



- 22 participating states in EMRP
- 28 participating states in EMPIR
- jointly agreed strategic research agenda
- implemented by EURAMET e.V.



# **Evolution of RMOs**





Worldwide			Europe	
1980s	first RMOs are established loose cooperation		1987	EUROMET based on MoU
1999	CIPM MRA RMOs getting responsibilities in implementation of MRA		2002	MERA Study Analysing options for closer cooperation
			2007	EURAMET e.V Legal Entity, replacing EUROMET
Today	Evolution of other RMOs - in some RMOs steps towards		2008	Joint research programmes starting <i>iMERA-Plus / EMRP / EMPIR</i>
	<ul> <li>- "White spots" on metrology world-map get filled</li> </ul>		2016	Next steps for coordination Study on "Coherent European Metrology Infrastructure"
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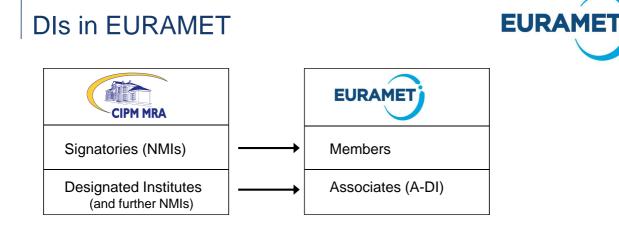


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## **EURAMET** Membership



Members: 37 NMIs **Associates:** JRC-IRMM (EC) 76 DIs Liaison Organisations: Finlard Nonetau 4 RMOs & BIPM Estonia 3 NMIs beyond Europe Latvia KMA (Kosovo under UNSCR 1244) Lithi ania ingdom United 6 regional/international Netherlands Germany Polard Organisations Belgium Germ Luxembourg Czech Republic Słovakia Averia Hungary Blovenia Romania Croatia France Switzerland Se*rbia* iB <sup>Bulgaria</sup> lonteneoro Spain Turkey Maita Cyprus DI-workshop: EURAMET Structure of NMIs & DIs / Lyngby, Denmark, 18 - 19 February 2016 11



#### **CIPM-MRA**

introduces concept of "Designated Institutes" (DI) as responsible for national standards not covered by the "traditional" NMI

#### EURAMET

requests a formal <u>registration of a DI</u> as <u>Associate</u> before carrying out the measures related to the CIPM MRA

- participation in EURAMET KCs and SCs
- review of the QMS by the EURAMET TC-Q
- review of the CMCs by the concerned EURAMET TC

A-DIs can participate in all technical activities of EURAMET (in their field of designation)

## How to become an A-DI?



#### 1) Designation

- national authority designates institute (procedure + template on BIPM website)
- BIPM lists DI in KCDB

#### 2) Communication BIPM – DI – EURAMET

- BIPM writes to DI informing them on their role and expectation within KCDB
- BIPM informs EURAMET on new DI

#### 3) Communication EURAMET – DI

- EURAMET contacts DI,
- informing on EURAMET rules and possibilities for participation
- DI should apply to become Associate

#### 4) Acceptance of the DI as Associate: A-DI

- Decision by GA
- Payment of annual fee

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## **EURAMET** expectations to DIs



DIs should ...

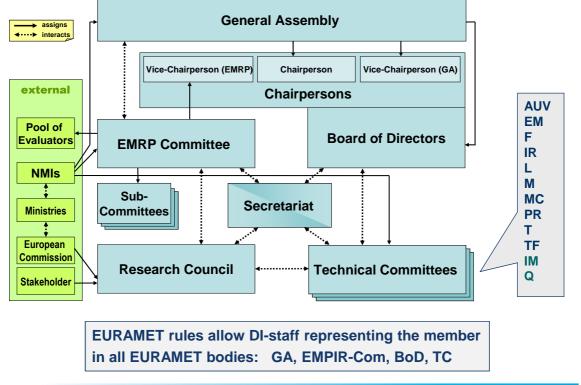
- maintain national measurement standards, and ensure having the technical competence end expertise
- actively participate in EURAMET activities, in particular in EURAMET projects and comparisons (KC, SC)
- have contact person or observer in TC or SC of their designation field
- get their QMS evaluated by EURAMET TC-Q
- have CMCs published in the KCDB (purpose of designation)

A-DIs not fulfilling the expectations related to their participation in the CIPM MRA, within a period of 5 years, may be excluded from EURAMET EURAMET Byelaws \$5(5)

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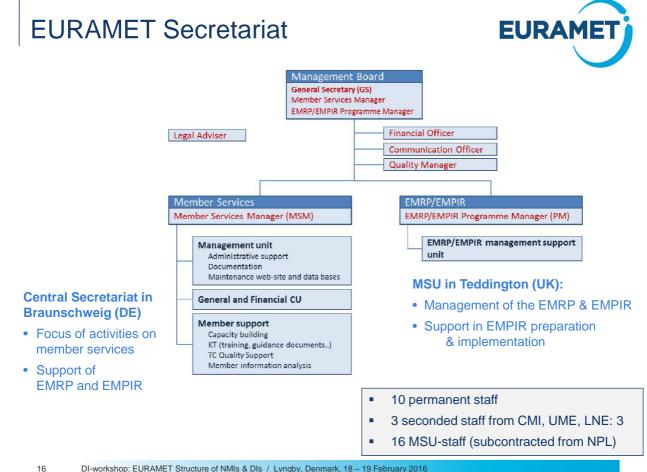
## **EURAMET** Organisation





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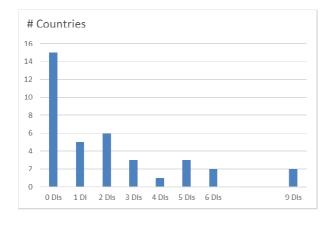
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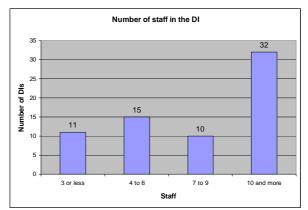
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# **DIs in EURAMET countries**







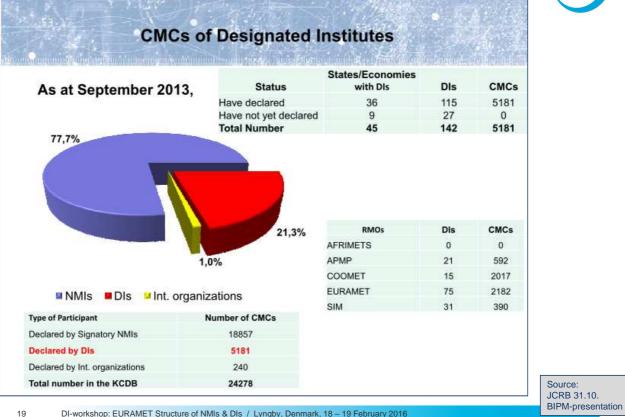


Approx. half of DIs have less than 10 staff members

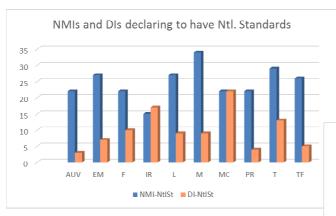
Survey March 2011

## Role of DIs within the CIPM MRA



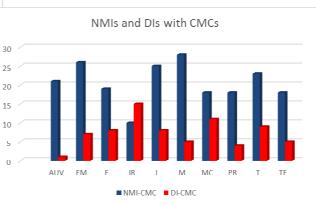


# **DIs in EURAMET TCs**



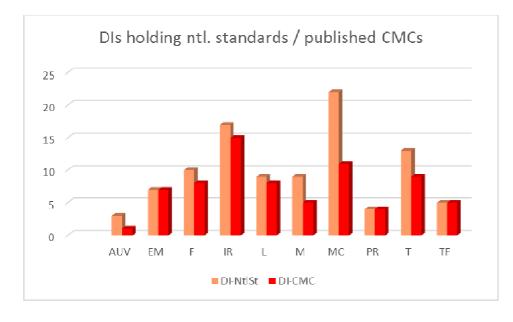
TCs with highets DI participation: IR, MC (same as NMI) F, T (half of NMI)





# DIs with CMCs published





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# Better integration of DIs in EURAMET

#### Progress during last years:

- Clear procedures for registration and formal integration of DIs into EURAMET + close information exchange with BIPM
- Review of our rules to facilitate participation of DIs in TCs and SCs
- Analysis how national metrology infrastructure (composed by NMI + DIs) is organized in EURAMET member countries
- Preparation of EURAMET Guide 2 on "Role of DIs within the CIPM MRA" with guidance to
  - national designating authorities
  - DIs
  - NMIs
  - EURAMET TCs
- Guide 2 was the basis for CIPM MRA-D06 on "DIs participating in the CIPM MRA -Expectations and nomination form"
- Workshop on "Challenges for Full Integration of DIs within EURAMET"





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**DIs have all participation options in EURAMET** 

## **CIPM MRA**

- Comparisons
- QMS review
- CMC review

### General

- Participation in TCs/SCs:
   contact person / observer
  - TC-projects
- Delegate, EMPIRrepresentative
- EURAMET functions:
   BoD, Chair, VC
  - TC-Chair, SC-Convenor

## **EMRP/EMPIR**

- JRP
  - receiving funding
  - coordinator
- Grants

# Conclusion



## **DIs play an important role in EURAMET**

- 60% of EURAMET member countries have DIs
- High relevance in "non-traditional" metrology areas for NMIs: IR, MC
- Active participation in all activities
- > 20% of CMCs from EURAMET are from DIs
- Currently both Vice-Chairpersons come from DIs
- Regularly TC-Chairs come from DIs





# Thank you for your attention!

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