

**EURAMET e.V.**

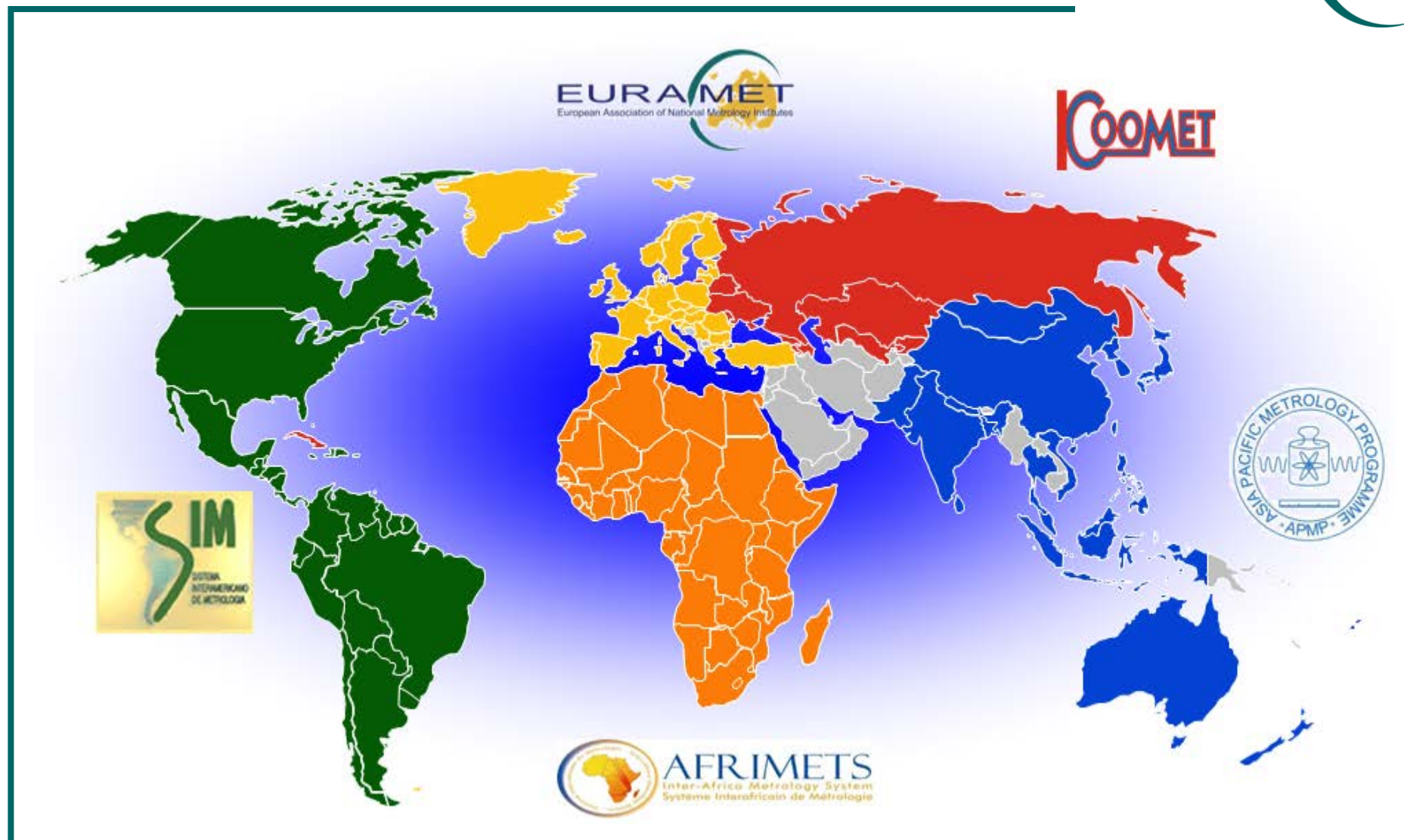
**European Association of National  
Metrology Institutes**

**Leslie PENDRILL, EURAMET Chairperson**

[chairperson@euramet.org](mailto:chairperson@euramet.org)

[www.euramet.org](http://www.euramet.org)

# Regional Metrology Organisations (RMO)



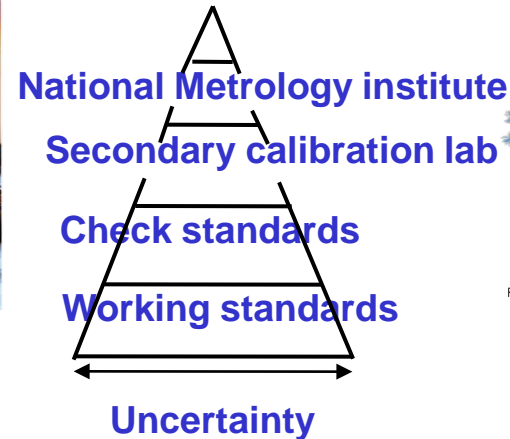
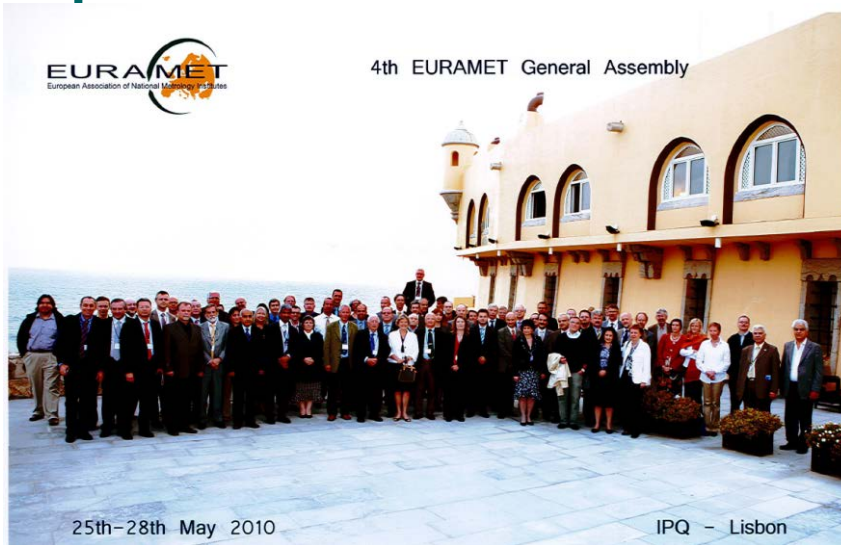
5th EURAMET GA Chairpersons' Report Past Year

Sarajevo, Bosnia-Herzegovina, 7 June 2011

G05.03

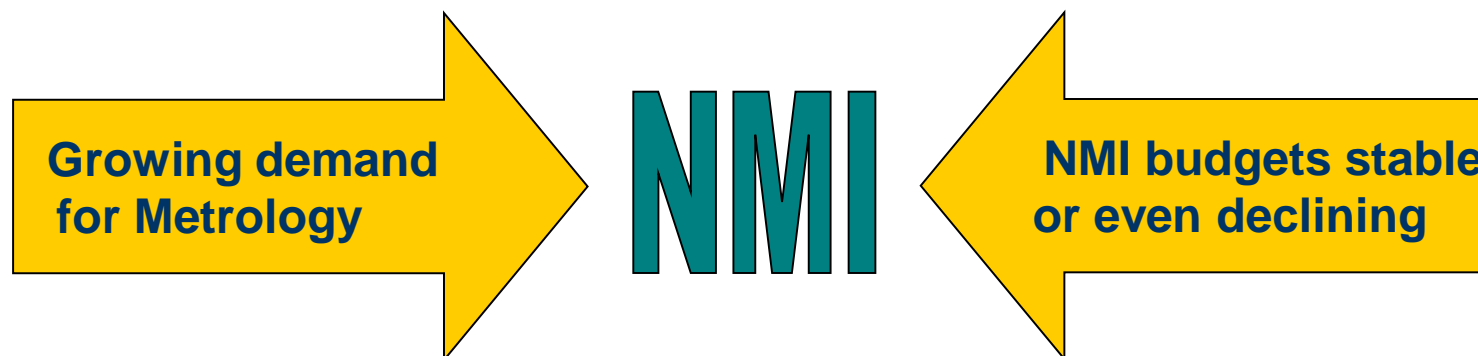
# Objectives & Strategies

## European Association of National Metrology Institutes



**Cooperation quality-assured measurement**

## "Metrology Dilemma"

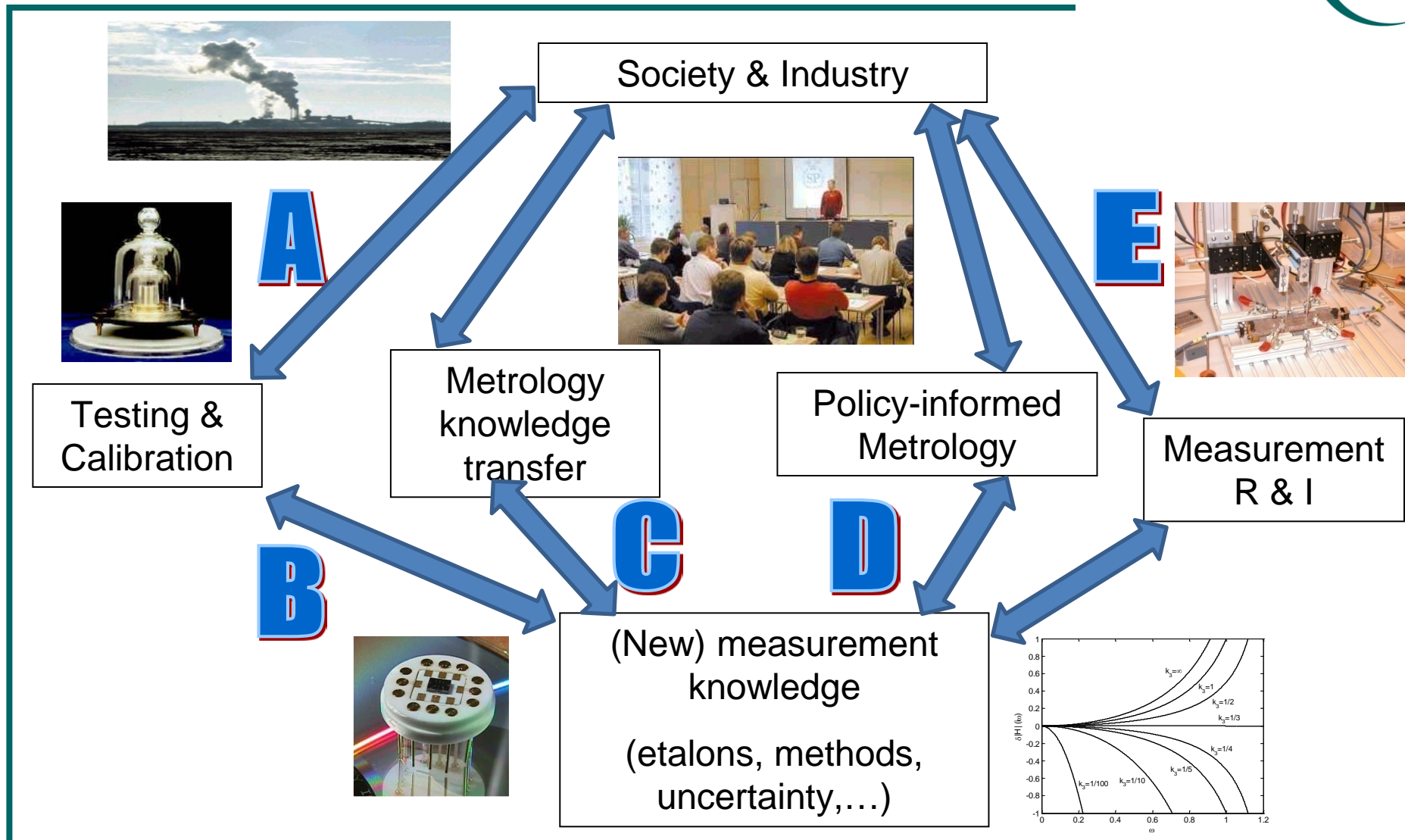


# Objectives & Strategies

- 0) Governance & membership**
- 1) Administration & secretariat**
- A) Traceability of measurements to SI**
- B) International recognition:**
  - National measurement standards
  - Calibration and Measurement Capabilities (CMC) of members
- C) Knowledge exchange & infrastructural support**
- D) Policy support**
- E) Research in metrology**
  - European Metrology Research Programme (EMRP)



# Critical factors for success in innovation & trade



# Focus during past year

## **0) Governance & membership**

Formulation of overall EURAMET Strategy

## **1) Administration & secretariat**

Continued strengthening of Secretariat

## **B) International recognition**

Continued work to clarify International Recognition procedures (e.g. on site peer visits) of Members, especially Designated Institutes

## **C) Knowledge exchange & infrastructural support**

Strengthening EURAMET's role in Infrastructure Development

## **D) Policy support**

Increasing visibility of metrology in wider fields of conformity assessment and policy support

## **E) Research in metrology**

Implementation of European Metrology Research Programme, particularly EMRP Article 185  
Plans for possible further research & innovation collaboration in FP8



## EURAMET Vision

# 2020 Strategy

*EURAMET to be the leader in the development and application of measurement enabling Europe to be competitive, healthy and sustainable through innovation*

## EURAMET Mission

Our mission is to:

- Develop and disseminate an appropriate, integrated and cost effective measurement infrastructure for Europe taking into account the needs of end users in industry, business and Government
- Ensure that the European measurement infrastructure is internationally competitive and recognised, and is based on robust and high quality science and R&D.
- Support members in meeting their own national requirements through collaboration and a balanced European measurement infrastructure





## Presenting EURAMET:

- *What do we do?*
- *Why do we?*
- *Who are we?*

This document outlines EURAMET's 2020 strategy.

## 2020 Strategy

Reliable and traceable measurement underpins the welfare of a modern society and plays a critical role in supporting economic competitiveness, manufacturing and trade as well as quality of life. In this modern world, a well developed measurement infrastructure gives confidence in many aspects of our daily life by for example:

- Enabling the development and manufacturing of reliable high quality and innovative products
- Supporting industry to be competitive and sustainable in its production
- Removing technical barriers to trade and supporting fair trade
- Ensuring safety and efficacy of healthcare
- Meeting the grand challenges of energy and environment

EURAMET, as the Regional Metrology Organisation (RMO) of Europe, has 37 member countries. It leads cooperation of National Metrology Institutes (NMI) with nearly 6000 metrologists in the development of the European metrology infrastructure and services. It represents Europe in the international metrology forum of the CGPM (General Conference of Weights and Measures).

Our strategy concentrates on helping member nations and Europe to meet future needs related to innovation, growth and societal well being through the provision and development of quality assured and traceable measurement.

### Our Values

- Common Core mission
- Recognition of added value through co-operation
- Collegiality
- Public good



EURAMET Strategy 2011 - 2020

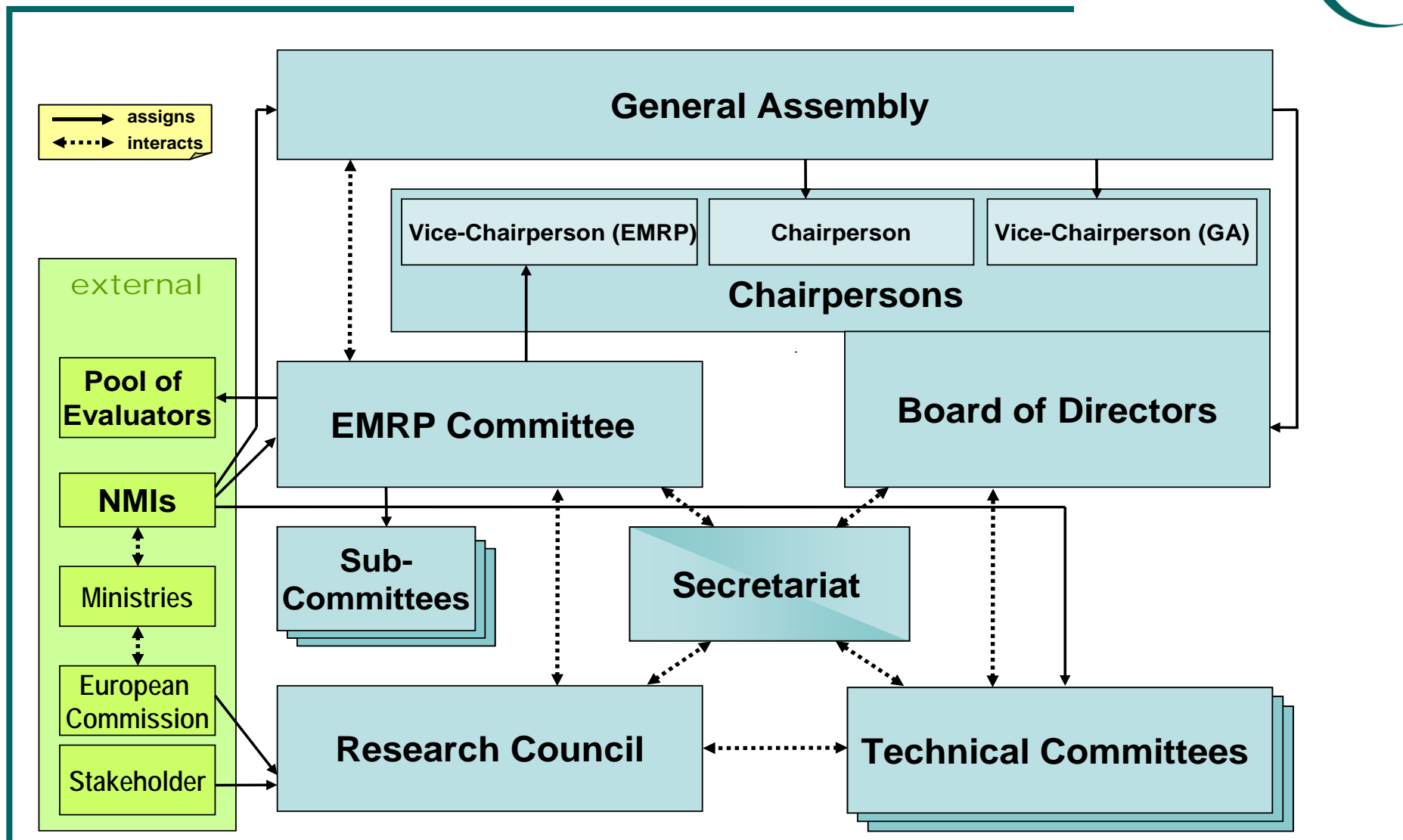
- *What is driving our strategy?*
- *Where will we be in year 2020?*

## 2020 Strategy

### 2. Our Changing Context

Many of the challenges we face are the global challenges of Health, Climate change, Environment, Energy, and Sustainability. Such challenges require global solutions supported by reliable measurement, requirements for which often exceed the capacity and capability of individual nations and their National Metrology Institutes (NMIs). Thus pooling of metrological resources across national boundaries is essential to tackle key societal challenges.

Furthermore, the pace of development is accelerating at an unprecedented rate and offers huge opportunities and challenges for developing new industrial products and services. Average product life cycles in many sectors have decreased markedly, so have complexities of products and services through innovation. New technologies are having a major impact in this respect. Inevitably the demand for metrology and





Status	Name		2007	2008	2009	2010	2011	2012	2013	2014
Chair	L. Pendrill	SE		Ch.E		Chairperson		P.Ch.		
Vicechair	J. Drnovsek	SI					Vice-Chair (GA)			
Vicechair	J. Stenger	DE					EMRP-Chair			
Member	J. Bartolo	MT	1st		2nd					
Member	A. Dalhuijsen	NL				1st				
Member	P. Hetherington	IR	1st		2nd					
Member	K. Hossain	UK			1st					
Member	B. Jeckelmann	CH				1st				
Member	P. Klenovsky	CZ	1st		2nd					
<b>Standing Invitees</b>										
TCC-Q	P. Klenovsky	CZ				1st				
TCC-IM	M. Chambon	FR				1st				
Q-Manager	E. Sadikoglu	TR							appointed until further notice	
Legal Advisor	B. Tafel	DE								
EMRP-PM	D. Jarvis	UK								End 2017
Head Secretariat	W. Schmid	DE								End 30 Oct 2014

## Chairpersons, BoD & Secretariat



**Chairperson:**  
**Leslie Pendrill**

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Internet: [www.sp.se](http://www.sp.se)



**Vice-Chairperson (GA)**  
**Janko Drnovšek**

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Metrology Institute of the Republic of Slovenia  
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Internet: [www.mirs.si](http://www.mirs.si)



**Vice-Chairperson (EMRP)**  
**Jörn Stenger**

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Fax: +49 531 592 3002  
E-mail: [emrpchair@euramet.org](mailto:emrpchair@euramet.org)  
Internet: <http://www.ptb.de>





Field of Activity / contact group	Persons in charge
<b>1) Governance &amp; Strategy</b> [Byelaws §10 (1)]	<b>Chairperson</b> , Vice-chairs, TC-IM Chair, Head of Secretariat, Kamal
<b>2) Administration</b> [Byelaws §17 (2)]	<b>Head of Secretariat</b> , Chairperson, Vice-chairs, QM, Auditors (Albert, Joe)
<b>A) Traceability of measurements to SI</b> [Byelaws §2 (2) c), d)]	
EA Technical Committees	<b>Chairperson</b> , Vice-chair (GA), Beat
<b>B) International recognition</b> [Byelaws §2 (2) f)]	
CG JCRB, MRA	<b>Chairperson</b> , Head of Secretariat, TC-Q Chair, TC-IM Chair
<b>C) Knowledge exchange &amp; infrastructural support</b> [Byelaws §2 (2) e), g), i)]	
CG Publicity (Newsletters, Conferences, Guides, KT...)	<b>Paul</b> , Chairperson, Vice-chairs, Head of Secretariat & EMRP Manager, Beat
CG Intl. development	<b>Jörn</b> , Leslie, Janko, Pavel, Head of Secretariat (Wolfgang), TC-IM Chair (Maguelonne), with support of TC-IMFG Chair (Arnold) and Alexis
<b>D) Policy support</b> [Byelaws §2 (2) h)]	
CG Conformity assessment (incl. regulation, legal metrology, accreditation, standardisation?)	<b>Leslie</b> , Pavel, Janko, TC-IM Chair (Maguelonne), with support of TC-IMFG Chair (Arnold)
CG European standardization	<b>Kamal</b> , Albert, Leslie
CG JRC	<b>Chairperson</b> , Vice-chairs, EMRP Manager
<b>E) Research in Metrology</b> Byelaws [§2 (2) a), b)]	
CG COM & RTO interaction	<b>Chairperson</b> , Vice-chairs, EMRP Manager, Kamal
Joint Research, EMRP	<b>Vice-chair (EMRP)</b> with support of EMRP committee members (different tiers)





**EURAMET  
Chair-elect**

**XX(XX)**

**June 7th 2011**

**4 new BoD  
Members**

**XX (XX)**

**June 7th 2011**

**New Chair-elect and Board of Directors Members**



TC-EM

Electricity  
and  
Magnetism

**François Piquemal**  
**(LNE, France)**



TC-MC

Metrology  
in  
Chemistry

**Michela Segal**  
**(INRIM, Italy)**



TC-F

Flow

**Elsa Batista (IPQ,  
Portugal)**



TC-L

Length

**Antti Lassila**  
**(MIKES, Finland)**



TC-M

Mass and  
Related  
Quantities

**Nieves Medina**  
**(CEM, Spain)**

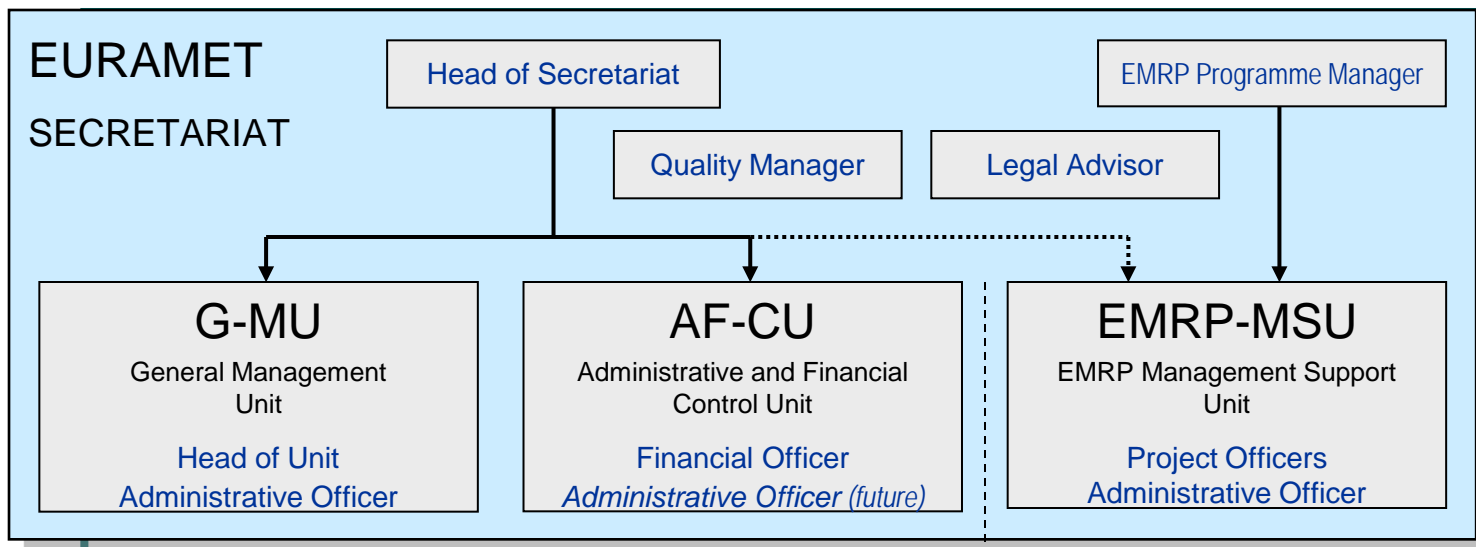


TC-PR

Photometry  
and  
Radiometry

**Marek Šmid (CMI,  
Czech Republic)**

## New Technical Committee Chairs



Braunschweig  
Germany

Teddington UK

- 2 sites (Braunschweig and Teddington)
- Permanent staff, part of it directly employed by EURAMET
- Supported by secondments from Members for specific tasks and projects

Head of Secretariat:  
Wolfgang Schmid

EMRP Programme Manager:  
Duncan Jarvis

Quality Manager:  
Enver Sadikoglu (10%)

Legal Advisor:  
Barbara Tafel (10%)

EURAMET e.V. - Secretariat  
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D-38116 Braunschweig  
☎ +49 – 531 – 592 1960  
Mail: [secretariat@euramet.org](mailto:secretariat@euramet.org)  
[http:// www.euramet.org](http://www.euramet.org)



100+ organisations (NMI, DI)

- employ about 4000 persons
- circa 2000 persons work on R&D activities
- spending about 200 M€ per year (50% of total budget) on R&D acti

**EURAMET new members 2010:**

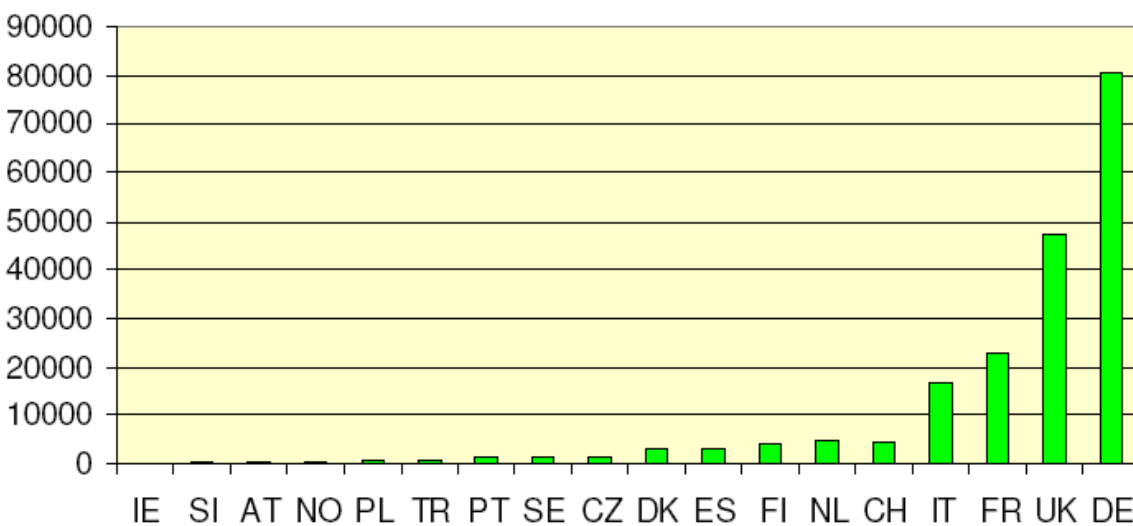
35th: DPM Albania

36th: BoM Macedonia (FYR)

Liaison KDM Kosovo under  
UNSCR 1244



Metrology R&D budget - k€

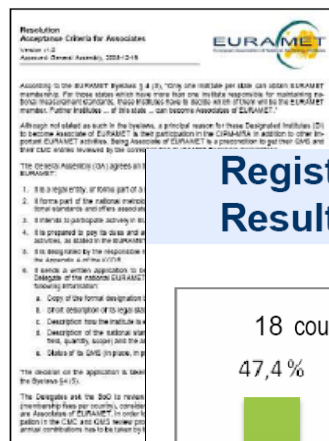




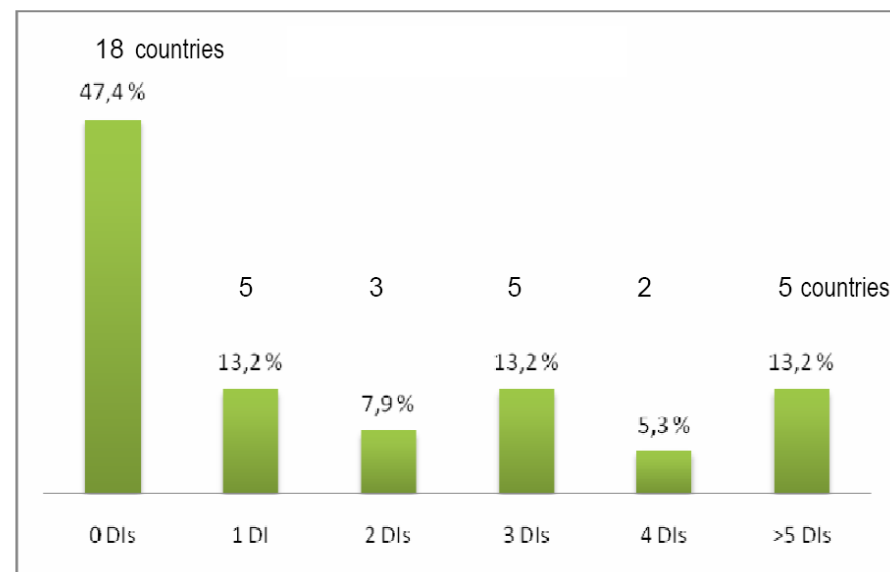
## Landscaping on National Metrology Infrastructure (NMI + DIs)

### Registration process of DIs as EURAMET Associates (A-DI)

- 1) Resolution on “Acceptance Criteria for Associates” approved by the GA on 2008-12-19 (written voting)
- 2) Annual contribution by A-DIs: 1000 € approved by GA on 2009-06-08
- 3) Procedure and declaration form approved by BoD on 2009-10-05
- 4) Decision on application of the form (BoD 2009-10-05)  
DI's are requested – via the Delegate of each country – to provide the requested information of the form as an initial registration procedure, even for existing Associates
- 5) Request for information was sent to the Delegates  
EURAMET Chairperson on 2009-10-12
- 6) Evaluation of the received information  
EURAMET Secretariat, supported via a secondment: Silvie Hoffmanova, CMI  
**Concluded in December 2010**



### Registration process of A-DI Results: Number of DIs per country





## EURAMET Liaison Organisations

### RMOs:

- APMP
- COOMET
- AFRIMETS
- SIM

### Corresponding NMIs:

- DSSU, Ukraine
- INPL, Israel
- NIS, Egypt

### Corr. Organisations:

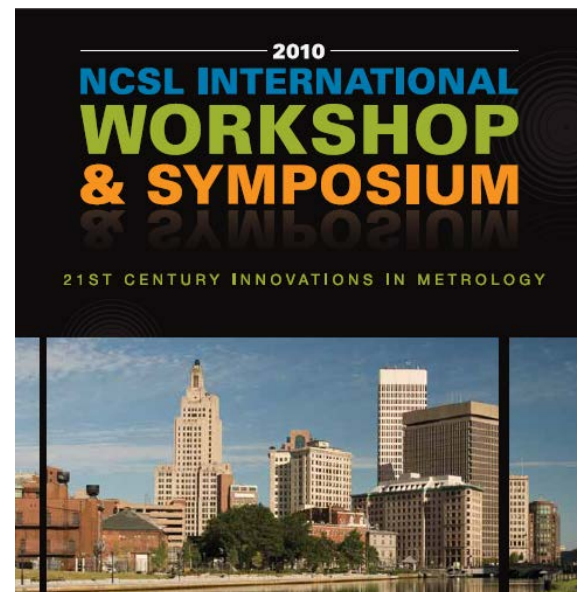
- BIPM
- EA
- EURACHEM
- EUROLAB
- NCSLi
- WELMEC





## Asia Pacific Metrology Programme 2010

Pathumthani & Pattaya, Thailand  
8 - 20 November 2010



European metrology strategy for  
smart, sustainable and inclusive  
Growth

Leslie PENDRILL, EURAMET Chairperson

[chairperson@euramet.org](mailto:chairperson@euramet.org) [www.euramet.org](http://www.euramet.org)

EURAMET Report to APMP Symposium 2010 "Roles & Impact of Metrology"  
Pattaya, Thailand 17 November 2010



## Training programme for 15 Caribbean Metrologists at European NMIs



In the second half of March 2011, 15 metrologists from Caribbean National Bureaus of Standards (NBS) received two weeks hands-on training at different EURAMET member NMIs in fields like mass metrology, pressure, volume, temperature and electricity meters. The training was framed by initial and final workshops including a training course on measurement uncertainty at the PTB / EURAMET headquarters in Braunschweig, Germany, on 14 and 28/29 March 2011 respectively.

The activity was financed by the EU ACP Programme PRO€INVEST ([www.proinvest-eu.org](http://www.proinvest-eu.org)), and coordinated by the Technical Cooperation of the German NMI Physikalisch-Technische Bundesanstalt (PTB) together with EURAMET and CROSQ, the CARICOM Regional Organisation for Standards and Quality.





## *International Scientific Metrology Symposium*

### **“Prioritisation in Developing Metrology Infrastructure”**

**Sarajevo, Bosnia and Herzegovina, 8 June 2011**

Organised by IMBiH and EURAMET, within the 5<sup>th</sup> EURAMET General Assembly  
Participants of the GA & Invited Guests

<b>Session 1</b>		11h00 – 12h45	Chair: Zijad Dzemic
11h00	Welcome and Opening		Representative of the host
11h15	Balancing needs and resources in national & regional metrology		Leslie Pendrill EURAMET Chairperson
11h40	Relevance of a functioning metrology/quality infrastructure for the EU integration process		Johann Hesse Head of Section for Economics, Trade and Natural Resources in EU Delegation in BiH
12h05	Importance of a functioning quality infrastructure for the industrial development of an emerging country		Radomir Marinkovic Bosnia and Herzegovina

## FOCUS GROUP ON FACILITATING NATIONAL METROLOGY INFRASTRUCTURE DEVELOPMENT



*New 2010!*



## VISION 2015

## REGIONAL COORDINATION OF SERVICES IN SOUTH-EAST EUROPE





## Guidelines on the determination of uncertainty in gravimetric volume calibration

EURAMET/cg-19/v.01

September 2009

## Calibration Guide

N°	Calibration Guides	TC
01	<a href="#">Calibration of Stylus Instruments for Measuring Surface Roughness *</a>	L
02	<a href="#">Calibration of Gauge Block Comparators</a>	L
03	<a href="#">Calibration of Pressure Balances *</a>	M
04	<a href="#">Uncertainty of Calibration Results in Force measurements</a>	M
05	<a href="#">Co-ordinate Measuring Machine Calibration **</a>	L
06	<a href="#">Extent of Calibration for Cylindrical Diameter Standards</a>	L
07	<a href="#">Calibration of Oscilloscopes *</a>	EM
08	<a href="#">Calibration of Thermocouples</a>	T
09	<a href="#">Measurement and Generation of Small AC Voltages with Inductive Voltage Dividers</a>	EM
10	<a href="#">Determination of Pitch Diameter of Parallel Thread Gauges by Mechanical Probing</a>	L
11	<a href="#">Guidelines on the Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement</a>	T
12	<a href="#">Guidelines on the Evaluation of Vector Network Analysers (VNA)</a>	EM
13	<a href="#">Guidelines on the Calibration of Temperature Block Calibrators</a>	T
14	<a href="#">Guidelines on the Calibration of Static Torque Measuring Devices</a>	M
15	<a href="#">Guidelines on the Calibration of Digital Multimeters</a>	EM
16	<a href="#">Guidelines on the Estimation of Uncertainty in Hardness Measurements</a>	M
17	<a href="#">Guidelines on the Calibration of Electromechanical Manometers</a>	M
18	<a href="#">Guidelines on the Calibration of Non-Automatic Weighing Instruments</a>	M
19	<a href="#">Guidelines the Determination of Uncertainty in Gravimetric Volume Calibration</a>	F
20	<a href="#">Calibration of Climatic Chambers, Requirements for the Accreditation of Calibration Laboratories</a>	T





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# Policy support

## Legal metrology



## ***EURAMET 2010 MoU & Collaboration Agreements***

## Quality infrastructure



## Standardisation



Sharm-el-Sheikh  
(Egypt) Sept 2010



**European Metrology Research Programme**

**Outline 2008**

*Document available on: [www.euramet.org](http://www.euramet.org)*

Edition - November 2008

1/49

## Grand Challenges

Health

Energy

Environment

New technologies  
(nano-sciences, security, etc.)

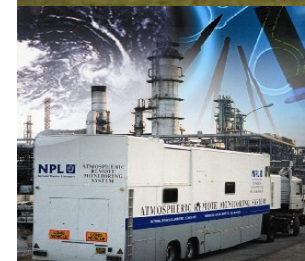
## R&D for fundamental and applied metrology

Fundamental metrology

Focused single discipline

(including SI, Fundamental  
Constants, Biotechnology,  
Materials)

## Capacity Building and KT



## EURAMET response to the public consultation of GREEN PAPER<sup>1</sup>

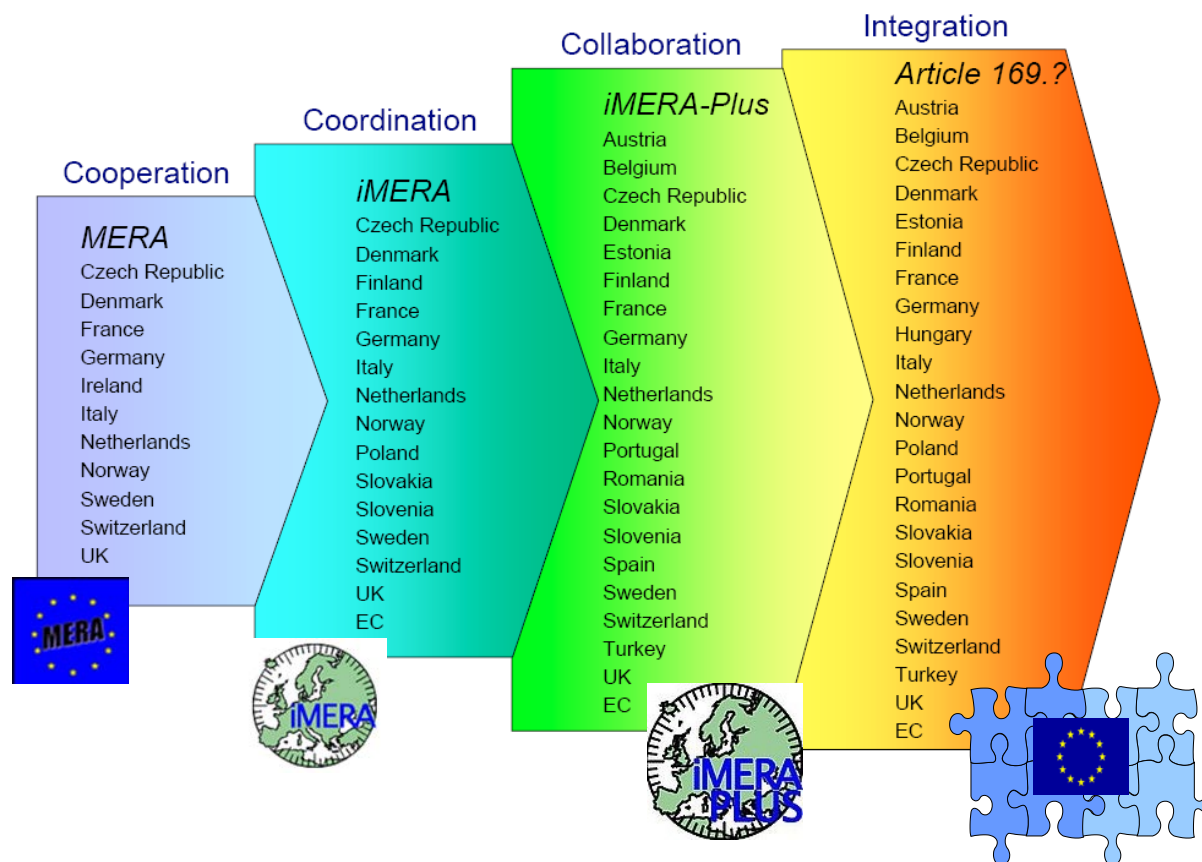
# From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research & Innovation funding



## Working together to deliver on Europe 2020

Considerable commitment from majority of 36 national metrology programmes

e.g. in EU projects FP6 MERA, ERA-NET iMERA, FP7 ERA-NETplus iMERA+, Art185(169)



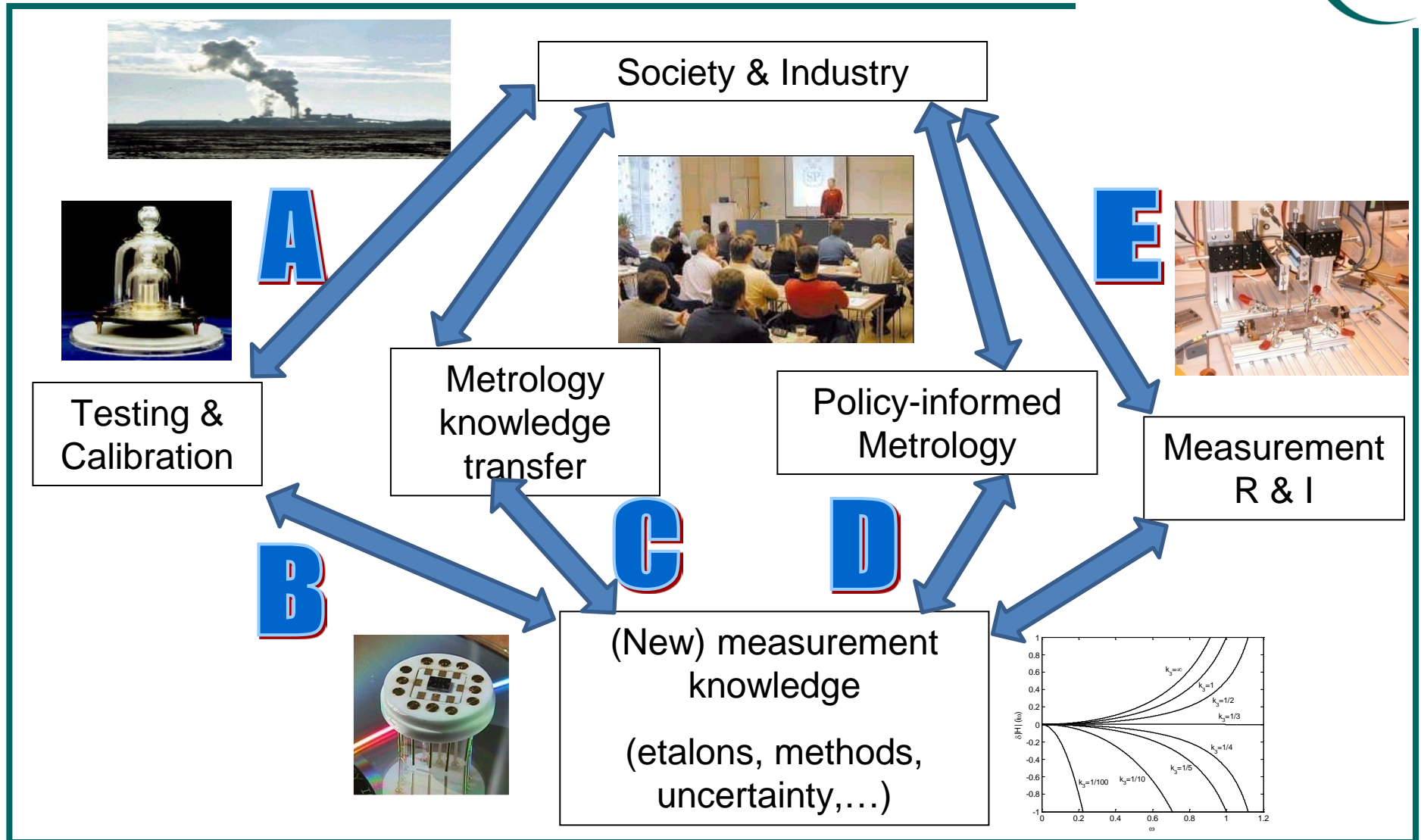
## Working together to deliver on Europe 2020

**Particular features of national metrology** which work together in support of this effective leveraging of funds are:

- All partners – the NMIs and their governmental programme owners – share a **common, well-defined mission**
- Most partners **know each other** and have cooperated internationally for many decades
- Metrology relies on obtaining **consensus** amongst different laboratories
- National metrology is considered in all countries as a **public mission** rather than a commercial concern, an area of ‘Market failure’



# Critical factors for success in innovation & trade





# Thank you for your attention

**Leslie PENDRILL, EURAMET  
Chairperson**

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[www.euramet.org](http://www.euramet.org)