

# **EURAMET:**

## **A short introduction**

### **COOMET Committee Meeting 2018, Sarajavo**

Beat Jeckelmann  
Chairperson

## European Association of National Metrology Institutes

EUROMET since 1987

EURAMET e.v. since 2007

- **Members:**  
37 European NMIs
- **Associates:**  
78 Designated Institutes,  
holding National standards

metrologists:

NMIs: ~ 5000

DIs: ~ 1500



# EURAMET is....



- The gateway to Europe's integrated metrology infrastructure.
- It facilitates access to European measurement expertise, and underpins the delivery of globally competitive, high impact metrology.
- It ensures Europe maintains its global reputation for excellence in measurement science.
- It raises awareness of the value of measurement demonstrating the impact of metrology on society's grand challenges.





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

# From cooperation to coordination: Development cycles of 10 years



1987

Technical Cooperation (projects in TCs)



1999

Mutual recognition of national standards and calibration certificates



2007

Joint metrology research programmes



2017

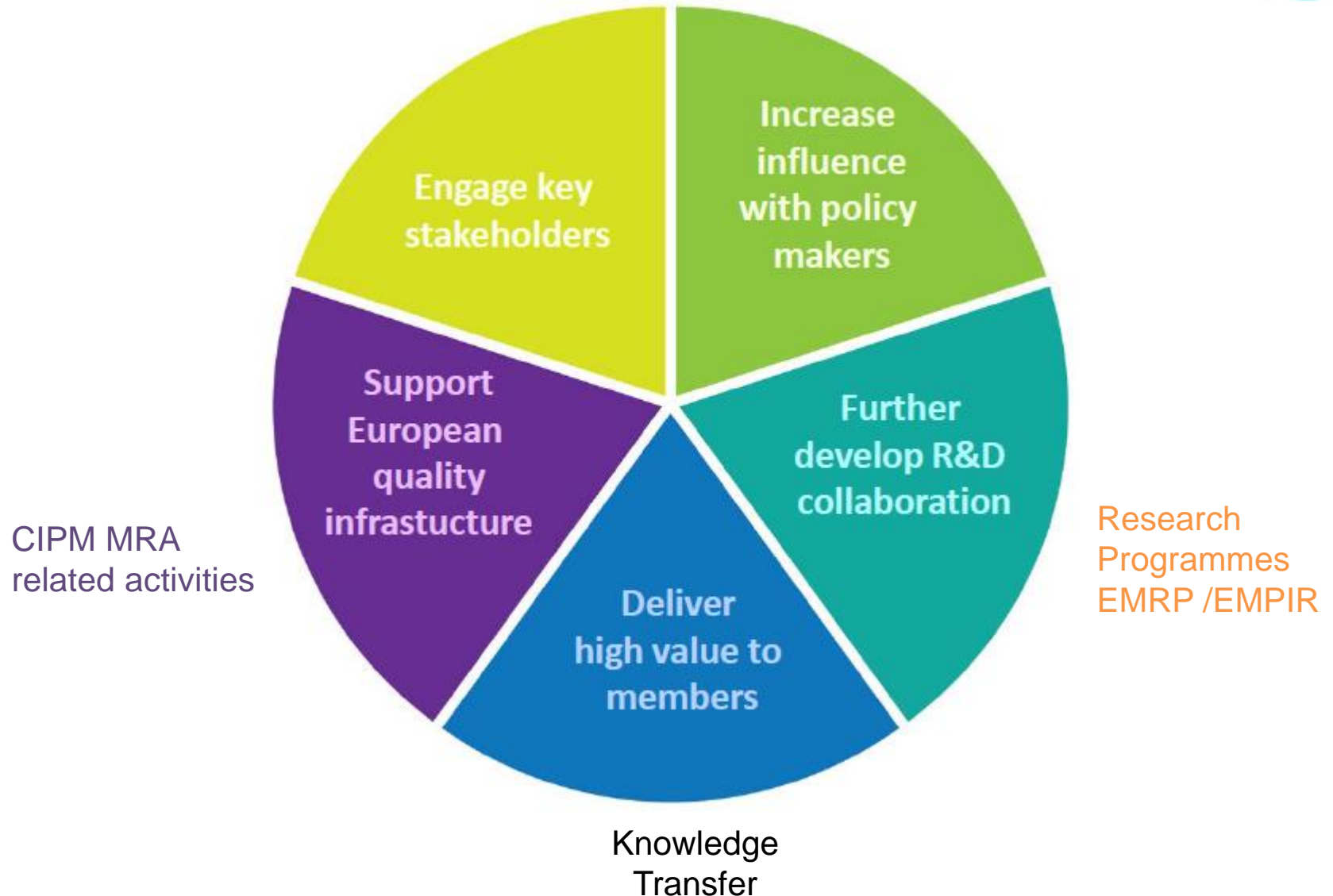
Coordination Strategy

European Metrology Networks





# Strategic Objectives



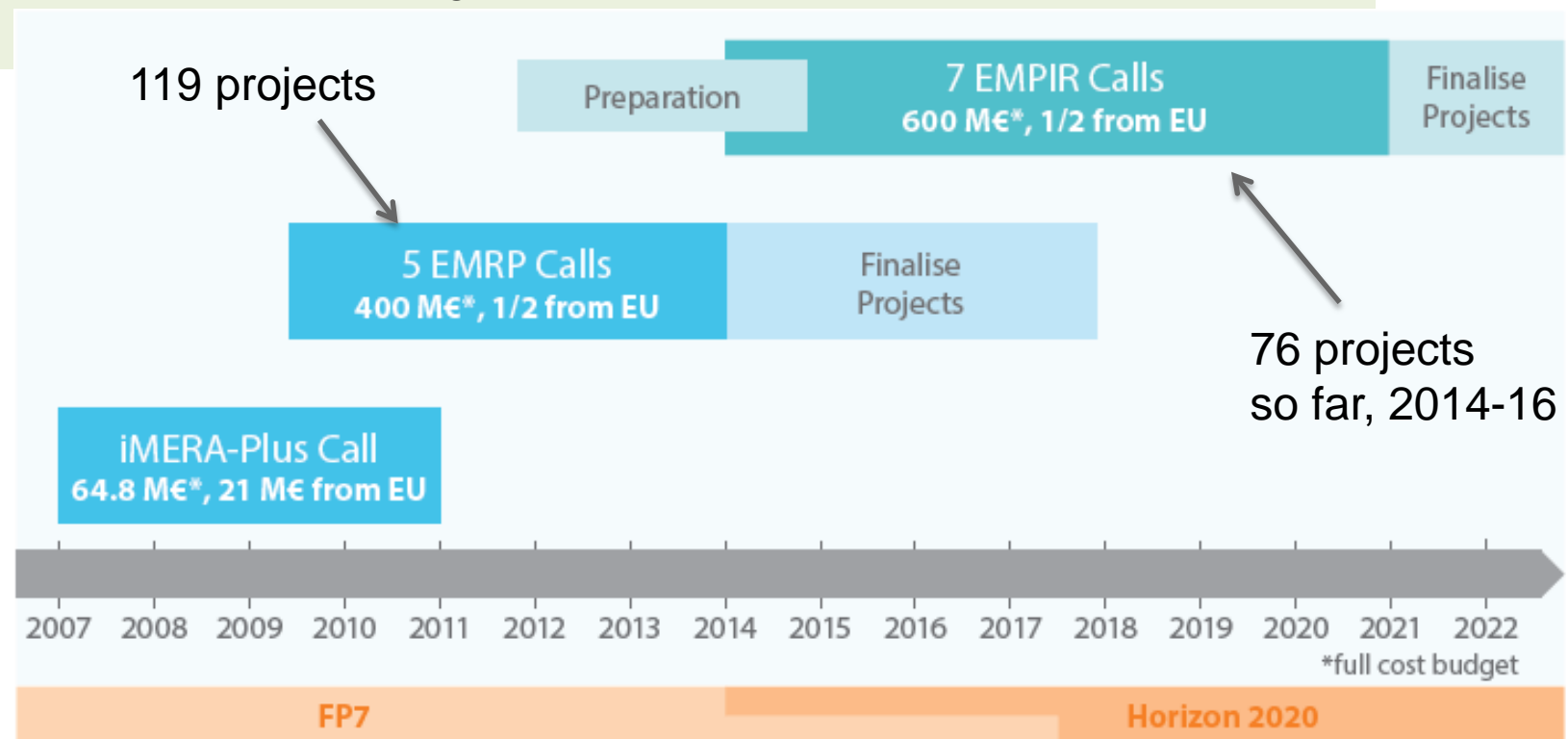
# Research Programmes

# European Metrology Research Programmes



Implemented by EURAMET; Current programme EMPIR:

- Annual calls between 2014 and 2020
- Thematic calls on
  - Fundamental science
  - Innovation in industry
  - Grand challenges
  - Standardization





# EMPIR Modules



<b>Module 1:</b> Science	Fundamental scientific metrology	<b>TP FUN</b>	48%
	Grand challenges Energy, Environment, Health	<b>TP ENG, ENV, HEA</b>	
<b>Module 2:</b> Innovation	Industry-driven joint research	<b>TP IND</b>	22%
	Technology-transfer projects	<b>Extensions</b>	
<b>Module 3:</b> Prenorm.	Metrology R&D for standardization	<b>Extensions TP PNORM</b>	10%
<b>Module 4:</b> Capacity building	R&D for measurement capabilities	<b>TP SI</b>	15%
	Capacity building projects	<b>TP RPot</b>	
Programme management and administration Central support for CB and Innovation			5%

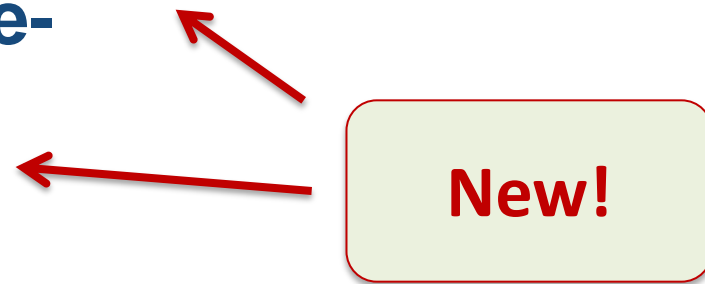
# Strategic Research Agenda



- Key challenges
- Current capabilities and the state of the art (addressing competitive worldwide situation, key achievements of iMERApplus and EMRP)
- Scope of activities and priorities, expected key outcomes

## Research in metrology for:

- Health
- SI Broader Scope
- Pre Normative and **Pre-regulation**
- Research Potential
- **Support for Networks**



# Delivering Impact



European Metrology  
Research Programme



## Environment impact report

A summary of the outputs and impact of the first EMRP joint research projects in Environment.

The aim of this theme is to improve data quality for environmental policy making, underpin environmental research activities and stimulate technological innovation. The research is focused at both the local environmental level for air, water and soil quality and at the global level for challenges relating to climate change.

EURAMET e.V. - the European Association of National Metrology Institutes

European Metrology  
Research Programme  
Delivering Impact



## Improved exhaust monitoring

Air pollution continues to be responsible for more than 430,000 premature deaths each year in Europe. Automotive vehicles are a major source of air pollution - of particular concern are the fine particles emitted by diesel and direct injection petrol engines. To improve public health and environmental quality, the EU regulates pollution from road vehicles and new passenger cars must meet the European emission standards (the standard currently in force is known as Euro 6) before they can be type approved.

Europe's National Measurement Institutes working together

The European Metrology Research Programme (EMRP) brings together National Measurement Institutes in 23 countries to address key measurement challenges at a European level. It supports collaborative research to ensure that measurement science meets the future needs of industry and wider society.

European Metrology  
Research Programme



## Industry impact report

A summary of the outputs and impact of the first EMRP joint research projects in the Industry theme.

The aim of research in this theme is to develop metrological methods and techniques to improve the measurement infrastructure for industry in order to support product innovation, process improvement and quality assurance. The research is focused on advanced manufacturing processes in a wide range of industrial sectors.

EURAMET e.V. - the European Association of National Metrology Institutes

European Metrology  
Research Programme  
Delivering Impact



## Investigating nano-defects

As electronics get ever smaller, detecting defects during quality control becomes more difficult. NSMM, a scanning microscopy technique, offers a new way to spot defects by measuring electromagnetic properties and has potential for investigating new materials for faster chips. For it to be viable for either of these, traceable calibration methods are needed so ultrafast electronics manufacturers' have confidence in its use.

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# Increase Influence with policy makers

# Standards Development organisations



## ■ CEN – CENELEC:

- Memorandum of Understanding renewed
- STAIR-EMPIR group formed to facilitate dialogue and communication between the metrology research communities in Europe and CEN and CENELEC members and standardization activities (STAIR: STandardization, Innovation and Research)



## ■ ISO:

- Memorandum of Understanding signed
- EURAMET TCs can act as liaison organisation in ISO TCs (first links established in TC-F)



## • CIE

- Memorandum of Understanding signed





# Cooperation with WELMEC



## Letter of Intent EURAMET – WELMEC

- evaluate the options for enhanced future cooperation in fields such as communication towards stakeholders, promotion and dissemination of guidance documents, training, identification of metrology needs in regulation, and increase influence with European policy makers and National governments
- EURAMET provides secretariat services for WELMEC



## **Regulation scrutiny group established**

- collate information about regulation that contains metrological needs anticipate upcoming regulation that may include metrological challenges, “watch-dog function”.
- communicate with COM to raise visibility of EURAMET in order to increase effectiveness of EURAMET for science-based policy advice.
- establish a strategic research agenda for regulation-driven metrology research.

# Cooperation with COOMET



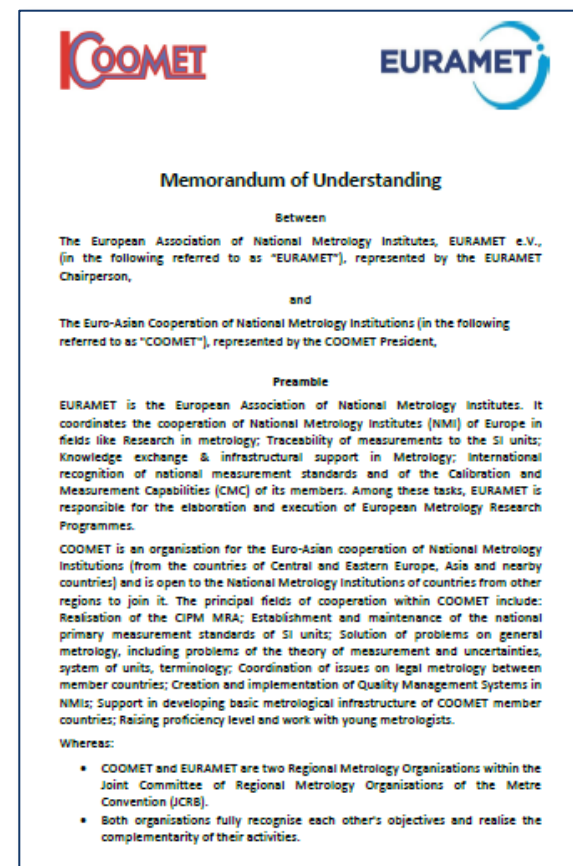
March 2017 EURAMET was approached by COOMET, suggesting closer cooperation

12-09-2017 Meeting COOMET – EURAMET delegations:  
- review of draft MoU  
- preparation of action plan

12-04 2018 MoU to be signed today

## Elements of cooperation (MoU & action plan):

- Annual meetings of EURAMET & COOMET delegations
- Annual action plan
- Mutual invitation to TC meetings
- Mutual information on planning of KCs / SCs
- Cooperation in Capacity Building (e.g. related to CIPM MRA and BIPM CBKT)
- Facilitating EMPIR participation of COOMET members
- EURAMET to participate in COOMET's "International Competition of Best Young Metrologist"



# Action plan 2017 - 2018



Action	
1/1	<p>Both delegations to inform their TC-Chairs, that EURAMET and COOMET shall mutually invite the TC-Chairs to the annual meetings of their organization.</p> <p>=&gt; In progress</p>
1/2	<p>COOMET to inform EURAMET on their plan of future conferences in COOMET member countries.</p> <p>=&gt; Open</p>
1/3	<p>Prepare a workshop for COOMET members in December 2017 in Braunschweig on the possibilities and rules for participation in EMPIR.</p> <p>=&gt; Carried out in Braunschweig on 4<sup>th</sup> December</p>
1/4	<p>Following the workshop (A 1/3) guidance documents for COOMET members on participation in EMPIR shall be prepared: COOMET should prepare a summary document in English; to be reviewed by EURAMET and translated to Russian language by COOMET.</p> <p>=&gt; Done by COOMET</p>

# Action plan 2017 - 2018



Action	
1/5	TCs of EURAMET and COOMET should inform themselves mutually on their plans for inter-laboratory comparisons (KCs and SCs). <b>=&gt; Should happen at TC-meetings or CC-meetings</b>
1/6	EURAMET invites COOMET experts to participate in the training on "QMS review within the CIPM MRA" on 7 to 8 of November in Madrid, Spain. TC-Q Chair Enver Sadikoglu to provide the information. Deadline for registration is end of September. <b>=&gt; One COOMET representative participated</b>
1/7	COOMET to nominate an observer to the EURAMET BoD Working Group for Capacity Building (BOD-WGCB). <b>=&gt; Open</b>

# Knowledge Transfer and Capacity Building




# Capacity Building Instruments


- Training courses
- Research abroad
- Metrology research projects



Develop and grow your institute  
using EURAMET's Capacity Building  
Programme


# Website: Knowledge Transfer


 SEARCH

 LOGIN

The gateway to Europe's integrated metrology community.

[Home](#) | [Newsletter](#) | [Contact us](#)



 MENU

ABOUT EURAMET


RESEARCH & INNOVATION

GUIDES & PUBLICATIONS

KNOWLEDGE TRANSFER

TECHNICAL COMMITTEES

GENERAL ASSEMBLY

 Knowledge Transfer

## KNOWLEDGE TRANSFER

The Knowledge Transfer pages provide different opportunities to share expertise, skills and knowledge with the metrology community in EURAMET and worldwide:

### Training & Materials

Find out more about upcoming trainings and browse through selected training materials >>

### Capacity Building

EURAMET aims to improve the research and operational capacity of emerging European National Metrology Institutes and Designated Institutes, through [capacity building activities](#) >>

### Board of Directors' Working Group for Capacity Building

The group assists all EURAMET members, especially new and emerging ones, in the development of their national metrology infrastructure and its integration within the European metrology network in a coherent, efficient and sustainable way >>

### Guides

EURAMET has published a variety of [calibration and technical guides](#) >>



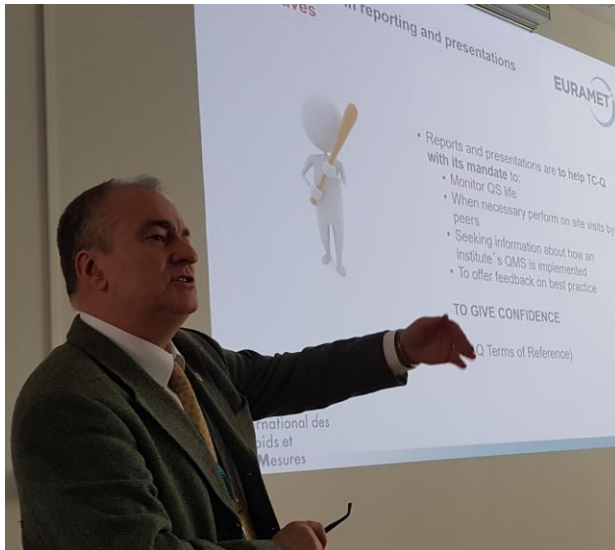
iStock.com/maxkabakov

## MENU

- [Training & Materials](#)
- [Capacity Building](#)
- [BoD Working Group for Capacity Building](#)
- [Guides](#)

# EURAMET – BIPM training on review of QMS

## 7/8 November 2017



- 23 participants, 12 countries, 8 from NMIs, 15 from Dis
- 1 guest from COOMET, 1 from GULFMET
- 9 lecturers from BIPM and EURAMET
- Practical/exercise part highly appreciated by participants

EURAMET initiative accepted by BIPM

Hosted by INTA, Spain

Objective:  
Preparation of QMS reviewers,  
focus on peer review



For more information: See news on EURAMET website

["Training course on the review of quality management systems is a success"](#)

# EURAMET Calibration & Technical Guides



EURAMET has published  
19 Calibration Guides and  
3 Technical Guides

New guide:

- Calibration of Angular Encoders

Revised guide:

- Evaluation of Vector Network Analysers (VNA)

For free download from the website:

[www.euramet.org/publications-media-centre/cgs-and-tgs](http://www.euramet.org/publications-media-centre/cgs-and-tgs)

## Next GA

The EURAMET GA 2018 will take place in Bucharest, Romania, in the week from 28 May to 1 June 2018

# Thank you for your attention

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