

G13.04.02

Strategic activities of EURAMET

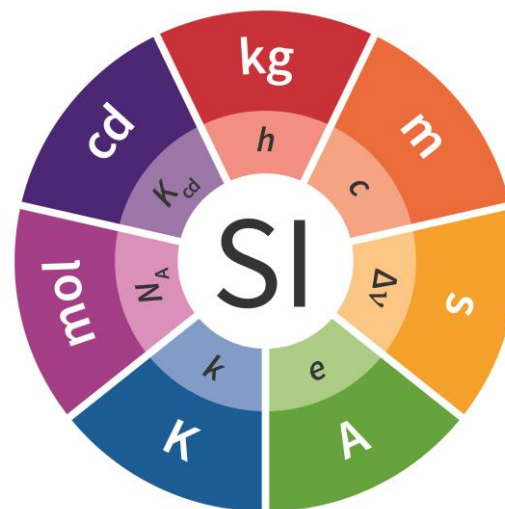
2019 GA, Borås

Hans Arne Frøystein
Chairperson

Contributions to the new SI



I would like to take this opportunity to thank my colleagues at NMIs and DIs throughout Europe for their significant contributions to the scientific basis for the new SI. In joint coordinated initiatives the EU and the participating states are putting 1 billion Euros from 2007 through 2020 into the EMRP and EMPIR programmes for research and innovation in metrology, both fundamental SI research and industrial innovation but also research to develop metrology for the Grand challenges in health, environment and energy. The projects have more and more included partners from the other regions of the world. And we have discovered or gotten reconfirmed that there are Indeed extremely competent and innovative people out there. And nice too. We surely want to continue our efforts in Europe, and to have you on board in the future. Thank you all!



JV, 20 May 2019

Vision

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

Mission

- Develop and disseminate an appropriate, integrated and cost effective 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 high quality science and R&D
- Support members in meeting their own national requirements through collaboration and a balanced European measurement infrastructure

Strategic objectives



- Engage key stakeholders
- Increase influence with European policy makers and National Governments
- Further develop cooperation in R&D
- Deliver high value to members and associates
- Supporting quality infrastructure in Europe and internationally

Stakeholders in QI, policymakers

- Standardisation bodies:
 - Specific topic in EMPIR on pre-normative R&D



International Commission on Illumination
Commission Internationale de l'Eclairage
Internationale Beleuchtungskommission

- European Accreditation
 - EURAMET on EA Advisory Board
 - EA observer in TCQ
 - Technical assessors, comparisons, guidelines
- National governments and European policy makers
 - Regulation Scrutiny Group and follow-up actions
- The laboratory world



Cooperation with COOMET



- 09-04-2018 Signing of MoU (COOMET GA)
- 14-03-2019 Meeting COOMET – EURAMET delegations,
agreeing on 2019 actions

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”



Memorandum of Understanding

Between

The European Association of National Metrology Institutes, EURAMET e.V.,
(in the following referred to as "EURAMET"), represented by the EURAMET
Chairperson,

and

The Euro-Asian Cooperation of National Metrology Institutions (in the following
referred to as "COOMET"), represented by the COOMET President,

Preamble

EURAMET is the European Association of National Metrology Institutes. It coordinates the cooperation of National Metrology Institutes (NMI) of Europe in fields like Research in metrology; Traceability of measurements to the SI units; Knowledge exchange & infrastructural support in Metrology; International recognition of national measurement standards and of the Calibration and Measurement Capabilities (CMC) of its members. Among these tasks, EURAMET is responsible for the elaboration and execution of European Metrology Research Programmes.

COOMET is an organisation for the Euro-Asian cooperation of National Metrology Institutions (from the countries of Central and Eastern Europe, Asia and nearby countries) and is open to the National Metrology Institutions of countries from other regions to join it. The principal fields of cooperation within COOMET include: Realization of the CIPM MRA; Establishment and maintenance of the national primary measurement standards of SI units; Solution of problems on general metrology, including problems of the theory of measurement and uncertainties, system of units, terminology; Coordination of issues on legal metrology between member countries; Creation and implementation of Quality Management Systems in NMIs; Support in developing basic metrological infrastructure of COOMET member countries; Raising proficiency level and work with young metrologists.

Whereas:

- COOMET and EURAMET are two Regional Metrology Organisations within the Joint Committee of Regional Metrology Organisations of the Metre Convention (JCRC).
- Both organisations fully recognise each other's objectives and realise the complementarity of their activities.

Capacity Building in EURAMET Overview



- Capacity Building activities
 - Training courses: annual programme
 - Researcher Mobility Grants
 - Research Potential Projects (EMPIR)
- BoD Working Group for Capacity Building (BOD-WGCB)
 - giving strategic advice on CB activities
 - next annual meeting in October 2019
- Capacity Building is supported by
 - Capacity Building Officer: Tanasko Tasic
 - EMPIR funds
- CB strategy

Vision: An efficient, balanced and integrated European metrology infrastructure which meets national and European needs.
- Close cooperation with BIPM CB&KT programme and with other RMOs to achieve synergy effects
- See EURAMET website for more information:
<https://www.euramet.org/knowledge-transfer/capacity-building/>

Summer school of thermal metrology

EIM, Thessaloniki, 17-21 Sep 2018



Structured programme – concentrated covering of all important sub-areas!

- General metrology, CIPM, CCs, CCT
- EURAMET, RMOs, NMIs, DIs,
- EURAMET TC for Thermometry
- Units, uncertainties
- Contact and non-contact thermometry
- Humidity
- Thermophysical quantities
- Lab sessions (7 in parallel)
- Summary & a view in future



44 students from 32 countries

- 36 from EURAMET NMIs and DIs
- **8 guests from all other RMOs**

28 lecturers

- 22 from EURAMET
- 1 from COOMET / 1 from BIPM
- 4 from other institutions.

Possitive side effects:

Good relationship developed between students and lecturers
Inter-RMO collaboration in practice

High engagement in the preparation from TC-T community and host EIM



Calibration & Technical Guides



- A working group was set up by the EURAMET GA the WELMEC CM to analyse future cooperation between WELMEC and EURAMET: Gregor Dudle, Corinne Lagauterie, Ulrike Fuchs from WELMEC: Hans Arne Frøystein, Beat Jeckelmann, Pavel Klenovsky from EURAMET
- The discussion around possible future scenarios for organising the future cooperation was replaced by a discussion around the content of the collaboration, following WELMEC's decision to go for a status of a legal entity
-

A strategy developed early 2019, put forward to WELMEC CM and EURAMET GA



Common priorities:

- Establish a single point of entry for metrology in Europe
- Further develop mutual confidence in metrology services in Europe
- Ensure that the European metrology infrastructure is developed in a coordinated and cost effective manner for citizens, industry, business and Government

- **Increased visibility:**
 - A common face of metrology in Europe, easily accessible for the stakeholders”
- **Increased influence and better regulation:**
 - Provide a coordinated contribution to the development of regulation at the European level
 - Be recognised for the contribution metrology makes
 - Be recognised by policy makers as first contact for metrology related questions
 - Gain support and resources for our work
- **Increased capacity:**
 - Support members and associates of both organisations to develop the European metrology system


- WELMEC to be established as an eV in 2019, domiciled in Braunschweig
- Secretariats to be collocated at the PTB premises
- A contract will define day-to-day cooperation, e.g. common web site
- No exchange of money above the amounts allowed under EURAMET's non-trading status
- Contact points in each organisation established for the key strategies

Next programme



Discussions with EC about EMPIR follow-up programme have progressed and a “common understanding” between Commission Council and Parliament has been published listing an Institutional Partnership in Metrology to be part of Horizon Europe.

This will:

- Build on the achievements of EMRP /EMPIR
 - Contribute to sustainable coordinated metrology infrastructures
 - Strive for scientific excellence
 - Underpin EU regulation
- 
- EMNs

Overall objective

The overall objective is to create sustainable structures in areas of strategic importance for the future of European metrology.

EMNs will ...

- cover an area of major strategic importance, with **European dimension**;
- consist of a core network of NMIs/DIs with a **clear commitment** to contribute to the network;
- establish close links to a wider **stakeholder community**;
- strive for **scientific excellence**;
- plan the activities based on a **strategic agenda**;
- establish a **knowledge, technology transfer and promotion plan**;
- plan for **sustainable structures**;
- develop and coordinate **common infrastructure** if needed

First European Metrology Networks starting



- At the EURAMET GA in 2018 the first 6 “European Metrology Networks” (EMN) were approved.
- They are now in process of establishment

No	Title	Champion
1	Mathmet	Markus Bär (PTB)
2	Quantum Technologies	Ivo Degiovanni (INRIM)
3	Laboratory Medicine	Rainer Stosch (PTB)
4	Smart Electricity Grids	Gert Rietveld (VSL)
5	Energy Gases	Annarita Baldan (VSL)
6	Climate and Ocean Observation	Emma Woolliams (NPL)

EURAMET'S EUROPEAN METROLOGY NETWORKS

Close collaboration in measurement science with a new sustainable structure

The vision of EURAMET and its members is to ensure Europe has a world-leading metrology capability, based on high-quality scientific research and an effective and inclusive infrastructure, that meets the rapidly advancing needs of end users. EURAMET's European Metrology Networks (EMNs) help realising this aim.

Currently there are six EMNs: Mathematics and Statistics, Laboratory Medicine, Quantum Technologies, **Smart Electricity Grids**, Energy Gases, and **Climate and Ocean Observation**.

The EMNs will analyse the European and global metrology needs and address these needs in a coordinated manner. EMN members will then formulate common metrology strategies including aspects such as research, infrastructure, knowledge transfer and services. The members will be committed to contributing to the EMN, helping to establish sustainable structures that are strategically planned from the outset.

By providing a single point of contact for information, underpinning regulation and standardisation, promoting best practice and establishing a comprehensive, longer-term infrastructure, the EMNs aim to create and disseminate knowledge, gain international leadership and recognition, and build collaboration across the measurement science community.



- <https://www.euramet.org/european-metrology-networks/>

Next programme – next steps



- The EC have issued a tender for consultants to assist them in the impact assessment of the plans for institutional partnerships under Horizon Europe. The contract is expected to be awarded soon and start on June 1st.
- As part of the tender process, the potential contractors have identified who they would interview for evidence. Some Euramet officers, NMI Directors, ministry representatives, international organisation officers and relevant European industrial experts are expected to be on the lists. Interviews will take place over the summer.
- A public consultation will take place for 12 weeks from early July, similar to the exercises we have seen in the past.

Next programme – next steps



- The “Shadow” Programme Committee are holding discussions with member states to determine which partnerships should be included in the first workplan for Horizon Europe. A list of some 44 are up for discussion rather than just the institutional ones defined in the annex. The EC have submitted 4 pages on their proposal for us.

Next programme – EC doc



General Information

Preliminary title of the European Partnerships	European Metrology Partnership - <i>Towards a European Metrology Area</i>
Short description of the partnership	Accelerating Europe's global lead in metrology research, and creating European networks for emerging metrology areas, which will contribute to Europe's wider competitiveness, and incorporating a wide range of new stakeholders.

Next programme – EC doc



A European Partnership in Metrology would build on the momentum of previous initiatives in metrology, the science and traceability of measurements, in which the Member States pool the majority of national resources into a single initiative to achieve a global competitive advantage that could not be attained otherwise. The focus now is to create specialised metrology networks across Europe to respond to new global challenges, which will ultimately contribute to an efficient metrology capacity closely interlinked with the Single Market. The only way to accomplish this strategically is through a European Partnership.

- **Main objective:** The initiative will create, by 2030, a sustainable system for metrology that will be able to provide the R&I support in the future, without the need for further structural funding through an institutionalised partnership. This milestone will be accomplished by the end of the proposed Partnership, and should encompass a full range of strategic application areas that are especially important for Europe.
- For emerging fields, in which pooled efforts across borders give higher impact, European metrology networks will be created. The objective of the European metrology networks will be to create a European infrastructure that provides services, performs research, supports policy development and ensures a technological expertise within the specific area of the network.

Next programme – next steps



- A programme document extending their proposal to explain exactly how we would meet the criteria defined for institutional partnerships by ERAC will need to be produced between us and the EC. (We are waiting for the EC to produce the template for this.)
- The impact assessment is expected to be complete by Christmas so that a first proposal for the institutional partnerships can be put by the Commission to Parliament in the first quarter of 2020. Parliament will process all the institutional partnerships as a batch. A delay in one could hold up all.

Next programme – actions required



- Euramet members should prepare to announce the public consultation to their ministries and stakeholders and then chase for replies over the summer.
- This may involve generating briefing material for stakeholders explaining how the previous programmes have benefited them and what more they could expect from a further programme.

Next programme – actions required



- This applies not only to the members that plan to make a commitment to the programmes. All Euramet members benefit from the programmes and the activities they support. NMIs from these countries are strongly encouraged to respond to the public consultation expressing support and explaining how they benefit despite not being in a participating country.
- Euramet expects to receive regular feedback from the commission on the number of responses received by the commission from each country, and will pass this on to Delegates and EMPIR Committee members so they can see the effectiveness of their communications in their country.

Next programme – next steps



Delegates should:

- Review the political drivers from the national priorities
- What should the objectives be?
- Is regulation still the new driver we wish to address?
- Are the EMNs developing as we expect?
- Consider their National Commitment

Research Council should:

- Offer advice on the key priorities for the research
- Which of the EC priorities will particularly benefit from metrology research?
- What other areas should EURAMET make a priority?
- Are there new high level stakeholders we are missing?

EMPIR Committee should:

- Consider the current discussions with the EC on how the cofunding would work
- Consider what effect this would have on the form of annual work programmes e.g. the large increase in external funded partners,
- How will nationally funded work be governed.

Budget Ambition for next programme – 700 M€



- 210 M€ of EU money for internal funded partners
- 140 M€ of EU money for external funded partners
- We need to demonstrate national cofunding of 350 M€ in an “auditable” way i.e. some form of Finance Statements

The European Partnership in Metrology

an Institutional Partnership (A185)

National funding covers the **institutional** activities:

- Management of the programme
- Discretionary activities
 - Capacity Building
 - Knowledge Transfer
 - Mobility Grants
 - TP SI, RPT, SIPs and NET?
- TC and MRA activities
- National activities that support EURAMET priorities

Costs of these activities are collected according to standard Horizon Europe rules (125 % of Direct Costs)

EU funding covers JRP Calls:

- TP ENG
- TP ENV
- TP HLT
- TP IND
- TP NRM
- TP SI?
- TP RPT?....

Projects funded according to standard Horizon Europe rules (125 % of Direct Costs)

Pilot studies

Smart Electrical Grid EMN

- Each partner to detail their activities relevant to the EMN area in 2019 and estimate costs (about 1 page each)
- The EMN to confirm that those activities do contribute to the strategic agenda
- Each partner to collect related costs over the year (timecard recording etc) and prepare a draft Financial Statement
- The EMN to compile those statements into a joint statement and compare with the estimates.

NPL Temperature group

- NPL to detail their activities in the group relevant to EURAMET in 2019 and estimate costs (about 1 page)
- EURAMET to confirm that those activities do contribute to their strategic purposes
- NPL to collect related costs over the year (timecard recording etc) and prepare a draft Financial Statement
- EURAMET to compare the statement with the estimates.

Thank you for your attention



Questions?