European Metrology Networks – current status

2019 GA meetings – Borås
G13.10.01

Duncan Jarvis
General Secretary

European Metrology Networks (EMN)

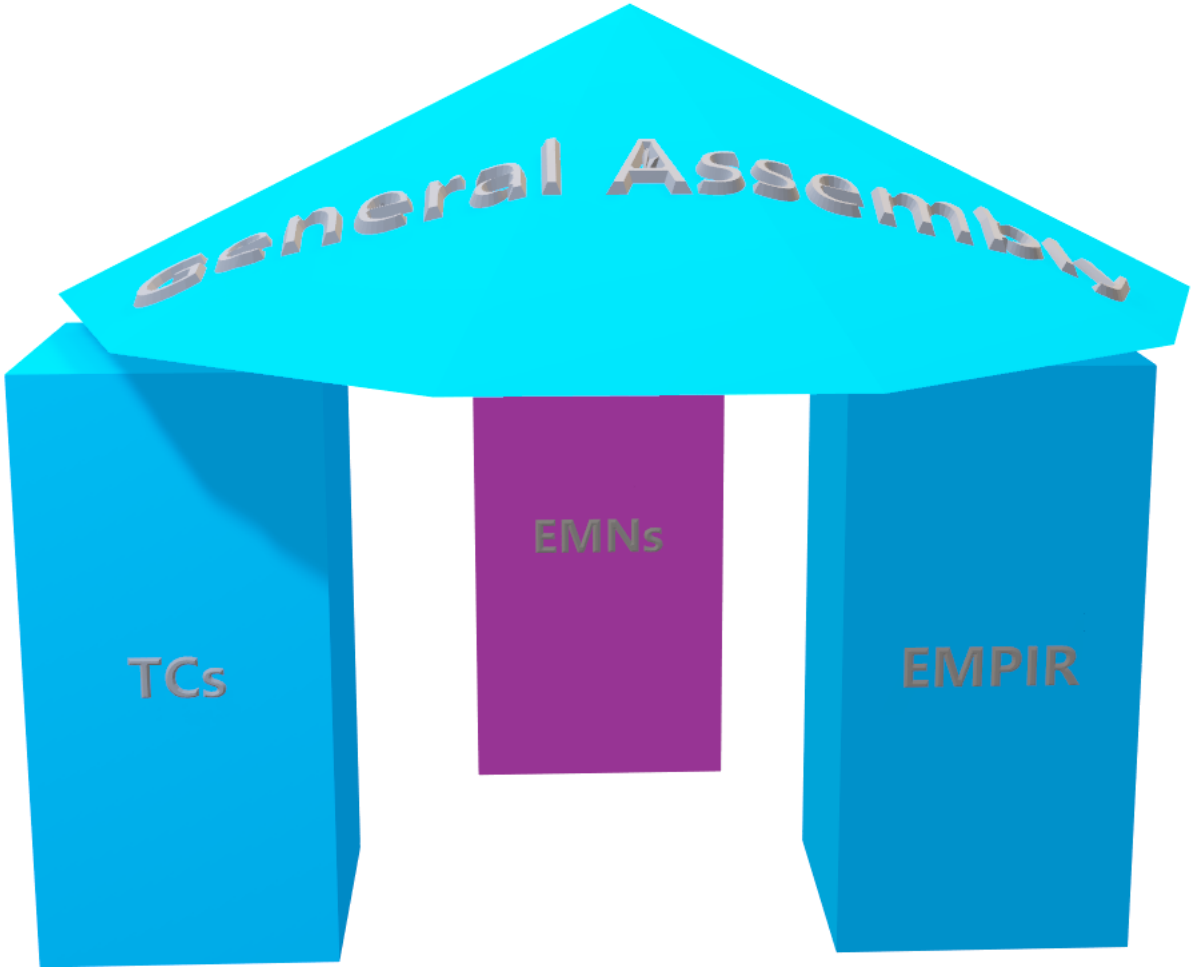
Overall objective

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

EMNs in EURAMET



New structural element

described in EURAMET Rules of Procedure (RoP)

Type of networks

Science

- Leadership and scientific excellence
  in a challenging field
- Increase visibility and acceptance in research community, reach critical
  mass

- MATHMET and
  Quantum Technologies

Type of networks (2)

Societal Challenges

- Single point of contact for metrology questions in covered field
- Links to relevant stakeholders
- Underpinning of **regulation and standards** through research, KT and services
- Sustainable infrastructures

- Laboratory medicine,
  smart grids, energy gases…

Type of networks (3)

Infrastructures and services

- Coordinated development of metrology infrastructure (in new fields): complementary development, avoiding unnecessary duplication
- Joint facilities
- Coordinated services and KT

- Nordic and Mediterranean Smart specialisation,…

EMN Website Launch

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/

Approved EMNs

Title	Chair (acting)	Website
Mathmet	Markus Bär (PTB)	https://www.euramet.org/mathmet
Quantum Technologies	Ivo Degiovanni (INRIM)	https://www.euramet.org/quantum-technologies
Laboratory Medicine	Rainer Stosch (PTB)	https://www.euramet.org/laboratory-medicine
Smart Electricity Grids	Gert Rietveld (VSL)	https://www.euramet.org/smart-grids
Energy Gases	Annarita Baldan (VSL)	https://www.euramet.org/energy-gases
Climate and Ocean Observation	Emma Woolliams (NPL)	https://www.euramet.org/climate-ocean

EMNs considered in 2019

No	Title	Champion
1	Biotechnology for Health Innovation	Helen Parkes (LGC)
2	Food Safety	Andrea Mario Rossi (INRIM)
3	Mediterranean	Carmen Garcia Izquierdo (CEM)
4	Northern Europe	Jan Johansson (RISE)
5	Medical use of Ionising Radiation	Valentin Blideanu (LNE)

The coordination group made comments on these asking for significant improvements which will take time to implement. None of them are proposed to the GA in 2019.

Proposed SNTs in 2019 Call

SNT No	SNT title (proposed)
w01	Support for a European Metrology Network on **quantum technologies**
w02	Support for a European Metrology Network on **positioning, navigation, timing, and geodesy**
w03	Support for a European Metrology Network on **environmental monitoring**
w04	Support for a European Metrology Network on **advanced manufacturing**
w05	Support for a European Metrology Network on the **medical use of ionising radiation**
w06	Support for a European Metrology Network on **medical device regulation**
w07	Support for a European Metrology Network on **food safety**
w08	Support for a European Metrology Network on **reliable radiation protection regulation**

Other EMNs still being considered?

Title	Champion
Digitalisation	Sascha Eichstädt (PTB)
Ionising Radiation Effect	Hans Rabus (PTB)
Measurement and decay data evaluation network for radionuclide metrology	Mark Kellett (LNHB)
Regulatory / Conformity Assessment	Haris Memic (IMBIH)
Clean Energy?	

Approved EMNs

	Stakeholder community	Strategic importance for Europe	National Commitment
Climate and Ocean	Active involvement at European level	Clear political priority around climate change	148 FTE
Smart Electrical Grids	Long history of engagement through IEC	Clear political priority around reforming electricity supply	89 FTE
Energy Gases	Existing MoU links stakeholders and NMIs	Clear political priority around sustainability of supply	60 FTE
Quantum	Quantum Flagship regards metrology as “early adopter”	Political priority for EU to commercialise before other regions	133 FTE
Laboratory Medicine	Existing network needs support from metrology	Metrology community needs to invest here minimising duplication	87 FTE

BoD review of existing EMNs

What barriers do you see in the development of the EMNs?

- Lack of commitment to work together and invest national resources for the common good. Some members still think the EMNs are about capturing EU funding rather than focussed investment of the existing national funding. Some are there to observe rather than bring effort to common goals.

- Limited appreciation of relevant stakeholder needs and a clear plan to deliver appropriate solutions that the stakeholders can exploit easily.

BoD review of existing EMNs

- Lack of strategic drive from senior management. By definition, these 6 areas represent the most important areas for European metrology yet few NMI directors and division heads are getting personally engaged to drive them. Both Quantum and Climate and Ocean Observation have special roles in their membership for those that can drive the political stakeholder involvement rather than focus on the technologies in the individual sections. Recruitment to these posts has been very difficult.

BoD review of existing EMNs

- The drive in Quantum Technologies has been hampered by the lack of the JNP. EMNs should not depend on programme funding and this one needs more attention and more encouragement on the national level to get it started.

- There has been much discussion about the different roles of EMNs and TCs and there is much mis-information circulating in the community. This uncertainty makes EMN development more difficult.

Further workshops planned for this year

1. 5 June, Webinar – Exploitation plans for EMNs
2. Autumn, (Host required) - Smart Specialisation for interested Delegates
3. 10 December, PTB Berlin - NMI Directors on EMN progress and programme Commitment
4. Autumn? or Spring next year – Medical Device Regulation

Relationship between EMNs and TCs

EMNs:

- Focus on interactions with a specific group of stakeholders – ensuring the metrology community develops research and services to meet their needs
- Co-ordinate the work of the members with the greatest investment in the area to ensure that we make the best use of the limited resources.

TCs

- Focus on interactions between Euramet members – ensuring that all members can access the resources developed nationally, in JRPs, or in EMNs.
- Develop roadmaps related to the technical area
- Govern the MRA processes, plan capacity building, link to other RMOs..

Relationship between EMNs, TCs and the Programmes

Both TCs and EMNs:

- Develop strategic agenda which inform plans for call scopes in the programmes
- Develop ideas for PRTs in response the call scopes
- Ask relevant JRPs to report progress at their meetings
- Have systems for approving and collating data that demonstrates the national funding supporting European priorities, earning bidding rights in the programmes.

Questions?