




European Metrology Networks

Workshop, Paris, 9 January 2018

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Chairperson



Aim of the workshop

- Develop a common understanding for the EMN concept
- Answer open questions
- Exchange of ideas
- Discuss ideas for EMNs; give guidance on how these EMNs should be developed

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Our goals




- To ensure that Europe's metrology infrastructure and networks develop in a way that enhances industrial innovation, competitiveness and international trade, and responds to the grand societal challenges.
- To address challenges in internationally competitive joint approaches beyond the capabilities of a single institute.
- To give special attention to the needs of emerging members, and initiate, develop and implement activities to assist them through knowledge transfer in achieving metrological capability where needed and to provide reliable cross-border services where not.
- To strengthen and coordinate the contributions of the European metrology infrastructure needed to enable regulation.



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From cooperation to coordination




Development cycles of 10 years




1987
1999
2007
2017



Technical Cooperation (projects in TCs)



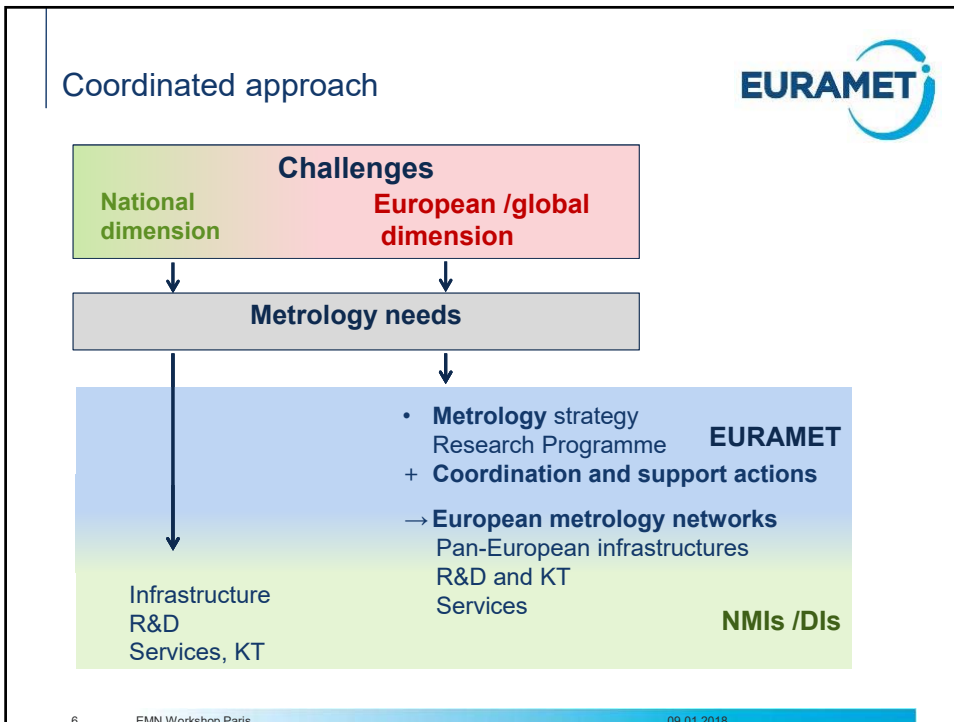
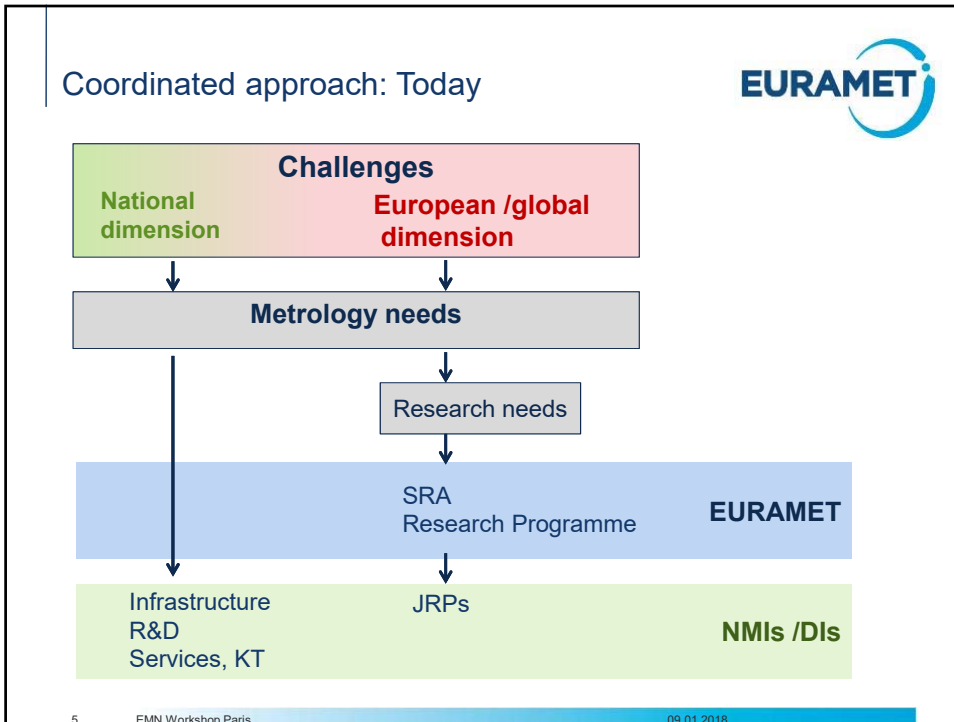
Mutual recognition of national standards and calibration certificates

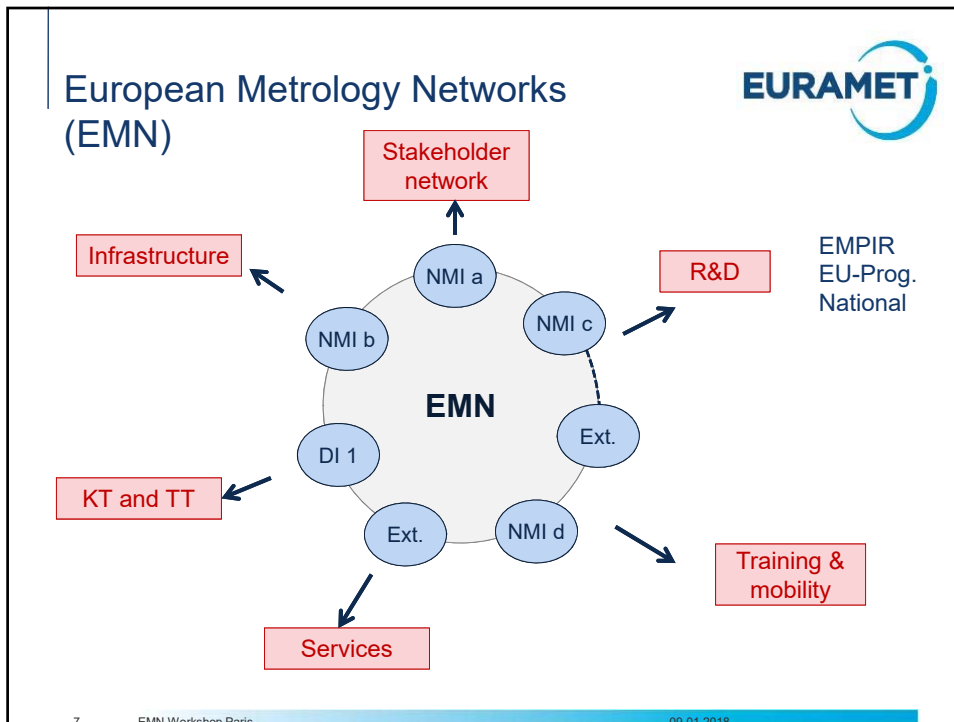




Joint metrology research programmes

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EMN – Overall objective

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

- Creating and disseminating knowledge
- Gaining international leadership and recognition
- Building coordinated infrastructure

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Strategic importance



EMN needs to cover a field which:

- is of **strategic importance at the European level** and has a high potential impact, which is too wide for individual players;
- Needs capabilities and/or tools beyond the ones which are already established at NMIs and DIs.

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Characteristics of EMNs



EMNs are established by a subset of EURAMET members which share

- a **common strategic agenda** for the field addressed by the network
- and **commit themselves** to contribute to the network within a given framework.

The strategic plans of different EMNs are not independent – NMIs/DIs may decide to reduce or stop activities in one field to free resources for the establishment of advanced capabilities in another field.

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Characteristics of EMNs (2)



Furthermore EMNs will:

- Establish close links with the 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 common infrastructures if needed
- Provide services in a coordinated manner if appropriate

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Type of networks



Science

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



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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
- **Case studies** Laboratory medicine, food security, smart grids,...



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Type of networks (3)



Infrastructures and services

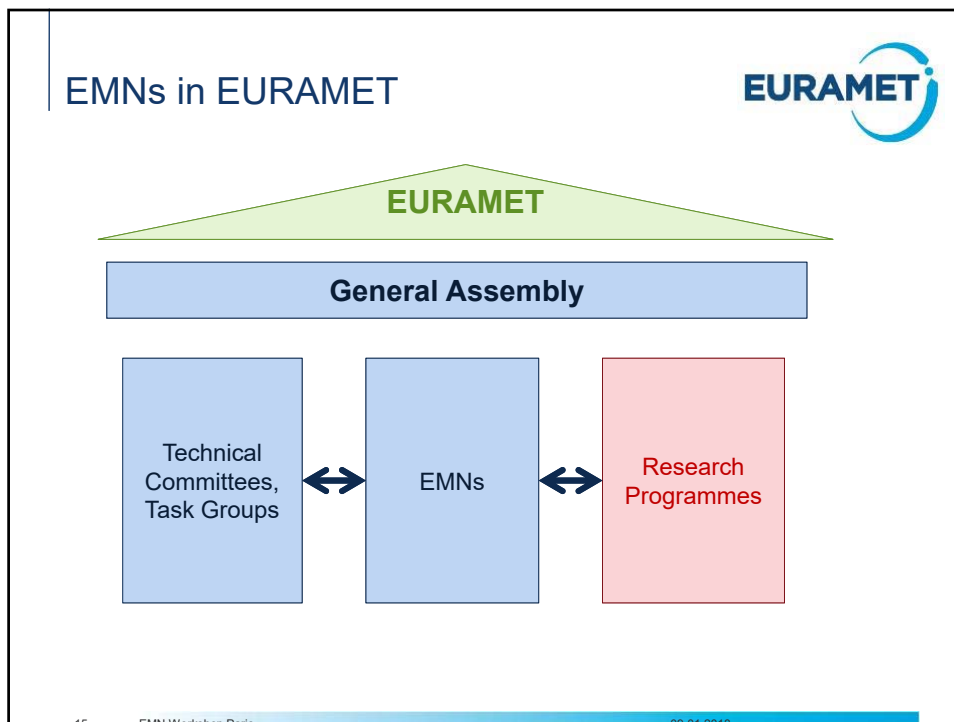
- Coordinated development of metrology infrastructure (in new fields): complementary development, avoiding unnecessary duplication
- Joint facilities
- Coordinated services and KT
- **Case studies** Smart specialisation,...



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EMNs in EURAMET (2)

Amendment in Rules of Procedures

- (1) "EURAMET Metrology Networks" (EMN) may be established to create an efficiently coordinated and shared metrology infrastructure which goes beyond research activities.
- (2) An EMN consists of a subset of at least three EURAMET members and/or associates. Further organisations may join the EMN if they fulfil the specific criteria.
- (3) An EMN will become an integral part of EURAMET. The establishment and the dissolution of an EMN must be approved by the General Assembly.

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RoPs.... (cont)



- (4) A General Assembly working group (EMN GA-wg) will evaluate proposals for EMNs and will prepare the related decisions of the General Assembly. The EMN GA-wg will monitor the activities of all EMNs on a regular basis. The EMN GA-wg convener will be the link between the EMNs and the General Assembly.
- (5) A transparent interaction between the EMNs and with the EURAMET TCs is essential. The coordinators of EMNs and the TC-Chairs will meet at least once per year.
- (6) Further content-related and organizational aspects of the EMN are to be agreed by the members of the EMN in a Memorandum of Understanding.

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Next steps



- EMPIR Call on JNPs in 2018
- GA 2018
 - Adoption of new Rules of Procedures
 - Approval of first EMNs

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Thank you for your attention!

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Achievements

Many Positive effects of programmes:

- Approx. 50% of NMI/DI research is carried out in the framework of EMRP and EMPIR
- Improved quality of research
- Substantial increase of cross-border collaboration
- Capabilities in new fields established; technologies developed that were not accessible alone
- International leaderships in selected fields
- Increased stakeholder involvement
- Increased external participation in projects
-

Where do we stand?



Progress in coordination made, especially thanks to research programmes, but.....

- Research projects mostly defined in a bottom-up approach
- National strategies are not known
- No «European» strategy

- ⇒ Networks of excellence form naturally in some fields
- ⇒ But also more duplication in other fields

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Moving forward....



- There are important steps to take in the near future to move from today's system with insufficient coordination of European resources in metrology, to a fit-for-purpose and truly coordinated metrology infrastructure in Europe with appropriate use of joint infrastructures and coordinated services.
- Continuation of EU funding beyond EMRP/EMPIR will strongly be influenced by our ability to demonstrate the wider impact of the joint research & innovation actions.

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Mandate to the BoD from Director's workshop



Develop coordination strategy:

- Identify fields where
 - EURAMET should not become active
 - EURAMET should play the role as enabler
 - A pan-European approach may be suitable

- Develop appropriate coordination models

- Strategy document worked out over summer 2017;
consultation with advisory group.