

A large, abstract graphic on the left side of the slide, composed of several overlapping, curved blue shapes in various shades of blue, creating a sense of motion and depth.

EURAMET and European Metrology Networks

Metrology for BIOMETHANE,
Workshop, Delft, 22-23 January 2019

Hans Arne Frøystein
Chairperson

OUTLINE



- EURAMET e V, role and organisation
- Research Programme
- Coordination strategy and EMNs

EURAMET eV – the European association of national metrology institutes



- EURAMET is a not-for-profit association established under German law (eV: “eingetragener Verein”) established 11 January 2007, domiciled with its secretariat in Braunschweig, Germany
- EURAMET is the Regional Metrology Organisation (RMO) of Europe. We coordinate the cooperation and facilitates the development of National Metrology Institutes (NMI) in Europe in fields such as research in metrology, traceability of measurements to the SI units, and knowledge transfer
- EURAMET provides the framework for international recognition of national measurement standards under the CIPM MRA and related Calibration and Measurement Capabilities (CMC).

EURAMET Membership



- **Members:**

- 37 European NMIs

- **Associates:**

- 78 DIs

- 1 NMI applying for membership

- **Liaison Organisations:**

- 4 RMOs & BIPM

- 3 NMIs beyond Europe:

- KMA (Kosovo under UNSCR 1244), ME (Ukraine), NIS (Egypt)

- 6 regional/international Organisations, including IAEA, Eurolab, Eurachem, CEN/CENELEC, ETSI



Board of Directors



Name	Institute	Country	Position
Frøystein, Hans Arne	JV	Norway	Chairperson
Rastello, Maria Luisa	INRIM	Italy	Vice-Chairperson (GA)
Ikonen, Erkki	VTT	Finland	Vice-Chairperson (EMPIR)
Jeckelmann, Beat	METAS	Switzerland	Past chair
Džemić, Zijad	IMBiH	Bosnia - Herzegovina	Member
Chambon, Maguelonne	LNE	France	Member
Edelmeier, Robert	BEV	Austria	Member
Stenger, Jörn	PTB	Germany	Member
Klenovský, Pavel	CMI	Czech Republic	Member
Fokkema, Vincent	VSL	Netherlands	Member

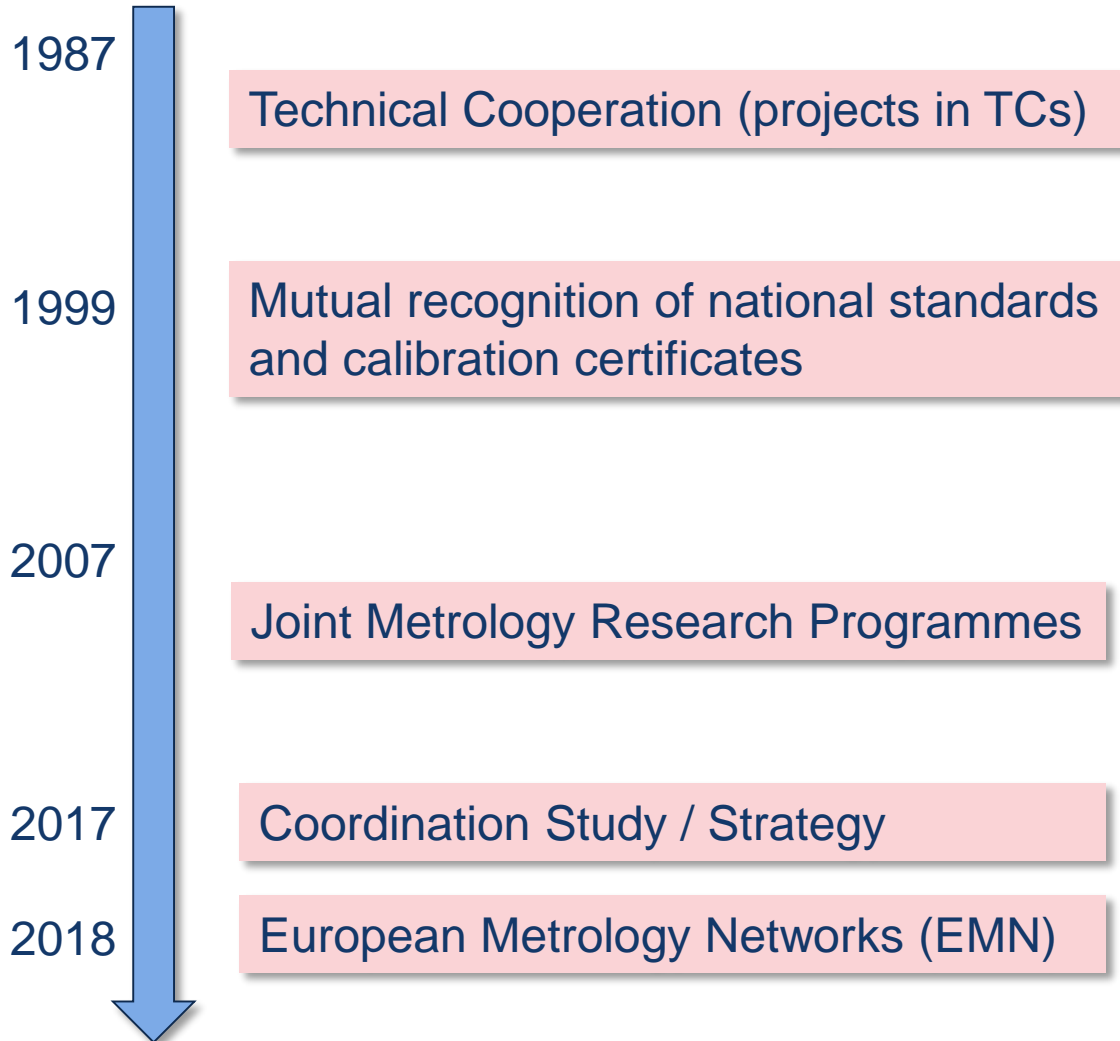
Technical Committees



TC	TC-Chair	Institute	Country
AUV	Robinson, Stephen	NPL	United Kingdom
EM	Callegaro, Luca	INRIM	Italy
F	Milota, Petra	BEV	Austria
IM	Dobre, Miruna	SMB	Belgium
IR	Ankerhold, Ulrike	PTB	Germany
L	Bosse, Harald	PTB	Germany
M	Spohr, Isabel	IPQ	Portugal
MC	Andres, Hanspeter	METAS	Switzerland
PR	Kück, Stefan	PTB	Germany
Q	Stoll-Malke	PTB	Germany
T	del Campo, Dolores	CEM	Spain
TF	Whibberley, Peter	NPL	United Kingdom

- Secretariat lead by the General Secretary: dr Duncan Jarvis
- EURAMET has an annual budget of about 4.5 M€ provided by its members, over 4 M€ of this is associated with the administration of EMPIR. It also distributes an additional 45 M€ of EU funds per year to participants in EMPIR projects.
- There are 39 staff in the secretariat (32 FTE), 26 based in Teddington, 10 based in Braunschweig, and 1 each in Turkey, France and the Czech Republic.
- Some of the Braunschweig staff also provide the WELMEC secretariat.
- Contact details are available at: <https://www.euramet.org/about-euramet/committees-and-bodies/secretariat/>

From cooperation to coordination: Development cycles of 10 years

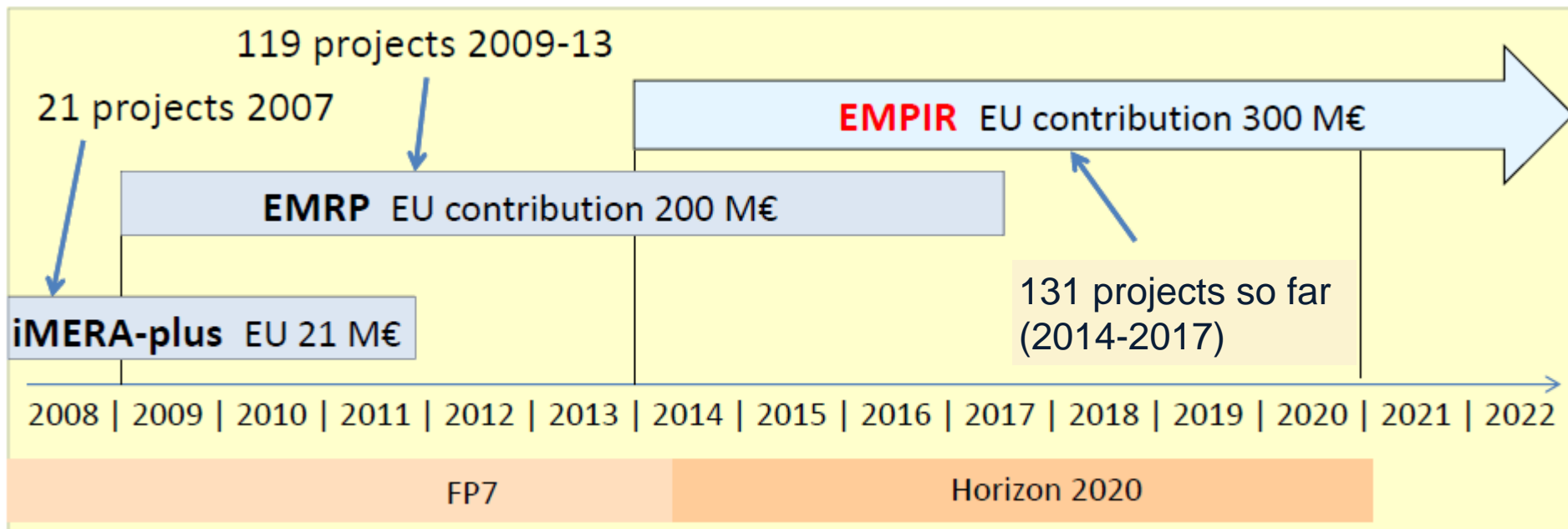


Research Programmes



Implemented by EURAMET; Current programme EMPIR:

- Annual calls between 2014 and 2020
- Thematic calls on
 - Fundamental science
 - Grand challenges
 - SI traceability
 - Innovation in industry
 - Standardisation
 - Capacity building

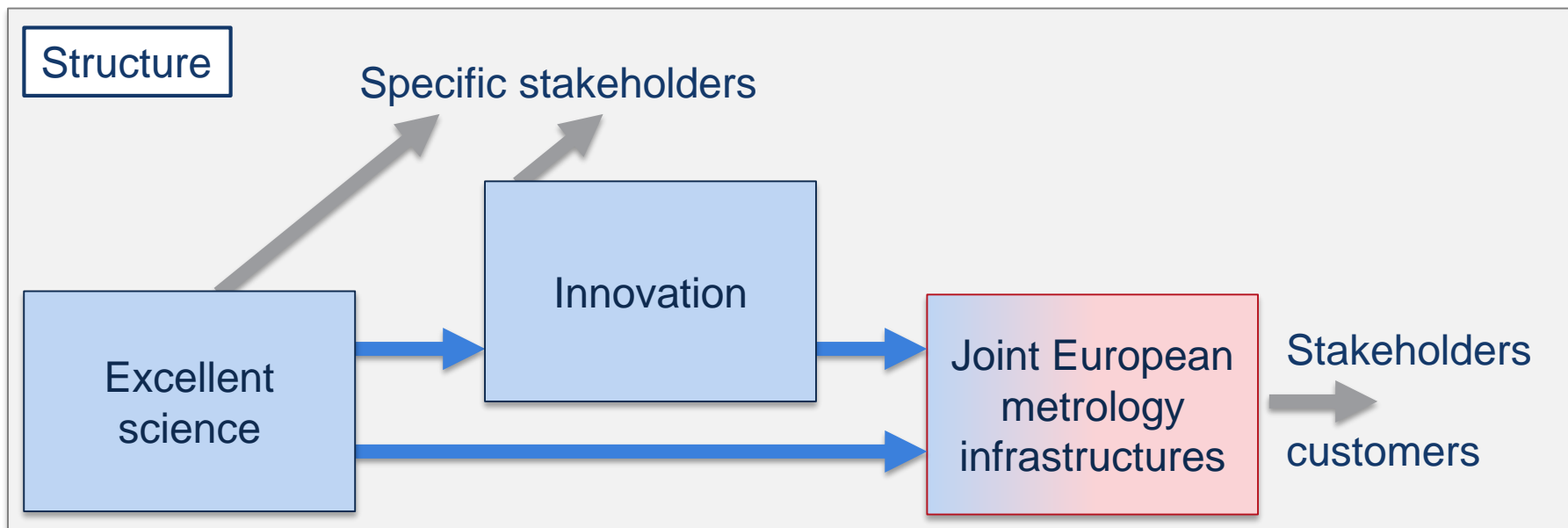


Next programme – possible/suggested profile



Discussions with EC about EMPIR follow-up programme have started. New programme, running as Art. 185 initiative, should:

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

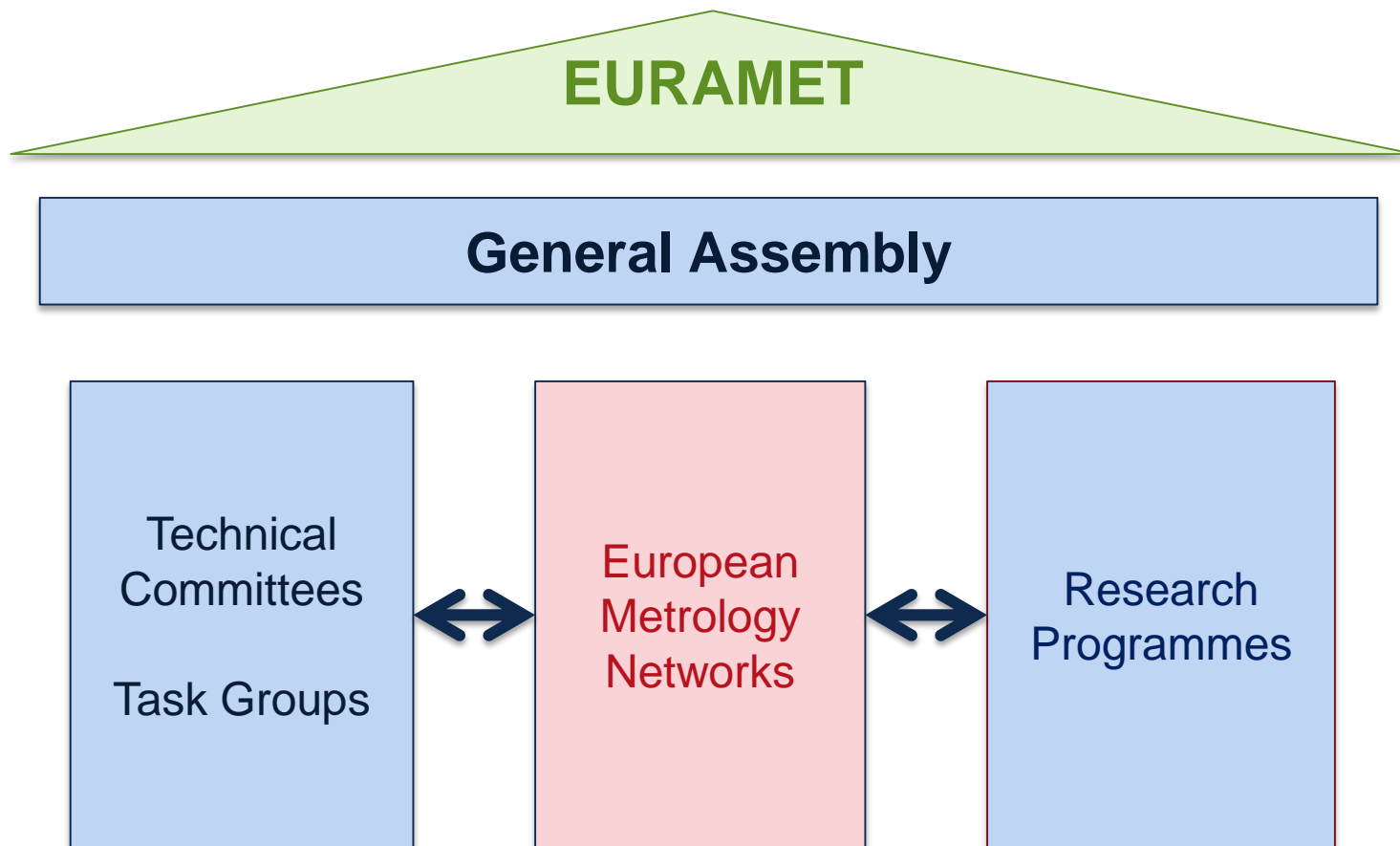


Overall objective

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



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
complementary development, avoiding unnecessary
- Joint facilities
- Coordinated services and KT
- **Case study Smart specialisation,...**



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)

Other EMNs under development



Title	Champion
Food Safety	Andrea Mario Rossi (INRiM)
Nordic Smart Specialisation	Jan Johansson (RISE)
Advanced Therapeutics and Precision Medicine	Helen Parkes (LGC)
Precision Navigation, Timing and Geodesy	Jean-Pierre Wallerand (CNAM)
Digitalisation	Sascha Eichstädt (PTB)
Ionising Radiation Effect	Hans Rabus (PTB)
Reliable radiation protection metrology	Annette Röttger (PTB)
KET Advanced Manufacturing	Harald Bosse (PTB)
Measurement and decay data evaluation network for radionuclide metrology	Mark Kellett (LNHB)
Medical Devices	Dominik Prazak (CMI)
Regulatory / Conformity Assessment	Haris Memic (IMBIH)

and some initial ideas...



- Latin / Mediterranean Smart Specialisation
- Environment Monitoring
- Water Pollution

EMPIR funds to support networks: EMNs and JNPs



The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

European Metrology Network (EMN)

- governed by a Memorandum of Understanding
- negotiated by the EURAMET members
- **approved by GA**
- members commit resources
- led by the “Chair”
- last indefinitely

Joint Network Project (JNP)

- “coordination and support action” (CSAs)
- proposed by a group of internal funded partners
- **decision by EMPIR Committee ***
- supported by EMPIR funds
- managed by the “Coordinator”
- last until the end of EMPIR

EMN may be supported by JNP

* based on ranking list prepared by independent referees