

G16.04.03 Capacity Building

16th EURAMET General Assembly

**BEV, Vienna, Austria & Online
31st May and 1st June 2022**

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OUTLINE

- Background
- Update on CB instruments
- CB Survey
- E- Learning

Deliver high value to members and associates

→ Move to a fit-for-purpose and truly **coordinated** metrology infrastructure in Europe, **assist** members in achieving metrological capability where needed, **support** participation of NMIs and DIs in MRA, **facilitate** the integration of member NMIs and DIs into EURAMET's activities

CB Strategic objectives



Support building the human and institutional capacity of member NMIs and DIs necessary to respond to the demands of indirect stakeholders, both:

- **Emerging**
- **All NMIs: Basic technical skills** for the new staff as well as the „**soft**“ **skills**.

Implement actions for developing or reinforcing member **NMI/DI research capabilities**

Support EURAMET NMIs/DIs toward more effective participation in **CIPM MRA processes & mechanisms**

Support **integration** of all EURAMET members into EURAMET structures and activities

Achieve **sustainability** of CB activities over the long-term through securing appropriate financial and human resources

Cooperation with other organisations on CB matters

CB Strategy has been updated inline with the EURAMET Strategy 2030.

Impact of CB & EMRP/EMPIR



Widening the JRP community

- Countries joined at EMPIR stage: Ireland, Greece, Serbia, Bulgaria, Croatia – new participants in JRP projects,
- New countries coordinating JRPs: Slovenia, Bosnia & Herzegovina, Portugal, Croatia, Ireland
- NMIs from non EMPIR countries (never participating in a JRP before) joining as external partners: Lithuania, North Macedonia, Montenegro, Moldova

Sharing the load

- Emerging institutes started hosting training courses (DMDM, MBM, IMBiH, DPM)
- New institutes started piloting intercomparisons within last 10 years: DMDM, BIM, EIM, HMI, HMI/FSB-LPM, HMI/FSB-LPMD, IMBiH, VINS.

NMI/DI development

- New measurement services and facilities in NMI/DIs
- Many CMCs in preparation, some claims already submitted, some already approved

- **Europe-wide participation (36 countries)**
- **Cooperation with the BIPM, COOMET, APMP**
- **EURAMET CB Strategy** prepared

Success stories: <https://www.euramet.org/knowledge-transfer/focus-topic-capacity-building/>

The Capacity Building in EURAMET is possible because of **altruistic collegial support** and cooperation and collaboration between more and less developed institutes and **EMPIR financing** (EU and members' cash contribution).

Institutes are giving support to colleagues from other institutes in accordance with their capabilities

Each institute benefits in some moment and through some instrument

BoD Working Group for Capacity Building (BOD-WGCB)



Giving **strategic advice** on CB activities

Annual meeting 2021: 6/7 October (online)

24 Members (**all EURAMET members welcome to join!**)

DPM (AL), BEV (AT), IMBiH (BA), SMD (BE), BIM (BG), **EIM (GR)**, FSB-LPM (HR), METROSERT (EE), BoM (MK), PTB (DE), MIKES-VTT (FI), NSAI/NML (IE), FMTC (LI), **LATMB - LNMC (LV)**, INM (MD), MBM (ME), GUM (PL), DMDM (RS), SMU (SK), MIRS (SI), CEM (ES), METAS (CH), TUBITAK UME (TR), NPL (UK)

Observers

WELMEC
COOMET
APMP

BoD-WGCB Convenor

Paul Hetherington, NSAI

BOD-WGCB Guardian

Maria Luisa Rastello, EURAMET Vice-Chairperson (GA)

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CB Instruments yesterday, today and tomorrow



	Duration	2019	2020	2021	2022
Training courses and workshops	3d	+	+	+	+
Mentoring Scheme Award (MSA)	3w	-	+	+	+
RMG – researcher mobility grants	3m	+	+	+	+
Small collaborative projects	1.5 y	-	+	+	-
Research Potential Projects (new)	3y	-	-	-	+
E-Training platform in development	-	-	+	+	+
Collaboration with EMNs	-		+	+	+

Declaration of countries' strategic priorities may facilitate acceptance in any JRP consortia

Not all of these instruments would be available every year, please check the detailed instrument page or contact the [CB Officer](#) for more information

CB Instruments yesterday, today and tomorrow



First training course with presence after 2020 to be held in June 2022 in CMI, two others in preparation

	Duration	2019	2020	2021	2022
Training courses and workshops				+	+
Mentoring Scheme Award (MSA)	5w	-	+	+	+
RMG – researcher mobility grants			+	+	+
Small collaborative projects	1.5 y	-	+	+	-
Research Potential Projects (new)			-		+
E-Training platform in development				+	+
Collaboration with EMNs				+	+
Declaration of countries' strategic priorities may facilitate acceptance in any JRP consortia					

3 applications approved
1 in process, some more in preparation

Preparations running,

13 PRTs submitted

Registration (solved by BIPM),
copyright/licensing,
QMS documents,
development of courses

Training courses, highlights of 2021 and view in future



2021 highlights

- EURAMET - COOMET training course on small volume comparisons, October 2021
- EURAMET – BIPM short training course on comparisons in thermometry, April 2021 (97 participants from all RMOs)

...

2022: First training course with presence after more than 2 years

- EURAMET training course on resistance standards 2022-06-06 to 2022-06-07
- Many others at <https://www.euramet.org/knowledge-transfer/training-courses/>

2023:

- EURAMET Summer School on Thermal Metrology Ljubljana, September 2023
- ? EURAMET Summer School on Flow and volume Metrology

Other initiatives

- Training course on preparation of CMC claims (TCT CMC review group)
- Evaluation methods of comparisons (?)

RMG statistics



JRP	2016	2017	2018	2019	2020	2021	2022	2023
Adverts	22	14	18	21	20	13		
Applications	19	14	14	18	17	10		
Contracts	13	10	13	17	16	10*		
Months	61	33	43	50***	86***	33*		
Estimated Value (k€)	152	84	112	156	200**	94*		
Forecasted spend (k€)	0	127	100	110	98	121	120	35

* Estimates as negotiations have just started and contracts have not been issued.

** Includes 85% up front payments of disrupted and delayed activities.

*** Subject to Covid and other restrictions (some amendments in progress).

Researcher Mobility Grants (RMGs)



Timeline – preparation of 2022 call

- March: start of the activities
- By 15 May: interested researchers and guestworking institutions should send information to the EURAMET CBO;
- By 1 June: research topics and timelines defined (for the adverts);
- 5 July to 6 September 2022: the call is open;
- Oct to Dec 2022: – eligibility check of the proposals by MSU,
 - evaluation of the proposals by the referees,
 - evaluation of the proposals by the EMPIR or Partnership consortia,
 - outcome of evaluations and results announced,
 - negotiation of the contracts (with the employers, the guestworking institutions and the researchers),
 - drafting the RMG contracts,
 - signature of the contracts.
- Beginning of 2023: earliest start of the RMGs.

2022 Call for Researcher Mobility Grants (RMGs) – potential hosting projects



EMPIR call 2019		EMPIR call 2020		Partnership Call 2021	
ENG	ENV	FUN	IND	NRM	
Metro-PV	traceRadon	TSCAC	MetroCycleEU	HiDyn	
FutureEnergy	RemoteALPHA	POLight	DynaMITE	Digital-IT	
MEFHYSTO	Infra-AUV	COMET	FutureCom	MEWS	
MetroHyVe 2	MAPP	PrimA-LTD	ATMOC	Biomethane	
NanoWires	STELLAR	SEQUME	QADeT	STATIS*	
HEFMAG	MetClimVOC	MEMQuD	PROMETH2O	EMC-STD*	
Met4Wind	Met4ClimOS	SuperQuant	TracOptic		
WinDEFCY	AEROMET II	NEXTLASERS	MetExSPM	Green deal	
BIOFMET	MetroPEMS		PowerElec	OpMetBat	
		NRM	Decarb	BIOSPHERE	
NRM	RPT	MetTLM	MetHyInfra	PaRaMetriC	
MRgRT-DOS	QuantumPower	MFMET	Elena	isoMET	
RevStdLED	RealMass	DC grids	SAFEST	Met4H2	
SI-Hg		MetrIAQ		MetCCUS	
ISO-G-SCoPe		iMET-MRI		PlasticTrace	
IT4PQ		SAPHTIES		MetroSoilMoist	
MeTISQ				MetEnvPol	
HV-com ²				quantiAGREMI*	

*) JRP proposals approved for financing in end of April 2022

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EURAMET CB Survey



- Initiative – World Café discussions at the Joint Meeting BoD/TC Chairs/EMN Chairs/WG Convenors (Feb. 2021)
 - Drafted by BOD-WGCB Steering committee
 - Complemented and endorsed by the BOD-WGCB plenary
 - Online questionnaire with 9 questions
 - Duration: 4 weeks (22 November to 17 December 2021)
 - Population: 159 people
 - Participants: 30 people
 - Response Rate: 18.9 %
 - Replies:
 - Delegates & Alternates – 40.0 %
 - TC Chairs – 13.3 %
 - DI Contact Persons – 26.7 %
 - BoD-WGCB Contact Persons – 16.7 %
 - Anonymous – 3.3%
- Average Satisfaction Score:
4,1 /5

Many respondents with multiple roles...at least 10 (42%) of BOD-WGCB members

EURAMET CB Survey Summary



One could reveal (this is not directly documented) that two groups of institutes were embraced in the survey with different preferences:
„Smaller“ NMIs - Prefer shorter activities, combined research and basic
„Larger“ NMIs - Prefer longer activities, more research

Good complementarity of instruments

There are certain preferences for each instrument

Keep the instruments, because each of them has it's customers

Do not introduce new, some **fine tuning needed, of course**

Check if the **administrative procedures** could be simplified

Improve information about CB activities (general, eligibility, ...)

No indication of bigger problems, but rather various opinions indicating spread of the involved parties

Interesting question



I don't know whether **Euramet** has defined a **profile for a metrologist**, which describes all the competences a metrologist should have. This would also help capacity building in training of metrologists. Because then it is possible to identify possible gaps in capabilities in certain areas and countries. CB activities could then be directed more effectively towards these gaps.

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E-Learning platform development Evolution



2014	Project within the TC-IM
2020	renewed initiative
2020	Stakeholder consultations, BOD-WGCB, TCs, Advisory board.
September 2020	Endorsement by the 41 BoD
February 2021	Demonstration in Sharepoint presented
September 2021	Invitation to join BIPM Moodle E-Learning platform,
September 2021	Decision to join the platform (44 BoD)
January 2022	Signature of the „Practical Arrangement“ with the BIPM
May 2022	This presentation
31. May 2022	Last day of the BIPM test site operation
21st June 2022	Presentation/insights (Summer 2022 TC Chair Workshop)
...	

Joint E-Learning platform with the BIPM

- Based on willingness of the experts and NMIs/DIs to share their materials within the international metrology community
- Supports capacity building needs of:
 - EURAMET members and associates
 - Other Institutional partners
 - EURAMET as the RMO.
- Ownership remains with the authors of the materials (CC BY-NC-SA)
- E-Learning Advisory Board
- E-Learning platform Editor
- Planning and coordination of preparation of materials with other RMOs.
- Peer review for assuring quality of materials
- **Approval of necessary QMS documents (licencing of the materials, operational instruction for the process)**
- **Registration of participants, access rights (solved with the BIPM)**
- **„Moodlisation“ of existing materias, Development of new materials**

Licensing, access rights, review, ...



The copyright holder(s) agree(s) to (please mark the checkbox):

- ☒ default licencing under Creative Commons 4.0 CC BY-NC-SA
 - ☐ different licencing modus (please describe here)
-

2. Access to material

The copyright holder(s) agree(s) to grant access to their material as follows (please mark the checkbox):

- ☒ Grant access to the material to any registered user of the platform
- ☐ Grant Access to the material only for staff of NMIs and DIs of any RMO
- ☐ Grant Access to the material only for staff of NMIs and DIs of EURAMET
- ☐ Grant access to the material only to users specifically registered to access the material

- ☒ The Author(s)/organisation submitting the material(s) warrant(s) that the material and its use in connection with the e-Learning platform does not infringe any copyright, patent, trademark, or other intellectual property right of any third party. (please mark the checkbox.)

The author/organisation agrees that the material is peer reviewed by competent peer experts selected by EURAMET (e.g. from other RMO or EURAMET). To facilitate the review process authors are asked to suggest two potential peer reviewers to EURAMET Secretariat with the submission of this form (please write below):





About the CBKT



KCDB help page



What is New?



BIPM YouTube



OIML e_Learning



BIPM COURSES



ALL COURSES



CIPM MRA		
PUBLISHED DOCUMENTS	DISCUSSION DOCUMENTS	RELATED DOCUMENTS
EN 1000-1 International System of Units (SI) Units, Symbols and Abbreviations	DISCUSSION 10 The International System of Units (SI) Units, Symbols and Abbreviations	DISCUSSION 10 The International System of Units (SI) Units, Symbols and Abbreviations
DISCUSSION 10 The International System of Units (SI) Units, Symbols and Abbreviations	DISCUSSION 10 The International System of Units (SI) Units, Symbols and Abbreviations	DISCUSSION 10 The International System of Units (SI) Units, Symbols and Abbreviations

CIPM MRA documents



COOMET COURSES



EURAMET COURSES



GULFMET COURSES

Thank you for your attention
and contributions to EURAMET CB

Questions?

Contact: tanasko.tasic@euramet.org