



Brussels, 28 June 2022

European Partnership on Metrology 1st Steering Group meeting

DATE: 24 JUNE 2022, 09:30-12:30

PLACE: ONLINE

Participants:

AMIHALACHIOAE Cornelia (Member, MiE)
AUERBACH Dagmar (Observer, Programme Manager)
CHAMBON Maguelonne (Observer, Metrology Partnership Chair)
COBBAERT Christa (Member, LUMC)
DIDERICH Michael (Member, Hydrogen Europe for Clean Hydrogen JU)
DRÖLL Peter (Co-Chair, Director of the Prosperity Directorate EC DG R&I)
FRIEDL Anna (Member, LMU)
GIGASE Yves (Member, KDT JU)
GÜNES Minna (Member, Aalto University)
IMKAMP Dietrich (Member, ZEISS)
KOLIBOVÁ Natália (Co-chair, Czech Office for Standard, Metrology and Testing)
PINTO SEPPÄ Isabel (Member, B4P)
RASTELLO Maria Luisa (Member, CIPM)
SKLIAROV Volodymyr (Member, NSC-IM)
STENGER Jörn (Member, EURAMET)
TARASOVA Oksana (Member, WMO)
TIEDGE Jürgen (Observer, HoU of E3, EC DG R&I)
VALSAMOS Georgios (Observer, EC DG R&I)

1. WELCOME BY THE CHAIRS

- Natália KOLIBOVÁ and Peter DRÖLL made a short introduction presenting who they are

2. SHORT EXPLANATIONS OF THE MANDATE AND TASKS OF THE STEERING GROUP

- Peter DRÖLL explained briefly the motivation for including in the Metrology Decision the Steering Group and its tasks
 - Better align the research priorities with the stakeholders needs and facilitate synergies in HE.

- Identify research areas which contribute to the functioning of the internal market and Unions climate neutrality goal.
 - Advise the Partnership on priorities for the future work programmes.
- The agenda was accepted. Yves GIGASE (KDT JU) asked clarification of the role of the Steering group and enquired what type of projects have been selected in the 2021 call. Peter DRÖLL responded that under agenda point 3 Jörn Stenger would provide information on the work programme 2021 and 2022. Oksana TARASOVA (WMO) pointed out that the group is not in charge of selecting projects, but rather to provide strategic guidance.
- 3. SHORT PRESENTATION OF EACH MEMBER**
- Natália KOLIBOVÁ called all members in alphabetical order and then the observers from EURAMET.
- 4. DISCUSSION AND ADOPTION OF RULES OF PROCEDURE FOR THE STEERING GROUP**
- Natália KOLIBOVÁ asked the members for any comments on the Rules of Procedures that have been circulated to the members in advance.
 - Michael DIDERICH (Clean Hydrogen JU): Mentioned that Hydrogen Europe together with Hydrogen Europe Research (Private partners of the Clean Hydrogen JU) is in a process to sign a MoU with EURAMET and asked whether this should be included in the RoP.
 - Oksana TARASOVA (WMO): Mentioned that any MoU with EURAMET should not be part of the RoP. The two Chairs agreed.
 - The RoP have been adopted unanimously.
- 5. DISCUSSION OF WORK PROGRAMME 2022 OF THE METROLOGY PARTNERSHIP**
- Jörn STENGER presented:
 - an overview of EURAMET and the strategic objectives for 2030.
 - European Metrology Networks (EMN) and their matchmaking with European Partnerships and Initiatives.
 - Research programmes, from EMRP (2009-2013) to EMPIR (2014-2020) and European Partnership on Metrology (2021-2027).
 - Focus on the objectives and the call plan for EPM. Selected projects for Call 2021.
 - The members asked Jörn:
 - Yves GIGASE (KDT JU): Only Metrology partners can participate in the projects or also externals? What about the intellectual rights?
 - 1/3 is reserved for external funded participation
 - Additionally, beneficiaries without receiving funding can participate as from industry, if they have clear benefits or associated partners can participate if they are not allowed to receive funding based on the eligibility criteria for HE.
 - Concerning the intellectual rights: The results are foreseen to be open access. There is a lot of input for the industry. The experience from EMRP and EMPIR is that often follow-on cooperation develop from joint research projects.
 - Minna GÜNES (Aalto University): How EURAMET reaches the other research infrastructures?

- Mainly through EMNs (European Metrology Network). For example, EMN on quantum they liaise with the flagship and the research infrastructure on quantum technologies. Also MiE, CH, KDT, and B4P are connected through EMNs. Further cooperation and contact for example with EOSC or Metrofood.
- Infrastructures added from Minna in the chat: Integrated Carbon Observation System ICOS <https://www.icos-cp.eu> and The Aerosol, Clouds, and Trace Gases Research Infrastructure <https://www.actris.eu>
- Dietrich IMKAMP (ZEISS) added in the chat an open consultation on Metrology for Semiconductor Technologies event: [Open consultation on Metrology for Semiconductor Technologies - Event Details - EURAMET](#)
- Cornelia AMIHALACHIOAE (MiE): EPM shares common objectives with MiE so we should find an efficient way to communicate.
- Maria Luisa RASTELLO (CIPM): How will the needs for the new EMNs be decided?
- Oksana Tarasova (WMO): Will the carbon markets (Article 6 of the Paris Agreement) be of interest? Certification of carbon products? Measurement of other emissions sources like the carbon in the soil (agriculture)? Connection of the carbon credits with the digital aspect?
 - Jörn: A new EMN is in place for Pollution Monitoring.
 - Jörn: Climate and Ocean EMN considers the emissions in a global scale.
 - Oksana: Traceability of carbon stored in biomass is much different on what we see in the atmosphere.
 - Jörn: Technologies to measure emissions on agriculture (not only carbon) are being developed among the metrology community
 - Peter: The Commission can make the links with colleagues in DG CLIMA.
- Oksana Tarasova (WMO): What about the cities and using of models in urban scale?
 - Peter: This is a direct link with the EU missions. 100 cities have already been selected to become climate-neutral by 2030
 - Jörn: There is no dedicated EMN to cover this topic for the moment. Smart cities are partially addressed by a working group on digital transformation, because smart metering is key for smart cities.
- Christa COBBAERT (LUMC): We need Precision Diagnostics in health care to get diagnoses and treatments more accurate and personalized. Transitioning from the old school (measuring mixtures of measurands with technology that is blind for the molecular diversity) to a molecular definition of health and disease in patients is essential for enabling preventive medicine and

improving clinical and cost-effectiveness of medical testing in care pathways. Molecular testing will also assure much better comparability and traceability of medical test results among hospitals. Molecular testing (e.g. with quantitative proteomics) also has great potential for advancing sustainable standardization of medical tests.

- Jörn: Very complex topic, partially covered by the regulation. A Targeted Programme on Metrology for Health was launched this year.
- Peter: The Commission can make the links with colleagues in health.
- Christa: Will share a paper on the subject.

6. EXCHANGE ON STRATEGIC PRIORITIES EXPECTED BY EACH MEMBER IN VIEW OF FUTURE ACTIVITIES OF EURAMET, INCLUDING EUROPEAN METROLOGY NETWORKS AND FORTHCOMING WORK PROGRAMMES

- Peter DRÖLL opened the floor to the members for a discussion on the expected strategic priorities in view of future activities of the Metrology Partnership.
- Yves GIGASE (KDT JU): There are new types of sensors for quantum technologies and AI. There is a change of paradigm on how information is produced (big data). Metrology partnership should expand its scope toward that direction. AI treats data from different sources, for example AI in vehicles internal, traffic lights, surrounding buildings data etc. Digital twin of such cases and optimisation of the traffic conditions is essential for the near future. This is for the moment applicable for one vehicle, but the challenge is to integrate it virtually for all the vehicles. This is a way to also optimise the carbon emissions and energy consumption. Metrology of the virtual environment of Digital Twins and feed it back to physical world.
 - Jörn: This is a complex contribution, and it will be an important topic of discussion for the next Steering Group meetings. Some points are already included in several ongoing projects. This year's EPM call includes a Targeted Programme on Digital Transformation, for which we have projects proposals such as on generic metrology for AI-assisted algorithms, large sensor networks, digital twins and EOSC related topics. AI and machine learning is a key point for Metrology. Autonomous driving is not very prominent yet, but some partners are working on that. It is in an early stage, but the developments are coming.
- Cornelia AMIHALACHIOAE (MiE): On manufacturing a mapping is needed to better harmonise the topics. MiE is covering a very broad range. We need to have bilateral interaction to narrow it to the real needs. Metrology should be fundamental for complex products topics. Quality control, dimensional measures and guidelines. Pilot on new standards. On the selection of their topics, they want to engage EPM to make the topics even better. They projects should base on standardization. Synchronization of EPM with MiE is very important.

- Jörn: EURAMET fully endorse the bilateral interaction with MiE, mentioned that the EMN on Advanced Manufacturing is highly engaged with the partnership and that they are members in their Stakeholder council and therefore up to date with the activities what the EMN is doing in terms of public activities, like the open consultation last November.
 - Peter: We should increase the impact from Steering Group to the EPM and vice versa through the PPPs and the JUs.
- Anna FRIEDL (LMU): In the radiation field more personalised medicine is required. In radiation protection you have already limits but there it is rather straight forward. There are several factors impacting that such as radiation qualities, x rays, accelerated ions etc. can this be considered? Also, other aspects like age of the patient, genetic aspects, sex etc. can we take them into account? Or it is better to have a rough clear-cut method? This is also related to standards.
 - Jörn: The EMN on radiation protection is the key representative for that and the metrology community is aware of the need for metrology for personalised medicine. Question: EURAMET would like to strengthen the link to EURATOM. Is it possible to facilitate this?
 - Peter: The Commission can make a link with EURATOM colleagues.
- Isabel PINTO SEPPÄ (B4P): B4P represents the building and building environments (bridge, roads, water management infrastructure). From the matchmaking slide (between EMNs and European Partnerships and JUs) the energy aspect is missing. For example, the renovation initiative, on that feedback is essential from Metrology (digital twins for meteorology interoperability). There is a gap in AI and historical data for Digital Twins (also mentioned from Yves)
- Isabel PINTO SEPPÄ (B4P): For B4P is also important the resilience connected to the climate mission. Extreme weather events and protection of critical infrastructures. On predictive maintenance (bridges and critical infrastructures) input from Metrology is very important.
- Isabel PINTO SEPPÄ (B4P): There are some clusters for different thematic areas and MS. The networks can be a level of synergies of the local metrology institutes. She can send notes on that.
 - Maguelonne: Can provide helpful documents too.
- Cornelia AMIHALACHIOAE (MiE): Support from the Metrology Partnership on the digital transformation in manufacturing and the use of sensors for quality assurance.
 - Jörn: Quality assurance methods for measuring and equipment calibration certificates are key objectives. A digital calibration certificate, which can also be used beyond calibrations, is being developed and discussed widely. This complex area will need to be addressed in upcoming SG meetings.
- Maria Luisa RASTELLO (CIPM): In the future a device can decide if it needs calibration and do it alone (link provided [NIST on a Chip | NIST](#)). After the new definition of SI anyone can realise a unit (it cost a lot of

money, but it can be done). For time google is challenging the UTC. Suggestion/question: How you can imagine the traceability change in the future?

- Jörn: This may happen in the future, but it will not replace the Metrology institutes.
- Maguelonne: New types of measuring to be on track with digitalisation.
- Michael DIDERICH (CH JU): They have many ongoing projects with EURAMET (new type of sensors). They have done a workshop on the connection between Metrology and Hydrogen (18 individual from Research, Industry and NMIs) aiming at identifying priorities for metrology applied to hydrogen technologies, as well as aiming at developing a common roadmap with common targets. Mentioned that in many cases there is risk of gap or duplication of funding, while it is also important to link the existing projects to the future ones. We need to also consider the end users. It would also be beneficial if the knowledge management platform TRUST (managed by the JU) could be fed with results from projects funded outside of the JU.
- - Jörn: Metrology for Clean Hydrogen has very high priority for EURAMET. Several joint projects have been concluded, are running or being planned. An intense cooperation with CH JU is key.
- Dietrich IMKAMP (ZEISS): NMIs and EURAMET they take care on digital standards on Manufacturing (digitalisation). The standards are coming from US, projects already address this comment. NMI on a chip? Who is taking responsibility for that? What about traceability? NMI on a chip may be implemented but it cannot be a solution, low cost but the quality is not guaranteed
 - Maria Luisa RASTELLO (CIPM): This will not happen tomorrow, but we need to be aware and prepared.

7. AOB, including date for the next meeting

- Natália KOLIBOVÁ confirmed with the members that there are no additional comments
- Next meeting was proposed for 27 of October
 - Anna mentioned that she will not be available for that date
 - Peter raised the option of a doodle for the date.
 - Michael mentioned that before that date there is a Governing Board meeting for Clean Hydrogen JU that can be interesting for the next Steering Group.

8. Closing remarks

- Peter DRÖLL: Noted high level of commitment and of ambitions in the group where rich input has been proposed. We should identify how to link

with other projects and feed them to the future actions and vice versa. New Commission tool the Horizon results platform should be considered.