

Title: Support for a European Metrology Network promoting smart specialisation in the Latin region

Abstract

NMIs and DIs in the European Latin countries are facing the challenge of requests for increased scope in their metrology services and the development of new metrology fields which are beyond the capability of an individual NMI, whilst budgets for metrology are static or decreasing in real terms. The European Neighbourhood Policy encourages regional cooperation between countries, and several structures and networks in different fields have been created between European Latin countries to develop this. A network focusing on smart specialisation in the region will allow the metrology community to develop similar close cooperation in response to stakeholder needs.

Keywords

Smart specialisation, regional metrology strategy, Latin region, metrology services, metrology training, metrology R&D, traceability, network, quality infrastructure

Background

EURAMET aims to develop and disseminate an integrated, cost effective and internationally competitive measurement infrastructure for the whole of Europe. Its priorities are driven by the needs of industry, business and governments Europe wide. EURAMET supports its members to meet their national requirements, to establish a balanced European measurement infrastructure and demonstrate the impact of metrology. While most activities are best coordinated at the European level there are some that EURAMET's members can coordinate with their near neighbours more successfully, and in greater depth, than they would with the whole community. This greater capacity for coordination may stem from geographical closeness, common cultural and linguistic roots, or common economic drivers. Wherever these local factors enable EURAMET's members to do things together better on a regional level than they could do alone, or across the whole of Europe, a regional network can be the appropriate vehicle for managing the cooperation.

Spain, Portugal and Italy share a common cultural and linguistic heritage, a geographic closeness and similar economic drivers that should allow such detailed regional cooperation. They already cooperate closely in responding to the demands placed on them by the need to demonstrate the quality of the primary standards they maintain and disseminate through the Mutual Recognition Arrangement of the CIPM. Their geographic closeness and common heritage should allow them to cooperate more closely on legal metrology bringing efficiencies in operation that will benefit both regulators and suppliers and reduce barriers to trade. The recent introduction of the quantum SI requires significant effort from an economic and scientific point of view, and the complete establishment of the quantum SI is impossible for almost all individual NMIs without cooperation and smart specialisation. Metrology institutes in this region have faced decreasing national investments in metrology and consequent reductions in staff in recent years, making it difficult for them to undertake all the services and tasks that they have historically provided. Smart specialisation in the region will enable them to provide services at the level required by their stakeholders and at the cost their governments can afford.

Outside of the metrology community, a number of structures, plans and networks addressing specific needs of the region have been supported and promoted by the EU, but with a little metrological involvement. These structures and networks include the UfM (Union for the Mediterranean), 5+5 Dialogue, MedECC (Mediterranean Experts on Climate and Environmental Change), MSP (Mediterranean Solar Plan), and Medare (Mediterranean climate DAta Rescue). A regional EMN would provide a single point of contact for metrology to support these other regional initiatives.

How and where NMIs should focus limited resources to obtain maximum impact for society urgently requires a strategic plan and significant coordination at all levels. No single NMI has the expertise or resource to tackle

all or even a significant fraction of the most critical priorities without collaboration. Without coordination, there is a strong likelihood of unnecessary duplication, with NMIs potentially independently choosing to focus efforts on the same challenge with consequential neglect of others. EURAMET establishes European Metrology Networks to coordinate the NMI response, to establish close links to the stakeholder community, to develop and implement a strategic agenda and establish a knowledge, technology transfer and promotion plan, to ensure an effective response is put in place. This SNT is intended to elaborate how a network could support EURAMET and to support that network in its initial tasks.

Objectives

Proposers should address the objectives stated below, which are mainly based on the PNT submissions. Proposers may identify amendments to the objectives or choose to address a subset of them in order to maximise the overall impact, or address budgetary or scientific / technical / legal / regulatory / market constraints, but the reasons for this should be clearly stated in the protocol.

The JNP shall focus on developing a long-term ongoing dialogue between the metrology community and relevant stakeholders. This dialogue should support the take-up of research outputs from the metrology community and the collection of needs from stakeholders to inform future research and service provision in the Latin region. In addition, the JNP should focus on developing a plan for a joint and sustainable European metrology research infrastructure in the Latin region via a future European Metrology Network.

The specific objectives are:

1. To establish regular, constructive dialogue and liaison between the project and stakeholders to promote smart specialisation in the Latin region, including industry, accreditation bodies, calibration and testing laboratories, research organisations, academia, standards developing organisations and existing networks such as UfM (Union for the Mediterranean), 5+5 Dialogue, MedECC (Mediterranean Experts on Climate and Environmental Change), MSP (Mediterranean Solar Plan), and Medare (MEditerranean climate DAta Rescue). This should include not only fostering existing liaisons, but also promoting new collaborations and identifying stakeholders' needs.
2. To develop a Strategic Agenda (SA) and roadmaps for smart specialisation in the Latin region that take into account feedback and the metrological needs of stakeholders identified in Objective 1. This should include a strategy and mechanisms for smart specialisation which will (i) ensure a financially sound and sustainable coordinated offering of services and research activities fulfilling the needs of industry and society in the Latin region, (ii) enable NMI capabilities and facilities to be developed further in a regionally coordinated manner, (iii) address the sharing of facilities, (iv) improve the efficiency and quality of NMI services, research and quality infrastructure through decreased fragmentation in metrology operations and creation of a critical mass of resources in various metrology fields, (v) improve harmonisation of legal metrology.
3. To develop a web-based platform for relevant stakeholders in the Latin region that provides a single point of contact for their metrological needs. The platform should provide easy access to European metrology capabilities and services, relevant metrological tools and information in order to support decision-making and identify gaps in current NMI/DI measurement services. The platform should be developed in a manner that allows it to be maintained by a future EMN.
4. To set up a knowledge-sharing programme in the Latin region, to promote the dissemination and uptake of information by stakeholders. This should include a range of activities regularly organised by the project, such as the exchange of researchers and collaboration between organisations, metrology workshops, seminars, interdisciplinary studies, and training courses.
5. To develop a plan for a multidisciplinary and sustainable European Metrology Network in the Latin region. The plan should be completed within 12 months of the start of the project and should: (i) identify the scope of the EMN, with respect to the remits of other EMNs, (ii) use coordination and smart specialisation of capabilities and services, (iii) align with other running initiatives and projects, (iv) promote the development of emerging member states, and (v) consider how to extend collaboration to third countries.

The proposed activities shall be justified by clear reference to the measurement needs within strategic documents published by the relevant stakeholders. Proposers should establish the current state of the coordination in this area, and explain how their proposed project goes beyond this.

The proposed activities should not include those essential for the establishment and operation of the EMN. EMNs will be established and operated by the EURAMET members using their own national resources

regardless of whether specific EMPIR proposals are funded. EMPIR funding is for specific tasks aimed at ensuring a proposed EMN will progress quickly towards its establishment and implementation and contribution to the objectives of the programme.

EURAMET expects the average EU Contribution for the selected JNPs in this TP to be 0.4 M€, and has defined an upper limit of 0.5 M€ for this project.

Potential Impact

Proposals must demonstrate adequate and appropriate participation/links to the “end user” community, describing how the project partners and collaborators will engage with relevant communities during the project to facilitate knowledge transfer and accelerate the sustainability of the organisation. Evidence of support from the “end user” community (e.g. letters of support) is also encouraged.

You should detail how your JNP results are going to:

- Address the SNT objectives and deliver solutions to the documented needs,
- Provide a lasting improvement to coordination in the European metrological community and communication with their stakeholders beyond the lifetime of the project,

You should detail other impacts of your proposed JNP.

You should also detail how your approach to realising the objectives will further the aim of EMPIR to develop a coherent approach at the European level in the field of metrology and include the best available contributions from across the metrology community. Specifically, the opportunities for:

- improvement of the efficiency of use of available resources to better meet metrological needs and to assure the traceability of national standards
- the metrology capacity of EURAMET Member States whose metrology programmes are at an early stage of development to be increased

Time-scale

The project should be of up to 3 years duration.