

EURAMET

2020 Strategy

1. Introduction

This document outlines EURAMET's 2020 strategy.

Reliable and traceable measurement underpins the welfare of a modern society and plays a critical role in supporting economic competitiveness, manufacturing and trade as well as quality of life. In this modern world, a well developed measurement infrastructure gives confidence in many aspects of our daily life by for example:

- Enabling the development and manufacturing of reliable high quality and innovative products
- Supporting industry to be competitive and sustainable in its production
- Removing technical barriers to trade and supporting fair trade
- Ensuring safety and efficacy of healthcare
- Meeting the grand challenges of energy and environment.

EURAMET, as the Regional Metrology Organisation (RMO) of Europe, has 37 member countries. It leads cooperation of National Metrology Institutes (NMI) with nearly 6000 metrologists in the development of the European metrology infrastructure and services. It represents Europe in the international metrology forum of the CGPM (General Conference of Weights and Measures).

www.euramet.org

Our strategy concentrates on helping member nations and Europe to meet future needs related to innovation, growth and societal well being through the provision and development of quality assured and traceable measurement.

Our Values

- Common Core mission
- Recognition of added value through co-operation
- Collegiality
- Public good

2. Our Changing Context

Many of the challenges we face are the global challenges of Health, Climate change, Environment, Energy, and Sustainability. Such challenges require global solutions supported by reliable measurement, requirements for which often exceed the capacity and capability of individual nations and their National Metrology Institutes (NMIs). Thus pooling of metrological resources across national boundaries is essential to tackle key societal challenges.

Furthermore, the pace of development is accelerating at an unprecedented rate and offers huge opportunities and challenges for developing new industrial products and services. Average product life cycles in many sectors have decreased markedly, and complexities of products and services increased. New technologies are having a major impact in this respect. Inevitably the demand for metrology and metrological services is growing in tandem and is entering a new era. Innovation and investment in metrological capability and dissemination are essential to match the trend in demand. However, with the constraint on national resources in recent years, NMI's in Europe must co-operate and EURAMET provides an excellent framework and a vehicle for such co-operation.

The recently announced European strategy for smart, sustainable and inclusive growth – EUROPE 2020¹ – is expected to set the agenda for European research & innovation organisations. Several of the flagship initiatives of that strategy will engage metrology, including:

- “Innovation union”²
- “A digital agenda for Europe”³
- “Resource efficient Europe”⁴
- “An industrial policy for the globalisation era”⁵

Metrology in member states of EURAMET is at different stages of development; also the different national requirements vary widely. This offers real opportunity for synergistic co-operation but also provide significant challenges whereby building metrology capability of individual members has to be balanced between local, national and European requirements. Our overall aim is to raise the level of European metrology to be internationally competitive.

Through the establishment of the European Metrology Research Programme (EMRP)⁶, EURAMET has gained a leading position amongst the Regional Metrology Organisations of the world in co-operative research. Hence our aim is to build on the current success so that Europe can secure an internationally leading metrology capability to meet future needs.

3. EURAMET Vision

EURAMET to be the leader in the development and application of measurement enabling Europe to be competitive, healthy and sustainable through innovation

4. EURAMET Mission

Our mission is to:

- **Develop and disseminate an appropriate, integrated and cost effective measurement infrastructure for Europe taking into account the needs of end users in industry, business and Government**
- **Ensure that the European measurement infrastructure is internationally competitive and recognised, and is based on robust and high quality science and R&D.**
- **Support members in meeting their own national requirements through collaboration and a balanced European measurement infrastructure**

5. Strategic Objectives

To deliver our vision and mission, we have identified the following five strategic objectives:

5.1 Engagement of key stakeholders

The requirements for investment in the development of the European measurement infrastructure will always far outstrip the resources available from governments to fund it. It is important that EURAMET and European NMIs understand and prioritise investment in the European measurement infrastructure to address the present and future priorities of business and Government. To achieve this EURAMET will strengthen its links and influence with key users of the measurement infrastructure.

Our Goal is to:

- Develop key partnerships
- Understand stakeholder needs
- Increase impact of our work
- Anticipate market and needs trends based on foresight analysis.

To enhance the understanding of our stakeholders about the work EURAMET does and the benefits of the work, it is critical to promote our work effectively to increase uptake and impact, and thus secure future support for metrology.

We will:

- Develop an engagement plan with stakeholders
- Facilitate impact analysis of work done by EURAMET and its members
- Update our Metrology Foresight Roadmaps
- Launch a sustainable promotional and awareness programme.

Our Key Stakeholders

- Industry and Business
- National Government
- EC
- Standards Organisations
- Universities
- Legal and Conformity Assessment Organisations

5.2 Increase influence with European policy makers and National Governments

EURAMET has amongst its responsibilities the provision of support for policy-making particularly where measurement has an important role in setting and/or implementing the policy.

Our Goal is to:

- Be recognised for the contribution NMIs and EURAMET makes to improve European Growth, be it smart, sustainable or inclusive, according to the EUROPE 2020 Strategy¹
- Gain support and resources for our work
- Provide inputs to the development of relevant policies where measurement considerations are important.

In many areas, metrology makes an important contribution to the making of policies and their implementation on a robust basis. The challenge is to create continuous awareness with policy makers and other organisations involved in policy, such as regulators, standards bodies and legal metrology authorities about the expertise and the knowledge base of EURAMET members. EURAMET will take a proactive approach and offer comments and advice during the development of European policies. In the past year, EURAMET has made important first steps by signing collaboration agreements with CEN-CENELEC and WELMEC and consciously identifying the impact of EMRP projects in policy issues (e.g. smart grids, nanometrology, etc).

Engagement with Policy

In many European Directives measurements are a basic building block. Examples are:

- Water Framework Directive
- In-vitro Diagnostic Directive
- Air Quality Directive
- Directive on Greenhouse Gas Emissions

EURAMET members actively support the implementation of many EC Directives through measurement and monitoring work.

To be more effective in influencing policies, EURAMET will aim to develop an operational mechanism led by the Board of Directors (BoD).

We will:

- Identify suitable policy areas and mechanisms for EURAMET to contribute
- Establish a mechanism for rapid response to EC consultations to support European Policy development and implementation
- Ensure appropriate results from EMRP projects contribute effectively to the development of European standards of major importance.

5.3 Further develop co-operation in R&D

In the last three years, EURAMET has been highly successful in working with the European Commission and twenty two of the National Governments of member countries in developing the European Metrology Research Programme⁶ with a budget of 400 million Euros. The Programme is being managed successfully and has already initiated excellent projects in metrology covering areas such as the development of the SI system and Grand Challenges of Health, Energy, Environment and new Technologies. The aim is to develop the metrology capability of Europe fit for meeting global challenges and enabling Europe to be competitive against other major regions in the world. There is also a need to work closely with members to support each other in smaller projects of mutual interest in order to improve quality and efficiency as well as improving measurement services.

Our Goal is to:

- Enable Europe to continue to build world-leading metrology capability based on excellent science
- Significantly increase efficiency of investment and of resources utilisation
- Maximize impact of EMRP
- Attract support of EU Commission, Parliament and Council, as well as from National Governments for a successor to the EMRP Programme to start from 2014.

We will:

- Identify areas where European metrology needs improvement to be internationally competitive
- Prioritise areas for investment to enable Europe to meet its 2020 vision
- Demonstrate impact of EMRP and promote its successes on National, European and International level
- Prepare a plan of action for securing support for the EMRP successor Programme from the EC and National Governments
- Develop outline of successor Programme and achieve consensus
- Facilitate co-operation between members in R&D beyond EMRP
- Encourage more co-operation and openness between NMIs and researchers in academia, other research and technology organisations and industry.

EMRP

The European Metrology Research programme, jointly funded by the European Commission and all 22 European Countries, which have a national metrology research programme, was launched in 2008. This 400 million Euros programme covers research for the development of Measurement Standards and industrial metrology as well as metrology for addressing grand challenges of Environment, Energy and Health.

<http://www.euramet.org/index.php>

5.4 Deliver high value to members and associates

It is not possible even for the largest European NMIs to provide a comprehensive range of measurement and calibration services for their State. States are becoming increasingly reliant on foreign NMIs for the provision of measurement and calibration services. However, what is most valued by those using a national measurement infrastructure, particularly SMEs, is the capability provided locally by their 'own', local NMI. A delicate balance is required between the role of EURAMET in coordinating European measurement and calibration services, and the independence of individual NMIs to respond to national demands in a sustainable way.

Our Goal is to:

- Understand the true needs and visions of members and have an inclusive approach to all member needs
- To support all members and associates in achieving their own objectives taking into account existing diversity but balanced with overall European needs
- Increase scope for co-operation and sharing of resources/facilities for mutual benefit and convergent development
- Stimulate the development of a stable national framework for metrology by appropriate involvement of key metrology players as well as supporting metrology excellence as a driving force.

We will:

- Provide a platform for an effective information sharing and knowledge transfer in the areas: metrology infrastructure, metrology knowledge (e.g. training courses and materials), hands on training and secondments, visits of laboratories for learning and getting specific expertise, collaboration in projects with experienced laboratories, etc.
- Provide to members (in particular emerging members) EURAMET's expectations on the performance of a national metrology infrastructure in order to enable the country to be an effective partner in the European structures ²

- In case of distributed systems, provide particular recommendations on identification, designation and integration of DIs into the national metrology infrastructure
- Share and review strategies of individual members for research and services
- Develop a balanced way forward for improved provision of traceability and dissemination
- Enhance governance processes based on metrology expertise , economic indicators and possibilities to improve effectiveness and efficiency
- Give special attention to the needs of emerging members and initiate, develop and implement activities to assist them in achieving metrological capability in specific activities.

Co-operation based on synergy

EURAMET helps to develop internationally competitive Centres of Excellence in metrology, and to raise the overall level of metrology capability and quality of service across Europe. It facilitates complementary development, sharing of resources, avoiding unnecessary duplications, establishing joint facilities and supporting horizontal knowledge transfer amongst its members

5.5 Supporting quality infrastructure in Europe and internationally

Metrology with traceability to measurement standards plays a vital role in business and regulations alike as globalisation increases. In 1999 the *Comité International des Poids et Mesures* (CIPM) sponsored the creation of a Mutual Recognition Scheme (CIPM MRA) to underpin and formalize technical competence of its signatory NMIs and Designated Institutes (DIs). In the frame of the Meter Convention Europe has more NMIs than any other Regional Metrology Organisation (RMO), and there are also a very large number of DIs which has created particular challenges for Europe in the implementation of the CIPM MRA.

The work of EURAMET Technical Committees has often been dominated by the requirements of the CIPM MRA. EURAMET needs to review the operation of the CIPM MRA processes and work with its sister RMOs to refine the processes that underpin the mutual recognition of national standards internationally.

Dissemination of best practice of fundamental and legal metrology in developing countries is another international aspect where Europe plays a significant role e.g. through the commissions' EuropeAid and Twinning programme. EURAMET members are actively supporting the development of such metrological infrastructure and have much to offer.

CIPM MRA

86 institutes including NMIs of 50 Member States of the BIPM, 33 Associates of the CGPM and representatives of 3 international organizations have signed a Mutual Recognition Arrangement (known as **CIPM MRA**) for national measurement standards and for calibration and measurement certificates issued by NMIs.

This Mutual Recognition Arrangement is a response to a growing need for an open, transparent and comprehensive scheme to give users reliable quantitative information on the comparability of national metrology services and to provide the technical basis for wider agreements negotiated for international trade, commerce and regulatory affairs.

www.bipm.org/en/cipm-mra/

Our Goal is to:

- Improve efficiency and effectiveness of CIPM/MRA
- Influence Joint Committee of the Regional Metrology Organisation in close co-operation with other RMOs to optimise CIPM MRA processes and governance
- Strengthen cooperation with European Co-operation for Accreditation (EA) in areas of common interest associated with accreditation
- Work with EC in the implementation of technical aid projects in the accession and countries outside Europe.

We will:

- Work with the European Commission to develop a plan to address the above mentioned issues
- Play an active role in JCRB in the effort under way to streamline procedures under CIPM MRA
- Map an appropriate plan for working with EA to address issues of common interest.

References

1. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>
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