

THE EUROMET STRATEGY 2002

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Abstract

EUROMET, a European Collaboration in Measurement Standards, was formally established in 1987. It consists of national metrology institutes (NMIs) and is open to membership to NMIs of all states of the European Communities, all states of EFTA and PECO and to the Commission of the European Communities. Its key objective is to promote the coordination of metrological activities and services with the purpose of achieving greater efficiency.

For several years, EUROMET has been developing a strategy that meets its objectives. The strategy has evolved and developed in reaction to the changing national, European and world metrology scenes.

The strategy has now been updated to meet current and proposed needs and takes into account the demand for metrology in new areas, the role of metrology in promoting world trade, the needs of society and the success of EUROMET to date.

This paper discusses the main elements of the EUROMET strategy. It describes how the strategy aims to make a more effective and efficient use of the member NMIs resources, providing a more coordinated framework in addressing new metrological requirements.

The strategy addresses collaborative research and improved planning of investment in major facilities, thereby providing coverage of new areas in an efficient manner. European NMIs commit to a greater degree of mutual dependence, leading to formal traceability arrangements and in some cases, service devolution.

1. Introduction

EUROMET was formally established by the signing of a Memorandum of Understanding by participating States in 1987.

The Signatories to the Memorandum of Understanding declare their common intention to take part in EUROMET, a European collaboration in measurement standards. EUROMET is open to membership of national metrology institutes of all States of the European Communities, of all States of the European Free Trade Association and to the Commission of the European Communities. EUROMET is further open to national metrology institutes of other European States, such as PECO, subject to the agreement of the existing members.

The participating metrology institutes collaborate in EUROMET, with the objective of promoting the co-ordination of metrological activities and services with the purpose of achieving higher efficiency.

The aims of EUROMET are:

- To develop a closer collaboration between Members in the work on measurement standards within the present decentralised metrological structure.
- To optimise the utilisation of resources and services of Members and emphasise the deployment of these towards perceived metrological needs.
- To improve measurement services and make them accessible to all Members.
- To ensure that national facilities developed in the context of EUROMET collaboration are accessible to all Members.
- Co-ordination of projects on measurement standards.
- Co-ordination of major investments for metrological facilities.
- Transfer of expertise in the field of primary or national standards between Members.

At the time of its formation, EUROMET member NMIs recognized the benefits to be gained from greater co-operation between the members. This proactive mechanism for co-operation and collaboration has greatly assisted in new metrological developments in Europe. It has also played a critical part in assisting developing NMIs.

2. Background

Since its formation, the EUROMET strategy has evolved and developed in reaction to the changing national, European and global metrology scenes. It has also matured as EUROMET member NMIs think through the implications of the increasing coherence of European Union member states in the context of the Single Market.

Up to about 20 years ago there was never any doubt raised over the ‘one country – one NMI’ philosophy. Europe was well-served by a handful of the world’s top NMIs complemented by a second group of competent and generally highly selective NMIs. This continues to be the situation. Over the years, however, more NMIs have been created and the European Commission also has implemented a Regional Policy plan to support the construction of NMIs in less well-developed regions. This policy was successful in terms of laboratory construction and has, in general, resulted in NMIs that are also technologically selective. A major driving force behind this development was, and still is, the national obligation to support national economies by provision of competent metrological services to the local industry, in particular to the SMEs. Furthermore a reliable national measurement infrastructure is regarded as indispensable for consumer protection and other needs of society.

3. Changing Environment

The environment in which European National Metrology Institutes operate is changing quite rapidly. Three such factors are especially relevant to EUROMET's strategy:

- The increase in requirements for new metrological research and the provision of traceable measurements. This increase in need occurs within traditional areas of activity as well as in new areas such as food, consumer concerns, the environment, life sciences and medicine.
- The EU-US trade talks and other Mutual Recognition Agreements have raised the political profile of metrology. This complements existing requirements related to the Single European Market and the enlargement of the EU itself so metrology has therefore to be seen to be supporting the free movement of goods and services and to help in reducing technical barriers to trade. The CIPM MRA is a key initiative in this context.
- The success of EUROMET to date in stimulating co-operation and collaboration in research.

These trends oblige us to look carefully at the speed as well as the extent to which we are implementing our general policy as set out in the 1987 Memorandum of Understanding.

In developing its strategy EUROMET has examined the different arrangements and options, which NMIs currently utilize.

In general, those NMIs that have a strategy of selectivity have based their choices on areas that serve specific local pattern of economic activity. In some cases, they offer research, maintain primary and secondary standards and provide calibrations from the same NMI team. In others, and as the CMC analysis has shown, they take high-level traceability from others so as, eventually, to provide a calibration service that meets national requirements.

The current local/distributed system therefore has enormous in-built advantages on which we can capitalise and which, if they did not exist, we would need to create. These advantages include:

- local presence with close relationship with customers
- maintain, and make available to industry, in their own language, a competence in a wide range of measurement services
- effective technology diffusion capability
- close links with national accreditation bodies and legal metrology service
- access, through EUROMET, to expert advice and expertise
- collaboration in joint research programmes through EUROMET and other regional organizations.

The overwhelming conclusion is, therefore, that EUROMET should continue to develop and extend our current model of a collaborative network of national metrology centres focussed on local needs.

Strategy – Main components

The basis of the EUROMET strategy 2002 is increased collaboration between member NMIs. EUROMET members are quite clear that the only way in which to meet the ever increasing and diverse demands in the field of measurement is through increased collaboration. This will cover a range of activities which range from more open planning of future work, to integrated and complimentary research activities, and to increased mutual dependence in terms of service provision.

The key elements of the strategy are:

- Identification of new areas of research that could be carried out collaboratively, using complimentary teams from NMIs with secondments and exchanges between NMIs. This will be particularly utilized where large, complex and expensive facilities are required. This work could proceed for a number of years culminating in the provision of a new service that could be provided by a subset of NMIs. EUROMET this as a 'Virtual Research Institute'
- Long term advance planning and notification of major investments by NMIs. While this is already being done by EUROMET members to some extent, EUROMET believe that this arrangement should be strengthened and undertaken on a more structured basis. It will allow for decision making on investments in a more organized fashion, thereby providing NMIs with increased opportunities for collaboration and sharing of new and expensive facilities. In due course, it may be desirable to investigate new financial models for cross-state finance of a facility at a single NMI;
- A more structured and at times formal approach to the selective provision of services by EUROMET members. EUROMET members that are signatories of the CIPM's Mutual Recognition Arrangement now have a formal process and framework within which to form objective assessments of their service capabilities and thereby create increased confidence in the acceptance of test and measurement certificates from NMIs. This enables EUROMET to move further forward with its arrangements for mutual dependence in the area of service provision. In this case EUROMET commits itself to a greater degree of mutual dependence in which the NMIs that choose to do so, will identify areas of their current work that can be reduced and for which they can look to other NMIs to provide a full service for users in both countries. This arrangement could extend to a withdrawal from a significant current activity. The participating NMIs would expect that resources released would be redeployed so as to enable them to tackle newly emerging areas, preferably through initial collaboration via the Virtual Research Institute model. While the NMI may not be providing a service in specific fields, local expertise and knowledge is still maintained by utilizing staff mobility arrangements and access to facilities.

Conclusion

EUROMET's strategic intention is to ensure adequate and efficient supply of metrology capabilities to European users through a secure, innovative and flexible arrangement which meets national as well as European needs at the same time and within the same structure. Over time

NMIs will become more selective and there will be a greater level of mutual dependence. Planned and coordinated research and increased collaboration between NMIs will ensure that the measurement needs in existing measurement fields and well as in new and emerging areas can be addressed in an efficient manner.