

International Organization of Legal Metrology



Legal metrology comprises all activities for which legal requirements are prescribed for measurements, units of measurement, measuring instruments and methods of measurement, these activities being performed by or on behalf of governmental authorities, in order to ensure an appropriate level of credibility of measurement results in the national regulatory environment.

(OIML D 1 "Elements for a Law on Metrology")

OIML: Who are we?

The OIML is an intergovernmental Organization set up in 1955 to develop cooperation in legal metrology.

It comprises Member States who have ratified the Treaty as well as Corresponding Members, and enjoys close mutual cooperation with international organizations such as the Metre Convention and ILAC.

Its goals are to develop mutual information, recognition, confidence and cooperation so that each Member can benefit from the legal metrology work carried out by other countries.

OIML technical work is carried out by about seventy Technical Committees and Subcommittees made up of experts from Member States; a number of other countries and liaison organizations also contribute.

The OIML publishes International Recommendations which are model technical regulations and which are "international standards" in the sense of the WTO TBT Agreement.

It also publishes Documents and Guides, and set up the OIML Certificate System in 1991 which aims to make it easier for manufacturers to obtain national type approvals worldwide.

In addition to the Certificate System, the OIML has also set up the Mutual Acceptance Arrangement and is developing further systems of certification and recognition.

The International Bureau of Legal Metrology, Headquarters of the Organization, publishes a quarterly Journal (the OIML Bulletin) and maintains a comprehensive web site with the aim of communicating this information to as wide an audience as possible.



Benefits of legal metrology

Legal metrology benefits the economy and society, providing credible measurements for trade, health, safety, protection of the environment and law enforcement, and especially providing evidence of this credibility.

- For the economy, legal metrology reduces disputes, reduces the need for duplicating measurements, and protects those trading partners who have neither the skills nor the facilities to perform their own measurements. It contributes to fair trade and more generally, facilitates both domestic and international trade. This is a key factor for economic development;
- Concerning health, legal metrology allows practitioners to rely on their medical instruments and medical laboratory analyses, rendering diagnosis more reliable. It also contributes to the accuracy of measurements performed for pharmaceutical and medical treatments (surgery, radiotherapy, etc.), improving their efficiency and security;
- Human safety also demands reliable measurements and legal metrology backs this up (pressure, maximum loads of equipment, etc.);
- Legal metrology allows environmental protection policies to be based on reliable measurement data, and to be enforced efficiently; and
- Finally, legal metrology leads to fairer law enforcement (evidential measurements for road safety and other laws and regulations). It backs up the decisions of law enforcement officers and of the courts, and protects individuals.



Support to regulators

For any regulating authority, drawing up a national regulation requires that the technical aspects be studied and that consensus be reached among national stakeholders on the requirements to be adopted. It also demands compliance with the international consensus required by the World Trade Organisation's TBT Agreement.



National regulators find in the OIML a source of competence which has already studied the technical aspects related to metrological issues, and which has already reached a consensus at international level, taking into account all stakeholders. This applies to metrological issues for trade, but also for health, safety and the environment.

OIML publications facilitate the preparation and adoption of national regulations and ensure compliance with the WTO's requirements for setting up regulations. This support to regulators concerns:

- Authorities who draw up legal metrology regulations; and
- Authorities who draw up technical regulations, the implementation of which requires measurements.



This role of the OIML saves resources for all national regulators and contributes to the goals of the WTO.

To render this service, the relevance of the OIML's

publications is periodically reviewed and when adaptations are necessary due to new technologies, the revision of these publications is undertaken.

Support to national enforcement authorities

Enforcing a regulation requires the conformity of regulated products and of the measurements performed in this enforcement process to be assessed in all the fields mentioned. This conformity assessment requires resources and facilities in terms of metrology that are not always available in all countries, and that would be too costly to set up independently in each country. Sharing part of the facilities and resources with other countries is therefore necessary.



The OIML has set up an international system for type evaluation of measuring instruments, which will be followed by international systems for individual certification and for certification of measurement results. These systems may be taken into account in the implementation of national regulations, thus saving costs and resources, and ensuring compliance with the WTO's requirements for the metrological aspects.

To render this service, the relevance of the OIML systems is periodically reviewed and when adaptations are necessary their revision is undertaken.



Support to users in non-regulated areas

A number of users of measurements do not have advanced competences and skills in metrology and are not in a position to evaluate by themselves the reliability of measuring equipment and the credibility of the measurements performed.

The OIML provides technical requirements that are of an advisory nature to users when they select a measuring instrument, when they use it, or when they have it calibrated, verified or maintained by a servicing company. These OIML publications allow users to acquire confidence in the measurement results that they use.

As examples, using OIML publications and OIML Certification systems as a reference, physicians may have greater confidence in medical laboratory analyses, individuals may rely on a fair application of measurements by law enforcement authorities, industry may give credit to the measurements performed for food safety and for the environment, etc.



Trade facilitator

Fluid domestic and international trade requires infrastructures to work correctly and smoothly: for example banks, transport, telecommunications, or education. But we are also looking to ensure a certain level of confidence and this necessitates a specific infrastructure: metrology, accreditation, and certification.

Without confidence in measurement results, measurements are duplicated, delays are increased, there are more disputes, and trade efficiency is poor.

In its Recommendations, the OIML lays down normative and/or regulatory technical requirements, and provides recognized Certification systems that facilitate the establishment of confidence in the measurements performed for domestic and international trade. By this, the OIML speeds up trade and eliminates costs arising from the duplication of measurements or from disputes.

Exchange of knowledge and competence

The OIML is a common resource for national regulatory services and for metrological institutes, to exchange information about legal and day-to-day metrology issues.

Through the Organization, Members of the OIML can gain access to technical information concerning new measurement technologies, their performance and reliability, test and evaluation methods for measuring equipment, etc.

Many also have regular contacts with their colleagues from other Member States, so that they can benefit from each other's experience, ask questions, visit each other, exchange experts, develop and run cooperative studies, envisage common facilities, etc.

Developing countries

The OIML has a broad program for supporting developing countries, the goals of which are the following:

- Facilitating the participation of developing countries in OIML work;
- Taking account of specific developing countries' needs in OIML work;
- Providing developing countries with appropriate guidance for the development of legal metrology; and
- Facilitating developing countries' access to technical assistance and development programs for legal metrology.



Medical

Volume
Prepackages

Weighing

Environment

Length

The way to a Global Metrology System

The OIML allows legal metrology services, laboratories and manufacturers to have access to information on legal metrology in Member States and Corresponding Members. Through the OIML, they will obtain information on national legal metrology regulations, procedures to access markets, the organization of the national legal metrology systems, addresses of the national and local responsible bodies, national conformity assessment procedures and markings, etc.

The OIML will constitute an international system, together with other International Organizations dealing with different aspects of metrology, such as the Metre Convention (scientific metrology), ILAC (traceability through accreditation), and Standardization Organizations (ISO, IEC). This system, bringing together all the aspects of metrology and setting up international acceptance and recognition agreements, constitutes a global, international infrastructure for metrology, a Global Metrology System, that answers the needs of individual countries and Regions to face the challenges of globalization and to provide a metrological environment favourable to social and economic welfare and growth.



Key figures (April 2009)

Member States	58
Corresponding Members	56
Recommendations published and in force	102
Documents published	28
Vocabularies published	2
Certificates registered	2021
Technical Committees and Subcommittees	18 + 47



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