



International Organization of Legal Metrology Organisation  

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Organisation Internationale de Métrologie Légale

*UNECE Steering Committee  
on Trade Capacity and Standards*

## **The importance of metrology in Quality Infrastructure**

Ian Dunmill  
*Assistant Director, BIML*

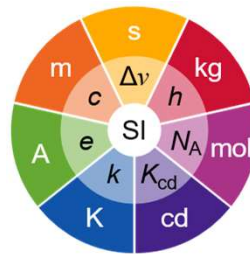
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## International metrology – the BIPM

- Bureau international des poids et mesures
- Founded 1875
- Based in Sèvres, just outside Paris
- Responsible for the International System of Units, the SI
- Provides foundation for traceability of scientific and industrial metrology





## International metrology – the OIML

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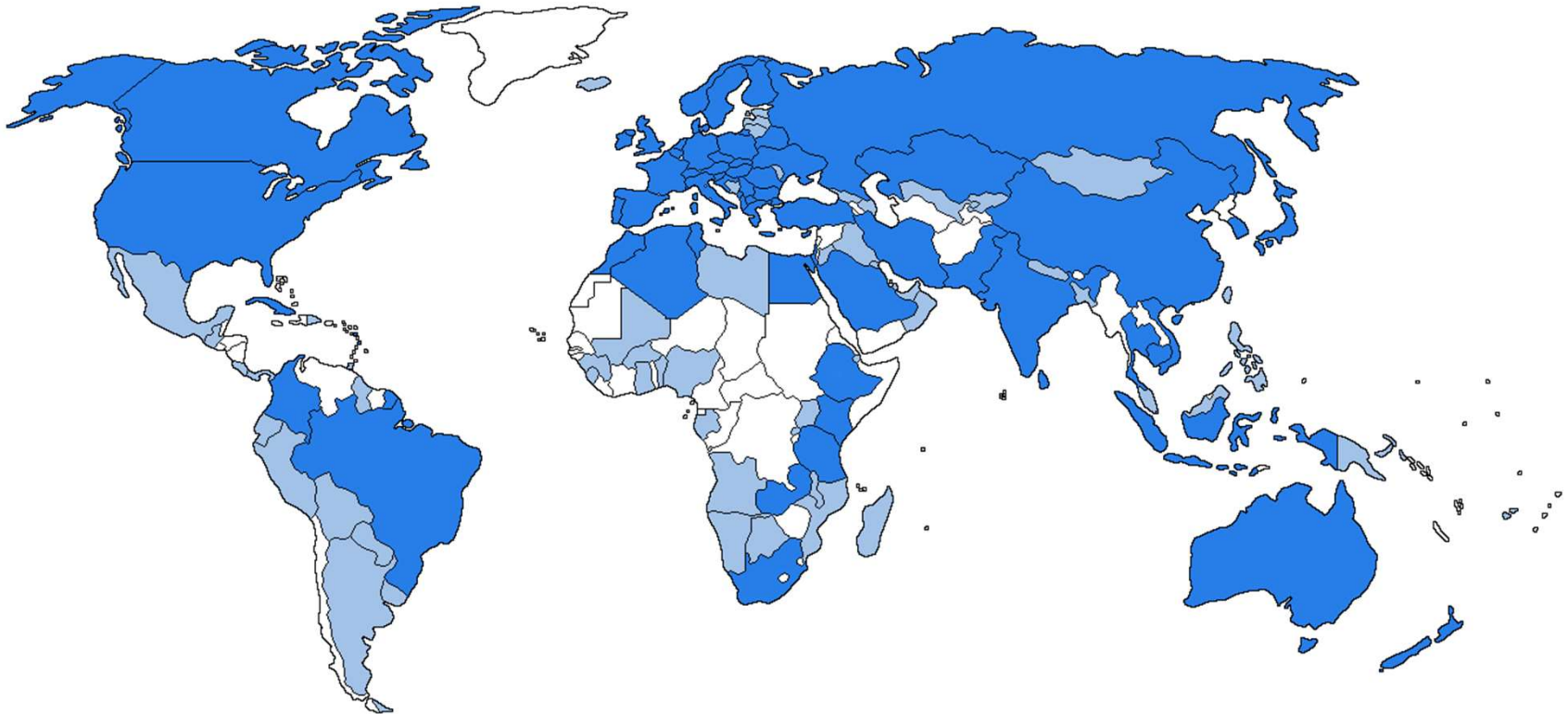
- Organisation Internationale de Métrologie Légale
- Founded 1955
- Based in Paris
- Produces harmonized models for technical legislation on measuring instruments called “International Recommendations”
- Basis for type approval, verification and inspection of regulated measuring instruments





## OIML membership

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64 Member States – dark blue  
65 Corresponding Members - light blue

## What is legal metrology?

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- Application of regulation to measurement, or vice-versa
- Laws on measurements some of the oldest across the world



### **Code of Ur-Nammu – 2100–2050 BCE**

*“He fashioned the bronze sila-measure, standardized the one-mina weight, and standardized the stone weight of a shekel of silver in relation to one mina”*



### **Magna Carta – 1215**

*“There shall be standard measures of wine, ale, and corn (the London quarter), throughout the kingdom. There shall also be a standard width of dyed cloth, russett, and haberject, namely two ells within the selvedges. Weights are to be standardised similarly.”*



# Traceability of measurement

Ensures unbroken chain of measurement from end point  
back to the international standard



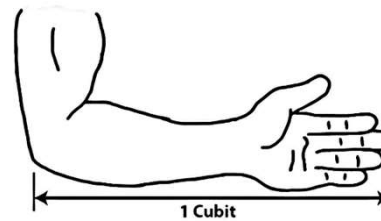




## Traceability in ancient times

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- Construction of the pyramids used the same system
- Standard unit: the cubit – length of Pharaoh's forearm
- Granite primary standard
- Wooden working standards
- Penalties for misuse or fraud







# Legal metrology affects all our lives, every day

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Societal confidence in an appropriate level of accuracy of measurement means most people don't think about any of this!



# Legal metrology supports Sustainable Development Goals





# World Metrology Day 2024

Joint BIPM / OIML activity in association  
with the RMOs/RLMOs

**20 May 2024**

[www.worldmetrologyday.org](http://www.worldmetrologyday.org)

- Directors' messages
- Posters
- Events

World metrology day is now a UNESCO  
“International Day”!

<https://www.unesco.org/en/days/metrology>

The poster for World Metrology Day 2024 features a green background with a central circular graphic containing icons for various sustainable development goals (SDGs) such as clean energy, industry, and climate action. The text 'We measure today for a sustainable tomorrow' is prominently displayed. Logos for BIPM, OIML, EURAMET, and TÜBİTAK are at the top, and logos for BIPM, OIML, UNESCO, and the date '20 May 2024' are at the bottom.

World Metrology Day

TÜBİTAK EURAMET

We measure today for a sustainable tomorrow

Bureau International des Poids et Mesures OIML UNESCO

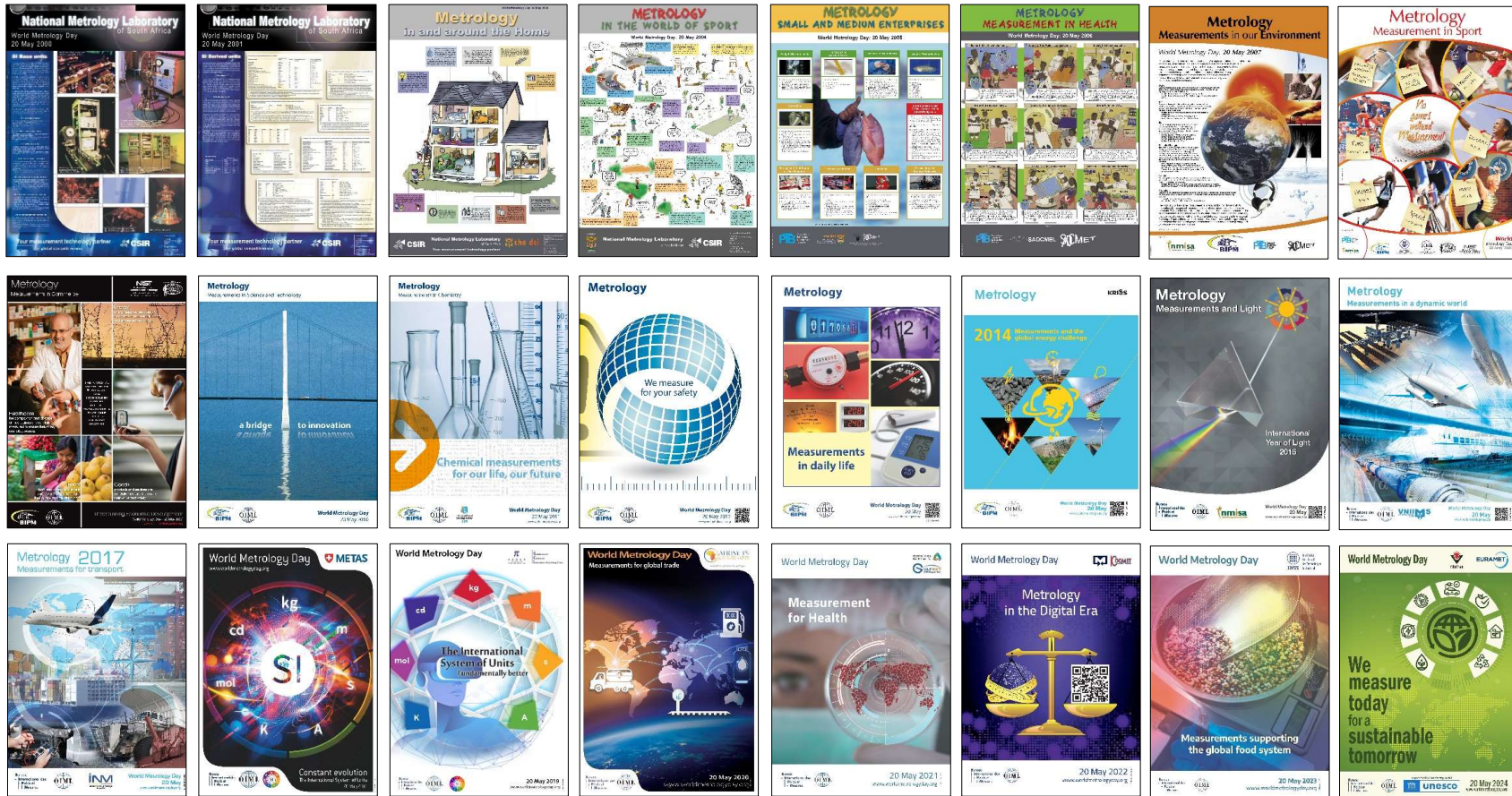
In support of the UNESCO World Metrology Day 2024

20 May 2024  
[www.worldmetrologyday.org](http://www.worldmetrologyday.org)





# World Metrology Day

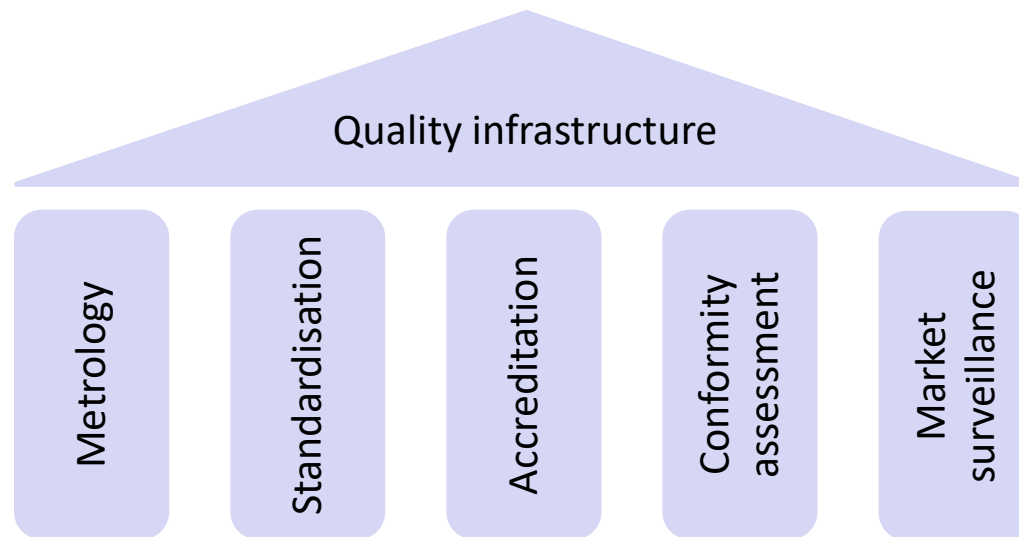




## Metrology as an element of quality infrastructure

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- Recent WMD themes highlight different aspects of how metrology affects all our daily lives as well as our futures
- Cross-cutting themes to show how metrology fits into the **quality infrastructure**





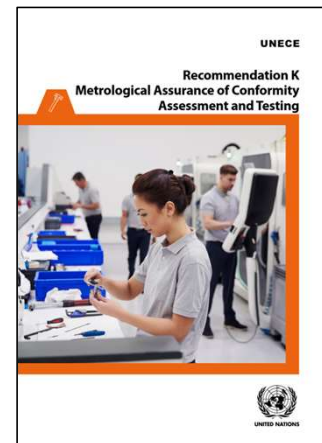
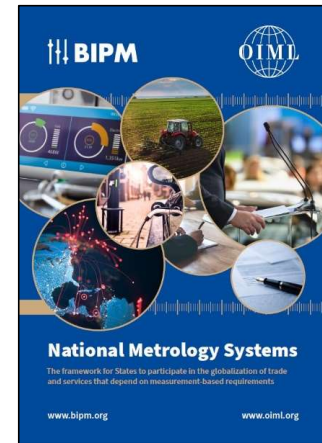
# Implementation of metrology as part of a national quality infrastructure

- OIML D 1:2020 *National metrology systems – Developing the institutional and legislative framework*
  - Joint OIML / BIPM publication + brochure
  - Sets out what should be considered when putting a metrology law into place
  - Sets out options for legislation and structures
  - Provides examples of clauses for model law

<https://www.oiml.org/en/about/policy-and-legislation/bipm-oiml-brochure-on-d-1>

- UNECE Recommendation K (2024)
  - Basis of metrological assurance of conformity assessment and testing and its optimum use in international exchanges
  - Gives guidance for economies that have not yet implemented a robust national metrology system

[https://unece.org/sites/default/files/2024-02/ECE\\_TRADE\\_482E.pdf](https://unece.org/sites/default/files/2024-02/ECE_TRADE_482E.pdf)





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Thank you

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[www.oiml.org](http://www.oiml.org)

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