



Draft Resolution E

On the further digital transformation of the global metrology system

**28th meeting of the
General Conference on
Weights and Measures
(2026)**



The documents presented to the General Conference on Weights and Measures (CGPM) are prepared in English as well as French.

Please note, however, that the official version, particularly of the Resolutions voted by the CGPM, is the French one.

Version history

Version 1	2026/01/13	Publication of Draft Resolutions
Version 2	2026/01/30	Draft Resolution C: effective date of continuous UTC set on 20 May 2027
Version 3	2026/03/30	Draft Resolution D: need to use conventional values fixed by international organizations and to consider the role of the BIPM
Version 4	2026/06/30	Draft Resolution D: “the realization of lunar reference time scales” replaced by “the realizations of the lunar reference time scale” in the “further recommends” section, to reflect the aim of the draft resolution to state that there must be a unique lunar reference time scale, even if there may be several realizations
Version 5	2026/07/13	Draft Resolution V: amounts for the proposed dotation added

To contact the Director of the BIPM:

Dr Annette Koo
Pavillon de Breteuil
F-92312 Sèvres Cedex, France
annette.koo@bipm.org
+33 (0) 1 45 07 70 00
<https://www.bipm.org>

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On the further digital transformation of the global metrology system

The General Conference on Weights and Measures (CGPM), at its 28th meeting,

recalling that

- resolution 2 “On the global digital transformation and the International System of Units” adopted by the CGPM at its 27th meeting (2022) encouraged the International Committee for Weights and Measures (CIPM) to extend the role of the Metre Convention to an anchor of trust for metrology into the digital era,

recognizing that

- the accelerating pace of digital transformation is intrinsically linked to data as a key asset of digitalization,
- the importance of FAIR principles, making data findable, accessible, interoperable and reusable, is increasingly acknowledged, as they are progressively incorporated into governmental policy frameworks and industrial processes,
- the widespread deployment of sensor networks enabling intricate digital ecosystems, and the rapid advancement of artificial intelligence require timely and coordinated responses to both the evolving regulatory landscape and the emergence of new technologies,

considering that

- significant progress has been made in the development of comprehensive digital metrological concepts and tools including the implementation of the SI Reference Point, the promotion and dissemination of FAIR data, as well as the establishment of digital certificates,
- a global network of collaboration has been established, engaging a broad spectrum of stakeholders, all aimed at promoting harmonization across all areas of digitalization,
- the CIPM Forum on Metrology and Digitalization (FORUM-MD) has successfully brought together the international metrology community to discuss current issues and topics of future relevance,

noting that

- further coordinated efforts by the CIPM, the International Bureau of Weights and Measures (BIPM), the Regional Metrology Organizations (RMOs), and the National Metrology Institutes (NMIs) are imperative to address the long-term challenges of the digital transformation, in particular to enable machine-actionable access to all services of the CIPM Mutual Recognition Arrangement (CIPM MRA),
- the global dissemination of digitalization practices in metrology is urgently needed,
- addressing the global challenges associated with the digitalization of societies requires a multidisciplinary and internationally coordinated approach,

anticipating that

- the continued development of a global digital quality infrastructure will enable economic growth by allowing industry to reach the next level of automation and human-machine co-creation,

encourages the CIPM to further intensify and expand its strong engagement in ensuring that the Metre Convention becomes fully accessible for all in the digital era, by

- extending the SI Reference Point into a comprehensive and authoritative digital framework that allows the machine-actionable conversion between the SI and other systems of units, as well as between different digital representations of units,
- fostering harmonization to ensure conceptual consistency and interoperability across the overall digital metrological framework, including the use of standardized data exchange formats and knowledge modelling approaches,
- facilitating the advancement of digital metrology for artificial intelligence (AI) and complex systems, including the reliable integration and quality assurance of large-scale sensor networks,

invites

- NMIs, RMOs and other stakeholders to enter the next level of commitment and collaboration with the CIPM to continuously advance, promote and implement machine-actionable digital information, advanced digital certificates, as well as data and AI quality metrics,
- all organizations dedicated to a digital quality infrastructure to join this collaborative venture to ensure that the metrological base of digital transformation becomes the cornerstone of industrial development and continuous prosperity world-wide.

Pavillon de Breteuil
F-92312 Sèvres Cedex
FRANCE
bipm.org

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