Strategic Plan for the
BIPM Work Programme (2026)

Draft for comment

This draft is open for CIPM comment for comments from all National Metrology Institutes (NMIs) and Designated Institutes (DIs). The deadline for comments is 5 September 2025.

Institutions are invited to each make a single submission using the comment template available from the BIPM website.

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INTRODUCTION

Background

This strategic plan for the work of the BIPM is prepared for consideration at the 27th meeting of the CGPM (2026). It will be one of the principal inputs to the development of the BIPM Work Programme (2028-2031).

Objectives of the BIPM

This strategy addresses the highest-priority activities of the BIPM needed to support the objectives agreed in 2018 by the CGPM, which are that the BIPM should:

- represent the world-wide measurement community, aiming to maximize its uptake and impact,
- be a centre for scientific and technical collaboration between Member States, providing capabilities for international measurement comparisons on a shared-cost basis,
- be the coordinator of the world-wide measurement system, ensuring it gives comparable and internationally accepted measurement results,

and that fulfilling the BIPM mission and objectives is complemented by its work in:

- capacity building, which aims to achieve a global balance between the metrology capabilities in Member States,
- knowledge transfer, which ensures that the work of the BIPM has the greatest impact".

Consultation

This draft strategy will be published on the BIPM website and open for comments from all National Metrology Institutes (NMIs) and Designated Institutes (DIs) from 4 August to 5 September 2025.

Priorities for the development of this strategic plan

This strategy is inspired by the opportunities for metrology to progress new technologies identified in the CIPM Strategy 2030+. These are that:

- Digitalization opens the door to new metrological services.
- Artificial intelligence opens new pathways for metrological traceability.
- In an interconnected world, the focus of metrology is no longer on the device.
- The quantum revolution is based on metrology.

The CIPM Strategy 2030+ also identified that the delivery of services of all types (e.g. comparisons, meetings, capacity building etc.) has increased much faster than the increase in Member State funding. Hence, the strategy prioritized actions that can enable this growth to continue and with improved efficiency. Activities that will continue to be a high priority in the future include:

- Coordination of CIPM MRA activities, including KCDB and high-impact comparisons (these typically have very high participation by CC members, they are at the leading edge of the technology and their development can be supported by NMI secondees).
- Coordination of UTC; to build the global community of UTC laboratories and promote its uptake with users.
- Liaison with priority International Organizations (IOs) (e.g. WMO, OECD, UNESCO, IAEA and WHO) to promote metrology solutions to grand challenges and to open access for NMIs to international stakeholders.
- Expand CBKT and e-learning, in partnership with the RMOs.
- Coordinate sectorial activities (e.g. linked to cross-cutting forums) and particularly those that are co-funded by other IOs (e.g. JCTLM).
- Facilitating online participation to provide fair access to meetings and resources to all Member States.

New activities that are expected to increase in importance in the CIPM Strategy 2030+ are:

- Coordination and implementation of new digital services including new database services to provide the SI “digital anchor of trust”.
- Use of new digital tools (e.g. based on AI) to facilitate equitable access across all NMIs and regions.
- Building the “observer” model for states and IOs to increase global participation.
- Meetings of CCs and workshop focused on objectives agreed in advance by the CIPM.

New directions to improve efficiency to deliver high priority actions in the CIPM Strategy 2030+ include:

- Transition in balance of staff skills to best address future priority requirements (e.g. coordination, comparison coordination and representational actions).
- Resources redirected to address growing future commitments to digital transformation and new database activities.
- Implement new mobility contracts to encourage greater exchange of staff between NMIs and BIPM (and vice versa).
- More outsourcing of access to external facilities to achieve greater efficiency and to minimize the need to employ technical and maintenance staff (e.g. DOSEO/CEA, IAEA, LNE/METAS for gravimetry).

Physical metrology		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To support the comparison programme of the CCEM to demonstrate the capabilities of the NMIs at the highest level by conducting on-site comparisons using dedicated travelling standards and via comparisons using well-characterized travelling standards. To carry out knowledge transfer by BIPM scientists to NMI experts on electrical quantum standards.	– *Perform ongoing bilateral on-site comparisons of electrical quantum standards:* ▪ *Josephson voltage standard at DC and AC (up to 1 kHz)* ▪ *Quantum Hall resistance standard.* – *Perform comparisons of the most fundamental electrical quantities using well-characterized travelling standards.* – *Explore the use of graphene for the next generation of quantum Hall resistance standards.*	– *To increase the impact of the service with NMIs by using a new generation of more efficient and versatile quantum standards:* ▪ *Extending Josephson voltage comparison at DC and AC to more NMIs.* ▪ *Investigating extension of Josephson comparisons to higher frequencies.* ▪ *Developing a transportable quantum Hall resistance standard based on graphene to improve the efficiency of on-site comparisons.* – *To provide knowledge transfer services to NMIs that are developing new quantum standards capabilities.*
To support NMIs that have no access to quantum standards by providing calibrations for electrical quantities and by knowledge transfer.	– *Maintain the portfolio of highest-accuracy calibration services for the most fundamental electrical quantities that exploit past developments for comparisons.*	– *To adapt the portfolio of calibration services to NMIs needs.* – *To develop and deliver a knowledge transfer programme on electrical quantum standards for emerging NMIs.*
To support the *mise en pratique* of the kilogram by maintaining the Kibble balance and by coordinating CCM key comparisons of primary realizations held by NMIs.	– *Organize a key comparison of realizations of the kilogram as part of the 3-year cycle and evaluate the level of international agreement.* – *Determine the CCM consensus value for the kilogram for an internationally coordinated dissemination.* – *Improve and maintain the BIPM Kibble balance to contribute to a robust system of kilogram realization and dissemination and build a "digital twin".*	– *To coordinate key comparisons of primary realizations of the kilogram.* – *To coordinate a key comparison of secondary mass standards.* – *To maintain the BIPM Kibble balance for realizing the kilogram for participation in CCM comparisons, contribution to determination of the consensus value of the kilogram and for mass dissemination.*
To support the dissemination of the kilogram by providing calibrations of mass standards to NMIs that have no access to a primary realization.	– *Provide mass calibrations in terms of the consensus value for the kilogram for NMIs that do not have access to their own primary realization.*	– *To develop and deliver knowledge transfer in the fields of realization of the kilogram using a Kibble balance and dissemination of the kilogram.*

Time metrology		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To implement and further refine a state-of-the-art process for calculating and disseminating the world reference time scale UTC by: – integrating data from o new types of atomic clocks and frequency standards at the NMIs. o new types of time and frequency comparison techniques. – continuing the automation process and improving the availability of digital data.	– *Improve the world reference time scale (UTC) through:* o *integration of additional clock comparison techniques such as the Integer Precise Point Positioning (IPPP) and new type of commercial clocks based on optical technologies.* o *use of refined algorithms to enhance the stability and accuracy of UTC and UTCr.* – *Review the development of NMI research on time and frequency transfer evaluating their possible use in UTC.*	– *To improve the accuracy, resolution, reliability, accessibility, traceability and latency of UTC to **support the needs of the global time community**.* – *To collaborate with RMOs to support traceability to UTC and to coordinate the growing number of NMI time laboratories in an equitable and efficient way.* – *To increase **support for new NMI services** to underpin more stringent industrial needs for synchronization.* – *To support **new applications of UTC** and international timekeeping by providing **more digital services.***
To **promote** the importance and benefits of a **unique international reference time scale (UTC)** to all user communities, meeting the needs of both current and future users.	– *Promote the uptake of UTC with users, by engaging with stakeholder communities, also addressing the possibility of a negative leap second.* – *Reinforce the liaison with IOs, including the ITU, ICG, IGS, IAG and IERS. Collaborate with space agencies and related IOs to propose a reference time for the Moon traceable to UTC.*	– *To enhance interaction with IOs and user communities to ensure that UTC is recognized as the consistent and useful international time reference.* – *To liaise with national and international space agencies to promote the need for timing systems in space (e.g., on the Moon, Mars and for the SKA) to be traceable to UTC.*

To **support the work of NMIs** in the development of **optical frequency standards, their comparison, and their use in time scales and UTC**, towards a future redefinition of the second and of time keeping based on optical clocks, following the roadmap of the CCTF.	– *Update the UTC algorithm and data analysis to incorporate new data from optical frequency standards and optical links.* – *Monitor the activities of NMIs on advanced time and frequency transfer techniques for the comparison of highly accurate optical standards and evaluate the possible use in UTC.*	– *To coordinate and support the CCTF in the development of a new definition of the second.* – *To support NMIs with the generation, maintenance and dissemination of time scales based on optical standards.* – *To evaluate the cost/benefit of laboratory work to compare NMI optical clock technologies at the BIPM using equipment provided by stakeholders.* – *To set up a new BIPM infrastructure to join the European optical links and provide a test bed for advanced time and frequency comparison*
To further enhance the capacity of UTC laboratories to realize, monitor and automate the generation and dissemination of UTC(*k*) time scales to serve their national and international users, and hence improve their contribution to UTC through the CCTF capacity building programme.	– *Develop an interactive training course on the efficient realization of UTC(k) and participation in UTC within the framework of the BIPM e-learning platform.* – *Create a repository of open-source software freely available and collaboratively developed by the NMIs to support their UTC(k) generation, validation and dissemination.* – *Collaborate with RMOs to support the training of laboratories with limited capabilities and specific needs in their country.*	***To support NMIs by*** – *evaluating future needs of timekeeping.* – *promoting exchange among the laboratories through the CBKT programme, the CCTF Working groups, and "Technical Exchanges" to create a common understanding and shared experiences among NMIs.*

Chemical metrology		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To support the CCQM strategy in demonstrating and improving equivalence and facilitating the establishment of national measurement standards and services for: – **greenhouse gases**, at performance levels required to support national energy and environmental priorities. – **major air quality gases**, at performance levels required to support national health and environmental priorities.	*To coordinate CCQM and BIPM ongoing comparisons of standards for:* – *methane and carbon dioxide in air, with uncertainties congruent with global and urban monitoring requirements.* – *isotope ratios of carbon dioxide with uncertainties congruent with scale definitions and emission source apportionment.* – *surface ozone and nitrogen dioxide for accurate air quality monitoring.* *To maintain and disseminate primary reference gas for NMIs to realize highest accuracy stable carbon isotope measurements and services.* *To provide online knowledge transfer courses for NMIs establishing:* – *Air quality standards.* – *Reactive gas standards and FTIR facilities.* – *Isotope ratio standards for carbon and oxygen.*	*To support the CCQM 2030+ strategy through:* – *Provision of on demand comparisons for CO_2, CH_4, N_2O, NO_2 and O_3 gas standards to support NMI measurement services and addressing global energy and environmental priorities.* – *Provision of on demand comparisons and primary reference gas for carbon isotope ratio measurement to enable NMI measurement service equivalence for energy transition and fuel standards.* – *Provision of knowledge transfer activities with online e-learning and practical on-site activities, covering gas standard calibration, spectroscopic purity analysis, isotope ratio measurement, dynamic gas standards for NMIs establishing or expanding their national gas standard systems.* – *Support programmes to mentor NMI scientists coordinating gas standard comparisons for the first time.*
To support the CCQM strategy in demonstrating and improving equivalence and facilitating the establishment of national reference measurement capabilities and services for: – **small molecule organics**, at performance levels required to support reference measurement systems for laboratory medicine, food safety and trade in primary produce, forensics, environmental analysis and pharma.	*To coordinate CCQM comparisons on calibration standards for:* – *monitored therapeutic drugs (Cyclosporin A and Digitoxin).* – *small molecule organics (Pesticides and Veterinary drugs).* – *diagnostic peptide biomarkers (PTH(1-84).)* – *mycotoxin food contaminants (OTA).*	*To support the CCQM 2030+ strategy through:* – *Provision of an ongoing series of comparisons for both high and low molar mass DNA and RNA markers covering NMI calibrators for clinical testing (infectious disease, cancer and hereditary genetic disease marker measurement), food analysis, environmental monitoring and biotechnology.*

– **peptides and proteins**, at performance levels required to support reference measurement systems for laboratory medicine, healthcare, and bioengineering sectors. – **DNA and RNA**, at performance levels required to support reference measurement systems for nucleic acid testing associated with human/animal disease, foods and environmental analysis.	*To provide reference data on heteronuclear internal standards for qNMR, supporting NMI measurement services.* *To provide on-site and online knowledge transfer courses and studies for NMIs establishing:* – *qNMR for purity evaluation.* – *Mycotoxin in food reference systems.* – *Pesticide and Veterinary Drug Residue in Food Refence Systems.*	– *Provision of an ongoing series of comparisons for both high and low molar mass peptide and proteins with and without modifications covering NMI reference materials for clinical testing, food allergens, and bioengineering.* – *Provision of an ongoing series of comparisons for both high and low polarity small molecule organics covering NMI standards and measurement services for food and environmental contaminants, and clinical testing.* – *Provision of knowledge transfer activities with online e-Learning and practical on-site activities, covering qNMR analysis of pure material, calibration solution production, peptide, and protein standard value assignment for NMIs establishing or expanding their national chemical and biochemical measurement infrastructure.*
To promote and develop the use of SI traceable standards and measurements with inter-governmental organizations and other stakeholders for use in chemical and biochemical analysis.	*To support CCQM task groups in:* – *Developing metrology strategies for food safety.* – *Digitalization.* – *Coordinating a global change in ozone reference measurements.* – *Developing an extended global greenhouse gas measurement system.* – *Micro- and nanoplastic measurement.* *To upgrade the JCTLM Database with web-based nomination and review functionality and visibility to Large Language Models (LLMs) for greater uptake of reference measurement systems in clinical diagnosis.* *To develop a greenhouse gas measurement and meta data database following FAIR principles enabling greater uptake of NMI standards.*	– *To increase participation in the CIPM MRA and uptake of NMI measurement services by International Organizations with laboratory networks active in chemical and biochemical measurement.* – *To support CCQM task groups in interfacing with and providing technical solutions to global stakeholder communities.* – *To implement AI to support the submission and review processes of the JCTLM Database; to move to real time review and approval of Reference Material, Methods and Services for IVD industry.* – *To expand the GHG Scale database to cover all standards produced by NMIs for accurate environmental monitoring.* – *To establish an international isotope scale database as a unique reference for global isotope measurements.* – *To support sectoral and cross-committee efforts in promoting and developing the use of the SI, notably in the health, environmental, food safety and advanced manufacturing sectors.*

Ionizing radiation metrology		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
Deliver high-precision, high-accuracy dosimetry measurement services that enable national metrology institutes to compare and calibrate their standards, **sustaining global metrology in healthcare and radiation protection**. Particular emphasis will be placed on **supporting emerging metrology institutes and developing dosimetry capabilities for innovative therapeutic techniques**, together with a **global strategy** to adapt and prioritize over time the existing services **to meet the continuously growing** demands from the Member States.	– *Continue providing comparison and calibration services of dosimetry standards for low, medium and high-energy photons, as well as for brachytherapy.* – *Upgrade the low-energy x-ray facility to the sustainability and efficiency of the corresponding dosimetry services.* – *Initiate the development of a new standard dedicated to high-energy electron dosimetry.* – *Finalize the development of a long-term strategy for dosimetry facilities, considering options including increased use of off-site facilities.* – *Decide on the continuation or redefinition of specific calibration and comparison services, based on CCRI recommendations.*	– *To implement a CIPM decision on the long-term strategy for dosimetry facilities and for services.* – *To explore alternatives to the Co-60 source as the world-wide reference for radiotherapy standards, potentially leading to the development of a new type of facility at the BIPM.* – *To propose new BIPM comparisons for additional x-ray energies, where relevant.* – *To launch new services for high-energy electron dosimetry.*
Provide long-term, highly stable comparison services that support **radioactivity measurements world-wide**, while developing **new capabilities** to demonstrate the equivalence of standards **for emerging radionuclides** used in nuclear medicine, environmental monitoring, and challenging-to-measure isotopes.	– *Provide radionuclide activity comparisons with the three key international reference systems: SIR, SIRTI and ESIR.* – *Launch a modernized version of the SIR (SIR 2.0) with enhanced measurement capabilities, allowing the use of lower activity levels and hence of new radionuclides, costly and hard to produce.* – *Develop digital electronic methods for SIR, SIRTI, and ESIR systems.*	– *To expand the SIR2.0 to gaseous samples and ESIR capabilities to include new radionuclides relevant to health and environmental challenges.* – *To implement digital electronic methods to enhance the capabilities of existing electronic acquisition systems.*

Work with stakeholders, including other international organizations and RMOs, **to ensure a coordinated international approach** in ionizing radiation metrology by fostering collaboration to provide world-wide well-coordinated and impactful responses **to both current and emerging challenges**.	– *Coordinate with RMOs to support regional implementations of the SIRTI system for measurements of short-lived radionuclides.* – *Strengthen collaboration with the IAEA to improve metrological traceability in environmental radioactivity analysis.* – *Coordinate international efforts with the CCRI(III) to define a reference facility for high-energy neutrons.* – *Develop with NMIs a centralized service enabling comparison of digital data analysis methods with international consensus.*	– *To increase the number of short half-life isotope comparisons with RMO's SIRTI linked to the BIPM SIRTI.* – *To co-pilot Supplementary Comparisons with the IAEA, involving reference materials.* – *To be involved in the international coordination of the determination and evaluation of fundamental nuclear data for new radionuclides.* – *To coordinate international efforts to organize scientific cooperation and comparisons related to standards and facilities for high-energy proton/hadron dosimetry and high-energy neutrons.*

Digital transformation and new digital services

– Our aim is to develop expertise to become an anchor of trust for the digital transformation in metrology both in our own services and through support for the work of the CIPM

Strategic objectives	Current plans (2026-2027)	Long-term goals (2028+)
To underpin the SI Digital Framework with a coordinated data architecture that allows efficient document and knowledge management and allows FAIR access to all reference data curated by the BIPM while ensuring data integrity.	– *The SI Digital Framework has a modular architecture that can be extended stepwise.* – *Beta -versions of the SI Reference Point, a reference Point for nuclides and an API for CMCs are being implemented and further developed. It is planned to extend the references and develop additional APIs following the decisions of the FORUM-MD.* – *All BIPM certificates will be available in a digital format (eg DCC) when requested by end 2027.*	– *To set up a modern system that allows machine-actionable access to the BIPM data and documents. The architecture to be designed in a way that allows data from the KCDB, UTC, JCTLM and other databases to be successively integrated thereby enhancing quality and efficiency of the services.* – *To optimize the data structure for access by AI.*
To support the work of the CIPM FORUM-MD and Consultative Committees by, for example, developing and promoting AI-based tools.	– *For the next update of the JCTLM database, AI-based tools are planned: the integration of a chatbot to support the database users as well as an AI supported review process for submitted data.* – *First pilot projects for automated data analysis of comparison data have been initiated in the CCs.*	– *To ensure that the SI Reference Point is recognized and used as the common root for traceability to the SI for digital systems.* – *To increase the efficiency and reliability of procedures by implementing AI-based tools while ensuring the integrity and safety of data.*
To develop and implement rules and procedures for the use of AI in the BIPM that respect the mission and the legal framework of the organization.	– *Consultation is underway to identify AI-based tools for evaluation. No policy is currently in place for the official adoption of AI-based tools.*	– *To maximize the benefit from applying AI-based technologies to the work and services of the BIPM while ensuring trust, data safety and data integrity.*

Capacity building and knowledge transfer		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To reinforce the international metrology system and support its efficient operation through capacity building and knowledge transfer. To ensure a balanced participation in the system and especially support effective engagement with the international metrology community in developing countries.	– *The number of available e-learning courses is constantly increasing. All six RMOs are now represented on the platform. Currently, 29 courses are available.* – *Regular Technical Exchanges held online. A new course for TC Chairs has been included in the programme and courses for Comparison pilots are under development.* – *Training sessions are organized in-person at the BIPM and regionally to support the CIPM MRA user community.*	*To develop a comprehensive framework for the CBKT Programme with a structured plan that:* – *Addresses different levels of need, both in the metrology system (CIPM MRA, JCTLM, UTC etc.) and also specific laboratory expertise provided by the BIPM laboratories.* – *Training in new fields such as digital transformation.* – *Improves coordination of activities with implementation partners.*
To provide comprehensive capacity building programme for Observer States and potential Observer States in collaboration with funding partners and others, fully funded from outside of the BIPM.	– *An e-learning course about the BIPM is currently under preparation which course will provide an introduction to the BIPM and the international measurement system.for new staff at NMIs/DIs as well as future observers.* – *A concept note with UNIDO is currently being prepared on possible joint projects for relevant regions (Africa, Pacific Islands, Caribbean).*	*To establish collaborations with funding partners to ensure the participation of observers in capacity building measures without any financial burden on Members/Associates. The CBKT programme for observers includes specific e-learning courses, online and in-person events and is delivered in collaboration with UNIDO/UNESCO and liaison QI organizations.*
To support NMIs to promote metrology as a topic in their national education systems.	– *Building on the success of the collaboration for World Metrology Day, the BIPM and UNESCO have declared the intention to develop a project on metrology education.*	*To promote metrology within the educational activities of UNESCO, subject to a joint agreement.*
To effectively address knowledge transfer requirements through a sustainable visiting/seconded scientist programme to and from the BIPM.	– *The number of visiting scientists (in terms of full-time equivalents) will be maintained at the same levels as 2025.* – *Participation in on-site technical workshops will grow throughout the programme.*	– *To promote home institute and third-party funding of scientists visiting the BIPM and to increase full-time-equivalent complementary staff numbers by 25 % with respect to 2025 levels.* – *To expand on-site technical workshops to cover all technical fields in the BIPM Work Programme.* – *To further develop the range of Joint Technical Projects with NMIs to support exchange of scientists for knowledge transfer activities and programme delivery.*

Communication and promotion		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To communicate effectively with BIPM stakeholders (NMIs/DIs, decision makers, IGOs and the scientific community) about the BIPM, the Metre Convention, metrology and the benefits of metrology.	– *The communications channels and media formats of the BIPM have been substantially broadened as part of the anniversary communication campaign.* – *New communication formats have been introduced, also addressing the non-scientific audience.* – *The website of the BIPM is its primary communication channel and is constantly updated.* – *The LinkedIn and YouTube profile of the BIPM are continuously optimized based on user data.*	– *To maintain the communication channels of the BIPM at a high technical level.* – *To publish a technically updated and restructured website that is separated from a document repository.* – *To use a variety of tools and inclusive language to reach out to culturally diverse target groups.* – *To continue broadening communication on social media for different target groups.*
To support NMIs and RMOs in effectively communicating the relevance of metrology by providing a broad range of promotional materials with a special focus on showcasing its impact. Through an asset database these materials are made available to Member States and Associates as well as RMOs.	– *A joint project on the impact of metrology on sustainable development goals is currently under discussion with UNIDO.*	– *To develop a broad variety of impact studies and use cases in partnership with NMIs, RMOs and other international organizations.* – *Promotional material including photos, graphics and videos are constantly updated.*
To ensure that *Metrologia* remains the most important scientific journal for metrology by flipping it to a “gold” open access standard.	– *A contract for the “flip” of Metrologia to an open-access model has been signed from January 2026.* – *To ensure the financial stability of the journal and reach the target of 70 articles per year, the journal will be widely promoted in the community.*	– *To ensure that Metrologia remains the number one journal for metrologists to publish in.* – *To improve the impact factor of the journal.*

Coordination and institutional liaison		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
– To improve and promote the mutual recognition of national measurement standards and of calibration and measurement capabilities (CMCs) issued by NMIs, particularly by operation of the KCDB and supporting the JCRB.	– *KCDB 2.0 has been fully implemented. Continuous updates improve user friendliness and digital accessibility.* – *An API for CMCs has been implemented and tested. An API for comparisons is planned.*	– *To specify, commission and implement a machine-actionable KCDB 3.0 with AI-based optimized data processing.* – *To work with NMIs to showcase "concrete" examples of the impact of metrology.*
– To build mutual support between the BIPM and the RMOs.	– *The first workshop for RMO secretariats has been held in 2023, to be repeated in 2027.* – *A toolbox for RMO secretariats has been launched through the BIPM website.* – *An RMO working group on capacity building has been established in collaboration with the BIPM.*	– *To build a backbone to the regional infrastructure to back-up the regional secretariats (including designated contact points for each RMO).* – *To support the participation in the CIPM MRA for Member States and Associates that cannot join an RMO.*
– To liaise with Member States, Associates and potential Observers as well as candidates and support them in application procedures.	– *Structured procedures have been put in place to accompany candidate states through the application process.* – *An e-learning course to introduce the BIPM is currently being prepared, targeting candidate countries that do not currently adhere.*	– *To ensure smooth operation of the BIPM by improving procedures for applications and payments in all three categories of adherence.* – *To maintain and expand relationships with the NMIs and with the embassies of Member States, Associates and Observers (as well as potential candidates for the three categories).*

– To raise visibility and understanding of metrology within the international quality infrastructure (QI) community, especially for the interrelation of metrology and accreditation with regards to the newly founded international body GLOBAC. – To deepen existing links and establish new collaborations with IOs outside the QI community to advocate for the application of metrology in specific areas.	– *The BIPM, specifically the ILC department, maintains longstanding relationships with the international organizations for legal metrology, standardization and accreditation and is actively involved in the INetQI, the relevant WG of UNECE and the QI section of UNIDO. The perception of "QI" has been significantly broadened during recent years as more actors have become involved, which risks diluting the influence of metrology.*	– *To maintain and extend the network of technical and institutional liaisons with two aims:* 1. *Strengthen the role of the BIPM as one of the pillars of the international QI landscape and thereby supporting the role of NMIs in Member States.* 2. *Raise awareness of the importance of metrology with other IOs in important areas of application identified in the CIPM strategy.*

<table>
<tr><th colspan="3">People - to support the ethos and working practices of an international organization that can respond flexibly to a developing mission.</th></tr>
<tr><th>Strategic objectives</th><th>Current plans (2026-2027)</th><th>Long-term goals (2028+)</th></tr>
<tr><td>To develop the BIPM organizational structure to enhance its agility and improve its efficiency in delivering on its mandate and objectives.</td><td colspan="2">– To review the functional design of the BIPM (departments and support services) so that it can respond effectively to the changing balance of activities in the work programme and the flexibility achievable by outsourcing selected roles or contributions.
– To develop a comprehensive talent management framework, (based on identified roles, authorities, competencies, talents and accountabilities) as a basis for transparent and streamlined career and salary progression that values the need for flexibility.</td></tr>
<tr><td rowspan="2">To broaden the skills mix and experience available amongst the BIPM staff whilst achieving long-term improvements in efficiency.</td><td>– To increase the staff’s capacities in the planning, organization and coordination of workshops, webinars and other activities that can support the CIPM strategy.
– To increase the staff’s scientific expertise in emerging needs of metrology that can support the CIPM strategy and the NMIs in their national role of realizing reference standards for their stakeholder needs.</td><td>to optimize talents and skills on the basis of a robust performance assessment model and strengthened motivational landscape in the context of a strengthened “talent management” framework.,</td></tr>
<tr><td colspan="2">– To maintain working groups amongst the BIPM staff, including seconded experts from NMIs on critical topics such as digital transformation from NMIs and stakeholder organizations when possible.
– To increase opportunities for BIPM staff to build relevant expertise by secondment to NMIs and other international organizations.</td></tr>
<tr><td>To develop and implement best practice in the support of the Consultative Committees, Joint Committees and Working Groups through the provision of Executive Secretaries.</td><td>To improve the effectiveness of the CCs by strengthening common practice across them and to support the CIPM as they establish cross discipline/sector forums.</td><td>To continue to adapt to the evolving landscape by implementing a new structure for staff supporting the growing needs of the CCs, JCs, etc.</td></tr>
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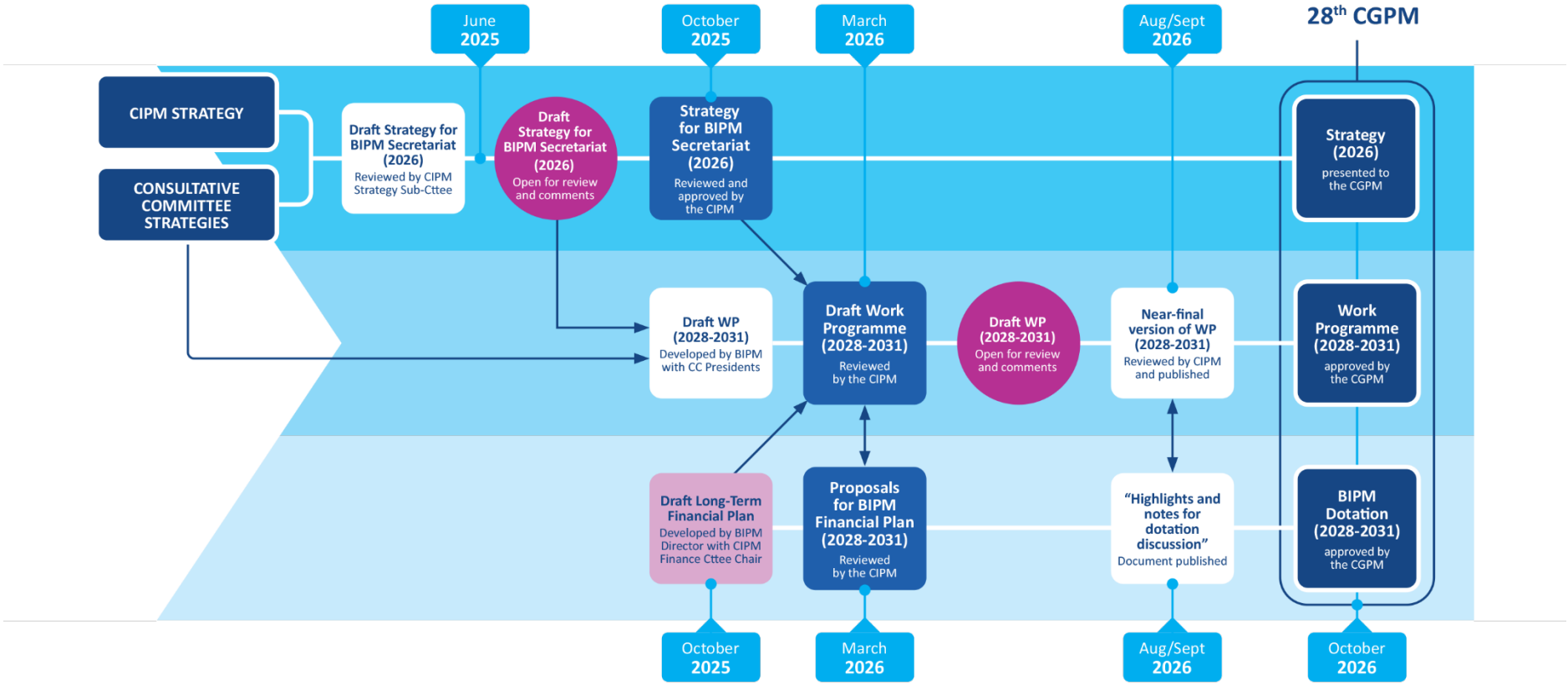
Infrastructure - to provide necessary support functions in the most efficient way, whilst respecting the unique challenges of the BIPM as an international organization.		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To develop the IT infrastructure to support the mission of the BIPM.	*Prioritizing resilience, reliability, and performance by enhancing system and network infrastructure with cloud-native technologies, optimizing systems for high availability, low latency, and scalability.*	*To enhance the existing hybrid IT architecture that integrates both on-site and cloud-based systems, to best align with the evolving needs of the BIPM mission.* *To progress initiatives to optimize cloud adoption and implement new technologies such as artificial intelligence (AI) to drive innovation and efficiency.*
To implement "state of the art" cyber-security measures.	*Enforcing security with: multi-factor authentication, anti-ransomware on the storage layer and on updating of firewall architecture with an AI-powered platform.* *Carrying out external security audits with phishing test campaigns and a penetration test of the API-driven microservices architecture.*	*To adopt a "zero trust" security model by enforcing authentication measures, by implementing least privilege access via role-based or attribute-based controls and continuously monitoring user behaviour for anomalies.*
To develop the built environment to sustain the BIPM work programme as it evolves.	*To review the use of the laboratory buildings and to renovate where necessary,* *To develop and implement a plan for the maintenance and use of heritage buildings and grounds that support the mission of the BIPM.*	
To ensure that the BIPM meeting facilities, which support the CCs and WGs, continue to follow "best practice" amongst international organizations.	*To study options for solar power from suitable building roofs and to implement where cost-effective.* *To provide remote (video) access to all key meetings to respond to pressures to reduce global travel.* *To keep the balance of regional participation in meetings online and in person under review and to report to the CIPM.*	

Financial sustainability - The delivery of the strategy presented here will depend on a broad range of funding mechanisms. The funding mechanisms described here are proposed to complement the contributions paid by Member States and the subscriptions paid by Associate States.		
Strategic objectives	**Current plans (2026-2027)**	**Long-term goals (2028+)**
To establish joint technical projects in support of agreed actions of common interest with NMIs and key stakeholders.	*Agreements have been signed with NMIs for joint technical projects in: the Chemistry Department, the Time Department and for CBKT projects.*	*To specify actions within the draft Work Programme (2028-2031) that are proposed for funding as joint technical projects with NMIs.*
To deliver sector specific coordination activities with financial contributions from key sectoral stakeholders.	*An agreement signed for support of the JCTLM with the IFCC. A tiered membership model is under review. Registration fees charged for JCTLM Stakeholder Workshops.*	*To use the model of stakeholder contributions for any new sector-specific coordination activities.*
To deliver the work programme by using facilities managed externally to the BIPM where appropriate and cost-effective.	*Agreement signed for use of the DOSEO high-energy dosimetry facility. Access to external capabilities facilitated by technical projects (e.g. for absolute gravity measurements).*	*To review all major facilities on-site, to consider their expected "lifetime" and to evaluate whether the same capability could be accessed more cost-effectively external to the BIPM.*
To involve NMI staff ("complementary staff") in the delivery of the work of the BIPM Work Programme.	*The number of complementary staff has grown during the work programme, reaching ten (full-time equivalent) in 2025. Approximately 10 % of the cost of these staff is supported by their host NMI.*	*To increase the total number of opportunities for complementary staff to support the BIPM WP (2028-2031) and to increase the fraction of this staff time supported by the host institute to 50 %.*
To seek support from stakeholders in Member States for the supply of essential laboratory equipment.	*Close collaboration with NMIs has resulted in substantial equipment donations to support the work programme (including a high-field NMR system). The BIPM Department Directors will continue to work with NMIs to seek further opportunities.*	*To review requirements for major new investments and to work with NMIs to engage with suppliers to seek their support.*

Planned timings in preparation for the 28th meeting of the CGPM (2026)



List of acronyms

AC	Alternating current
AI	Artificial Intelligence
API	Application Programming Interface
BIPM	Bureau international des poids et mesures/International Bureau of Weights and Measures
CBKT	Capacity Building and Knowledge Transfer
CC	Consultative Committee of the CIPM
CCEM	Comité consultatif d'électricité et magnétisme/Consultative Committee for Electricity and Magnetism
CCL	Comité consultatif des longueurs/Consultative Committee for Length
CCM	Comité consultatif pour la masse et les grandeurs apparentées/Consultative Committee for Mass and Related Quantities
CCQM	Comité consultatif pour la quantité de matière : métrologie en chimie et biologie/Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology
CCRI	Comité consultatif des rayonnements ionisants/Consultative Committee for Ionizing Radiation
CCTF	Comité consultatif du temps et des fréquences/Consultative Committee for Time and Frequency
CEA	Commissariat à l'énergie atomique et aux énergies alternatives
CEEMS	Countries and Economies with Emerging Metrology Systems
CGPM	Conférence générale des poids et mesures/General Conference on Weights and Measures
CIPM	Comité international des poids et mesures/International Committee for Weights and Measures
CIPM MRA	CIPM Mutual Recognition Arrangement
CMC	Calibration and Measurement Capability
DC	Direct current
DCC	Digital Calibration Certificates
DNA	Deoxyribonucleic acid
DON	Deoxynivalenol
ESIR	Extended SIR
FAIR	Findability, Accessibility, Interoperability and Reuse
FORUM-MD	Forum on Metrology and Digitalization
FTIR	Fourier Transform Infrared
GDP	Gross Domestic Product
GHG	Greenhouse gas
GNSS	Global Navigation Satellite Systems
GUM	Guide to the Expression of Uncertainty in Measurement
IAEA	International Atomic Energy Agency
IAG	International Association of Geodesy
ICG	International Committee on Global Navigation Satellite Systems
IGS	International GNSS Service
IERS	International Earth Rotation and Reference Systems Service
ILAC	International Laboratory Accreditation Cooperation
IMRR	International Metrology Resource Registry
INetQI	International Network on Quality Infrastructure
IO	International Organization
IPPP	Integer ambiguity Precise Point Positioning
ISO	International Organization for Standardization
IT	Information Technology
ITU	International Telecommunication Union

IVD	*In-vitro* diagnostics
JC	Joint Committee
JCGM	Joint Committee for Guides in Metrology
JCRB	Joint Committee of the Regional Metrology Organizations and the BIPM
JCTLM	Joint Committee for Traceability in Laboratory Medicine
KCDB	BIPM Key comparison database
LNE	Laboratoire national de métrologie et d'essais (France)
NMI	National Metrology Institute
OECD	Organisation for Economic Co-operation and Development
OIML	Organisation internationale de métrologie légale/International Organization of Legal Metrology
OTA	Ochratoxin A
PAT	Patulin
PTH	Parathyroid hormone
QI	Quality infrastructure
qNMR	Quantitative nuclear magnetic resonance
RMO	Regional Metrology Organization
RNA	Ribonucleic acid
SI	Système international d'unités/International System of Units
SIR	Système international de référence/International Reference System
SIRTI	SIR transportable instrument
SKA	Square Kilometre Array
TDCR	Triple-to-Double Coincidence Ratio
TWSTFT	Two-Way Satellite Time and Frequency Transfer
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UTC	Coordinated Universal Time
UTCr	Rapid UTC
VIM	Vocabulaire international de métrologie/International Vocabulary of Metrology
WG	Working Group
WHO	World Health Organization
WMO	World Meteorological Organization
WP	Work Programme
WTO-TBT	World Trade Organization Committee on Technical Barriers to Trade