



CGPM Working Document

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Executive Summary

At the 28th General Conference of Weights and Measures, Member States will be invited to express their confidence in the BIPM, its objectives, services and direction when they vote on Draft Resolution V: On the dotation of the International Bureau of Weights and Measures for the years 2028-2031.

The BIPM uses the dotation to deliver its proposed Work Programme.

Therefore, this document describes first the highlights of progress made with the Work Programme that was presented to the 27th CGPM and endorsed when Member States voted to approve the dotation for the period 2024-2027.

The next section reproduces the executive summary of the Work Programme for the period 2028-2031. This provides a succinct view of what the BIPM commits to delivering with the resources provided by the proposed dotation.

Finally, the proposal for the dotation itself is presented with detail of the associated budget and the assumptions and commitments that underlie the budget. The contributions of Member States which complement the dotation are also outlined. Insight is given into how the organization will respond if the requested increase in the dotation is not approved or if inflation is much higher than forecast.

Highlights of progress made with the 2024-2027 work programme

At the time of writing (May 2026) the Work Programme has more than 18 months to run. We can report that all the commitments scheduled for completion to date have been accomplished and the BIPM is on track to deliver the Work Programme for 2024-2027.

We provide here a summary of the most important achievements for the first two years of the Work Programme - the calendar years 2024 and 2025. Data for 2026 will be provided at a later date.

Highlights of laboratory-based activities

Physical Metrology

- Successful pilot study with NIST and KRISS confirming the suitability of the differential sampling technique for a new comparison of Josephson voltage standards at ac (up to 1 kHz) at uncertainty levels of 10^8 to 10^7 .
- Participation of the Kibble Balance in the third CCM key comparison of kilogram realization experiments (CCM.M-K8.2024).
- Completion of the first two on-site comparisons of Josephson voltage standards at AC, with PTB and CENAM (BIPM.EM-K10).
- Completion of two on-site comparisons of quantum Hall resistance standards with PTB and CEM (BIPM.EM-K12). First successful comparison using a graphene-based QHR standard.
- Organization and completion of the third CCM key comparison of kilogram realization experiments (CCM.M-K8.2024) and determination of third consensus value of the kilogram.

Time Metrology

- Update of BIPM Circular T with new treatment of the time transfer uncertainty and inclusion of Galileo and Beidou in the evaluation of the prediction of UTC broadcast by GNSS.
- Update of the Rapid UTC (UTC_r) algorithm to better follow UTC at the nanosecond level.
- Development, publication and dissemination of an extended CBKT programme with e-Learning modules and interactive software for the evaluation of UTC(k) measures and two summer schools.
- Support to the CCTF hot topics related to the redefinition of the second, the continuous UTC, and the Lunar reference time scale.

Chemical Metrology

- First qNMR Summer School held at the BIPM and accompanying e-Learning course developed.
- Methods developed for the purity assignment of the SARS-CoV-2 monoclonal antibody CCQM-P216 published in peer reviewed journal.
- New ongoing comparison of CO₂ in air standards (BIPM.QM-K2) launched.
- Implementation of new ozone cross section worldwide for surface ozone measurements underpinned by BIPM.QM-K1.

- Results reported for comparison of quantification methods for PTH(1-84) in solution standards, CCQM-K155.d comparison coordinated by the BIPM.
- First results published for new on-going comparison (BIPM.QM-K2) on binary gas standard mixtures (CO₂/N₂).

Ionizing Radiation Metrology

- Finalization of the characterization and validation of the medium-energy x-ray facility.
- Setting up of ionization chambers for the new SIR (SIR 2.0).
- Successful current measurements with the SIR 2.0 system using the ultra-low noise current amplifier (ULCA) down to 0.03 pA.
- Start of the ESIR service and the first BIPM.RI(II)-K5 comparison with the ESIR.
- Production of long-term BIPM Ionizing Radiation Department strategy report for the CIPM.

Highlights of the international liaison role include:

- A joint BIPM-OECD workshop “Building Stronger Connections Between Quality Infrastructure and Regulation” was successfully organized at the BIPM (in person and online).
- The World Metrology Day 2024 launch event “We Measure Today for a Sustainable Tomorrow” was successfully organized at the UNESCO headquarters, in partnership with the BIPM and the OIML, to mark the official recognition by UNESCO of 20 May each year as a UNESCO International Day. A Memorandum of Understanding was signed with UNESCO on 15 December 2025 at UNESCO headquarters to replace the 1949/1952 CIPM-UNESCO Agreement.
- A Memorandum of Understanding was signed with the International Commission on Illumination (CIE) on 15 July 2025 to replace the 2007 CIPM-CIE Agreement.
- In the light of the 150th Anniversary celebration, a thematic session on Technical Assistance – Role of Metrology in facilitating Trade was organized on 11 November 2025 at the WTO.

Highlights of coordination activities include:

- A report summarizing the visionary ideas of young metrologists has been published. It is based on an online questionnaire (over 170 questionnaire responses), online workshops in six RMOs with the participation of 380 young metrologists and a consolidation meeting with the eleven RMO coordinators.
- The CIPM Strategy 2030+ has been completed and made available to stakeholders for consultation. Recommendations from the Young metrologists’ 2050+ vision project have been included in the Strategy.
- The BIPM Strategic Work Plan, based on the CIPM Strategy was developed, shared and feedback from 18 NMIs was received.

Highlights of capacity building and knowledge transfer activities include:

- A joint BIPM and OIML e-learning course consisting of five Modules was launched on the BIPM e-learning platform in July 2024. The course is based on the BIPM and OIML joint publication “National Metrology Systems - Developing the Institutional and Legislative Framework”.

- Five e-learning courses have been published on the BIPM e-learning platform: Validating clock data format with BIPM convention; Time scale algorithms basics to applications; Nominating higher-order references to the JCTLM database; Hybrid comparisons (developed by APMP); and Pilot's Guide to Measurement Comparisons (BIPM ILC Department).

Highlights of communication and promotion activities include:

- The World Metrology Day poster for 2024 was designed by TÜBİTAK UME (Türkiye) in collaboration with EURAMET. The 54 national and RMO posters, and details of 37 national events were published on the website.
- The 3-Day event for the celebration of the 150th anniversary was successfully held at the UNESCO headquarters (620 attendees) and Versailles (450 attendees).
- The BIPM150 communication campaign included multi-organizational coordination, website upgrades, more than 37 promotional videos, 34 articles, LinkedIn campaigns, and external media coverage.
- 76 national and RMO posters for World Metrology Day 2025, and details of 23 national events were published on the World Metrology Day website.

Highlights of digital transformation and new digital services include:

- Three new services have been released for beta-testing: the SI Reference Point, a reference for Service Categories in Physics and Ionizing Radiation, and a reference point for Nuclides. The knowledge bases underlying these references can be interrogated directly by machines, and an application programming interface is provided for the use of programmers and to generate the web interface.
- The versioning of the source code of the SI Reference Point is almost complete. It is intended to make the source code publicly available in the next step. Provenance information was incorporated into the knowledge base.
- The other services of the SI Digital Framework are being improved to better integrate with the digital references of the SI Reference Point.
- The API for CMCs in the KCDB has been improved and extended; it now includes greyed out CMCs. The mapping of quantities against service categories by the Consultative Committees is in the final stages of review.

Meeting activity expanded significantly during the first two years of the Work Programme 2024-2027. Following the COVID-19 pandemic, the BIPM has successfully transitioned to a hybrid meeting model, combining on-site and on-line participation. This approach has increased accessibility and overall engagement. The number of meetings hosted by the BIPM continues to grow year-on-year, with 172 in 2024 and 192 in 2025. The number of meeting participants rose from 8322 in 2024 to 11070 in 2025; the latter included participants at the 150th anniversary events.

Summary of the proposed BIPM Work Programme 2028-2031

Strategic Context and Purpose

The BIPM Work Programme 2028–2031 turns the strategic direction set out in the **BIPM Strategic Plan (2026)** and the **CIPM Strategy 2030+** into a coherent programme of activities. It ensures:

- continuity of critical infrastructural scientific metrology services to Member States that underpin the use of the International System of Units (SI) and Coordinated Universal Time (UTC); and
- responsiveness to evolving needs to meet global challenges with fit-for-purpose measurement capabilities.

The Work Programme reaffirms the BIPM's foundational role as the **world focus for the SI and UTC** in line with its three objectives to be:

- the representative of the international scientific metrology community in a range of forums;
- the centre for scientific and technical collaboration between National Metrology Institutes (NMIs); and
- the trusted, impartial coordinator of international measurement comparability.

The Work Programme is structured around these three primary objectives of the BIPM, complemented by a fourth pillar focused on stewardship of resources.

Two cross-cutting themes are embedded across all domains:

- Digital transformation, enabling machine actionable metrology;
- Capacity building and knowledge transfer, ensuring global balance and sustainability.

Partnership Opportunities

The Strategic Plan for the BIPM Work Programme (2026) identifies five complementary partnership opportunities to increase impact, improve flexibility in responding to stakeholder needs, and support the BIPM's financial sustainability during a period of growth and transformation.

The first mechanism involves **joint projects** with NMIs and key stakeholders, primarily through in-kind contributions. These partnerships are critical for activities right across our work programme. Examples include communication and educational initiatives with Regional Metrology Organizations (RMOs) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), development of reference materials for comparisons, capacity building linked to the CIPM Mutual Recognition Arrangement (CIPM MRA), digital transformation of the quality infrastructure, and training of future metrologists.

The second partnership model focuses on sector-specific coordination funded by financial **contributions from stakeholders**. This approach supports targeted activities such as metrology for clean air, laboratory medicine traceability through the Joint Committee for Traceability in Laboratory Medicine (JCTLM), and CIPM sectorial task groups.

A third model involves the **use of shared external facilities**, allowing cost effective delivery of specific services, notably in ionizing radiation metrology.

A highly effective partnership mechanism is the **secondment of NMI staff** to the BIPM. Currently contributing around 10 FTE annually, secondees play a vital role in delivering BIPM outputs, transferring expertise, and promoting international alignment of best practices. The BIPM intends to expand this model and increase cost sharing by home institutes.

Finally, **donation of equipment** provides another targeted mechanism, notably by potentially enabling the BIPM to pilot a new key comparison for optical frequency standards.

Representation of the Global Measurement Community

Under its first objective, the BIPM strengthens its role as the **international voice of scientific metrology**, enhancing the visibility, understanding and uptake of metrology by decision makers, industry and society. The activities of this work programme enhance the impact of Member State investments in metrology by translating technical excellence into societal value and policy relevance.

Key directions for 2028–2031 include:

- Active representation and collaboration with international quality infrastructure bodies, United Nations (UN) agencies, scientific organizations, and sectorial partners;
- Deeper partnership with the International Atomic Energy Agency (IAEA) to support Member State needs for ionizing radiation services;
- Strengthened engagement with time users and international bodies to promote global adoption of UTC, including roles in support for emerging needs such as lunar timekeeping;
- Continued advocacy for metrological traceability in chemistry, biology, laboratory medicine, food safety, and environmental monitoring.
- Annual World Metrology Day campaigns delivered with UNESCO, the International Organization of Legal Metrology (OIML), and RMOs, reinforcing the societal relevance of measurement;
- Modern, coherent communication via an upgraded BIPM website, integrated document repositories, and consistent messaging across channels;
- Expansion of joint communication campaigns with RMOs, international organizations, and quality infrastructure partners.

Scientific and Technical Collaboration

The second objective remains at the core of the BIPM's mission: providing **shared, high-level scientific infrastructure and expertise** that no single country can efficiently maintain alone.

During 2028–2031, the BIPM will maintain and evolve major technical programmes in:

- **Electricity** (quantum standards for voltage, impedance, comparisons and calibrations);
- **Mass** (kilogram realization - Kibble balance, international comparisons and calibrations);
- **Time** (UTC, support for new definition of the second);
- **Chemistry and Biology** (gas, isotope ratio, organic molecule, protein and deoxyribonucleic acid (DNA)/ribonucleic acid RNA standards);
- **Ionizing Radiation** (dosimetry and radionuclide metrology for emerging medical and environmental applications).

Across these domains, the Work Programme emphasizes:

- Delivery of high priority international comparisons underpinning NMI Calibration and Measurement Capabilities (CMCs);
- Maintenance of reference standards and facilities with long-term stability and low uncertainty;
- Integration of new scientific developments, such as optical frequency standards, digital reference materials, and advanced nuclear data;
- Use of shared facilities and travelling standards to optimize costs and access;
- Strong reliance on NMI secondees and joint projects, reinforcing mutual capability development.

Scientific activities increasingly incorporate digital methods, from automated data acquisition and processing to digital twins and technical database services.

Coordination of the Worldwide Measurement System

As coordinator of the global measurement system, the BIPM provides the **institutional, technical, and digital infrastructure** that enables mutual recognition and international trust. This ensures that national measurement results are internationally accepted, comparable, and fit for emerging scientific and societal needs.

Key elements of this role include:

- Operation and evolution of the CIPM MRA, including the Joint Committee of the RMOs and the BIPM (JCRB);
- Secretariat support to Consultative Committees, Joint Committees, and CIPM groups;
- Organization of approximately 220 meeting days per year, supporting thousands of participants on-site and online;
- Stewardship of *Metrologia* as the leading international open access journal for metrology;
- Strengthening engagement with Member States, Associates, Observers, and potential new participants, working toward Universal Adherence to the Metre Convention.

Digital Transformation

Digital transformation is a defining feature of the 2028–2031 period. Through these efforts, the BIPM positions the Metre Convention as the **global digital anchor of trust** for measurements.

The BIPM will continue implementing the SI Digital Framework, providing:

- Authoritative digital representations of the SI and related vocabularies;
- Persistent identifiers and ontologies enabling machine-actionable traceability;
- Interoperable digital services connecting the Key Comparison Database (KCDB), JCTLM, time scales and other platforms.

Major milestones include:

- Deployment of machine-actionable KCDB services;
- Expansion of digital services, Application Programming Interfaces (APIs), on a common platform;

- Introduction of Artificial Intelligence (AI)-enabled tools aligned with governance, security, and integrity requirements.

Capacity Building and Knowledge Transfer

Capacity building remains central to the BIPM mission, with a strong focus on **equity and long term impact** to strengthen global participation and sustain the effectiveness of the international measurement system.

Key developments include:

- Implementation of an integrated “All-of-BIPM” Capacity Building and Knowledge Transfer (CBKT) framework, aligned with NMI needs;
- Expansion of e-learning, remote training, and digital resources;
- Continued delivery of summer schools, webinars, workshops, and technical exchanges across all measurement domains;
- Targeted support for Observers and developing metrology systems, in collaboration with United Nations (UN) agencies and RMOs.

Stewardship of Resources

To support delivery of this ambitious programme, the BIPM commits to strong stewardship of:

- **People**, through skills evolution, organizational agility, and expanded secondments;
- **Digital infrastructure**, including cybersecurity, AI governance, and modern Information Technology (IT) systems;
- **Built environment**, ensuring safe, sustainable, and accessible laboratories and meeting facilities.

Conclusion

The BIPM Work Programme 2028–2031 presents a forward-looking response to scientific, digital, and societal change while maintaining the continuity of core technical services. It preserves the BIPM’s unique international mandate while adapting delivery models, introducing more partnership opportunities, and developing its services to meet growing global expectations.

Through strategic focus, collaborative delivery, and responsible stewardship, the BIPM will continue to ensure that **measurements worldwide remain comparable, reliable, and trusted** – supporting science, innovation, trade, and sustainable development for the benefit of all Member States.

Proposal for the dotation for the period 2028-2031

Proposal Summary

The resources required to deliver the Work Programme (2028-2031) have been considered and a financial plan for the period has been developed.

The final proposal is that the Work Programme as presented can be delivered if an increase in the dotation for the period 2028-2031 of 1.5 % each year is agreed by the Member States at the 28th CGPM.

Although this annual increase is less than the projected inflation of 2.0 %, the capacity of the organization to deliver critical services and respond to the global challenges identified in the CIPM Strategy 2030+ can be maintained through the opportunities for partnership – secondments, joint projects, equipment donations, stakeholder contributions and shared facilities.

Additionally, efficiencies in laboratory operations through automation, reductions in the cost of energy for the site, and outsourcing of expertise where appropriate will allow for savings.

Budget Details

Staff

The number of positions in the organization over the period from 2028 to 2031 is projected to remain stable at between 67 and 68. This represents a commitment to careful control of the size of the organization and its long-term financial commitments. Table 1 gives the projected number of full-time equivalent staff positions in the organization.

Year	2026	2027	2028	2029	2030	2031
No of positions ¹	67	68	68	68	67	67

Table 1 – Number of current full-time equivalent positions in the organization and projections through to the end of the next period.

Despite the overall stability in size, staff transitions and outsourcing of appropriate functions will allow for growth in support of digitalization of metrology and in resources allocated to the time department for the increased activity anticipated by the resolutions passed at the CGPM.

The planned personnel budget includes support for secondees – details can be seen in the ‘Partnerships’ section below.

The budget assumes an annual growth in salaries, allowances and healthcare of 2.8 %.

Operating Costs

The budget assumes an annual inflation in most operating costs of 2.0 %. This is taken from long term predictions made by reputable financial institutions of inflation in the Euro-zone over the next period.

The 2.0 % inflation assumption has been applied across all operating cost categories from 2029-2031 after a re-baselining of the budget in 2028, except for staff costs (details above), contract staff costs

¹ The projected number of positions reported here correspond to staff positions found in the organizational chart of the BIPM and cannot be compared directly with the ‘number of staff’ reported in the CGPM Working Document published in October 2022 which was assessed differently.

which is assumed to inflate at the same rate as staff at 2.8 %, and travel which is assumed to be subject to a 4.0 % inflation.

Laboratory and Site Investment

The total investment in Laboratory equipment is expected to be similar in absolute terms in the next period to that of this period. The major purchases required to deliver the programme are an updated and digitized KCDB, a Co-60 source, a triple-quadrupole mass spectrometer, and a graphene based QHR system.

Site investment is projected to be moderately higher in the next period compared to this period to improve long term sustainability of the infrastructure, to maintain the quality of the laboratory environments and ensure suitability of the facilities for a growing number of on-site meetings.

Tables 2 and 3 contains the amount of intended investment over the period.

Efficiencies and Savings

Many of the items in the proposed Work Programme will deliver greater efficiencies and reduce long term costs to the organization. Some specific examples include the following

- New repository to ensure ease of uploading, finding and tracking documents (R01-1.2)
- Implementation of a graphene based QHR standard to reduce operating costs (S01-5.1)
- Development of a compact, easier-to-use Kibble balance (S04-2.3)
- Increased automation and digitalization of time services and ionizing radiation equipment and processes to reduce operating costs (S06-4.5,6, S13-1)
- Full update of KCDB to be machine actionable (C01-2.1)
- Upgrade of JCTLM processes including the use of AI to increase efficiency (C04-4.5)
- Use of AI at the BIPM introduced in a safe way (A03-1)
- IT and built infrastructure improved to increase resilience and reduce long term costs (A04, A06)

Other Contributions

Targeted Partnership Opportunities

Five partnership models have been explicitly described in the Work Programme which invite collaboration to achieve some of the activities identified. This approach allows for increased flexibility, responsiveness, and financial sustainability in the organization. The partnership opportunities also provide benefits for our partners through knowledge exchange, deeper mutual understanding of priorities, and cooperative approach to setting the direction for the organization over time.

The benefits of these models to the organization can also be expressed in financial and 'in kind' contribution terms.

Firstly, the deliverables identified for **seconded** opportunities the BIPM amount to over 12 full-time equivalent positions (FTE) each year of the programme. Considering the budgeted subsistence support for these secondees over the full period and comparing the cost to what a similar effort would cost the BIPM if it employed staff, the benefit to the organization is estimated at just over 1.9 M€ which amounts to 3 % of the budget.

Secondly, **joint projects** will give the BIPM access to otherwise unavailable resources held in partner institutes. While the scope and rate of delivery of these projects will depend on the circumstances of each agreement, an idea of the magnitude of the contribution can be estimated.

A total of 43 deliverables are open for collaboration in this way. Of those, the contribution of partners for over 30 of the projects can be estimated and would amount to over 16 FTE of time and potentially 1.1 M€ worth of materials and expenses incurred by partners across the whole period. The size of the remaining 10 or so projects will vary depending on the agreed objectives.

Donations of equipment continue to be of high value to the BIPM's activity and arise from relationships of trust and mutual benefit. The donation of an optical frequency standard is the most significant anticipated item in the next period and will allow the BIPM to add support to the roadmap toward the redefinition of the second.

Continued **stakeholder contributions** allow the BIPM to coordinate services that target specific sector needs. In recent years these amount to approximately 150 K€ per annum.

The BIPM will continue to make use of **shared facilities** for delivery of services in Ionizing Radiation, collaborating with both local French facilities and with the IAEA.

Ongoing Cooperation

It should also be remembered that the organization is more than the staff and facilities at the headquarters in Sèvres. The General Conference as its supreme decision-making organ, and the CIPM and the subsidiary entities it creates are indispensable to achieving the objectives of the organization.

Over every period, eighteen Member States commit to support an elected individual to contribute to the CIPM in its supervisory role of the BIPM. That support enables CIPM members to provide strategic, technical and other governance supervision, meet as a committee to review the operations of the organization including the laboratory activities, and take up roles to lead subsidiary entities on behalf of the CIPM.

The ability of the organization to “promote and advance the global comparability of measurements” relies critically on the participation of Member States in these subsidiary entities of the CIPM (including Consultative Committees, Forums and Sectoral Task Groups), in the Regional Metrology Organizations, in Joint Committees (including the JCRB, the JCTLM, the JCGM), and in capacity building.

The fundamental necessity of collaboration to the effectiveness of the organization therefore also relies on the ongoing support of Member and Associate States and Economies for staff at their metrology institutions to contribute to these activities. In cases where this support includes attendance at events in Sèvres, it leverages the investment in maintenance of facilities by the organization for on-site meetings and the relationship we have with the French Ministry of Foreign Affairs to ensure access for all. The BIPM also seeks to ensure the widest possible contribution and commits to best practice hybrid delivery of events whenever appropriate

Proposed budget (in k€)	2027	2028	2029	2030	2031
Gross salaries	5 880	6 045	6 214	6 388	6 567
Family and social allowances	1 400	1 439	1 479	1 490	1 469
Social contributions	435	447	460	473	486
Seconded subsistence allowance	321	350	360	370	380
Total staff cost	8 036	8 281	8 513	8 720	8 901

Table 2 – Details of staff budget to deliver the programme of work proposed for the next period.
2027 is the final year of the current period.

Proposed budget (in k€)	2027	2028	2029	2030	2031
Staff cost	8 036	8 281	8 513	8 720	8 901
Contribution to the Pension Fund	2 900	2 900	3 000	3 100	3 200
Contract service suppliers	440	450	463	511	555
Site expenses	946	946	965	984	1 004
Coordination and communication	717	672	682	963	724
Laboratory operating expenses	904	820	836	853	870
Laboratory investment	975	1 100	900	650	650
Site investment	475	550	500	450	400
Miscellaneous	220	200	200	250	200
Total Expenses	15 613	15 919	16 059	16 481	16 504
Contributions: dotation	13 762	14 223	14 436	14 652	14 872
Contributions: States acceding	312	127	193	261	332
Subscriptions	1 054	1 013	970	926	880
Subscriptions: States acceding	0	14	14	29	30
Other income	485	490	495	500	505
Total Revenue	15 613	15 867	16 108	16 368	16 618
Difference (surplus+ / deficit –)	0	-52	49	-113	114

Table 3 – Estimated total budget to deliver the programme of work proposed for the next period. 2027 is the final year of the current period. The amount for the “States acceding” in 2027 corresponds to the 4 States that acceded since June 2022 plus one more state assumed to accede in 2027. A detailed list of the costs under each heading is given in the Annex as well as detail on assumptions for States acceding.

Proposal for the dotation by the CIPM

At their meeting in June 2026, the CIPM reviewed the long-term financial plans for the BIPM Headquarters, and the underlying assumptions explained above. Following this review, they decided that it was justified to request an increase in the dotation for the period 2028-2031 of 1.5 % each year. Therefore, the numbers to be entered into the text of Draft Resolution V are:

14 222 510 euros in 2028

14 435 848 euros in 2029

14 652 386 euros in 2030

14 872 172 euros in 2031

The planned budget for 2028 to 2031 is shown in Table 3 and background information on the calculation of the dotation is given in the annex.

As described above, this proposal continues to represent no nett growth to the size of the organization or its real long-term financial commitments. The sustained level of delivery of services, and evolution to meet current and future challenges will be possible with a dotation increase each year of 1.5 % in an environment of inflation that is expected to exceed 1.5 % due to cost savings and through partnership models.

Impact of a flat Dotation for the BIPM: Consequences of a Real-Terms Reduction

The previous section ‘Summary of the Proposed Work Programme’ describes all that the BIPM intends to deliver with the resources provided by the dotation. It is a response to the increasing global demand for reliable and meaningful measurement as new technologies are developed, digital transformation is rolling out at pace, national security and innovation systems are under pressure, and regulatory responses to health and environmental concerns are implemented.

If there is not unanimous support² from Member States to increase the dotation at the 28th General Conference on Weights and Measures in October 2026, and instead the dotation is fixed at the 2027 level, this will amount to a real-terms reduction of 2 % year on year over the four years of the period 2028 – 2031. The BIPM will have to take proactive action to decrease its activity and services in several areas to meet its budget envelope, with the following impacts:

- *Modernization and Digitalization of Time Services:* Delay will limit new services and support for multi-source time synchronisation underpinning finance, energy distribution, telecom and positioning. (Impacted deliverables S06-2.1, S06-2.2, S06-4.3, S06-4.4, S06-5.1 and .2,
- *Comparison of Optical Clocks with a Transportable Instrument:* Reducing support for this project will delay the redefinition of the second and the validation of national standards and infrastructures underpinning fundamental physics and quantum applications including secure quantum communications, sensing, and relativistic geodesy. (Impacted deliverable S07-1.3)
- *Coordination of Lunar Time:* Discontinuation of BIPM support will mean that interoperability of lunar technology must rely on bilateral agreements, undermining security and multilateralism in Moon and space missions. (Impacted deliverables R02-4.3, S06-6.2)

² Approval of the annual dotation requires the absence of any negative votes (Article 6.5 of the Annexed Regulations to the Metre Convention)

- *qNMR reference method development*: Without ¹⁹F and ³¹P qNMR reference methods, manufacturers and regulators will lack a traceable, internationally consistent means to verify the purity and potency of both fluorinated drugs and mRNA/DNA-based therapeutics, undermining quality assurance across two of the fastest-growing areas of modern medicine. (Impacted deliverables S10-1.3, S10-2.1 to .3, S10-3.2, S10-4.2)
- *International Liaison and Communication*: Reduced activity will limit the recognition of the contribution of Member State investments in metrology to addressing national and global challenges. (Impacted deliverables R01-2.1 to .4, R01-3.3, R02-3 and .4, S08-1.1 to .3, C01-3.1 to .5, C02-1.1 and .2, C07-1.2, C08-1 and .2)
- *Co-60 irradiator*: Deferring the replacement of this item will risk continuity of the primary dosimetry reference underpinning worldwide consistency of radiation measurements for safe cancer treatment and radiation protection. (Impacted deliverable S11-3.2, at risk S11-1, S11-2)
- *BIPM Compact Kibble balance*: Delayed development of the instrument will limit the support for weighing industries in countries not possessing a Kibble balance. (Impacted deliverable S04-2.3)

Many of the indicated deliverables will be omitted entirely, while some of them will be limited in scope, or will become critically dependent on a partnership model to be delivered. If the 1.5 % per annum increase is agreed but inflation is significantly higher than projected, the above list will also form the starting point for consideration of what activities to reduce.

Beyond the immediate impacts described above, the loss of ongoing investment in laboratory expertise, the reduced engagement and capacity building coordinated internationally, and the delay in developing critical services for the long term will:

- Erode the trust in and reputation of the SI and UTC as authoritative references
- Risk the pace of innovation and interoperability for digital, space and quantum technologies
- Weaken international equivalence and raise trade barriers
- Reduce the capability of the BIPM to respond to unanticipated Member State needs
- Increase the resources required by individual national laboratories for activities currently undertaken on a common basis by the BIPM
- Reduce availability of international benchmarking and evidence for strategic national investment

The BIPM is the central element of the global measurement infrastructure. It enables international cooperation underpinning comparability of measurements for innovation, public policy, trade and security, and reduces costs for national laboratories. It is also a critical pillar of the international quality infrastructure, ensuring trust and confidence.

A flat dotation is a real-terms reduction that would force prioritisation away from services that Member States increasingly rely on. Over the longer term, any loss in continuity, credibility, and depth of scientific expertise at the BIPM would be difficult to rebuild and could weaken the foundations of the international measurement system. It will also lead to increased costs in the regions, as services now provided by BIPM will need to be provided by individual institutes in Member States.

The BIPM remains firmly committed to maintaining global trust in measurement and to adapting, in partnership with its Member States, to the demands of a rapidly changing world. Through sustained collaboration and shared commitment, it will continue to deliver a resilient, forward-looking system that supports collective success.

Annex – Background Information

Calculation of the Dotation

Details of the methods used to calculate national contributions³ to the dotation and subscriptions⁴ are available from the BIPM website.

The CGPM at its 16th meeting (1979) established the principle addressing accession of new Member States (embodied in Resolution 7) that has been followed since that time:

- a) Since new Member States bring additional work to the BIPM, in order to ensure that support/services to existing Member States are not degraded, and the overall budget of the BIPM should rise accordingly when a new Member State accedes, but
- b) the contribution of existing Member States should not rise as the result of a new Member State acceding.

In this way, the CGPM agrees that the dotation increases when a new Member State accedes, but only by the amount of the contribution of the new Member State. There will be no increase in the contribution from each existing Member State (and adjustments are made to ensure that the maximum and minimum contributors are not affected).

To calculate the dotation for the 2028 – 2031 period, we start from a base corresponding to the dotation agreed for 2027 with any uplift due to states that have acceded since then. At the time of the CIPM meeting in June 2026, four states had acceded and become Member States⁵ since the dotation was set for the 27th meeting of the CGPM. Their contributions amount to 249 924 €.

Therefore, the base for the calculation of the dotation is the sum of the 2027 dotation agreed by the 27th CGPM, 13 762 401 €, and the 249 924 k€ uplift due to the four states that have acceded since then. This gives 14 012 325 €. Then the 1.5 % compound increase is applied and this is the basis for the figures used in Draft Resolution V.

Budget Detail

The **cost headings** in Table 3 of this document include the following

- Contract service suppliers: Cleaning, reception, security, gardening, others
- Site expenses: Utilities, insurance, office costs, IT operating, building, grounds & vehicle maintenance
- Coordination and communications: Publications, cost of meetings, core capacity building expenses, digital transformation and database maintenance, travel (liaison staff and director).
- Laboratory operating expenses: All laboratory expenses, facility rental, workshop, site supplies, travel for comparisons, travel (laboratory staff)
- Laboratory investment: scientific equipment, database upgrades

³ <https://www.bipm.org/en/member-states>

⁴ <https://www.bipm.org/en/associates>

⁵ Costa Rica, Uzbekistan and Albania (previously Associate States) and Dominican Republic (reinstated as a Member State).

- Site investment: Buildings, grounds, vehicles, IT investment
- Miscellaneous: Financial, legal costs, exceptional staff costs, expenses of the CIPM bureau

In estimating the **budgeted income from Member States**, the following assumptions have been made

- One further State will accede to the Metre Convention and become a Member State in each of the years of the next period from 2028 – 2031 and that each of these is currently an Associate State.
- Two further States will become Associate States during the next period from 2028-2031.

Acronyms used in the present volume

AI	Artificial intelligence
API	Application Programming Interface
APMP	Asia Pacific Metrology Programme
BIPM	International Bureau of Weights and Measures
CBKT	Capacity Building and Knowledge Transfer
CC	Consultative Committee of the CIPM
CCM	Consultative Committee for Mass and Related Quantities
CCQM	Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology
CCTF	Consultative Committee for Time and Frequency
CGPM	General Conference on Weights and Measures
CIE	Commission on Illumination
CIPM	International Committee for Weights and Measures
CIPM MRA	CIPM Mutual Recognition Arrangement
CMC	Calibration and Measurement Capability
ESIR	Extended SIR
EURAMET	European Association of National Metrology Institutes
FTE	Full-time equivalent
GNSS	Global Navigation Satellite Systems
IAEA	International Atomic Energy Agency
IT	Information Technology
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
NMI	National Metrology Institute
OECD	Organisation for Economic Co-operation and Development
OIML	International Organization for Legal Metrology
QHR	Quantum Hall Resistance
qNMR	Quantitative Nuclear Magnetic Resonance
RMO	Regional Metrology Organization
SI	The International System of Units
SIR	International Reference System for gamma-ray emitting radionuclides
ULCA	Ultra-low noise current amplifier
UNESCO	United Nations Educational, Scientific and Cultural Organization
UTC	Coordinated Universal Time
UTCr	Rapid UTC
WTO	World Trade Organization

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