

IEC Secretary-General's Report November 2021-August 2022

IEC Secretary-General's Report

The present report covers the period following the IEC General Assembly held in 2021 until the end of August 2022. The relevant information has been categorized in accordance with the following structure:

- Governance, strategy and policy
- Standardization
- Conformity assessment
- Membership, Affiliates & Capacity Building
- Finance, sales and business development
- IT operations
- Resources and efficiency planning

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1 Introduction

I am pleased to present the first statutory report by the Secretary-General to the General Assembly.

While my predecessors and I have been reporting to the IEC Council as a matter of course for many years, the report's new format is a direct consequence of the governance review. In fact, the 2021 edition of the IEC Statutes and Rules of Procedure mandates reports from both the President and the Secretary-General to the General Assembly, for the latter's approval.

With the aim of being complementary, President Dr Yinbiao Shu is providing the IEC Members with a strategic and visionary assessment and outlook in his report (GA/63/DV), while this report is focusing on key governance and operational outputs and outcomes that the IEC community has achieved, with the support of the IEC Secretariat, since the last General Meeting in Dubai.

Starting with the aftermath of the adoption and entry into force, as of 1 January 2022, of the new IEC Statutes and Rules of Procedure, it has become visible very quickly that the IEC has taken a major leap in terms of empowerment and involvement of its Members. The new IEC governance system provides for a clearer structure and more inclusive processes which lead to more deeply rooted common decisions. Over the past months, the personal engagement by the many individuals serving on IEC's governing bodies – some of them entirely new – has been very tangible. For instance, the IEC Board has embarked upon an avenue of targeted measures to continuously enhance the excellence of its own performance. This is in addition to putting in place a framework of performance parameters to measure, assess and improve the efficacy of the new governance system on a regular basis.

It is noteworthy, that – overall – the governance activities under the new system are more onerous for all parties involved, i.e. members of governing bodies as well as the IEC Secretariat. In order to remain a powerhouse for forward-looking standards and conformity assessment services, the IEC will need to be focused and selective in setting its governance priorities going forward. The organization has a strong operational track-record to build on, as it has been performing at a high level during the pandemic, which is also reflected in the robust financial performance during the past years.

We are now operating in a so-called "new normal" environment in which it is not always easy to find the right balance in terms of internal *modus operandi* and external interaction with partner organizations. But true to the insight that one should never let a good crisis go to waste, the IEC community has not shied away, over the past months, from tackling a number of heavy challenges which – if handled in a progressive, yet inclusive manner – promise long-term opportunities and rewards for the organization. This includes notably the adoption and operationalization of the new IEC Strategy with its three main pillars, Digital, Sustainability and Trust, the continuation of a stronger integration of conformity assessment and standardization under the 1 IEC umbrella, the search for a sustainable new IEC business model for the future, the launch of the Global Impact Fund, the SMART standardization and conformity assessment project jointly undertaken with ISO and the evaluation of possible CO_2 measurement and certification tools and processes.

Looking beyond the boundaries of our own organization, partnering with others is more important than ever for IEC to achieve its objectives. While we collaborate extensively with our sister organizations, ISO and ITU, including through the World Standards Coordination (WSC), we have started engaging more vigorously with some of the world's most important global governance organizations including WTO, G20, COP. There, we are finding increasingly fertile grounds to raise the profile and further the cause of international standards and conformity assessment. However, we can't stop there and need to develop our external relations with other important stakeholders, for instance in the areas of renewable energy and artificial intelligence. As regards AI, the international conference organized in Geneva in May has demonstrated how we can connect with new sources of state-of-the-art know-how, complementing what we do with ISO in ISO/IEC JTC 1.

In parallel with the flurry of substantive IEC activities briefly mentioned above and summarized in more detail on the following pages of this report, we are working on a number of organizational changes and enhancements within the IEC Secretariat, too. One particular area of focus is staff management and development where we have put in place more precise staff rules, a competency model to support a better alignment of the organization's needs and the capabilities of our staff, as well as new training opportunities. Another key effort to enhance our operational excellence is the introduction of a modern enterprise resource planning system which is designed to become the digital backbone for all financial and other core processes within the IEC Secretariat. This should also enable us to provide data to the IEC Members in a more automated and timely manner going forward. Last but not least, a great amount of time and effort is currently being spent on strengthening our IT governance, security and data services, as well as our planning and execution capabilities with a view to allocating existing IT resources strategically and exploiting the funding available within the annual budgets to the utmost extent.

I would like to conclude my introduction by extending my deep gratitude to Dr Yinbiao Shu for his inclusive leadership as Chair of multiple IEC governing bodies and task forces, and for his truly presidential guidance to me and the entire IEC Secretariat. Although it was unfortunately not possible to meet in person since the outbreak of Covid-19, Dr Shu has put considerable trust in the Secretariat. Together with his team, he has greatly facilitated the efficient preparation and conduct of countless governance meetings. We sincerely hope to benefit from his personal presence during the 2022 General Meeting in San Francisco, and we look forward to benefitting from his wisdom beyond 2022 in his future role as Immediate Past President.

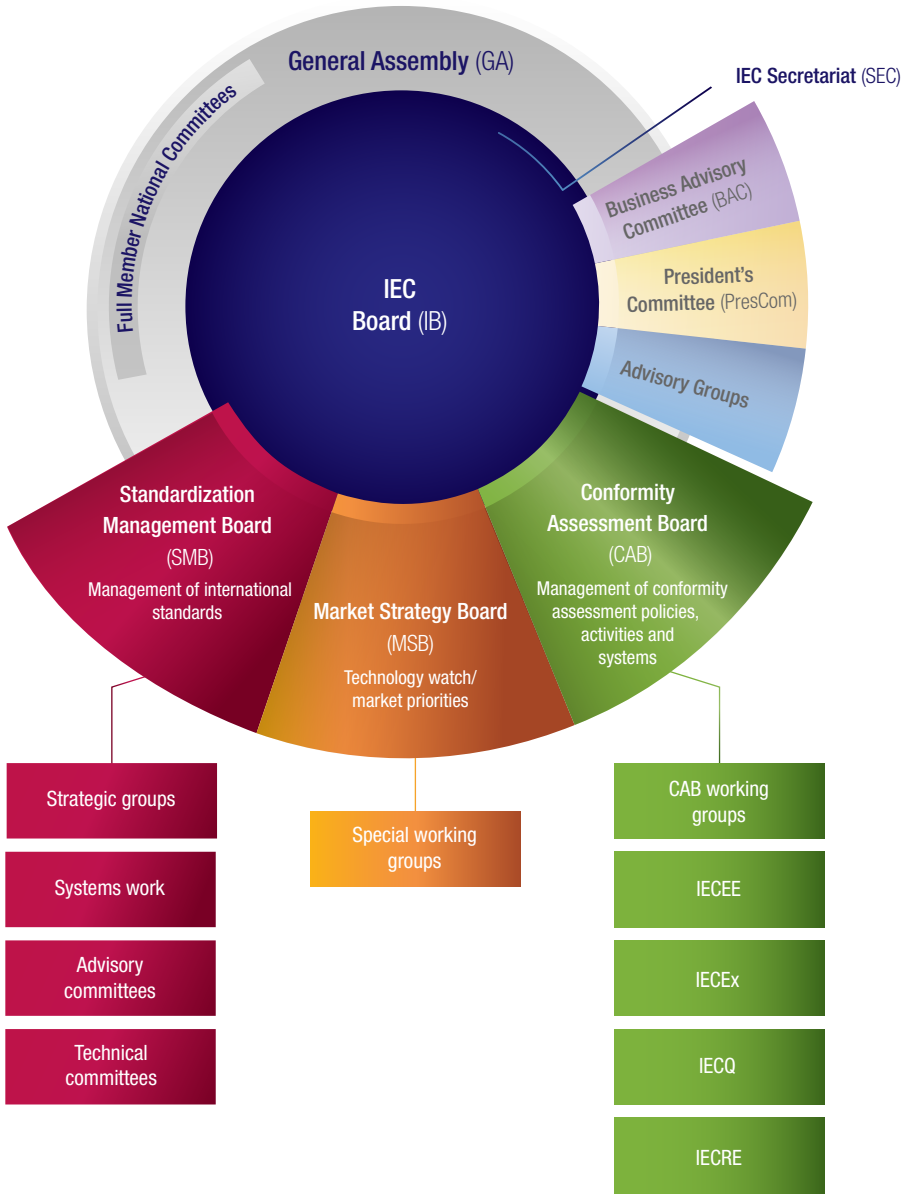
My final thanks go to my staff and to the IEC Members. Conventional wisdom has it that nobody can serve two masters at the same time. However, the IEC Secretariat is tasked to serve all of the organization's Members and Affiliates. I am very grateful for the many constructive interactions with all of you, and for your understanding and sense of compromise whenever prioritization is the only way forward. It does make my task very fulfilling indeed. We do count on your continued goodwill, while we keep evolving and trying to improve our services. I am speaking on behalf of all my colleagues at the Secretariat when expressing my excitement about the many personal encounters that will finally be possible again at the next IEC General Meeting. With this in mind, I look forward to seeing you in the city by the bay shortly.

2 Governance, strategy and policy

2.1 Governance

Following unanimous approval by IEC Full Members, the new IEC Statutes and Rules of Procedures (SRoP) and the Transitional Rules entered into force as of 1 January 2022.

The new governing bodies have held their first meetings and the rolling hand-over is nearing completion. To ensure a smooth transition, while maintaining current business activities, new IT platforms for the governance bodies have been implemented and the website has been updated.



2.2 New Strategic Plan

The new IEC Strategic Plan was approved by the IEC Board (IB) and General Assembly (GA). It provides nine goals based on the following three strategic themes:

- Enabling a digital and all-electric society
- Fostering a sustainable world
- Leading on trust, inclusion, and collaboration

CAB, MSB and SMB have developed operational plans to meet the objectives of the Strategic Plan.

The IEC Forum has established a working group to examine how IEC National Committees (NCs) can contribute to the Strategic Plan, focusing in 2022 on the goal of producing standards and conformity assessment solutions for a safe and secure digital society.

A webpage has been developed with information about the Strategic Plan including narratives for use by NCs and other stakeholders.

2.3 Completion of the IEC Masterplan

In January 2022, the IEC Board received the final report on the implementation of the Masterplan (2017-2021). Core achievements of the Masterplan included:

- Establishment of an IEC Conformity Assessment Radar that identifies future CA needs
- Creation of the New Revenue Generation (NRG) Advisory Group, which led to the development of three new products and services
- NC participation dashboard for Members to monitor their involvement in IEC work and identify opportunities to enhance their participation
- Creation of a risk framework for the entire IEC community
- Completion of a governance review, resulting in a new governance system as reflected in the 2021 edition of the IEC Statutes and Rules of Procedure
- Enhanced collaboration between IEC and ISO on IT tools, including release of a single sign-on, harmonized data feeds and the online standards development platform
- Revision of the IEC Sales Policy and creation of an IEC Copyright Policy
- Creation of a mapping tool
- Initial development of an approach to making standards machine readable and interpretable which evolved into the broader concept of SMART

2.4 Policy as shaped by the governance bodies

2.4.1 President's Committee

During its meetings, PresCom has addressed issues related to the potential for greater interactions among the bodies reporting to the IEC Board, the need for further discussions about the long-term sustainability of the IEC business model, new opportunities to increase the participation of IEC Young Professionals and has made recommendations to showcase IEC work related to climate action.

PresCom has also discussed the European standardization strategy and noted the importance of ongoing global communication regarding the benefits of international standards first vs regional or national standards.

2.4.2 IEC Board

Key performance indicators (KPIs) relative to the governance system (performance parameters) have been selected and are currently being implemented, to be reviewed by the IB in February 2023.

Table 1 | KPI selection

Standards work	Stakeholders
Standards adoption	Experts
Standards production time	Gender diversity
Technical committees in new areas	Governance
Conformity assessment work	P-membership
Conformity assessment global reach	Financial results
Conformity assessment in new areas	Capital & reserves
Global brand visibility on social media	Sales
Global reach	Employees
Geographical diversity	Employee turnover

2.4.2.1 Global Impact Fund

The IB approved the IEC Global Impact Fund (GIF) which will provide grants for projects that address specific environmental, social and governance challenges using IEC International Standards and Conformity Assessment Systems. The IEC Secretariat (SEC) has provided extensive support including the development of the Strategic Business Plan, Operational rules, Donation policy and a variety of communications material.

2.4.2.2 SDGs

The IB Task Force 3 on SDGs, set up in 2020, continued its activities to drive change in IEC toward SDG-focused thinking across the community. A major development was the inclusion of the strategic theme Fostering a sustainable world in the IEC Strategic Plan. The IEC has undertaken a range of activities to support the UN SDGs including educating and sharing about the UN SDGs, developing publications addressing circular economy, waste management and conformity assessment services.

2.4.2.3 SMART Standards

The IB Task Force 5 on SMART Standardization and Conformity Assessment was set up in 2021 with the objective of overseeing the whole set of IEC SMART activities. The following work streams were identified as key elements of its work programme:

- Oversight of technical development and piloting of the IEC SMART Standard concept which is ongoing in SMB Strategic Group 12
- Development of use cases to validate the IEC SMART Standard concept
- Exploration of future possible business models and their impact on the IEC and its members
- Communication, outreach and training activities

The IB TF 5 and the ISO Council SMART Steering Group have developed a collaboration framework to ensure effective coordination (and alignment wherever appropriate) between the two organizations on the topic of SMART Standards and Conformity Assessment. This collaboration framework defines joint activities to optimize the use of resources from both organizations and avoid the duplication of work. It has been endorsed by the IB and by the ISO Council at their February 2022 meetings.

A Joint Coordination Group (JCG) between the IB TF 5 and the ISO Council SMART SG has been established to oversee the collaboration framework and met for the first time in March 2022. In September, the addition of a SMART CA group, which comprises IEC and ISO members, has been established to further engage on how conformity assessment will align in the digital future.

At its June 2022 meeting, the IB approved the release of extraordinary funding (CHF 300 000 from the reserves) to support the launch of SMART pilot projects in the second half of 2022. The IEC SEC is creating an Implementation Group in SMB SG 12, consisting of project management, SG 12 representatives and IT resources, to assist with piloting the SMART Standards concept.

A communication plan has been presented and discussed within the IB TF 5. Communication material targeting technical committees and National Committees is being developed by the IEC SEC in collaboration with ISO.

In the most recent IB TF meeting on 13 September, the Task Force members had an active discussion on how to further the SMART work. The market for SMART standards is accelerating with several standards organizations and commercial organizations experimenting with SMART solutions. The Task Force impressed the need to position IEC as a leader in the SMART space. Concretely, the Task Force agreed to create Playbooks which will provide specific guidance on SMART and how to leverage digital standards. These Playbooks will also serve to help address the need to increase alignment across the technology, business model, and use cases working teams.

2.4.2.4 Risk framework

The IB approved the streamlining of the IEC Risk Mitigation Plan and risk management process at its October 2021 meeting in Dubai. The plan covers 14 risks and recommended actions, many of which are already being implemented. As per the new governance structure, the Governance Review and Audit Committee (GRAC) oversees the plan and makes improvements as needed.

2.4.2.5 Business continuity management

On recommendation of PresCom, the IB thoroughly considered the implications of the crisis in Ukraine during two extraordinary IB meetings dedicated to this matter. As a result, and on the basis of input received from the Standardization Management Board (SMB), the participation of experts from the Russian Federation in IEC technical meetings was clarified, in coordination with ISO.

IEC SEC continues to address issues that may be impacted by the pandemic, including standards development, conformity assessment, finance and human resources. While mitigation and support measures had been put in place at the onset of the pandemic to ensure continuity in standards development activities, the SMB, in collaboration with the ISO/TMB, has developed detailed guidance to help technical committees in planning their virtual, hybrid or face-to-face meetings.

2.4.2.6 ISO/IEC Joint Task Force on JTC 1

The IB has agreed with the ISO Council proposal to create an ISO/IEC Joint Task Force to review the criteria for making ISO/IEC JTC 1 standards publicly available at no charge. Following completion of this review and based on ongoing discussions in the SMB on the opportunity to look at additional IEC/ISO joint technical committees in the future, the IB will re-evaluate the need and scope for a prospective strategic review.

2.5 Market strategy

The Market Strategy Board (MSB) launched a feasibility study by the SMB and CAB for a new IEC CO2 Certificate Programme, Special Working Group 13.

The MSB set up Special Working Group 16 to conduct a road mapping exercise and develop an IEC Market and Technology Dashboard looking to 2035. The focus of the SWG 16 will be to research and provide a future vision for the IEC based on the disappearing borders between the different industrial domains.

The previous two extensive road mapping exercises undertaken by the MSB were, in 2013, *Evaluation of roadmaps, technology trend studies, and research agendas* and, in 2019, with the MSB Position Paper *2030 and the IEC*. These two documents will provide the

foundation for an overdue long term road mapping exercise for market and technology trends. The MSB estimates the timeline to completion will be Q4 2023.

The MSB has completed its 16th white paper, *Zero carbon power system based primarily on renewable energy*, which will be published during the 2022 IEC General Meeting. The MSB will launch its 17th white paper, *Power semiconductors for an energy-wise society* in October 2022 and expects to publish it during the 2023 IEC General Meeting.

Two MSB trend reports are currently underway, entitled *Sensors for future power grids* and *SMART standards – A market and industry perspective*, which will complement the work of SMB SG 12 by looking at how markets and industry will adopt the use of SMART standards.

2.6 AI with Trust conference

The AI with Trust conference, organized jointly by IEC and the Swiss Federal Department of Foreign Affairs (FDFA), took place on 16-17 May 2022 in Geneva, Switzerland. It brought together numerous speakers and participants from around the world, both in person and online.

The conference explored the interplay between legislation, standardization and conformity assessment and what is needed to harmonize international efforts for artificial intelligence. It was a follow-up to the 13 October 2021 online workshop on the same topic.

The IEC SEC, together with the FDFA, is now considering the development of a platform to continue the dialogue between relevant stakeholders and support targeted initiatives requiring coordinated inputs from the standardization, conformity assessment and regulatory communities.

2.7 World Standards Cooperation

The CEOs of IEC, ISO and ITU met in May 2022 to discuss the ongoing collaboration of the three organizations under the auspices of WSC. The CEOs were updated by the ITU on World Standards Day activities, and by the IEC on the G20 International Standards Summit. The three organizations also shared information about their plans to participate in COP27.

The WSC met for its annual meeting in February 2022 which included a keynote address by a COP26 climate champion. A high-level meeting took place with the World Trade Organization (WTO) in March 2022 which identified potential areas for closer collaboration.

2.7.1 World Standards Day

World Standards Day is held each year to promote international standards as a crucial instrument for global trade and economic development. It is also a tribute to the collaborative efforts of the thousands of experts worldwide who develop international standards.

WSD has selected the theme of SDGs as part of its multi-year campaign with a focus on sustainable environment in 2022. A website, initially launched in 2021, provides many tools and resources for members to promote WSD. The aim is to increase awareness about the role of standards for the achievement of SDGs with a broader public.

For WSD 2021, a high-level panel session brought together the heads of the IEC, ISO and ITU-T to discuss the important role of standards in helping the world to achieve the SDGs. Over 130 participants followed the online event.

2.7.2 G20

Under the auspices of the Italian G20 Presidency, UNI and CEI, together with IEC, ISO and ITU, organized the 2021 International Standards Summit on 28 October 2021 to highlight how standardization organizations can contribute to sustainability. The panel session was attended by the leaders of the three organizations and resulted in a call to action for G20 members. It also included a media conference. As a result of these activities, the final declaration of the G20 leaders expressly recognized the need for standardization.

Preparations are now underway for the 2022 edition of the G20 International Standards Summit which will take place in Bali, Indonesia on 20 October 2022 as an official side-event of the G20 Ministerial Meeting. The event is organized by the Indonesian Standardisation Agency BSN, together with the IEC, ISO and ITU, and with the participation of the WTO. It will showcase how the institutional framework provided by international standards bodies can help governments and regulators implement objectives related to health, digital transformation, sustainable energy transition and the SDGs. Similar to the 2021 edition, the G20 country members of the IEC, ISO and ITU will prepare a statement and a call to action will be shared with the G20 countries.

2.7.3 Standardization Programme Coordination Group

The SPCG is dedicated to identifying, reviewing and coordinating proposals for new technical activity in IEC, ISO and ITU-T to avoid overlaps and duplication of work. It includes representatives from SMB, TMB and TSAG.

The SPCG continued to work towards creating a coherent and coordinated international standards landscape across the three organizations. Since the last IEC General Meeting, the SPCG reviewed 14 proposals for new fields of activities and issued four recommendations that were taken onboard by one of the three technical management boards.

An outreach campaign to the technical communities of the three organizations is being prepared to raise awareness about the SPCG. This will include an animated video and short Q&A about the SPCG, its activities, and how it can support the technical communities of IEC, ISO and ITU-T.

Recognizing the role of the SPCG to share and consider information on new subject areas of strategic interest, the SPCG agreed to also review proposals for new pre-standardization and strategic groups such as IEC standardization evaluation groups (SEGs) and ISO strategic advisory groups (SAGs) with a similar process to that of the other proposed new fields of activities.

The SPCG has plans to set up a pilot for technical coordination for artificial intelligence and machine learning communities within the IEC, ISO, and ITU-T.

2.8 Climate action and COP

The IEC is expected to receive observer status at the United Nations Climate Change Conference (UNFCCC) which should allow for participation in future COPs. Discussions are underway, including with the Egyptian National Committee on how the IEC can showcase the contribution of its standards towards climate mitigation at the forthcoming COP27 in Sharm El-Sheikh.

Close cooperation between IEC and ISO in 2021 resulted in a Climate action kit with input by 15 IEC Members with use cases on how standards have been used for regulatory action in support of the environment. The kit was shared in advance of COP26 and on the IEC website. Mr Vimal Mahendru, as part of the Indian delegation, represented the IEC in his capacity as the IEC Ambassador for SDGs during COP26. Additionally, the IEC was able to contribute to COP26 via ISO, which has UNFCCC observer status.

Communications around COP26 focused in particular on SDG 13 (Climate action) and how the IEC contributes to this important topic. Social media statistics highlighted the interest in this topic with an above industry average engagement rate (5% versus an industry average of 0,4%).

In his opening speech at COP26, the UN Secretary General underlined the need for an expert group to prepare standards in this context. The IEC, ISO and ITU reacted with a media release and a letter offering their global, consensus-based institutional framework for this purpose.

2.9 ITU Global Standards Symposium

The fourth GSS-20, held on 28 February 2022, in Geneva, Switzerland, brought together leaders in the standardization sphere, including the heads of the IEC and ISO. Discussions focused on how international standards can become key enablers to overcome challenges and maximize opportunities to accelerate digital transformation to achieve the SDGs. Participants to the GSS-20 showed a keen interest in the joint IEC/ISO approach to SMART standards and conformity assessment.

3 Standardization

3.1 New groups and processes

The SMB established several *ad hoc* groups to investigate matters arising from SMB meetings or from strategic activities:

- ahG 92 has been set up to investigate the impact of copyright and licensing on future IEC standardization activities.
- ahG 93 has been set up to support the use and implementation of the global relevance toolbox (GRT) in technical procedures. The aim is to increase the global relevance of IEC International Standards by encouraging the inclusion of certain national and regional deviations to facilitate greater adoption.
- ahG 94 has been established to evaluate the potential for standardization activities addressing product carbon footprint (PCF) in the electrotechnical sector. The group will provide technical recommendations on the rollout of PCF work in the IEC in coordination with relevant advisory and technical committees, boards and ISO/TMB. An interim report has been provided in June 2022.
- ahG 95 has been established to outline the SMB understanding of an all-electric and connected society as specified in the IEC Strategic Plan and to evaluate the needs for standardization activities in this area.

Two new standardization evaluation groups have also been established by the SMB:

- SEG 13 will evaluate the potential for standardization activities addressing electrical infrastructure for power generation, transmission, distribution, and relevant utility-scale energy storage systems under extreme climate, environmental and disaster conditions.
- SEG 14 will explore standardization opportunities in quantum technologies, evaluate and investigate technical capabilities and applications as well as current research and activities, in view of developing a standardization roadmap.

Based on the recommendations from SEG 11, a new systems committee has been established to help leverage IEC contributions to sustainable electrified transportation (SET). A technology report, *Future of sustainable transport*, was published in July 2022.

The links between the SMB and the MSB have been strengthened by reconfiguring SG 11 to proactively monitor emerging trends and technological shifts that may impact the standardization work of the IEC. The list of hot topics will be jointly maintained by SG 11 and the MSB and shared with CAB.

3.2 Digitalization of the SDGs

Major efforts have been made to integrate the SDGs into the IEC information system to provide a global overview of the SDGs related to the standardization work. The SDGs have also been included in the review report form with the aim of assigning SDGs to publications undergoing a maintenance cycle in addition to the new projects. In order to assign SDGs to the currently existing publications catalogue, technical committee officers have been contacted and asked to provide the SDGs which could be related to their existing publications. Following the completion of this work, the IEC website provides a tracker with the list of IEC publications related to each of the SDGs.

3.3 Mapping platform

Efforts are underway to promote the use of the mapping platform by technical committees and provide support in the development of complex maps. In 2022, six committees released completed maps: a common map for TC 59 and TC 61, TC 112, TC 125, SyC Smart Energy, and SyC AAL. As of the end August 2022, 19 maps were under development.

The preparation of a video explaining the mapping platform is underway by the IEC SEC and will be promoted across the IEC community.

3.4 Directives maintenance process

The Directives are a key set of rules that ensure that technical committees operate in full transparency and consider the input from all their country stakeholders. The ISO/IEC Directives Part 1 is maintained by the ISO/IEC Joint Directives Maintenance Team which met once a year until 2021. In order to improve its capacity and to process the ever-increasing number of change requests, the team created an ISO/IEC Directives Change Request Form and reviewed its operating process based on advancement stages of the forms processing. This will result in a workplan of six meetings per year, planned in coordination with the SMB and TMB meetings.

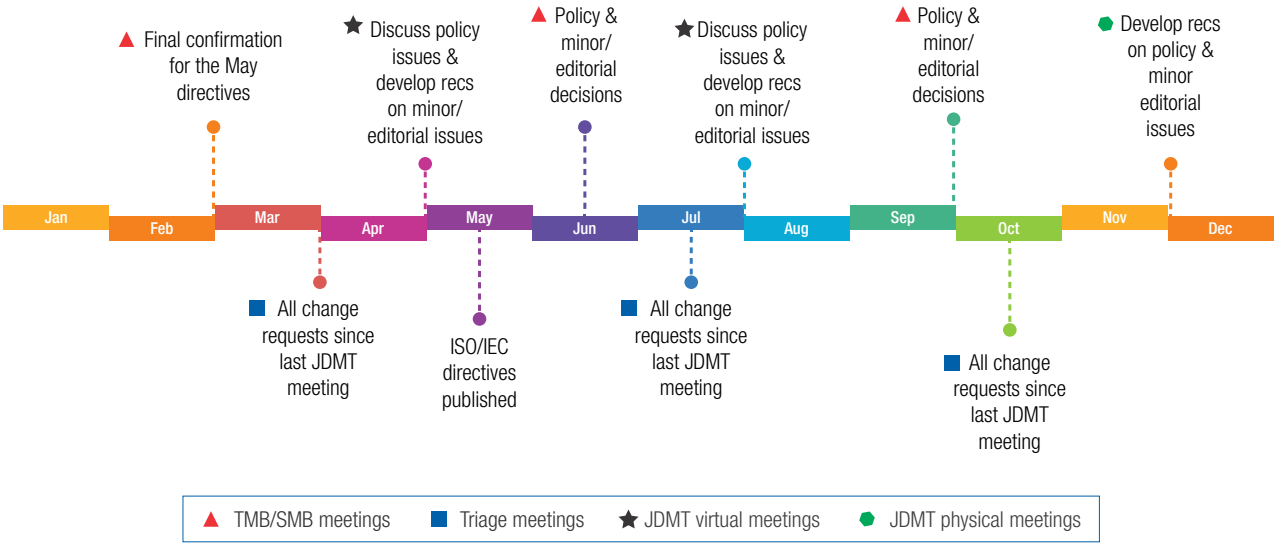


Figure 1 | JDMT annual timeline

3.5 Database standards

The Database Standards Reference Group, comprised of representatives from technical committees and National Committees, completed its work and submitted its conclusions to the SMB. This report included a proposal for a revision of the Annex SK *Procedures for IEC standards as databases* which was approved and published with the May 2022 edition of the Directives. Business specifications have been further developed and submitted to the IEC IT team for the further development of the corresponding IT tools.

3.6 Publication output

By the end of 2021, the IEC had issued the following types of publications:

Table 2 | Publications repartition – Year 2021

International Standards (new + maintenance)	433
Technical specifications (new + maintenance)	41
Technical reports (new + maintenance)	45
Publicly available specifications	8
Systems reference deliverables	2
IEC and ISO jointly developed IS + TS + TR	30
IEC and IEEE joint developed international standards	10
Total	**569**

The average development time for standards has decreased by 7% between 2020 and 2021, from 32,6 to 30,1 months.

Between 1 January and 31 August 2022, the IEC issued the following types of publications:

Table 3 | Publications repartition – end August 2022

International Standards (new + maintenance)	228
Technical specifications (new + maintenance)	23
Technical reports (new + maintenance)	27
Publicly available specifications	4
Systems reference deliverables (new + maintenance)	3
Total	**285**

The figures above show a slowdown in output which may be a consequence of the pandemic. The switch to virtual work has made the comments resolution by the working groups more time consuming, leading to delays in the development of standards.

The average development time for standards is 31 months.

3.7 New projects and maintenance

An analysis of the new projects initiated over the past few years indicates that a large number of projects for new standards (NPs in the graph on page 17) or for maintenance of existing standards (RRs in the graph on page 17) have been initiated in 2021. This may put the outlook for future publication output in a more positive perspective, even bearing in mind that the average development time is about 2,5 years.

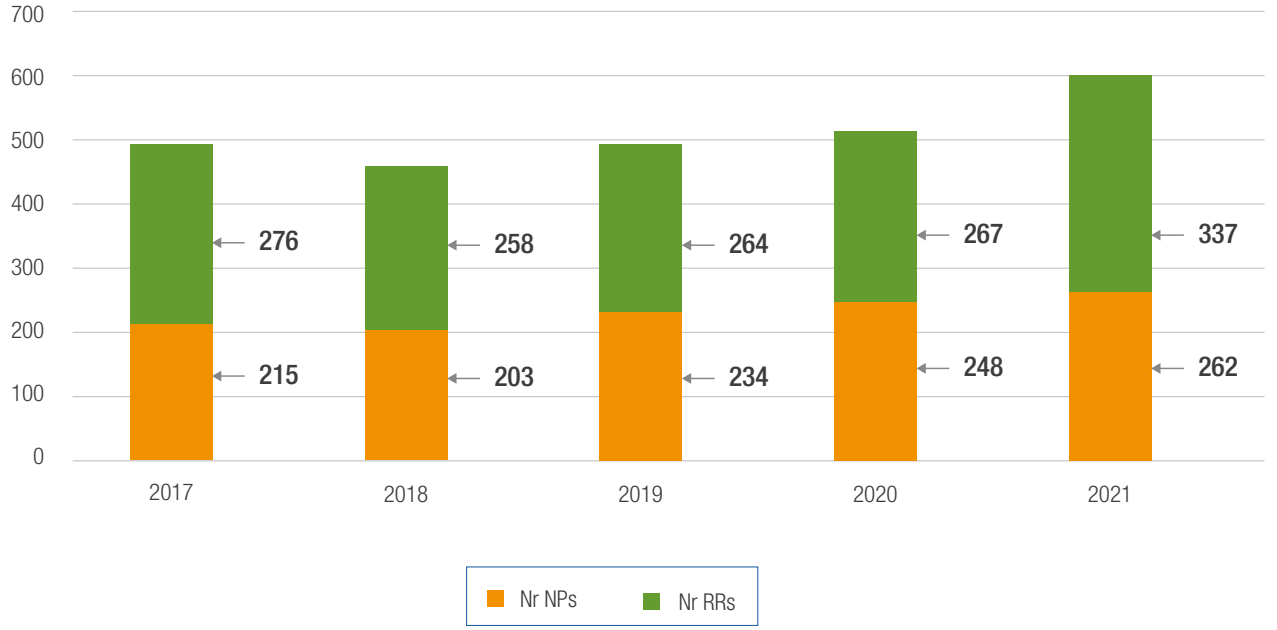


Figure 2 | Projects for new standards and for maitenance of existing standards

Table 4 | Number of NPs and RRs

Year	Nr NPs	NR RRs	Total
2017	215	276	491
2018	203	258	461
2019	234	264	498
2020	248	267	515
2021	262	337	599

Since January 2022, the number of late projects has decreased compared with 2021, reaching a low of 11% in June 2022. By August 2022, out of 2 036 active projects, 291 (approximately 14%) were late, consistent with the average of 14% in 2021.

The total number of active projects has exceeded the threshold of 2 000 since the beginning of 2022 and has remained above this value. This is the highest number of active projects in IEC history and indicates that a large number of publications are being prepared for future publication over the next few years.

4 Conformity assessment

4.1 New groups and processes

With respect to the new IEC Statutes and Rules of Procedure (SRoP) and the new IEC Strategic Plan, CAB took the decision to formally adopt a strategic mindset. Since the SRoP states that CAB decisions should be taken *in the best interest of IEC as a whole*, and that the IEC Strategic Plan was considered to be the current expression of the best interest of the IEC for now and the future, CAB should move proactively to achieve the goals of its Strategic Operational Plan (CA SOP).

A new subgroup to CAB WG 10 Policy and strategy has been created and tasked with reviewing and updating the CA SOP annually. This will include setting and adjusting goals, timeframes and KPIs, as necessary, as well as monitoring and reporting the progress towards the achievement of these goals.

The CAB Taskforce on SDGs continues its work to show the link between the IEC CA Systems through standards attributed to individual UN SDGs that are in their scope, as well as through other links.

A new working group, CAB WG 19 Digital transformation, has been set up to monitor the activities of other IEC subgroups and external organizations active on the topic of digital transformation, smart, AI, machine learning, machine readable standards, etc. It will also coordinate any relevant work with SMB SG 12 and IB TF 5 and inform CAB on this topic through regular reports.

To become more proactive and responsive to market needs, CAB has approved a new approach that allows IEC CA Systems to set up services based on draft IEC Standards. However, those services can only be implemented once the standard has been published.

To increase awareness about conformity assessment among national regulators, CAB has approved a proposal from CAB WG 14 Promotion and marketing to conduct a survey to IEC NCs and affiliate countries concerning their national regulators. CAB WG 14 will work with the IEC SEC to compile appropriate material to address regulators and government authorities through IEC NCs and Member Bodies.

4.2 Budget and finance

All IEC Conformity Assessment Systems performed well in 2021, experiencing growth in membership and demand, which is reflected through a surplus in revenue. Financial results, as per the IEC CA Systems 2021 audited accounts and the IEC Statutory Financial Statements for 2021, highlight the following operational results:

- IECEE = + 336 602 CHF
- IECEx = + 284 710 CHF
- IECQ = + 115 799 CHF
- IECRE = + 64 108 CHF

To date, the 2022 financial situation has been quite strong for all four IEC CA Systems. New certification bodies and test labs have joined, the scope has been extended in existing bodies and the number of issued certificates and test reports is likely to further increase. The 2022 budget includes a *designated reserve* to fund specific activities such as promotions and innovation, special IT projects, the development and implementation of new services and infrastructure.

Agreement has been reached on the 2023 budgets for the four IEC CA Systems by their respective Management Committees and validated by CAB.

4.3 IEC CA Systems highlights

4.3.1 IECEE

4.3.1.1 Business continuity

From a business continuity point of view, IECEE had a strong end of 2021 with a positive final result and a net growth in all areas. IECEE managed to increase the number of certificates issued as well as the number of registered participating organizations. This trend also continued during the first half of 2022, which underlines that in this, hopefully, final stage of the pandemic, business continuity will be ensured in IECEE.

As a further step towards normal conditions, IECEE successfully hosted its first hybrid committee for testing laboratories (CTL) meeting in Boston, USA. The IECEE Certification Management Committee (CMC) meeting took place in June in Halifax, Canada as a face-to-face meeting with remote access for participants unable to travel. It brought together 67 participants in person and 47 participants remotely. Of the 38 member bodies represented at the meeting, 24 had at least a part of their delegation present in person while only 14 member bodies were exclusively connected remotely. This is a significant contrast with the CTL meeting in March where the majority of participants attended remotely.

4.3.1.2 Peer assessment related matters

While the remote assessment processes allowed for business continuity during the period of significant travel restrictions, more IECEE peer assessments are again conducted as face-to-face assessments. To ensure plannability, the remote assessment process will remain available at least until the end of 2022 with the clear intention of allowing for the remote option as an exception as of 2023.

Following the lessons learned from the remote working experience, the Peer Assessment Training (PAT) group has completely redesigned the training concept for lead- and technical assessors. While traditionally a fully face-to-face training with content provided during the onsite training, it is planned to have a part of the training available online for preparation and self-study, including an examination, from 2023 onwards. This will allow the onsite training to better focus on complex practical issues related to peer assessment.

4.3.1.3 Highlights and new activities

IECEE transitioned into 2022 with a new, but very experienced leadership team with a change of most of the officers as well as other key roles. The new leadership team consists of Mr Steven Margis as the Chair, Mr Toshiyuki Kajiya as Vice-Chair, Mr Simon Barrowcliff as Treasurer and Mr John Quigley as CTL Chair.

During the 2022 CMC meeting, the membership approved the implementation of a new service on certification of personnel competencies (CoPC) which is intended to be available to participating organizations in 2023. Within the coming month, the operational details will be defined to ensure a smooth implementation of the new service.

Dedicated task forces are currently working on further extensions to the IECEE scope and service portfolio. For example, one task force is examining the feasibility of radio services, which is intended to support the market with solutions allowing easier market access and approval processes for appliances using radio transmitting or receiving devices. Another task force is examining the feasibility of services for domestic IoT devices given that many domestic devices are connected to the Internet. However, these two potential areas of work will require more time to evaluate market needs and feasibility of implementation by IECEE.

The IECEE membership assigned the tasks related to the IEC Strategic Plan and the CAB operational plan to the IECEE Policy and Strategy Committee (PSC). The PSC is a high profile and experienced committee which is well suited to conduct this important work. As with the implementation of the masterplan, the IECEE is fully dedicated to the IEC Strategic Plan.

4.3.2 IECEx

4.3.2.1 Business continuity

From a business continuity point of view, IECEx maintained strong growth in 2021 despite travel restrictions, and ended the year with a positive result due to business continuity measures introduced in February 2020. These measures addressed both the peer assessment as well as the auditing of IECEx certificate holders as required by the IECEx schemes covering equipment, services and personnel competence. As a result, IECEx increased the number of certificates issued as well as the number of IECEx certification bodies and testing laboratories. This trend has continued during the first half of 2022.

4.3.2.2 Peer assessment and remote auditing

Business continuity measures enabled remote meetings and the implementation of remote tools to undertake peer assessment and auditing of certificate holders by IECEx certification bodies. The IECEx Management Committee, via its ExAG group, has undertaken a lessons learned review in order to determine the possible use of remote tools as well as on-site visits, while preserving the need to ensure full and complete assessments are undertaken.

4.3.2.3 Highlights and new activities

While ensuring the safe use of equipment (both electrical and mechanical) in areas where flammable or combustible materials may be present, IECEx has responded to the growing interest in hydrogen as an emerging future source of energy including green hydrogen, and established a new expert working group, IECEx WG 19, in late 2021 under the convenorship of Dr Arnhold. Working with experts from ISO/TC 197 on hydrogen technologies, IECEx has produced a new draft IECEx operational document to assist in harmonizing the approach to international certification of hydrogen dispensing equipment.

In addition, the IECEx certificate of personnel competence scheme has been expanded to include the new unit of competence Ex 011 dedicated to hydrogen safety. This positions IECEx as the international focal point for the certification of equipment, services and persons associated with the production, distribution and use of hydrogen, especially green hydrogen, and demonstrates the agility of IECEx to respond to traditional, current and emerging conformity assessment needs of industry, government and stakeholders.

Apart from its work on hydrogen over the past year, IECEx is forging ahead in its relationship building with the IECEx Management Committee agreeing to:

- Re-engage with UNECE
- Maintain its solid and valuable collaboration with IEC TC 31
- Further develop its initial cooperation with ISO/TC 197 and IEC TC 105
- Build on its initial relationship with IRENA
- Re-activate the joint working group between IECEx and OIML in the area of legal metrology

As part of its marketing and promotions efforts, IECEx launched three IECEx animated videos with translated subtitles. They are accessible from the IECEx website as well as the IEC YouTube channel.

4.3.3 IECQ

4.3.3.1 Business continuity

From a business continuity point of view, IECQ maintained strong growth in 2021 despite travel restrictions, and ended the year with a positive result due to business continuity measures introduced in February 2020. These measures addressed the issue of peer assessment as well as the auditing of IECQ certificate holders as required by the IECQ schemes covering approved components and approved processes. As a result, IECQ had an increase in the number of certificates issued and maintained its membership of IECQ approved certification bodies.

4.3.3.2 Highlights and new activities

In recognition of the growing demand to address a globalized approach to conformity assessment on the topic of a green future, IECQ formed special working group IECQ WG 14 under the convenorship of Ms Marie-Elisabeth d'Ornano. IECQ WG 14 has positioned itself as a focal point for discussions and proposals for conformity assessment in support of the IEC commitment to a more sustainable future. Over the past year, IECQ WG14 has worked with experts from IEC TC 111 and developed a harmonized approach for the assessment and certification of organizations claiming to comply with IEC 62430 in the area of environmentally conscious design. The cooperation with IEC TC 111 continues to address an approach towards carbon footprint declarations and product lifecycle.

In addition to its collaborative work with IEC TC 111 over the past year, IECQ built on its efforts in 2020 to move its IECQ CB auditor training course (typically five days face-to-face) to full remote delivery. In 2021, eight formal IECQ CB auditor training courses were conducted remotely, including the exams.

4.3.4 IECRE

4.3.4.1 Business continuity

IECRE reported a very strong result for 2021 with a surplus and no direct tangible financial impact due to pandemic restrictions. IECRE managed to remain stable and in the first half of 2022 had a net growth in membership. As in previous years, the wind sector remains the dominating factor for this stability. Based on the indicators from the first half of 2022, the trend continues and there is currently no immediate sign for concerns in terms of business continuity. The IECRE membership is starting to engage in onsite meetings and to transition away from fully remote meetings. The upcoming RE Management Committee (REMC) meeting in October, hosted by the German Member Body in Frankfurt, is planned as a face-to-face meeting.

4.3.4.2 Peer assessment

While remote peer assessment processes ensured development and business continuity for IECRE, first assessments are again planned onsite. For a small and developing system like IECRE, remote assessment was crucial for its further development.

In parallel, IECRE improved its peer assessment processes over the past year, which included improvement needs highlighted by CAB. Overall, it was intended to move from start-up requirements in peer assessment to more permanent and mature solutions as well as to improve efficiency by establishing stronger aligned processes between the three sectors, wind, marine, solar PV. A first round of updated rules and processes has been approved by the membership, but the work will continue.

4.3.4.3 Highlights and new activities

To underline the importance of the IEC Strategic Plan and CAB operational plan, the IECRE membership decided to strengthen their focus on strategy and strategic issues by creating a working group to fully engage in strategy. While IECRE, which is solely dedicated to conformity assessment services in the area of renewable energy generation, provides a 100% fit into the IEC Strategic Plan, IECRE WG011 on strategy will ensure a full implementation of the CAB operational plan as well as highlight strategic issues for the further growth and development of IECRE.

REMC SG 554: Small winds, reached final drafting stage for the process of conformity assessment certification of small wind turbines. The adjustments and modifications for the IECRE peer assessment process reached an important milestone with the approval of the updated operational documents by the membership and the soon to close voting process at the end of September for the Rules documents.

Further areas for potential future work include grid code compliance and cyber security issues in renewable energy assets. Both areas suggest very high market demand, but will require further work. While the challenge for grid code compliance is the lack of harmonized international grid requirements, the cyber security area needs to be aligned with IECEE which is the IEC CA community's focal point on cyber security.

5 Membership, Affiliates & Capacity Building

Helping countries benefit from IEC

(January to August 2022)

88 Members, 86 affiliates

- Timor Leste became an affiliate in January 2022
- Liberia became affiliate plus in May 2022
- Uzbekistan approved to move from affiliate to Associate Member in January 2023

Tailored approach in every region - 76 events, 6 260 participants



- Africa – build awareness (24 events, 910 participants)
- Americas – capacity building (15 events, 2 865 participants)
- Asia-Pacific & Middle East – strengthen participation & build awareness (17 events, 2 110 participants)
- Europe – maintain participation (20 events, 375 participants)

*"events" includes outreach calls, events organized by IEC, events where IEC had a speaking slot, regional webinar, etc



Building knowledge & enthusiasm - 25 activities, 2 800 participants

- 4 NC training sessions
- 1 three-day Standardization Officer training
- 7 webinar events
- 5 *Standard in a Day* bootcamps
- 8 OSD project related events

Helping Members engage stakeholder



- Government/regulators/policy makers: participation in 15 events
- Industry: participation in 11 events
- Academic institutes: participation in 3 events



Sharing experiences and ideas

- 2 IEC Forum meetings
- 2 workshops on IEC CA Systems for affiliates
- 5 active mentoring partnerships
- 9 regional sessions on New Revenue Generation

Encouraging affiliates to use IEC work



- 2 affiliates started adopting, 5 made additional adoptions
- 7 countries with Affiliate Conformity Assessment status
- 1 affiliate used its CD/CDV commenting rights
- 1 affiliate declared its first technical selection



Dialogues on a broad range of topics

- IEC Strategy
- IEC Governance transition
- Diversity within the IEC
- Stakeholder engagement
- Artificial intelligence
- Circular economy and environmental aspects

5.1 Membership update

As of 31 August 2022, the IEC has 62 Full Members and 26 Associate Members.

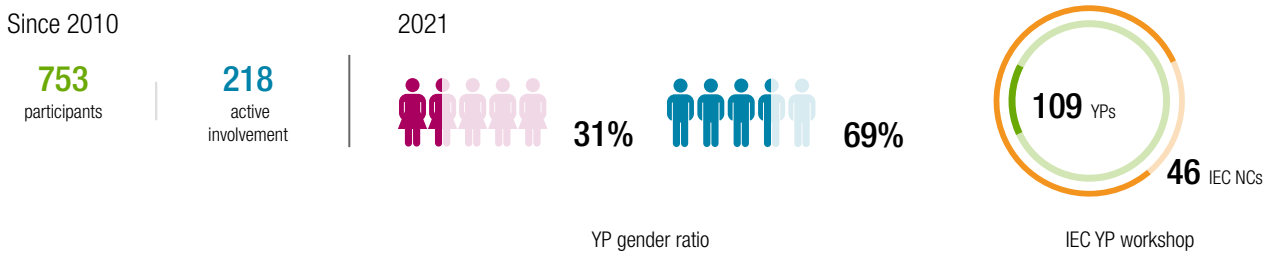
The General Assembly approved by correspondence the application from Uzbekistan for Associate Membership as of 1 January 2023. Libya was withdrawn from Membership in February 2022, following 5 years of suspension because of unpaid dues.

5.2 Young Professionals

Since its inception in 2010, the IEC Young Professionals (YP) Programme has welcomed 753 YPs of which 218 have maintained an active involvement at the international level.

A total of 109 YPs from 46 IEC National Committees participated in the 2021 Young Professionals workshop, of which 40 participated in person and 69 remotely.

IEC YP Programme participation



The YPs were able to observe either SMB or CAB meetings to learn more about the IEC standardization and conformity assessment work. A *Standard in a Day* bootcamp, organized by the IEC Academy, allowed YPs to contribute to the development of a standard. They learned about different stakeholders as well as the IEC processes, including drafting, commenting, and consensus building.

The YPs also participated in several interactive sessions led by 30 experts addressing topics such as digital transformation, SDGs, artificial intelligence, wind energy, circular economy, etc.

Several 2021 IEC YPs provided input to a series of activities, including the New revenue generation (NRG) Working Group 1 on IEC Smartplace, the IECEE preparatory meeting and a workshop on the platform economy model. Two YPs were accepted as members of the IB TF 3 on SDGs. Three 2021 YPs presented at the *AI with Trust conferenc*e.

The next IEC YP workshop will take place alongside the 2022 IEC General Meeting and will welcome 101 YPs from 50 IEC NCs. Young Professionals will have the opportunity to meet the IEC leadership team, network with experts from around the world and contribute to interactive sessions about standardization and the IEC CA Systems.

5.3 IEC Academy

The IEC Academy organized its Academy and Capacity Building Day during the 2021 General Meeting which brought together 54 onsite and 155 remote participants from 67 countries. Addressing the topic of *2022 and beyond – the new normal*, panellists representing a number of IEC NCs shared their perspective on the future of hybrid meetings (here to stay), forecasts regarding a return to onsite meetings (uncertain), training (essential for capacity building), consensus building (slower than before the pandemic

due to the absence of face-to-face meetings). IEC NCs also indicated their ongoing need for training and support to optimize hybrid meetings.

5.4 Affiliate Country Programme

As of August 2022, 86 countries participate in the Affiliate Country Programme (ACP). Somalia and Timor Leste are the most recent countries to have joined the programme.

During the 2021 General Meeting, the ACP organized the following three events which were attended by 88 delegates from 38 countries:

- Affiliate forum entitled *How to establish a NEC and attract power utilities and regulators in the NEC work?* with three case studies from Costa Rica, Côte D'Ivoire and Uzbekistan.
- Workshop for industrializing countries entitled *UN SDG 5 on gender equality and diversity*.
- NEC Secretaries and Presidents workshop entitled *How to attract local companies and stakeholders* with case studies from Ecuador, Israel, Mongolia, and Norway to encourage affiliate countries to implement similar strategies.

As part of the Affiliate Conformity Assessment (ACA) activities, two workshops took place on IECEx schemes and the IECRE wind energy scheme. In addition, a new IECRE course on *Equipment for use in Renewable Energy applications* is available on the IEC Academy platform.

Congo and Cote D'Ivoire concluded a mentoring partnership.

For further information, please refer to the Annexes – IEC Regional Directors' activities.

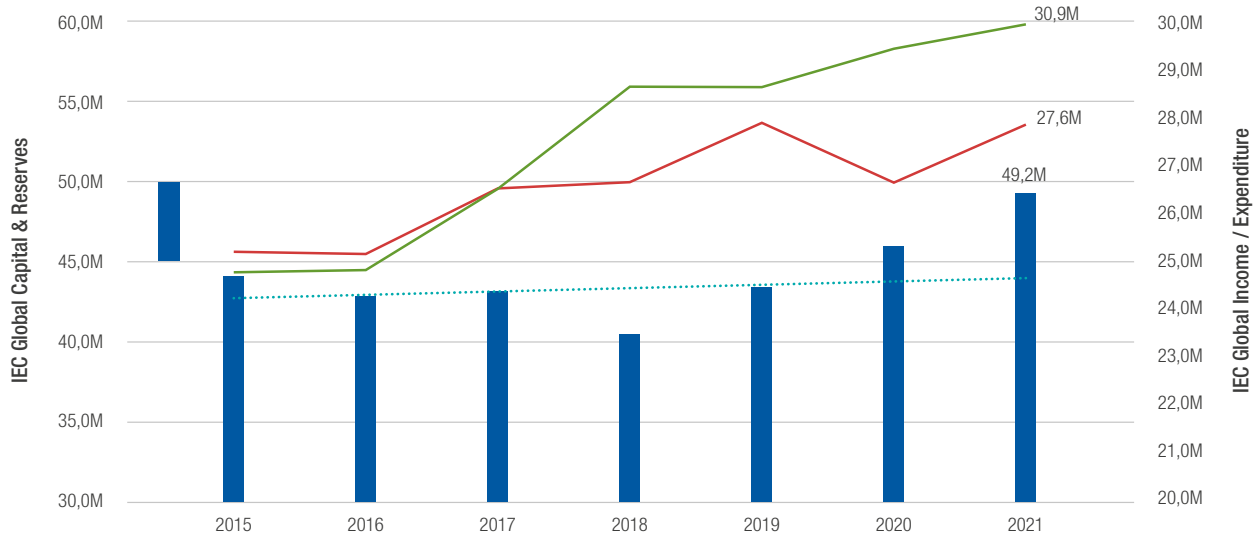
6 Finance, sales and business development

Consolidation is underway for the 1 IEC approach to finances which will aggregate the five IEC business units (Standards & Services and the four IEC Conformity Assessment Systems).

6.1 2021 financial performance

The IEC 2021 end-of-year results are encouraging and continue the positive trend started in 2018. The IEC income stood at CHF 30,9 million which is up 5,1% on 2020 and the highest ever in its history.

IEC Global financial status 2015-2021



The drivers for this growth can be attributed to a marked increase in net royalties for Standards & Services as well as an increased income for IEC Conformity Assessment Systems.

Expenditure was at CHF 27,6 million which is a slight (3,5%) increase compared with 2020. This increase is due to more investment in IT, legal services, finance and business development. As can be expected, the expenditures for meetings and travel are lower than normal due to the Covid-19 restrictions. The net difference between Income and Expenditure as represented by the Operational and Financial result is up by almost 15%.

Finally, Global Capital & Reserves at CHF 49,2 million are up by CHF 3,1 million or 6,7%. These promising results will allow the IEC to continue investing in areas such as IT, digitalization, business development and cyber security.

The IEC SEC continues to develop detailed and transparent financial publications in close collaboration with the IEC Treasurer.

6.2 2022 financial update

The 2022 budget was approved by the IEC Council at the 2021 General Meeting in Dubai.

As of July 2022, the year-to-date (YTD) financial figures are encouraging; income has increased compared to the same time last year and to the YTD 2022 budget. Expenditure remains well under control, with a positive YTD operational and financial result.

In the context of the 1 IEC, the first-ever IEC aggregated forecast for end 2022, outlooks 2024/25 and statutory budget 2023 aggregating all five IEC business units (Standards & Services and the four IEC CA Systems) have been presented to the Business Advisory Committee (BAC) for review on 27 July and to the IB on 30 August. The 2023 statutory budget was recommended by IB for approval by the General Assembly in November.

6.3 Monitoring Covid-19 impact

The Covid-19 pandemic did not have a significant impact on IEC activities or finances during the last quarter of 2021 nor in the first two quarters of 2022. It was therefore decided by the IB at their June meeting to discontinue the report.

6.4 New revenue generation

As of August 2022, three New revenue generation (NRG) products have been launched successfully. A total of 26 Commented versions of standards have been published, two IEC Academy Masterclasses on IEC 62368-1 are available, and 2 270 IEC CA test report forms (TRFs) are available and distributed by 14 IEC NCs.

The second term of NRG is focusing on four new projects, including a new paid service based on the certificate database and the online certificate system, services for consortia and new products based on IEC publications. These projects were selected out of more than one thousand new business ideas.

Two additional NRG products are expected to launch by the end of the year: the IEC Smartplace and the Extended version. A market analysis will be conducted to better understand demand for IEC International Standards at the end of the third quarter of 2022.

In order to further deepen collaboration with IEC NCs, the IEC SEC has initiated quarterly meetings with NC Secretaries, and sales/marketing staff to provide detailed information on new IEC products and services as well as share related promotional activities and available marketing assets. *Ad hoc* sessions allow interested NCs to express their needs, learn how they can collaborate to introduce these products and services into their markets, and share promotional plans that are inspiring for the whole community. To date, more than 100 participants representing 40 NCs have attended these meetings.

On 3 November 2022, during the IEC General Meeting, an NRG open session will present 2022 results.

6.5 IEC Products & Services Portal

IEC PSP is the backbone of the master data publications central repository. It replaces several previously used platforms: the library server, the revisable files database and the watermarked collection. The IEC PSP offers the following features: a powerful search engine, free access to previews, personalized bookmarks, favourite functionality, and comments creation and management.

All IEC NCs have full access to the back-office platform, allowing them to not only create commercial subscriptions for their customers but to also provide access autonomously to their experts. User guides both for the back-office platform and the IEC PSP are also provided.

Customers and experts are able to access IEC Products on a read-only basis, while IEC NC administrators can download the files in PDF, Word, and XML formats (as available).

7 IT operations

7.1 IT governance

The execution of the IT project portfolio for 2022 is ongoing and the anticipated IT project portfolio for 2023 is finalized to support the preparation of the budget. Special focus is being placed on IT process improvements, such as IT project management.

The IT risk register was presented to the Governance Review and Audit Committee (GRAC). Progress was achieved for different identified risks, among which technical debt assessment. The new IEC Membership IT Network (IMIN) modalities were presented to the BAC and suggestions to collaborate closely with ISO were adopted.

7.2 Key projects

Finalization of major services and projects for the IEC community and IEC SEC, including analysis of the meeting registration system refresh, automation and digitalization of the quality management processes for the peer assessment of the IEC CA Systems, finalization of the new subscription-based IEC Products and Services Portal.

In addition, the content management system has been updated and migrated to a new cloud provider. The cloud back up project has also been implemented.

7.3 Online standards development

An updated version of the OSD platform was launched at the end of June. This new version enables IEC NCs to use the platform for the collection, consolidation, and submission of their comments to draft standards. It is available for two pilot projects that already are or will soon be at the committee draft for comments (CD) stage. The new version also offers enhancements to the user interface. A joint steering group between IEC and ISO meets on a regular basis to coordinate collaboration.

7.4 Other joint IEC/ISO projects

IEC and ISO continue to frequently exchange information on best practices and collaborate extensively to align IT systems whenever it makes sense for the members of each organization. In this context, harmonized application programming interfaces (APIs) has been put in place. The two organizations also collaborate on SMART standards, meeting registration systems, and best practices in data services and project management.

7.5 Cyber security

The joint meeting with ISO, held in February, addressed new opportunities for cooperation in cyber security. A presentation outlined cyber risks in the context of a standards development organization and proposed a multi-year mitigation programme including a risk log ranking cyber risks in terms of probability and impact. Ongoing collaboration and best-practice sharing with ISO on cyber security is underway.

IEC SEC has put in place a comprehensive set of security measures to reduce risks related to cyber attacks: advanced threat protection software to fight suspicious login attempts; multi-factor authentication; digital signatures in standards development templates; enhanced staff sensibilisation and training. Single sign-on solutions for core IEC systems and alerts of conspicuous system behaviours in anticipation of potential instabilities or cyber attacks were also implemented.

7.6 IT internal support

The IT Division re-orientation process is about to be finalized. Consultations took place with IT management, IT colleagues, and IEC management and details were presented at the IEC Global Staff meeting on 30 June. HR and IT have developed updated job descriptions to reflect the roles and responsibilities to support IEC strategic objectives.

Collaboration between General Services (HR) and IT led to improved user services regarding virtual and physical meeting rooms set-up and agile IT equipment procurement and provisioning.

8 Resources and efficiency planning

8.1 Enterprise resource planning

Further digitalization of the IEC SEC is underway. For the forthcoming ERP system, the analysis phase for finance, sales and the IEC CA Systems was completed as planned by the end of March and a steering committee meeting was held in April to review the results.

It was decided to move forward with identified IEC-specific developments and to incorporate the appropriate business intelligence (BI) tool for improved integrated reporting and statistics. The design and training phases are currently ongoing with user-acceptance testing in Q3 and go-live scheduled for early Q4 2022.

8.2 Staff rules

The IEC SEC has updated and modernized the rules for its staff based in Geneva, following an in-depth review. The updated rules comply with Swiss human resource laws and regulations and have been signed by each staff member.

8.3 Staff development

The IEC SEC has introduced the competency model to identify staff development needs, build critical competences, and optimize performance evaluation. The aim is to ensure that staff is both motivated and well equipped to address the future needs of the organization. A training plan for 2022-2023 has been built to support IEC staff development in line with the IEC competency model.

To promote individual staff development, the staff have been given access to an online training catalogue and two specific training sessions to strengthen managerial capabilities.

8.4 Recruitment

The IEC SEC has welcomed eight new employees since January 2022 (six replacements and two new positions) for a total full-time equivalent (FTE) staff of 117,2 at the end of August 2022. The newly created position of Digital Transformation Officer, to help develop the digitalization strategy of the IEC and coordinate its implementation, has now been filled. The same holds true for the new Director of the Standardization Division and an Officer to support the Global Impact Fund.

8.5 Contract management

The IEC SEC has gathered and analyzed over 250 financial and non-financial commitments from different divisions to build a central inventory. This allows to streamline negotiation, drafting, review and management of future contracts.

Annexes – IEC Regional Directors' activities

Annex 1 – IEC-APRC

Name of event	Number of participants	Notes
Web meeting to introduce IEC to Tuvalu	10	Online
Regional affiliate meeting	12	Online Brunei Darussalam, Bhutan, Cambodia, Fiji, Mongolia, Myanmar, Nepal, Papua New Guinea (absent with apologies)
EU-Singapore FTA webinar	50	Online
APEC Joint Regulatory Advisory Committee on electrical and electronic equipment meeting	30	Online
APEC Subcommittee on standards and conformance meeting	70	Online
Web meeting with stakeholders from Mongolia	20	Online
ACCSQ WG 1 on Standards meeting	40	Online
IEM-Standards Malaysia-Energy Commission ASEAN Electrotechnical Symposium	170	Hybrid IEC President keynote video
IEC standards development workshop – Malaysia	22	Online with NC from MY and IEM. APRC Regional Director, MY NC Secretary and NC expert
Regional affiliate meeting	16	Online Brunei Darussalam, Bhutan, Cambodia, Fiji, Mongolia, Myanmar, Nepal, Papua New Guinea, Timor Leste
PASC meeting	123	Online IEC President, IEC Secretary-General and APRC Regional Director
Sales and copyright workshop - Philippines	11	Online IEC Head of Sales & Business Development
China YP Programme	183	Online APRC Regional Director provided training, IEC Technical Officer supported judging and Director of Membership, Affiliates and Capacity Building gave a speech.
Launch ceremony of Chinese version of IEC TS 62257-9-5:2018 and IEC TS 62257-9-8:2020	630	Hybrid Congratulatory video by APRC Regional Director Six newspapers reported on the ceremony, including China Quality News and JingBao News

APEC Subcommittee on standards and conformance meeting and APEC Joint Regulatory Advisory Committee on electrical and electronic equipment meeting	100	Hybrid In person participation by IEC APRC Regional Director. Important opportunity to promote awareness on latest developments in IEC to trade and standards officials from APEC economies at the SCSC meeting and to regulators at JRAC.
17th International Standards Olympiad	120	Online Congratulatory video by IEC Secretary-General and IEC Technical Officer in the panel of judges. Event targets two categories of students – middle school and high school – with the participation of 40 teams (120 students) from Korea and internationally. It aims to promote awareness about the benefits of standards for the safety, quality and reliability of products and services to students.
International Standardization Forum and opening of Chinese NC IEC promotion centre	500	Hybrid Event was held alongside the opening ceremony of the Chinese NC IEC promotion centre to support the development, use and adoption of IEC International Standards and Conformity Assessment Systems in China and encourage more Chinese stakeholders to actively contribute to the IEC community. Participation by IEC Secretary-General and various IEC experts and those from other organizations in the forum. APRC Regional Director, together with Chinese NC Secretary and others, delivered presentations during the capacity building workshop on 21 Aug.

Annex 2 – IEC-AFRC

Name of event	Number of participants	Notes
Regional discussion with affiliates in Africa on SDGs	14	Online
Regional discussion with Members in Africa on SDGs	6	Online
IECEx awareness session with NC from Nigeria by IECEx Executive Secretary	17	Online
IECQ awareness session with NC from South Africa by IECQ Executive Secretary	14	Online
Regional discussion on French product certification and commenting process	12	Online
Online workshop on solar products' end-of-life in West Africa in French and English	200	Online about 80 participants per session (four sessions held)

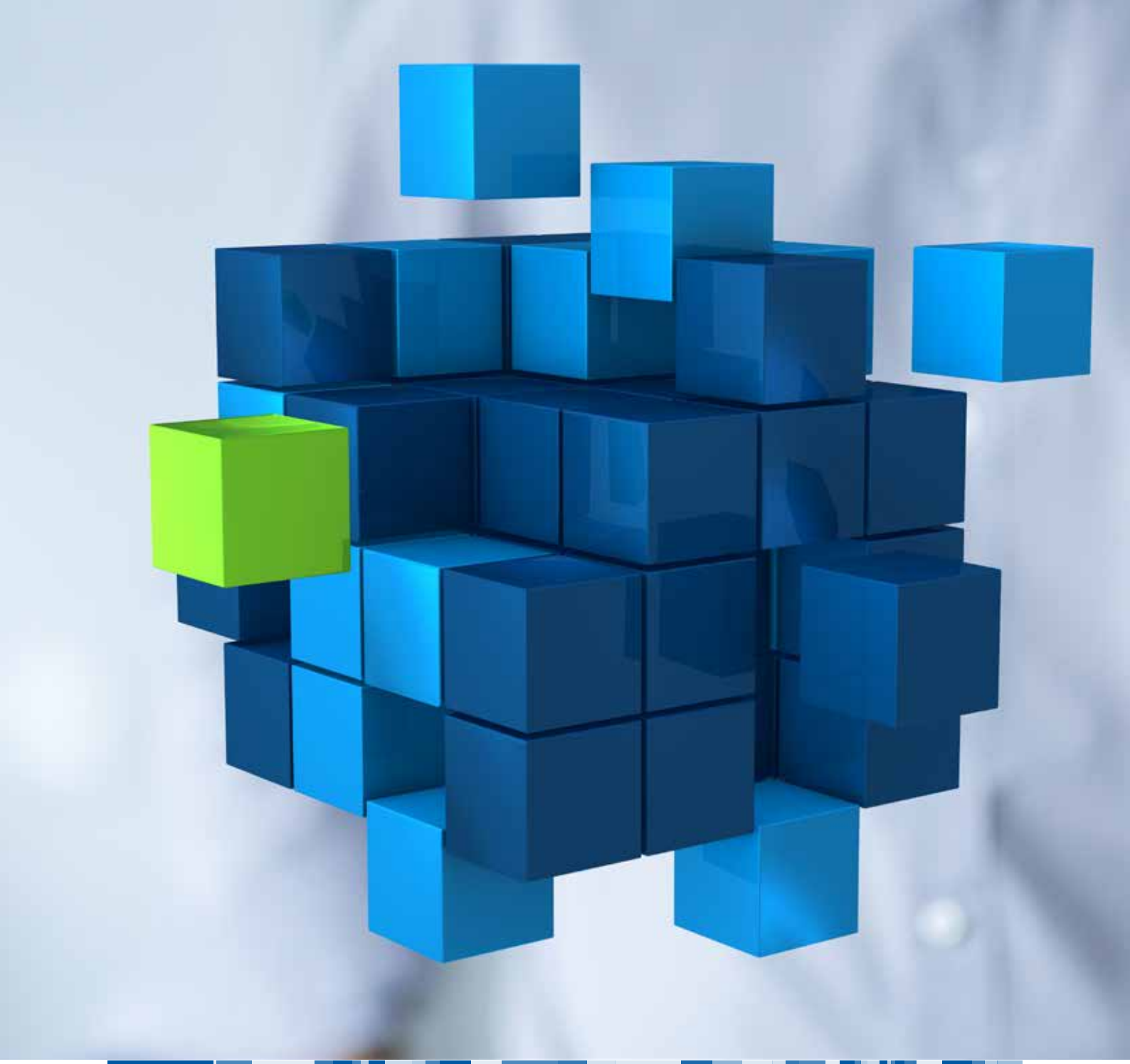
Name of event	Number of participants	Notes
Regional discussion with affiliates in Africa on assembling electrotechnical products in Africa – situation and way forward	14	Online
Regional discussion with Members in Africa on assembling electrotechnical products in Africa – situation and way forward	6	Online
Second regional NC benchmarking session talk with NC Secretary from Norway	23	Online Côte D'Ivoire, Ethiopia, Ghana, Kenya, Morocco, Nigeria, South Africa, Uganda
Second regional NEC benchmarking session talk with NC Secretary from Norway	37	Online participants from 20 countries: Botswana, Cabo Verde, Congo, Eswatini, Gabon, Gambia, Guinea, Guinea Bissau, Liberia, Madagascar, Namibia, Niger, Rwanda, Senegal, Somalia, Sudan, Tanzania, Togo, Zambia, Zimbabwe
First regional NC benchmarking session talk with NCs from Côte D'Ivoire and Ghana	19	Online NCs from Côte D'Ivoire, Ethiopia Ghana, Nigeria
First regional NC benchmarking session talk with NCs from Senegal and Rwanda	21	Online Participants from Botswana, Chad, Gabon, Gambia, Guinea, Madagascar, Namibia, Rwanda, Senegal, Somalia, Tanzania, Zambia, Zimbabwe
NC free regional discussion on South-South cooperation	4	Online Participants from Kenya, Nigeria and South Africa
NEC free regional discussion on South-South cooperation	15	Online Participants from Botswana, Chad, Gabon, Cameroon, Guinea, Liberia, Madagascar, Namibia, Rwanda, Senegal, South Sudan, Togo, Zimbabwe
Online workshop on regional numbering of IEC Standards	6	Workshop for AFSEC TC Officers
Free topic discussion on sustainable development objectives for the African French speaking community	28	Online Participants from Algeria, Benin, Côte D'Ivoire, Gabon, Guinea, Morocco, Senegal, Togo
Participation in ARSO General Assembly in Yaounde (Cameroon)	+150	Benin, Botswana, Burkina Faso, Burundi, DRC, Egypt, Eswatini, Ethiopia, Gambia, Ghana, Guinea, Kenya, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe. Partners from USA, China, BSI, GSO, etc.
Contact visit in Sao Tome & Principe	20	National stakeholders with the State Secretary of Industry and Trade
Participation in APUA Congress in Dakar (Senegal)	+150	With IEC President Elect Building awareness about IEC with African power utilities and connecting CEOs to relevant IEC NCs and NECs

Name of event	Number of participants	Notes
Participation in AFSEC General Assembly	70	Côte D'Ivoire, Egypt, Ethiopia, Ghana, Kenya, Namibia, Nigeria, Rwanda, Senegal, South Africa, Zambia, Zimbabwe 4 partners (IEC, IEEE, PTB, State Grid Corporation of China)
One-to-one call	9	Gabon (1), Morocco (2), Nigeria (3), South Africa (1), Tanzania (1)
NC free regional benchmarking session with Nigeria	30	Online Participants from Côte D'Ivoire, Kenya, Nigeria, Uganda
NC free regional benchmarking session with South Africa and Ethiopia	22	Online Participants from Nigeria, Côte D'Ivoire, Ethiopia, Morocco, South Africa, Uganda

Annex 3 – IEC-LARC

Name of event	Number of participants	Notes
Discussion regarding support to Bolivia (PBT – IEC)	4	Online
Meeting on cooperation IEC – PTB – IBNORCA	6	Online
Webinar *Brazilian Strategies for Digital Transformation and Artificial Intelligence*	75	Online
International seminar *Digitization of the electrical industry 4.0*	450	Online
Web meeting with Bolivian stakeholders	60	Presence from public, private and academia sectors
The 3rd Edition of Quality Day in Haiti	200	Attended by public and private sectors
2022 COPANT General Assembly and workshops	130	Presence of all COPANT Full Members, adherent members, and guests IEC presentations on SMART Standards, digital transformation, circular economy, environmental aspects and IEC annual activities report
Web meeting with Dominican Republic NEC stakeholders	40	Presence of Brazil NC Officers (mentoring programme) Attended by local public and private sectors
Chile NC support mission	40	In person meetings with several stakeholders as regulator, energy efficiency agency, utility and utilities association, retailors, academy and R&D Participation in the NC board meeting
Web meeting with Brazilian stakeholders on IEC CAB and IEC CA Systems	10	Presence from public and private sectors

Name of event	Number of participants	Notes
DKE Young Professionals camp 2022	20	Presentation on the IEC YP Programme Presence of young professionals from several stakeholders and countries
2022 International Energy Symposium – SIEC / Mexico – organized by CANAME (Mexican Chamber of Electrical Manufacturers)	540 in person 1 050 virtual	Opening address by IEC President and IEC Secretary-General Presence of representatives from energy sector, government authorities, manufacturers, etc.
Micro, small and medium enterprises event (Mexican Secretariat of Economy)	40 in person 110 virtual	Event dedicated to the importance of the involvement in standardization and conformity assessment
Thematic meetings in Mexico with presentations about: • Standardization • Conformity assessment • IEC and National Young Professionals Programme	50	Presence of stakeholders' representatives from NSBs, regulators, industries, certification bodies and test laboratories
Visits to three test laboratories in Mexico with potential to start or increase their participation in the IEC Conformity Assessment Systems	40	Clarifying the IEC CA Systems benefits to industries, certification bodies and test laboratories



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