



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION



IEC MASTERPLAN

IEC. Making electrotechnology work for you.

Masterplan 2011 is published with thanks to all those individuals in member National Committees, management bodies and the wider IEC community who have contributed with their ideas, comments and support to development of the Commission's new strategic review and plan.



CONTENTS

| | |
|---|----------|
| VISION AND MISSION | 4 |
| A – THE IEC MARKET | |
| A1 – Making IEC the home of industry..... | 5 |
| A2 – Leadership in emerging markets and technologies..... | 6 |
| A3 – Expanding the audience..... | 7 |
| A4 – Raising the market profile..... | 8 |
| B – TECHNOLOGY | |
| B1 – Anticipating market needs..... | 9 |
| B2 – Systems and sectoral approaches..... | 10 |
| C – CO-OPERATION | |
| C1 – Global collaboration..... | 11 |
| C2 – IT tools and capabilities..... | 12 |
| D – GOVERNANCE AND STRUCTURE | |
| D1 – National Committee representation and operations..... | 13 |
| D2 – Conformity assessment governance..... | 14 |
| E – EXPERTS AND LEADERS | |
| E1 – Continuity in the quality and availability of IEC experts and leaders..... | 15 |
| F – FINANCES, EFFICIENCY AND THE IEC FAMILY | |
| F1 – Financial stability and the IEC business model..... | 16 |
| F2 – Technologies and processes for efficiency..... | 17 |
| F3 – Development of the IEC Family..... | 18 |



VISION

Worldwide use of IEC standards and conformity assessment systems as the key to international trade.

MISSION

IEC's mission is to be globally recognized as the leading platform for standards, conformity assessment systems and related services needed to facilitate international trade and enhance user value in the fields of electricity, electronics and associated technologies.



Several stakeholder groups make up the IEC's global market, broadly comprising industry and business; utilities; governments; scientific, R&D and test establishments; academia; and end-user groups. Of these, it is industry in a broad sense that makes the greatest investment in the IEC's work, contributing its time, money and experts to develop the standards and services it needs and uses.

The nature of IEC's close and direct relationship with industry, through its member National Committees, is an important characteristic that differentiates the Commission among its peers and partners in the international standardization and conformity assessment world. It is also therefore the key to the IEC's operational and service culture, which aims to provide the highest-quality and most efficient return on all its stakeholders' investments.

If the Commission is to sustain its leadership in meeting market needs and expectations, further efforts are required to reinforce and expand these close relations with its principal stakeholders. Beyond the high-level individuals themselves, industry and other sectors use processes and procedures that may be emulated in the IEC to good effect, notably in enhancing efficiency in its governance.

Because of the key role that its relationship with industry will continue to play in unlocking sustainable success, certain crucial areas of action are recurring themes throughout this strategic plan:

- enhancing the influence of stakeholders in the technical and management work;
- supporting all National Committees in securing proper representation of national electrotechnical interests;
- further developing the IEC "brand" and promoting the Commission globally as the leading world-wide platform for international electrotechnical standardization and related conformity assessment matters;
- enhancing the role of the Market Strategy Board in providing direct input from principal markets and increasing visibility of the IEC among all key stakeholders;
- extending co-operation with other international bodies and partners to better serve complex markets.

Making IEC the "home of industry"

IEC will enhance its position as industry's natural "home", the platform of choice for all standardization and conformity assessment needs in the global electrotechnical community that the IEC serves.



Leadership in emerging markets and technologies

IEC will seek early leadership in emerging market sectors, identifying those that have strong potential to benefit from using the IEC international standardization platform.

As new technologies are developed – and societal, industrial or economic priorities change – new markets emerge for which IEC products and services are needed by many interested parties, not only exporters but also importers, regulators or test establishments, for example. For such emerging markets, as well as for some fast-changing traditional market segments, the IEC offers a unique combination of efficient mechanisms and processes and the accumulated experience of its international network of experts.

In this context the IEC also offers a comprehensive array of deliverables, covering not only a product or system's life-cycle but also the lifetime of the market itself. To fulfil its mission in a sustainable way over the long term, it is essential for the IEC to identify new and evolving electrotechnical markets as they emerge, and to take a leadership role in all relevant standardization efforts.

ACTIONS

- A.** improve “early warning” of market trends by strengthening the involvement and influence of industry in National Committees, particularly including small and medium-sized enterprises as well as start-ups;
- B.** encourage mentoring of National Committees in developing countries by those in the more industrialized world;
- C.** strengthen the high-level market-watch role of the Market Strategy Board, including emerging-technology R&D in academia as well as industry;
- D.** initiate global forums and workshops for key emerging market sectors to identify issues and needs, to roadmap future actions and to promote the IEC's leading role in the electrotechnical field;
- E.** develop pilot schemes or projects to demonstrate system approaches or architectures for standardization;
- F.** co-operate directly with consortia for them to be able to use the IEC as the most cost-effective and efficient platform for transforming their industry specifications into consensus International Standards.

The benefits of IEC's International Standards and global conformity assessment systems have played a demonstrable part in changing society for the better over more than a century. Vast improvements in assured levels of safety, reliability, efficiency, convenience and environmental compatibility continue to be introduced around the world as new electrotechnical processes, materials and technologies using those standards and conformity systems are brought to market.

Such a track record raises society's expectations. Not only end-users but governments and other regulatory bodies can all look to the IEC's consensus-based standards and related conformity systems as the best technical and procedural references for safe, energy-efficient and environment-friendly solutions in the public sector. Greater participation in the IEC's work by these market interests is increasingly necessary to ensure that the highest-quality deliverables continue to be globally available for voluntary implementation or referencing in the public sector.

Expanding the audience

IEC will substantially increase the involvement in its work, through its National Committees, of interested parties from governmental or other regulatory bodies and end-user groups.

ACTIONS

- A.** establish, through the National Committees and relevant IEC management bodies as well as appropriate intergovernmental organizations, a continuous and systematic dialogue with regulators at national and regional levels;
- B.** promote global harmonization of technical regulations based on IEC standards, identifying current trends and future needs in regulated markets and developing roadmaps to facilitate early IEC involvement whenever appropriate;
- C.** promote recognition of the IEC's strategic value in support of public policy objectives, and of the benefits to end-users and society in general;
- D.** support National Committees in enhancing their representation of end-user and consumer interests;
- E.** expand the dialogue with developing countries in support of public policy needs and objectives, and enhance access to, use of and involvement in IEC work by participants in the Commission's unique Affiliate Country Programme.



Raising the market profile

IEC will raise its profile at the highest levels of both private and public market sectors, persuading participants of its strategic value as the recognized provider of global standards and conformity assessment solutions in its field.

As a provider of largely product-based International Standards and associated conformity assessment systems, the IEC has deservedly won an unrivalled reputation in the technical community. With globalized markets and increasingly converging technologies, however, have come changes in industry's perceptions as well as society's needs.

Twenty-first century industrial leaders, on whom the IEC relies to support electrotechnical standardization, often have a marketing or financial rather than a technological background. Major trends in society, such as that towards greater electrical energy efficiency, involve multiple technologies and disciplines and demand much more than a product-based approach to standardization.

In this collaborative, systems-based environment, the Commission must constantly inform and educate the market, promoting the IEC brand and its core value as the leading global forum in the electrotechnical field, the one to which all stakeholders can bring their needs and expertise to find solutions of universal benefit.

ACTIONS

- A.** enhance direct communications with leaders in industry, business and government, particularly through personal contacts by the IEC and National Committee Officers;
- B.** create targeted marketing packages promoting the IEC's strategic value for specific market segments, including small and medium-size enterprises;
- C.** enhance and expand the relationship with academia, in business and management schools as well as engineering establishments, to educate tomorrow's leaders;
- D.** target relevant audiences at conferences, symposia and workshops to promote IEC leadership in new and topical market sectors.

To define the envelope for its coverage in the electrotechnical universe, and to be ready to respond with the right deliverables at the right time, the IEC must first be able to anticipate demand. This requires constant monitoring of technical trends and business developments such as new alliances and partnerships in industry, as well as tracking scientific advances that will influence the need for standards and related services.

Prioritization of market requirements based on this type of research and information monitoring will be key to the IEC's ability to attract a critical mass of participants in major new areas of technical work.

Anticipating market needs

IEC will strongly reinforce its technology- and market-watch functions, both through the member National Committees and specialized groups in the management boards.

b

TECHNOLOGY

ACTIONS

- A.** emphasize the members' key role in gathering technical and market trend information at national and regional levels, and in feeding that information to the appropriate IEC bodies at international level;
- B.** establish a continuous technology- and market-watch mechanism within the MSB to act as a sounding board for the whole of the IEC and allow optimal prioritization of technical work;
- C.** use workshops/symposia, roadmapping and technical/academic papers to identify new technologies, as well as soliciting input from relevant personnel in industry, including young professionals;
- D.** ensure closer contacts with consortia and other industry forums for early identification of and action on international standardization needs in fast-moving technologies;
- E.** ensure constant coordination and information flow among the MSB, SMB and CAB, including appropriate strategic groups within the latter two, as the essential basis for rapid and coherent action whenever appropriate.

Systems and sectoral approaches

IEC will lead the way in substantially extending the use of systems and sectoral approaches in appropriate areas of its standardization and conformity assessment activities.

The fundamental strength of the IEC over the decades has been the quality and market acceptance of its technology-based product standards and specifications, standards that also are the reference in the Commission's conformity assessment schemes. The need for such product or product-family standards will continue for the foreseeable future and the IEC must maintain its efforts, and its reputation, in this traditional area of pre-eminence.

The multiplicity of technologies and their convergence in many new and emerging markets, however – particularly those involving large-scale infrastructure – now demand a top-down approach to standardization, starting at the system or system-architecture rather than at the product level. System standards are also increasingly required in sectors such as environment, safety and health.

Although the introduction of such processes in the IEC began some years ago, a major effort is now required to improve understanding of them and to widen their application. It will be necessary to take account of the implied need for increased co-operation with many other standards-developing organizations, as well as with relevant non-standards bodies in the international arena. There will also be implications for the IEC's conformity assessment systems and processes.

ACTIONS

- A.** define and strengthen the systems approach throughout the technical community to ensure that highly complex market sectors can be properly addressed and supported;
- B.** identify new technical areas and anticipate emerging markets/technologies that require a systems approach;
- C.** define and implement enhancements to the TC/SC structure for improved functionality, notably to improve coordination on issues that cross traditional boundaries;
- D.** extend the use of strategic or other horizontal groups to bridge areas covered by more than one or two TC/SCs;
- E.** organize workshops/symposia to develop understanding of and more clearly define processes for a systems approach to standardization;
- F.** develop architecture proposals and roadmaps for system-level standardization and, if appropriate, related conformity assessment activities;
- G.** extend use of joint development agreements to work on a sectoral basis with appropriate SDOs and industrial consortia having international reach.

The emergence of some major new societal trends is not only driving the development of new technologies but adding impetus to technology convergence and cross-over. This is particularly the case among advanced electrotechnologies and many related areas of application, for example in the IT field.

The complexity of the resulting markets and technical developments makes coordination and collaboration at the global level an imperative because, increasingly, no single government, industry, manufacturer or standardizing body (sectoral, national, regional or international) can on its own meet the need for global solutions.

In the standardization world, the IEC has co-operation agreements, liaisons and working relationships at many levels: with its WTO-recognized international standardization partners ISO and the ITU; with professional organizations such as CIGRE and IEEE; and with several regional standardizing or harmonization bodies including CENELEC, CANENA and, most recently, AFSEC. Beyond the standardization world, there are key relationships with many intergovernmental bodies and international sectoral agencies.

It is the IEC's combined strengths – its focus, track record and core expertise in electrotechnology, its direct links with major stakeholders in industry and its worldwide connections through intergovernmental and non-governmental agencies – that uniquely position it to provide leadership in its areas of competence, building collaborative solutions with all such partners to meet global standardization challenges. The ability to include conformity assessment systems in the equation, based on IEC, ISO and ISO/IEC publications, only adds to the value proposition when attracting all key players to the table.

Global collaboration

IEC will initiate and lead global collaborative forums in the electrotechnical field, including its standardization partners and other international bodies as well as the relevant industry players, to define market needs as a framework for coordination, co-operation and International Standards development.

ACTIONS

- A.** extend the relationships and co-operative working arrangements with all relevant standards bodies and professional organizations, especially ISO and the ITU, whenever it is in the best interests of customer markets;
- B.** closely monitor other organizations' electrotechnology-related activities and collaborate with those organizations to develop consensual high-level architectures that will facilitate system-level standardization;
- C.** reinforce relationships with relevant intergovernmental and other international agencies where IEC can bring synergy by bridging gaps with industry or other market players;
- D.** raise the IEC's profile in electrotechnical standardization and conformity assessment for areas of major societal interest, including through personal contacts at "boardroom" level, MSB activities and targeted promotional packages to attract participants to specific forums.

IT tools and capabilities

IEC will constantly seek to upgrade and improve IT tools and capabilities based on user input and feedback, consultation with the members and best practices in other standards-related groups, offering the IEC community and other interested parties the most efficient working platform for all their standards and conformity assessment needs.

International standardization and the operation of global conformity assessment systems are by definition co-operative processes and a particular strength of the IEC is the efficiencies it is able to achieve by managing those processes from A to Z. Supporting all these activities is a comprehensive suite of IT tools and applications, many developed or adapted in-house from widely used and readily available software.

As a pioneer and leader in implementing such functional collaboration tools tailored for use by the entire standards community around the world, the IEC has a policy of making them available, essentially free of charge, to all members and participants in the standardization and conformity assessment work. It also offers these tools to other interested international organizations and regional bodies.

ACTIONS

- A.** strongly promote the “A to Z” approach in IEC’s standardization and conformity assessment processes, extending the use of common, practical IT tools by all participants;
- B.** integrate National Committees, the standards development and conformity assessment communities to the fullest possible extent in use of the IEC’s IT systems, including additional tools such as social media;
- C.** particularly encourage maximum use of the IEC’s IT tools among the developing-country members and IEC Affiliates, either directly through Central Office and the regional centres or through regional organizations such as AFSEC;
- D.** ensure adequate training for all users of the IEC’s IT tools, particularly including leaders and project managers in the technical community responsible for delivering relevant projects in a timeframe that meets market needs.

The role of the member National Committees in ensuring that the IEC is able to serve its many markets is absolutely central since it is they who are statutorily committed to representing all relevant interested parties in their individual countries. Global perceptions of the IEC and its role in society depend to a great extent on these local relationships with National Committees.

It is a key differentiator of the IEC that while all members, full and associate, make equal commitments in this respect, the Commission's membership and governance structure remains sufficiently flexible to recognize that no two National Committees are truly alike. In the real world also, different political, economic, industrial and trading conditions inevitably mean that not all are able to fulfil their statutory commitments to the same degree or in the same way.

It is nevertheless vital for the sustainability of National Committees, and therefore of the IEC as a whole, that all available support continues to be given to structuring their management and operations to meet this overriding need to represent all national electrotechnical interests. In this way they are best able to stimulate technical and management participation in the IEC, particularly by industry, to build the national position on any issue and to exercise their duty to vote.

National Committee representation and operations

IEC will propose mechanisms to support, evaluate and improve the structure, representation and sustainable operations of all National Committees.



Conformity assessment governance

IEC will develop proposals in the short term to further secure the strategic governance and management structure for its conformity assessment activities.

Substantial strides have been made in recent years in increasing the participation of industry, aligning the IEC conformity assessment systems' basic rules and clarifying the essential management oversight role of National Committees in this area of the Commission's activities.

To support the effective, broad-based governance structure essential for this vital "second pillar" of the IEC, further efforts are needed to optimize representation within the Conformity Assessment Board of all interested parties.

In any business or organization, it is essentially the quality of the people involved that decides the quality of the product or service. The IEC is no exception and must continuously strive to ensure that participants in its work, whether technical experts in a standards development team or business leaders in a management committee, are not only the best qualified for the task but also the most passionate about achieving the Commission's goals.

For continuity in the availability of high-quality experts and IEC leaders to be secured for the long term, it is necessary to convince senior management in the market of the IEC's value as a strategic business tool. Properly defined, communicated and managed standards projects with effective and timely results enable industry leaders to identify work that is relevant to them and to commit the appropriate resources for the time required.

For the participants themselves, it is necessary to ensure sustained motivation, encouragement, training and support if the market and the IEC are to benefit fully from their accumulated knowledge and experience.

Continuity in the quality and availability of IEC experts and leaders

IEC will continuously strive to secure the long-term interest, motivation and availability of its market experts and current as well as future leaders.

ACTIONS

- A.** emphasize the importance of engaging experienced leaders, particularly from among standards users in industry, to secure the availability of highly qualified, market-oriented expertise throughout the IEC's management and operational structures;
- B.** further develop relationships and relevant coursework with universities, business and engineering schools as the primary source of future IEC experts and leaders;
- C.** give experts as well as National Committees the means and tools to promote the value of their IEC work to top management in their own companies or organizations, including recognition of their achievements;
- D.** ensure sustained follow-up of young professionals and leadership programmes at Central Office, national and regional levels;
- E.** ensure the provision to experts of information about and online training with IEC procedures and IT tools, particularly including new web-based facilities and applications, and seek feedback from experts on the tools and services they need to optimize the quality and efficiency of their IEC work.



Financial stability and the IEC business model

IEC will support the National Committees in seeking ways to widen sources of revenue and ensure the long-term financial stability of the membership.

The IEC's primary mission as a not-for-profit organization is to serve and add value for its markets. Its proven business model is built not only on membership dues, publication sales and the services offered by its conformity assessment systems, but also principally on the very substantial investment of time and money in the technical work by experts from all sectors, particularly industry.

Conservative financial and investment policies and sound operational management have allowed the IEC as an organization to successfully weather the storm of recent global crises. The slow and geographically uneven nature of economic recovery, however, in addition to loss of potential revenue through illegal third-party sales on the Web and ongoing calls for the free availability of standards, are all challenges to the financial stability of National Committees and the Central Office alike.

In this context, the intellectual property that is integral to the IEC's International Standards and other publications is a cornerstone of the Commission's business model, with publication sales and associated royalties being a vital element of National Committees' own financing as well as that of the Central Office.

ACTIONS

- A.** support all National Committees in promoting the IEC business model, based on the copyright, sales and distribution policies of the Commission;
- B.** complete and sustain the registration programme for IEC logos and marks in all relevant territories of the world;
- C.** take all appropriate measures to protect the IEC's intellectual property and the revenues flowing therefrom, including through such mechanisms as licence agreements and customer registration, and by tracking and reporting abuse in the market.



Since the 1990s, the IEC has been at the forefront among its peers in making available to National Committees and technical experts at all levels a suite of electronic tools and services that offer ease of access for experts, robust document development, exchange, distribution and control. These tools support processes for the technical work, however, that are still largely based on traditional product standardization in the paper era. Particularly for a system approach to standardization in increasingly complex markets, it is recognized that the wider IEC community needs to embrace new technologies, tools and processes in order to significantly further advance operational efficiency and improve both the quality and speed of service to the market.

Technologies and processes for efficiency

IEC will continuously strive to lead the way in providing members and participants in its work at all levels with an “industry-best” platform using the most cost- and time-efficient technologies to support its processes for International Standards development and associated activities.



Development of the IEC Family

IEC will seek to enhance participation in, access to and use of IEC work by developing countries.

The IEC has been a pioneer in bringing the benefits and advantages of involvement in the IEC to the developing world, not only through its Associate membership category and the Affiliate Country Programme, but also for example by opening up membership of its conformity assessment systems to countries that are not yet IEC members. It is vital that the IEC continues and enhances support to developing countries, both as standards customers and conformity assessment users, and with a view to building their capacity for greater participation in the work. This will involve making full use of the Commission's human networks and IT resources.



ACTIONS

- A. enhance support to National Committees in smaller and developing countries, including through twinning or mentoring arrangements with members in the larger and fully industrialized countries, and by disseminating useful knowledge on technologies, methodologies or conformity assessment processes through training, seminars or other means;
- B. extend co-operation particularly with the World Trade Organization to persuade countries not yet involved in the IEC to seek initial participation through the Affiliate Country Programme.



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

3, rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

Tel + 41 22 919 02 11
info@iec.ch
www.iec.ch