



CEN – European Committee for Standardization

CENELEC – European Committee for Electrotechnical Standardization



STANDARDS FOR THE ENVIRONMENT



Why the public sector should get involved in standardization?

Environmental protection is a global concern – and the challenge is becoming more urgent every day. The public sector is one of the most important actors facing this challenge, as it can safeguard environmental matters, for example through legislation and regulation. This brochure gives the public sector an overview of how also standards can be an effective tool to reduce environmental impact and in that way support the implementation of policies.



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Integral to coordinated and effective action towards environmental protection is a **common language** among all stakeholders involved. Standards can provide this language.

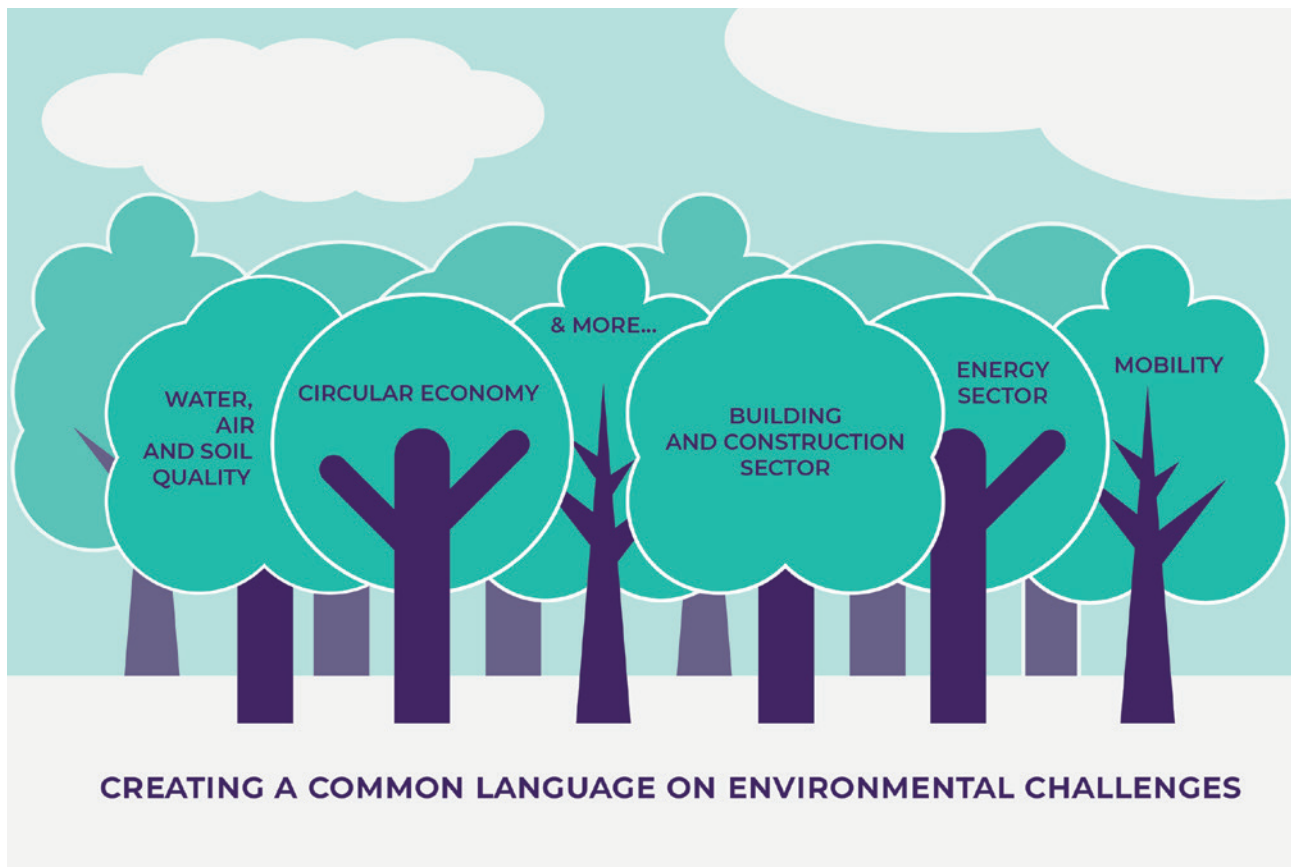
Standardization is a valuable tool for national, European and international regulation. It also plays a key role in environmental protection. For example, the **European Green Deal** pledges to make consistent use of standardization in order to facilitate societal, environmental and economic transformation and innovation. This concerns focus topics such as circular economy, energy transition, mobility and biodiversity.

Standards are important in many environmental areas, not only in traditional ones like water and air quality, but also in the construction and building sector, the energy sector and electronic products, to name just a few.



STANDARDS IN A NUTSHELL

Standards establish consistent rules that can be universally understood and adopted. They help to ensure, for example, product functionality, compatibility and interoperability. Standards also define terminologies and methodologies so that products, processes and services can be more easily understood, characterised and compared. For example, when measurement methods are not universally implemented, the alignment of measurement performance must be proven for each test parameter. This requires additional costs and effort. **Standards avoid this by helping us speak a common language ensuring the same method is used by all providing a common accepted scale.**





While standardization often focuses mainly on technical and economic aspects, requirements concerning **consumer and environmental protection** are becoming more and more important. For instance, standards on **environmental management systems** such as the EN ISO 14000 series **provide practical tools** for companies and organisations looking to manage their environmental responsibilities. These standards have proved to have **a farreaching impact** all over the world. Therefore, standards are of high relevance for public stakeholders and civil society actors.

→ Standards foster the development and implementation of guidelines and can transform our way of working, communicating and living. With an increased momentum towards sustainability and environmental protection, standards will play an increasingly significant role in the work of the public sector.

Environmental protection at European level – Standardization as a vital part of EU legislation?

For decades, the European Union has made significant achievements concerning the protection of the environment. As an international organisation made up of 27 Member States, one approach was crucial to the development and implementation of universal policies across Europe: **Speaking a common language on environmental matters**.

This is why standardization has become a **significant tool for better and agile regulation** in the EU: Where regulation concentrates on essential requirements for environmental protection, standards can specify universally understood details that enable industry and other stakeholders to meet these requirements. This approach (already established in 1985) – called the **New Approach** – unburdens the regulator and makes use of the expertise of thousands of experts in Europe.

In recent decades, standardization processes have largely moved from the **national to the European and international level**. European citizens have benefited immensely from this development: By removing technical barriers to trade, the European standardization system has contributed substantially to making the European single market one of the most competitive and prosperous economic areas in the world. And in some areas, environmental conditions have been addressed and improved collectively.

By using standards as a tool to achieve policy goals, European legislation has become more effective and efficient – standards are typically designed to reflect the ‘state of the art’ and are universally understood in all EU Member States, creating a common language among all stakeholders involved.

In order to address environmental challenges, the EU established various **Directives**, including the **Energy Performance of Buildings Directive**, the **Ecodesign Directive**, the Directives on **Air** and **Water Quality**, as well as on **Waste Electrical & Electronic Equipment**. European standards also play an important role in supporting strategic European environmental and industrial policies, among which the Circular Economy Action Plan.



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KEY FEATURES OF THE STANDARDIZATION SYSTEM



MULTI-LAYERED The standardization system works at national, European and international level. At each level, standardization organisations coordinate standardization processes. The European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI) are the official European standardization organisations (see Regulation (EU) No 1025/2012). The International Organisation for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU) are the official international standards bodies. National standardization bodies have a say in every case, with their delegates representing the national position in the European and international committees and contributing to the standardization processes.



INCLUSIVE Standards are developed by bringing together experts from all kinds of stakeholders: Operators, manufacturers and commercial actors, researchers, test institutes and societal stakeholders such as environmental and consumer organisations as well as public authorities. Generally, any interested party can and should send experts to the working committees.



CONSENSUS-BASED Decisions in standards committees are consensus based. This means that the final vote on the adoption of each standard rests with the members, using an iterative process designed to build consensus.



Why standardization is important to public authorities dealing with environmental protection?



Despite many benefits of the New Approach, it can still be a challenge to achieve a high level of environmental protection in standards in this framework. It is, therefore, crucial that the public sector gets involved in standardization and that environmental expertise in the relevant committees is ensured. Generally, standards can make the work of public authorities such as ministries, parliaments and government agencies more effective and efficient – for example in implementing regulation and legislation, designing governmental programmes, and improving the environmental practice of business and industry. Specifically, standardization offers the following concrete **benefits for environmental regulation and legislation**:



SETTING CLEAR, TRANSPARENT AND ENFORCEABLE POLICIES: Standards can define a universal terminology for products, processes and phenomena. This way, misuse of specific terms and misunderstandings can be prevented. Key terms are clearly defined, creating legal certainty regarding, for example, the definition of reparability in the context of circular economy. Standards can also define methodologies ensuring comparability of results of measurements allowing e.g. environmental monitoring. This is particularly relevant when measurements are used to assure compliance with environmental requirements, such as permissible emission limits for vehicles. By defining an appropriate method of measurement, a limit violation can be determined clearly and verifiably under reproducible conditions. This way, laws and regulations can be unambiguously enforced.



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STAYING UP-TO-DATE: According to the standardization rules, standards are regularly updated when there are new technological developments that need to be considered for the product, process or methodology. By referring to these standards, the regulations of governments and other administrative bodies stay compatible with the 'state of the art'. At the same time, by actively monitoring developments in standardization or actively engaging in standards committees, the public sector keeps up with the latest developments, allowing, for instance, a better design of research and innovation programmes.



WORKING MORE EFFECTIVELY AND EFFICIENTLY: Often, decision makers and regulators develop testing methods and other technical specifications in environmental areas without being fully aware of existing standards or ongoing standardization activities in that field, resulting in parallel efforts. By monitoring the field of standardization, the public sector can decrease its work by taking standards developed by expert committees into consideration.

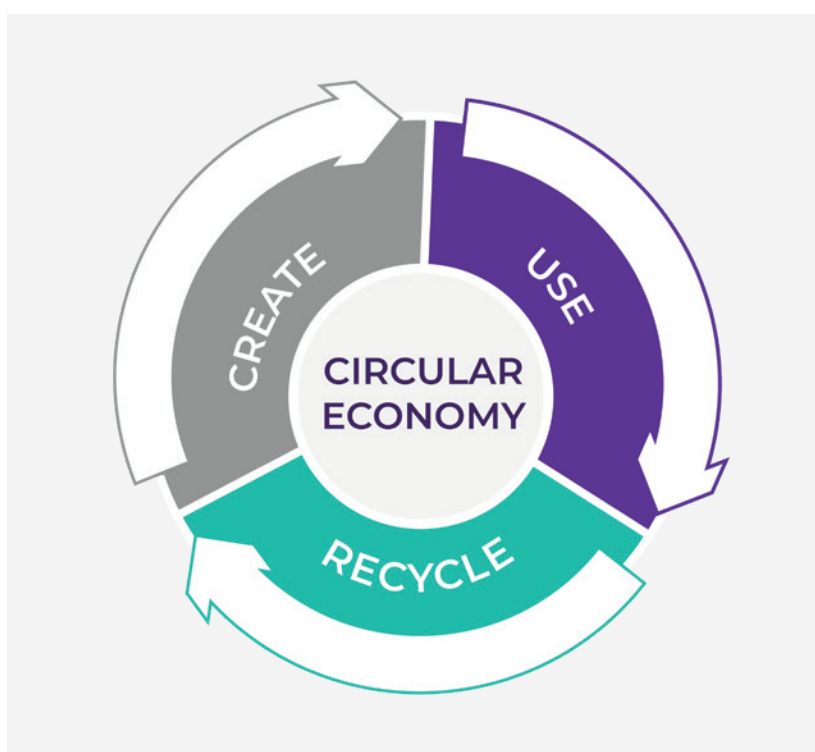


Broad acceptance: Standards are developed within circles of stakeholders and experts from business and industry, science and civil society, as well as the public sector. Civil society and public sector perspectives are thus included in the process. By making use of these jointly developed results and consensus-based decisions, the public sector can increase acceptance of legislative initiatives.

→ As a result, taking standardization into account for public policy making can be beneficial for environmental protection, both at national and European level. This becomes apparent in various policy fields such as circular economy, climate change adaptation and sustainable finance.



Circular economy – An economic model yet to be defined



The implementation of a circular economy – eliminating waste and creating a ‘closed-loop system’ for the continual use of resources – has been on the agenda of EU Member States and the European Union for years. With the European Green Deal, underpinned by a new Circular Economy Action Plan, the subject is further prioritised as one of the key focus areas. Circular economic systems address various stages of a product, from manufacturing and using to repairing, reusing, remanufacturing and recycling.

HOW CAN STANDARDIZATION CONTRIBUTE TO ESTABLISHING A CIRCULAR ECONOMY?

Standardization can be used as a valuable instrument to support closed economic loops. Standards can be used, for instance, to **universally define key** terms such as ‘repairability’ and ‘product durability’. By creating universal terminology, the concepts can be used not only by industry, but also by the public sector for legislation and regulation purposes. When enforcing laws and regulations, regulatory loopholes based on ambiguous requirements can be avoided. Moreover, relevant standards can be used in public procurement, ensuring that products compatible with the circular economy rationale are procured.

RECENT DEVELOPMENTS AND SUCCESS STORIES

There are already various standards in place that foster circular products and management systems. For example, several standards provide details on how to collect, transport, sort and treat waste of electrical and electronic equipment (WEEE) (EN 50625 series, EN 50614). These standards contain detailed requirements on how to depollute WEEE, making sure that workers and the environment are not exposed to toxic chemicals, as well as facilitate recycling and preparation for reuse. Other standards characterise plastic recyclates in order to enable end-of-life plastics to re-enter the production cycles, fostering development towards a more circular economy. Standards for the European Ecodesign Directive are being developed with the aim of more sustainable use of resources within product lifecycles. Moreover, standards to support ecodesign requirements



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on material efficiency aspects for energy-related products are already available (e.g. EN 45555, EN 45556, etc). These standards cover aspects such as extending product lifetime, ability to reuse components or recycle materials from products at end-of-life, use of reused components and/or recycled materials in products.

Considering its comprehensive nature, circular economy is a field that still has **enormous potential for standardization**. So far, while underway, there are few to no comprehensive standardised guidelines for universal definitions, principles, strategies or monitoring. The lack of an unambiguous definition of circular economy means that, for example, circular economy indicators can be interpreted in different ways, as it is unclear what and how to measure. Standards thus create the framework of future development of circular economy; its improvement, measurement and monitoring. At international level, ISO technical committees are currently working on new standards covering various aspects of circular economy, including principles and nomenclature, circularity assessment for products or organisations, chain of custody and several sector specific standards.

Given the significance of circular economy for economic transformation, it is essential for the public sector to monitor developments, get engaged in standardization processes and make use of existing and upcoming standards in regulation and legislation.

Adaptation to climate change – Systematically preparing for climate change impacts

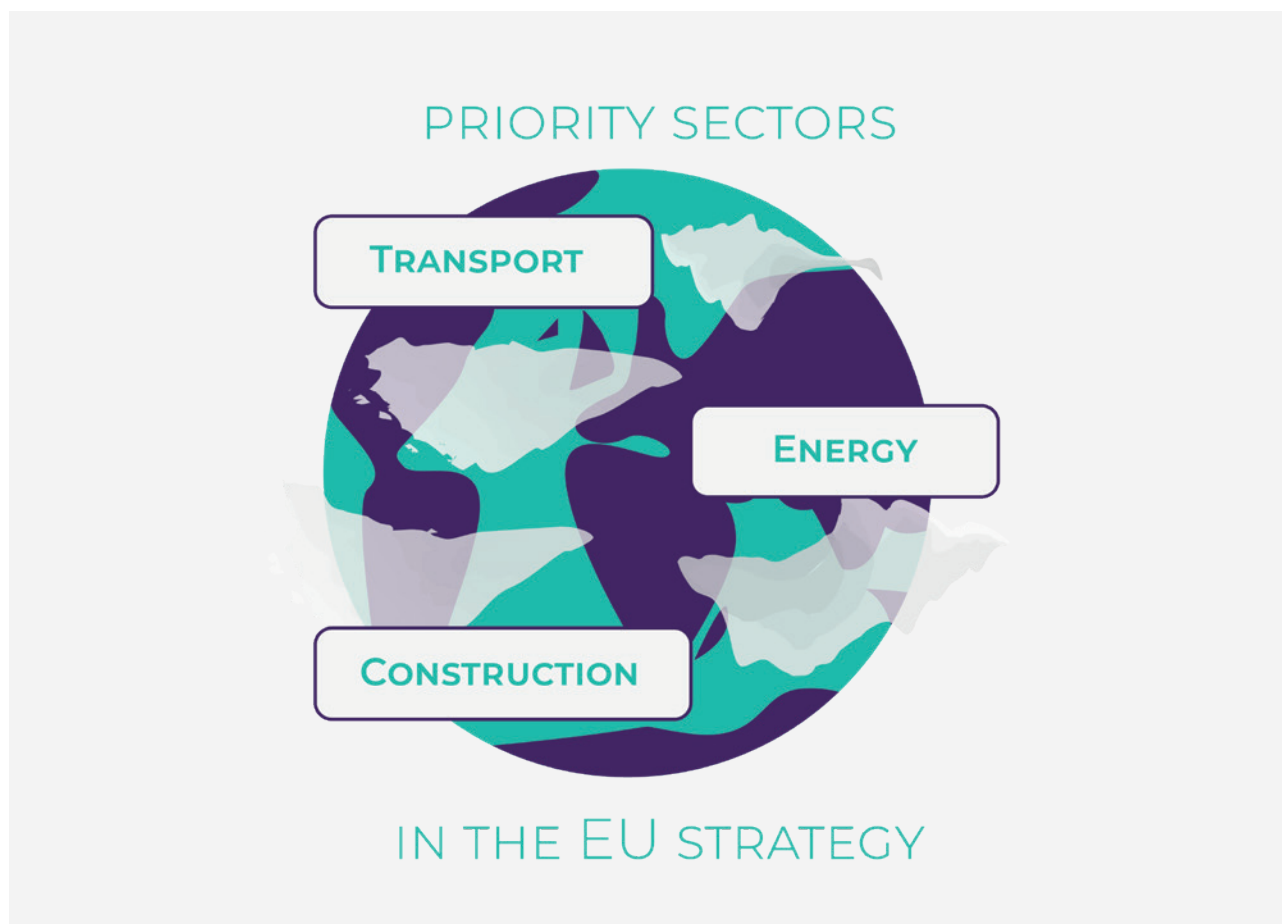
Climate change will have severe and irreversible impacts on the environment, economy and living conditions of all humans. As a response to climate change, there are two complementary strategies for reducing and managing the associated risks. On the one hand, mitigation is addressing the causes of climate change e.g. by reducing emissions. And on the other hand, adaptation to climate change is dealing with the unavoidable physical impacts of climate change by taking the appropriate measures to prevent or minimise the damage, or even taking advantage of opportunities that arise. This is not only important for companies and citizens, but also for policy makers and public authorities.

HOW CAN STANDARDIZATION CONTRIBUTE TO ADAPTATION TO CLIMATE CHANGE?

For effective adaptation to climate change, standards on adaptation and resilience-building can be a powerful instrument to inform decision makers at various levels of government. Standards also facilitate the mainstreaming of measures and processes of adaptation to climate change. In particular, they provide a **reliable reference framework** that informs by describing proven adaptation approaches, processes, management systems, product designs, terminology and test methods.



RECENT DEVELOPMENTS AND SUCCESS STORIES



In 2013, the European Commission adopted an EU Strategy on Adaptation to Climate Change, highlighting the **key importance of standardization** for securing adaptation to climate change. Subsequently, the European standards bodies CEN and CENELEC established the Adaptation to Climate Change Coordination Group to coordinate standardization efforts and encourage cooperation in this field. The group focuses mainly on building and maintaining more climate-resilient infrastructure in three priority sectors identified by the EU Strategy: transport, energy and building/construction.

In July 2019, the first standard for adaptation to climate change [EN ISO 14090] was published, providing a basic tool for the systematic management of climate change risks. Specifically, it **helps organisations of all kinds to prepare for and manage the impacts of climate change**, exploit opportunities and prevent harmful impacts. Furthermore, it demonstrates good practice to investors and customers. In addition, there are subsequent standards from the same family: EN ISO 14091 addresses vulnerability, impacts and risk assessment for organizations in the context of climate change, while ISO/TS 14092 is concerned with requirements and guidance on adaptation for local governments and communities.

For the public sector, it is crucial to become involved in preparing critical infrastructure elements and organisations for changes in climatic conditions. To do so systematically, standards are a helpful tool to ensure that adaptation will mitigate and prevent damage.



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Sustainable finance – Moving beyond ‘50 Shades of Green’

Meeting the ambitions set out by the Paris Agreement, the European Green Deal and the Sustainable Development Goals require a substantial shift in financial investments away from fossil fuels and limited resources towards greener products. To this end, sustainable finance is a concept that looks at how to integrate environmental, social and governance practices into the financing of economic activities. Furthermore, it aims to foster awareness and transparency among financial actors about the need to mitigate environmental, social and governance risks in their investments, particularly those of a long-term nature.



HOW CAN STANDARDIZATION CONTRIBUTE TO ESTABLISHING SUSTAINABLE FINANCE?

With a growing demand for sustainable investment opportunities but a lack of harmonised criteria and terminology to classify these investments, standardization can be used as a tool to establish **objective criteria** to determine which investments are sustainable and green. This will lead to improved judgement by institutional investors, rating agencies and companies in the pursuit of sustainable investment opportunities.

RECENT DEVELOPMENTS AND SUCCESS STORIES

Following the Paris Agreement, the EU established a High-Level Expert Group (HLEG) on Sustainable Finance, which contributed to developing the Action Plan on Financing Sustainable Growth. This Action Plan sets out the EU's strategy and roadmap for sustainable finance and the Commission's intention to introduce an **EU classification system for sustainable financing activities**. Accordingly, a Technical Expert Group (TEG) made up of members from the finance industry, NGOs and academia was tasked with developing an EU taxonomy on green financial products, a benchmark for index funds, disclosure regulations and green bonds. In order to guarantee clarity and consistency, the European commission is a member of the ISO Technical Committee (TC 322) that was formed on the topic of sustainable finance. The Committee's aim is to promote standardization in the field of sustainable finance, so that sustainability considerations including environmental, social and governance practices are integrated into institutional investment decision making and wider financial management. In sustainable finance, European advances in the field of standardization are regarded as the benchmark for this particular area – by other countries, regions and also by ISO.



For the public sector, it is important to define clear rules and criteria for what products are considered sustainable products, especially when it comes to investment opportunities. This is why standardization activities should be monitored closely by public authorities.

In summary, using standardization as a tool for environmental protection and environmental legislation offers many benefits to the public sector: Standardization establishes a common language among all stakeholders, making the work of the public sector more effective and efficient. Generally, there is still a lot more that can be done to improve environmental protection with the help of standards – this will be a crucial task for the public sector.

How to get started in your standardization journey

RELEVANT ORGANISATIONS

- [About CEN and CENELEC | The CEN-CLC Strategic Advisory Body on Environment \(SABE\)](#)
- [Overview of CEN Members and CENELEC Members – National standardization bodies](#)
- [Overview of CEN Technical Bodies and CENELEC Technical Bodies – All standardization activities in one place](#)

RELEVANT INFORMATION ON STANDARDIZATION FOR THE PUBLIC SECTOR

- [CEN/CENELEC Guide: Better Regulation through Standards – A Guide for Policy Makers](#)
- [CEN/CENELEC brochure: European Standards respecting the environment](#)
- [ISO/IEC brochure: International Standards for policy makers](#)



ABOUT

CEN (European Committee for Standardization) and CENELEC (European Committee for Electrotechnical Standardization) are recognized by the European Union (EU) and the European Free Trade Association (EFTA) as European Standardization Organizations responsible for developing standards at European level, as per the EU Regulation 1025/2012. The members of CEN and CENELEC are the National Standardization Bodies and National Electrotechnical Committees of 34 European countries. European Standards (ENs) and other standardization deliverables adopted by CEN and CENELEC, are accepted and recognized in all these countries. European Standards (ENs) contribute to enhancing safety, improving quality, facilitating cross-border trade and strengthening the European Single Market. They are developed through a process of collaboration among experts nominated by business and industry, research institutes, consumer and environmental organizations, trade unions and other stakeholders. CEN and CENELEC work to promote the international alignment of standards in the framework of technical cooperation agreements with ISO (International Organization for Standardization) and the IEC (International Electrotechnical Commission).

** Number of full members in May 2020*

HOW TO GET INVOLVED

Participation in the standardization process allows stakeholders to have a say on the content of draft standards and enables them to be better informed about developments in standards relevant to their area of interest or sector of activity. Companies, public bodies and other (national) organizations, wishing to participate in CEN activities should contact the CEN Member (National Standardization Body - NSB) or CENELEC Member (National Committee - NC) in their country. By contacting the NSB or NC, these organizations can either participate in the national mirror committee responsible for providing input to the relevant Technical Committee (TC) at European level, or be put forward by their NSB/NC to be an active member of a European Standardization Committee/ Working Group.

