



CENELEC

INTEGRATING STANDARDS IN YOUR FP7 PROJECT



*Linking R&D and Standardization:
a pocket guide for project proposers*



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→ What are standards?

Standards are agreed definitions or specifications of units, methods, products, processes or services. They provide people and organisations with a basis for mutual understanding, and are used as tools to facilitate communication, measurement, commerce and manufacturing.

Standards are everywhere. They make life easier, safer and healthier for businesses and consumers. Standards are useful for optimising performance, ensuring the health and safety of consumers and workers, protecting the environment and enabling companies to comply with relevant laws and regulations.

Most people are aware of standards for building materials, paper size (such as A4), optical media (such as DVD), mobile telephones (such as GSM) and connecting cables (such as USB and HDMI). These standards ensure connectivity and interoperability so that products made by different companies can be used together, thereby giving more choice to consumers.

→ Standards are bottom-up

In most cases, the initiative to develop a new standard is taken by interested stakeholders who consider that a particular standard would be useful as a way to address specific needs. Other interested parties are taking part in standardization activities at national, international and European levels. Companies, academic experts, researchers, SMEs, consumers and regulators bring together their ideas and experience concerning products, materials, processes or services in order to agree upon and produce a standard.

Experts, working at the European level in more than 400 Technical Committees, develop standards in many areas including bio-based products, construction, energy, environment, ICT, materials, nanotechnologies, security and services.



Who are the European Standards Organisations?

→ The European Standards Organisations

Three European Standards Organisations (ESOs) are recognised by the EU institutions as having the capacity and expertise necessary to develop European Standards – identified by the code EN. These are:

- **CEN – European Committee for Standardization**
- **CENELEC – European Committee for Electrotechnical Standardization**
- **ETSI – European Telecommunications Standards Institute**

The members of CEN and CENELEC are the National Standards Bodies and Committees in 32 European countries. Through Technical Committees and other groups of interested stakeholders, the ESOs provide platforms for the development of European Standards and other consensus-based publications.

→ The CEN-CENELEC Management Centre

The CEN-CENELEC Management Centre, located in Brussels, is in charge of the daily operations, coordination and promotion of all CEN and CENELEC activities. Its Research Helpdesk provides support to the research and innovation community on standards issues. A dedicated team of experts help project proposers analyse standardization opportunities in their field and give advice on how standards can be integrated into project proposals.

→ Links with international standards organisations

Through the close relationship between CEN and the International Standards Organization (ISO) and CENELEC and the International Electrotechnical Committee (IEC) project proposers can easily access the international market.



What does standardization deliver?

According to the needs and specific interests of stakeholders, different solutions regarding standardization are available. Fast-track standards for example are relevant to quickly-evolving environments such as R&D.

→ European Standards (ENs)

The European Standard (EN) is the flagship of the standardization activity in CEN and CENELEC. The process to deliver an EN takes a maximum of 3 years from the date that the technical work begins.

Once approved, ENs are implemented at national level as identical national standards and all conflicting national standards are withdrawn. This means that one EN replaces 32 national standards.

→ Technical Specifications (TSs)

A Technical Specification (TS) can be produced when there is no immediate need or not enough consensus for an EN. It might also be appropriate to projects where the technology developed is not yet mature and/or the subject matter is still under technical development. The average timeframe for the delivery of a TS is 2 years. National standardization bodies are not obliged to adopt a TS as a national standard.

→ CEN/CENELEC Workshop Agreements (CWAs)

Workshops are fast - relatively informal - consensus-building groups, open to direct participation of any interested party. The result of their work is published as a CEN or CENELEC Workshop Agreement (CWA). Workshops are particularly suited to dealing with experimental topics, often in connection with the output from research and innovation projects. The average timeframe for the delivery of a CWA is 18 months. That is why a CWA can be integrated in the lifetime of an R&D project. National standardization bodies are not obliged to adopt a CWA as a national standard.



What types of standards exist?

There are many thousands of standards of various types. These include: standard specifications for products, materials, components, systems and services; standard units of measurement; standard test methods; standard practices and procedures; and standard definitions of terminology.

Standards can be categorised into four major types:

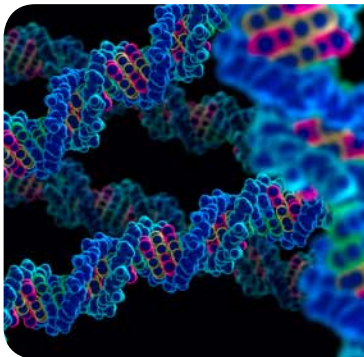
- **Fundamental standards** which concern terminology, conventions, signs and symbols, etc.;
- **Test methods and analysis standards** which measure characteristics such as temperature or chemical composition;
- **Specification standards** which define the characteristics of a product (product standard) or a service (service activities standard) and their performance thresholds such as fitness for use, interface and interchangeability, health and safety, environmental protection, etc.;
- **Organisation standards** which describe the functions and relationships of a company, as well as elements such as quality management and assurance, maintenance, value analysis, logistics, project or systems management, production management, etc.



Do you need standards?

If you answer “yes” to any one of the questions below, you may need to think seriously about standards!

- Will your R&D results need to be compatible and interoperable with other technologies? YES NO
- Do you intend to bring your research results to the market? YES NO
- Will you need to ensure reliability and comparability of your R&D activity or results? YES NO
- Does your project intend to have a long-term impact? YES NO
- Do your results have a potential European or international market application? YES NO
- Would you like to display some kind of mark of product or process quality? YES NO
- Will any products or processes arising from your project be of interest for public procurement? YES NO
- Will you need to reassure consumers and others regarding the safety of your innovation? YES NO



Why include standardization in your project?

In many EU calls for research and innovation, standardization is identified as a key activity, deliverable or expected outcome of future projects.

Even if standardization is not always mentioned as such, it might still be extremely worthwhile that you participate in standardization work. The earlier you consider standardization, the more you will benefit from it. As demonstrated on the next pages, incorporating standardization into your plan can broaden the scope of your project's horizons in important ways.

Your project's need	Benefits that standardization can bring	Corresponding standardization-related action	Examples some best practices
Use recognized methodologies, processes, terminology... <i>Don't reinvent the wheel!</i>	Standards codify the state of the art.	Identify and use existing standards which can contribute to your project	WIMBEX – project proposal built around EN 13757-5:2009 to develop remote wireless water meter reading solutions www.wimbex.com
Enable the fast and easier market exploitation of your research results	Enhance interoperability, comparability, compatibility with what exists Reassure users of your results Availability of your results to a wide community in a clear wording i.e. a standard	Plan a standardization activity as part of your project proposal	Interoperability – SMART CM (see page 9) Comparability – ISOIL project (see page 9) Reassurance for users – iNTeg-Risk (see page 9)
Ensure your results adapt to market conditions	Comply with health or safety requirements in your sector Comply with regulatory requirements that might apply (e.g the Medical Devices Directive)	Identify existing standards which can support market take-up of your results	SPIDIA - project proposal took into account existing in-vitro diagnostic medical devices European standards EN591:2001 and EN 12322:1999 www.spidia.eu
Dissemination of your project and results to European stakeholders in your field	Test your project outcomes with a wide community of stakeholders, raise their awareness of your project, expand your network...	Integrate an action related to standardization in your project proposal Apply for a Project Liaison (see page 10)	NatureSDIplus - project liaison with CEN/TC 287 – results of the project are taken up by CEN Technical Report 15449 www.nature-sdi.eu
Long-term exploitation of the project results	Results taken-up in a standard remain available beyond the project's life-time Standards are regularly revised	Plan a standardization activity as part of your project proposal Bring your research results to standardization	TRANSFEU – results of the project will feed into prEN 45545-2 'Railways applications – fire protection on railway vehicles' www.transfeu.eu

Some best practices

→ SMART-CM

Project description: the SMART-CM project, funded by the EU 7th Programme for Research and Development (FP7) will provide a solution for the interaction between public administrations and the market players involved in the container transport chain management and administration business.

Standardization activities: the 'Dissemination and consensus building' work-package of SMART-CM foresees the development of a CEN Workshop Agreement (CWA) which is currently being prepared (Container Security & Tracking Devices). This CWA will foster interoperability of technologies currently applied to safe container chain management at global level, messages exchange and process implementation between customs and actors, and among actors of this industry.

Website: www.smart-cm.eu

→ iNTeg-Risk

Project description : the iNTeg-Risk project, funded by FP7, is aimed at improving the management of emerging risks, related to "new technologies" in European industry. The aim of the project is to reduce time-to-market for the EU lead market technologies and promote safety, security, environmental friendliness and social responsibility as a trademark of EU technologies.

Standardization activities: the CWAs work-package of iNTeg-Risk foresees the development of 6 CWAs. These CEN Workshop Agreements will answer to the need to have common and neutral specifications in the field of emerging risks.

Website: www.integrisk.eu-vri.eu.

→ i-SOIL

Project description: the i-SOIL project, funded by FP7, aims at developing, validating and evaluating necessary concepts and strategies for the transfer of measured physical parameter distribution into maps.

Standardization activities: among the activities of the 'Dissemination' work-package of i-SOIL is the development of a CWA around a best practice approach for electromagnetic induction measurements of the near surface. This CEN Workshop Agreement will foster data reproducibility for single geophysical methods and is an important prerequisite enabling common interpretation of results obtained using different methods.

Website: www.isoil.info

→ NatureSDIplus

Project description: the main aim of the NATURE-SDIplus project is to establish a best practice network on geographical information for nature conservation to stimulate the members and, in perspective, the target users at improving the harmonisation of their datasets on nature conservation to better exploit and access them.

Standardization activities: NatureSDIplus had a Project Liaison with CEN/TC 287 on Geographic Information. The project has given input to CEN/TR 15449 on Geographic information - Standards, specifications, technical reports and guidelines, required to implement Spatial Data Infrastructures.

Website: www.nature-sdi.eu

How to include standardization in your project proposal?

→ Screen existing standards

The websites of CEN (www.cen.eu) and CENELEC (www.cenelec.eu) provide access to a database of over 20.000 existing standards. Browsing this database can help you decide which of these would be useful for your project. If there is no standard that «fits» and you think that a standard would bring value to your project, you might decide to either develop new standardization activities, or to contribute to ongoing standardization work.

→ Develop new standardization activities

Identified standardization needs can be included as an activity of your project proposal. A CEN or CENELEC Workshop Agreement can be a good option as it can be delivered within your project timeframe. Alternatively, your project can lead to the development of a new European Standard (EN).

→ Contribute to ongoing standardization activities

If you want to contribute to ongoing standardization activities, you can plan a “Project Liaison” in your project proposal. The Project Liaison will allow a representative of your project, once accepted, to participate in plenary meetings of the relevant Technical Committee and contribute to the work. The CEN-CENELEC Management Centre can provide you with a letter of support.

→ Find the right standardization partner

A CEN or CENELEC Member – a National Standardization Body or Committee - can become a partner in your project. In specific cases, the CEN-CENELEC Management Centre could become a formal or associated partner.



What if your project is already up-and-running?

If your project is already up-and-running, the following options are available:

→ Screen existing standards

It is never too late to apply an existing standard. You can decide which standard will be most useful for your project by consulting the database accessible through the CEN and CENELEC websites. If there is no standard and you think there is a need for a new standard, there is still time to get involved in developing new standardization activities, or contributing to ongoing standardization work.

→ Project Liaison

An accepted European project can request a "Project Liaison" with an existing CEN or CENELEC Technical Committee. As soon as this liaison status has been granted, a representative of your project can participate in the plenary meetings of the Technical Committee and contribute to the work, for instance to assist the progression of new identified standardization work.

→ Initiation of new standardization activities

If you have identified new standardization needs, these could be further developed in a Technical Committee or through a Workshop Agreement. Please contact the Research Helpdesk to identify the best solution.





Get in touch!

Every project is different. If you consider getting involved in standardization activities, please feel free to contact the CEN and CENELEC Research Helpdesk. We can support you to identify the best solution for your project.

Contact the Research Helpdesk by email: research@cencenelec.eu

Website: www.cencenelec.eu/research

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