INTEGRATING STANDARDS IN YOUR HORIZON 2020 PROJECT

Linking Innovation and Standardization: a pocket guide for project proposers

Table of contents

Standards support research & innovation

➜ Standards in Horizon 2020

Standardization is identified in Horizon 2020 as one of the innovation-support measures. Standardization can help bridge the gap between research and the market, by enabling the fast and easy transfer of research results to the European and international market. The research community acknowledges this; nearly three-quarters (73%) of FP6 and FP7 project coordinators, who included standards in their previous projects, said that they would be willing to address standardization again (Technopolis Study, September 2013).

➜ What are standards?

Standards are agreed definitions or specifications of units, methods, tests products, processes or services. They provide people and organizations a basis for mutual understanding.

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 developed by those who need them !

The initiative to develop a new standard is taken by interested stakeholders who believe that a particular standard could help address specific needs. Other interested parties take part in standardization activities at national, European and international 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.

Do you need standards?

If you answer "yes" to any one of the questions below, you may need to seriously consider standards!

- ➜ Will your R&D results need to be compatible and interoperable with other technologies? ☐ YES
- ➜ Do you intend to bring your research results to the market? ☐ YES
- ➜ Will you need to ensure reliability and comparability of your R&D activities or results? ☐ YES
- ➜ Does your project intend to have a long-term impact? ☐ YES
- ➜ Do your results have a potential European or international market application? ☐ YES
- ➜ Would you like to display some kind of mark of product or process quality? ☐ YES
- ➜ Will any products or processes arising from your project be of interest for public procurement? ☐ YES
- ➜ Will you need to reassure consumers and others regarding the safety of your innovation? ☐ YES

CEN CENELEC

GREEN E-MOTION

Project description: The Green E-Motion FP7 project (€24 million EC contribution) connects regional and national electromobility initiatives leveraging on results and comparing the different technology approaches to promote the best solutions for the European market.

Standardization activities: Green E-Motion has set-up a Liaison with the CEN CENELEC e-mobility coordination group, thereby contributing to the improvement and development of new and existing standards for electromobility interfaces.

Website: www.greenemotion-project.eu

GRIFS

Project description : The Global RFID Inter-operability Forum for Standards (GRIFS) FP7 project aimed to improve collaboration and thereby maximise the global interoperability of RFID standards.

Standardization activities: GRIFS produced an overview report of RFID-related standards, on a global scale, identifying the standards bodies, the geographical and technical scope of the work, opportunities and risks of collaboration, including a gap/overlap analysis.

Website: www.grifs-project.eu

IMS 2020

Project description: The project focused on the creation of roadmaps towards Intelligent Manufacturing Systems (IMS) in the year 2020. The roadmaps highlight the main milestones of innovation activities (R&D, management and policy actions) needed to achieve a desired vision.

Standardization activities: IMS 2020 developed a Roadmap on standardization in manufacturing.

Website: www.ims2020.net

SPIDIA

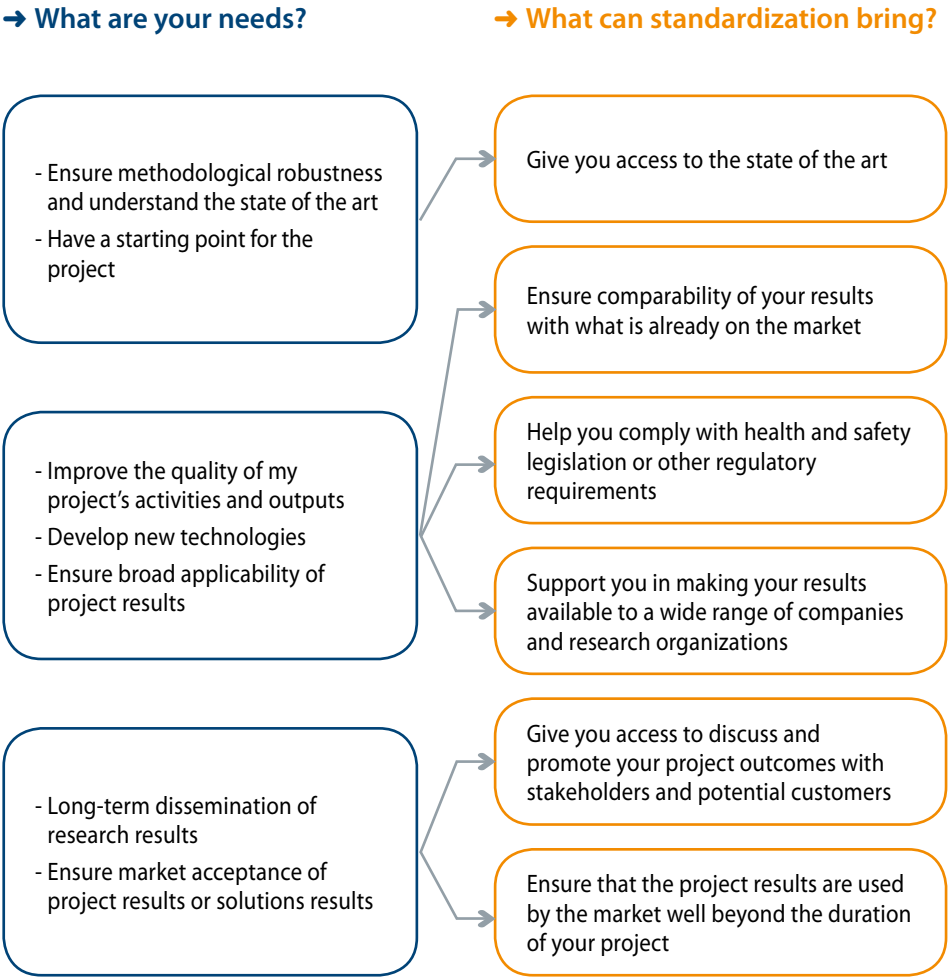
Project description: The SPIDIA FP7 project aimed to improve pre-analytical procedures for in-vitro diagnostics by developing necessary guidelines, new technologies and new tools for practical applications in the area of health and medicine.

Standardization activities: The 'Dissemination' work-package of SPIDIA will enable the development of 9 Technical Specifications, which will be published in 2015. The Technical Specifications will answer the need for standardized pre-analytical procedures for e.g. the sample collection, stabilization, transport, storage and processing integrated in one IV process.

Website: www.spidia.eu

How to include standardization in your project

This flowchart shows possible options for project proposers interested in including standardization in their project. However, please bear in mind that every project is different. Therefore we advise you to contact our Research Helpdesk (see page 9) when you set up your project.



➜ What should you include in your proposal?

- A standardization partner (see page 9)
- A task related to the screening of existing standards
- A liaison with the relevant Technical Committee in order to link with standards in real time (see page 9)

- A standardization partner
- A work-package on standardization, aimed at developing a new standard (see page 9)

And/Or

- A liaison with the relevant Technical Committee

And/Or

- A task to analyse which standards are needed
- A task to define a standardization roadmap or strategy

➜ Examples

Green Emotion
GRIFS

IMS 2020
SPIDIA

Who are the European Standardization Organizations?

➜ The European Standardization Organizations

Three European Standardization Organizations (ESOs) are recognized by the European institutions as having the necessary ability and expertise 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 Standardization Bodies and Committees in 33 European countries. Through Technical Committees and other groups of interested stakeholders, the ESOs facilitate the development of European Standards and other consensus-based publications.

➜ Links with international standardization organizations

Through the close relationship between CEN and the International Standards Organization (ISO) and CENELEC and the International Electrotechnical Committee (IEC), standardization work can take place in parallel at European and international level, and project proposers can easily access both markets.

➜ 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. A dedicated team of experts help project proposers analyse standardization opportunities in their field and give advice on how standards can be integrated into Horizon 2020 project proposals through the Research Helpdesk: research@cencenelec.eu.

Include standardization in your project proposal

In order to ensure the greatest impact, standardization has to be included in your project from the proposal stage.

➜ 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 standards would be useful for your project. If there is no standard that «fits» and you think a standard would bring value to your project, you might decide to contribute to ongoing standardization work or develop new standardization activities.

➜ Contribute to ongoing standardization activities

If you want to contribute to ongoing standardization activities, your project can become a 'Liaison Organization'. This allows a representative of your project, once accepted, to participate in meetings of the relevant Technical Committee and contribute to the ongoing standardization work.

➜ Develop new standardization activities

Identified standardization needs can be included as an activity (work package) in your project proposal.

A CEN or CENELEC Workshop Agreement can be a first option as it can be delivered within your project timeframe. Alternatively, your project can lead to the development of a new Technical Specification (TS) or European Standard (EN).

➜ Involve the right standardization partner

A CEN or CENELEC Member – the National Standardization Organization/Committee – can become a partner in your project. Visit our website to access the list of our national research and innovation correspondents: www.cencenelec.eu/research.

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

You can get in touch with the CEN-CENELEC Management Centre to assess how best to address standardization within your research project: research@cencenelec.eu

What can be standardized?

➜ Fundamental standards on terminology, practices and procedures, conventions, signs and symbols, etc.

Example: EN 60469:2013 - Transitions, pulses and related waveforms - Terms, definitions and algorithms

The aim of this standard is to provide definitions of terms pertaining to transitions, pulses, and related waveforms and provides definitions and descriptions of techniques and procedures for measuring their parameters.

➜ Test methods and analysis standards, which measure units and characteristics such as temperature, chemical composition, etc.

Example: EN 13577:2007 - Chemical attack on concrete - Determination of aggressive carbon dioxide content in water

This standard specifies a reference method to determine the quantity of carbon dioxide present in water which has a capacity to dissolve lime in concrete.

➜ Specification standards, which define the characteristics of a product or a service activity and their performance threshold such as fitness for use, interface and interchangeability, health and safety, environmental protection, etc.

Example: EN 15232:2012 - Energy performance of buildings - Impact of Building Automation, Controls and Building Management

This standard specifies a structured list of Building Automation and Control System (BACS) and Technical Building Management (TBM) functions, which have an impact on the energy performance of buildings. Furthermore, this standard sets out minimum requirements regarding BACS and TBM functions to be implemented in buildings of different complexities (…)

➜ Organization 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.

Example: EN 15358:2011 - Solid recovered fuels - Quality management systems - Particular requirements for their application to the production of solid recovered fuels

This standard specifies requirements for the quality management system for the production and trade of solid recovered fuels from the reception of waste(s) up to the delivery of solid recovered fuels.

What types of standards exist?

According to the needs and specific interests of stakeholders, different solutions 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 as identical national standards and all conflicting national standards are withdrawn. This means that one EN replaces 33 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 or the subject matter is still under technical development. The average timeframe for the delivery of a TS is 2 years. National Standardization Organizations 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 for 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, allowing CWAs to be integrated in the lifetime of an R&D project. National Standardization Organizations are not obliged to adopt a CWA as a national standard.

Patents and Standards

Standardization is intended to put ideas into the public domain, whereas patents intend to make an invention the property of the inventor for a certain limited period of time. Misconceptions may exist that standards and patents are in conflict, whereas they in fact fit closely together.

Where standards are formulated in terms of results to be achieved rather than in terms of technical solutions, a patented technology is one possible approach to comply with the requirement of the standard.

More information is available from our website www.cencenelec.eu/patents

Get in touch!

Every project is different. If you would like to include standardization in your Horizon 2020 project or get involved in standardization activities, please contact the CEN and CENELEC Research Helpdesk.

email: **research@cencenelec.eu**
website: **www.cencenelec.eu/research**
twitter: **@Standards4RDI**
phone: **+32 2 550 08 11**
address: **Avenue Marnix, 17- B-1000 Brussels, Belgium**

We can help you identify the best solution for your project!

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