How to link standardization with EU research projects

Advice for
CEN and CENELEC Members

CEN CENELEC

Foreword

This document – "How to Link Standardization with EU Research Projects: Advice for CEN and CENELEC Members" – has been written by the members of the BRIDGIT project (Bridging the Gap Between Research and Standardization). A European project focusing on the link between research and standardization, BRIDGIT started in January 2013 and ended in March 2015. It was co-funded by the European Commission and EFTA.

The BRIDGIT project aims to support the implementation of the Integrated Approach developed by the CEN and CENELEC Technical Boards' Working Group "Standardization, Innovation and Research" (STAIR).

In doing so, BRIDGIT is supporting at least two of CEN and CENELEC's Ambitions to 2020, i.e. the Innovation and Growth Ambition (by closely cooperating with the research and development community, so that the timely inclusion of research results in standardization activities becomes routine) and the Sustainable system Ambition (by bringing new experts from a range of different new fields into our System).

The BRIDGIT consortium consisted of AENOR, AFNOR, ASRO, BSI, DIN, DKE, DS, NEN, SN and the CEN-CENELEC Management Centre (CCMC); with DIN acting as project coordinator.

This document provides advice for National Standards Bodies (NSBs) and National Electrotechnical Committees (NCs) that want to increase their interaction with the research community and participate in research projects. It can also be of use to NSBs/NCs that are already participating in research projects.

Besides this document, the BRIDGIT project has also developed other tools aimed at providing orientation, advice and recommendations on how to bridge the gap between research and standardization. These tools are available on webpages aimed at either CEN and CENELEC members or the research community.

The webpages aimed at CEN and CENELEC members give information on the whole process of NSB/NC participation in a research project, e.g. finding a relevant project, developing a project proposal and participating in the implementation of the project. The webpages aimed at the research community explain the benefits of addressing standards in research, guide the research community on why and when to use standards, and provide information on how to work with standards in research. Both sets of webpages include examples and material that can be useful when linking standardization and research.

Both sets can be found on www.cencenelec.eu/research.

Contents

A guide for the reader

This document addresses those NSBs/NCs that wish to establish, increase or further develop interaction with the research community, including private and public organizations that perform or support research, development and innovation.

Throughout the document, the term "standard" refers to all types of documents published by formal standardization organizations, irrespective of the level of consensus within the standardization process. Those include both "formal" standards (e.g. EN, ISO, national standards) and other standardization documents (e.g. TS, TR, CWA).

This document is written for all NSBs/NCs, regardless of their level of experience in terms of cooperating with the research community. It offers advice on how best to approach participation in research projects, how to develop a strategy for research, set up a communication strategy, and find and participate in research projects.

The primary focus is on Horizon 2020, the EC's current framework programme for research and innovation, but other research and funding programmes are available at the national and European levels.

This document consists of four chapters and three annexes, each of which can be read independently of the others. However, if you are new to the area of research and innovation, or if you have little experience in cooperating with the research community and participating in research projects, it could be to your advantage to read the chapters in order.

Summary of the content

Why link research and standardization? (Chapter 1)

The first chapter introduces the role of NSBs/NCs in linking standardization and research and provides information on initiatives linking standardization with research, including the "Integrated Approach", a method developed by the CEN and CENELEC Joint Working Group on "Standardization, Innovation and Research" (STAIR).

Getting organized (Chapter 2)

The experience of a number of NSBs/NCs has shown that to ensure a well-organized approach to activities related to research projects, two crucial factors need to be taken into account: the definition of your strategy and the development of your organizational capability. Chapter 2 will give you an understanding of these factors and inspire you in your first steps towards successful participation in research projects.

Engaging your stakeholders (Chapter 3)

The third chapter focuses on how to define and engage with stakeholders in the research community. Experience shows that many people involved in research have little or no knowledge about standardization. In this chapter you will find tips and recommendations to help you ensure a successful engagement.

Participating in research projects (Chapter 4)

The final chapter offers NSBs/NCs guidance with regard to their participation in research projects. Here you can find information on what your role could be in research projects, how to identify relevant projects and how to participate in research projects. While the primary focus is on research projects at the European level, especially in Horizon 2020, it is possible to draw parallels with other European and national research initiatives.

Success stories (Annex A)

The first annex contains stories of how standardization played a crucial role in the success of research projects funded under the EU´s Seventh Framework Programme for Research (FP7).

CEN and CENELEC Policy on Participation in Research Project Consortia (Annex B)

Annex B presents the CEN and CENELEC policy on participation in research consortia.

Useful links (Annex C)

Annex C offers links to help you find information on different aspects of participating in research projects.

Figure 1 illustrates the contents of this document and the interrelation of its elements.

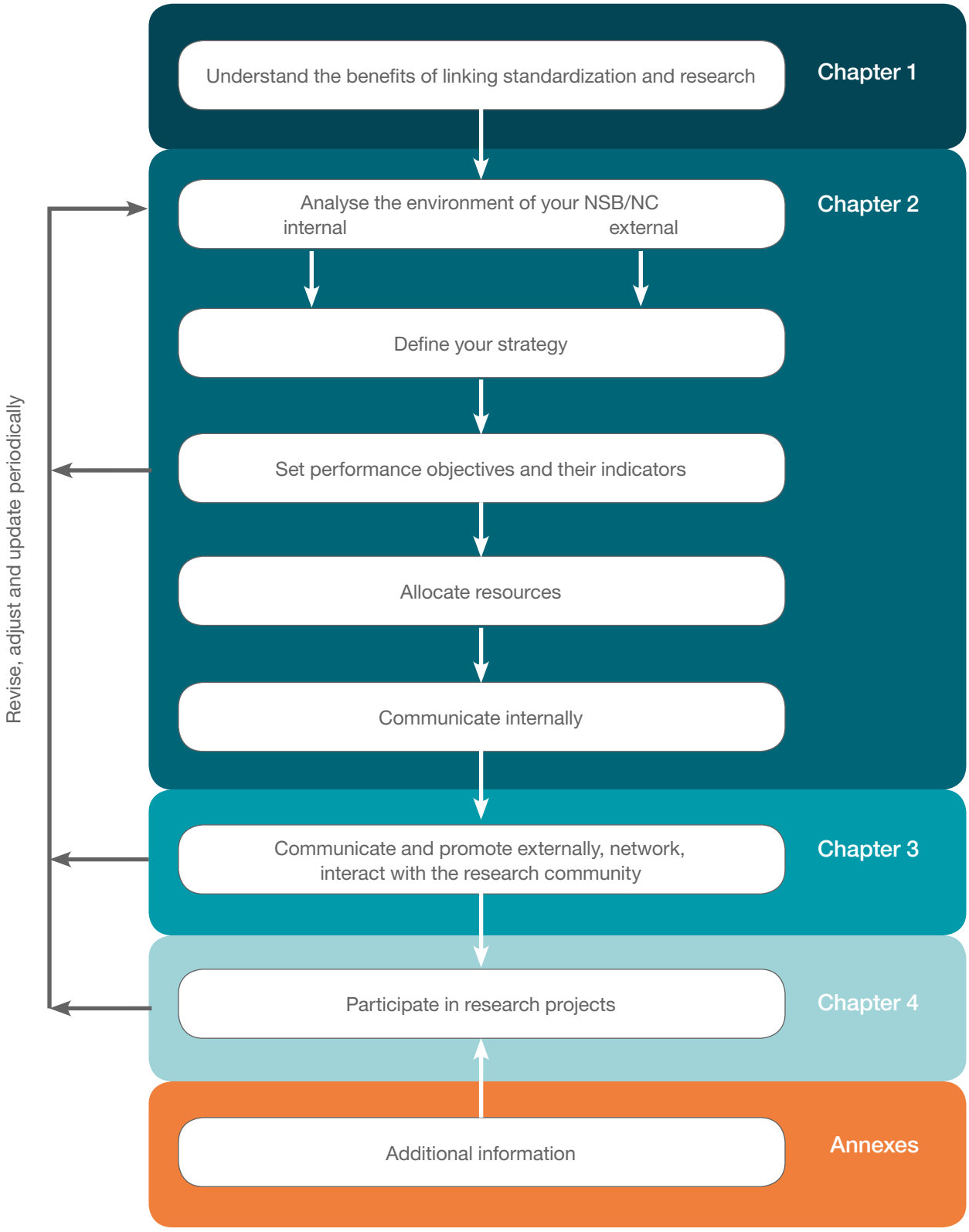

Figure 1: Contents of this document and the interrelation of its elements

1 Why link research and standardization

1.1 European policy

With the increasing focus on the link between research and standardization in Europe, many policy documents have recognized that standards are critical for innovation. Those documents include:

- "The annual Union work programme for European standardisation for 2015" (COM(2014)500; Communication from the European Commission to the European Parliament, the Council and the European Economic and Social Committee)
- Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation
- "A strategic vision for European Standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020" (COM(2011)311 final; Communication from the European Commission (EC) to the European Parliament, the Council and the European Economic and Social Committee)

1.2 The advantages for NSBs/NCs

Participation in research projects is an increasingly important means of integrating research results into the existing standards landscape and establishing new areas of standards activity that will in turn foster the development of new business for European companies. The results of research projects can be invaluable to you as a standardizer, so standardization needs to be able to incorporate the findings gained in research in order to integrate the latest knowledge into standards. By incorporating the latest knowledge into new standards, they can provide the foundation for further developments, new research and ultimately new knowledge, creating a virtuous knowledge circle of standards and research.

With the dissemination of research results becoming so important and the ability to improve and innovate having become central to businesses and society, there is a growing need to raise awareness about standardization and to broaden the knowledge of its use as a powerful tool for bringing research and new technologies to the market.

Standardization has had an important role in previous European framework programmes for research and innovation, and has been given an even more significant and explicit role in Horizon 2020. By doing so, the EC encourages researchers who are preparing proposals to address the relevance of standards and standardization in their projects.

Researchers can also participate in the work of existing Technical Committees (TCs). By engaging in research, NSBs/NCs can serve as a bridge between research and industry by disseminating research results and ensuring close cooperation between key players when future standards are set.

For you as NSBs/NCs, participating in research projects and engaging with researchers in standardization will:

- increase your network and interaction with other communities
- identify new areas for standardization and new markets
- provide new services to your stakeholders
- increase the number of researchers in Technical Committees and other technical bodies
- build competence through involvement in research projects
- improve policymakers' awareness about your organization and its role in innovation
- provide you with an additional source of income

Some initiatives have been developed to link standardization with research and particularly in connection with previous European-funded research projects, see Annex A.

Although there have been a small number of projects aimed at integrating research and standardization, a significant increase in activity will be required across Europe to fully exploit standardization's potential to bring research and new technologies to the market. All those who are involved in making standards will need to overcome the existing barriers to establish a more robust link between research, standardization and innovation.

1.3 The Integrated Approach

One significant initiative is the Integrated Approach developed by the CEN and CENELEC Technical Boards' Working Group "Standardization, Innovation and Research" (STAIR). It describes a way to link standards, research and innovation by:

- raising awareness of the benefits of standardization in the research and innovation process
- facilitating the transfer of research results and the outcomes of innovation activities into standardization
- fully exploiting the functions of standards for research and innovation activities in order to increase the competitiveness of the EU and EFTA countries

Participation in activities related to the Integrated Approach

CEN and CENELEC members are invited to participate in CEN and/or CENELEC activities related to the Integrated Approach. Doing so will not only provide you with a source of information and consultation to update you about the progress of projects, news and other activities, but active participation related to the Integrated Approach will also allow you to have a direct influence in establishing common positions and practices.

For more information, contact the CEN–CENELEC Research Helpdesk: research@cencenelec.eu.

To implement the Integrated Approach, standardization bodies need the support and collaboration of research organizations, private enterprises and researchers themselves.

More information on the Integrated Approach

See the brochure "An Integrated Approach for Standardization, Innovation and Research", available at http://www.cencenelec.eu/research/news/publications/Publications/STAIR.pdf

2 Getting organized

2.1 The importance of forward planning

The experience of a number of NSBs/NCs has shown that two factors should always be taken into account to ensure a well-organized approach to activities related to research projects: strategy (Chapter 2.2) and internal organizational capability (Chapter 2.3). Understanding these two factors is the first step in developing a successful interaction with the research community.

2.2 Strategy

2.2.1 Define your strategy

In order to develop the relationship between standardization and research in an organized and fruitful way, you should start by defining a strategy. The strategy should set out your vision and approach to addressing the integration of standardization and research and the general aims and expectations that you wish to achieve. Developing the strategy will entail establishing concrete objectives and developing a plan to achieve them. Naturally, this strategy will be aligned with the overall strategy of your particular NSB/NC. Below you will find some advice on how to establish your strategy.

2.2.2 Gain commitment to support your strategy

To support any decision to work together with researchers, you will need to commit time and resources. Given that any new roles and activities will be managed and supported from within your organization, your top management will also need to support and recognize those as being part of the everyday activities of your NSB/NC.

2.2.3 Do your homework: make sure you have all the knowledge you need to complete your strategy successfully

Base your strategy on both an internal analysis of your organization and an external analysis of your environment. In general, many of these aspects will influence your choice of research-related activity and the objectives that are appropriate for your organization.

TABLE 1: ASPECTS TO CONSIDER IN THE INTERNAL AND EXTERNAL ANALYSES

Internal analysis	External analysis
■ the resources (e.g. human, technical) available to your organization ■ your organization's previous contact with research organizations ■ your organization's current levels of participation of researchers in national committees ■ your organization's existing knowledge of procedures for participation in research projects ■ your organization's previous experiences with participating in research projects ■ your organization's capacity for fulfilling the obligations entailed in performing standardization work (e.g. secretariats)	■ the identification of stakeholders (researchers, policymakers, National Contact Points (NCPs) and intermediate organizations; see Chapter 3 for more information) ■ the identification of the needs of these stakeholders ■ the level at which standardization is already routinely considered in national research policies and programmes ■ the main research areas/activities in your country ■ the success rates of previous project proposals in your country

2.2.4 Establish objectives to develop your strategy

Once the internal and external analyses have been done, you will have enough information to decide to what extent you would like to be involved in research and which activities you would like to develop.

The next step in your strategy-building process should be to establish concrete objectives. Those can be specific tasks, actions or activities that will help you to achieve the aims of your strategy. Ensure that they are realistic, achievable and, as far as possible, measurable and verifiable through relevant performance indicators (see the text box with examples of performance indicators below). Both the strategy and the objectives should be realistic and appropriate to your expectations at your starting position.

Examples of objectives

- to create a specific unit/department responsible for the Integrated Approach
- to assess any existing skills and if necessary acquire the appropriate training to get adequate skills
- to use the Integrated Approach as part of your usual promotion of standardization (communication, education on standardization, etc.)
- to establish regular contact with relevant stakeholders
- to develop a communications plan
- to develop a methodology for participating in research project proposals
- to set a number of research project proposals in which you would like to participate, based on the available capacity

As part of this identification of external factors, you might also consider any work undertaken by CEN and CENELEC, such as dedicated working groups, publications, supporting materials and communication activities. This can be an important aid to you in setting your objectives and planning and undertaking your relevant activities. It will help you to:

- understand the standardization context and European policy developments affecting it
- answer questions and raise your awareness of calls and tenders
- coordinate your activities with other CEN and CENELEC members

Examples of performance indicators

- the number of mechanisms for communicating the Integrated Approach concept to stakeholders (dedicated website, exploitation of your own media, creation of informative materials to be disseminated, etc.)
- the number of events organized to communicate the concept of the Integrated Approach to national stakeholders
- the number of external communication events attended in relation to Horizon 2020 or other research-and-innovation-funding programmes
- the number of research project proposals in which you have participated that have included standardization activities
- the number of proposals submitted to funding programmes to which you have not previously applied
- the number of framework agreements made with national authorities or stakeholders (e.g. NCPs, universities, research centres, etc.)

2.3 Organizational capability

2.3.1 Resource allocation

It is desirable to have staff members dedicated to innovation and research. The number of staff will depend on your organization's involvement in research and innovation activities and on the resources available.

It is important for staff to have well-defined responsibilities for developing activities, fulfilling objectives and coordinating interaction with the research community. Staff should have (or be prepared to develop) knowledge of or experience in the following areas:

- standardization procedures and IPR policy
- the concept, benefits and application of the Integrated Approach
- funding programmes for research and innovation (e.g. Horizon 2020, national programmes) and the rules for participation (see Chapter 4.2)
- project and portfolio management

Knowledge of these topics can be acquired by doing desk research, attending informative events, enrolling in specific internal or external training courses, etc.

As participation in research projects is often externally funded, a large financial contribution on your part may not be necessary. Nevertheless, you should bear in mind that the cost of preparing a proposal is not usually covered by project funding, and any resources required for this should be considered as being integral to any staff role.

Your level of existing experience may influence how much time you allocate to developing project proposals: the more often you have done that, the easier it will be and the less time it is likely to take. However, once a project has been approved and starts, the budget (mainly personnel and travel for an NSB/NC) may be totally or partially covered by the programme that is funding the project (e.g. Horizon 2020).

2.3.2 Internal communication

To avoid conflicting messages, a lack of coordination and lost opportunities, a fluent and meaningful internal information flow within your organization will be essential.

Your colleagues in standardization should be informed, trained and involved. You should ensure that they understand the concept of the Integrated Approach as well as specific approaches to the integration of standardization within research projects. They will also need to know who is responsible for research-related activities within your organization.

Internal communication may also need to take the following into account:

- activities that are related to research (e.g. contacts, external communication)
- activities that require the direct involvement of your colleagues in standardization (e.g. whether they are envisaged to be directly involved in research project activities)
- proposals and research projects in which your organization is participating (e.g. project title and the names of those in charge)

Furthermore, it is also important to ensure that other departments, units or positions in your organization are aware of any research-related activities, so that they can:

- understand the projects, including why they are being developed and who is in charge
- make contact between potential interested parties and project leaders
- contribute to the communication of the concept to anyone within the research community with whom they have contact
- ensure that potentially useful contacts are never lost
- contribute additional activities to research projects (e.g. communication, training, editorial work)

A "living" process

As with other business activities, you should periodically analyse the results obtained from your research and standardization activities with a critical eye. This analysis should allow you to assess and adjust the methods and activities you have used and your strategy and objectives as necessary. Your goal should be to learn from your experience and to optimize your performance.

3 Engaging your stakeholders

3.1 Communication and networking

Communication and networking are core activities when it comes to forging a better link between standardization and research. Both are important when you are planning your first involvement in research projects but also on a continuing basis throughout your participation in research.

A good planning and design of your communication activities will support your organization in its efforts to raise awareness about the link between innovation and standardization, the opportunities that standardization can offer to research, and the role of standardization as a facilitator of innovation. As one NSB/NC cannot possibly reach all relevant stakeholders, you may find it useful to consider how best to make use of third parties that might be able to convey your message and thus act as information multipliers. Networking will help you become known within relevant organizations and institutions and among the people who are actively involved.

3.2 The importance of having a good communication plan

Experience has shown that many people involved in research have very little if any knowledge about standardization. This also implies that they are not aware of the benefits that linking standardization and research may bring.

Furthermore, when they find requirements in Horizon 2020 calls such as those that ask for a consideration of standardization activities, they either do not know how to go about doing that or they approach the idea incorrectly in their proposals. Even those with some previous knowledge of standardization are unlikely to identify ways of relating standards activities to research projects on their own, without the help of standardization bodies.

This is why good promotion and communication is extremely important, both to engage the research community in your activities, and to involve you in research projects.

Communication is not an end in itself but should play an important role in helping you to link research with standardization. Achieving your communication goals will enhance your organization's credibility as a potential research partner and thus increase your likelihood of success. It is therefore essential to have a good communication plan with clear goals and actions.

Defining the goals of communication is the first step in choosing target groups, materials, forms of communication, and timing. You will also need to consider the different purposes of communication, as follows:

- Raising awareness

  The aim here is to create awareness of the role that NSBs/NCs can play in research projects and the kind of services they can provide; usually this does not involve any "deep" knowledge of standardization, but it could be helpful to use the example of an existing project or of ongoing activities and their outcomes. An NSB/NC may wish to inform research organizations about the services it can offer researchers, using supporting materials such as flyers or brochures targeted to research organizations.

- Promoting understanding

  The aim here is to communicate information relating to the benefits of the standardization activities and to help the target groups acquire a deeper understanding of your activities and services. For example, an NSB/NC may wish to organize a promotional event, providing information and interacting with stakeholders.

- Calling for action

  Communication with the aim of calling for action has the deepest impact on the target groups. Here, the audience are those individuals who are in a position to influence and bring about change within their organizations or structures. For example, the NSB/NC could contact a decision-maker to present the opportunities that standardization offers as an added value to research projects in order to secure the engagement of the NSB/NC in a research project.

3.3 Target groups

Standards play an important role for every stakeholder in the research community. While there may be significant differences between countries in this respect, it is always important to consider the following groups of stakeholders:

- **Researchers**

  These are individuals who perform the research activities. They can be publicly or privately funded and they might work at universities, research institutions or research departments in companies.

- **Policymakers**

  These are national, regional or local authorities who have some level of responsibility in the planning, organization or funding of research.

- **National Contact Points (NCPs)**

  These are the formally appointed points of connection between the EC and the national project coordinators. There may be one or more topic-specific NCPs and those can be part of one or several different organizations depending on the structure of NCPs in your country. They play a strong role as information providers for consortia, proposers, potential participants, etc.

- **Intermediate organizations**

  These include sector associations, research platforms, and clusters. Often they facilitate consortia creation and composition as well as idea generation and they are willing to provide information to their members or associates.

As a first step, you should identify these categories of stakeholders in your project to have a target list as a basis for building communication plans to link between research and standardization.

Technical Committees will also be an interested party if researchers are willing to get involved in standardization activities or if a new standardization proposal arises from a research project. It is also smart to do some communication and awareness work with them as well, so they can be more supportive of this kind of activity.

National Contact Points (NCPs)

The network of NCPs is the main structure when it comes to providing guidance, practical information and assistance on all aspects of participation in Horizon 2020.

NCPs are national structures established and financed by the governments of the EU member states and the states associated with the framework programme. NCPs give personalised support in the applicant's own language. The NCP systems may vary from one country to another, from highly centralised to decentralised networks, and may involve a number of very different actors, ranging from ministries to universities, research centres and special agencies but also private consulting companies.

The NCPs can also advise consortia on contacting the NSB/NC to deal with the standardization aspects of the projects when requested in the calls. Communicating with NCPs is thus an essential networking activity.

For contact details of your NCPs, see
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

3.4 Which information to provide

A thorough knowledge of the benefits that standardization offers to research is central to supporting any communication or promotion, as it will help you to make standardization sound attractive to researchers and to answer specific needs. As nothing is more interesting for a target group than a potential solution to a particular challenge, make sure you know the specific issues and obstacles you as an NSB/NC may help researchers overcome.

While the general concept may well be broadly the same in each case, the way to present it may differ significantly for each target group. Identify the priorities and interests of each specific target group and focus primarily on what you can offer them.

Table 2 provides standardization answers for different groups of stakeholders to the topics and concerns that can arise in early discussions, and to reinforce the link between research and standardization.

TABLE 2: STAKEHOLDERS' TOPICS AND CONCERNS AND THE SOLUTIONS OFFERED BY STANDARDIZATION AND NSBs/NCs

Group	Topics and concerns	Solutions offered by standardization and NSBs/NCs
Researchers	Reasons to address standardization in research projects	The dissemination and exploitation of research results through standards; an appropriate integration of standardization can improve the results of the evaluation of the research proposal
	How to address standardization in research projects	NSBs/NCs can take over the activities in a research project related to this, thus providing immediate expertise
	Dissemination of research results	Standardization activities support wide but also focused dissemination
	Commercialization of research outputs	Standards provide user confidence and market access
	Possible conflict between standardization and the protection of intellectual property (IP)	NSBs/NCs can advise on standardization in relation to IP
Policymakers	Establish efficient research and innovation strategies and policies	NSBs/NCs are part of the research community; standardization supports innovation and NSBs/NCs provide the link between research and standardization
	Increase the social and economic impact of the publically funded research	Standards foster knowledge transfer and market uptake
	Increase national revenues from European research funds	An appropriate integration of standardization can improve the results of the evaluation of project proposals and thus contribute to shares in European funds

Group	Topics and concerns	Solutions offered by standardization and NSBs/NCs
NCPs	Increase the number of projects in Horizon 2020 that are led by a coordinator from their country	An appropriate integration of standardization can improve the results of the evaluation of the research proposal
	Be able to provide information to researchers, e.g. standardization in calls	As NSBs/NCs have the best and most in-depth expertise available, they are the right contact for standardization issues
Intermediate organizations	Provide information and services to their members	As NSBs/NCs have the best and most in-depth expertise available, they are the right contact for standardization issues
	Improve the success rate of their members' project proposals	An appropriate integration of standardization can improve the results of the evaluation of the research proposal
	Improve the business benefits for their members/sectors	Standards provide user confidence and market relevance

Having a sound knowledge of your stakeholders' needs in terms of research will enable you to communicate effectively with stakeholders. It can be a good idea to approach your stakeholders to be able to clearly identify and understand their needs. Your stakeholders' needs can be quite different from what you as an NSB/NC might imagine them to be.

It will be of great help to address researchers in the language of research, which is quite different from the language used by standardizers. Spend some time getting to know the terms commonly used in research. See Chapter 4.5 for a number of common abbreviations.

Table 3 includes some concerns that researchers often express regarding their involvement in standardization. It also provides some arguments that you should consider when dealing with those concerns.

TABLE 3: COMMON CONCERNS OF RESEARCHERS ABOUT PARTICIPATING IN STANDARDIZATION AND POSSIBLE ANSWERS TO THOSE CONCERNS

Concerns	Answers
Standardization takes a long time	There are different processes and standard documents available; some require less time to develop. While consensus-building can indeed take time, the end result will be a better standard with more impact
There is no clear process on how to participate in standardization for researchers	Explain the options for participation
Participating in standardization requires large amounts of resources	A range of resources is available at the national and European levels which may be allocated to standardization in research projects
Standards do not recognize the commitment of researchers	This is a consequence of the open process of standardization, but it is balanced by other advantages
Industry and especially SME do not see the benefits of investing in the participation in standardization	Explain the benefits related to the market
Existing standards sometimes constitute a barrier to new disruptive technologies	Participating in the development of new or revised standards can be the best solution to this

3.5 How to communicate

Not all methods of communication are suitable in all situations. In some cases, you may simply want to create general awareness of the work being undertaken, or to improve understanding about the benefits of standardization activities. You might also aim to have a deeper effect, for example by persuading an organization to change its existing approach towards involvement in standardization. Alternatively, you may be directing your efforts towards the general research community, towards a selected group of universities or towards an NCP, adapting the materials, the form of communication and the timing accordingly in each case.

To avoid wasted time and effort, or even potential negative consequences, it is important to select the most suitable method for each target group and objective. The quality of materials and the means you choose are more important than quantity, and established methods of communication may not be sufficient to reach certain goals or a particular target group. Varying your means of communication may well increase your chances of success.

Similarly, make sure you carefully consider the timing of any communications activities you undertake. For example, sending promotional materials to researchers or NCPs can be especially pertinent when a wave of calls is published, whereas contacting policymakers may be more fruitful when they are preparing or updating innovation strategies or funding programmes.

Consider the following methods of promoting the engagement of standardization and research:

- Creating a dedicated webpage

  This can be a low-cost way to reach a potentially wide audience. Make sure your target group will be able to find it by using relevant keywords, such as “standardization”, “research”, “innovation”, “Horizon 2020”. Consult www.cencenelec.eu/go/Bridgit/webpage for suggestions about such a webpage.

- Distributing brochures and flyers

  These can be used for general purposes but also for specific target groups or events. As the amount of information they contain is limited, it is important to carefully select the main topics to be included. Consult www.cencenelec.eu/go/Bridgit/NCPguide for a flyer that can be used to target NCPs and www.cencenelec.eu/go/Bridgit/researchersguide for a brochure on innovation and standardization.

- Giving presentations at external events

  These can be useful to “sow the seeds” of information to identified target groups and as a first contact for further conversations.

- Providing information to technical committees

  This is simple, because you are using your existing committee contacts. Often technical committees are not aware of the benefits of integrating standardization and research.

- Organizing dedicated events

  These can be very useful for communicating to a wide range of target groups. Such events could be conferences or seminars. It is important to clearly identify the topic of the event, the target audience, the aims and the speakers as well as the information to be presented and the focus given to the specific interests of the audience. When choosing speakers, it can very often be useful to invite a speaker from your target group for the event. You may wish to present practical examples or success stories, and it can be interesting to present the view of others, rather than just your own voice.

  With these kinds of events, the way in which you contact the potential audience and advertise the event to attract attendees is crucial. Do not hesitate to use whatever means would be most effective to reach your audience: consider which third-party “platforms” and “multipliers” might be able to announce events in turn to their own audiences, and make sure you use the full range of media options open to you. For more information on organizing such events see the document “Tips for organizing an event for researchers” (www.cencenelec.eu/go/Bridgit/eventsguide).

- Holding face-to-face meetings

  These are useful as a way to provide detailed information to specific stakeholders (e.g. policymakers, NCPs, research contacts at a university) and to obtain a high level of feedback.

Any communication methods you choose will need to be evaluated in terms of their effectiveness and appropriateness when it comes to achieving the expected objectives. When planning communication activities, you may find it helpful to use a simple sheet on which you can record every relevant aspect, and then using that same sheet as a simple evaluation tool later on.

3.6 Networking

The concept of networking is different from that of communication, but it can also include a strong promotional component. Building and working across networks implies interaction between all the different members of the network, collaboration, brokering, searching for opportunities.

The research and innovation community is structured around several clusters at the European and national levels. These include European Technology Platforms, Joint Technology Initiatives and National Contact Points. These clusters can play a significant role in reaching out and raising awareness about the role of standardization in research projects among their members and promoting the participation of NSBs/NCs in research projects.

To get involved with these different channels and networks, you will need to know the background and aims of each of them. As a first step, take a look at your national stakeholders in research (see list of stakeholders in Chapter 3.3) and ask yourself the following questions

- Do the stakeholders you have identified suit your strategy and vice versa?
- Which of them are already participating in research projects on the national and/or European levels, or have done so before?
- Have those stakeholders that have had experience with participating in research projects incorporated standardization activities within their projects?

Once you have gained an initial broad overview of your research community, you will need to get in touch with them and to start building your network. Depending on their knowledge of standardization and their involvement in research projects, you might need different strategies to get in contact with different stakeholders. Please keep in mind that truly building a network involves much more than just exchanging business cards: it is more a question of continual interaction with your stakeholders. You might consider the following activities:

- joining established networks, sharing information, participating in events, initiatives, etc.
- creating your own virtual network around standardization, research and innovation to interact with the research community, bring them closer to the world of standardization and promote your participation in research projects (e.g. through social media)

Not all activities will suit all stakeholders. Keep in mind while networking that many stakeholders will have little or no knowledge of standardization, and may simply not be interested in it as a topic. It can be very useful to develop informative material in advance that you can send them (see also Chapter 3.5). Focus on the value that your services can add rather than simply listing what services you provide.

Once you have built your network, it is important that you maintain it. One of the main issues will be the availability of a contact at your NSB/NC; you should be easy to contact by means of the Internet, by email and by telephone.

To keep in touch with your network you could also send a regular newsletter to its members, including your current standardization activities.

3.7 Link with education about standardization

In addition to communication and networking targeted at research, you can also strengthen the link between research and standardization by educating the wider community about standardization.

Understanding standards and standardization and being able to use them effectively is of great importance to current and future researchers, as well as to other organizations participating in research.

Through education about standardization, researchers can better understand the benefits of standards, how to use them and how to contribute effectively to the process of making standards. This will increase the likelihood that researchers will include standardization from the beginning of their projects, thereby reaping the full benefits that standardization can offer. Basic knowledge about standardization is necessary to ensure that researchers will recognize how their projects can benefit from standards and standardization.

CEN and CENELEC have adopted a “Masterplan on Education about Standardization”, which describes the strategy for education about standardization in Europe. It offers a framework for an orchestrated action by major stakeholders in Europe, with European-level leadership, initiatives and vision, all of which support nationally coordinated and implemented activities. The European approach is designed to support NSBs/NCs in creating their own structures to drive national activities and share best practices.

The CEN and CENELEC Joint Working Group on “Education about Standardization” has developed two model curricula, one to be used by formal education, the other by vocational training organizations.

You can learn more about the CEN and CENELEC tools and initiatives in connection with education about standardization on http://www.cencenelec.eu/standards/education.

4 Participating in research projects

4.1 Background

Horizon 2020 is the largest funding scheme for research, development and innovation in Europe, with a broad variety of funding options and themes.

Bridging the gap between research and standardization is by no means limited to European research. As an NSB/NC, you should also focus on your national research infrastructure and your national funding opportunities. Working closely with your national funding agencies on the benefits of standardization can lead to a closer link between research and standardization.

Some advice before you start

Before thinking about participating in research projects, you should consider the following:

- An average of 10 – 12% of all proposals is selected by European Commission for funding.
- The development stage of your proposal will not be funded by the European Commission.
- Your contributions to proposals may be required at short notice.

However, if the proposal is well prepared and well-structured with good project management, your project is more likely to get funded.

You can increase your efficiency in various ways:

- by having a repository of administrative information (e.g. administrative data, a description of your NSB/NC, CVs, a generic description of your potential activities, considerations for budgeting)
- by remaining available until the deadline of the call, because contributions (activities, texts and budgets modifications and adjustments) may be required at any time until then
- by carefully reading the chapters below

Part of the information in this chapter is a simplified version of the procedures provided in the Participant Portal. The Participant Portal is a powerful tool that any person and entity active in a European research project must use during the entire lifetime of a project, what the proposal stage until final reporting. The Participant Portal of the EC can be found at: http://ec.europa.eu/research/participants/portal/desktop/en/home.html.

It is regularly updated with new procedures and rules applicable for projects under Horizon 2020 and other funding opportunities. The information provided on the portal is authoritative, and the portal should therefore be consulted when actively engaging in projects.

4.2 Things to consider prior to participating in a project

If your organization wishes to participate in research projects, you should consult the Participant Portal (see above), and contact your relevant National Contact Point (see also box in Chapter 3.3).

From either of these sources, you should collect detailed information on the following:

- different funding schemes and rules
- the application process and used terminology

Internally, you should clarify the technical, financial and administrative responsibilities and roles (see Chapter 2).

Participation in European research projects

NSBs/NCs can participate in Horizon 2020 projects in different ways, depending on the project characteristics or the NSBs'/NCs' own strategies and preferences:

➜ **Partner:** As a partner you are a regular consortium member. Partners are expected to be active in one or more of the "work packages" (WPs) of the project and to contribute knowledge and expertise; in case of an NSB/NC this could be information on e.g. existing standards and standardization

Being a partner involves reporting, including financial and technical justifications, and voting in project decision-making, in addition to participating in project meetings. The latter provides you with many options for interacting with the project partners as well as with contacts outside the project with the goal of interesting them in the world of standardization. Partnership also provides full access to information in the project.

As a partner you can also take over one or several of the following roles in the project:

- **Task leader (TL):** a task leader may be appointed to coordinate a specific task of a WP. His or her responsibilities are similar to those of a WPL (see below). If standardization has been allocated to a WP instead of forming a WP itself, the NSB/NC would be the task leader within the WP handling standardization as a task.

- **Work package leader (WPL):** a WPL is fully responsible for one or more of the WPs of the project. An NSB will thus usually be responsible for the WP related to standardization activities, if foreseen as such. Being WPL requires some effort, specifically regarding coordination, delegation and organization of work, reporting on progress and results and attendance of meetings at WP and overall project levels.

- **Project coordinator (PC):** Being coordinator of a project requires a large effort and should be based on a strategic decision of the NSB/NC, e.g. if the project is directly focussing standardization (e.g. a CSA, Coordination and Support Action [1]). Being the project coordinator requires sound management expertise and skills, having sufficient resources allocated to coordination, planning and reporting, and having the overall responsibility for setting up and submitting the proposal and implementing the project, including the financial coordination and reporting, until closure of the project.

➜ **Subcontractor:** As a subcontractor you are contracted by the coordinator or one of the partners to develop the standardization activities planned for the project. You do not need to justify your expenditures according to the rules for participants, which allows you to request reimbursement of your full costs; you might not be invited to all project meetings and do not have any voting rights. This kind of participation allows less involvement and influence in proposal writing and project implementation. Note: If you wish to take the role of subcontractor, this should be agreed by the project coordinator during the proposal phase so that you can deliver the input needed to accurately describe your role and standardization activities. If you are contracted at a later stage, your range of activities might be very limited due to financial constraints at that time.

➜ **External advisor:** NSBs/NCs are often contacted by project consortia to provide letters of support at the proposal stage or to participate in advisory boards during the project development. These boards provide support by means of information and advice. They are requested to comment on project deliverables and may need to attend some meetings. No funding is available to cover the work to be done, but travel costs to the meetings are very commonly covered by the project.

[1] Actions consisting primarily of accompanying measures such as standardization, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of networking and coordination between programmes in different countries ([Online], Available: https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/WP_participants.ppt [4 February 2015])

4.3 Identifying and selecting calls of interest to NSBs/NCs

Calls for proposals are launched on a regular basis by the EC. A call for proposal is a request by the EC to apply for funding in a predefined area of research. To identify calls that are relevant to your NSB/NC, you will need to check the Horizon 2020 website. Calls are structured around specific areas such as bio-based industries, energy or ICT. A full list of areas can be consulted online (http://ec.europa.eu/programmes/horizon2020/en/find-your-area).

There are usually several hundred calls covering very different areas that are grouped into "topics". As an NSB/NC, you may be interested in participating in any of them, or you may wish to select a range of them in which you have more interest, depending on your strategy. If you have identified calls that are relevant or of interest to you, you can also search for and propose partnership requests through various channels such as CORDIS, IDEALIST or NCPs. For more information about this, see: http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/applying-for-funding/find-partners_en.htm.

Furthermore, CCMC usually issues an analysis of every Horizon 2020 call, identifying the topics that make reference to standardization, which you might also use for your own purposes.

Moreover, many requests for having NSB/NC participate in projects will arrive as a result of direct contact with coordinators or other partners, for example from former project partners, through meeting potential partners during partnering events or via referrals from colleagues who are in direct contact with researchers. Such requests might also result from communications events or activities (see also Chapter 3).

To help you select calls that are relevant to your NSB/NC and to evaluate requests for participation, you can assess and consider the following non-exhaustive list of questions alongside your organization's strategy (see also Chapter 2):

- Is standardization mentioned explicitly in the call?
- Do you see a potential for standardization in the research proposed? Even if standardization is not mentioned in the call, is the research topic of interest to your NSB/NC?
- Does any standard to be developed fit with existing standardization work?
- Can standards be developed in an existing TC?
- Would there be a need to establish a new TC or other group such as a workshop?
- Is there a need for other activities related to standardization that you as NSB/NC would like to undertake, e.g. consultancy on the standardization process, hosting, road mapping, or training?
- Are any of your national stakeholders active in this specific field?
  Note: this can also help you to identify relevant stakeholders or form an opportunity to engage with new ones.
- Are you aware of national positions for or against standardization activities in the field?
- Can you meet the deadline for responding to the call?
- Do you have staff available to work on the project proposal?

However, especially when an NSB/NC is starting with this kind of participation, you do not need to worry excessively about selecting the appropriate project; just get involved in one or more of them to gain experience.

4.4 Drafting a project proposal

4.4.1 Considerations

Once you have selected a call, you will need to start preparing a project proposal with the project consortium. First, you will need to present your capability of joining a project (Chapter 4.4.2). You will also need to provide input to the project proposal (Chapter 4.4.3) and the budget (Chapter 4.4.4).

Examples of how standardization is addressed in Horizon 2020 calls

- "Projects are expected to stimulate pre-normative or standardization activities"
- "Standardization … may also be addressed as an integrated part of the proposal"
- "Contribution to ongoing standardization work"
- "… establish world-level standard is encouraged"

4.4.2 Presenting your capability of joining a project

The first direct contact you have with a project consortium is the one that sets the scene. Depending on whether or not the project consortium has already considered standardization or is even aware of it will affect how you manage your contact with the consortium:

1. The project consortium has already considered standardization or wants to address standardization proactively

- Check the call text and analyse it in detail: what is expected of standardization activities?
- Let the coordinator explain what he or she has in mind regarding standardization and why they want to engage in standardization (Is it because standardization is mentioned in the call? Is it because they know about the dissemination/exploitation potential that standardization offers? Has the coordinator or one of the partners already been involved with standardization, and if so, how?)
- Assess the coordinator's ideas about and proposals for standardization (Are they realistic? Has he or she understood how standardization works in principle?)
- Develop a rough proposal (see Chapter 4.4.3) of what your NSB/NC could offer, taking into account the coordinator's motivations, ideas and proposals, the call text, and your own capabilities and capacity
- Discuss the proposal: how do you see standardization in the research project (what could or would you imagine as "good practice"); explain what standardization would mean with or without an NSB/NC and the differences with and added benefits of working "with the NSB/NC"
- Prepare and propose a rough budget line for your contribution and discuss if they would prefer to have you as a partner or as a sub-contractor (see Chapter 4.4.4)

2. The project consortium has never considered standardization so far or is unaware of standardization

- Familiarize yourself with the specific call text, deliberate over your potential contribution to the project, and ensure that you are well prepared for the question of why they should involve standardization in the project
- Assess the motivations and interests of the consortium and provide the coordinator with information on the activities that you could engage in for the project:
  - highlight that properly including standardization will increase the chances of achieving a high evaluation score
  - include information on the benefits of standardization for researchers, examples of existing activities and standards, and examples of success stories
  - explain what standardization would mean with or without an NSB/NC and the differences and added benefits of working "with the NSB/NC". Consult the table in Chapter 3, which contains examples of stakeholders' concerns and the solutions offered by standardization and NSBs/NCs
  - explain the essential principles of standardization – a transparent process, consensus, the engagement of stakeholders – and why and where those are relevant to the project (It is inadvisable to go into detail about formal procedures unless specifically asked.)
- It is the coordinator's decision whether or not the project consortium wants you "on board":
  - if not: invite the coordinator to follow your NSB's/NC's activities in the field of the research to remain in touch in the event that the project should reconsider, and in case your NSB/NC has events for researchers
  - if yes: develop a rough proposal detailing what your NSB/NC could offer, based on the direction the project wants to take (see Chapter 4.4.3) and on your capabilities and capacity
  - prepare and propose a rough budget line for your contribution and discuss whether you are envisaged to take part as a partner or a sub-contractor (see Chapter 4.4.4)

Focus on convincing

"What can standardization bring to the project?"

➜ gives access to the state of the art

➜ ensures the comparability of the results with what is already on the market

➜ makes the results available to a wide range of companies and research organizations

➜ gives opportunities to discuss and promote project outcomes with stakeholders and potential customers

➜ ensures that the project results will be used by the market well beyond the duration of the project

➜ helps in complying with health and safety legislation or other regulatory requirements

4.4.3 Developing and scheduling your project activities

Work in research projects is usually structured into "work packages" (WPs). After having joined the consortium, there are many activities that you might feed into the proposal and allocate to WPs.

To help you make the most out of timing, note that analysing existing standards and standardization activities can be done at the very beginning of a project.

Analysing the standardization potential might be an activity within the project while advising on a standardization strategy suitable for the project or providing assistance in the process of proposing, developing, drafting and consensus-building for a new standard is likely to be meaningful after the project has produced some results.

Consider also that any standardization activity can only be funded within the project timeframe. It also needs to be decided whether standardization activities should constitute a whole WP or a task within a WP, e.g. dissemination/ exploitation.

If there will be a dedicated WP/task on standardization you should propose to be the WPL or TL and make sure that project partners commit to standardization activities (including resources). Moreover, you will need to decide which other WP(s) or task(s) you should participate in. Define deliverables and possibly even milestones for every WP and task. Keep in mind that as a WPL you will have specific obligations (e.g. reporting and administrative tasks) that need be taken into consideration when you are planning your budget.

NSB/NC activities to contribute to a research project

You can contribute to a research project via activities such as the following:

- **Analyse existing standards and standardization activities**
  This can include mapping existing standard deliverables and scheduled standardization activities, and listing TCs active in a sector.
- **Analyse the standardization potential**
  You can determine the standardization potential of a project with project partners and other stakeholders, documented in e.g. a standardization strategy (see below) , early preparation for standardization activities, the provision of contacts to relevant TCs and SCs.
- **Advise on the most suitable standardization strategy for the project**
  You can advise on the level of standardization (national, European or international) or the type of deliverable for a new proposal included in the project or on possible liaisons (see http://boss.cen.eu/TechnicalStructures/Pages/Liaison.aspx) with existing Technical Committees and other technical bodies.
- **Assist the standardization process**
  You can submit proposals for new work items or provide the secretariat to new standardization groups as a part of the project activities.

Furthermore, the consortium partners will need some advice and support from your side about standardization fundamentals, procedures, outputs, possibilities, etc.

4.4.4 Budgeting

It is important to pay close attention to funding conditions, as they might differ according to the programmes in which you participate.

If you are a partner in Horizon 2020, your budget request will be made up of the following parts:

- Direct costs:
  - personnel costs
  - travelling and subsistence costs (e.g. travelling to kick-off meetings, workshops, conferences, project meetings, work-package meetings, review meetings, standardization meetings)
  - other direct costs (e.g. liaison fees, the production of brochures, the provision of standards; catering for meetings; any subcontracting, including audit costs)
- Indirect costs (all general costs that are necessary but not directly linked to project activities) are eligible, up to a maximum level of 25% of your direct costs excluding subcontracting.

If you are a subcontractor, you must calculate the costs you will require to fulfil any of the proposed activities (staff, travelling, others), and you can apply the rate normally used in your NSB/NC for your indirect costs. You may still subcontract other parties according to the EC's rules for subcontracting.

In any case, make sure that the other partners include in their budgets any of their costs related to your activities. Standardization activities rely on stakeholder participation – your partners in the project are stakeholders. They will need to allocate resources for their contribution to standardization activities as part of their own budget, including staff costs and travel.

Be mindful that it can take longer to work collaboratively on standardization issues in the framework of a research project and make sure you allocate sufficient resources (man days, travelling) to all activities, including report writing, project-meeting preparation and attendance, cost justification, presentations. Each meeting planned e.g. for a CEN or CENELEC Workshop will entail costs for travelling and staff costs not limited to the meeting day.

You can find more information on budgeting in the Horizon 2020 Online Manual,
see http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm.

4.5 Submitting the proposal

Any formal step in proposal preparation (as well as any other step related to a research project under Horizon 2020) is to be done and stored in the Participant Portal.

Registration procedures to gain access are explained in the Horizon 2020 Online Manual
(http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm).

All organizations that are planning to participate in Research Framework Programmes need a Participant Identification Code (PIC).

To find out if your organization already has a PIC or still needs to register,
see http://ec.europa.eu/research/participants/portal/desktop/en/organisations/register.html.

Some abbreviations used in Horizon 2020

AccAd	Account Administrator
CA	Consortium Agreement
DoA	Description of Action
ECAS	European Commission Authentication System
FSIGN	Financial Statement Authorised Signatory
GA	Grant Agreement
LEAR	Legal Entity Appointed Representative
LSIGN	Legal Statement Authorised Signatory
PaCo	Participant Contact
PCoCo/CoCo	Primary Coordinator Contact/Coordinator Contact
PIC	Participant Identification Code

When working with European research projects, your organization must nominate the LEAR who will function as your primary contact when engaging with the Commission. The nomination of the LEAR must be validated by the EC. As he/she will be responsible for keeping the information about your organization up to date on the Participant Portal, you should nominate him/her as early as possible. He/she will also be responsible for allocating roles within your organization, e.g. the FSIGN (Financial Statement Authorised Signatory) and the LSIGN (Legal Statement Authorised Signatory).

After settling the proposal and the budget, CoCo registers the project, including all partners (with their respective PICs) in the Participant Portal. At that point you will need to nominate the NSB/NC staff members who will have the role of the PaCo(s). Whom the NSB/NC will nominate (e.g. who will have access to the financial data related to salaries that is necessary for reporting) will depend on your internal rules regarding access to information. Note that colleagues working on the project do not necessarily need to be PaCos.

The PaCo(s) will provide additional information on your organization and insert the figures of the budget needed. The CoCo then uploads the final Description of Action (i.e. proposal) and submits the final version of all requested documents.

Once the deadline has passed, all proposals will be evaluated within approximately five months by an independent panel nominated by the EC. The panel will check the research project proposals against a set of criteria published in the call to decide they are eligible for funding. The final decision will be taken by the EC.

4.6 Agreeing on contractual aspects

Once a proposal has been selected for funding, the EC will set up the overall Grant Agreement (GA) for the funding, while the project partners will negotiate a Consortium Agreement (CA) among themselves. Within the Consortium Agreement you should carefully read the chapters on “Background” (e.g. access to standards vs. access to information on standards) and “Results” (outcomes of the project; i.e. related to standardization deliverables). Regarding the results, the Consortium Agreement will need to include a statement that the copyright of any published standardization deliverable shall remain with the respective standards body.

4.7 Implementing the research project

About eight months after the deadline for the submission of the proposal, the project will start the implementation according to the Description of Action (DoA) if the project has been selected for funding. Any subsequent deviations will need to be negotiated among partners and in some case (e.g. financial issues) with the EC.

The GA defines the reporting periods in which financial and technical reports have to be delivered. It is essential to keep records of all costs and to be able to link them to specific activities. This will allow you to quickly provide a complete justification for your expenditures.

Technical reviews by independent experts can be commissioned by the EC. Project advisers will support the consortium and the project officer of the EC in technical aspects of the project.

The EC can audit any project up to two years after its completion and can return to any given project to assess the sustainability of results in comparison to the planning of the project.

Figure 2 illustrates the overall process from finding a project to the actual start of a project.

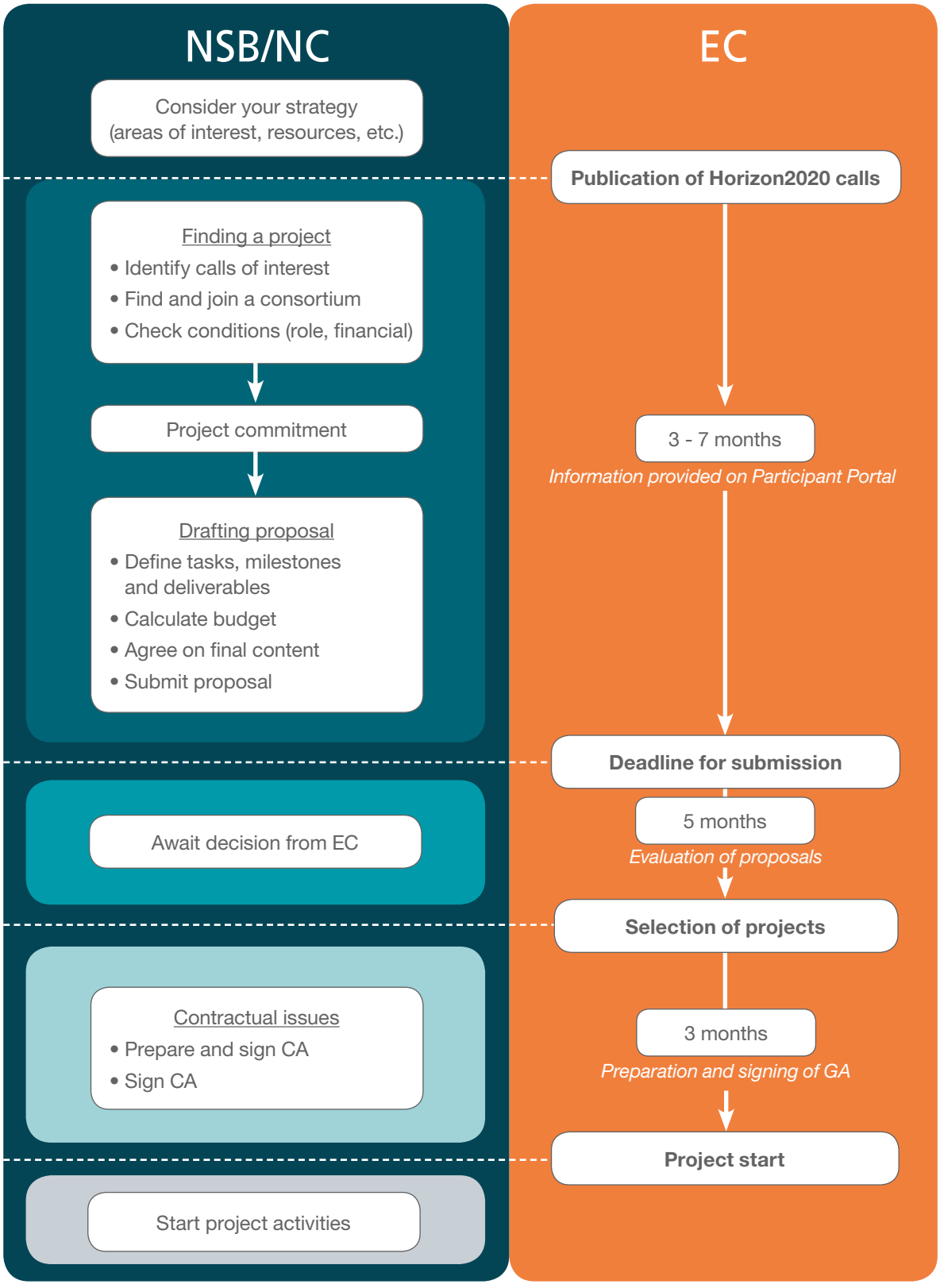

Figure 2: Processes from project initiation to the start of a project

Annex A: Success stories

Bioeconomy

The project 2ndVegOil covered research and demonstration on the use of 2nd generation vegetable oil fuels in advanced engines. One of the project objectives was to transfer the engine and fuel concepts to hybrid engines in order to achieve EURO 6 emission levels in road vehicles through an innovative solution.

To promote this innovation and disseminate it beyond the project partnership, the project initiated **CWA 16379**, "Fuels and biofuels — Pure plant oil fuel for diesel engine concepts — Requirements and test methods" NEN was a partner in the Consortium and held the secretariat of the workshop that worked on the CWA. http://www.2ndvegoil.eu/

Green transport

The project EASYBAT aimed at providing interfaces for switching a battery in and out of an electric car quickly and safely (the connector interfaces between the car, the battery, the communications network, and the battery cooling system) and design specifications that meet European industry and safety standards.

The objective of the project was to have a next generation, commercially available solution for battery switch integration components and design plans that allow for different types of batteries. To achieve the expansion into new markets, the project has contributed to the development by CENELEC of **CWA 16688**, "Battery swap systems interfaces for electric vehicles". NEN was as a subcontractor in the project in charge of organizing the Workshop process.

Clean Energy

The project STALLION aimed to set up a complete framework of methodologies and protocols for safety testing of stationary Li-ion batteries for large-scale grid applications. The results of the STALLION project contributed to standardization actions in IEC/SC21A and IEC/TC 120. It is among others expected that by December 2015 a new standard, **IEC 62897** "Stationary energy storage systems with lithium batteries - safety requirements" will be delivered, based on the STALLION results. DKE participated in the project's advisory board. http://www.stallion-project.eu/

Sustainability

The project SuperCleanQ developed quality control, quality assurance tools and procedures for plastics recycling processes targeted at food contact applications. Based on the project's outputs, a new CEN/TS (Technical Specification) was proposed in CEN/TC249/WG20, aiming to be delivered by March 2015 as **CEN/TS 16861**. NEN was a subcontractor in the project where they advised the standardization process. http://www.supercleanq.eu/

Materials

The project StaCast aimed to promote the transformation of the European aluminium alloys foundry industry into a quality/efficiency-driven and integration-oriented sector. The transfer of the StaCast research results into standardization happened through close collaboration with CEN/TC 132 'Aluminium and aluminium alloys' and was facilitated by the participation of Italian standardization experts in the consortium. As a result, two CEN Technical Reports were published: **CEN/TR 16748:2014** and **CEN/TR 16749:2014.** http://www.stacast-project.org/

Information and Communication Technologies

The project inTime aimed at generating additional value through adding a business layer on top of the then existing myOpenFactory communication infrastructure, already standardized in the German PAS 1074:2007. The key objective of inTime was to improve delivery reliability in each customer-supplier relationship balancing production in the overall network. To codify this approach and shorten access to market, inTime triggered the development of **CWA 16504** 'Simplified multilateral EDI - Secure electronic data interchange in non-hierarchical networks'. NEN was a partner in the Consortium and held the secretariat of the workshop that developed the CWA. http://data.fir.de/projektseiten/intime/

Annex B: Policy on Participation in Research Project Consortia

Approved by DECISION BT 26/2013 of the CEN/BT and by Decision D145/041 of the CENELEC/BT

The following points constitute the main elements of the policy:

- CEN and CENELEC as organizations will not join a research project as a partner. A CEN or CENELEC national member, representing CEN or CENELEC[2], can join a research project as defined by the Integrated Approach by becoming a project partner and consequently be financed by the project.
- CEN and CENELEC national members can identify relevant research calls and project proposals and decide whether or not to join the project as a partner.
- Project proposer may contact national members directly which may result in the member joining the project as a partner.
- Project proposers may contact CCMC directly to include an activity addressing standardization in its proposal. CCMC will then contact the relevant CEN or CENELEC member according to:
  - if the proposal clearly falls within the scope of a CEN or CENELEC TC or Workshop, the Secretariat of which is held by that member
  - if the project proposal clearly emanates from that member's country (e.g. the coordinator or some major partners are from that member's country)
  - where it is not possible to identify a CEN or CENELEC member through the above methodology, CCMC will strive to match the project proposal with the most relevant national member(s) in consultation with BT/WG STAIR and RDI-COR
- For cases where project proposers wish to establish a link with CEN and/or CENELEC (possibly in addition to the participation of a national member as a project partner) CCMC may provide the research project proposer with a "letter of intent" which confirms CEN's and/or CENELEC's interest in the relevant standardization project outcomes and which explains the standardization potential. CCMC will inform BT/WG STAIR of all "letters of intent" issued.
- CEN and CENELEC member contribution to research projects should follow a common best practice approach, ensuring a consistent offer to research projects throughout Europe. The best practice approach will be promoted to the members through BT/WG STAIR and RDI-COR.
- CEN and CENELEC members have an obligation to keep CCMC and BT/WG STAIR informed of projects in which they are partners. This information will help demonstrate the successful implementation of the Integrated Approach.

[2] A national member will join with a task which will be to progress a standards action such as secretariat of a TC or WG or WS. This is what links them then to CEN or CENELEC: the fact that they are supporting a standards process in CEN or CENELEC. Legally, the members are a partner in their own right to the project and they do not need CEN or CENELEC to agree on this; strictly speaking they do not represent CEN or CENELEC as such in the project but they commit to give support to a standardization process here in CEN or CENELEC.

Annex C: Useful links

CEN and CENELEC

Initiatives on education about standardization
http://www.cencenelec.eu/standards/education

Liaison Organizations
http://boss.cen.eu/TechnicalStructures/Pages/Liaison.aspx

Policy on participation in research project consortia
http://www.cencenelec.eu/go/Bridgit/policy

STAIR brochure “An Integrated Approach for Standardization, Innovation and Research”
http://www.cencenelec.eu/research/news/publications/Publications/STAIR.pdf

Tools for researchers (including FAQs)
http://www.cencenelec.eu/research/tools/Pages/default.aspx

Horizon 2020

Financial rules
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

Find partners
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/applying-for-funding/find-partners_en.htm

Horizon 2020 online manual
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm

Horizon 2020 programme
http://ec.europa.eu/programmes/horizon2020/en/find-your-area

National Contact Points
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

Participant Portal
http://ec.europa.eu/research/participants/portal/desktop/en/home.html

Participant Portal - User account and roles
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/user-account-and-roles/roles-and-access-rights_en.htm

Reference terms
http://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html

Register your organization or find out if your organization has a PIC
http://ec.europa.eu/research/participants/portal/desktop/en/organisations/register.html

Research and Innovation Participant Portal - Identity and Access Management (IAM)
http://ec.europa.eu/research/participants/data/support/pp_iam_changes.pdf

Projects

Cooperation Platform for Research and Standards (COPRAS) (FP 6)

COPRAS was a Support Action running from 2004 to 2007, aiming to improve the interfacing, cooperation and exchange between IST (Information Society Technologies) research projects and ICT standardization.

http://www.w3.org/2004/copras

Integrating Research and Standardization (INTEREST) (FP6)

The overall objective of INTEREST was to develop taxonomies of standards, of research outputs and of research-standards relationships and to contribute to the improvement of the interface between research and standardization, and thus to contribute to the effective diffusion and utilization of research which is being performed in Europe.

http://www.interest-fp6.org

Studies

Research Study on the Benefits of Linking Innovation and Standardization(2014)

Commissioned by BRIDGIT and realized by Optimat, this study identified and demonstrated the benefits of linking standardization and innovation.

http://www.cencenelec.eu/go/Bridgit/innovationstudy

Study on the Contribution of Standardization to Innovation in European Funded Research Projects (2013)

Carried out by Technopolis, this study focused particularly on the ways in which FP projects address standardization and on the benefits/impacts of standardization for FP research.

http://www.cencenelec.eu/go/Bridgit/FP7study

European policy

Communication from the commission to the European Parliament, the Council and the European Economic and Social Committee “The annual Union work programme for European standardisation for 2015”

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014DC0500

European Standardisation Policy documents

http://ec.europa.eu/enterprise/policies/european-standards/documents/official-documents/index_en.htm

Notes

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