AUGUST 2022

HSbooster.eu
Horizon Standardisation Booster

Services Matrix

Deliverable

3.1

TABLE OF CONTENTS

EXECUTIVE SUMMARY **5**

1 INTRODUCTION & SCOPE OF DOCUMENT **6**
1.1 Relation with other project deliverables 6
1.2 Structure 7

2 METHODOLOGY AND INTERCONNECTIONS **7**
2.1 Process for developing the service matrix, working assumption and methodology 7
2.2 Connection to education and training 8
2.3 Interconnectivity between service levels 9
2.4 Milestones for the Service Matrix 10

3 DESCRIPTION OF ALL SERVICE LEVELS **11**
3.1 Automated Service 12
3.1.1 Status of automated service level 12
3.1.2 FAQ & Glossary 13
3.1.3 Helpdesk 14
3.1.4 Chatbot 14
3.2 Proactive Service 16
3.2.1 Status of proactive service level: 16
3.2.2 Contacting R&I projects 18
3.3 Premium Service 20
3.3.1 Status of service: 20
3.3.1 Open call topics 21
3.3.2 External pool of Experts (EPE) 21
3.3.3 EPE – role, interaction and how does it work? 22
3.3.4 Standardisation readiness level (StRL) tool 23
3.3.1 Standardisation Mapping tool 26

4 CONCLUSIONS **31**

ANNEX 1 SOP **32**

ANNEX 2: OPEN CALL TOPICS **36**
Health 36
Resilience 37
Sustainable digitalization 38
Green transition in Europe 39
Smart Cities and Circular Economy in Buildings 40

ANNEX 2: EVALUATION CRITERIA AND SCORING FOR EVALUATIONS RECEIVED IN RESPONSE TO THE EXTERNAL POOL OF EXPERTS OPEN CALL **41**

TABLE OF TABLES

TABLE 1 - OVERVIEW OF HSBOOSTER.EU SERVICES 11
TABLE 2 - OVERVIEW OF AUTOMATED SERVICE LEVEL 12
TABLE 3 - OVERVIEW OF PROACTIVE SERVICE LEVEL 16
TABLE 4 - OVERVIEW OF PREMIUM SERVICE LEVEL 20

TABLE OF FIGURES

FIGURE 1 – HSBOOSTER.EU SERVICE CONCEPT 6
FIGURE 2 - MILESTONES FOR THE SERVICE MATRIX 10
FIGURE 3 - FAQ LISTS EXAMPLES FROM THE HSBOOSTER.EU .EU WEBSITE 13
FIGURE 4 - HELPDESK ENTRY POINTS 14
FIGURE 5 - FAQS, HELPDESK AND CHATBOT TIMELINE 15
FIGURE 6 - ADDITIONAL SOURCE MATERIAL OF RELEVANCE TO THE PROACTIVE SERVICE 18
FIGURE 7 - EXAMPLE OF STANDARD CONTACT E-MAIL IN THE PROACTIVE SERVICE LEVEL 18
FIGURE 8 - THE WEBSITE SET UP TO MANAGE THE RATING PROCESS OF EPES. 22
FIGURE 9 - STANDARD OPERATING PROCEDURE FOR THE EPE - 1ST MEETING. SEE ANNEX 1 FOR FULL SOP 23
FIGURE 10 – TECHNOLOGY READINESS LEVEL, NASA 25
FIGURE 11 INITIAL MAPPING OF RELEVANT TC/SC/WGS WITHIN TWO OF THE HSBOOSTER.EU CALL AREAS (PANDEMICS AND E-HEALTH) 30

Glossary

Terminology/Acronym	Description
CCMC	CEN-CENELEC Management Centre
CEN	European Committee for Standardisation
CENELEC	European Committee for Electrotechnical Standardisation
EPE	External Panel of Experts
ESO	European Standardisation Organisations1 (CEN, CENELEC, ETSI)
ETSI	European Telecommunications Standards Institute
EC	European Commission
HEI	Higher Education Institute
IEEE	Institute of Electrical and Electronics Engineers “Eye-triple-E”
IPR	Intellectual Property Rights
NC	National committee (IEC/CENELEC)
NSB	National Standards Body (ISO/CEN)
Project	Any European R&I project receiving the HSbooster.eu services or contacted by the HSbooster.eu partners
R&I	Research & Innovation
SDO	Standardisation Developing Organisation, term that signifies any organization developing standards, normally used for the industry or other sector specific organizations outside the formal organisations.
SOP	Standard Operating Procedure
STAIR	CEN-CENELECs group on research, innovation and education
StRL	Standardization Readiness level tool
T	Task

[1] https://europa.eu/youreurope/business/product-requirements/standards/standards-in-europe/index_en.htm

Executive Summary

The HSbooster.eu offers three levels of services to bridge the gap between the research and innovation community and the standards world. One of the most crucial aspects of the service matrix is to generate a model that is systematic, replicable and 'customer' centric, aiming at a high degree of automation.

The **automated service** (T3.1) is the entry-level service offered by HSbooster.eu, aimed at providing practical guidance and support to steer the research results towards the most promising standardisation pathway. Such guidance is "automated" in the sense that it is spontaneously initiated by the user and offered online, mainly through the project website.

Through the **proactive service** (T3.2) HSbooster.eu actively reaches out and contacts targeted projects where standardisation is deemed attractive and relevant. The proactive service is dialogue-based contrary to the automated service, which is one-way, and the premium service, where it is the expert (EPE) who offers the service and advice. The proactive service is led by the HSbooster.eu consortium and is based on the expertise and relations that the consortium builds upon, as well as the network and sources of information available through the consortium partners.

The **premium service** (T3.3) is the flagship of the HSbooster.eu. The tailormade premium service is based on the effort of a dedicated expert (EPE) who is linked to a specific project within his/her expertise.

The HSbooster.eu consortium role in the Premium Service level:

- Act as a facilitator to matchmake the expert to the eligible project;
- Develop criteria and assigns relevant experts to selected projects, with dedicated templates for experts to use;
- Create an evaluation module and feedback system to applicants to monitor results;
- Facilitat budget for projects to enrol in SDOs, WGs, and purchase copyrighted material (i.e standards, specifications);
- Liaise with EPE for educational purposes on defining their roles and responsibilities.

The Service Matrix has five distinct offerings: the EPE, the Open Calls, the Training material, the Standardisation readiness tool and the Mapping tool.

The thinking behind the HSbooster.eu is that scalability and automation is key to securing a long lasting impact of the project that can be sustained beyond its lifetime. Bridging the gap between the R&I community and the standards community will need a continuous effort and the HSbooster.eu is a vital starting point. The HSbooster.eu services will be constantly developed throughout project lifetime to ensure coherence and relevance of the offerings.

1 Introduction & scope of document

This deliverable, *D3.1 "Services Matrix"*, released at Month 5 (August 2022), gives a comprehensive description of the service levels offered in HSbooster.eu .eu, and explains the background and methodology used in the development and first roll-out phase. The report also gives an overview of standard operating procedures for the entire service range.

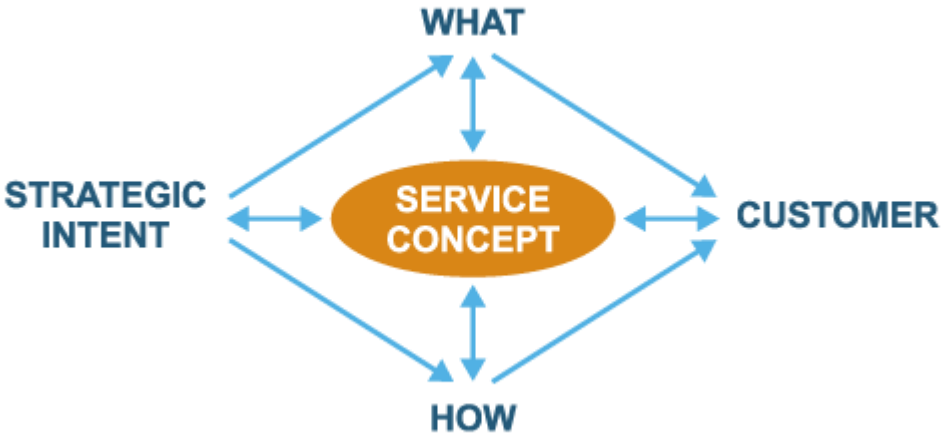


Figure 1 – HSbooster.eu service concept

When developing the service matrix, it was important for the HSbooster.eu consortium to consider the service concept in a systematic way, focusing on the strategic intent of the project, the 'customers' that the services should be offered to and WHAT the booster should offer and HOW to do it. See ideation concept used in the figure above.

One of the most crucial aspects of the service matrix is to generate a model that is systematic, replicable and 'customer' centric. Often, the standards community conveys information on standards and standardisation in a way that does not make it easy for outsiders to understand the benefits of using standards as background or see standardisation as an active tool for making a product or technology more widely used.

For R&I projects, standards are often seen as a burden for subsequent market access, not as a tool that, if properly used and with relevant stakeholders included in the process, can actually promote the use of a given product, process or technology.

In addition to this, IPR and standards are often seen as opposing elements and people with a researcher's mindset often feel compelled to choose a patent process when inventing something new.

In HSbooster.eu 's view innovation and standardisation goes hand in hand, and HSbooster.eu's mindset sets out to make standards and standardisation as natural a choice as the patent or copyright protection.

1.1 Relation with other project deliverables

The activities encompassed in this document are closely related to the following deliverables:

- D3.2 Lessons learned and service report (M24)

- D5.4 - The HSbooster.eu Training academy and materials (M24)
- D2.1 - HSbooster.eu .eu website (M2)

1.2 Structure

The document is divided in the following sections:

- *Introduction and scope of the document*
- *Methodology and interconnections*
- *Description and status of Service levels*
- *Conclusions*

2 Methodology and interconnections

2.1 Process for developing the service matrix, working assumption and methodology

The overall objective of the HSbooster.eu as project is to develop a method for linking research/innovation and standardisation while reaching the highest level possible of replicability. HSbooster.eu differs from similar projects by thinking ahead, digitalising all possible components, making it scalable and sustainable. This is a difficult task but is necessary if permanent and systematic links should be created between the European R&I efforts and the standardisation community.

These two areas have been functioning separately for many years, although many aspects are shared, for instance developing/describing new technology, new product development, novel/incremental innovation, market potential, IPR and standards.

The HSbooster.eu does not expect to overcome this barrier alone, but with a booster effort focusing on creating a scalable, replicable, and relevant service, we aim to set the cornerstone for a future effort in this direction.

Thus, the 24-month HSbooster.eu project is structured in full awareness of its role as a proof of concept, ensuring that all infrastructure, processes, and mechanisms are in place and fully scalable for subsequent industrialisation. Leveraging on previous experience[2] and its hands-on expertise in standardisation activities, the HSbooster.eu finds that we are in the right position and well on track to deliver on the objective.

The service matrix concept should not be seen as static. Rather it will evolve during the project in a learning by doing manner, where we continuously implement and review new procedures and experience.

In HSbooster.eu, three types of services will be offered: Automated (T3.1), Proactive (T3.2) and Premium (T3.3). In developing the service matrix, it became evident that the experts (EPE) would be a focal point. This is also the only part of the project where we heavily rely on external competencies and input. In order to reduce the risks associated with involving external parties, a thorough SOP (Standard operating procedures) for the EPE is necessary.

[2]The CSA H2020 StandICT.eu and StandICT.eu 2023, the "booster-type" Common Dissemination Booster and Horizon Results Booster as well as the CEN-CENELEC BRIDGIT 1 and 2 project, and several subject specific research projects with a standardisation component

The SOP for the EPE has been developed focusing on the following three aspects:

- What should be done
- How should it be done
- Gap analysis for individual projects

Considerations on what the EPE should address in the tailormade advice to R&I projects has centered around the following areas:

- Technology
- Product
- Material
- Testing or validation method
- Infrastructure development
- Service
- Ethics
- Policies

For further information see section 3.3.3 EPE.

2.2 Connection to education and training

For many years, the standardisation community[3] has been working with education and programmes/courses in standardisation in order to inform relevant stakeholders and make the new generations within engineering and other technical fields aware of standards as a necessary tool.

The efforts have primarily been driven by individual NSB/NC (CEN-CENELEC members), developing national courses, modules for higher education programmes and in a few cases entire study programmes centered on standardisation. The effort at national level has been supported by a certain level of coordinating activities and some education/learning material by the CCMC (CEN-CENELEC Management Centre) and the ETSI secretariat.

The impact of this effort has been small but consistent. For instance, in Denmark, Danish Standards has been part of the European effort to write a textbook on standards ('A World Built on Standards[4]'), developing accessible learning/training material for engineering schools, and giving guest lectures at the Danish universities/engineering schools on a regular basis.
Some NSBs are collaborating with universities and offer modules/courses or even entire programmes on standards/standardisation (for instance, KATS in Korea, the national standards body of Luxembourg).

On the other hand, several European universities offer courses whose curricula include content on standardization (e.g. Erasmus University, Vilnius University, Tilburg University (TLS), Delft University of Technology, Technical University of Eindhoven (TU/e) Technical University of Berlin, Matey Bel University, Vrije Univerisity, University of Belgrade, Technical University of Denmark (DTU), University of Southern Denmark (SDU) and many others). Most academics, who teach standardisation closely collaborate with NSBs and other SDOs, and they are active in organisations and groups such as EURAS[5],

[3] The standards/standardisation community is here defined as the formal standards organisations, their national standards bodies and the community of standards experts actually writing the standards.
[4] https://www.ds.dk/media/px5jhney/a-world-built-on-standards.pdf
[5] https://www.euras.org/

EUOS (EU Observatory for ICT Standardisation)[6], UNECE WP6[7], and AAStart. Still, the number of courses related to standardisation, and the number of students who have a chance to learn about standardisation during their studies are small.

The results of NSBs or other SDOs contacting and convincing the HEIs to integrate standardisation and standards in different curricula varies. The downside of this individual/national approach is the lack of coherence in the approach towards HEIs, the low penetration rate to relevant students (and other stakeholders), and lack of scale.
In addition, traditionally, CCMC/the ETSI secretariat and the NSBs focus their teaching and training effort on standardisation and not on standards. This is natural, as there are more than 28,000 standards in the formal standards portfolio[8]. However, focusing on standardisation as a concept or process is not enough to train/educate people or students outside the standards community.

Therefore, the approach of HSbooster.eu is to take the outside-in approach rather than inside-out. It is crucial that we develop material targeting the R&I community and focus on their needs and knowledge gaps. Initially, they need to understand why and how standards can help an individual project. This knowledge is pivotal if HSbooster.eu is to be a success. Secondly, researchers and innovators should be introduced to how the standardisation community works and then to the more detailed organisation of technical committees, the rules and processes, link to regulation, and finally to specific subject areas, as for instance machinery, IT, Health, etc.

In HSbooster.eu, we aim to create tailormade modules, training exercises, lectures and written materials than can be combined in different ways to meet the individual needs of an R&I project. This will be made available to the EPE and it will be part of the EPE's role to select the relevant material so the R&I projects get exactly what they need.

The incorporation of training material directly into the service matrix is an ambitious task which goes beyond the original objectives laid out in T5.1 and which focussed more on a stand-alone "Training Academy". The training material should be seen as a tool that will be used in all service levels of HSbooster.eu. Hence, T5.1 training academy, and the corresponding deliverable D5.4 HSbooster.eu Training Academy and materials, are closely linked to the service matrix. In other words, the service matrix and the training academy are mutually linked and one cannot function without the other.

2.3 Interconnectivity between service levels

It became apparent during the development of the service matrix that there is a close link and interconnectivity between the service levels. The services provided by HSbooster.eu cannot be seen as linear progression where R&I projects at a certain level receive the automated service, others the proactive, etc. On the contrary, flexibility and interconnectivity is key to securing that R&I projects receive the service needed at any time during their contact with HSbooster.eu.

For instance, an R&I project applying for premium service may need to start with the automated service, in order to build up the right level of knowledge. A project going through the automated service may find that their R&I project is at an advanced stage and that their Standardisation Readiness Level (StRL) is so high that they fit perfectly into a WG working specifically on their subject, thus, the project will apply through the Open calls in the premium service. Alternatively, we may find that

[6] https://www.standict.eu/euos

[7] https://unece.org/trade/wp6

[8] The formal standards portfolio is the total number of standards available from any given national standards body's webpage: https://webshop.ds.dk/en This does not necessarily include standards from other SDOs, for instance ASTM, IEEE or IETF, etc.

automated or premium services may be more suitable for projects identified to receive the proactive service.

Such a progressive approach means that a given R&I project may receive more than one service from HSbooster.eu. A benefit of this will be that we will be able to track and report on the progression of a given project and its relationship with the standards community. In addition to this, several of the tools developed in HSbooster.eu are applicable in more than one service level. For example, the training material is relevant for all service levels and so are the FAQ, Standardization Readiness level tool, mapping tool, etc. The idea is that by using mass customisation, HSbooster.eu will be able to provide targeted services by using a set of standardised tools which will be automated as far as possible to ensure scalability.

It is important to note that the HSbooster.eu is a pilot study and tools, including training, will be developed continuously during the project period. This means that we start with general training material on standardisation and further develop fine-tuned and more specific training.

Finally, HSbooster.eu .eu finds that at the current stage of development of the services, we do not have full overview of the R&I projects, what their profiles will be, their subject areas, and how their need for services will distribute across the three service levels. Thus, as the HSbooster.eu evolves, we envisage that knowledge on the projects' needs will increase and we will adjust the service levels and finetune the interconnectivity between service levels. This may also have implications on the service matrix and the SOPs developed. Staying flexible and adjusting during HSbooster.eu lifetime, is crucial for the success of this standardisation booster.

2.4 Milestones for the Service Matrix

To visualise the development of the Service Matrix and the important steps in ensuring project deliverables during project lifetime, an overview of Milestones are shown here:

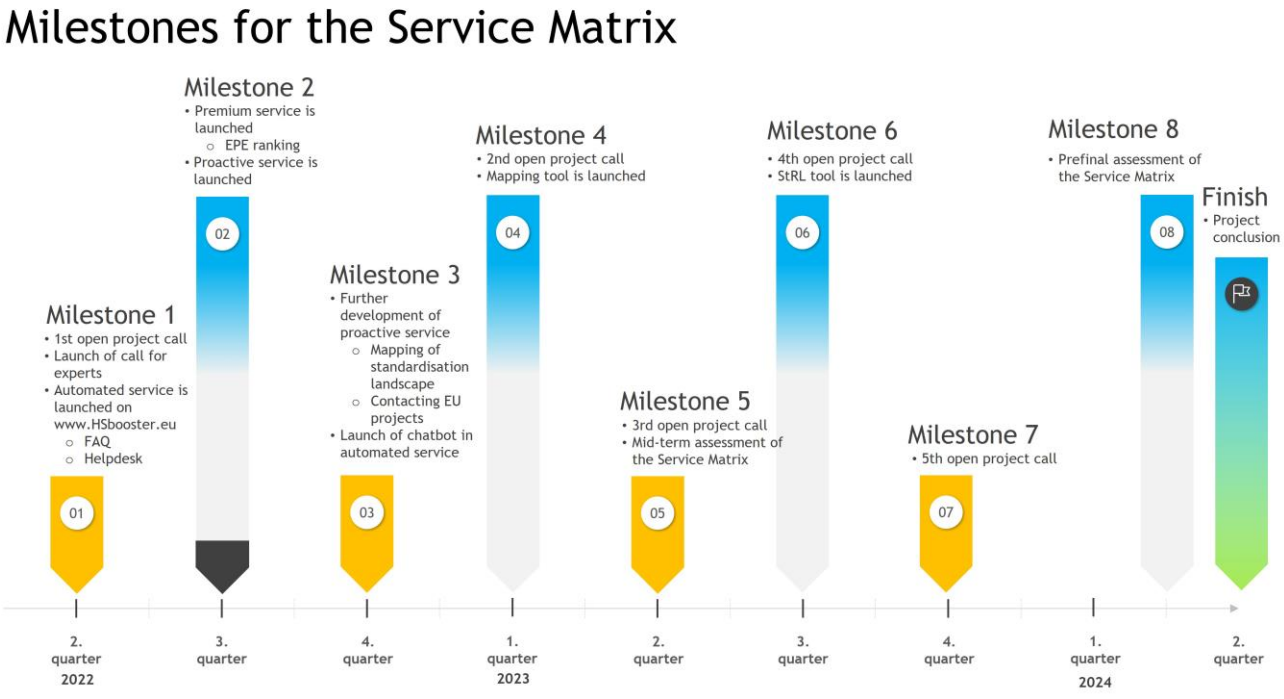


Figure 2 - Milestones for the Service Matrix

3 Description of all service levels

HSbooster.eu offers support and tailormade guidance to European R&I projects with the aim of identifying how and where the projects can use standards or engage in standardisation.
As described in our project proposal this is done through the offering of three types of services, see table 1 below.

Each service will be divided in a self-contained number of steps, that confer an industrialised method and are a prerequisite for future sustainability

Service category	Description	Means of delivery *[served H2020 & HE projects]*
Automated	Practical guidance and support to steer the research results towards the most promising standardisation pathway(s).	Online @ hsbooster.eu, by means of **FAQs, bot, and help desk** (Task 3.1). *[>250]*
Proactive	Prospective H2020 and HE projects are identified and proactively contacted to engage with the most appropriate SDO(s) / Working group(s).	One-on-one, via mapping and **matchmaking** activities (Task 3.2). One-to-many via **webinars, events, and training sessions** (Task 5.1 and Task 5.2). *[>250]*
Premium	Through the 5 open calls, H2020/HE projects will receive dedicated, specialised assistance in their standardisation efforts.	One-on-one by **consultancy activity** delivered by Consortia and selected External Experts (EPEs), individually contractualised (Task 3.3). *[>500]*

Table 1 - Overview of HSbooster.eu services

3.1 Automated Service

Recap of services and expected deliverables:

Task: 3.1 Automated Service
When: The automated service was launched in Month 2, tools will continuously be added as they are developed.
What: Online @ hsbooster.eu, by means of FAQs, chat bot, and help desk allowing responses within 2 business days.
A matrix of assessment of standardisation readiness of projects will be developed (and offered as an online tool), such as for instance the Business Model Canvas (BMC).
How:
Step 1-5 + duration:

Automated	The end-user accesses the service from the FAQ or Help Desk entry points on the website	Browse/download info available on the website. In case the session closes with FAQs or intervention of the bot, skip to Step 5	The end-user wishes to enter a one-on-one session with one HSbooster.eu staff member and register her/himself to the community	The live session takes place	Customer satisfaction form filled out by the end-user	From a few hours up to week

KPI: 250 services provided
Total effort: 12 Project Months (PM)

Table 2 - Overview of Automated service level

3.1.1 Status of automated service level

The **automated service** is the entry-level service offered by HSbooster.eu .eu, aimed at providing practical guidance and support to steer the research results towards the most promising standardisation pathway. Such guidance is "automated" in the sense that it is spontaneously initiated by the user and offered online, mainly through the project website. It consists of introductory information on standardisation, indication of relevant materials, events and trainings, support in discovering and learning the whole set of services offered by HSbooster.eu, as well as assessing readiness to produce standardisation results.

The automated service is delivered through a set of tools, namely FAQs, Helpdesk, chatbot and self-assessment tool described in the following paragraphs and addresses H2020 or HE projects interested in learning more about standardisation.

The process starts with an end-user (namely a H2020 or HE project representative) accessing the service from the FAQ, Help Desk or chat bot entry points on the website where they can browse for information. If the issue is resolved at this stage, the service closes and the end-user being requested to complete a satisfaction survey filled out by the end-user. If the answer is not found, the user can instead reach out to HSbooster.eu staff members for further information which may include and exchange of emails or a conference call in order to understand fully the request and to provide suitable recommendations. This may include more detailed intervention via the Proactive service and/or application directly to the Premium service.

The whole session for one automated service typically lasts a few hours but can be extended to up to one week if the session with the HSbooster.eu staff member needs to be scheduled at a later date. HSbooster.eu has a KPI of at least **250** automated services offered by the end of the project.

In the initial phase of the project, KPI tracking is done manually with reference only to one on one sessions organised/e-mail answered. A rough estimate of FAQ list consulted is also possible through the website analytics tracking the views of each specific page. A proper and more comprehensive way of tracking the automated service delivery will be the setup of a feedback survey form which will be available in September 2022 once all the main automated service tools will be implemented on the website.

In conclusion, the automated service can be seen as a first port of call for projects interested in finding out more about standardisation and/or HSbooster.eu .eu. Where appropriate, guidance provided will look to engage the project and push them towards applying for premium services (covered in T3.3) and identify projects for proactive services (T3.2). Their development will follow the platform evolution (managed under T2.1). Synergies will be also in place with stakeholder engagement, communication and training activities (T4.1, T5.1, T5.2).

3.1.2 FAQ & Glossary

A Frequently Asked Questions (FAQs) and Standardisation Glossary have been made available on the website since M2 (May 2022). They are subdivided in different categories:

- **General questions about the HSbooster.eu** and its main activities to inform target projects or experts about the opportunities available. For instance, specific FAQ lists currently cover the application process for both projects and experts involved in the premium services to be managed via open calls (see Figure 1):
- **Standardisation Glossary** to provide information and general concepts and definitions. Based on a set of questions covering a wide set of topics, the section includes definition of standards, main types of standards, the creation process of a standard, committees, working groups and related roles, sources and relevant publications where standards in specific domains are mapped.

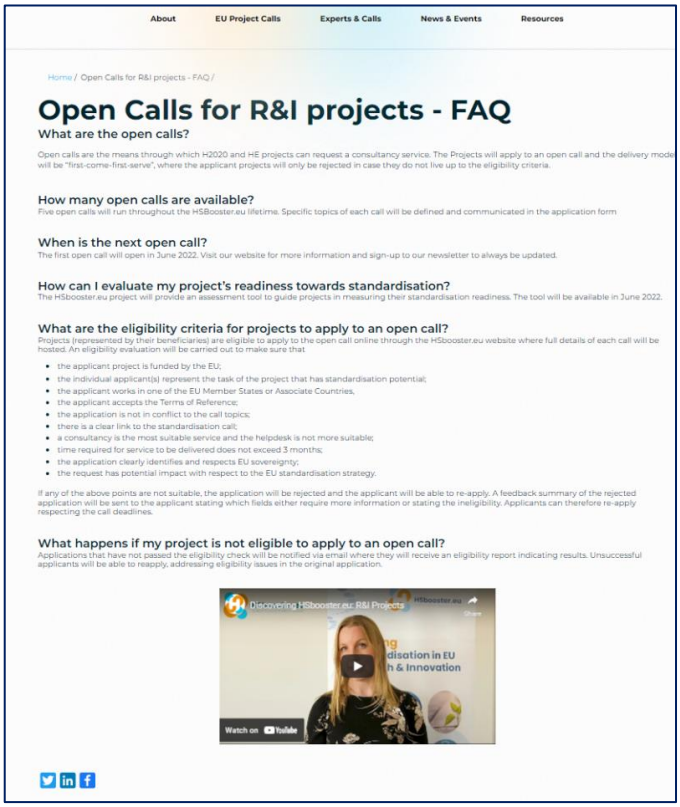


Figure 3 - FAQ lists examples from the HSbooster.eu .eu website

The current version of the FAQ and Standardisation glossary have been jointly developed by all the partners involved. They are progressively enriched and updated as the project progresses, also considering the main requests that will be collected from the projects during the one-on-one sessions or via the Helpdesk

3.1.3 Helpdesk

The Helpdesk, available since the beginning of M2, is a dedicated webpage and contact form that all website visitors can use with no need of being registered on the website to reach out to the HSbooster.eu staff and ask any enquiry about the initiative. Responses are given within 2 business days and help clarify the service offering, redirect to specific information on the website, support the identification of the best type of service for the applicant project. A view of the entry points for the help desk is offered in Figure 2.

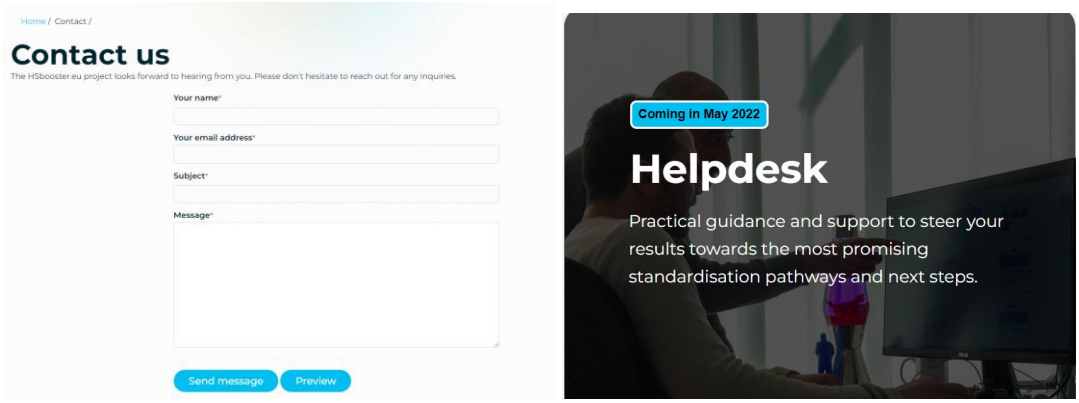


Figure 4 - Helpdesk entry points

3.1.4 Chatbot

The chatbot has the main function to help navigate the website, facilitate user experience and address preliminary questions by the projects. The initial months of the project have been dedicated to the analysis of the desired features of the chatbot and the scouting of suitable providers for such tool as an alternative to the in-house development of the chatbot. After evaluating various options, the consortium has agreed to proceed with a solution that will have the following characteristics:

- The chatbot will provide answers from an initial knowledge base developed and uploaded by HSbooster.eu, relying on the sources and materials already available (e.g. FAQs)
- The chatbot will cover both Q&A and lead generation functions (e.g. providing or asking for contacts to continue the conversation and keep the user engaged)
- The chatbot will be able to handle “off topics”, i.e. to redirect the user towards one of the questions in the knowledge base if the request is not initially aligned with such knowledge base

The chatbot service will be implemented starting from October 2022 (M6). Figure 3 below summarises the project timeline for the described automated service tools

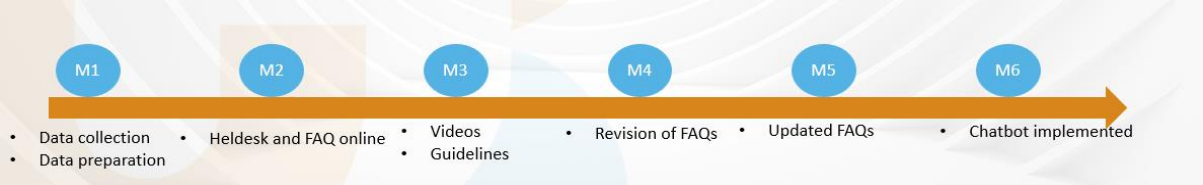


Figure 5 - FAQs, Helpdesk and Chatbot timeline

Content for the chat bot has also been identified and based on two main topics:

1. **Information related to service delivery**. Content from service-related information already available on the website and also the FAQs
2. **Standardisation-related information.** Content from the publication "A World Built on Standards[9]". The publication is the result of work carried out by the British Standards Institute, Danish Standards, the National Standards Authority of Ireland, the Finnish Standards Association and the University of Zagreb under the auspices of the CEN and CENELEC Joint Working Group for Education about Standardization in order to support education about standards and standardisation in Europe.

[9] https://www.ds.dk/media/px5jhney/a-world-built-on-standards.pdf

3.2 Proactive Service

Recap of service and expected deliverables:

Task: 3.2 Proactive Service
When: The first proactive services started in month 5, with the task running from M2-24.
What: HSBooster contacts prospective H2020 and HE projects with a proposal to engage with HSbooster and/or the most appropriate SDO(s)/Working group(s) via:

- One-on-one via dialogue, two-way online correspondences, mapping and matchmaking activities.
- One-to-many via workshops, events, and training sessions (Task 5.1 and Task 5.2).

Further activities:
•Identify relevant standardisation bodies, depending on technical field;
•Facilitate contact & set up first meetings with standardisation body/SDO and/or technical committee (s).
•Map existing standards in a technical field to evaluate the project's position in standardisation landscape;
•Map projects against existing technical committees/ working groups in standardisation as well as identifying the potential for creating new technical work items in either existing or new technical committees;
•Develop the evaluation scheme/survey and feedback system to continuously improve the Proactive Services.
How:
Step 1-5 + duration:

Proactive	Desktop research to identify at least one H2020/HE project and match it to relevant standards' areas and at least one candidate SDO	Proactive discussions with both the project and the SDO	Carry out a first session with the Project and the SDO to map standards potential	Monitor the development of the interaction for up to 1 month	1 customer satisfaction form filled out by the end-user and 1 by the SDO	Up to 1 month

KPI: 250 services provided
Total effort: 16 PM

Table 3 - Overview of Proactive service level

Through the **proactive service** HSbooster.eu .eu actively reaches out and contacts targeted projects where standardisation is deemed attractive and relevant. The proactive service is dialogue-based contrary to the automated service, which is one-way, and the premium service, where it is the expert (EPE) who offers the service and advice.

The proactive service is led by the HSbooster.eu consortium and is based on the expertise and relations that the consortium builds upon, as well as the network and sources of information available through the consortium partners.

3.2.1 Status of proactive service level:

Based on initial expression of interest, HSbooster.eu identified an initial five relevant projects, with whom the consortium is in contact in order to kick-start the proactive service. HSbooster.eu .eu will launch the service with those projects that already have a high degree of interest in and motivation

for standardisation. This will ease the dialogue and make a fast-track development of the service possible, with dedicated and interested projects.

However, in the long run the success of the proactive service depends on creating a systematic way to identify and contact relevant R&I projects. Multiple sources of information on R&I projects exists and the standardisation organisations regularly scan relevant FP calls and are in dialogue with prospective R&I projects. This diverse set of information needs to be assessed, organized and utilized systematically in order to find the fastest and most efficient way to identify projects.

To create an overview of information available, the HSbooster.eu identified a broad range of sources available, through dialogue with CCMC, ETSI, individual NSBs, specialists at NSB level (Danish Standards) and the EU Commission.

Relevant **sources** identified so far are listed below (prioritized):

1. CCMC (CEN-CENELEC Management Centre) annual screening of H2020 and Horizon Europe calls relevant for standardisation
2. Lists of R&I projects obtaining a letter of intent (LoI) from CCMC (CEN-CENELEC Management Centre). This list is provided by the STAIR Group (CEN-CENELEC group on research, innovation and education in standardisation)
3. Projects contacted by the EC for the purposes of the Scoping study for supporting the development of a code of practice for researchers on standardisation.
4. CORDIS database with all current R&I projects receiving funds from the EU Commission, using the extensive search function in the database as sorting mechanism
5. Annual Union Work Programme for standardisation (AUWP)
6. Lists of existing projects within the European NSB/NC community
7. Lists from NCP (National Contact Points), as a start, the Danish NCP is used.
8. Specific lists from NSB/NCs that are working within novel areas with high standardisation potential (for instance Artificial Intelligence (AI), space technology, hydrogen, life science)
9. Diverse set of information through standardisation news, scientific newsletters, web sites, press releases, etc.

The sources will be used to create an excel sheet with relevant projects for the Proactive service.

The method is hand-held so far, but it is our intention and aim to develop a reliable and replicable method that can easily be copied and redone, and even – if necessary – made automatic through an RPA solution (robot process automation). The latter would be a long-term effort, and not be feasible within the HSbooster.eu pilot project period.

When creating the list of projects, it is important to cross-check with the mailing list of EU projects that receive newsletters and information from the HSbooster.eu consortium, in order not to contact them with too close interval. The projects contacted automatically should have a suitable time period to react and possibly contact the HSbooster.eu on their own initiative. After a certain time period, those projects not reacting to the general information in newsletters, can be contacted again.

The list of source material is constantly updated in order to keep track of information collected internally at NSB level, in the HSbooster.eu consortium and through contact with CEN-CENELEC, ETSI and other SDOs. This is necessary to keep track of scientific, innovative or legislative news and recent developments relevant for standardisation:

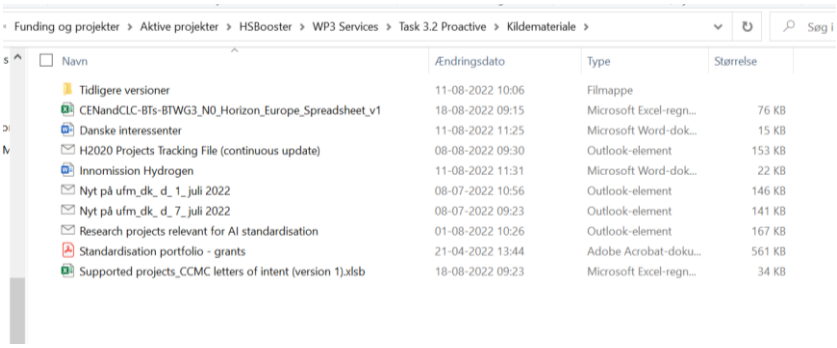


Figure 6 - Additional source material of relevance to the proactive service

3.2.2 Contacting R&I projects

The first step in carrying out the proactive service is to locate relevant projects and project contacts. In order not to prolong the contact process unnecessarily, contact details of projects are obtained through either 1) project websites, 2) press releases or other news information on the project or 3) through participating universities website, where most faculty staff's contact details (e-mails or phone) are openly accessible.

HSbooster.eu will use several ways for contacting R&I projects in order to determine which is the most effective method. This includes contacting projects via Cordis, e-mails, events, workshops or phone calls and using different senders for example the HSbooster.eu consortium, the EC or national contacts such as Danish Standards in Denmark, Trust IT in Italy, etc. By the end of the pilot, this should provide solid data on how to get the highest success rate when contacting R&I projects and enable HSbooster.eu to adjust our contact methods during project lifetime.

Standard contact e-mails are formulated and customized as necessary. Speaking guide is prepared for contact through phone. Power point presentations with short introduction to HSbooster.eu and benefits for the participating projects are prepared as information and marketing material.

See example of contact e-mail below:

Dear Mr./Ms. [insert text]

Congratulations on receiving funding from the European Union's Horizon 2020 Research and Innovation Action (RIA) programme under the topic [insert text].

The European Commission's newly launched Standardisation Booster (HSbooster.eu) project provides free-of-charge consultancy services through close collaboration with the European Standardisation Organisations to support the consortia of funded R&I projects in understanding and using standards more effectively; it provides guidance on how to influence the creation or revision of standards, which, amongst other benefits, can help to accelerate market entry.

With the first draft of the Standardisation Request from the European Commission published at the beginning of June, Artificial Intelligence (AI) is one of the urgencies that HSbooster addresses. Fitting this topic, we have chosen your project as an opportunity to have a dialogue about your possibility to influence standardization processes and move faster towards achieving project goals.

If you would like an introduction to HSbooster and learn how our customized services may assist you, we kindly encourage you to get in touch with us.

With kind regards,
The HSbooster team.

Figure 7 - Example of standard contact e-mail in the Proactive service level

A way to increase the success rate is to make sure that we have enough experts available to cover all projects even if a number of projects have similar project scopes which requires many experts in the same field.

Therefore, it is of great importance that the recruitment of EPEs is closely linked to the proactive service, and that the consortium aims to recruit the necessary EPEs. In certain cases, projects will need to be contacted at pre-defined times in order to avoid bottlenecks. Depending on the FP call, ordinarily one to three projects are established; however, some large calls have a large number of projects obtaining funding. In case of the latter, all projects will be contacted, but not at the same time, as this can create strain and potential resistance in a technical committee or working group in standardisation.

Additionally, if EPEs are not available, we should adjust our contacts to projects where we have EPEs available. If we contact projects and promise them a tailormade premium service and we cannot fulfil the promise, we will not see the effect that we aim for.

Last, but not least, the consortium is aware that we are in the starting period now, where the most important aspect is to get the service up and running in full scale. Going forward, we aim to filter projects according to the lifetime of the research that they are performing.

In conclusion, a correlation of timeline of the HSbooster.eu and the lifetime of projects is necessary in order to reach the projects at the right time. To clarify, projects with very innovative or early-stage technology development should not be contacted in the initial stage (1-2 years) of the project regarding proactive or Premium service, as they will not be ready to adopt/use and adhere to the service. This timeline adjustment and how to define the right parameters, will be developed during the pilot phase of HSbooster.eu, and will be able to be utilized after HSbooster.eu.

3.3 Premium Service

Recap of service and expected deliverables:

Task: 3.3 Premium Service

When: The open calls for the top-level services to be delivered to the targeted H2020/HE Projects, will be opened in Month 3. New calls will be continuously launched.

What: One-on-one consultancy activities delivered by the consortium and selected External Experts (EPEs), which are individually contractualised to support the projects via a set of five coordinated, open calls. The service is "first-come-first-serve", where the applicant projects will only be rejected on an eligibility element.

How:

Step 1-5 + duration:

Premium	The end-user (facility) wishing to apply to the Open Call completes an online, detailed application form to HSbooster.eu	On a weekly basis the applications are assessed for eligibility	The Expert is selected from the EPE and the end-user is informed & a dialogue starts.	The service is carried out with contributions from the EPE Expert and the HSbooster.eu staff	2 customer satisfaction forms filled out by the end-user (1 for the facility and 1 for the EPE)	Up to 3 months

KPI: 500 services
Total effort: 30 PM

Table 4 - Overview of Premium service level

HSbooster.eu consortium role in the Premium Service level:

- Acts as a facilitator to matchmake the expert to the eligible project;
- Develops criteria and assigns relevant experts to selected projects, with dedicated templates for experts to use;
- Creates an evaluation module and feedback system to applicants to monitor results;
- Facilitate budget for projects to enrol in SDOs, WGs, and purchase copyrighted material (i.e.: norms, standards);
- Liaises with EPE for educational purposes on defining their roles and responsibilities.

3.3.1 Status of service:

The Premium service is the flagship of the HSbooster.eu. The tailormade premium service is based on the effort of a dedicated expert who is linked to a specific project within his/her expertise. The Premium service has the following components:

- description of Premium service (Service matrix)
- description of expert profiles
- call for experts

- selection process and ranking of experts
- assignment of expert to projects
- delivering premium service in a three -month period

3.3.1 Open call topics

Call topics have been selected based on a number of sources, e.g., ICT Rolling plan for standardisation, EC Annual working plan (AUWP), EC Industrial strategy's key technology areas for enhancing EU independence, foresight analysis and monitoring of legislative efforts towards the EU Twin transition. SDO strategies and trend analyses (e.g., CEN-CENELEC trend analysis, ETSI LT- strategy), input from the HSbooster.eu European Advisory Group (EAG), NSB and ESO staff interviews and the new European Standardization Strategy.

By collecting and combining these sources of knowledge and insight, HSbooster.eu has been able to determine a set of top European urgencies that need to be addressed by R&I projects which are also deemed to be able to increase their impact by using standards and contributing to standardization.

The order in which the calls will be launched is based on current urgencies, timing of EC initiatives (such as standardization requests) and foresight analysis carried out by the European standardization organisations.

For a full list of the open call topics, see Annex 1 and online[10].

3.3.2 External pool of Experts (EPE)

One of the unique features of HSbooster.eu is the extensive external pool of experts, which should be seen as a massive pool of knowledge that can be activated whenever relevant enquiries are made by applicant projects. The first call for experts was carried out in month 2, but HSbooster.eu continuously carry out actions to enlarge the pool of experts. This includes promoting the opportunity to become an expert in the partners' networks, communication campaigns, dialogue with NSBs, ESOs and other stakeholders, etc. There is no maximum number of persons that can become experts. In fact, the larger and more diverse the pool of experts is the better, as this enlarges the knowledge base and thereby the quality of the consultations provided in the premium service. The external pool of experts should be seen as a continuous expertise that can be utilized in the continuation of the booster effort.

All experts are checked for eligibility (i.e. are they a real person, with no conflict of interest). For more information on eligibility, please refer to *D2.1 HSbooster.eu Website*.

Hereafter, the experts will be rated based on a set of predefined criteria. 40% of the evaluation will be carried out automatically and 60% will be carried out manually by a minimum of two HSbooster.eu partners.

The rating can be seen as a quality check that is carried out to ensure that each applicant R&I project receives an optimum service by a qualified expert. For more information on the rating process, refer to Annex 2.

The figure below shows the site set up to manage the rating process of EPEs.

[10] https://hsbooster.eu/open-call-topics

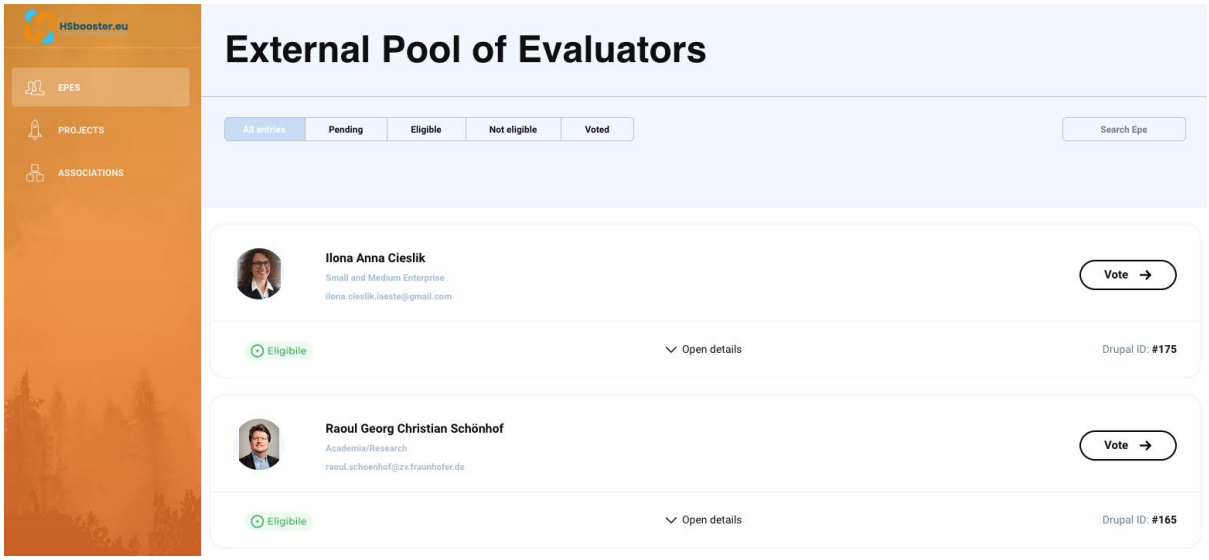


Figure 8 - The Website set up to manage the rating process of EPEs.

The premium services will be delivered partly with effort from the Partners and partly with support from external experts recruited with the call for EPEs. The effort from the EPE on every one-on-one support is quantified at 2 PDs (remunerated @400€/day, for a total budget of EPE effort of 400 k€), typically delivered to the applicant project in four sessions of 1.5 hours each, + 10 hours of background work and other offline interaction with the project (short calls/emails). In addition, the Consortium will have 33 PMs (=33*18=594 PDs) to spend on each service delivered. When the funding (internal effort & EPE effort) is depleted, the call will be closed.

HSbooster.eu facilitates budget for projects to enrol in SDOs, WGs, and purchase copyrighted material (i.e.: norms, standards) (80.000 Euros).

3.3.3 EPE – role, interaction and how does it work?

As mentioned, the EPE play a crucial role in HSbooster.eu .eu and the knowledge and advice of the EPE will make or break the standardisation booster. Therefore, the HSbooster.eu aims at conveying a very detailed SOP with clear steps and decision making points, in order to make the EPE as prepared as possible.

The HSbooster.eu will engage closely with the EPEs and make sure that they understand their task, carry out the service based on the SOP and that results and processes are tracked.

The EPE will work on an IT-platform, where as many steps as possible are automated, in order to avoid that the individual EPE has (too) many tasks that they need to carry out hand-held. If the tasks are well described and logic, the HSbooster.eu expects and counts on that the service will function optimally.

Additionally, the R&I projects are extremely busy, they have a lot of tasks to carry out in their research projects. If the HSbooster.eu should be relevant and used by the R&I projects, the service provided should be as easy to understand and use as possible. Too many e-mails, a separate platform with separate log-in, too many links to open and use will all add to the barrier for the R&I project.

Therefore, the EPE holds the key to securing a systematic, effective communication with the R&I project, and HSbooster.eu .eu has developed a clear process and standard operating procedures with a limited number of steps defined.

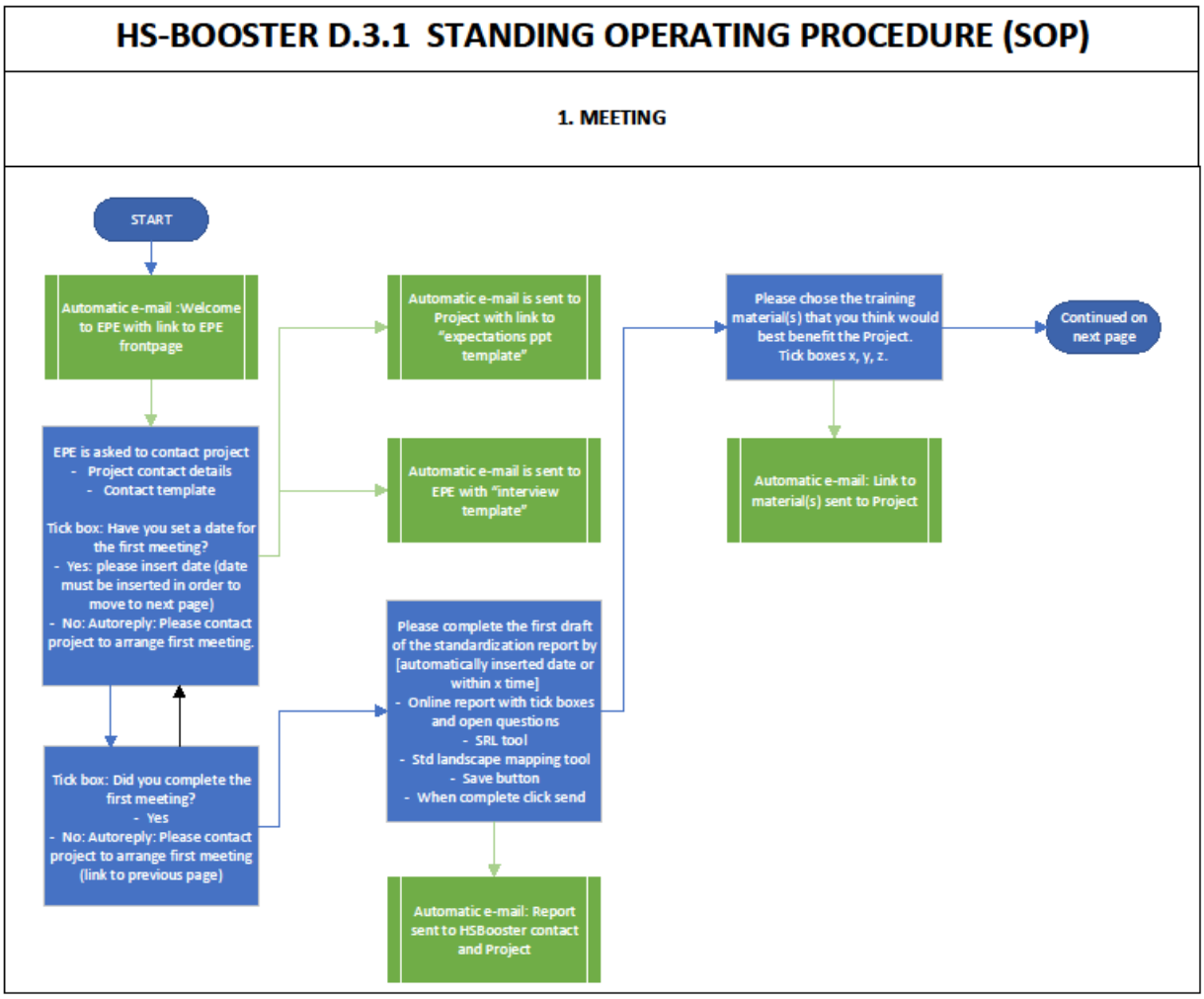


Figure 9 - Standard Operating Procedure for the EPE - 1st Meeting. See Annex 1 for full SOP

3.3.4 Standardisation readiness level (StRL) tool

Standardisation Readiness Level (StRL), is a new term identified in the HSbooster.eu .eu project to describe a measurement method or methodology to assess the readiness of any given R&I project to engage in standardisation.

This tool has as its main goal to support projects in assessing their readiness towards standardisation. It will directly support the identification of projects suitable for the proactive service (T3.2) and will help redirect projects towards other automated tools or towards the premium service (T3.3) depending on the results of the assessment. The initial months of the project have been dedicated to the analysis and discussion of the possible structure and content of the tool. It has been agreed that the tool will need to collect information from the projects via a short questionnaire and that results from the questionnaire should be visualised in an attractive and user-friendly way (e.g. in a radar-shaped graph or similar framework), including appropriate call to actions redirecting to various sections of the platform (e.g. application to premium services, useful trainings and guidelines, events, news, publications). The tool could therefore be used also to support impact monitoring via asking the projects to repeat the self-assessment and monitor progresses in their standardisation readiness level thanks to the delivered services.

The HSbooster.eu partners see two ways in which a StRL tool can be used, one for projects to test themselves and one for the EPE to use in their advice to R&I projects during the Premium service:

1) To prepare an online tool ('gamification' like) where projects can play and try their own standardisation readiness level. This tool should be part of the automated service and also be something that can easily be forwarded as a link to any project, as a starting path for dialogue.

2) To develop and use the StRL as a tool for the Expert to assess where the project is in terms of readiness, so here the tool needs to be granulated into detailed descriptions and if possible also quantitatively assessed.

The HSbooster.eu consortium sees the StRL tool as a very relevant at all service levels: as a 'readiness assessment tool' at the automated service level, where an R&I project can answer simple questions or enter relatively few key terms and the get an attractive and used-friendly visualization of their readiness level. As a dialogue tool, also with a strong visualisation, at the proactive service level and as part of the EPE advice, where the StRL can be used to direct the projects towards the right point of entry in the standardisation community.

As mentioned, the HSbooster.eu consortium needs to collect more information and understand the diversity of the R&I projects in order to develop the StRL.

We aim to carry on the development based on the methodology used in the well-known Technology Readiness Level (TRL), and to develop a model to assess and prove relevance and stage of a project with respect to standardisation.

Standardisation Readiness Level (SRL), is based on the TRL method developed by NASA on space technology development[11]. The same methodology will be used, but general terms will be applied to describe the maturity of the research area concerning its scalability and market potential/readiness. Also, a sort of categorization of the different research programmes and pillars will be developed in order for particularly the proactive service to assess and help the projects.

The design of the tool as an online resource may be based on similar tools created by Trust-IT in the cyberwatching.eu project[12] such as the Market and Technology Readiness assessment carried out in the EU Project Radar[13] and the GDPR Temperature Tool[14].

[11] https://www.nasa.gov/directorates/heo/scan/engineering/technology/technology_readiness_level
[12] https://www.cyberwatching.eu
[13] https://radar.cyberwatching.eu/radar
[14] https://gdprtool.cyberwatching.eu/Pages/Home.aspx

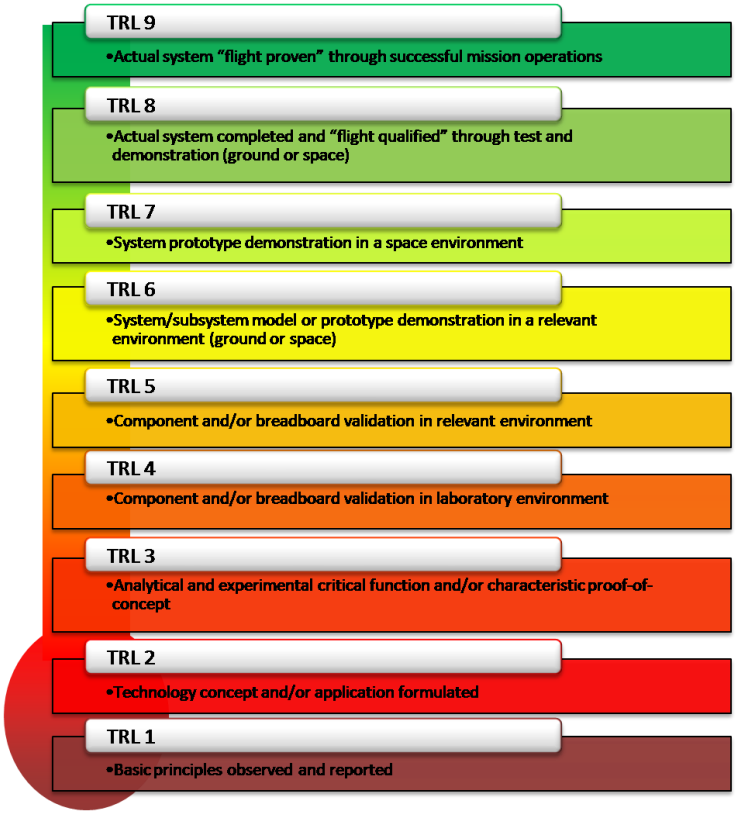


Figure 10 – Technology Readiness Level, NASA

Initial description of the different levels:

Level 1: Novel research, very little knowledge about standards and standardisation, standards not used in technology area of the project, initial stage of technology area where the standard deliverable **Technical Report/White paper** could be relevant.
Relevant R&I categories: ERC projects or novel technology development R&I projects

Level 2: initial knowledge on standards, aware that it exists, some parts of the project is related to existing areas. Certain maturity of technological area exists where terminology and definitions are beginning to materialise. Standard deliverable could be **Terms and Definitions**.

Level 3: new technological frontier, initial potential for standardization exists; maybe some deliverables (white papers, reports, etc) exist in the subject area or neighbouring/related areas; legislation exists or is in preparation.

Level 4: New technology in known research field, but potential for standardization exists; relevant standards exist in the area or neighbouring/related areas; legislation exists or is in preparation; research/technology area is ready for standards describing **methods**, including **testing and measurement**, to show the range/stability/validity, etc., of a given area.

Level 5: New technology development in known research field; legislation exists /is being prepared, need for compliance is apparent.

Level 6: High degree of compliance and dependency of EU legislation..

Level 7: Deliverables could be International Workshop Agreements/CEN Workshop Agreements (IWA/CWA), standards or technical Specifications

Level 8: CWA, or additional standards

Level 9: CE marking; closely regulated areas. Well-developed product/technology/service areas with well-defined market structure, where new developments make **Systematic Review**, additional **new standards** or **Amendments** to standards necessary/relevant.

By designing and developing the StRL tool, HSbooster.eu .eu will provide a new resource to the European research community which can increase the general understanding and use of standards and as a result expertise in the field. The main impact would be to improve how R&D projects recognise the importance of standardisation in valorising project results and as a consequence are able to plan and allocate appropriate resources to carry out more effective work in this area.

We see a tendency that subject matter standardisation organisations as IEEE are better at engaging researchers and having them engaged in forming local chapters, etc. This is partly due to the fact that the researchers gain reputation by engaging in subject matter areas.

This could be improved for the formal standardisations organisations as well. The StRL is not the only solution, but part of a solution to make standardisation more applicable, more recognised in the research community, if researchers can use the StRL in their research application, show their engagement in standardisation through their CVs, research reference or enter standards as part of their dissemination efforts, bibliographies, citation indexes, etc.

3.3.1 Standardisation Mapping tool

The Standardisation Mapping tool is the key to directing applicant projects toward the right standardisation committee or working group. The tool is currently at an early concept phase and below we provide an initial overview of this.

HSbooster.eu .eu sees great potential in 'harvesting' information from all/the major SDOs into one Map or overview, preferably in an interactive fashion. In order to achieve this, the first step is to create an overview or map that the HSbooster.eu can use in the service levels, primarily at Premium level.

It is apparent that creating this overview is not an easy task as each standardisation organisation uses their own way of categorizing or listing their standardisation efforts:

ISO organizes its technical committees, sub-committees and working groups (TC/SC/WG) within the following sectors:

- All Sectors
- Food And Agriculture
- Chemicals
- Building And Construction
- Business Management And Innovation
- Energy
- Sustainability And Environment
- Health, Medicine And Laboratory Equipment
- Horizontal Subjects
- Information Technology, Graphics And Photography
- Mechanical Engineering
- Non-Metallic Materials

- Ores And Metals
- Freight, Packaging And Distribution
- Security, Safety And Risk
- Services
- Special Technologies
- TRANSPORT

Both ISO and IEC also use search functions that rely on ICS Codes[15], which is an ISO developed recognized organizing system used for standards and other normative documents, see list below:

ICS	FIELD
01	Generalities. Terminology. Standardization. Documentation
03	Services. Company organization, management and quality. Administration. Transport. Sociology
07	Natural and applied sciences
11	Health care technology
13	Environment. Health protection. Safety
17	Metrology and measurement. Physical phenomena
19	Testing
21	Mechanical systems and components for general use
23	Fluid systems and components for general use
25	Manufacturing engineering
27	Energy and heat transfer engineering
29	Electrical engineering
31	Electronics
33	Telecommunications. Audio and video engineering
35	Information technology
37	Image technology
39	Precision mechanics. Jewellery
43	Road vehicles engineering
45	Railway engineering
47	Shipbuilding and marine structures
49	Aircraft and space vehicle engineering
53	Materials handling equipment
55	Packaging and distribution of goods
59	Textile and leather technology
61	Clothing industry
65	Agriculture
67	Food technology
71	Chemical technology
73	Mining and minerals
75	Petroleum and related technologies
77	Metallurgy
79	Wood technology
81	Glass and ceramics industries
83	Rubber and plastic industries
85	Paper technology
87	Paint and colour industries
91	Construction materials and building
93	Civil engineering
95	Military affairs. Military engineering. Weapons
97	Domestic and commercial equipment. Entertainment. Sports

[15] https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/international_classification_for_standards.pdf

In addition to this, de facto standardisation organisations also need to be included in the map. Due to the large number of de facto organisations, only the major organisations and their committees will be included (e.g. IEEE, W3C, etc).

There already exists a high level of interaction between the formal standardisation organisations and other organisations. This happens primarily at working group level, where Liaisons are the primary tool used to interlink.

Below is an example of Liaisons in one ISO/TC 215 which focuses on genomics/life science.

- A European standardization framework for data integration and data-driven in silico models for personalized medicine (EU-STANDS4PM)
- Austria (ASI)
- Biobanking and BioMolecular resources Research Infrastructure (BBMRI-ERIC)
- Clinical Data Interchange Standards Consortium (CDISC)
- Continua Health Alliances
- DICOM Standards Committee
- Electromedical and Healthcare IT (COCIR)
- European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry
- European Federation of Pharmaceutical Industries and Associations (EFPIA)
- Global Alliance for Genomics and Health (GA4GH)
- GS1
- Health Level 7 (HL7)
- Health on the Net Foundation (HON)
- ICC-commerce
- Infrastructure (BBMRI-ERIC)
- Institute of Electrical and Electronics Engineers (IEEE)
- Integrated and standardized NGS workflows for personalized therapy (Instand-NGS4P)
- Integrating the Healthcare Enterprise (IHE)
- International Council of Nurses (ICN)
- International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)
- International Health Terminology Standards Development Organization (IHTSDO)
- International Medical Informatics Association (IMIA)
- International Society for Telemedicine & eHealth (ISTHealth)
- International Telecommunication Union (ITU)
- Latinoamerican Institute for Quality Assurance (INLAC)
- mHealth Alliance
- The International Council for Harmonisation of Technical Requirements for Registration of Pharmaceuticals of Human Use (ICH)
- United Nations Economic Commission for Europe (UNECE)
- World Health Organization (WHO)
- World Organization of Family Doctors (WONCA)
- Health Standards Organization (HSO)
- The World Wide Web Consortium (W3C)
- The European Cooperation for Space Standardization (ECSS)

List of liaisons from one ISO TC (Genomic) to other standards developing organizations (SDOs) – It shows the level of complexity and complicated interrelations within standardisation

Other organisations are making their standards and other deliverables accessible according to a different set of subject areas, for instance IEEE is using a limited number of categories as their subject areas are limited to engineering.

2023 National Electrical Safety Code (NESC) and Handbook Online
2023 National Electrical Safety Code (NESC) Online

Aerospace Electronics
Blockchain Technology
Cybersecurity
Digital Health
Foundations for Smart Grid
Information Technology
Learning Technology
Nuclear Engineering
Power and Energy
Robotics and Automation
Smart Grid Research
Storage Systems Collection
Telecommunications
Test Suite Specifications
Vehicular Technology
Wake-Up Radio

3.3.1.1 Methodology in developing the HSbooster.eu mapping tool

The objective of the Standardisation mapping tool is to provide an online resource that can be used by applicant projects not only in the premium service, but also by R&I projects in the automated and proactive services. Currently, three options have been identified that will be further investigated in order to find the best, plausible solution.

Option 1 – Fully integrated: The optimum solution would be to develop a unified search engine tool (through APIs) that can tap into information already existing online by collecting and combining data from e.g. the CEN-CENELEC search engine, the ETSI portal, etc. This solution has a high degree of sustainability and automation but requires permission to use third party data and the development of a complex search tool.

Standardised information can be gathered from these sources and would be identified upon in separate agreements with the SDOs. This would most likely be high-level information on the standard or TWGs. More detailed information could be gathered other standardisation mapping activities that are carried out by other EC-funded projects. An example would be from the StandICT2023 EUOS. This could be also provided by the future follow up project. Specific input would be related to ICT-related standards. HSbooster.eu .eu would search for other standardisation mapping activities in other research sectors to ensure detailed coverage in other fields such as Health.

Option 2 - Danish Standards: Another option would be to tap into the knowledge database existing in Danish Standards. Danish Standards is a one-stop shop for CEN-CENELEC, ETSI, ISO and IEC standards and standardization and therefore has a large database with key information on standards and standardization work. It would be possible to retrieve data at predefined intervals in order to create an Excel sheet that could be used as the basis for an online search engine. This is a semi-automated solution, as HSbooster.eu would need to manually look into other organizations such as ITU, IEE, etc.

Option 3 - Manual: Finally, if the two solutions above are deemed impossible to develop and implement, a third solution would create a manually developed mapping that will be updated at regular time intervals. This solution is not automated and requires a high degree of manhours.

The third option could be integrated into an Excel sheet as seen below.

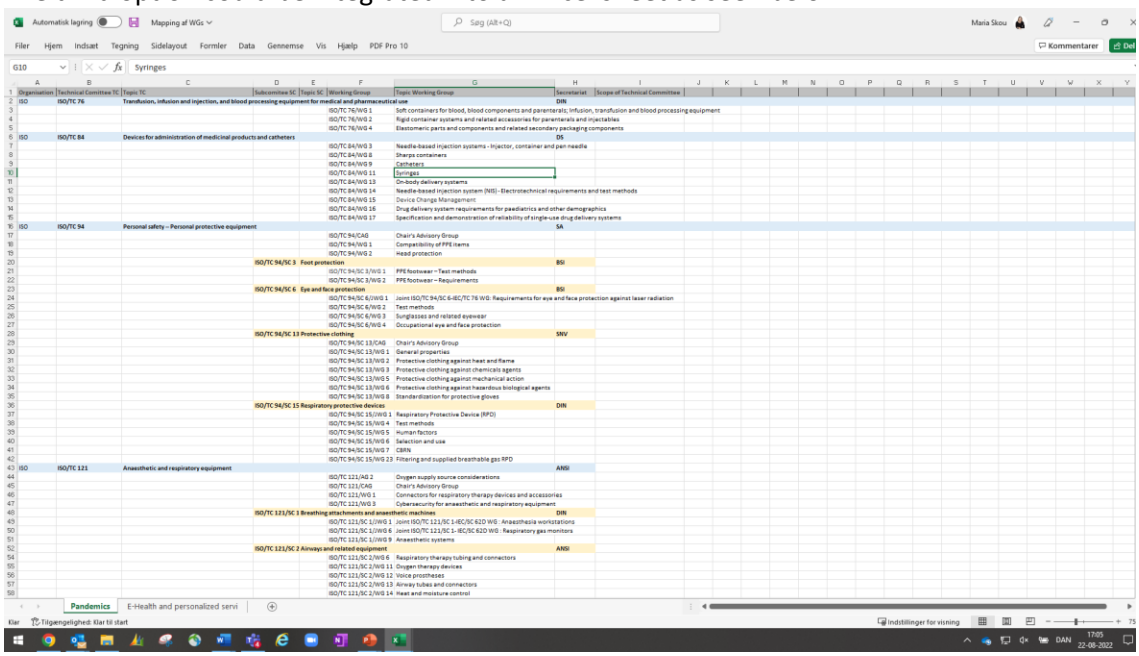


Figure 11 Initial mapping of relevant TC/SC/WGs within two of the HSbooster.eu call areas (Pandemics and E-health)

4 Conclusions

The HSbooster.eu has since its start in April 2022 developed the service matrix concept with all partners involved, formulated a full-service level description, including the standard operating procedures for particularly the Automated and Premium level services. The consortium has developed the concepts of the tools necessary to ensure a coherent service matrix and started on further concretizing the tools.

The service levels are all active and under implementation and will be further developed, adjusted and refined continuously, during project lifetime.

The lessons learned so far are:

- Scalability and consequently automation of the services are important to ensure effective and large-scale dissemination of the standardisation booster effort. Therefore, considerable time has been invested in investigating and assessing different solutions. This is time consuming but necessary.
- A common understanding between partners of the service levels has proven to be very important. All partners need to have a clear view and understanding of what the service levels include and what the aim is. Correspondingly, the purpose, outcome and benefits of the services should be crystal clear to the R&I projects that receive the guidance from the HSbooster.eu. and for this reason, the consortium has spent considerable time developing and agreeing on the service matrix.
- Connected to the points above, clear standard operating procedures are necessary to secure scalability and smooth running of the services in order to reach the high number of projects. The consortium expects to adjust and evaluate the service level matrix, the SOPs and the tools during project lifetime in order to incorporate learnings along the way.

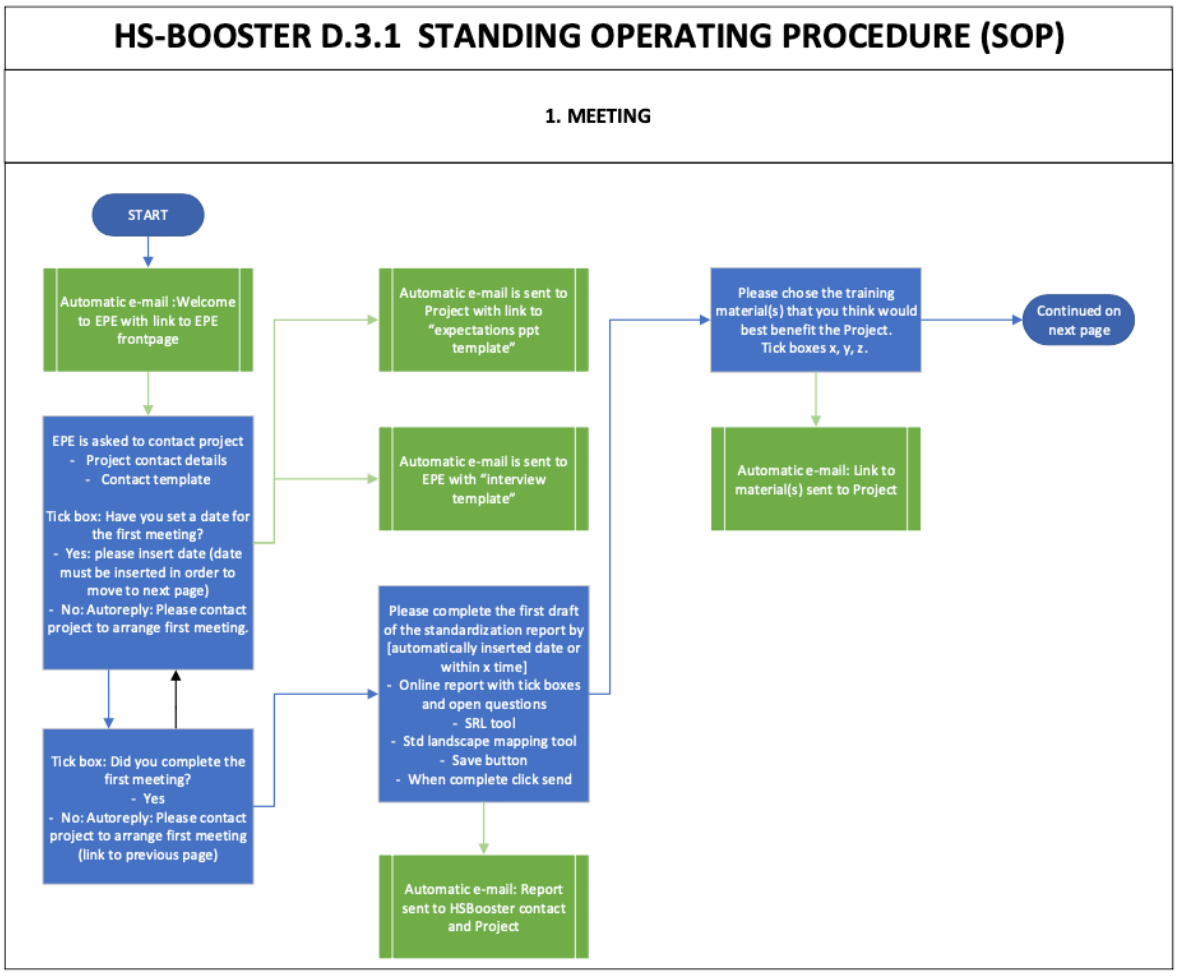
As clearly stated in the report, the thinking behind the HSbooster.eu is that scalability and automation is key to securing a long-lasting impact and sustainability of the project and its results. Bridging the gap between the R&I community and the standards community is not something that is done with one project and in two years' time. This is a permanent effort that will need to be constantly developed in order to meet the changing needs of researchers, standards developers and society.

Europe has long needed an effort to tie together these two interconnected communities; Asian countries have been doing this for a long time as they have understood the immediate links between R&I and standards and market formation. In Europe, the HSbooster.eu has taken essential steps in securing a link that will hopefully grow stronger during the pilot project period and beyond.

The HSbooster.eu consortium wishes to thank all partners and external collaboration partners involved so far for contributing and seeing the importance of the project. We also wish to thank the EU Commission for the chance to develop this project and contribute to the EU standardisation strategy[16].

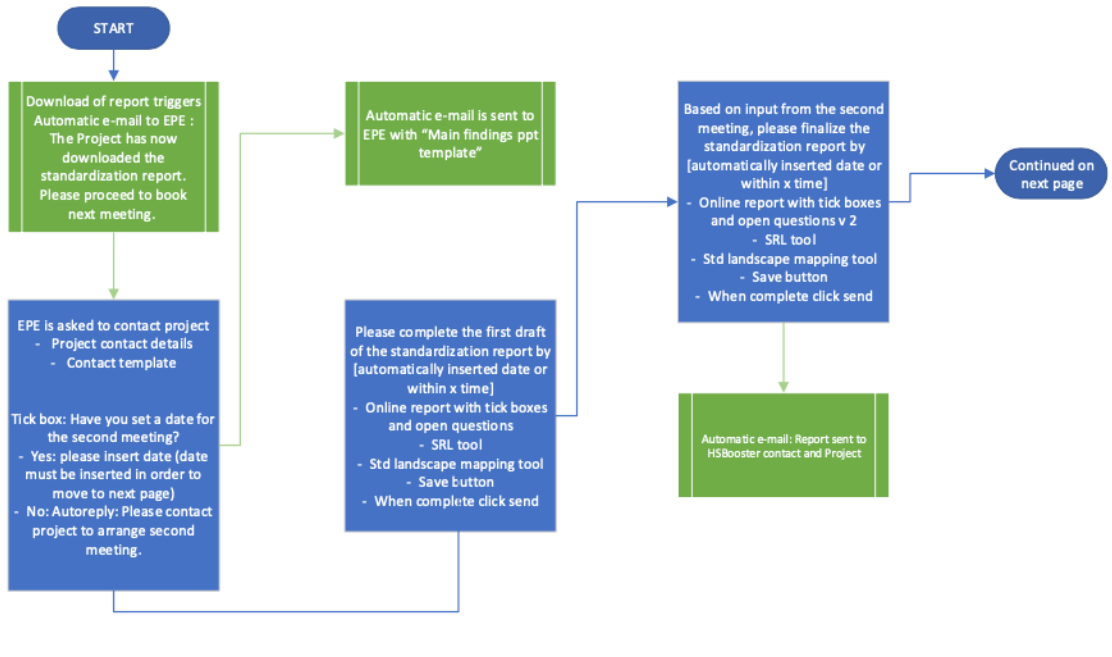
[16] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0031&from=EN

Annex 1 SOP


HS-BOOSTER D.3.1 STANDING OPERATING PROCEDURE (SOP)
1. MEETING
START
Automatic e-mail :Welcome to EPE with link to EPE frontpage
EPE is asked to contact project
- Project contact details
- Contact template
Tick box: Have you set a date for the first meeting?
- Yes: please insert date (date must be inserted in order to move to next page)
- No: Autoreply: Please contact project to arrange first meeting.
Tick box: Did you complete the first meeting?
- Yes
- No: Autoreply: Please contact project to arrange first meeting (link to previous page)
Automatic e-mail is sent to Project with link to "expectations ppt template"
Automatic e-mail is sent to EPE with "interview template"
Please complete the first draft of the standardization report by [automatically inserted date or within x time]
- Online report with tick boxes and open questions
- SRL tool
- Std landscape mapping tool
- Save button
- When complete click send
Automatic e-mail: Report sent to HSBooster contact and Project
Please chose the training material(s) that you think would best benefit the Project. Tick boxes x, y, z.
Automatic e-mail: Link to material(s) sent to Project
Continued on next page

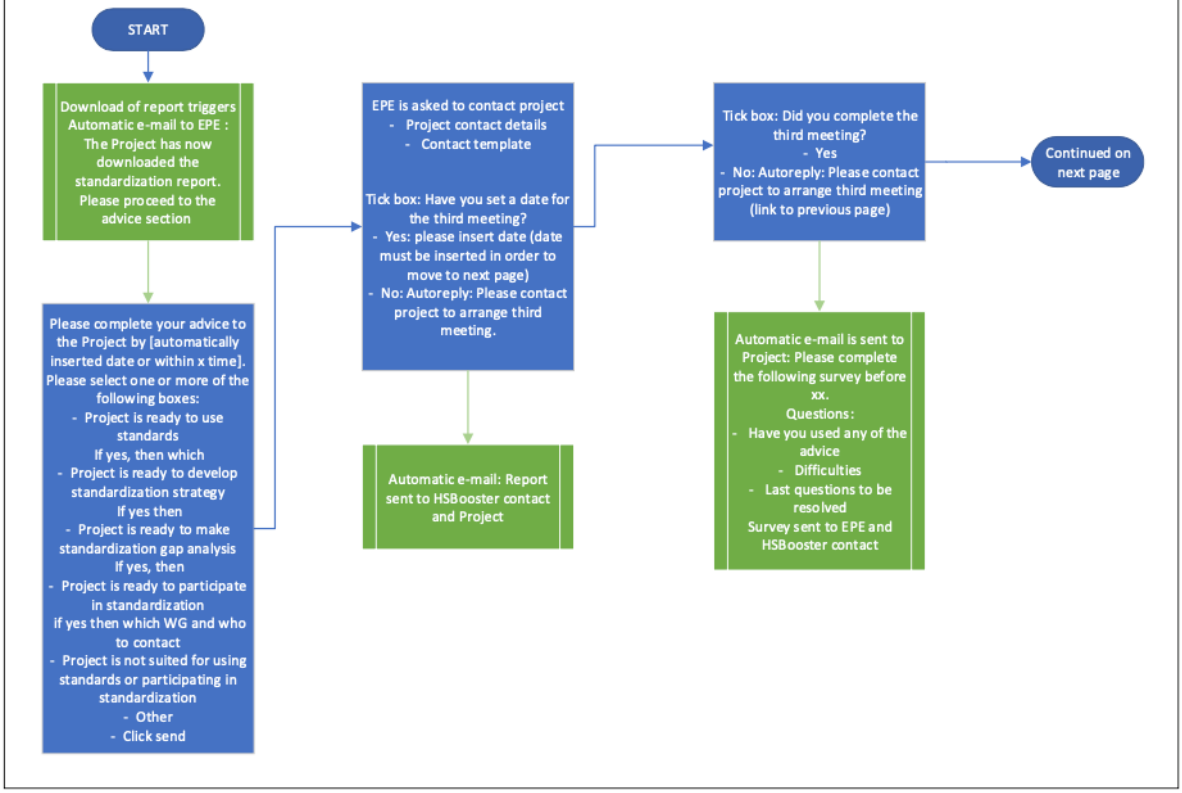
HS-BOOSTER D.3.1 STANDING OPERATING PROCEDURE (SOP)

2. MEETING



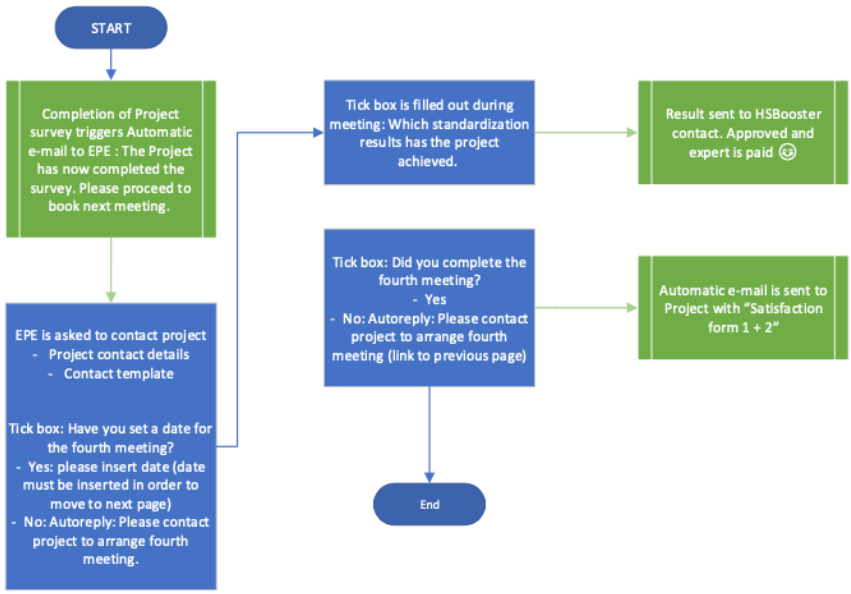
HS-BOOSTER D.3.1 STANDING OPERATING PROCEDURE (SOP)

3. MEETING



HS-BOOSTER D.3.1 STANDING OPERATING PROCEDURE (SOP)

4. MEETING



Annex 2: Open call topics

Health

Pandemics
Topics may include, but are not limited to:

- (COVID-19 vaccines) – equipment incl.
  - Needle free and needle based-injection systems for medical use
  - Aseptic processing
- Medicine production.
- Respiratory equipment.
- Pandemic preparedness and resilience
- Tests and measurement methods for SARS/COV19
  - Pathogens
  - Wastewater
- Epidemiology: risk, population, genetics

E-Health and personalized services
Topics may include, but are not limited to:

- eHealth
- Mobile applications
- Digital healthcare
- Assisted living
- Accessibility
- Personal medicine
- Cybersecurity in healthcare

Design and use of medical devices
Topics may include, but are not limited to:

- Design for disassembly
- Reliability of medical devices (for emergency use)
- 5G for live consultations and remote surgery
- Biotechnology (organ-on-chip)
- Patient safety

AI in Healthcare
Topics may include, but are not limited to:

- AI in radiology
- Ai health services
- Synthetic data

Resilience

Robust supply chains
Topics may include, but are not limited to:

- Energy and natural gas distribution
- Transport and infrastructure (roads, rails, telecommunications, energy etc)
- Workforce changes and demands
- Risk management
- Business continuity

Climate resilience
Topics may include, but are not limited to:

- Climate adaptation
- Climate monitoring
- Biodiversity
- Geotextiles

Hybrid civil/defence
Topics may include, but are not limited to:

- Civil crisis preparation
- Emergency management

Data protection and cybersecurity
Topics may include, but are not limited to:

- Information security for SMEs
- Payment services
- IT security
- Cyber resilience

Sustainable digitalization

Data quality and Artificial Intelligence
Topics may include, but are not limited to:

- Trustworthy AI
- Intelligent factories
- AI-based decision-making solutions (HR, legislation, labour)
- Circular data
- Ethical data usage
- Data interoperability

Access to and usage of data
Topics may include, but are not limited to:

- Ethical data usage
- Internet of things
- Common European data spaces.
- Data interoperability.
- Digital twins
- Blockchain and digital logbook
- Circular data
- eID
- eGovernment
- Internet protocols

Space
Topics may include, but are not limited to:

- European Global Navigation Satellite System (EGNSS)
- Big data from space
- 5G from space

Data and cybersecurity
Topics may include, but are not limited to:

- Cyber- and information security (SME)
- Cyber security in telecommunication
- Chips in terms of security, authenticity, reliability
- Payment services
- Audit and certification of information security
- Cloud Services
- Identity management

Quantum technology
Topics may include, but are not limited to:

- Quantum computing
- Quantum sensors
- Quantum simulations
- Quantum communication.

Green transition in Europe

Clean energy

Topics may include, but are not limited to:

- Clean hydrogen value chain
- Gas transportation (incl. hydrogen)
- Clean hydrogen infrastructure
- Documentation of green fuels
- fuelling and refuelling of green fuels
- Energy storage
- Wind turbines
- Smart energy

Materials (raw and secondary)

Topics may include, but are not limited to:

- Recycling of critical raw materials (CRM)
- Plastic recycling incl. textiles.
- Critical raw materials for batteries and waste batteries.
- Recycling/reuse of electrical components (WEEE directive)

Green and sustainable production

Topics may include, but are not limited to:

- Additive and on demand manufacturing (3d print etc.)
- Eco design
- Sustainable product initiative
- Product environmental footprint
- product passport
- material passport

Environmental impact

Topics may include, but are not limited to:

- Toxic-free environment
- Carbon capture, utilisation, storage (CCUS)

Smart Cities and Circular Economy in Buildings

Circular economy in the construction sector
Topics may include, but are not limited to:

- Design for circularity
- Design for disassembly
- Embedded carbon
- Selective demolition
- Material and product pass
- Non-destructive testing
- Low-carbon cement

Transportation
Topics may include, but are not limited to:

- Connected cars
- Green transportation

Infrastructure
Topics may include, but are not limited to:

- Interconnected city
- Postal service
- Intelligent transportation systems
- Critical infrastructure incl. pipes etc.

Green buildings
Topics may include, but are not limited to:

- Intelligent buildings
- Indicators for circular buildings

Annex 2: Evaluation Criteria and Scoring for evaluations received in response to the External Pool of Experts Open Call

Guidelines for Partners

The scoring guidelines for each criterion, on a scale of 0-10 is provided in the table below

SCORE CARD

Rating	Score
Applicant fails completely to address the criterion or cannot be assessed due to insufficient or incomplete information.	0
Poor. The criterion is inadequately addressed or is weak in evidence.	1-2
Fair. The applicant broadly addresses the criterion, but there are still significant weaknesses.	3-4
Good. The applicant meets the criterion well, yet a number of shortcomings are still present.	5-6
Very good. Overall, the applicant meets the criterion very well, but a small number of shortcomings are still present.	7-8
Excellent. The applicant fully satisfies the criterion. Any shortcomings are minor.	9-10

The initial criteria identified with the relative weighting which will be calculated and applied to the score by the system are shown below. Please note that for the criteria to be allocated a score from multiple Partners (2&4), an average of the 0-10 scores from the Partners will also be calculated and the weighting applied in the system.

Criterion 1: Role (10%);

Basis for the ranking: roles filled as editor, chair, expert etc in the Technical Working Groups of SDOs

This criterion is directly calculated in the system. TRUST is currently studying a methodology to correlate responses to criterion 1 & 3 in the platform. By incorporating a sub-weighting mechanism, this will be important to implement a fair scoring system i.e. this will address those cases such as when an applicant fills prime role but with few years' experience vis à vis a candidate in a less important role but with a considerable number of years' experience

Criterion 2: TWG Participation (30%);

Basis for the ranking: manual scores from two or more Partners on the roles carried within Technical Working Groups of the SDOs to be assessed on the basis of the following

- ✓ Extent of active engagement as a contributor to a Working Group, or other standards activity, especially over the past 12 to 18 months;

- ✓ Participation in more than one TC, SC, WG giving a holistic approach;
- ✓ Contributions to new standards or revision of standards.

Criterion 3: Years of Specific Experience in TWGs (20%);

Basis for the ranking: years of active engagement in TWG roles within SDOs

As for criterion 1, this criterion is directly calculated in the system – see above.

Criterion 4: Other Expertise and Professional Background (20%);

Basis of the ranking: manual scores allocated by two or more Partners on the basis of professional experience detailed in cv or LinkedIn profile and not considered under criterion 2, to be assessed on the basis of:

- ✓ Proven expertise in any one of the thematic areas relevant to the HSbooster.eu Services;
- ✓ Evidence of a good understanding of Standardisation processes and procedures, irrespective of field of expertise;
- ✓ Previous experience as an expert (e.g. for the European Commission, other funding bodies / agencies);
- ✓ Experience in participation in FP projects;
- ✓ Membership or participation in relevant groups with standardization focus (e.g. EURAS, EUOS, STAIR, UNECE WP6);
- ✓ Membership or participation in relevant groups with thematic area focus (e.g. networks on technical topics etc.

Criteria 5: Gender Balance (10%)

Basis for the score: address gender balance

Here, to favour the participation of female experts a score of ten points for female applicants and a value of zero for male applicants will be automatically allocated by the system. In cases where no male or female gender has been expressed, the value applied will be zero

HSbooster.eu
Horizon Standardisation Booster

Consortium

COMMpla
Communication Platforms and Online Solutions

Trust-IT Services
communicating to markets

DCU

University of Belgrade

DS
DANSK STANDARD

SGS

Funded by
the European Union