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Position Paper:

Strengthening the role of Standardisation supporting Research and Innovation in the 9th framework programme 'Horizon Europe'

The objective of **European Standardisation** is to agree on common specifications and/or procedures that respond to the needs of business and meet consumer expectations.

A wide range of stakeholders participate in Standardisation activities at national, European and international level. These stakeholders include: representatives of business and industry (including SMEs); consumer organisations; professional bodies; assessment, testing and inspection bodies; environmental and societal organisations; public authorities and enforcement bodies; trade associations; trade unions; academia; research organisations, etc.

By removing technical barriers and strengthening the competitiveness of European companies, European Standardisation is a key instrument for the consolidation of the Single Market, thereby creating conditions for economic growth.

Standards are part of the knowledge economy that underpins European industry and society. They facilitate innovation and promote the wide adoption of new technologies, providing a bridge between research and innovation (R&I) and the market.

These facts have been **recognized by the European Union** within Horizon 2020, from the early policy communications (e.g. COM(2010) 546, COM(2011) 311) to several specific references in all work programmes from 2014 to 2020. The strong focus of Horizon 2020 on innovation revealed Standardisation as an interesting factor in the R&I topics descriptions, the project proposals and the funded projects.

As part of the European Standardisation System, UNE is pleased to note this and is making a great effort to respond to that interest by actively contributing to several projects, raising awareness in the R&I community and supporting other National Standardisation Bodies in their way to engage with R&I activities. UNE is also pleased to note that the new EC Communication on FP9 'Horizon Europe' (COM(2018) 435, Article 2) recognizes Standardisation as a tool for supporting the exploitation of R&I results.

UNE, together with the European Standardisation Organisations CEN and CENELEC, is fully committed to support and promote the Horizon Europe programme and remain determined to reinforce the links between Standardisation, innovation and research. Consequently with this commitment, **this paper intends to raise the awareness of national and European stakeholders and public authorities on some aspects related to Standardisation that shall be strengthened in the planning and development of this 9th Framework Programme.**

Benefits from standards and Standardisation to R&I activities

Different EU communications include arguments showing that the use of existing standards and the contribution to future standards-setting will benefit R&I projects:

- Using standards as a knowledge source in the earliest possible stages of R&I give access and information to state of the art, promote rationalisation and avoids work duplication.
- Building upon standards ensures compliance with market conditions, grants interoperability and increases the transparency for prospective customers, thus generating users' confidence.
- Being involved in Standardisation to shape future standards helps to translate the R&I findings –including intellectual property rights– into marketable solutions, fostering the market uptake of the project results and the transfer of new knowledge into European industry well beyond the duration of the project.
- The existing and interconnected national (UNE, DIN, AFNOR...), European (CEN, CENELEC) and international (ISO, IEC) Standardisation system is a worldwide network for co-creation and knowledge transfer which involves the most interested stakeholders in each country for every field, so any contribution or contact implies a powerful dissemination fact for a project.

All these benefits can be summarized in just one sentence: **Considering existing standards and contributing to new Standardisation in R&I projects is a way to increase their dissemination and exploitation opportunities or, in other words, maximise their impact on the market and the society.**

Standardisation in previous Framework Programmes

The contribution of Standardisation to R&I Framework Programmes (FP) of the European Union dates back to the early nineties under FP4 (the Standards, Measurement and Testing Subprogram (SMT)) and FP5. In later Framework Programmes, Standardisation became a horizontal support tool relevant across all research areas.

COM(2008)133 'Towards an increased contribution from Standardisation to innovation in Europe' formally encouraged to "Facilitate the inclusion of new knowledge in standards, in particular from publicly-funded Research and Innovation programmes, (...) their systematic identification and the facilitation of exchanges with the appropriate standards bodies have the potential to accelerate the application of new knowledge in an industrial and commercial environment".

Some facts found in Horizon 2020:

- From the first Horizon 2020 call in 2014, many topics or calls introductions are asking for specific Standardisation requirements. 'Leadership in Enabling and Industrial Technologies' topics (NMBP, Space or ICT) as well as some 'Societal Challenges' topics, are usually encouraging consortia to take standards into account and contribute to new standard-setting. However, this fact is **highly non-homogenous**, and has not significantly grown across consecutive work programmes. As a discouraging consequence, many topics having great potential for using Standardisation as an impact enhancer have little or none requirements or recommendations about integrating it in the projects. This is really underutilising a tool that could be useful for a majority of Societal Challenges and LEIT topics. As a piece of example,

our evaluation in 2018-2020 calls reveals that 40% of possible references to Standardisation have been missed in NMBP topics, 30% in SC5-Climate Action and 70% in SC3-Energy.

- In European Commission's "In-depth interim evaluation of Horizon 2020" (SWD(2017)220 final, p. 100), Standardisation, interoperability and norms are seen as feeding into the "Reinforcement of Framework Conditions for R&I" and so promoting the expected impacts of the programme. However, as it has been analysed in the evaluation, R&I projects usually take into account existing standards but **do not yet make enough use of the Standardisation system** as a means to disseminate their results and to facilitate the exploitation of their innovations.
- Some current actions intended to recommend the use of Standardisation in Horizon 2020 aim to identify:
 - much focused pre-normative needs (namely contributions to specific pre-defined ongoing Standardisation works or Technical Committees), or
 - future Standardisation needs or roadmaps related to a given research field (through specific coordination and support actions, CSA).

Both approaches are very positive and can indeed represent the most suitable solutions in many particular cases. However, **the use in a wide majority of topics of generic statements** such as "...contribution to new or on-going Standardisation activities...", "...aspects such as Standardisation, market assessment and business plan, should be considered...", "...support to Standardisation is expected when necessary...", etc., would multiply the benefits of Standardisation in a substantially higher number of projects. Moreover, this approach is more bottom-up oriented, since the possible contributions to Standardisation are not previously guided, thus being open to a greater range of possibilities generated by the R&I stakeholders.

Recommendations for the implementation of the Horizon Europe Framework Programme

There is a vast educational duty to deploy in this field, since Standardisation is still unknown –or at least misunderstood– by a majority of the researchers and innovation stakeholders, confusing it with pre-Standardisation research (which can develop an "internal standard") but lacking the possibility to go through a voluntary consensus process which can convert their limited standard into a European or International Standard.

Despite the communication and education efforts being developed by the Standards Organisations, it is worthy to remember that the most powerful instruments for R&I in Europe are the Framework Programmes. Therefore, we strongly recommend European Union to **extensively exploit Standardisation in Horizon Europe strategy to take full advantage of the abovementioned benefits to the projects, and specially contribute to the Programme expected impacts** about "positive effects on growth, trade and investment flows" and "significant social and environmental impact". Without such visible presence of Standardisation in the Horizon Europe documents and calls, R&I stakeholders will hardly be motivated to include it in their project proposals, since they are not sure whether this will be well recognised in the evaluations or not.

This recommendation fully aligns with the Programme declared intentions: “the Commission will provide dedicated support to dissemination, exploitation and knowledge diffusion and put more emphasis on promoting the exploitation of R&I results” (COM(2018) 435).

To improve this, special emphasis would be required in Horizon Europe about:

- Substantially and **homogenously increase** the general references to the convenience of consider Standardisation in the projects as a general guideline for calls preparation in the ‘Global Challenges and Industrial Competitiveness’ pillar.
- Accordingly Enhance the awareness of EU project officers and proposal evaluators: include consideration and contribution to Standardisation among the **evaluation criteria** and offer suitable information to evaluators.
- Include the initiation of new Standardisation activities and/or the publication of new standards as a criterion for **assessing the performance and results of projects**. Among the foreseen ‘impact pathways’ and related ‘key impact pathway indicators’ for the “annual monitoring of the programme performance towards its objectives”, societal impact and economic impact are closely related to the benefits of Standardisation.
- **Policy missions** (as well as test beds, large scale pilots, lighthouse projects and other long-term and high-impact initiatives) shall always consider Standardisation as part of their planning and evaluation criteria.
- Consider the Standardisation system as a part of the European innovation landscape and thus promote its collaboration with the **European Innovation Council**.
- Ask the **National Contact Points network** to raise awareness on this subject, through informative packages or by including information in their events and infodays. Collaboration with the national Standardisation bodies and with CEN and CENELEC can be very helpful at this respect.

UNE is fully available and will be glad to expand this information and to provide any contribution that may be required.

About Asociación Española de Normalización, UNE:

The *Spanish Association for Standardisation, UNE* (previously known as *Spanish Association for Standardisation and Certification, AENOR*) is the National Standardisation Body of Spain, legally responsible for developing and disseminating technical standards since 1986. It is the Spanish member of CEN, CENELEC and ETSI at European level, ISO, IEC and COPANT at international level. Strongly involved in the engagement of Standardisation within R&I, it contributes actively to more than 50 actions from H2020, FP7 and other European and national programmes, either as a partner or subcontracted, by supporting the inclusion of Standardisation activities in R&I projects. It is also a member of the CEN and CENELEC strategic and coordination group ‘STAIR’ (Standardisation, Innovation and Research).