



37TH INTERNATIONAL
NO - DIG
FLORENCE 2019

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STANDARDISATION: TOOLS FOR INNOVATION

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Both at European level and within CEN and CENELEC, there is strong support to reinforce the links between research, innovation and standardization. These links are recognized in key political documents from all EU institutions, for example in the Communication on the “Innovation Union” within the EU 2020 Strategy, where the European Commission states that “*Standards play an important role for innovation.*”

The [CEN and CENELEC working group STAIR](#) (STAndardization, Innovation and Research) was heavily involved in the reflection around [HORIZON 2020](#), the European Framework for Research and Innovation. In this respect, the STAIR Group has provided an [answer to the consultation of the European Commission on the future Framework for Research and Innovation](#). The possible interactions and benefits between research and standardization have been qualified by the CEN and CENELEC STAIR working group as the “[Integrated Approach](#).”

Reference Material - EU Policy Documents

2012: [Regulation \(EU\) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardization](#)
“*Standards can help to bridge the gap between research and marketable products and services*”

2015: [Single Market Communication 550/2015](#)

“*Standards are crucial for innovation and progress in the Single Market because they increase safety, interoperability and competition and help remove trade barriers.*”

2010: Communication of the European Commission “[Europe 2020 Flagship Initiative Innovation Union](#)” COM (2010) 546

“*Standards play an important role for innovation: they enable dissemination of knowledge, and provide a platform for further innovation*”

The Integrated Approach



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The possible interactions and benefits between research and standardization have been qualified by the CEN and CENELEC STAIR working group as the "[Integrated Approach](#)."

The integrated approach (STAIR) for research, innovation and standardisation '*Think about standards at every stage of a research and development or innovation project*'

1 Standards support all stages of innovation

Standards support each stage of the innovation process and can help ensure compatibility and interoperability of products and technologies, which is also to the benefit of the end-user →

2 Faster to market with standards

Standards are a good tool to ensure fast introduction of innovative products and technologies to the market →

3 Create impact with your research results

Standards contribute to the dissemination of knowledge and exploitation of research results, alongside scientific publications and patents; this way, your research results can help to advance the state of the art →

4 Build trust in your innovations

Standards help promote innovative products and technologies by building confidence among users and consumers, while underpinning global knowledge exchange and trade →

5 Standards are universally recognized

As well as giving you access to the European market, many European standards are also aligned with international standards →

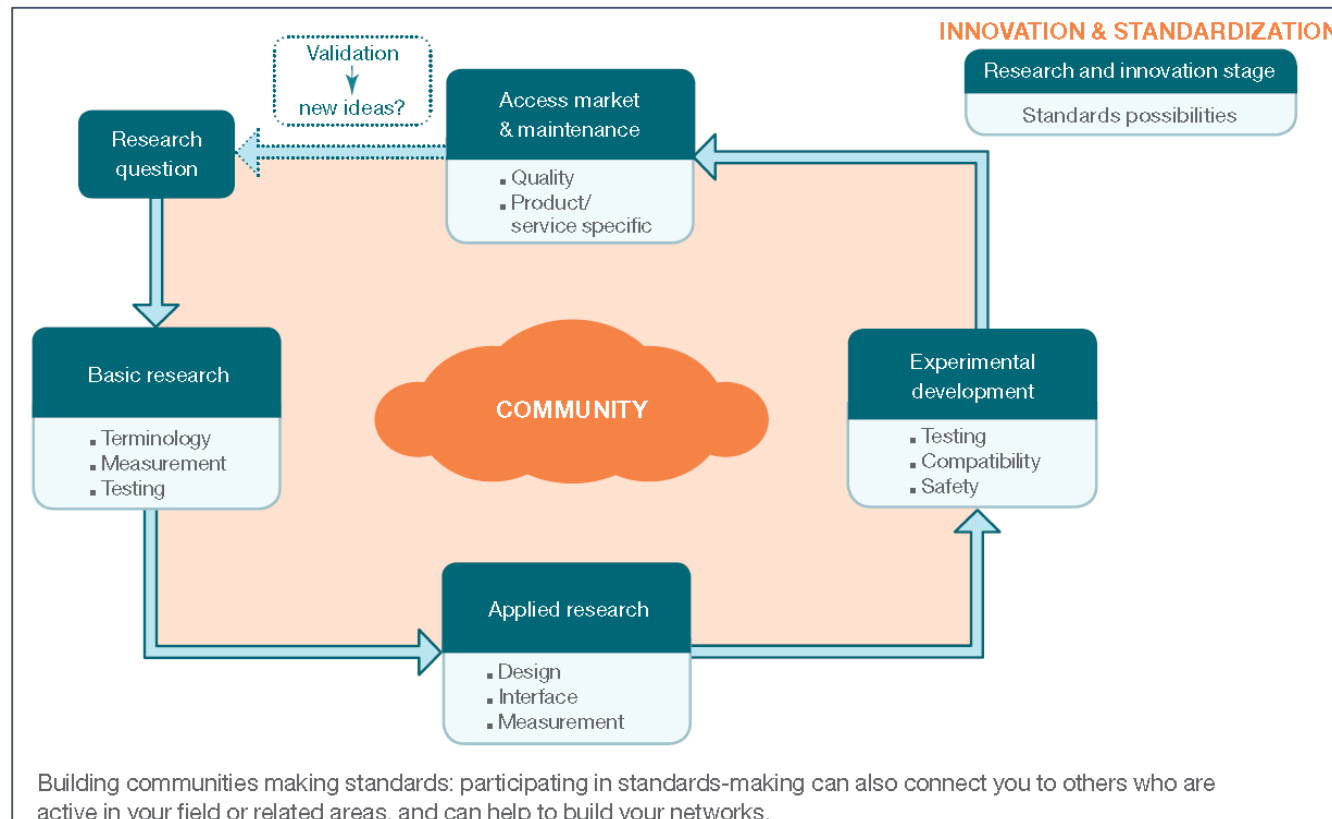
Standards to support all stages of innovation



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At the level of basic research, standards can have a connecting function, such as agreeing terminology or basic testing.

As research and innovation move further towards development, so can standards: by enabling and supporting aspects such as design, testing, compatibility and quality.



Source: CEN and CENELEC
“Standards to support research and innovation”, March 2015

Faster to market with standards



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Why use standards for transferring research results to the market?

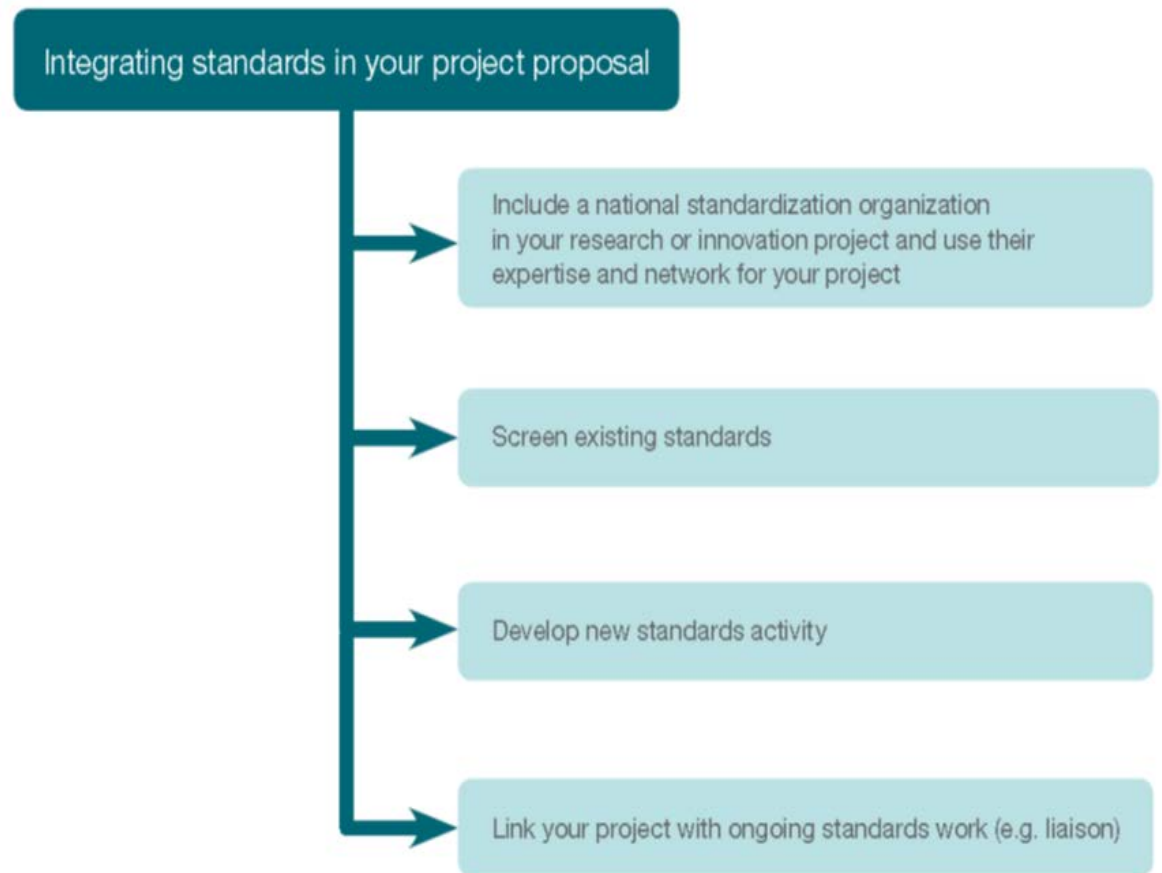
- Standards are made through building consensus, and the process of codifying the knowledge that they contain is validated through wide consultation.
- Standards are easily accessible to academia, public authorities, businesses and other stakeholder groups.
- Because standards can easily be referenced (for instance in procurement decisions), they can help to establish a new technology and create its market.

Create impact for your research results



How can you make and use standards in research and innovation, to maximize the impact of your results?

- Use existing standards e.g. standardized test methods, in your research and refer to best practices.
- Join a technical standardization committee (TC) to give input from your research into standardization and receive feedback from a large group of experts.
- Propose ideas for new standardization activity: your knowledge can be developed via a workshop-type environment into a fast-track pre-standard (CWA). Whilst it does not yet have the status of a proper full standard, it can address fast-evolving environments such as R&D.



Source: CEN and CENELEC “Standards to support research and innovation”, March 2015

Build trust in your innovations



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What are the strategic benefits of making and using standards?

- Standards codify knowledge in a format that is useable and accessible to others.
- Standards can lay the foundations for connecting research to real market opportunities, establishing trust in new technologies.
- Standards set parameters for interoperability and compatibility with other systems and technologies.

Research & Innovation: to sum up...



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Standards allow faster uptake of innovative solutions and enhance the economic value of research and innovation projects.

Integrating standards in your research projects will enable the:

Dissemination of your research results

A standard becomes a reference document which will ensure that research results are broadly disseminated, thus enhancing recognition of the researcher's results.

Opportunity to network

Participating in a standardization topic alongside other stakeholders allows you to network and to identify potential scientific or commercial collaborations.

Faster and easier market uptake

Taking into account existing standards or developing a new standard within your research project guarantees that your innovative result (product or service) will have a better market application and uptake. Translating research results into standards, facilitates the market validation and the innovation uptake on the market.

Access to public procurement markets

Standards codify state of the art innovative products and services, and are often used as references in public procurement schemes.

Reassure consumers

Standards reassure customers through the assessment of risks and the measurement of performance (e.g. new technologies).

Standards are universally recognized



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Standards are voluntary and represent agreements between experts from business, industry, academia and society, working with a standardization organization through a process of consensus-building and consultation.

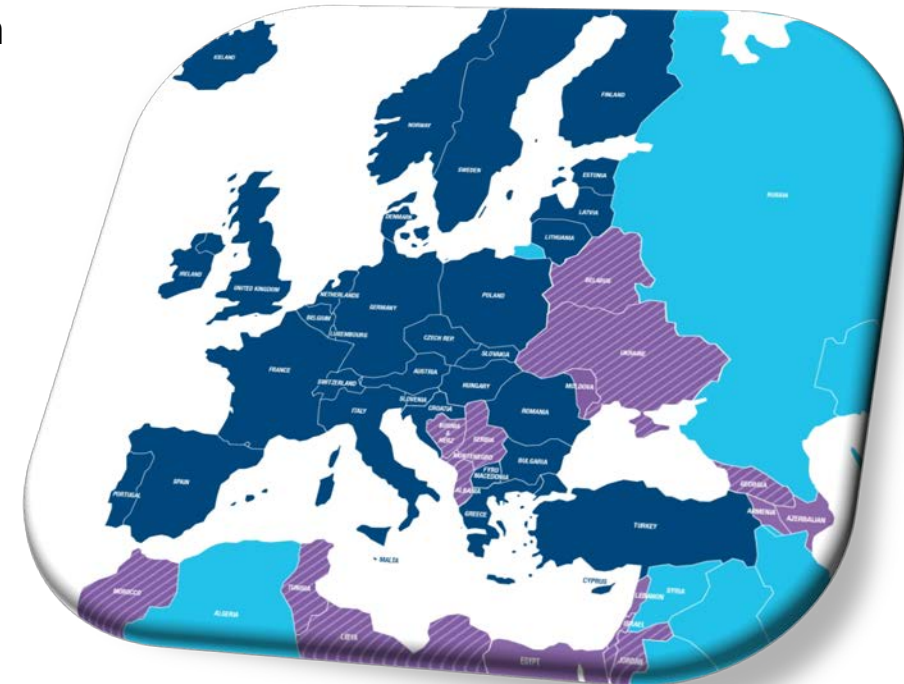
Standards form the basis of trade and support innovation through disseminating knowledge, best practice and interoperability.

Standards are voluntary but can also support European regulation/legislation
→ Harmonization effect

Automatically transposed into national standards

and therefore conflicting national standards are to be withdrawn

→ 1 EN = 34 identical national standards



National, European, Global Standards



**Ente Nazionale
Italiano di
Unificazione**



**European
Committee for
Standardisation**



**International
Organization for
Standardization**



Types of publication



European Standard (EN)

- Adopted by CEN and CENELEC and carrying with an obligation of implementation as identical national standard
- Available in 3 official languages (EN, FR, DE)
- Mandatory publication and standstill

Technical Specification (TS)

- When no immediate need/enough consensus for an EN or subject still under technical development
- Announcement

Technical Report (TR)

- Informative material (i.e. state of the art, best practices)
- Announcement

CEN Workshop Agreement (CWA)

Agreement developed by a Workshop which reflects an agreement between identified individuals/organisations responsible for its content

National publication (i.e. UNI/PdR)

- Transfer rapidly innovation
- Approved by individual experts
- Prepare the ground for standards
- Freely available in UNI catalogue



In 2011 UNI decided to develop a new "standardization tool" called *Prassi di Riferimento* (reference best practice).

This new type of document issued by UNI introduces specifications in particularly innovative sectors or fields for which the development of a full technical standard is not yet possible due to the lack of a consolidated "State of the Art".

Prassi di Riferimento (UNI/PdRs) are therefore technical specifications, guidelines or best practices developed on the basis of specific market stakeholders requests on new subjects, technologies or sectors.

The aim is to rapidly meet market needs, in fields which are particularly innovative or not ready enough to develop full standards, taking also into account the recommendations of EU Regulation 1025/2012 for what concerns the evolution of standardization deliverables other than formal standards.



The idea was inspired by similar documents developed by other European NSBs - for example AFNOR with the "référentiel de bonnes pratiques", BSI with PAS, and even CEN with CWA. As a matter of fact, **UNI/PdR can be considered - with some differences - as the transposition of the CWA concept to the Italian national context.**

The development process of UNI/PdR is quite fast - maximum 9 months from the kick-off meeting of the working group in charge of the development of the document - and restricted to a limited number of experts coming from the organization who requested the development of the document and from UNI network, under the operational supervision of UNI.

The whole development process of the UNI/PdR is transparent. Starting from the very beginning, when the starting of the work is officially announced, to the final approval phase, when the final version of the document is submitted to public consultation on UNI website, and the comments are discussed and resolved by the working group in charge of the development of the document.

Innovation through standardization: UNI/PdRs



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UNI/PdRs are thought to intercept not only **new and innovative issues**, but also **new stakeholders** which, for different reasons, have never approached standardization or have never thought about standardization as potentially useful tool.

Moreover, UNI/PdRs are to be considered as a new standardization instrument to **foster innovation and promote the transfer of technology thanks to standardization**: that's why the *Prassi di Riferimento* are freely available and downloadable from UNI website.

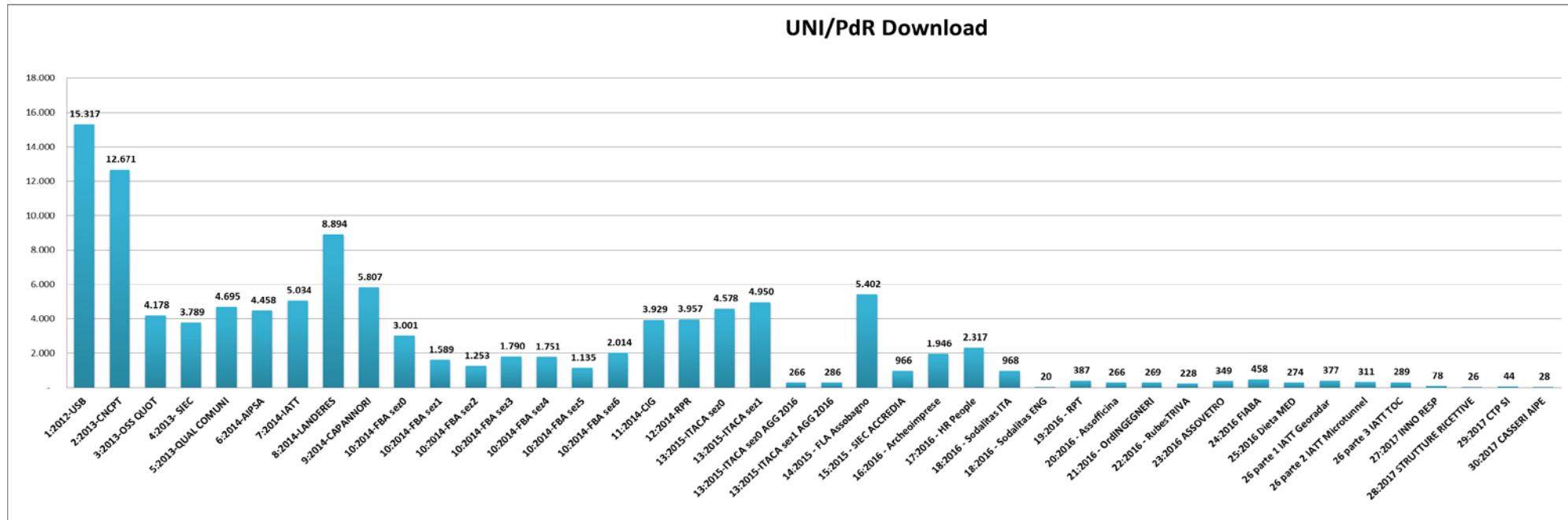
But UNI/PdRs are innovative also because **they are proposed as a first step to the future development of a full standard**: after 5 years from publication, UNI/PdRs are to become national/European or international standards (or technical specification) or have to be withdrawn.

Innovation through standardization: UNI/PdRs



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UNI/PdRs grand total downloads: 140.000



67 UNI/PdRs published (some of them made up of several sections and some in Italian-English version)

5 UNI/PdRs are under development

2 UNI/PdRs are about to kick-off

7 UNI/PdR are in the feasibility study phase

IATT and UNI: a longtime partnering



UNI/PdR 7:2014 Low environmental impact underground infrastructure technology - Mini-trenching systems

UNI/PdR 26.1:2017 Low environmental impact underground infrastructure technology - Underground infrastructure locating and mapping systems

UNI/PdR 26.2:2017 Low environmental impact underground infrastructure technology - Laying pipes by means of horizontal thrust boring

UNI/PdR 26.3:2017 Low environmental impact underground infrastructure technology - Directional Drilling Systems: Horizontal Directional Drilling (HDD)

UNI/PdR 37:2018 Trenchless renovation of rigid underground pipes delivering drinking water by lining with cement mortars or resins

UNI/PdR 38:2018 Electronic marking of underground networks and infrastructure in the subsoil



And coming up next...



UNI warmly welcome researchers, start-ups, universities and innovators to this dedicated one-day event.

Milano, Sede UNI
22 ottobre 2019

Standards + Innovation

**Standard, ricerca, innovazione:
una partnership vincente**

Nuove opportunità per competere

UNI ENTE ITALIANO
DI NORMAZIONE

Subscribe online
http://bit.ly/UNI_22Ottobre



UNI is playing a more and more important role in partnering with consortia, academia, start-ups and innovation hubs involved in **The European framework programme for R&D, Horizon 2020**

- Dissemination of knowledge
- Promote market uptake of research results
- Codification of best practices
- Encourage the creation of networks





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