

Ο ΡΟΛΟΣ ΤΗΣ ΤΥΠΟΠΟΙΗΣΗΣ ΓΙΑ ΤΗ ΔΙΑΣΥΝΔΕΣΗ ΕΡΕΥΝΑΣ ΚΑΙ ΑΓΟΡΑΣ

THE ROLE OF STANDARDS FOR BRIDGING RESEARCH AND MARKETS



ΠΡΟΤΥΠΑ ΓΙΑ ΒΙΩΣΙΜΕΣ ΚΑΙ ΕΞΥΠΝΕΣ ΠΟΛΕΙΣ

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Bridging Research & Markets

- Bridging research and markets for innovation is a key strategic goal of EU policy initiatives for competitiveness and growth
- Innovation
 - implementation of a new or significantly improved product (good or service) or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations **Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data (OECD, 2005)**
 - application of better solutions that meet new requirements, unarticulated needs, or existing market needs
 - more-effective products, processes, services, technologies, or business models that are readily available to markets, governments and society

What are standards?

- an agreed way of doing something
- design references for products and processes
- international consensus and instruments

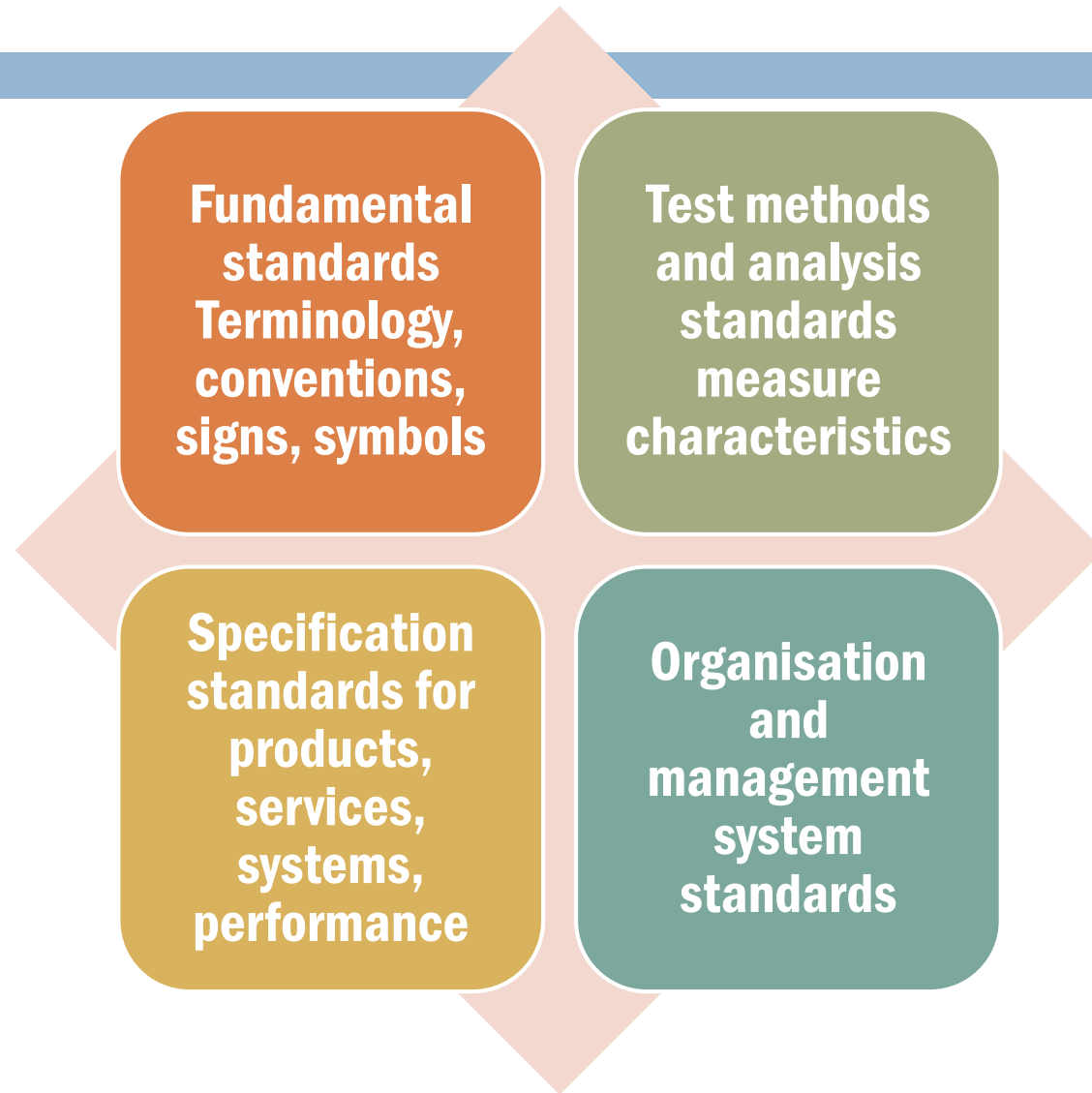


provide requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose

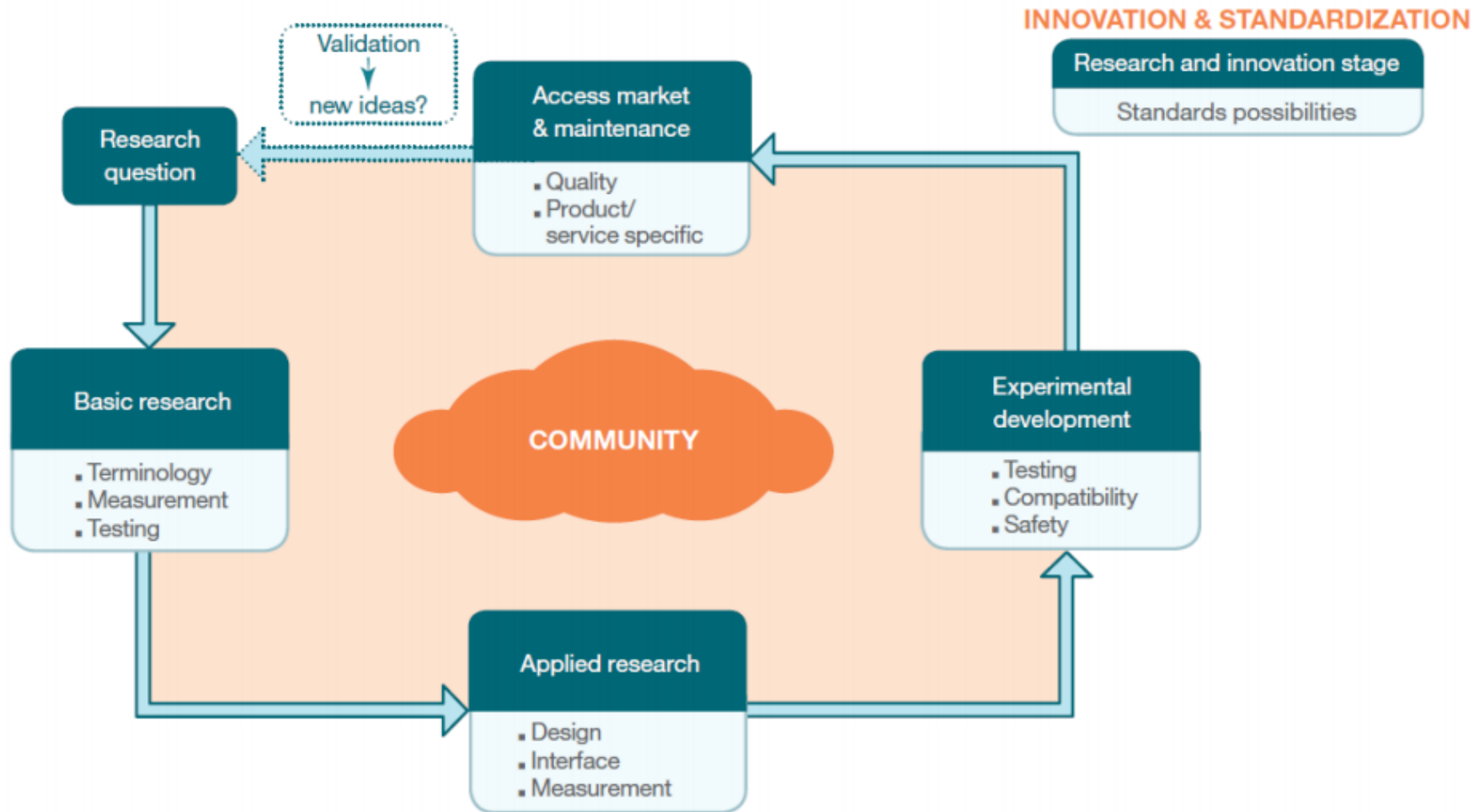


common specifications and/or procedures that respond to the needs of business and meet consumer expectations.

Types of Standards



Standards for Innovation from basic research to market uptake



Standardization “innovation accelerating” aspects

Formal framework for knowledge exchange and best practice identification



Communication and networking with all stakeholders towards consensus building



Structures and mechanisms to support and boost development

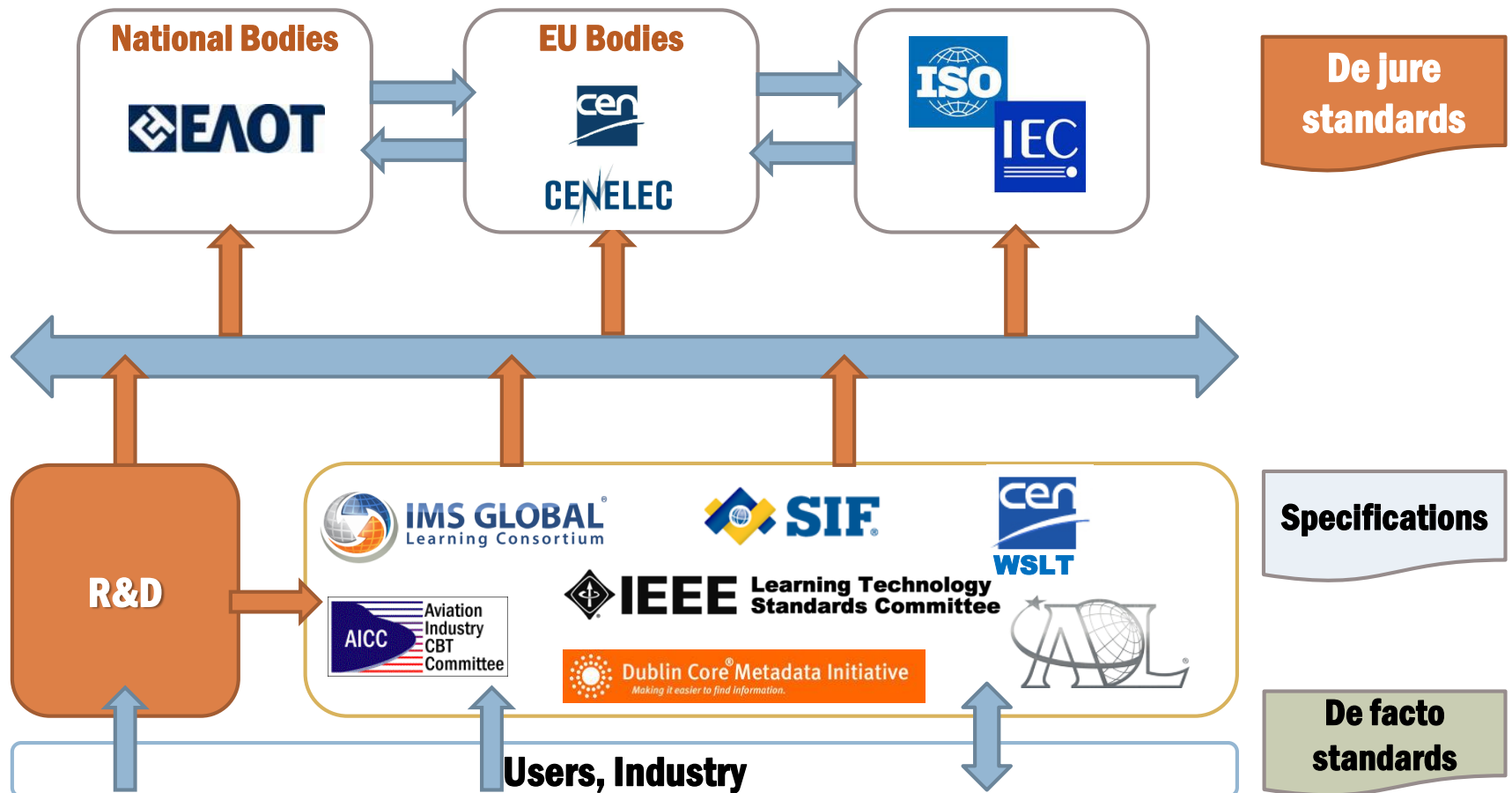


“Standardized” output formats for application and uptake

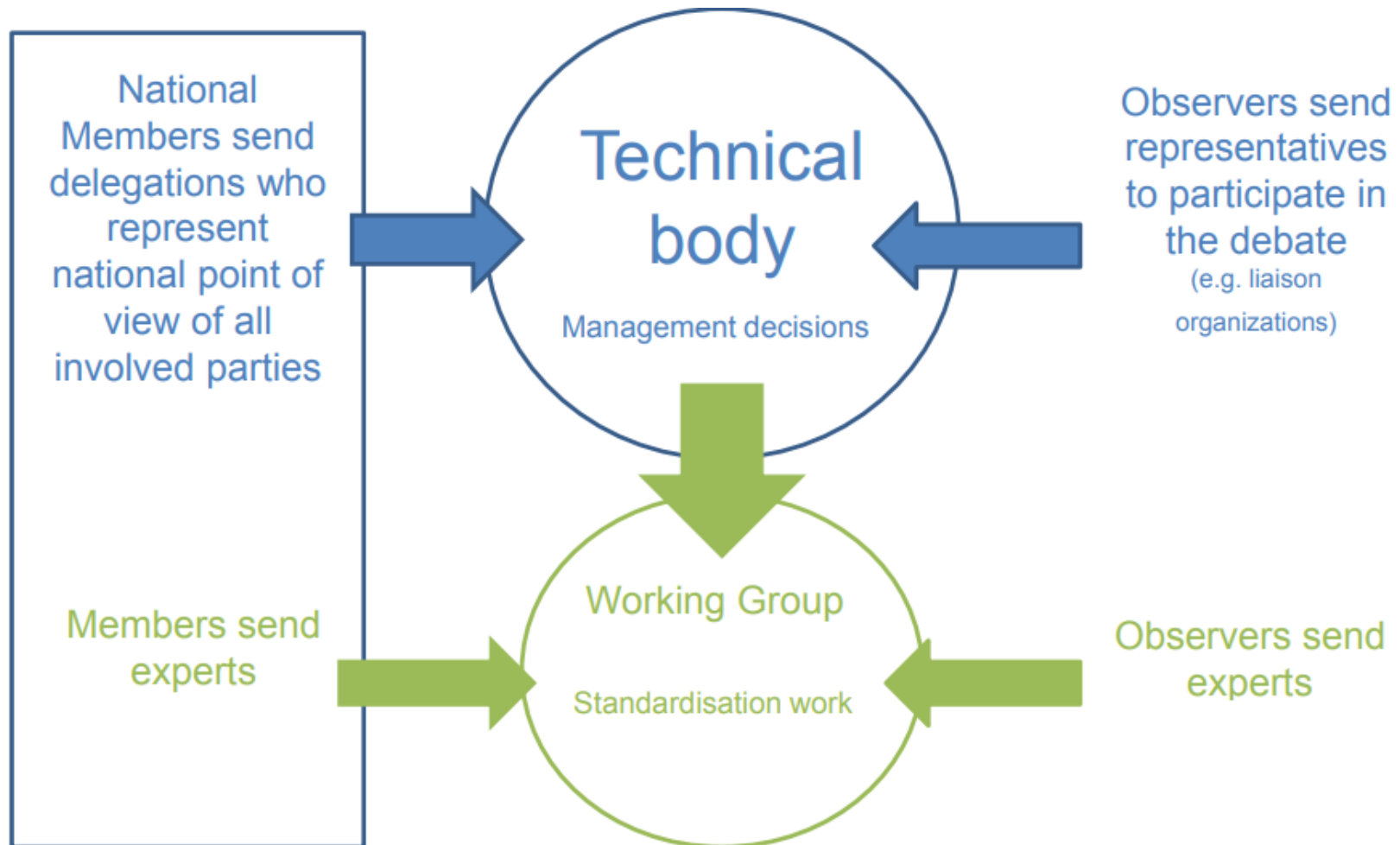


Lifecycle regulations for review and update

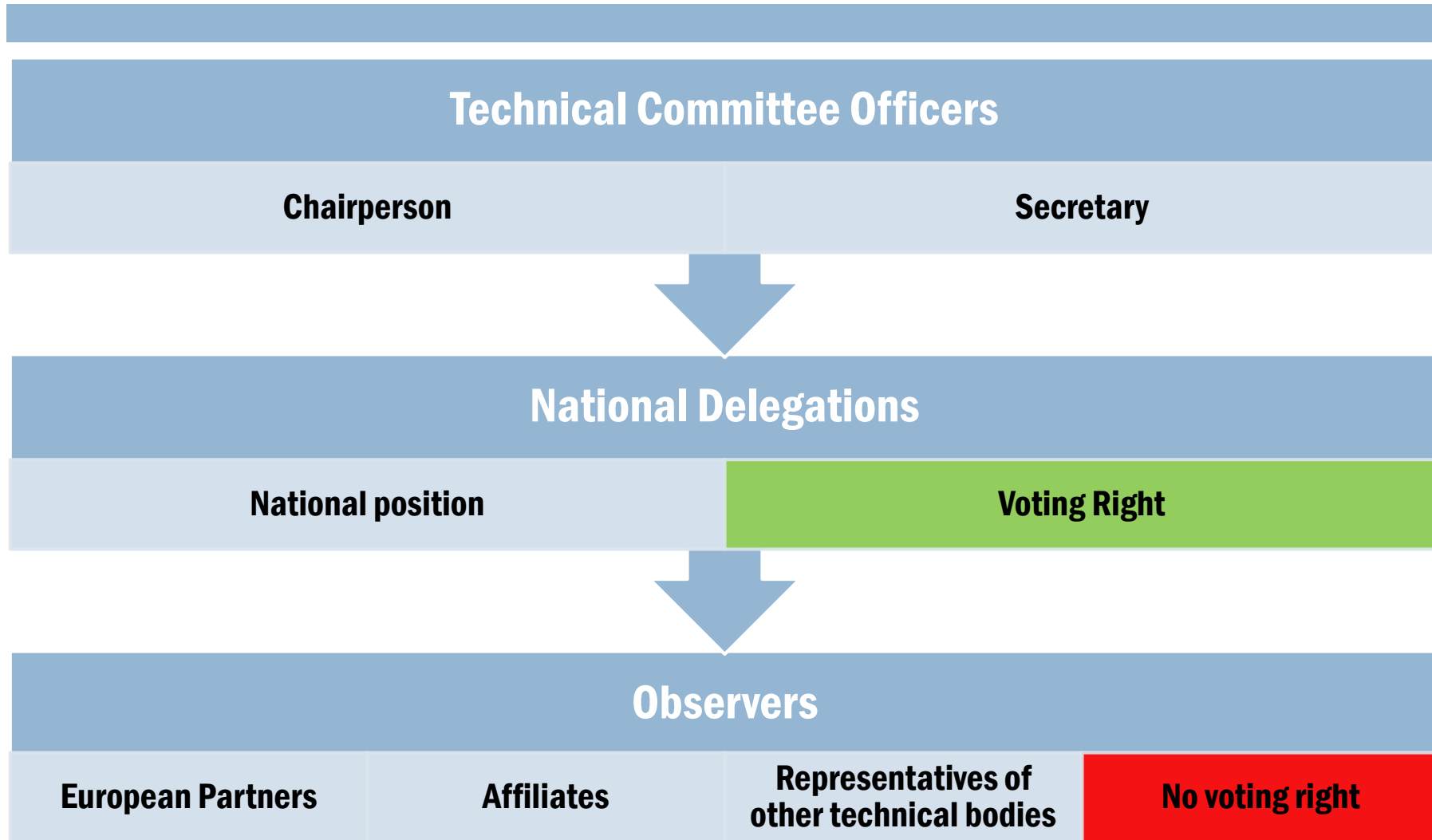
The international Standardization landscape



European Mechanisms



EU Technical Committees



EU Standardization Outputs

Developed in a Technical Committee following the national delegation principle:

□ **European Standard (EN)**

- European homogeneous approach
- Europe wide scale up – 1 EN replaces 33 different national standards in Europe
- Access to a 500 million stakeholders
- Weighted voting
- Development timeframe: up to 3 years
- Review: obligatory every 5 years

EU Standardization Outputs

Developed in a Technical Committee following the national delegation principle:

- **Technical Specification (TS)**
 - new technologies ('pre-standard')
 - no immediate need for a European Standard
 - Weighted vote
 - Review: obligatory every 3 years

EU Standardization Outputs

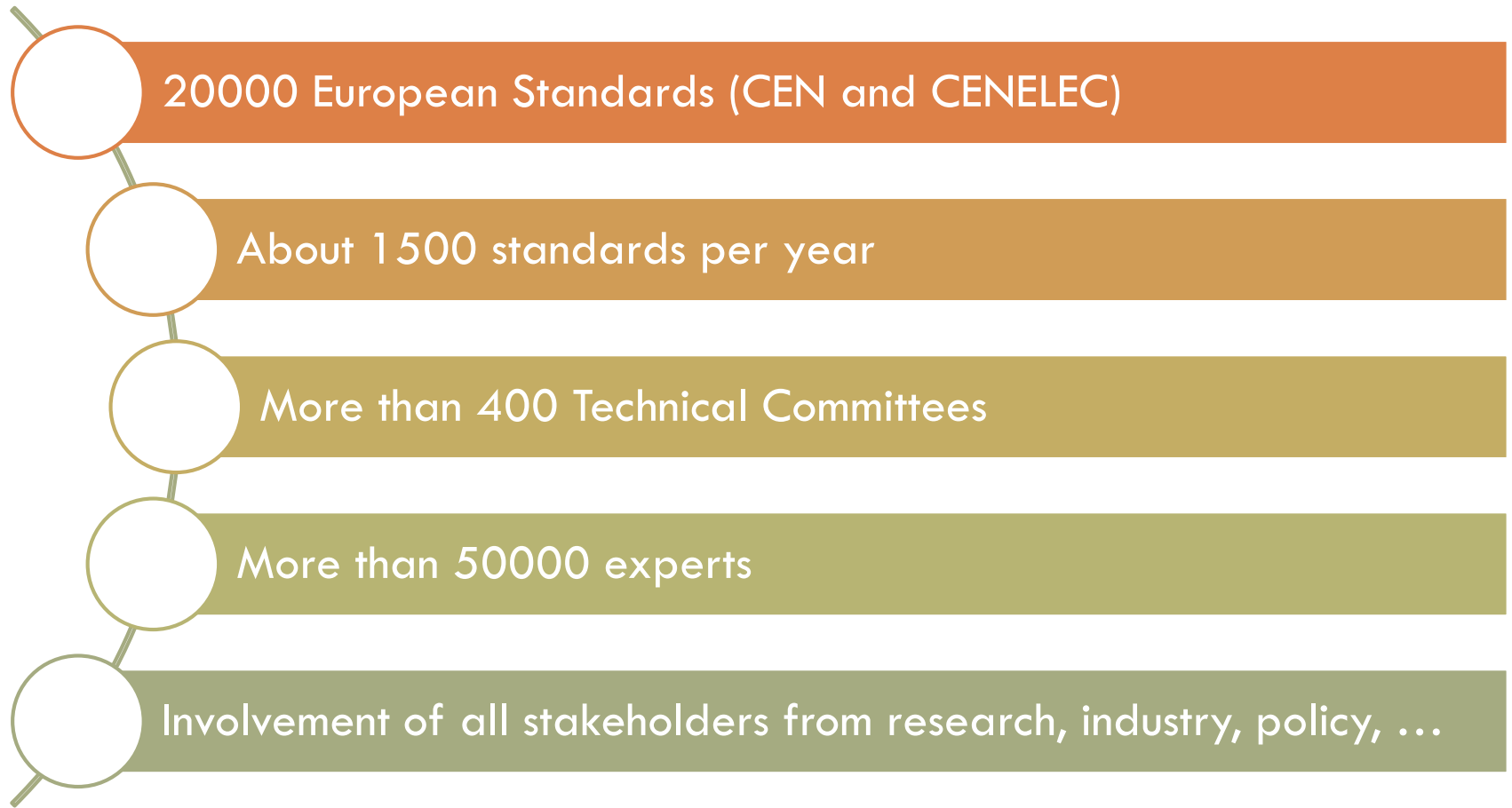
Developed in a Technical Committee following the national delegation principle:

- **Technical Report (TR)**
 - Informative
 - Need to provide information on technical content
 - Publication of data obtained from a survey, data on work in other organizations, etc.
 - Simple majority vote
 - No maximum lifetime specified (recommended to regularly review)

EU Standardization Outputs

- Direct participation model mostly used in R&D context:
 - **CEN-CENELEC Workshop Agreement (CWA)**
 - Open participation
 - Reaching consensus of identified stakeholders
 - No geographical limit
 - Technical specifications, guidance material, best practice, information, etc.
 - Development: 6-24 months
 - Review: obligatory every 3 years

European Standardization Overview



Policy recognition of R-I-S links

- **Europe 2020 Flagship Initiative Innovation Union (2010)**
 - “Standards play an important role for innovation”
- **The Standardization Regulation, 1025/2012**
 - “Standards can help to bridge the gap between research and marketable products or services”
- **Horizon 2020**
 - “Contribute to European competitiveness through support to the standardization process and standards”
- **Single Market Communication 550/2015**
 - “Standards are crucial for innovation and progress in the Single Market: they increase safety, interoperability and competition and help remove trade barriers.”

Key benefits of Standards

Standards support research

- they codify and disseminate the state of the art, and offer a level playing field for competition during the next phases of R&D

Standards enhance visibility

- standardisation is essential for market penetration of R&D results, helps reduce production costs and avoids lock-in to proprietary or immature solutions.

Standards strengthen regulation

- by implementing referenced standards, industry can meet legal requirements for placing goods on the market.

Key benefits of Standards

Standards promote innovation

- they help promote innovative products and services by building confidence among industrial users and consumers and creating a large scale market.

Standards further the creation of new markets

- they can help ensure compatibility and interoperability of products and services. The end-user benefits from reduced prices.

Standards ensure quality of products

- they improve the quality of products, applying state-of-the-art technologies and techniques and at the same time ensuring safety aspects

Key benefits of Standards

Standards increase safety and environmental protection

- they lay down basic rules not just for safe, environmentally sound products, but also to ensure that companies make standards a fundamental part of their culture in fields such as safety, consumer protection and the environment.

Standards facilitate trade

- they support exports by removing technical barriers to trade in the European Single Market, and globally by aligning with international standards as far as possible. In Europe they give access to 600 million consumers.

Standards accelerate time-to-market

- standardisation is the best tool to ensure a fast market introduction of innovative products and technologies at the earliest stage possible. Standardisation can in fact shorten the cycle between initial concept and global market access.

The CEN-CENELEC **STAIR** Initiative

- A dedicated joint working group on **ST**andardization, **I**nnovation and **R**esearch, (STAIR) has been created to provide strategic advice to the CEN and CENELEC Technical Boards on **synchronizing standardization with innovation and research**.
- According to the STAIR view standardization has to be considered during all stages of a research or innovation project.
- Goal:
 - STAIR to be fully implemented in the context of the new European Research and Innovation programme
 - Provide practical help to research projects to link to standardization.

The **STAIR** Integrated Approach

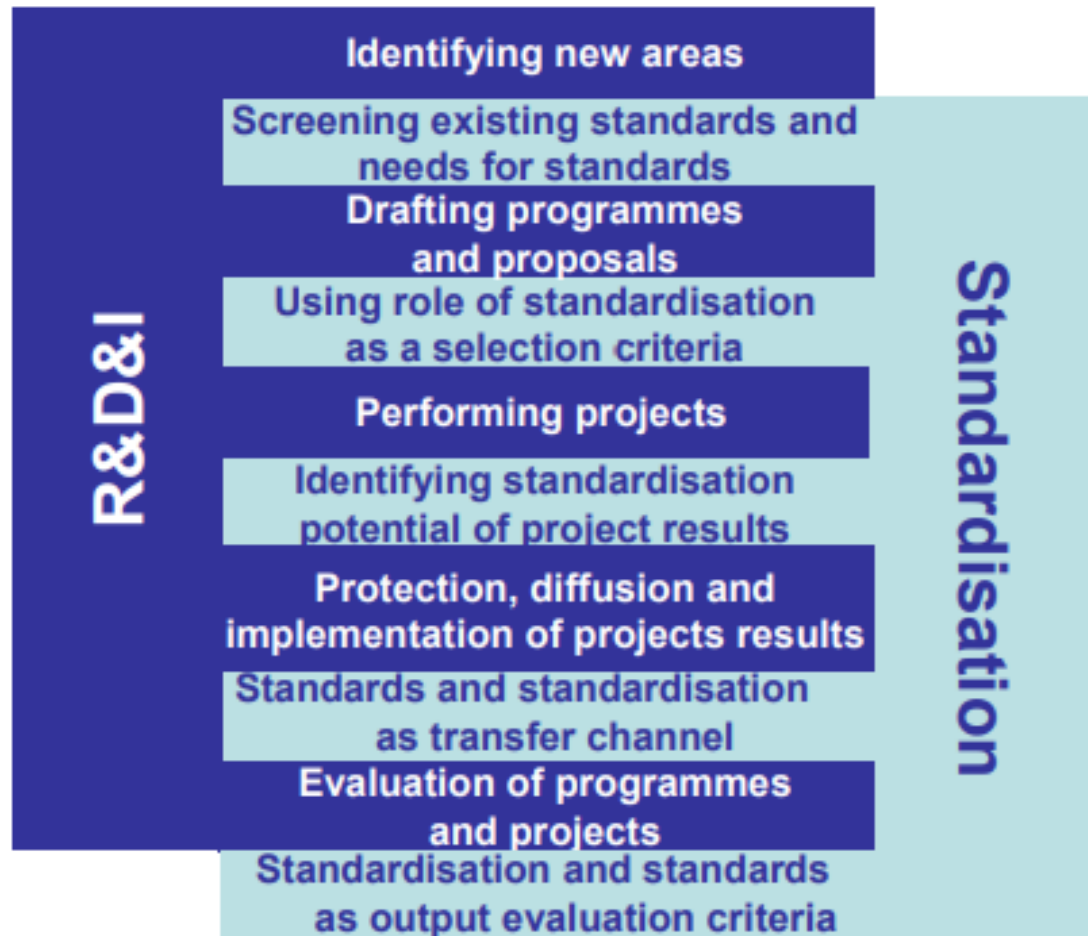
- Starting standardization as early as possible in the research, development and innovation (R&D&I) phases is an effective strategy to ensure that R&D&I have a clear impact on market and society by bringing the knowledge generated into the market through efficient standards development that enables the optimal exploitation of R&D&I findings based on the consensus of all relevant stakeholders.



Should you think about Standards?

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

The **STAIR** Integrated Approach



The STAIR Arguments

Arguments for researchers and research organizations

Standardization facilitates:

- ▶ the transfer of knowledge and technology into marketable products and services;
- ▶ the dissemination and exploitation of research results;
- ▶ the enhancement of recognition and reputation;
- ▶ networking with other researchers, industries and stakeholders for future research and innovation;
- ▶ the inclusion of all interested parties in framing the rules relevant for future research;
- ▶ leveraging licensing revenues of own patents by referencing them into standards.



Arguments for enterprises

Standardization facilitates:

- ▶ shaping the framework conditions of new and emerging markets;
- ▶ the access of new technologies to the market;
- ▶ reduced time to market and increased market share;
- ▶ timely access to knowledge of other stakeholders;
- ▶ networking with competitors, suppliers, customers and regulatory bodies;
- ▶ interoperability of own technologies with complementary technologies;
- ▶ the management of financial risk related to innovations;
- ▶ the acceptance of innovations among customers and public procurers;
- ▶ licensing of patents by referencing them into standards.

Standardization in H2020

- Contribution to standardization is the main objective of the call (“Standardization” is in the title)
- An explicit link is given to the activities of a named Technical Committee
- Strong links with standardization in the topic
- Standardization is mentioned as one of the market uptake measures
- Innovation has to be in line with existing standards

Standardization in H2020

- Screening of the calls for proposals (2016/2017) identified standardization in 37% of LEIT and in 24% SC calls as follows:
 - ▣ Mapping of relevant standards
 - ▣ Standardization gap analysis
 - ▣ Development of new standards
 - ▣ Proposal for a standardization plan
 - ▣ Consider standardization aspects when relevant

Examples of H2020 Calls

BBI.S1-2015:Standards and regulations

Scope: Proposals should address the following elements:

- An evaluation of existing standards and regulations
- Analysis of EU, national and regional legislation
- Supporting the CEN work (TC411 and other Technical Committees) to optimise the industrial applicability and use of the developed standards in order to further specify bio-based products characteristic communication thereof for the various application sectors and provide significant help in B2B and B2C communication.
- Build on and coordinate with other, on-going projects of the same topic of standards and legislation
- Address needed regulations updates to reflect relevant developments.

EEB-01-2016:Highly efficient insulation materials with improved properties

- Innovation action
- "Standardisation aspects should be included particularly in relation with the work carried out in CEN/TC 350" (CEN/TC 350 Sustainability of construction work)
- Selected projects: use the standards and contribute to the standards

FOF-05-2016:Support for the further development of Additive Manufacturing technologies in Europe

- The proposals should address i.a. the "Identification of gaps and opportunities for further research and innovation, as well as non-technological gaps ... (e.g. regulation, standardisation, public procurement).
- Expect impact i.a. to lead to "standardisation mandates to the European Standards Organisations"
- It is clear that the project will need to link with standardization organizations

Link with Standardization

- As a researcher
 - ▣ join a technical committee to forward input from your research into standardization
 - ▣ join a workshop to develop and contribute to normative or even purely informative documents.
- As project proposer
 - ▣ Add a standardization partner to your consortium or liaise directly with Technical Body
 - ▣ screen existing standards, develop new standards activity or link with ongoing standards' work

... and promote Innovation

- Transfer of innovative know-how to the market
- Dissemination of research results
- Opportunity to network
- Enhancement of the economic value of research project
- Comparability & interoperability : measurements, quality indicators, test methods
- Reassurance for European consumers
- Faster and easier access to markets

More information at:

□ <https://www.cencenelec.eu/research/innovation/>

The screenshot shows the CEN-CENELEC website's 'Standards for Innovation' page. The header includes the CEN-CENELEC logo, the tagline 'Making Standards for Europe', and navigation links for 'Subscribe', 'FAQ', 'Sitemap', 'Acronyms', and 'Contact us'. A search bar is located on the right. The main navigation menu includes 'ABOUT US', 'EUROPEAN STANDARDIZATION', 'RESEARCH & INNOVATION' (highlighted), 'IPR & PATENTS', 'INTERNATIONAL COOPERATION', 'SME', and 'SOCIETAL STAKEHOLDERS'. The left sidebar contains a 'Standards for innovation' section with links to 'Types of standards', 'IPR and standards in research', 'Tools for researchers', 'Tools for CEN and CENELEC Members', 'Standards & metrology', 'FAQs', and 'Research helpdesk'. The main content area is titled 'Standards for Innovation' and contains the following text: '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." They are also recognized in the June 2011 Communication of the European Commission "A strategic vision for European Standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020."' Below this, there is a link to 'Consult online the list of key policy documents related to innovation and standardization'. The text continues: '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 (pdf format). The possible interactions and benefits between research and standardization have been qualified by the CEN and CENELEC STAIR working group as the "Integrated Approach" (pdf format).' The page also features sections for 'Reference Material', 'EU Policy Documents' (with links to Regulation (EU) No 1025/2012, Annual Union work programme, 2011 Communication, 2010 Resolution, and 2010 Communication), and 'CEN-CENELEC policy documents' (with links to IPR and standards, Policy on participation in research projects, and a brochure on the integrated approach).



Thank you!

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