European Standardization Organizations

The Role of Standards in Driving Green Innovations

Sebastian Vogel, Project Manager

Agenda

The European Standards Organizations
Understanding “Standards”
Standardization and environmental technologies
Trends and conclusions

The European Standards Organizations

European Standards Organisations (ESOs)

Various business sectors

Electrotechnology

Electronic Communications

Making standards for Europe

International

Regional (European)

National

CEN and CENELEC National Members

43 National Standardization Organizations

from **34** countries

Understanding “Standards”

European Standardization System

European Standard (EN)

National standards (XX EN)

1x = 34x

Standards supporting free circulation of goods in the EU and beyond (600 million consumers)

What do we mean by Standard?

EUROPEAN STANDARD **EN ISO 14034**

NORME EUROPÉENNE

EUROPÄISCHE NORM October 2018

ICS 13.020.10

English Version

Environmental management - Environmental technology verification (ETV) (ISO 14034:2016)

Management environnemental - Vérification des technologies environnementales (ETV) (ISO 14034:2016)

Umweltmanagement - Verifizierung von Umwelttechnologien (ETV) (ISO 14034:2016)

This European Standard was approved by CEN on 8 January 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

technical specification

for ***voluntary*** application

adopted by a ***recognised standardisation body***

used as a ***rule***, ***guideline*** or ***definition***

for a repeatable way of doing something

CEN-CENELEC Portfolio

European Standards	Technical Specifications	Technical Reports	Workshop Agreements	Guides
24221	788	895	524	94

26522

CEN and CENELEC Standards in relation to international standards:

34% of CEN Standards are identical to ISO
74% of CENELEC standards are identical to IEC

Standardization and environmental technologies

High Level Forum: 2024 standardization priorities

*in line with the **CEN & CENELEC Strategy 2030***

Critical Raw Material

Hydrogen

Photovoltaic products

Carbon removal in construction products

Climate resilience of infrastructure

Electric vehicles charging infrastructure

European Green Deal infrastructure (EU Grid action plan)

Cybersecurity

Digital Product Passport

Digital identity framework

Artificial Intelligence

Data sharing/interoperability

Why standards for innovation?

Standards ensure **comparability**, **compatibility**, and **interoperability**

Standards **build trust** with customers, providing clarity and transparency about what to expect

On a **macroeconomic level**, standardization directly contributes to a country's economic growth and creates new markets

Standardization can **boost profitability** for individual companies

Standardization processes build and nurture **international networks**, based on principles of openness and transparency

The co-creation process of standardization supports open innovation and **cross-industry innovation**

Workshop Agreements from research: examples

- CWA 18119:2024 'A methodology to improve the recyclability rate of Strategic/Critical Metals from car electronics'
- CWA 18106:2024 'Circularity Protocols for extending the useful Life of Large Industrial Equipment'
- CWA 18095:2024 'Recyclability of novel and sustainable energy harvesting and storage technologies for IoT and wireless sensor network'
- CWA 18090:2024 'User centric charging infrastructure for electric vehicles - Guidelines for operators to implement advanced smart charging and management strategies'

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Standards+Innovation Awards 2023

- Winner of Project Award:
  - Next-generation Dynamic Digital EPCs for Enhanced Quality and User Awareness (D^2EPC)
  - Nominated by the Cyprus Organisation for Standardisation (CYS)

Benefits of Standardization

SDG 7 ‘Affordable and Clean Energy’

- Standards on energy management to help businesses improve the energy efficiency of products:
  - E.g., Ecodesign and Energy Labelling, 25 TCs produce ENs on methods for measuring performance.
  - E.g., transports: Standards help reduce the amount of energy used in the sector and shift to sustainable fuels. Existing standards cover means of transport, tools to monitor emissions in vehicles, and Intelligent Transport Systems (ITS) in urban areas.

SDG 13 ‘Climate action’

- CEN and CENELEC adopt a horizontal approach to environmental protection, embedding it across all their actions:
  - E.g., CEN TC 467 ‘Climate Change’ develops standards to mitigate and adapt to climate change
  - E.g., CENELEC TC 111X ‘Environment’ focuses on reducing the negative impact of electrical and electronic products on the environment.

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Benefits of standards

- Shaped by those who contribute
- Open and transparent process
- Market driven
- Recognized by Public Authorities and regulations: Supporting legislation

Trends and conclusions

Standardization Trends and Foresight

- **ISO** Foresight Framework and 2022 Trend report
- **IEC** Standardization Management Board Strategic Group 11 'Hot Topic Radar' develops a foresight approach
- **ISO/IEC JTC 1** 'Information Technology' Joint Advisory Group on Emerging Technology and Innovation "JETI"
- **JRC** Competence Centre on Foresight
- The **European Commission** publishes an annual Strategic Foresight Reports

CEN-CENELEC/BTWG 3 'STAIR' Standardization, Innovation, Research

- Putting Standards Into Science
- Horizon Screening

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Examples for Standardization Roadmaps

Industrial Symbiosis

- RISERS project (link)
  - enhance resource efficiency across Europe
  - establish clear pathways and actions aimed at developing essential standards
- launched in January 2024 with a duration of 3 years

Swappable Battery Systems for L-cat vehicles

- Stan4SWAP project (link)
  - facilitate the use of swapable battery systems
  - facilitate the decarbonisation of urban mobility
- launched in December 2023 with a duration of 2 years

Europe’s standardization system…

is unique in developing one common market

responds to SDGs with ongoing work

is open for innovative ideas

Q&A

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