European Standardization & Digital Transformation

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Fundamentals – CEN and CENELEC standards are...

- Based on the **national delegation principle**
- Representing a **consensus** among all interested parties, including **industry & SMEs** and **societal stakeholders**
- **Voluntary**
- Developed by **independent organizations** clearly distinct from authorities
CEN & CENELEC Standardization
Sectors and Topics

CEN
Bio-based products
Chemicals
Construction
Food
Heating, Ventilation & Air Conditioning
Materials
Nanotechnologies
Pressure equipment
Services

CEN & CENELEC
Air and Space
Consumer products
Electric Vehicles
Energy and utilities
Health and safety
Healthcare
ICT
Machinery safety
Measurement
Medical equipment
Railways
Security and Defence
Smart Grids / Smart Meters
Transport and Packaging

CENELEC
Electrical engineering
Electromagnetic Compatibility (EMC)
Fibre-optic communications
Fuel Cells
Household Electrical Appliances
Solar (photovoltaic) electricity systems

Cross-sectoral issues
Accessibility | Environmental Protection | Energy-efficiency (Eco-Design)
Industry sector coverage

Transport: 3138
Building and civil engineering: 2417
ICT: 2353
Materials: 2239
Utilities and energy: 1875
Household goods, sports and leisure: 1296
Electronics: 1283
General Standards (Quality, safety, etc.): 1238
Electrical engineering: 1147
Chemistry: 1100
Health and safety: 1055
Environment: 848
Food: 498
HVAC: 475
Packaging: 354
Services: 287

Total # of Documents: 3350
European Standards - Evolution

...meeting stakeholder needs
Internet of Things

<table>
<thead>
<tr>
<th>World Population</th>
<th>Connected Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 Billion</td>
<td>500 Million</td>
</tr>
<tr>
<td>6.8 Billion</td>
<td>12.5 Billion</td>
</tr>
<tr>
<td>7.2 Billion</td>
<td>25 Billion</td>
</tr>
<tr>
<td>7.6 Billion</td>
<td>50 Billion</td>
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</tbody>
</table>

Connected Devices Per Person
- 2003: 0.08
- 2010: 1.84
- 2015: 3.47
- 2020: 6.58

Source: Cisco IBSG, April 2011
The world is changing

- European industry is digitizing
- Traditional sectors now need IT standardization responses
- Rapidly evolving regulatory landscape
- Growing number of standardization providers
Standardization Bodies Supporting Digitization

Home/Building  Manufacturing/Industry Automation  Vehicular/Transportation  Healthcare  Energy  Cities  Wearables  Farming/Agrifood

Source: AIOTI WG3 (IoT Standardisation) – Release 2.0
Industry sectors are undergoing digital transformation

Target sectors are longstanding and active stakeholders in CEN and CENELEC

IoT happens here
Sectors and cross-cutting issues

Technology, Connectivity, Semantics, Interoperability…

Sectors (verticals)

Cybersecurity, Functional safety, Data privacy…
CEN-CENELEC Strategy for Digitization

CEN-CENELEC Ambitions 2020

Strategic Plan for Digitization

Implementing Projects
CEN and CENELEC projects in support of Digitization

- Joint Initiative on Standardization (JIS) Action 14 ‘Digitization’
- Strategic alliances and partnerships
- Digitization of CEN and CENELEC processes
- Specific IoT Pilot projects
- CEN-CLC-ETSI contributions to ICT Standardization priorities
- National initiatives
  - ISO / IEC
- ETSI, oneM2M, AloT,…
- Online Standardization
- Content management
- Identification and Pilots Kick – Off

Data, Cyber-security, Functional Safety,…
5 Priorities for ICT Standardization
Strategic Plan - projects supporting Digitization

- Online, collaborative standards development
  - Flexible, accessible online standardization platform

- Next Generation
  - Digital professionals & Natives

- Strategic Alliances
  - ECSO, oneM2M, AIOTI

- 21st Century standards content
  - Machine readable, user ready

- Digital transformation of CEN-CENELEC
  - Online Standardization, Content Management
CEN & CENELEC supporting Digitization of European Industry

- European standardization: essential for the effective digitization of industry
- Vertical Sectors drive digitization, with digital technology providers, enabled by standards
- CEN – CENELEC System’s own digital transformation
- Support national digitization initiatives
- Cooperation with ISO and IEC
- Partnerships with ETSI and others (oneM2M, ECSO, AIOTI...)
- Robust and innovation-friendly patent policy
Thank you very much for your attention