

# Energy & Standardization Challenges

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# 1 network



# Our fundamentals

National  
Delegation  
Principle

Market  
Driven  
Built on  
consensus

Industry,  
SMEs,  
Consumers...  
...

Voluntary  
Single  
Standard  
Model

Independen  
nt  
Support  
NLF

Coherent

- National
- Regional
- International

# A unique system

- CEN, CENELEC and ETSI Officially recognised as European
- Standardization Organizations (Regulation EU 1025/2012)

- **1 European Standard**



→ 34 identical national standards

→ All conflicting standards removed



- **Access to a market of 600 Million consumers!**



# CEN & CENELEC Standardization Sectors & Topics

## CEN

Bio-based products  
Chemicals  
Construction  
Food  
Heating, Ventilation and  
Air Conditioning (HVAC)  
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

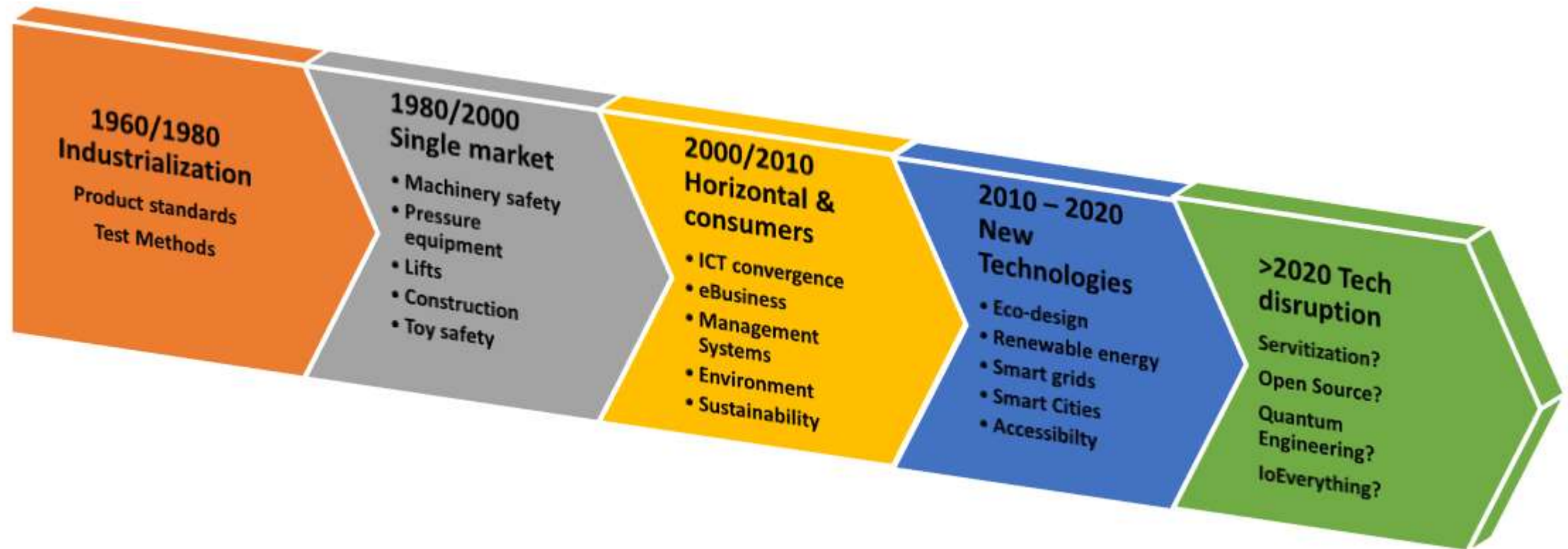
Electrical engineering  
Electromagnetic  
Compatibility (EMC)  
Fibre-optic  
communications  
Fuel Cells  
Household Electrical  
Appliances  
Solar (photovoltaic)  
electricity systems

## Cross-sectoral issues

Accessibility | Environmental Protection | Energy-efficiency (Eco-Design)

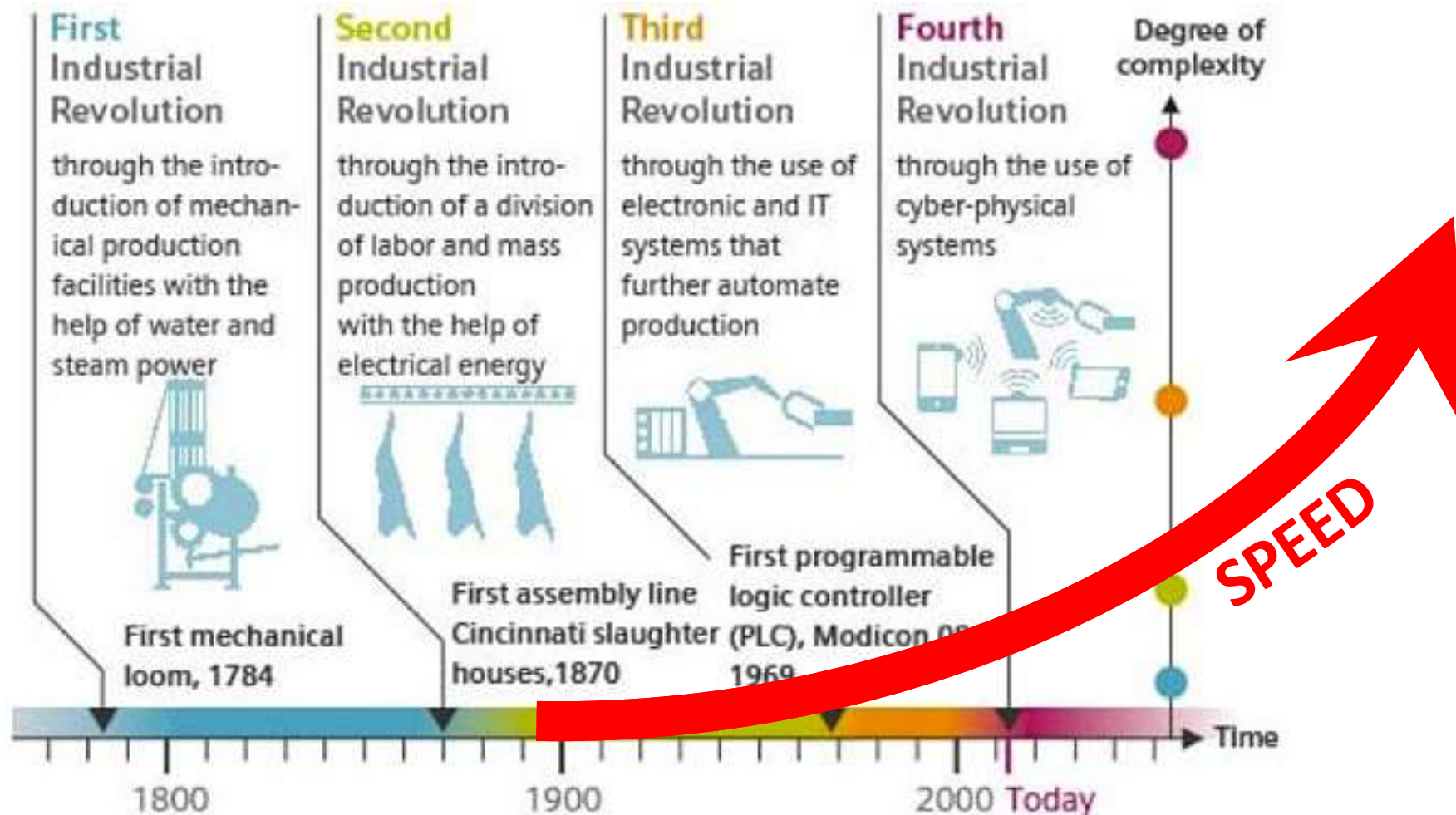
# Challenging landscape





# A fast evolving world

## Technology evolution







ECO



# Digital transformation of industry

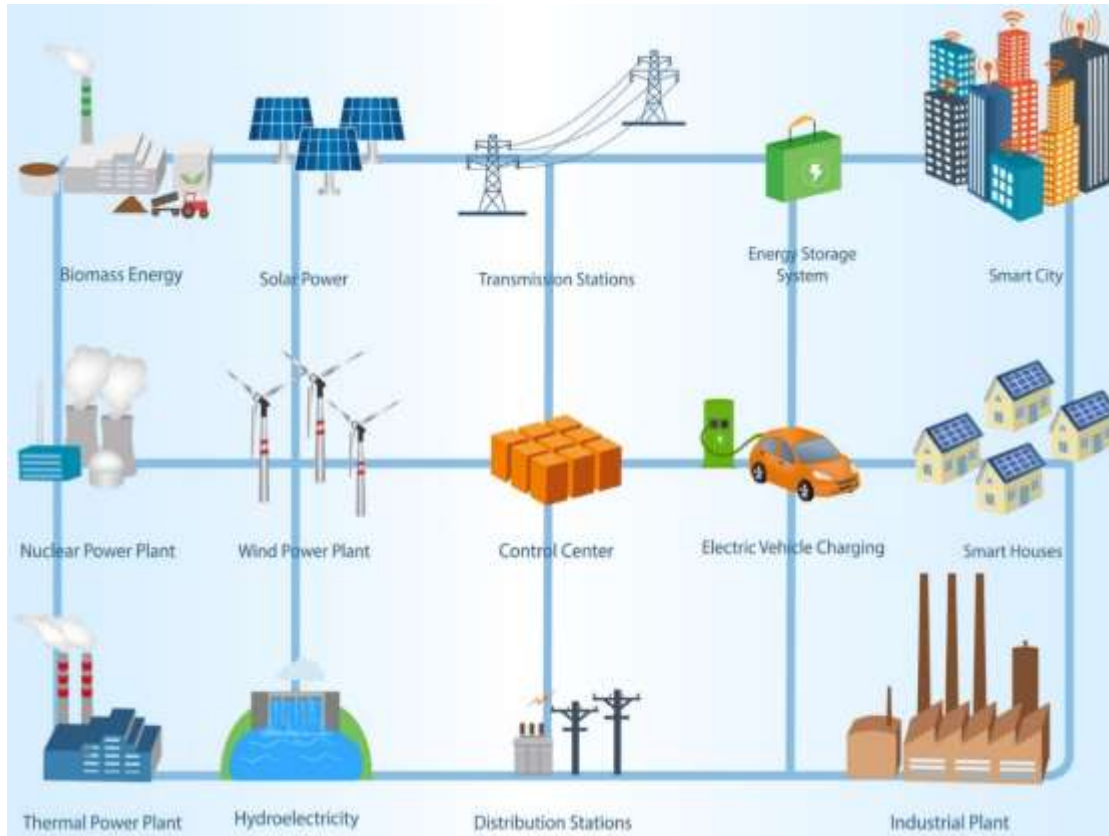
- European industry is increasingly using digital technologies
- Traditional sectors need ICT standardization responses
- Rapidly evolving regulatory landscape
- Growing number of standardization providers
- R&D-led growth

**CEN and CENELEC need to adapt**



# Energy transition

Transition to low carbon has started...



- **Energy Union strategy**
  - Modernization of EU economy
  - More secure, affordable and sustainable energy
  - New technologies and renewed infrastructure
- **Clean Energy Package**
  - Long terms objectives: 2030 + Roadmap 2050
  - Focus on Energy Efficiency, Renewables and fair deal for consumers

# European Standards supporting energy transition



- **Renewable sources**
- **Energy Efficiency**
- **Ecodesign and Energy Labelling**
- **Building Automation**
- **Power management**
- **Hydrogen and gas infrastructure**
- **Energy storage**
- **Energy conversion**
- **Smart Grids and Smart Meters**

CEN/TC 19 Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin.

CEN/TC 107 Prefabricated district heating and district cooling pipe system

### **CEN/TC 234 Gas infrastructure**

CEN/TC 235 Gas pressure regulators and associated safety devices for use in gas transmission and distribution

### **CEN/TC 282 Installation and equipment for LNG**

### **CEN/TC 312 Thermal solar systems and components**

CEN/TC 335 Solid biofuels

CEN/TC 343 Solid Recovered Fuels

### **CEN/TC 383 Sustainably produced biomass for energy applications**

CEN/TC 408 Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid

### **CEN/TC 411 Bio-based products**

CEN/TC 430 Nuclear energy, nuclear technologies and radiological protection

CEN/TC 441 Fuel labelling

### **CEN/TC 454 Algae and algae products**

CEN/WS 056 Fuel quality specification – pure plant oil application in diesel engines

CEN/WS 064 Phase 1 Mechanical equipment of innovative nuclear installations

CEN/WS 064 Phase 2 Design and Construction Codes for Gen II to IV nuclear facilities

**CEN/WS 073 Eco-efficient Substations**

**CEN-CLC/WS EINSTEIN - Good Practice Thermal Energy Audits (GPTEA)**

**CEN-CLC/WS REEMAIN Methodology for Resource & Energy Efficient Manufacturing**

**CEN-CLC/TC 6 Hydrogen**

CEN-CLC/TC 10 Energy-related products – Material Efficiency Aspects for Ecodesign

**CEN-CLC/JWG 1 Energy audits**

**CEN-CLC/JWG 3 Energy Management and related services – General requirements and qualification procedures**

**CEN-CLC/JWG 4 Energy efficiency and saving calculation**

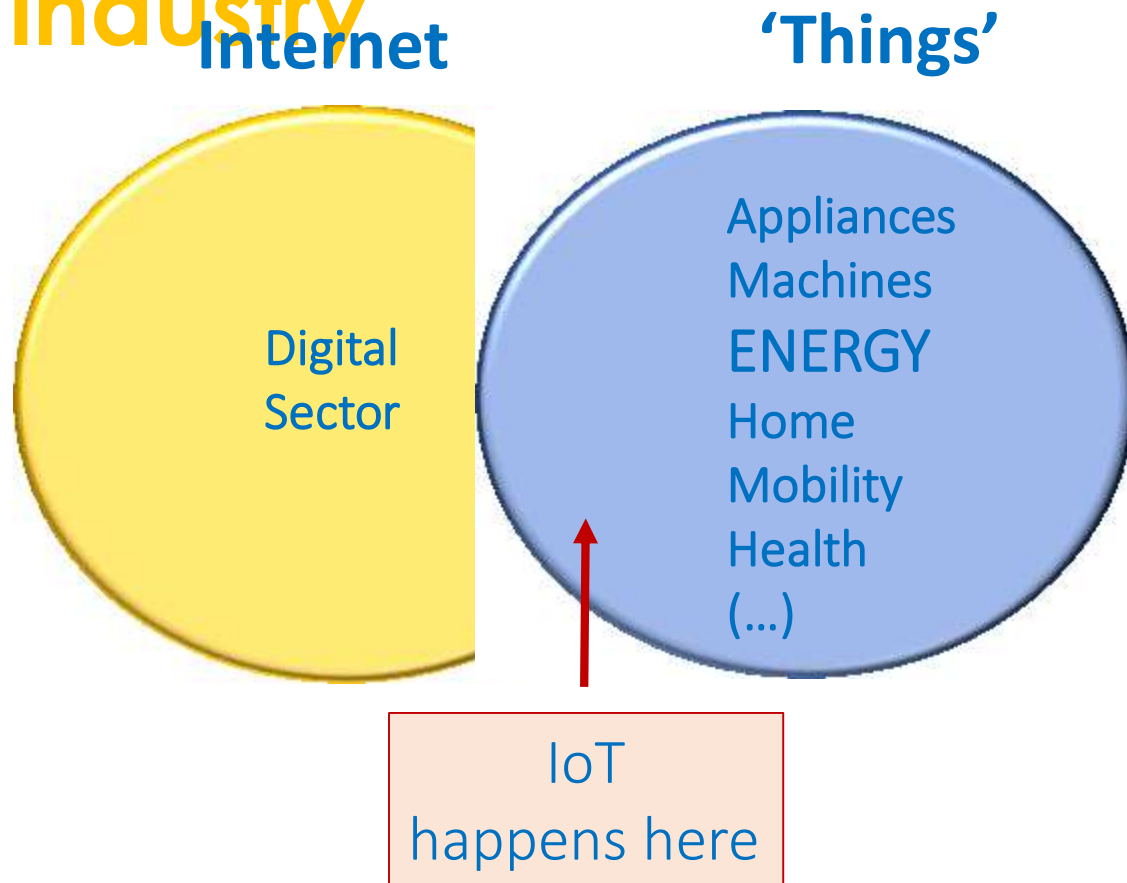
**CEN-CLC/JWG 9 Energy measurement plan for organisations**

CEN-CLC SFEM Sector Forum Energy Management  
Sector Forum Gas Infrastructure and Gas Utilization  
CEN-CLC-ETSI Coordination Group on Smart Energy Grids  
CEN-CLC-ETSI Coordination Group on Smart Meters  
CEN-CLC Ecodesign Coordination Group

CEN-CLC-InnoEnergy technical workshop on **Batteries** 2018-11-26 in Brussels

# Holistic approach

## Energy transition hand-in-hand with digitization of industry



- Digital transformation of Energy Sectors → Internet of Energy
- Digital sectors increasingly engaging with vertical sectors
- All stakeholders to be involved

# Responding to the digital challenge

- Ensure CEN and CENELEC can meet the needs of industry sectors that digitally transform  
→ **Digital transformation of industry**
- Make the CEN and CENELEC system more agile and adaptable to market and technology innovation  
→ **Digital transformation of CEN and CENELEC**



# 4 Pilot Projects in 2018

## Online standards development

- Seamless, 24/7 user-friendly environment for efficient **collaborative authoring of standards**, ensuring timely delivery to the market.
- Responsible: WG OSP – Convenor: Bruno Berken (AFNOR)

## Standards of the future

- Define '**standards of the future**' and how to deliver them.
- Responsible: Rüdiger Marquardt (DIN)
- Supporting groups: TF Digital Content and Ad hoc group JCAG/Legal Platform

## Establish strategic alliances

- Ensure CEN and CENELEC are credible and effective leaders in the digital domain through a market-led, formal **engagement strategy**.
- Responsible: Richard Taylor (BSI)
- Supporting group: TF Strategic Alliances

## Explore Open Source Innovation

- Identifying opportunities for standardization to support market uptake of '**open source**' innovations.
- Responsible: Andreas Lamm (DIN)/Dr. Jens Gayko (DKE)
- Supporting group: TF Open Source Innovation

# Innovation and Challenges for Standardization

- **Ever shorter** time to market and faster innovation
- **Digital transformation** of industry
- Continuous growth of private R&D, **outstripping** publicly-funded R&D,
- A **young generation** of researchers and innovators in start-ups
- Companies increasingly going **direct to market**, without first obtaining patents
- **Servitization** of the economy

# CEN-CENELEC Innovation Plan

## 3 main focuses

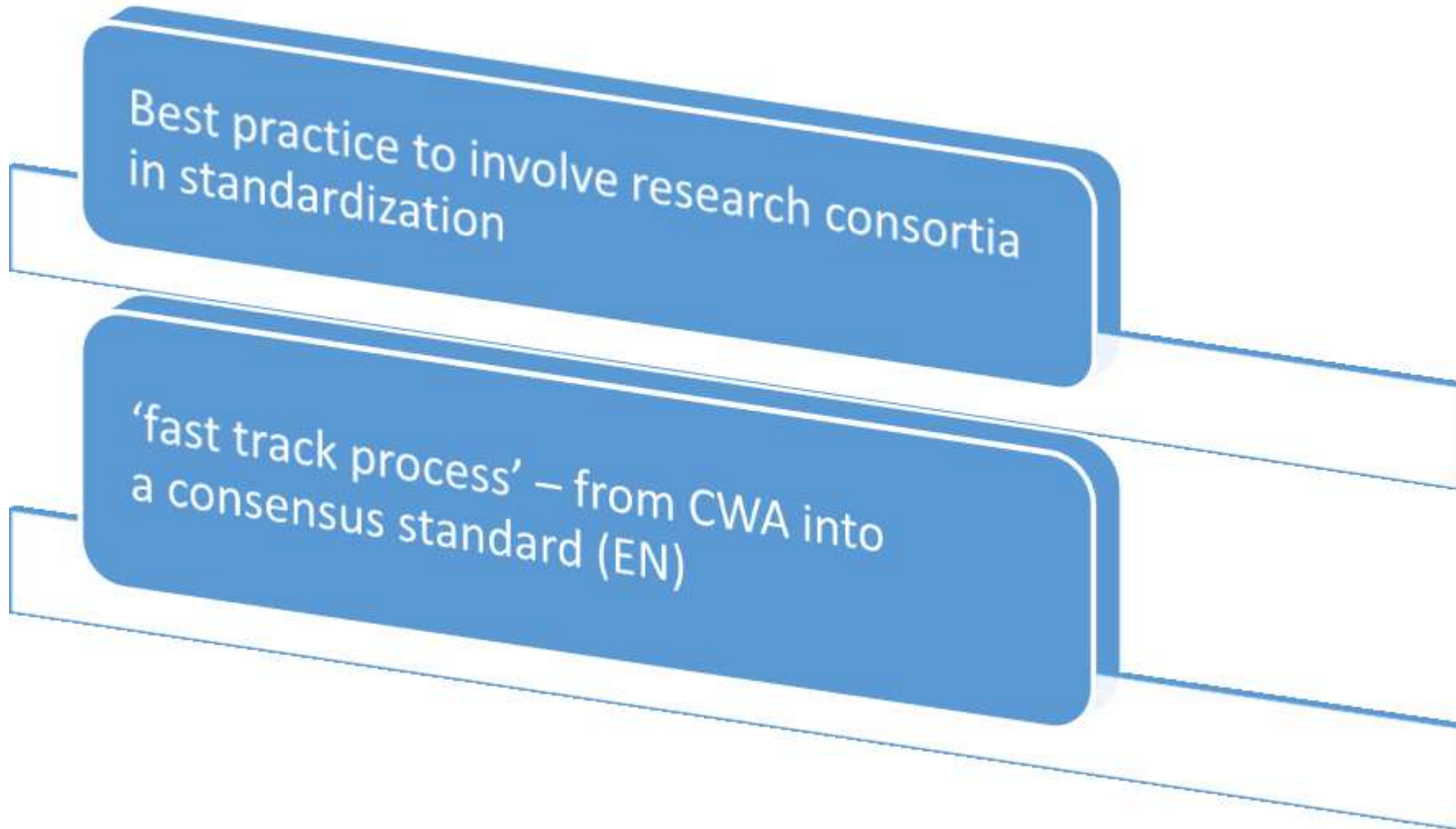
- To engage with researchers and innovators through recognizing contributions from research
- To offer deliverables and processes that meet researchers and innovators needs by a fast –track approach
- To obtain the support and recognition of (national and European) institutions

## 9 actions

# Engage with Researchers and Innovators



# Fast-track Approach



# Recognition and Support from Institutions

Influence FP9 tenders

Industry research groups  
to include standardization in projects

Assessment schemes -  
A contribution of researchers



thank you!

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