



European Standardization Organizations

Strengthening European Energy Security with European Standards

Elena Santiago – CEN and CENELEC Director General

Who are we?



- ▶ CEN and CENELEC are two out of the three European Standards Organizations (ESOs) together with ETSI
- ▶ CEN, CENELEC and ETSI officially recognised as European Standards Organizations ([Regulation EU 1025/2012](#))



Standardization in various business sectors



Standardization in the Electrotechnology sector



Telecommunications, broadcasting and other electronic communications networks and services

CEN and CENELEC members in 34 countries



Austria



Denmark



Greece



Latvia



Poland



Slovenia



Belgium



Estonia



Hungary



Lithuania



Portugal



Spain



Sweden



Bulgaria



Finland



Iceland



Luxembourg



Republic of North Macedonia



Switzerland



Croatia



France



Ireland



Malta



Romania



Türkiye



Cyprus



Germany



Italy



Norway



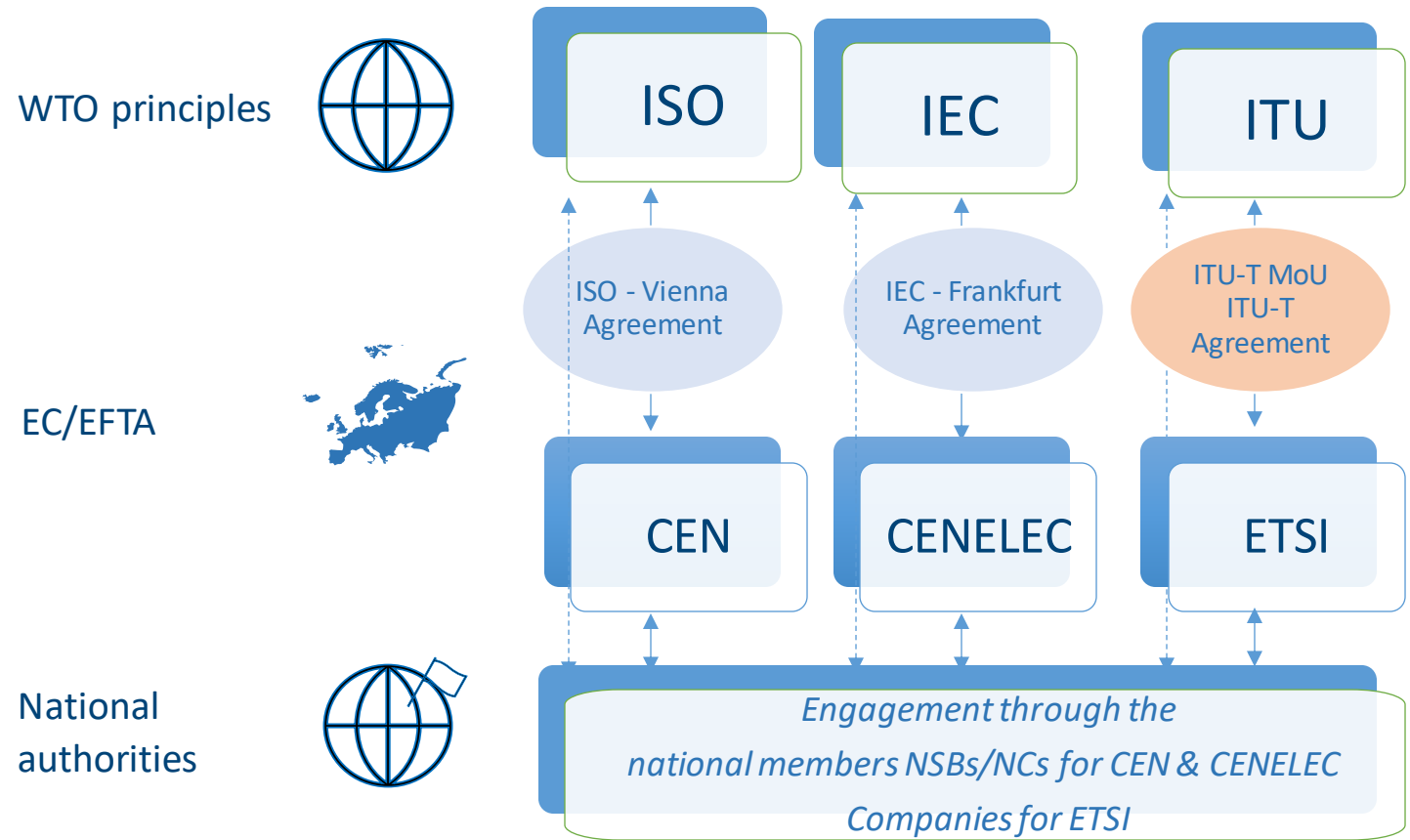
Slovakia



United Kingdom

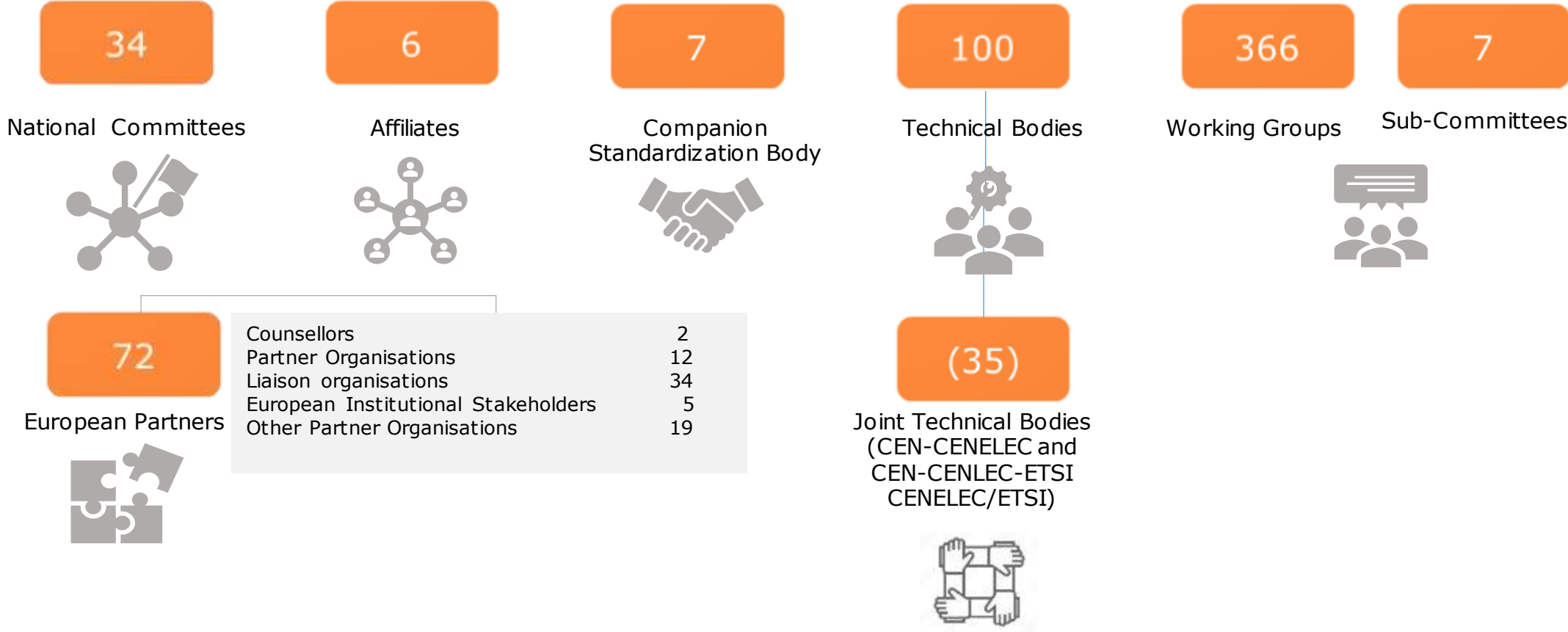


A coherent and inclusive system



Inclusive System representing all stakeholders voice: industry, SMEs, civic society, environmental organizations, academia and R&D, regulators, NGOs, etc

CENELEC Network at a glance - January 2023

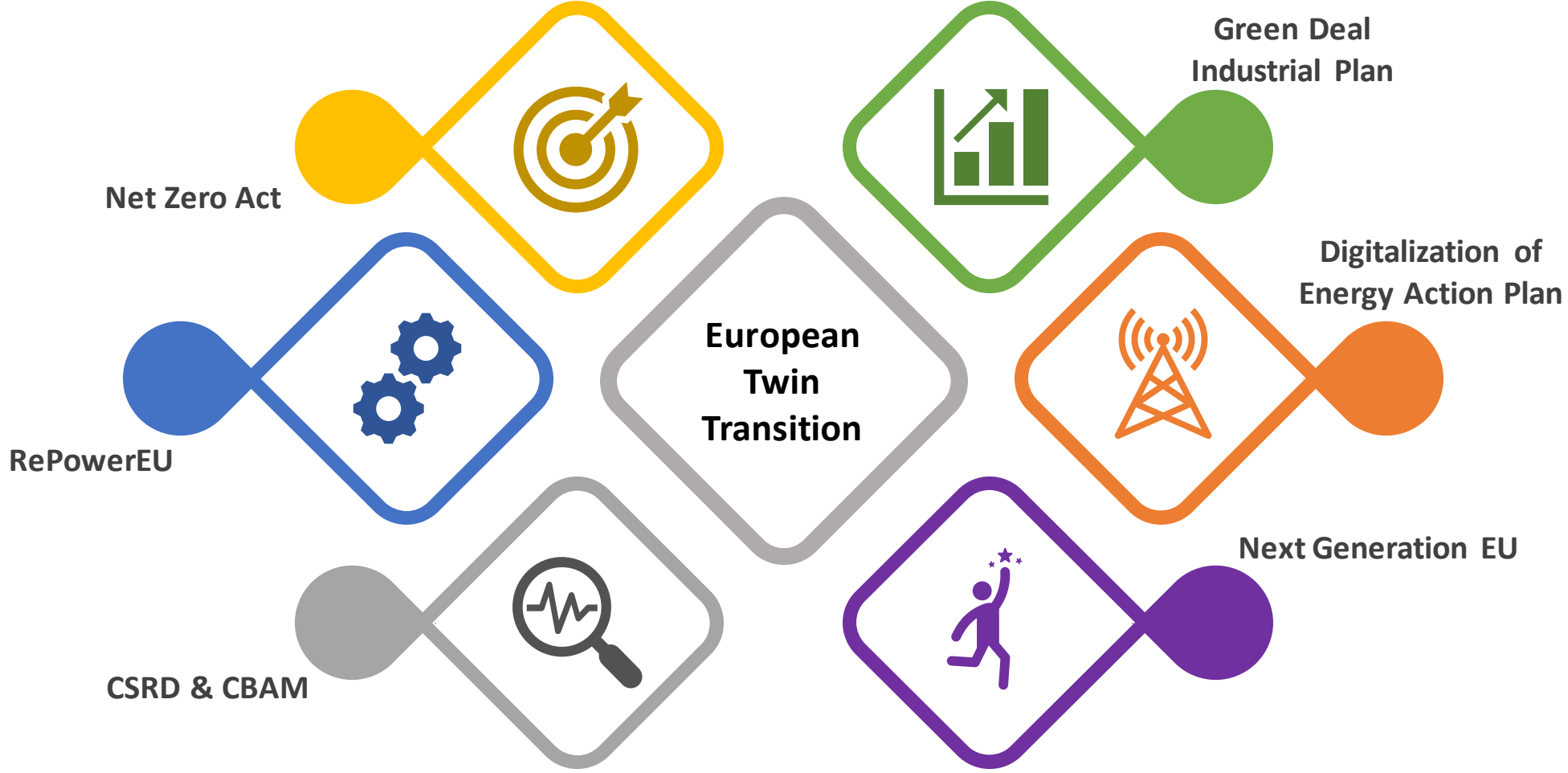


Geopolitical challenges



- ▶ Weaponization and politicization of the energy market
- ▶ To improve energy security and meet climate objectives:
 - ▶ supplies must be diversified
 - ▶ massive investments in clean and energy efficiency required
- ▶ Standards can support these objectives

European Energy Policy Drivers



European Energy Policy Drivers

The energy sector strives toward sustainability, to meet the growing energy demand, and brace for the digital world where new security-related challenges are emerging.

Europe is accelerating strategies to achieve energy security and increase energy independence within a Single Harmonized system

Standards are essential to deploy technologies fast



- ▶ to diversify energy resources,
- ▶ to integrate distributed renewable energy sources and smart grids
- ▶ to improve energy storage
- ▶ to enable an all-electric society (IAF)



European STANDARDS

- Strengthen the Single Market
- Reinforce the EU position in the Global Market
- Support the digital and green transition
- Support the resilience (re-industrialization) of the European economy





Vision

Building a safer, more sustainable and competitive Europe through European and International Standardization.

Mission

Through our stakeholder networks, we create consensus-based standards in order to generate trust, fulfil market requirements, enable market access and innovations for a better, safer and more sustainable Europe

 Goal 1: EU and EFTA recognize and use the strategic value of the European standardization system

 Goal 2: Our customers and stakeholders benefit from state-of-the-art digital solutions

 Goal 3: Increase the use and awareness of CEN and CENELEC deliverables

 Goal 4: The CEN and CENELEC system to be the preferred choice for standardization in Europe

 Goal 5: Strengthen our leadership and ambition at the international level



European standards in Energy



Renewables

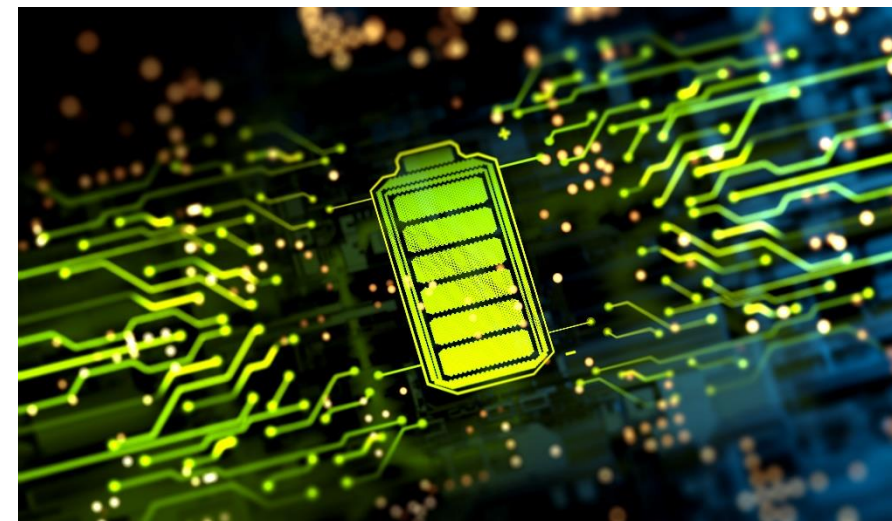
CLC/TC 88 'Wind energy generation systems'
CLC/TC 82 'Solar photovoltaic energy systems'

Hydrogen

CEN-CLC/JTC 6 'Hydrogen in energy Systems'
CEN/TC 268 'Cryogenic vessels and specific hydrogen technologies applications' and
CEN/TC 234 'Gas infrastructure'

Batteries

CEN/TC 301 'Road vehicles',
CLC/TC 21X 'Secondary cells and batteries' and
CLC/SR 35 (IEC/TC 35) 'Primary cells and batteries'



European standards in Energy



Bioenergy

CEN/TC 383 'Sustainably produced biomass for energy applications'

CEN/TC 454 'Algae and algae products'

CEN/TC 408 'Biogas'

Concentrated Solar Power and Heat

CEN/TC 312 'Thermal solar systems and components'

Geothermal Heat and Power

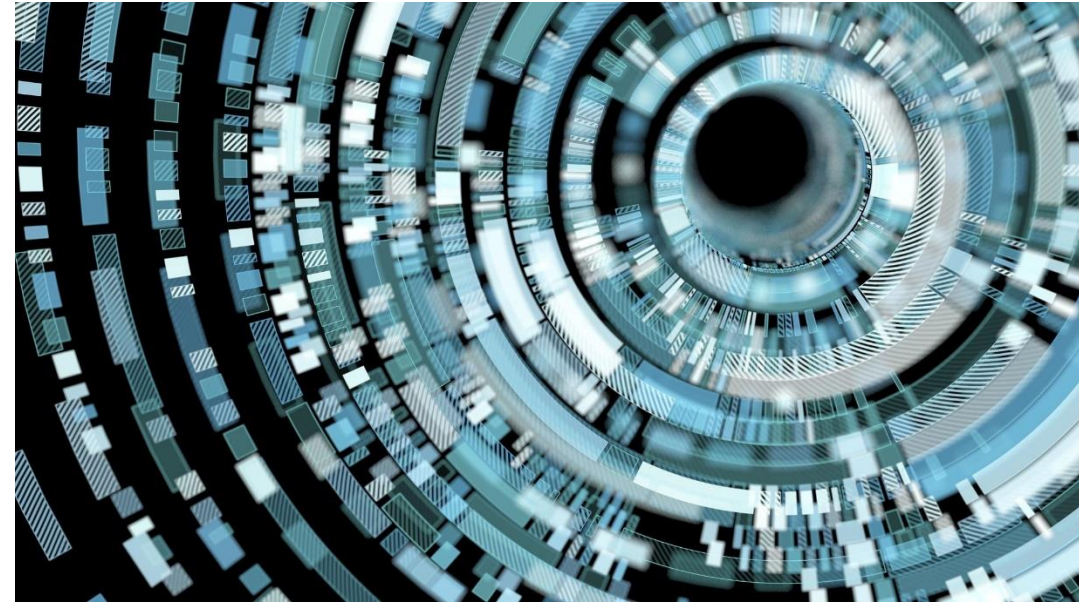
Work in IEC/TC 5 'Steam turbines' being re-activated

Hydropower and Pumped Hydropower Storage

IEC/TC 4 'Hydraulic turbines' Due to its impact on the grid,

IEC/TC 57 'Power systems management and associated information exchange'

New ISO/TC 339 'Small hydropower plants'



European standard in Energy



Electrical grid infrastructure

CEN and CENELEC were at the forefront of the development of standards allowing the deployment of **smart grids in Europe** (development of Smart Grid Architecture Model – SGAM).

EN IEC 61850 'Communication networks and systems for power utility automation' which pave the way for the use of a variety of digital technologies relating to **smart energy and** the integration of renewable energies and distributed energy resources (DERs) within the electrical network.

Electricity security

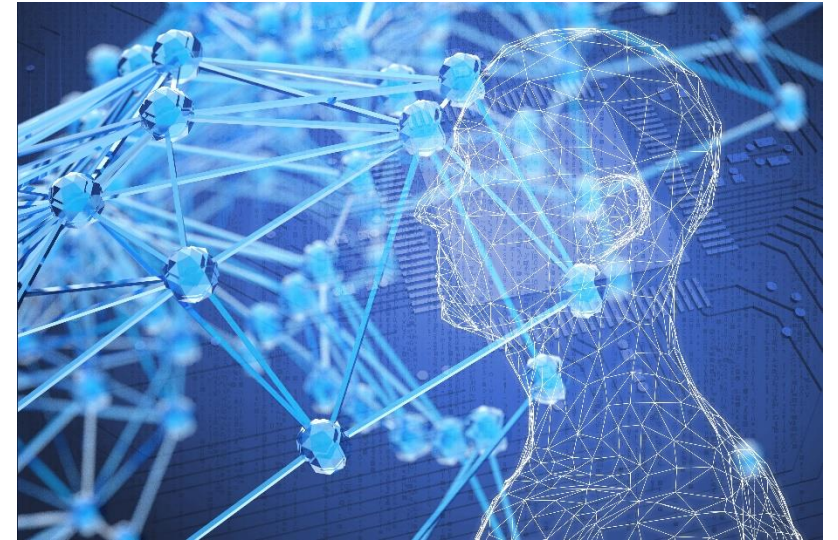
CLC/TC 8X 'System aspects of electrical energy supply'

Cybersecurity

CEN-CLC/JTC 13 'Cybersecurity and Data Protection'

Artificial Intelligence

CEN-CLC/JTC 21 – Artificial Intelligence AI



Our partners: the European Distribution System Operators (**E.DSO**) and the European association for the cooperation of transmission system operators (**ENTSO-E**)

SESKO in European standardization

- ▶ European standards are essential to meet Europe's ambitions → we count on your national support!
- ▶ SESKO leadership:
 - ❖ CLC/SR 3C: Graphical symbols for use on equipment
 - ❖ CLC/SR 91: Electronics assembly technology and space equipment standardization
 - ❖ CLC/TC 40XA: Fixed capacitors for use in electronic equipment
- ▶ Dynamic ecosystem built with the direct contributions of its national delegates → Finnish experts via SESKO



Conclusions

- ▶ The European Single Standard Model is a unique asset to achieve:
 - ▶ energy security and
 - ▶ increase energy independence

within a Single Harmonized system: the Single Market

- ▶ standards are instrumental for technological & industrial competitiveness & Europe must be influential and lead on topics of strategic relevance



Thank you

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