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Des industriels au service
de l'intelligence énergétique

Institut de Recherche
en Informatique de Toulouse
CNRS - INP - UT3 - UT1 - UT2J

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DATA CENTERS :
Environmental standardisation update & Code of Conduct

GreenDays 2018
Presented by Jean-Marc Pierson (IRIT)
Prepared by Nicolas Samman (EATON)

AFNOR ECO-TIC :
Eco-responsabilité et développement durable pour et par le numérique

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3 poles, a virtuous loop

Stakeholder groups involved with sustainability :

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3 poles, a virtuous loop

Stakeholder groups involved with sustainability :

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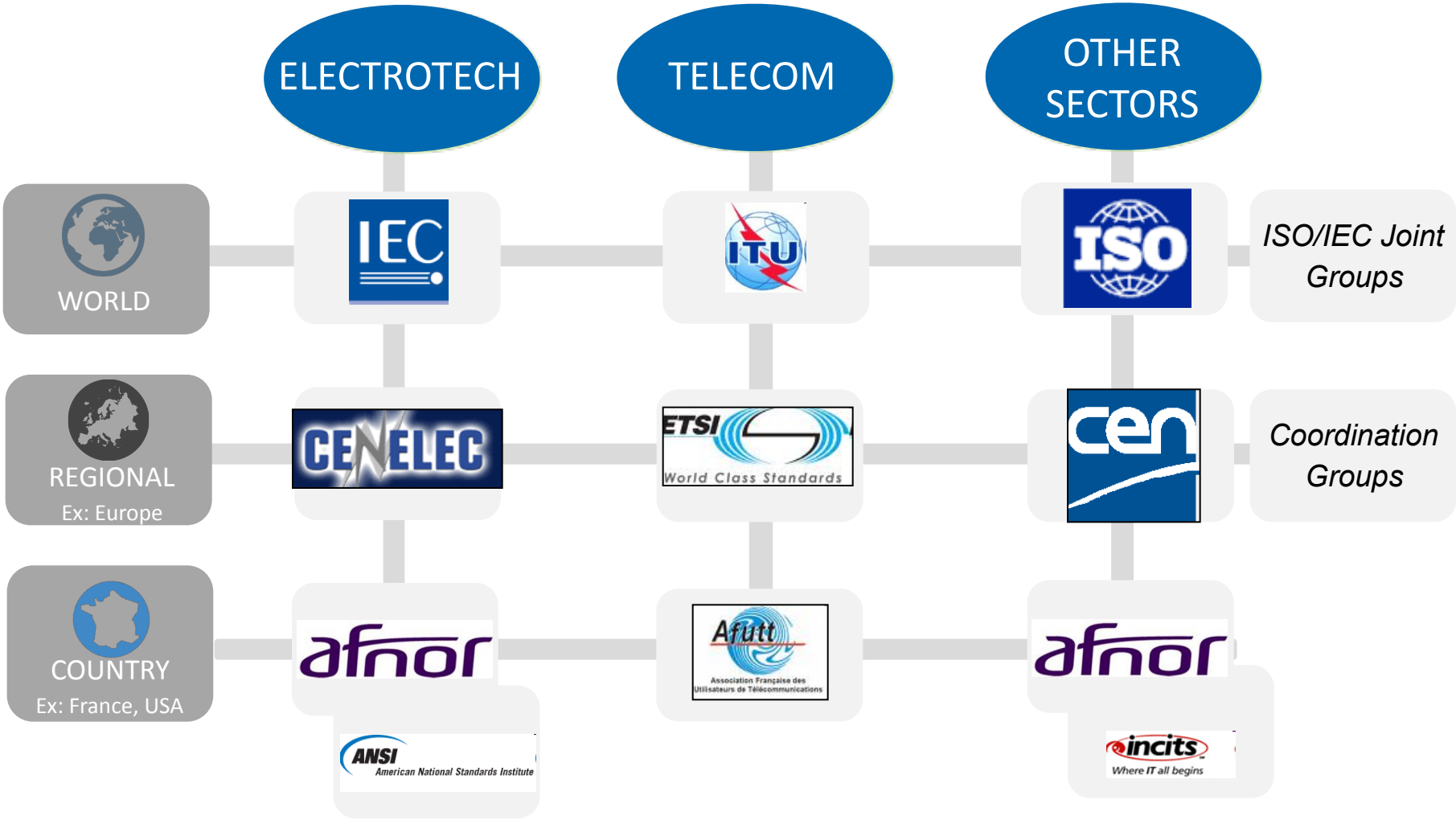
Standardization bodies



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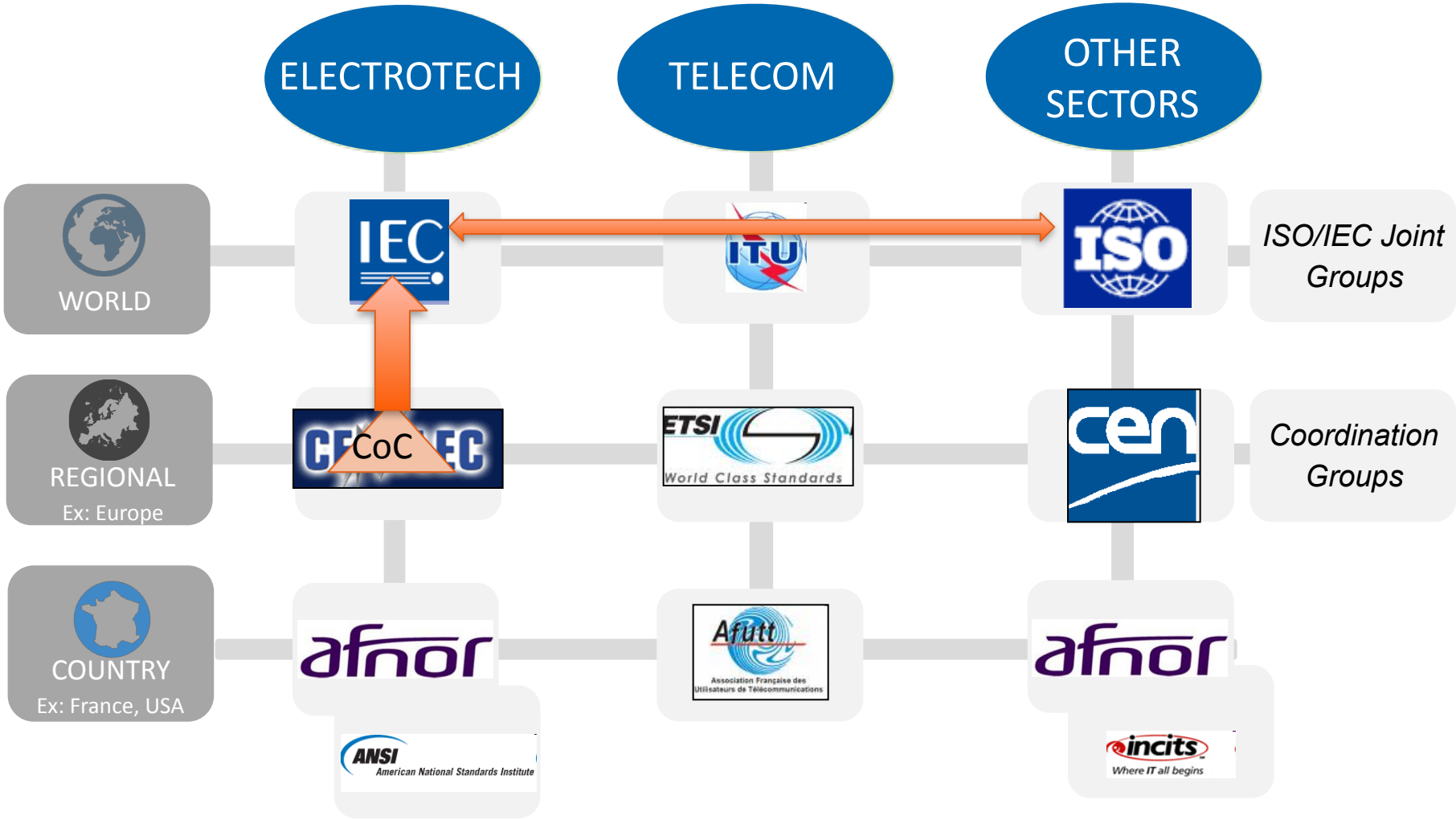
Standardization bodies



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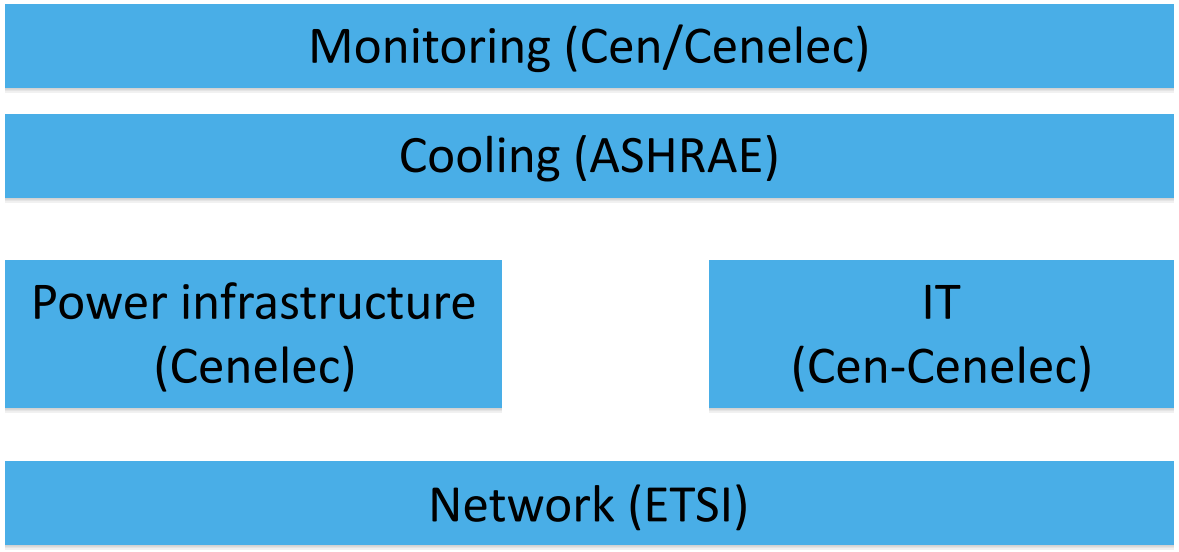
Other organizations

- Other committees publishing documents internationally recognised:
  - Ashrae
  - IEEE
  - GHG Protocol

- Other methodologies:
  - IEC, ISO, ITU

European standardization on data centers

Role split



Environment:
Cen/Cenelec

Quality:
Cen

Management:
Cen

CGGDC

- **Need to set-up coordination / joint groups**

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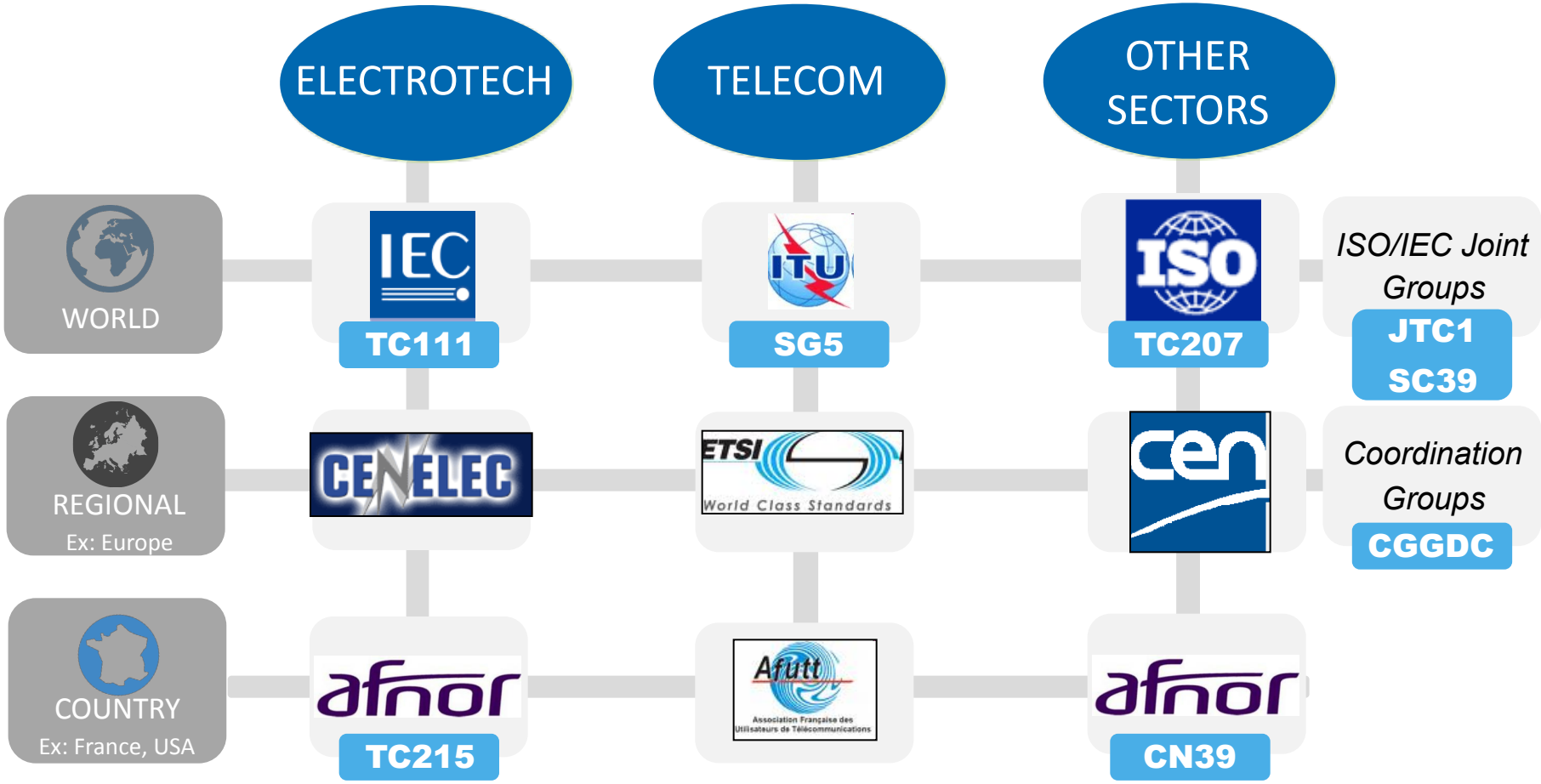
Main Data Centers standardization groups



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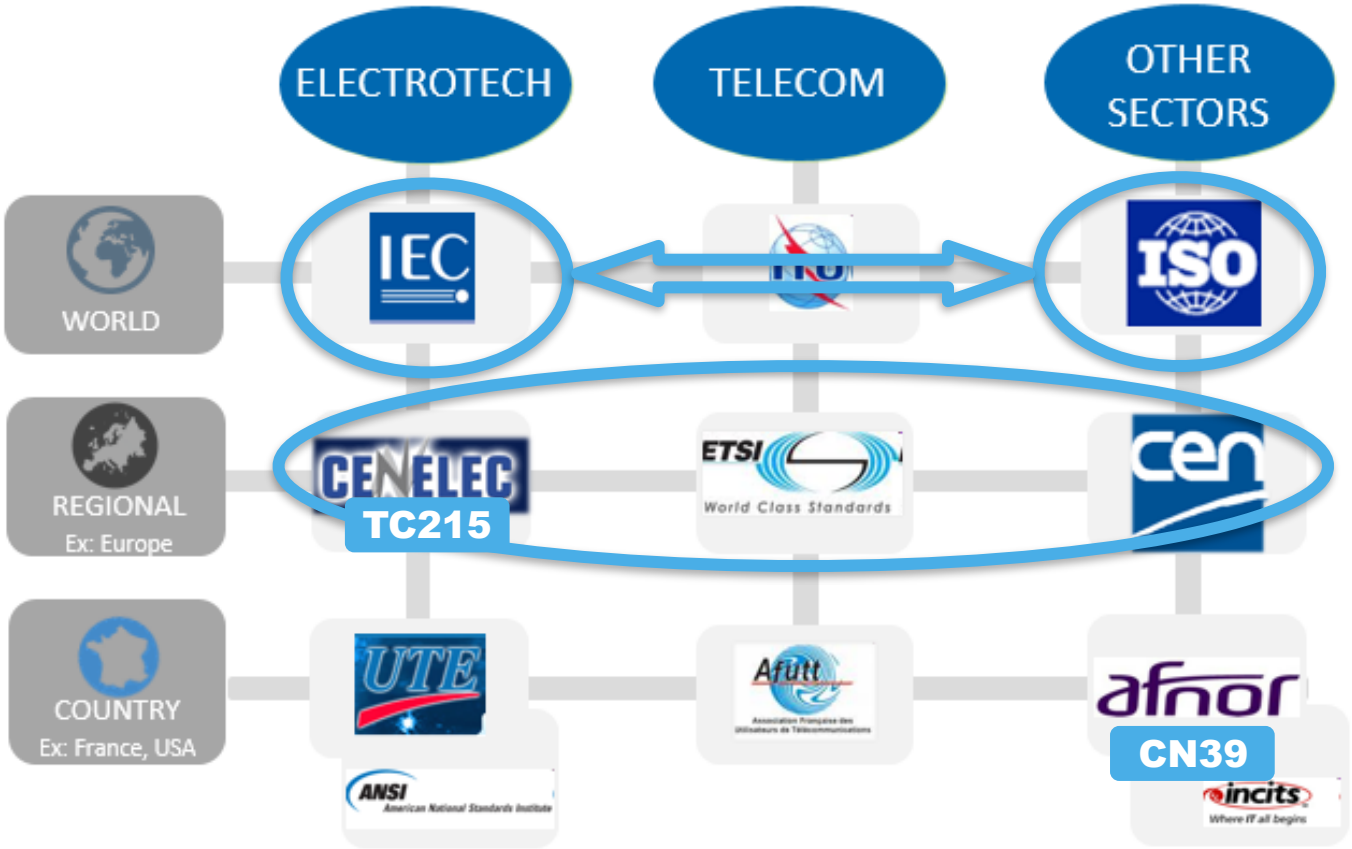
Coordinating data center standardization

- **To harmonize practices and regulation**



JTC1/SC39 joint group

CGGDC coordination

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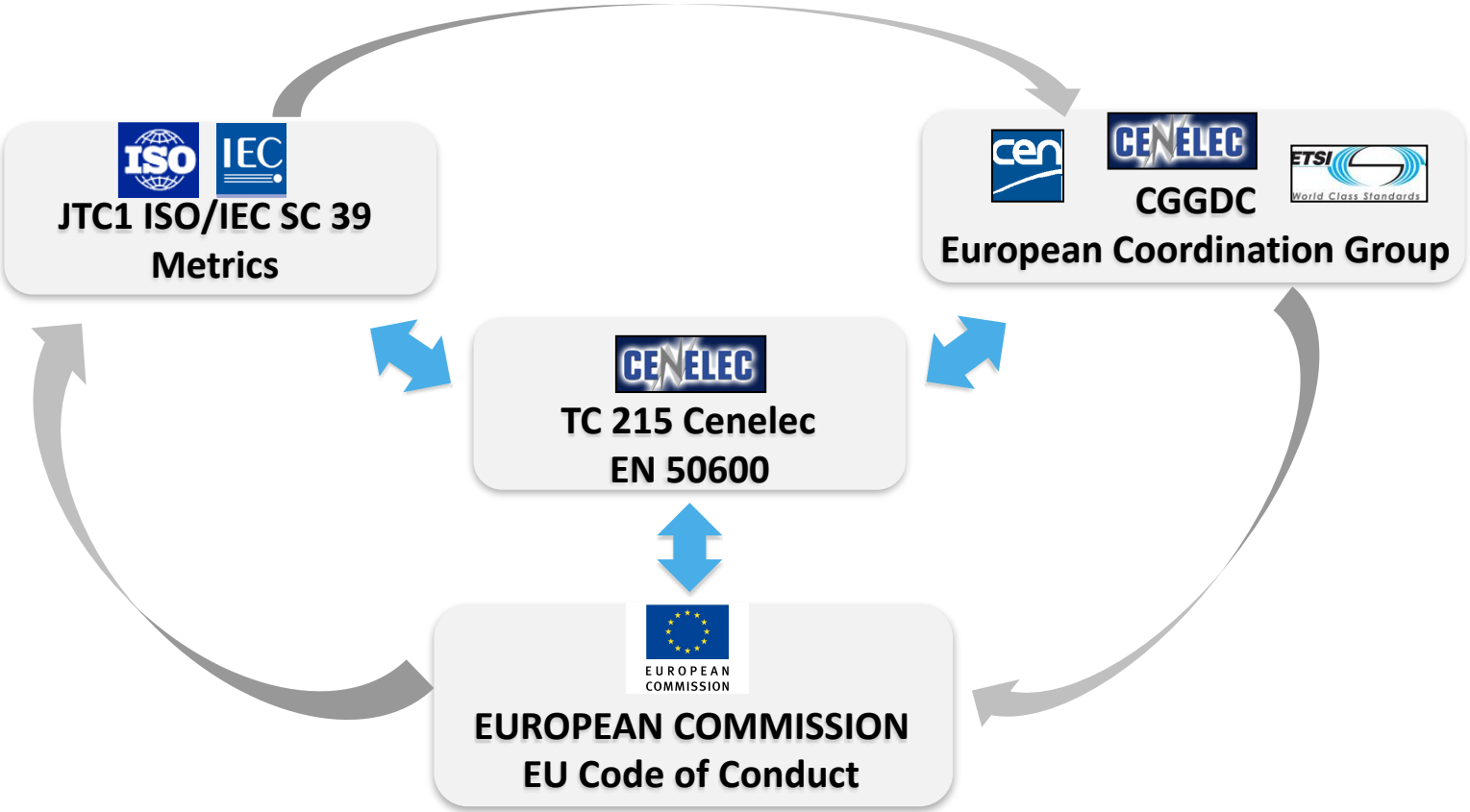
Data Center standardization: strategy

Main groups involved with standardization



Standardization : main projects on data centers

EU CGGDC:

- Coordination Group on Green Data Centers (Cen-Cenelec-ETSI)
  - Harmonize current projects on data centers: priority topics ; Code of Conduct promotion ; consistency

Global JTC1/SC39, joint group ISO/IEC:

- PUE, REF standards published (30134-series)
- Set up metrics/measurement for data centers (Energy Reuse, IT efficiency, Server Efficiency, etc…)
- New topics coming: Application/Software efficiency, cybersecurity
- Integration of 50600 series from Cenelec TC215

EU TC215, Cenelec:

- 50600 Design standards for the network incuding data centers (Tier, Code of Conduct, installation, cabling, connection, etc.)
  - 50600-99-1 now carries CoC

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DATA Centers

European Code of Conduct

Objective: Reducing energy consumption of data centers

- Voluntary commitment of individual companies which own or operate data centers
- Through monitoring power and energy consumption
- Adoption of best practices

Status:

- 180 participant operators are compliant
- 300 + endorsers (manufacturers, contractors, etc.)
- Enhancement through compulsory compliance for bidders within the Frame of public offers (e.g: UK)
- May be used as a base for future European directives

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Other standardization activities beyond Data Centers

UPS and other Power infrastructure items

- Safety, EMC, environmental impact
- UL/US and IEC global harmonization
- Most recent focus: efficiency improvments, including innovative modes management
- France owns global leadership

Prepare future Smart Grid and Pro-consumption

- Storage
- Energy regulation