



DATA CENTERS :

Environmental standardisation update & Code of Conduct



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

GreenDays 2018

Presented by Jean-Marc Pierson (IRIT)

Prepared by Nicolas Samman (EATON)

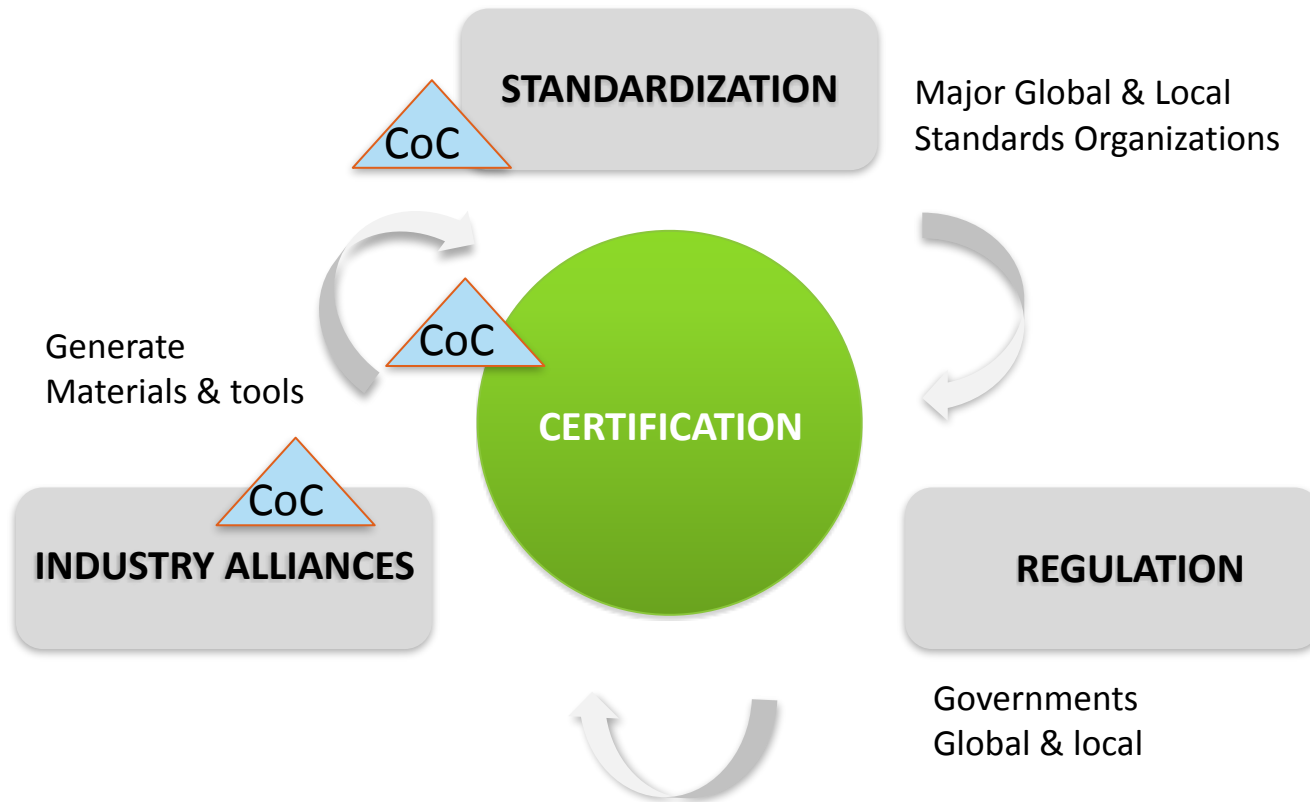
AFNOR ECO-TIC :

**Eco-responsabilité et développement durable pour et par le
numérique**

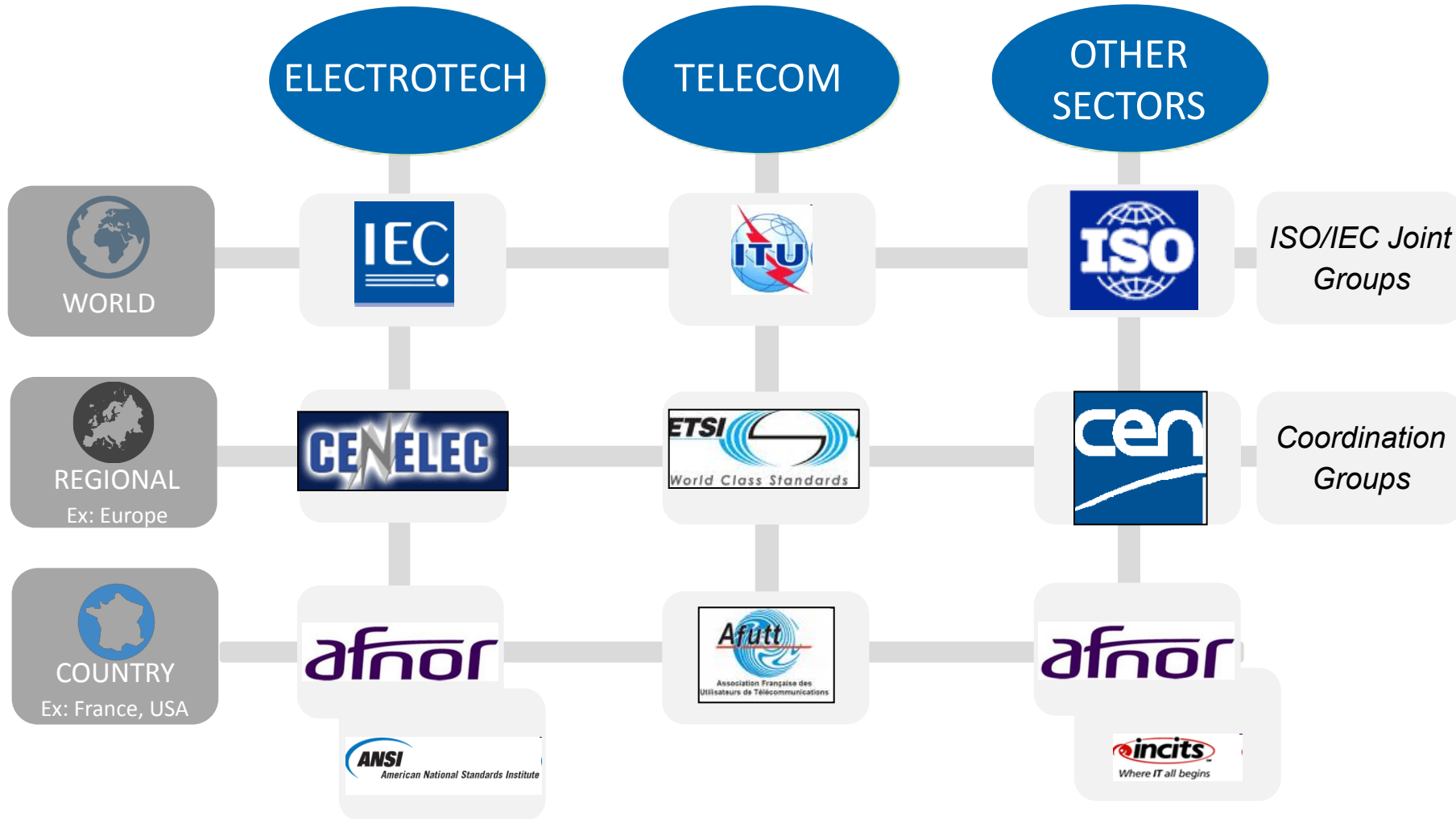
Stakeholder groups involved with sustainability :



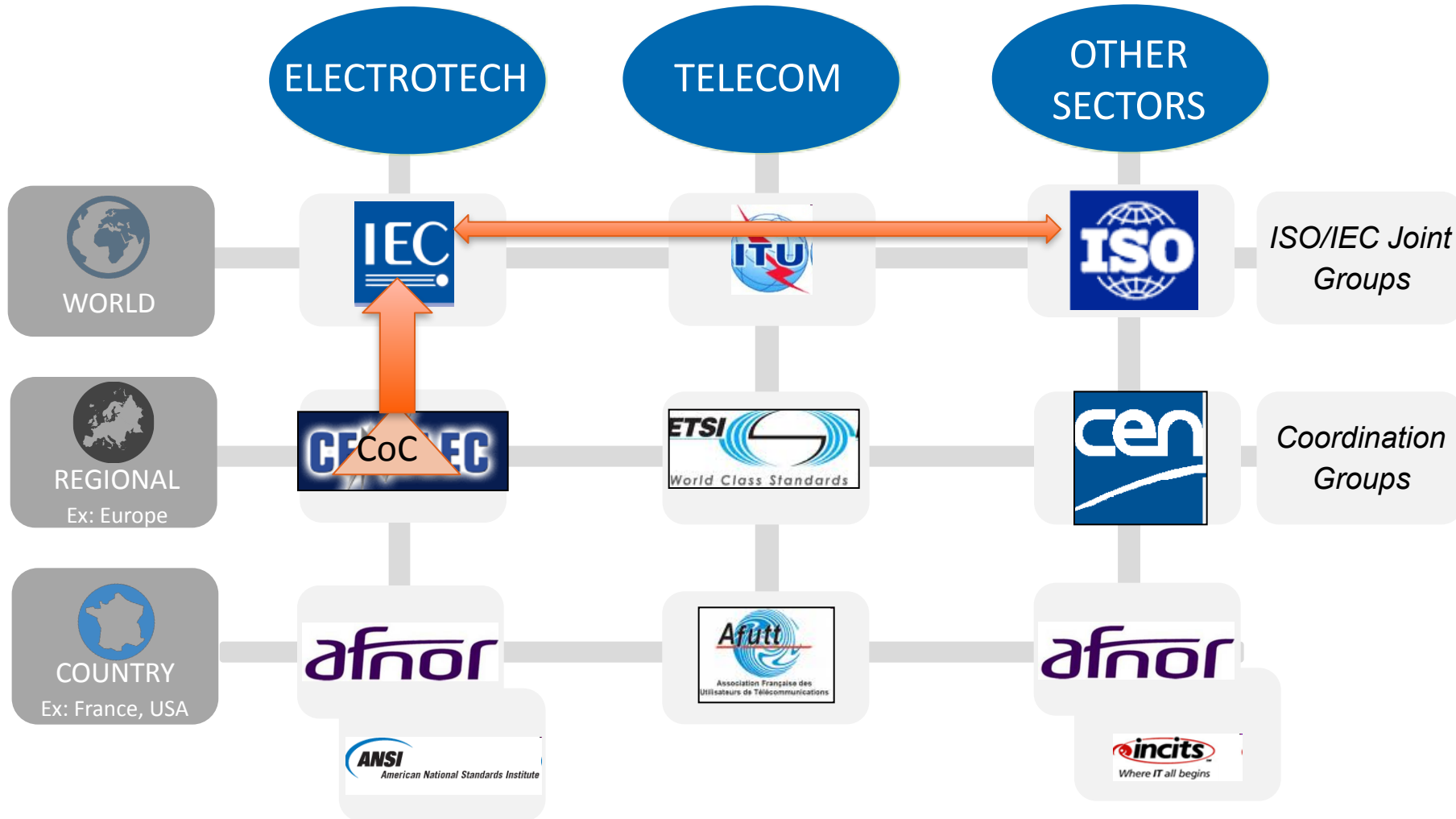
Stakeholder groups involved with sustainability :



Standardization bodies



Standardization bodies



- ▶ Other committees publishing documents internationally recognised:

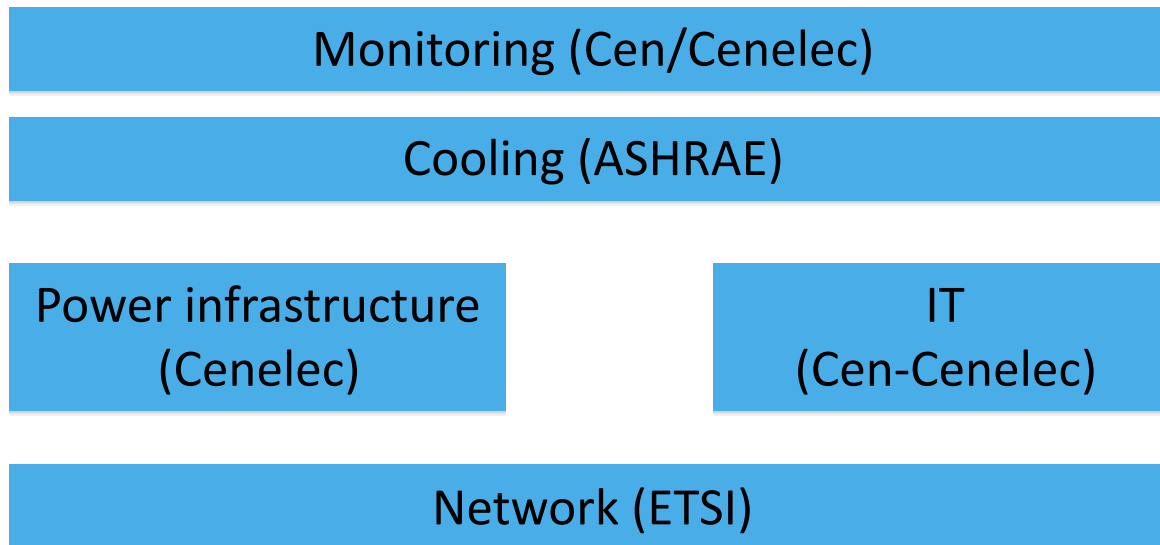
- ▶ Ashrae
- ▶ IEEE
- ▶ GHG Protocol



World Business Council for
Sustainable Development

- ▶ Other methodologies:
 - ▶ IEC, ISO, ITU

Role split



Environment:
Cen/Cenelec

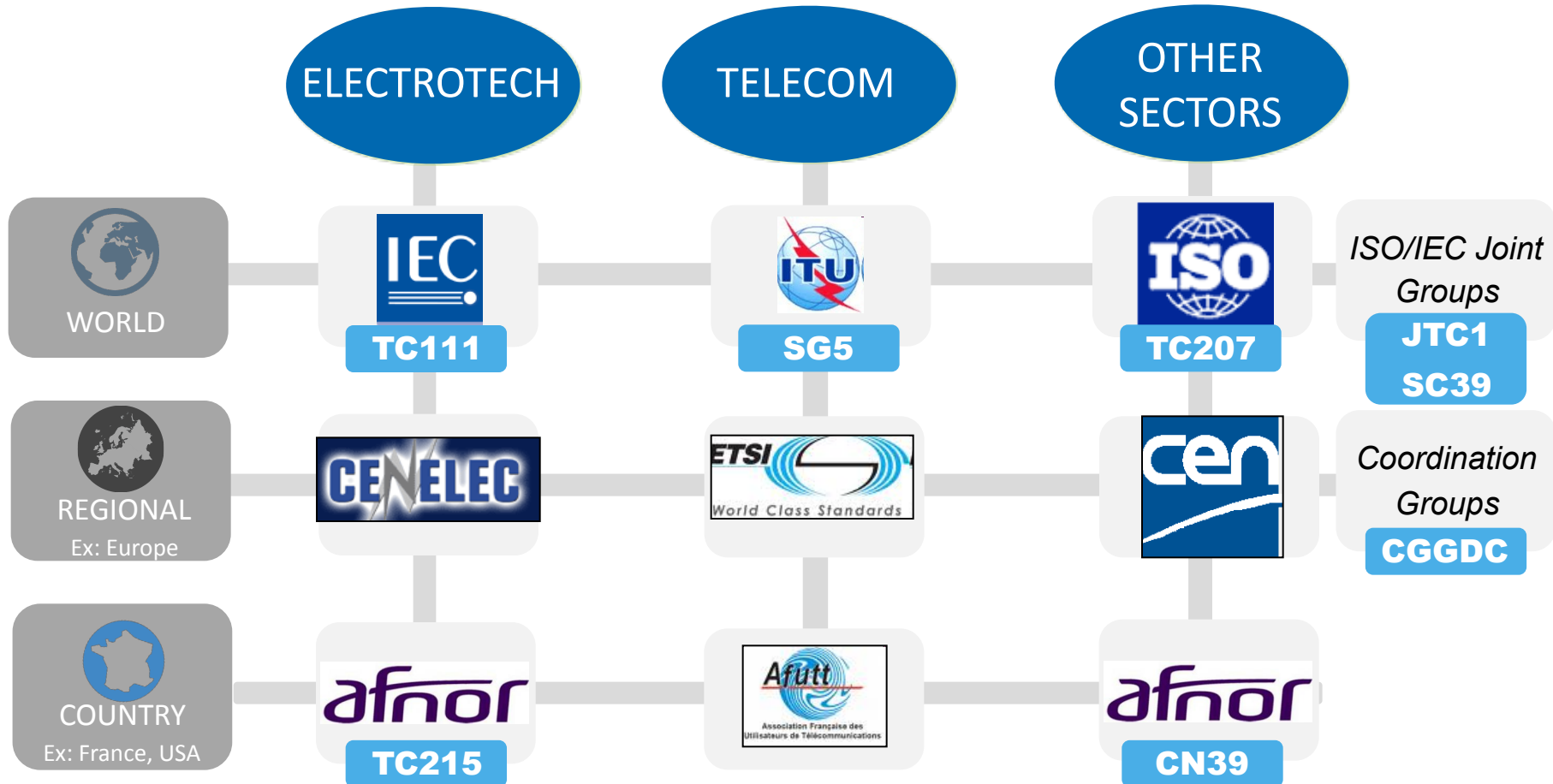
Quality:
Cen

Management:
Cen

CGGDC

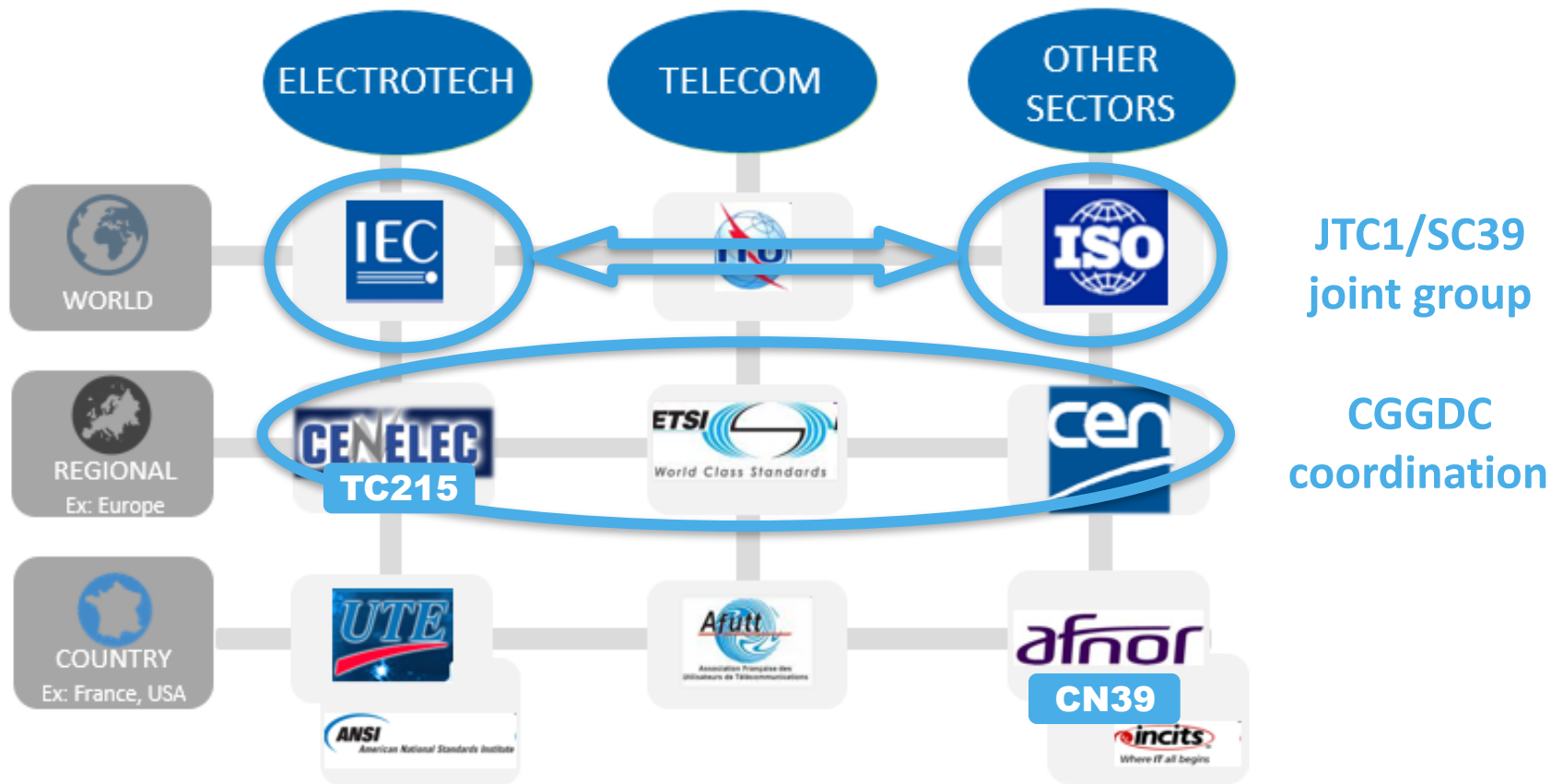
- ▶ **Need to set-up coordination / joint groups**

Main Data Centers standardization groups



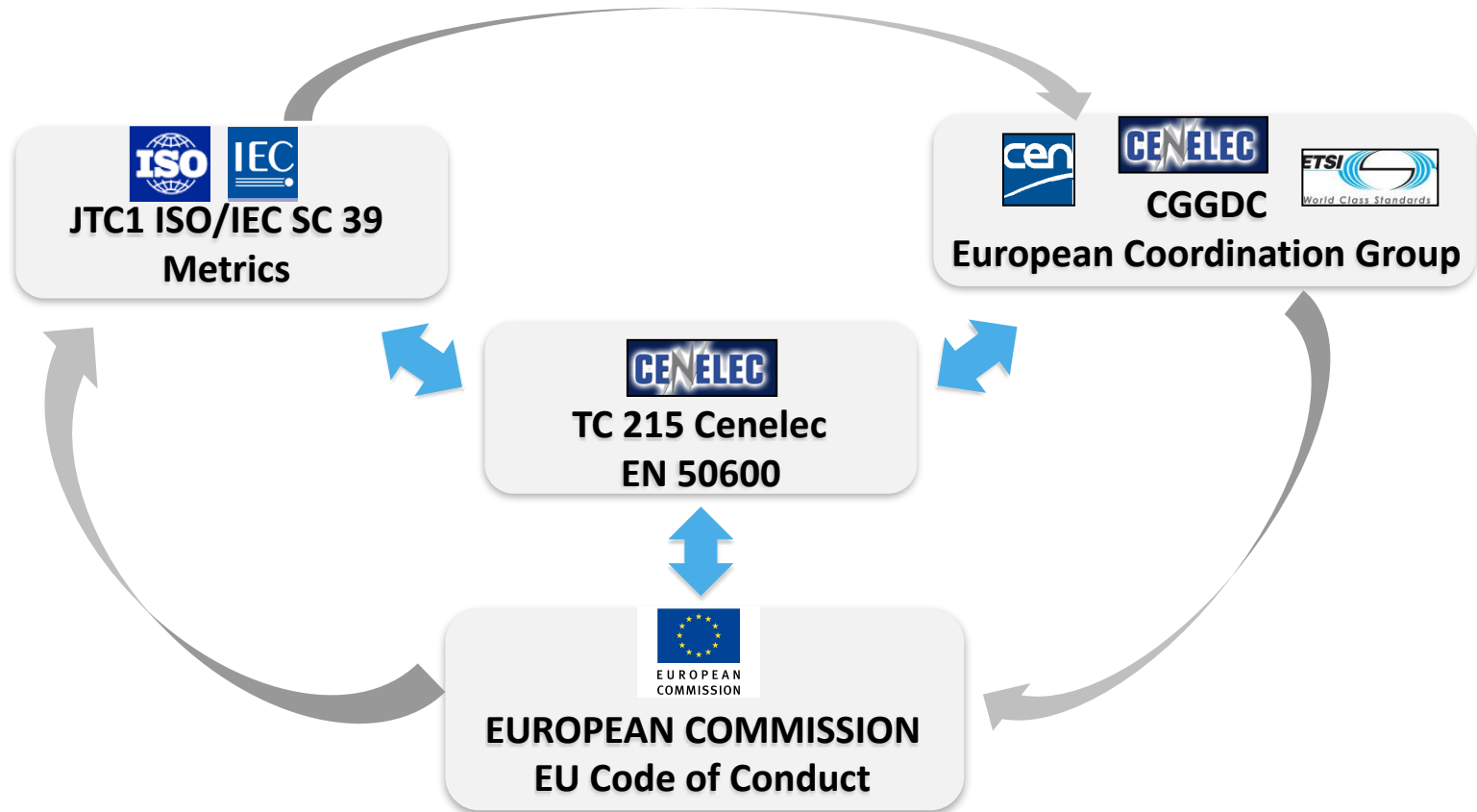
Coordinating data center standardization

- ▶ To harmonize practices and regulation



Data Center standardization: strategy

Main groups involved with standardization





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 including data centers (Tier, Code of Conduct, installation, cabling, connection, etc.)
- ▶ 50600-99-1 now carries CoC



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

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 improvements, including innovative modes management
- ▶ France owns global leadership

Prepare future Smart Grid and Pro-consumption

- ▶ Storage
- ▶ Energy regulation