AFRICAN RAILWAY THURSDAYS – 2ND WEBINAR

Key benefits of standardisation for railway operating companies: feedback from SNCF

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GENERAL STRATEGIC BENEFITS OF STANDARDISATION

Cost reduction

Harmonisation of technical specifications

Economies of scales (standard products)

Simplification and reduced cost of conformity assessment

Guarantees

quality, safety, reliability, interoperability

Economic growth

According to German DIN : +1% of German GDP

According to French AFNOR : +0,8% of French GDP

Compliance to regulation

European Harmonised standards

A bridge between innovation and market

Who controles the crossing point between innovation and markets holds a key position

Standardisation ensures this:

By promoting technical solutions

By excluding other technical solutions

Points of attention

- Standards are the technical references for the non-technicians (legislation, purchase, insurance)
- Certification and qualification based on compliance to standards ⇨ de facto mandatory
- Difficult access to market for non (yet) standardised solutions
- Standardisation takes time, needs time and applies on mature topics

SNCF IS STRONGLY INVOLVED IN RAILWAY STANDARDISATION

SNCF is active in National, European and International standardisation bodies

- In 142 Standardisation working groups
- With more than 250 experts

SNCF is active in UIC standardisation

- About 80 experts involved in the forums, platforms and WG (not all dedicated to standardisation)

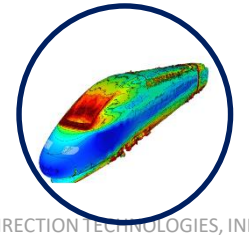
THE VALUE OF BEING ENGAGED: A FEW EXAMPLES

Refueling interfaces : Compatibility with systems already in use in France

Limitation of **standard height of overhead contact lines**
to keep cost civil engineering works low

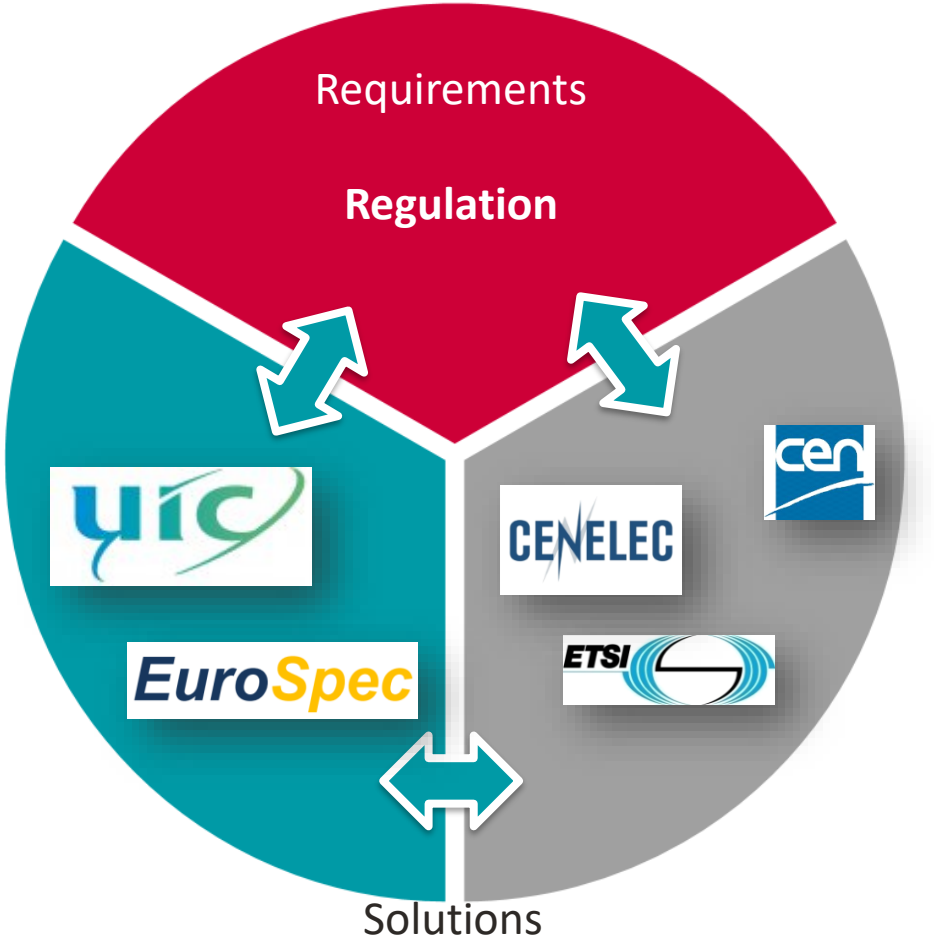
CEN/TC256/WG02 Structures / operational mass
Definition of operational mass allowing future operation of next generation of HS trains

CEN/TC256/WG01 Fire and smoke
Control of costs by adequate definition of tests



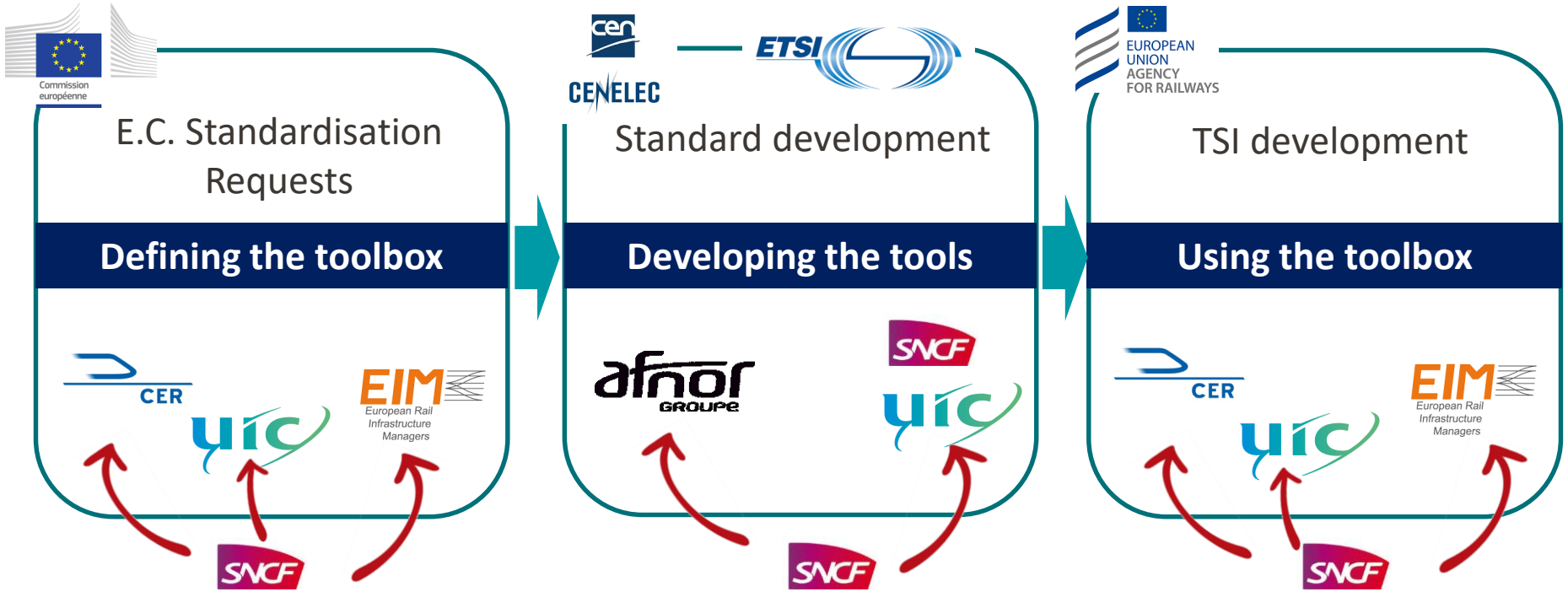
CEN/TC256/WG55 Simulation
Cost reduction through virtual acceptance instead of field testing

REGULATION AND STANDARDS : A COMPLEMENTING TRIO



STANDARDISATION SUPPORTING REGULATION

SNCF is active or represented at all stages of the process



STANDARDISATION AND INNOVATION : SHAPING THE FUTURE

SNCF is highly engaged in the development of the future railway system

ATO, Train Management System and ERTMS, FRMCS, Hydrogen, Digitalisation, AI, DAC …

Standardisation is an enabler for research and innovation

Standardisation of system architecture and interfaces	Allowing interoperability, modularity and interchanges of subsystems. Allows suppliers' innovative solutions inside identified building blocks
Standards for certification of innovative products	To set up the standard framework to demonstrate the compliance to legal requirements of innovative solutions: eg new materials
Standardised user requirements and use cases	Provides a secured framework for R&D, ensuring the acceptability of innovative products and future market uptake. Role of UIC.

IRS AND UIC'S ROLE IN STANDARDISATION

SNCF is promoting a balanced complementarity between UIC standards and IRSs and European/international standards

- SNCF maintenance **technical baseline often mirroring UIC specifications** (e.g. rail and track maintenance)
- Important role of IRSs in **capitalising the UIC project results**. A project report is almost forgotten after 5 years, obsolete after 10. An IRS is not and is kept up to date.

- **UIC has a key role in standardisation** in several domains such as:
  - GSM-R and FRMCS
  - Operation management : timetabling, freight operations (cross-border operations)
  - Safety-related requirements: braking, signalling, derailment prevention

CONCLUSION

- Standardisation is essential for the performance of the railway sector
  - In terms of costs, interoperability, innovation, integration, reliability…
- Standardisation is a tool for the service of the sector. It has to be controlled.
  - No standardisation for the stake of standardisation
- How we make use of standardisation is to be carefully considered
  - Which timeframe ? Management of transition periods
- Standardisation needs a rigourous process
  - Inter-related ecosystem, impact assessment requested
- Standardisation is an important and long term investment
  - Needs a strong involvment for an often delayed return on investment