

## **International Standardisation – the European Rail Supply Industry’s position**

## About UNIFE

Based in Brussels since 1992, UNIFE is the association representing the European rail supply industry at the European Union (EU) and international level. UNIFE gathers over 100 direct company Members – from numerous SMEs to major industrial champions from all over Europe – active in the engineering, design and manufacture of rolling stock (i.e. trains, metros, trams, freight wagons) as well as rail signalling & infrastructure equipment. UNIFE also brings together national rail industry associations from 14 European States.

## Introduction

Technical standards enable interoperability of products and technologies by defining technical specifications. Their application remains voluntary unless required by legislation or contractual agreements. For the European Rail Supply Industry, standardisation is key to improving quality, reducing cost and increasing competitiveness. Standardisation in rail and other mobility sectors will be essential for the creation of an integrated and sustainable mobility system.

## Importance of rail standards and recognised standardisation organisations

In Europe, the standardisation regulation (1025/2012/EU) recognises the European Committee for Standardisation (CEN), the European Committee for Electrotechnical Standardisation (CENELEC) and the European Telecommunications Standards Institute (ETSI) as the only legitimate standardisation bodies, in the sense of World Trade Organization (WTO) regulation. CEN and CENELEC are umbrella organisations that bring together all EU national standardisation bodies.<sup>1</sup> In the railway sector, no other bodies can create standards that provide presumption of conformity to meet the essential requirements, outlined in the EU's railway legislation.

At the international level, the European Union (EU) recognises the International Organization for Standardisation (ISO), the International Electrotechnical Commission (IEC) and the World Telecommunications Union as standardisation bodies in the sense of the WTO regulation.

Stakes are high for global industries, such as railways, when it comes to how these standards are defined. In many sectors, European countries long led the work on international technical standards but are now at risk of falling behind as other countries increase their efforts to influence their contents.

In recent years, China has noticeably recognised the strategic and economic importance of international standardisation. The country has gone so far as to identify standardisation as an avenue for promoting and projecting its international power. Standards were in the past considered a purely technical domain in which experts would agree on common solutions. However, a 2019 study found that “technical standardisation is turning into a crucial arena for political and commercial conflict.”<sup>2</sup>

<sup>1</sup> National Members are the National Standardization Bodies (NSBs) of the 27 European Union countries, United Kingdom, the Republic of North Macedonia, Serbia and Turkey plus three countries of the European Free Trade Association (Iceland, Norway and Switzerland). There is one member per country.

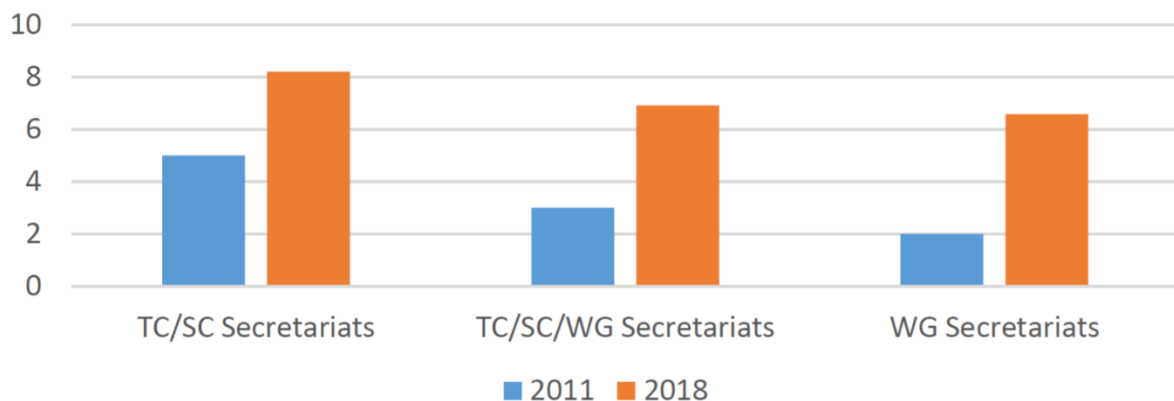
<sup>2</sup> Rühlig, Tim: *China's standard power and its geopolitical implications for Europe*, Swedish Institute of International Affairs, 2019: <https://www.ui.se/globalassets/ui.se-eng/publications/ui-publications/2019/ui-brief-no.-2-2019.pdf>

## International Standardisation: The situation in railways

In the railway sector, more European than international standards are in place. European standards generally provide more requirements. That is because it is easier to reach consensus among European stakeholders who have a similar railway culture and experiences due to the region's long history as the global technical leader in rail. Europe has the world's most advanced railway network, benefitting from highly developed knowledge in manufacturing, testing, validation, operation and maintenance of High-Speed Trains, regional trains and metros. Furthermore, European standardisation follows the most advanced approach to innovation; European standardisation focuses on formulating requirements and pass-fail criteria instead of specifying solutions or product descriptions.

Over the past few years, international standardisation at the ISO/IEC level has become more important for the railway sector, thanks to a strong push from Asian countries, notably China and Japan. Their delegates to the International Standardisation Working Groups are now far more numerous than in the past. Via their national standardisation bodies, these countries are proposing more and more New Work Item Proposals (NWIP) and, consequently, future Working Group (WG) convenors.

Figure 1: China's share of Technical Committee Secretariats, Sub-Technical Committee secretariats and Working Group Secretariats in 2011 and 2018, measured in percent.



Source: Rühlig, Tim: *China's standard power and its geopolitical implications for Europe*, Swedish Institute of International Affairs, 2019

This increase in both delegates and Working Group leaders shows a growing awareness among these countries of the importance held by the standards that govern designing, manufacturing and validation, but also operational management. It is the result of their acquired experience in the past years, particularly on the part of China, due to booming developments in railway rolling stock, signalling, infrastructure, energy, and operation & maintenance. There is now more knowledge and an increased interest in influencing the railway sector at a global level from these countries.

Leading an international standardisation working group gives the leading country, through its convenor, the opportunity to decide when and where to organise the different meetings of the related working groups. Therefore, more and more meetings are now taking place in Asia. Timing and location of meetings are crucial as travel and accommodation costs often are a decisive factor for whether or not a delegate can participate in a meeting. For time and budgetary reasons, appointed European delegates often have to decline meetings and as a result the outputs of such meetings cannot be validated by these experts.

Furthermore, Asian countries - especially Japan and China - often delegate numerous experts to international standardisation bodies (ISO-IEC). In China's case, this is in line with the party state's strategy to grow their international influence. Thus, Chinese delegations are provided all the resources they need as their leadership and attendance increases the nation's overall presence in these standardisation bodies. Also the Japanese industry benefits from their government's belief that the promotion of Japanese standards in key sectors is an essential governmental task and finances standardisation activities accordingly.

For European companies, the situation is completely different. In Europe, an expert is first nominated by an NSB and then their employer decides whether their participation is considered economically useful. There is a trend for European companies to optimise their resources in terms of their number of delegates, as well as allocated tasks and missions. European countries are often involved in both European standardisation bodies (CEN, CENELEC, ETSI) and their international counterparts (ISO-IEC). Given the limited resources, priority is often given to the European standardisation working groups, which leads to less influence in the international standardisation working groups. This choice is often influenced by the difference in costs involved.

Standardisation creates costs for the companies involved:

- *Delegation of experts:* the largest expenses, alongside travel costs, generated by a delegation is that it occupies the time of highly specialised experts, especially when engaged at meetings in overseas locations.
- *Attending national mirror groups:* in order to represent a countries' position, the delegated expert must also attend the respective national mirror group meeting of their NSB.
- *Costs of secretariat management:* if a country has chosen to take over the secretariat of a working group (usually the same country that chairs the group), it creates further costs for the convenor as they manage the secretariat and cover fees for the project leaders.
- *Cost of a standard:* any company that wants to use a standard must pay to purchase it, regardless of how much it contributed to its creation

## Migration of Standards

In order to avoid duplication between international and European standardisation, and to increase the efficiency of standardisation at both levels, CEN and CENELEC have signed agreements with their respective international counterparts, the International Standardisation Organisation (ISO) and the International Electrotechnical Commission (IEC), setting out rules for cooperation. Indeed, it is possible for an EN standard to be migrated to an international one, or vice versa.

Whenever a new standard is needed - for instance, as a result of a new technological development - it can be developed either at the European level with CEN/CENELEC (EN-Standard) or at the international level with ISO/IEC (ISO/IEC-Standard). From a European perspective, it should first be considered for any new standardisation request whether it can be brought forward directly at the international level or if it is better to first develop an EN-standard. Europe needs to promote internationalisation of railway standards, but at the same time prevent international standards that conflict with European requirements.

## Need for more alignment between European ESOs

Finally, there is the challenge of European delegates not speaking with a unified voice in the international working groups and committees, if they do attend them. International Standardisation Bodies operate on the national delegation principle which gives each country one vote in the standards decision-making process. To ensure the consistency between EN-standards and ISO/IEC-standards in the future, it is of paramount importance to improve coordination between European countries like, for example, by organising preparatory meetings at the European level ahead of international meetings.

If delegates from European countries argue in different directions, a “lighter” compromise supported by non-European countries is likely to be the result. This is due to the consensus rule observed by these committees. Lighter international standards, regarding requirements, will make solutions proposed by the European railway industry less competitive in respect to the other proposed solutions being put forward by others, in particular Asian ones. This is because European solutions are based on more demanding European standards. Redeveloping or adjusting existing solutions or platforms induce additional costs for the European railway industry. Therefore, it is important that European delegates align their views ahead of such meetings when possible.

In many cases, NWIPs at ISO/IEC level are not thoroughly analysed at the European level to consider their implications for European industry. This is even more the case for NWIPs in non-rail standardisation committees that impact the rail sector.

## Recommendations

**The EU needs to recognise the strategic importance of international standardisation:** Standards are essential for the competitiveness of European industry. Global economic powers, such as China and the US, approach technical standardisation from a strategic political viewpoint. The EU needs to act in the same way if it does not want to fall behind. This is in line with the European Commissions’ 2011 White Paper which recognised the role standardisation plays for the transport industry. It also pledges to ensure the EU’s role as a global standard setter in this field. In 2019, The EU’s “Expert Group on the Competitiveness of the European Rail Supply Industry” clearly identifies the influence of international standardisation on European industry<sup>3</sup>.

In support of this approach, UNIFE has the following key recommendations for the European Commission, Member States, standardisation bodies and the railway industry:

### 1. The Railway Sector (manufacturers, railway undertakings, infrastructure managers):

- Europe can only speak with a unified voice internationally if European standards are built on a strong internal foundation. The EU railway sector should work together for a stronger European voice globally. Therefore, standardisation initiatives outside the recognised standardisation organisations must be avoided whenever they conflict or overlap with an existing standard or ongoing work at CEN, CENELEC or ETSI.

### 2. The European Standardisation Organisations (CEN, CENELEC and ETSI) and national Standardisation Bodies:

---

<sup>3</sup> European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Report of the expert group on competitiveness of the European rail supply industry, Final Report, 2019: <https://ec.europa.eu/docsroom/documents/37829>

International standardisation is based on the national delegation principle. While maintaining this principle, new ways must be explored to achieve a better alignment of the different European NSBs, so they speak each with their own voice but argue in a common direction, at ISO/IEC level:

- CENCENELEC working groups need to better monitor and take into consideration relevant standardisation activities at ISO/IEC level.
- The Sector Forum Rail at CENCENELEC should be tasked with delivering a message to the NSBs during the relevant Technical Committees (TC256 and TC9X) ahead of ISO/IEC meetings, alerting them on specific items that are crucial for the sector.
- In the future, better attendance of European experts can be achieved by allowing video conferencing for ISO/IEC working parties. CENCENELEC should upgrade its video conferencing capabilities and advocate video conferencing for technical working parties at the ISO/IEC level.

### 3. The European Commission and Railway Agency:

Given the growing competition at the global level, the EU needs to help levelling the playing field by supporting European standardisation.

- As suggested in the EC Expert Group's report, the Commission should provide financial support to CEN, CENELEC and ETSI for the organisation of dedicated groups mirroring standardisation activities at ISO/IEC
- In addition, the Commission could provide funding for a dedicated *International standardisation coordinator* for the railway sector at CENCENELEC: today, more than ever standardisation activities at ISO/IEC level impact the railway sector. An international standardisation coordinator would facilitate much needed coordination and raise the awareness of important standardisation activities
- At the same time the European Commission and the European railway agency should continue the promotion of EN standards and the European system (TSIs) bilaterally.