UNIFE statement on connecting Europe through high-speed rail

May 2025

UNIFE – the European Rail Supply Industry Association – welcomes the initiative of the European Commission to draft and promote an action plan for an ambitious European high-speed rail network to strengthen EU cross-border rail connectivity. Indeed, **the deployment of high-speed rail in Europe is paramount to reach the ambitious goals of the *Sustainable and Smart Mobility Strategy***, which notably aims at doubling high-speed rail traffic by 2030 and tripling it by 2050, as well as making scheduled collective travel of under 500 km carbon neutral within the EU by 2030. Both the Letta and Draghi reports also identified it as a major priority to strengthen Europe's economy.

UNIFE is pleased to note the link established by the European Commission between the plan and the competitiveness of the European Rail Supply Industry, but also believes a number of conditions (e.g. long-term predictability, enhanced interoperability, investment, innovation, strengthened procurement rules) are to be met in order to boost this competitiveness.

Against this background, UNIFE would like to highlight a number of key messages on the main priorities of our industry in this upcoming action plan.

Market outlook and predictability as a fundamental requirement for industrial capacity

The 2024 UNIFE World Rail Market Study provides valuable information as to the size of the current and future European[1] high-speed rail market[2]. In particular:

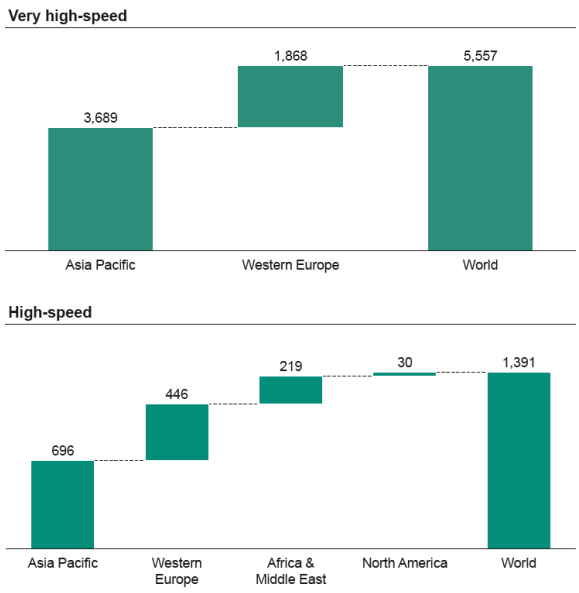

Figure 30: 2021-2023 total market value for VHS and HS trains [EUR m, p.a., in 2023 real values]

- The 2023 installed base of rolling stock in Europe is composed of 10.000 very high-speed trains and 7.400 high-speed trains.
- The current market 2021-23 of high-speed and very high-speed rolling stock in Europe amounts to €2.3 billion per year, while the global market value is €6.8 billion. The market was supported by a robust growth in Western Europe, as countries invested in the development of their networks. The largest orders included ICE 3neo for Deutsche Bahn and the new ETR1000 for Trenitalia, while Spain, France and Austria also registered high growth in this period. As a result of the increase, Western Europe's share grew from 20% to 34% in VHS, and from 19% to 32% in the high-speed segment between 2019-21 and 2021-23.
- The forecast for 2027-29 indicates a market value of €2.4 billion per year (with an expected drop of 1.8% per year in Western Europe), while the global market value is expected to amount to €10.7 billion – mainly driven by increased orders in the Asia-Pacific region.

While UNIFE notes the high-speed rail segment constitutes a dynamic market, the absolute growth in Europe is nonetheless expected to be limited until 2029.

UNIFE also would like to emphasize the **need for the plan to be fully in line with the revised Trans-European Transport (TEN-T) policy**, which has crucial strategical importance. UNIFE welcomes that new high-speed railway connections have been included, particularly in the regions where these connections are yet to be built and where they will contribute to further improve the transport connectivity.

With demand increasing and new entrants gradually entering the market, the European high-speed rail market represents significant business opportunities for the European Rail Supply Industry – not only for system integrators but

[1] The definition of "Europe" (Western Europe and Eastern Europe) in the World Rail Market Study includes EU 25 as well as the United Kingdom, Switzerland, Norway, Serbia and Turkey.
[2] The nomenclature of the World Rail Market Study is the following:
- "high-speed" (HS): speed of 220-299 km/h
- "very high-speed" (VHS): speed equal to and exceeding 300 km/h

also for component manufacturers and various suppliers of all sizes. However, it has been witnessed in this market segment in particular that some Member States still show a preference for local players.

However, the industrial investments required for such activities require long-term predictability and visibility on the perspectives of market development, in particular regarding infrastructure, including on the advancement of the 2030 objectives of the revised TEN-T Regulation.

In order to overcome the short-term and fragmented approach, a long-term strategy should be defined, with a target high-speed network agreed upfront and rolled out in a common plan and effort between Member States and the EU. This would also secure the industrial capacity of the rail supply industry, which stands ready to deliver on high-speed rail projects when demand pipeline is clear.

As an example, on 4 April 2025, Alstom announced a plan to invest more than €150m to increase production capacity to meet the French and international demand for its Avelia very high-speed trainsets and deliver on its ongoing commitments[3].

UNIFE's key messages:

- UNIFE would welcome an update from the European Commission regarding the advancement of the 2030 objectives of the revised TEN-T Regulation.
- A long-term strategy should be defined, with a target high-speed network agreed upfront and rolled out in a common plan and effort between Member States and the EU.

Enhancing interoperability across the EU and reducing divergences in requirements

In the European Union, any new rolling stock project will require a significant engineering effort to adapt to European requirements (Technical Specifications for Interoperability (TSIs)), national requirements (Notified National Technical Rules (NNTRs)) and customer requirements. In addition, European and national requirements may evolve during the life cycle of the projects, often leading to significant redevelopment efforts and costs.

It is therefore important to simplify and stabilise the sectoral regulation applicable to rail, to reduce the level of risks in projects and progress towards a truly single European market for railway equipment and increase the leverage capabilities of public and private investment.

The increased implementation of the existing Union regulatory framework, notably the TSIs which will ultimately lead to harmonisation of rules and greater market accessibility, remains necessary. In support of this, UNIFE welcomes the European Commission's and European Union Agency for Railways' (ERA) continued efforts in finalising the work with Member States on the elimination of national technical, safety and operating rules. The removal of remaining technical and operational barriers and divergences are needed to achieve a truly interoperable high-speed network and reduce the complexity of the system. Last but not least, improving the efficiency of the vehicle authorisation process is key.

As established in the revised regulation regarding EU guidelines for the development of the trans-European transport network (TEN-T), an effective European high-speed network must ensure ERTMS is deployed as the single European signalling system, enhancing rail safety and efficiency as the backbone of the future digital railway. The decommissioning and removal of legacy 'Class B' signalling systems and train detection systems will facilitate the circulation of rolling stock and the authorisation for placing on the market of vehicles intended for use across the high-speed network.

UNIFE's key messages:

- UNIFE calls on the European Commission and European Union Agency for Railways (ERA) to ensure predictability for updates to the applicable regulations (e.g. TSIs), plan for transition rules which provide sufficient stability in line with rail project delivery and asset lifecycles and continue working with Member States to eliminate national technical, safety and operating rules.
- UNIFE calls for the acceleration of the roll-out of ERTMS on the entire TEN-T network as the single European signalling system, in parallel with the decommissioning of national legacy 'Class B' systems, as per the revised TEN-T regulation.
- It is extremely important to avoid disrupting existing projects due to new regulatory requirements. This creates

[3] https://www.railwaygazette.com/business/alstom-to-invest-150m-to-increase-high-speed-train-production-capacity/68606.article

additional administrative complexities, costs and delays – and creates a high level of risk for projects. Recent cases (Data Act, Cyber Resilience Act) should be mitigated in this respect and as a rule, new requirements should apply only to new projects.

Advancing research and innovation in high-speed

As demonstrated in the Europe's Rail Joint Undertaking (ERJU) high-speed rail study (2023), the deployment of innovative technologies will inspire an increased modal shift to high-speed rail.

These technologies have been developed by ERJU, and Shift2Rail Joint Undertaking before it. Although not specifically designed for high-speed, they have a great impact on that market segment. In particular, due to the change of aerodynamics and the increasing air resistance (for example, air resistance at 300 km/h is about 2.25 times higher than at 200 km/h), **it becomes even more vital to reduce energy consumption – and thus to decrease operating costs – through innovative solutions.**

Several Flagship Projects (FPs) of ERJU are extremely relevant and can be applied to high-speed, including:

- FP2 on digital and automated/autonomous train operations, e.g. deliver scalable automatic train operation (ATO) up to GoA4 for all segments, reducing operational and life cycle costs by European Train Control System (ETCS) Hybrid Level 3, ETCS Level 3 moving block with new train positioning technologies, or Absolute Safe Train Positioning (ASTP) as a key technology for e.g. moving blocks.
- FP3 on intelligent and integrated asset management, e.g. European railway checkpoint for mixed traffic (inc. wayside inspection & monitoring systems and data analytics combining both on-board & wayside data sources for health assessment), practical solutions for sensing superstructure system components (including intelligent sleepers, ballast, rail and contact lines), multi-sensor/multi-source monitoring of tracks, surrounding and switches for short-term superstructure asset management, robotics for maintenance in high-speed operations, or railway checkpoint developments for high speed/mixed traffic.
- FP4 on sustainability, e.g. new running gear architectures including for high-speed, or new Permanent-Magnet Synchronous Motor (PMSM) with high power density will lead to significant curbing in energy consumption, which is critical for high-speed rail.

This highlights the importance of research and innovation for various market segments, including high-speed rail, to achieve a more efficient, attractive and competitive railway system.

Pursuing these efforts at the European level beyond the current Multiannual Financial Framework (MFF) and Horizon Europe – due to end in 2027 – will be key not only for the success of the deployment of a high-speed rail network, but also for the competitiveness of the European Rail Supply Industry against the background of increasing competition and significant Government support[4].

In parallel, it is key to ensure innovations are deployed on the European high-speed rail network, which must be at the forefront of Europe's digital transformation – from digital twins and automation to AI-driven traffic management and energy-efficient solutions. These innovations not only improve the passenger experience but also strengthen the competitiveness of European suppliers.

Last but not least, long-term investment in the successor of ERJU and its System Pillar could support the harmonisation of operational rules to be applied on European high-speed lines.

UNIFE's key messages:

- UNIFE calls on the European institutions to establish the successor of ERJU in the next MFF.
- The successor of Europe's Rail must have sufficient budget for R&I (minimum EUR 3bn, of which half will come from EU funding and the other half from industry contributions) and EUR 15bn for pre-deployment ensuring the needed technological maturity level and accelerating the market uptake.
- This will allow increased value for the clients (public authorities and operators), to leverage long-term private investments, boost the competitiveness of the European rail supply industry, and contribute to achieving the goals of the Single European Railway Area by increasing harmonisation of operational rules.

[4] As shown by OECD in its report *Measuring distortions in international markets: The rolling stock value chain*.

Securing public funding, leveraging private financing and de-risking investments in high-speed rail

In February 2025, eleven Prime Ministers wrote a letter to President von der Leyen about the importance of connecting European capitals and other major cities with the high-speed rail network and its importance. UNIFE fully supports the idea that **the financing of high-speed rail connections including cross-border ones in the context of the TEN-T network should be a priority for the next MFF and the future Connecting Europe Facility (CEF).**

On the other hand, it is clear that the needs will go much beyond the capabilities of public funding. In this respect, the Draghi report sheds light on the challenge of attracting private capital to major infrastructure projects due to their lengthy lead times and return on investment. In particular, the European market for public-private partnerships in rail infrastructure is much less active than in other parts of the world. It would be interesting to analyse the reasons for this situation – there is no reason why private financing can be relied upon to finance major infrastructure investments in North, South America or Asia Pacific but not in Europe.

In this sense, **the European Investment Bank (EIB)** has the tools to deploy technical and financial capacity including through EU financial instruments to explore viable business models and boost opportunities to finance rail transport. These operations are aligned with the EIB's ambition to become the EU Climate Bank and support our priorities communicated to the Bank during the revision of its Transport Lending Policy.

Furthermore, **the InvestEU Programme** leverages private investments to high EU policy priority areas, such as sustainable infrastructure. Risk-bearing capacity is often creating challenges for the rail sector to attract private investments, especially for high-speed projects. With the Invest-EU guarantee model, the EU budget guarantee backs the investments of financial partners increasing their risk capacity, and thus allows to mobilise additional investment.

It is also important to **acknowledge the positive role played by digitalisation**, to ensure the *"coordinated planning, financing, and implementation of infrastructure"*. Indeed, digitalisation and data-driven solutions have the potential to improve outcomes across the entire lifecycle of large-scale infrastructure assets like high-speed rail – from planning to construction, operation and maintenance – all while maximising their value over a (typically) decades-long lifespan.

More specifically, in the context of the European high-speed rail network, **solutions like digital twins** can ensure more efficient, transparent and coordinated delivery of high-speed rail infrastructure by providing a unified, up-to-date view of assets and data for all stakeholders-. They can help de-risk infrastructure project delivery by enabling better planning and improved management of the construction and commissioning phases, reducing risks of cost and time overruns. This ultimately maximises the value of public funding channelled into infrastructure, whilst attracting private investments, by demonstrating improved risk management and compliance with project KPIs.

UNIFE's key messages:

- A robust centrally managed CEF III of increased financial ambition which would be a catalyst for the development of a fully-fledged TEN-T Network, including the missing high-speed rail connections and the completion of major cross-border projects, is essential.
- The support of financial entities, such as the EIB, will continue to be essential and should be reinforced to support high-speed rail projects.
- The continuation of InvestEU will be crucial to boost private financial support to high-speed rail. The new InvestEU programme should allow the European Commission and Member States to further leverage and facilitate private financing in the rail sector by making use of tools such as the EU Taxonomy and Green Bonds to boost investments in order to accomplish the TEN-T targets, and to consider how public-private partnerships contractual arrangements could promote investments. It should also revitalise the market for public-private partnerships, reviewing the current applicable regulatory framework, and enhancing the attractiveness of such project structuring for public and private partners alike.
- The High-Speed Rail Plan should recognise and promote the adoption of data-driven solutions (e.g. digital twins, connected data environments) to deliver on the EU high-speed rail network in an efficient and coordinated manner, whilst minimising risks and maximising return on investments.

Enabling a strategic public procurement framework

From a high-speed rail angle, UNIFE believes that the European Rail Supply Industry is to be considered both as:

- **Strategic**, because it provides key technologies, products and services for rolling stock, infrastructure and signalling for high-speed rail, which is flagship and deeply linked to the competitiveness of the Single Market. These technologies are also key for European exports.
- **Critical**, because it is increasingly based on digital solutions, and the need to ensure a high level of security cannot be overstated in the context of military mobility. As per Directive 2022/2555 on measures for a high common level of cybersecurity across the Union (NIS2 Directive), rail transport is acknowledged as a 'sector of high criticality' and includes it in its scope railway undertakings and infrastructure managers.

Beyond the risks posed by armed conflicts and related hybrid threats, it is essential to ensure that strategic and critical technologies are provided by reliable suppliers. Indeed, **Europe needs to remain in the technological lead and to avoid strategic dependencies on third country State-owned or -controlled actors**, in particular for control-command and signalling which is highly security critical since it regulates rail traffic, avoids collisions etc.

Furthermore, it should be recalled that there are currently strong rail market access imbalances (e.g. China's rail market has an accessibility rate of 13% according to the 2024 UNIFE World Rail Market Study). In this context, the EU high-speed rail plan should **promote reciprocity in market access in relation to the treatment of foreign bidders**. This is the case for South Korea, *vis-à-vis* of which the EU has kept a market reservation on the high-speed segment for years in the WTO Agreement on Government Agreement (GPA) of the World Trade Organisation (WTO). Due to the EU reservation, the high-speed rail segment is to be considered as not committed and should a Korean supplier bid, EU contracting entities have a right to reject such a bid or to accept it while applying score adjustment if deemed adequate.

Last but not least, **the strategic role of public procurement should be enhanced** for flagship projects such as the procurement of high-speed trains. The EU public procurement framework should also be more effectively used to enhance to achieve EU policy objectives. Despite increased possibilities for contracting authorities to get better value for money when procuring goods and services, price-driven tenders largely remain the prevailing trend in the rail sector. The Most Economically Advantageous Tender (MEAT) principle understood as Best-Price Quality Ratio (BPQR) is rarely used in rail procurement. In terms of environmental and social criteria, there is typically a minimum threshold required to participate but once this threshold is met, there is no further evaluation and the process tends to be more bureaucratic than a real value-adding evaluation criterion. In practice, this leads to enterprises vying for low-price solutions, which tends to decrease quality. The rules also effectively prevent innovation instead of encouraging it, as economic operators try to avoid development costs and as innovative solutions in tenders are often undervalued. Applying the MEAT principle through non-price criteria would benefit above all the railway operating community and end users.

UNIFE's key messages:

- Ensuring the technological sovereignty of Europe for high-speed rail needs to be a priority. In this framework, the security implications of allowing foreign State-controlled suppliers for security-critical systems like rail control-command and signalling should be fully assessed by the European Commission in order to improve the resilience of signalling systems, particularly on European high-speed lines.
- The European Commission should develop a multi-stage approach:
  - As a general rule, no bidder from a country with which the EU has no agreement on public procurement should be allowed to bid in tenders with control-command and signalling as subject matter and high-speed traffic as mixed or total use. This is in line with the judgment of the Court of Justice of the EU on the Kolin case (October 2024), which confirmed that third country bidders from these countries cannot invoke remedies nor demand equal treatment under the EU Directives.
  - For the manufacturing of high-speed trainsets and infrastructure, Article 39 of Directive 2009/81/EC on Defence and Security could be used as inspiration given the strategic and critical nature of high-speed rail. It is indeed mentioned that a tenderer shall be excluded from participation in a contract if it "*has been found, on the basis of any means of evidence, including protected data sources, not to possess the reliability necessary to exclude risks to the security of the Member State*". This provision needs to be more specific and it should also be ensured that the supplier should be excluded if it is not able to give evidence of the full segregation of the solutions supplied with the rest of the non-EU entities. On top of this, existing market reservations in rail procurement should be leveraged to ensure reciprocity in access to markets.
  - High-speed rail procurement should have the Most Economically Advantageous Tender (MEAT) principle, understood as Best-Price Quality Ratio (BPQR), implemented in a mandatory way due to its flagship, high costs and complex project nature. Beyond this mandatory aspect, it is important to ensure sufficient weighing of MEAT for these projects; indeed, the experience of applying MEAT in Europe shows that quality ratios below 40% will mean that price remains the most important element in the tender evaluation.

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