

SUSTAINABLE TRANSPORT: POLICY OPTIONS AND OPPORTUNITIES FOR INFRASTRUCTURE INVESTORS IN HIGH-SPEED RAILWAYS SECTOR IN THE EU

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Context and objectives of the forward looking research

The goal of the paper is to analyse the recent evolutions of the market context in high-speed railways sector at EU level in order to better evaluate the comprehensive opportunities and risks for long-term private investors.

Rail is a key catalyst and beneficiary of the decarbonization trend, as **government policies at all levels support passenger rail** over other motorized transport modes.

Railway companies in the high-speed sector at EU level are not monopolies anymore and the evolution of governance and technological development could create **new opportunities for private investors to implement new strategic initiatives and improve, transform and grow business** thanks also to huge investments to extend the European HSR network (1,033 km are under construction and 4,859 km are planned before 2032 in the EU).

Thanks to the investments on new efficient HSR lines and to the changes in transport regulations internal **rail competition is emerging in Europe**. Currently, the countries that have internal open competition within the railway sector over long distances are limited to Italy, Austria, Czech Republic, Sweden, France and Spain.

In this very optimistic context for HSR infrastructure development **Sweden and UK recently decided to reduce their plans in the sector**. In both cases governments have announced they are concentrating on the maintenance and development of the conventional network with a particular focus on commuter traffic and freight.

Methodological approach and structure of the study

The study is structured in five elements:

1. Introduction on private financing of railway assets and analysis of the expected development of European HSR.
2. Analysis of the recent regulatory framework evolution at EU level in the HSR market: infrastructure access, infrastructure pricing, standardization in signaling and rolling stocks.
3. Potential role of new open-access operators in the European high-speed railways market.
4. Analysis of the new context for air-rail competition and complementarity.
5. Synthesis of the highlights and evaluation of the potential implications for long-term financial investors in terms of specific market segments or opportunities to improve, transform and grow the HSR business.

Public investment in railways sector is growing but not in an homogenous way among EU countries

The 2020 Sustainable and Smart Mobility Strategy aims at **doubling the high-speed rail traffic by 2030 and tripling it by 2050** at EU level.

The Connecting Europe Facility (CEF), Cohesion policy, and the Recovery and Resilience Facility (RRF) are golden funding opportunities to push for the rail sector's much-needed modernisation.

CEF funds primarily **rail border crossing projects**, like Rail Baltica, Fehmarn, Brenner and Lyon-Torino. ERDF, Cohesion Fund and RFF supports rail national development. E.g. The Italian RFF foresees a 15 billion investment Euro for new HSR lines by the end of 2026 (among them Napoli-Bari, Brescia-Vicenza, Palermo- Catania-Messina and Milano-Genova) plus 3 billion for ERMTS.

In this very optimistic context for HSR infrastructure development **Sweden and UK recently decided to reduce their plans in the sector**, concentrating on the maintenance and development of the conventional network with a particular focus on commuter traffic and freight.

Opportunities related to emerging competition within the HSR sector

HSR direct competition is emerging in Europe (Italy, Austria, Czech Republic, Sweden, France and Spain- 54% of HSR lines).

Competition led to clear **economic benefits for end consumers** (via cheaper tickets, higher frequencies, better on-board services, newer rolling stocks, etc) and **for infrastructure managers**, through higher use of tracks.

GetLink (Eurotunnel) underlined the importance of a **pro-active strategy** to accelerate the development of the sector through specific technologic, organizational and commercial instruments for **reducing the time** needed to launch new services, offering commercial support and for **reducing the cost** of using the infrastructure.

The current examples of open access competition demonstrate that there is a **long and expensive obstacle** course to overcome along with **substantial financial investment** and **high commercial risks**.

At present, Italian **NTV**, the Spanish **Iryo** (Air Nostrum 31%, Globalvia 24% and Trenitalia 45% with 20 trains) and Czech **LeoExpress** are the only three private railways undertakings operating HSR services at EU level. Both NTV and Leo Express are multimodal companies (trains and buses).

The potential role of new open access operators

Several new European operators supported by international investors have announced their intention to compete in the HSR market in the EU market, but the sum of the rolling stocks orders by the new open access operators (around 66 trains) is not dissimilar to the existing fleet of NTV the 10 year competitor in Italy (52 trains)

Name	Main EU country involved	Lines	Planned year of market entry Main characteristics
Le Train	France	French Great West	2026 – Regional operator mainly for leisure pax (10 trains)
Kevin Speed	France	French domestic market	2028 – Low cost operator in the main French Metropolitan area (20 trains)
Proxima	France	French domestic market	2027 – Paris -Western region (Bordeaux, Rennes, Nantes, and Anger (12 trains)
Heuro	Netherlands	Amsterdam-Paris and Amsterdam -London	2027 Channel tunnel operator (12 trains)
Evolyn	France	Paris-London	2026 – Channel tunnel operator (12 trains)

The most ambitious project of growth of HSR in Europe will be predictably carried out by players already in the market.

A new context of air-HSR complementarity

New market forces (liberalisation, decarbonisation, digitalisation) **support new forms of collaboration among air and rail operators**, such as:

- Air Nostrum- Trenitalia consortium for the first private operator in Spanish HS market (operation started in Dec 2022)
- **DB became the first rail member of Star Alliance** led by Lufthansa Group on August 2022 and the collaboration will allow DB and Star Alliance passengers to book integrated international plane and train journeys through one platform.
- **Dutch Government's Action Plan for Rail and Air Services.** The plan is designed to encourage rail travel on destinations in a 700-kilometer radius from Schiphol Airport. Almost 50% of Schiphol's O&D passengers already use the train to get to and move from the airport. KLM, Schiphol, NS (Dutch railways) and ProRail (railway infrastructure manager) will also be involved in the Air/Rail action plan, following the **Air + Rail experience of Air France and SNCF at CDG airport.**

For the development of air-rail complementarity will be crucial to support specific investments for **improving transfer experience at nodes** (e.g. passenger service systems – eg. Customer Information System -CIS, Closed Circuit TV- CCTV, Station Information and Surveillance Systems (SISS) enhanced WiFi) as well as on a roadmap for **intermodal baggage solutions** (e.g. AirPortr).

New source of value creation related to air-rail synergies in a context where HSR can act as a substitution for short-haul flights and airport can become multi-hub

Short-haul flights generate twice as many emissions per seat-kilometer than long-haul flights, therefore many public authorities at both national and EU levels are currently considering the idea of **reducing short-haul flights and replacing them with less polluting HSR options** (e.g. Loi Climat et Résilience in France) or **limit the number of flights at specific airports** in a context where potential multimodal alternatives are available (e.g. AMS)

Potential sources of value creation:

1. to **increase operational efficiency at both node and link level**,
2. to succeed in **capturing new opportunities in order to enlarge the spectrum of services offered by infrastructure operators**, thanks to the creation of **multimodal hub at airports** (e.g. remote check-in, baggage drop, fast track, new passenger process thanks to biometric and facial recognition, new media infrastructures, facilities enabling longer dwell time for passengers in retail outlets thanks to security and check-in transformation, etc).
3. The growing number of air-rail integration projects will contribute to generate a **new targets** for railways undertakings and station infrastructure managers. New revenues could come from **high spending long-haul passengers** connecting in major European hubs offering direct HSR serves (e.g. AMS, CDG, MAD, FRA, ZRH)

Synthesis of the highlights: regulation and organizational set-up

The following tables explain the 15 HSR trends in Europe, classified in three classes:

- 1) Regulations and organizational set-up;
- 2) Infrastructure and technologies;
- 3) Commercial innovation and consumer behavior.

Railways operators and long-term investors should monitor each trend, placing them at the top of their management agendas; each company defines its own strategic positioning to approach the spectrum.

Trends in High-Speed Railways in Europe to be monitored by long-term investors

<i>Class of trends</i>	<i>Detailed trends</i>	<i>Short term (<3 years)</i>	<i>Medium term (3<x7 years)</i>	<i>Long term (>7 years)</i>
Regulation and organizational set-up	Pro rail policies, both European and national, including CountEmissionsEu, Taxonomy and Emissions Trading Scheme			
	European standardization			
	New forms of consolidation and partnership among European railways undertakings			
	New private open access entrants (e.g. Kevin Speed, Le Train, Evolyn, Heuro etc)			

Synthesis of the highlights: infrastructure and technology

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<i>Class of trends</i>	<i>Detailed trends</i>	<i>Short term (<3 years)</i>	<i>Medium term (3<x7 years)</i>	<i>Long term (>7 years)</i>
Infrastructure and technology	New cross-border infrastructure (Lyon-Turin, Brenner, Fehrman, Rail Baltica)			
	Smart, agile rolling stocks for new low-cost operators			
	Implementation of ERMTS with higher track utilization and optimized capacity			
	Modernization of stations (retail amenities/accessibility/safety) and transformation to fluid platforms for multimodal hubs			
	Increasing relevance of complementarity investments in telecoms, digital and energy efficiency (e.g. ElecLink)			

Synthesis of the highlights: commercial innovation and consumer behavior

Trends in High-Speed Railways in Europe to be monitored by long-term investors

<i>Class of trends</i>	<i>Detailed trends</i>	<i>Short term (<3 years)</i>	<i>Medium term (3<x7 years)</i>	<i>Long term (>7 years)</i>
Commercial innovation and consumer behavior	New potential targets for railways undertakings related to changing business and leisure travel habits due to environmental awareness (e.g. 'flightshame') and growing importance of remote working in metropolitan area			
	Expanding seasonal service to touristic destinations			
	Paying more attention to comfort and fair prices due to changing demography (ageing, single parent families, etc.)			
	Multimodal mobility and air-rail integration through customized door-to-door digital platform			
	Expansion of cross-national ticketing, also for air-rail ticketing			
	Introduction of new low-cost business model in the HSR sector (e.g. Ouigo, Avlo, etc), to contribute to enlarging, differentiating the value propositions and prices, and increase the overall quality levels			

Potential implications for long-term investors

Types of investments

1. New opportunities coming from **infrastructures that will be the beneficiaries of rapid HSR development**: commercial area of main stations, people-movers, air-rail links and assets dedicated to new HSR operators – like depots.
2. Complementary infrastructures offering **synergies between rail and other infrastructure assets**. Examples could come from:
 - **renewable energy** (e.g. photovoltaic installations on railways sites);
 - **telecoms** (all the new railways lines will have fiber optic cableducts for connecting all systems not dedicated exclusively to railways needs) and
 - **long cable electricity interconnector** (e.g. ElecLink).

Geographical considerations

The main opportunities of growth will be on the **Amsterdam- Amsterdam Schipol-Cologne-Brussels-Paris CDG -Paris-London**. The length of this network is similar to the Italian but in North-West Europe the market seems to be severely underserved compared to the Italian, in terms of high-speed trainsets.