

About

Survey on the connectivity of major TEN-T airports by long-distance rail

The **TEN-T Regulation** requires airports with a total annual passenger traffic volume exceeding 12 million passengers to be connected to the TEN-T rail network by long-distance rail services, including high-speed rail (excluding other public transport), by 2040. For airports with annual passenger volumes of between 4 and 12 million, a connection via public transport (e.g. metro, light rail, tram) to the TEN-T network or to a nearby urban hub within the TEN-T is sufficient. We define the following terms as follows:

- **High-speed rail** refers to passenger rail services operated on specially built high-speed lines equipped for speeds generally greater than 250 km/h or specially upgraded high-speed lines equipped for speeds of the order of 200 km/h, typically connecting larger cities over longer distances with few or no intermediate stops.
- **Long-distance rail** refers to passenger rail services, connecting the airports to the TEN-T network, giving passengers a possibility to travel with ease by rail to and from the main European airports without a need for transfer in the urban node, located in the vicinity of the airport.
- By **connection**, we mean that a station enables direct access between rail and air services – i.e., passengers can transfer between the two modes without leaving the airport grounds, using only on-site means such as walking, shuttle buses, people movers, or internal rail links.

This study will support the implementation of the TEN-T Regulation by investigating the current state as well as **future plans** for Air-Rail connectivity at the respective airports. Furthermore, existing **obstacles**, that may have hindered stakeholders from establishing a suitable Air-Rail connection in the past, or do so now, as well as potential **measures** to overcome these obstacles are of interest. The survey is concluded by questions about additional data. The study is looking for evidence by carrying out this survey, desk research, and following stakeholder interviews.

We kindly ask you to fill out **one survey per organisation**, if possible. For better coordination we also provided you with a **pdf-file containing the questions**. If you are not able to submit one complete survey, you may submit multiple questionnaires (participants can then skip chapters).

If you are answering this survey **for multiple airports**, we would appreciate you filling out separate questionnaires – **one per airport**. If no exact figures are available, please give an estimate.

Participation is **voluntary**. Your information will be **evaluated anonymously**. Names of individuals and organisations will not be disclosed to the client.

Company and personal questions

1. Which stakeholder group do you belong to?

Please select the option that best applies to your organisation.

airline

ministry/authority

expert/academia

non-governmental organisation (NGO)

other:

2. Is this questionnaire being submitted as the complete and coordinated response of your organization?

Yes, this is the complete and coordinated submission of our organization

No, this is a partial submission (additional questionnaires will be submitted by our organization)

I do not know

Reasons and obstacles of train connectivity (1/4)

3. What are the main drivers for increasing long-distance (including high-speed) rail connectivity at EU airports?

Multiple answers possible.

economic growth targets (driven from market/business side)

policy/governance targets (e.g. environmental and climate objectives, tourism development ...)

demand side driven reasons (e.g. customer satisfaction)

legal requirements (e.g. national or EU regulations)

other:

4. Please briefly elaborate your selection of main drivers:

5. To what extent can long-distance (including high-speed) rail replace feeder flights/short haul to EU airports?

Please elaborate on the opportunities, limitations, and key influencing factors (e.g. travel time, passenger behaviour, connectivity, cost and/or environmental impact).

6. At what level are you able to provide estimates on airport investment costs?

Please select the highest level at which you can provide reliable figures.

EU-wide / across multiple Member States

one specific EU Member State

one specific major EU airport

I cannot provide cost estimates

Reasons and obstacles of train connectivity (2/4)

7. What is the estimated total investment required across the 20 TEN-T-obligated airports in the EU to achieve full multimodal connectivity compliance?

Rough order of magnitude is sufficient, e.g. €500m–1bn. Please enter whole numbers without any decimal places.

EUR

8. What is the estimated total investment required in your Member state to achieve compliance with TEN-T multimodal connectivity requirements for all TEN-T obligated airports?

Please fill in country name. Rough order of magnitude is sufficient, e.g. €500m–1bn. Please enter whole numbers without any decimal places.

Member State

Cost estimate EUR

9. What is the estimated total investment required at the airport to achieve compliance with TEN-T multimodal connectivity requirements?

Please fill in airport name. Rough order of magnitude is sufficient, e.g. €500m–1bn. Please enter whole numbers without any decimal places.

Airport name

Cost estimate EUR

10. In your view, who should primarily bear the costs of the infrastructure investments required to meet TEN-T multimodal connectivity obligations at major EU airports?

Multiple answers possible.

Airport operators

Rail undertakings

Railway infrastructure managers

Airlines

EU funds (CEF, Cohesion Fund etc.)

Member State / national government

Regional / local authorities

Other:

I do not know

11. Are you aware of any general infrastructure-related or process-related obstacles preventing or hindering long-distance railway connections to EU airports (including high-speed)?

Yes

No

I am not sure

Reasons and obstacles of train connectivity (2/4)

Only questions will appear here if you mentioned obstacles.

12. What are the main infrastructure-related obstacles, that hinder (improvements in) long-distance (including high-speed) rail connectivity at major EU airports?

Please select up to three options.

lack of political will at the national level (e.g. absence of national rail strategy or funding commitments)

lack of political will at the local or regional level (e.g. opposition from local authorities or planning bodies)

frequent changes in government disrupting the planning process

limited social acceptance among local residents (e.g. concerns about noise, land use, or construction disruption)

limited own financial resources of airport operators or railway undertakings (internal capital constraints)

(expected) limited ability or willingness of railway operators to offer long distance services on new rail infrastructure

Lack of willingness to help a competitor (high speed rail compared with feeder flights/short haul air)

limited physical space or unfavourable structural conditions on site (e.g. insufficient land for station construction or platform expansion)

limited external resources from service providers (construction companies, suppliers) legal uncertainties (e.g. planning law, classification of importance.)

legal uncertainties (e.g. planning law, classification of importance.)

environmental legislation (e.g. protected areas, biodiversity obligations)

conflicting financial interests of airport operators (e.g. revenue from parking, car rentals)

Other:

13. Please elaborate your selection of infrastructure-related obstacles:

Explanation

14. What are the main process-related obstacles, that hinder (improvements in) long-distance (including high-speed) rail connectivity at larger EU airports?

Please select up to three options.

social acceptance / willingness of travellers to use rail connections

limited own financial resources (of airlines or railway undertakings)

conflicting financial interests of airport operators (e.g. revenue from parking or car rental)

lack of willingness to help a competitor (feeder flights/short haul air compared with high speed train)

limited interest of airlines

insufficient skill set of staff (e.g. language barriers for train drivers)

limited awareness and knowledge of Air-Rail connectivity options among travellers or staff

limited integration of rail and air travel schedules

limited digital integration (e.g. apps, travel planners, real time information)

limited organisational integration regarding ticketing between railway undertakings and airlines (e.g. through-ticketing, baggage transfer)

insufficient signposting and wayfinding within the airport or at rail stations (e.g. unclear directions to rail access points)

lack of economic viability for railway operators (financial sustainability)

other:

15. Please elaborate your selection of process-related obstacles:

Explanation

16. What measures can be taken to overcome these obstacles?

Multiple answers possible.

public relations/communication

investment measures (e.g. acquisition of funding)

studies

process improvements, acceleration, training

improving air-rail service offerings (e.g. language service, increased comfortability by door-to-door service with check-in from home)

none

other:

17. Please briefly explain the measures mentioned:

Explanation

Reasons and obstacles of train connectivity (4/4)

18. Are you aware of any specific regulatory obstacles for the use of long-distance (including high-speed) rail at airports (laws, regulations, safety or operating requirements, etc.)? If yes, on which political level (regional, national, EU)?

Please describe.

19. Do railway stations at airports cause particular problems for rail operations (e.g. longer transfer times or stopping times) in long-distance transport (including high-speed)?

Please describe.

20. How willing are the following stakeholders to cooperate with each other to offer additional rail travel services to major EU airports?

Please select the applicable answers.

	very low	low	medium	high	very high	I do not know
Airlines (cooperating with railway undertakings)						
Railway undertakings (cooperating with airlines)						

21. Please elaborate on (potential) reasons of stakeholder willingness:**22. Which major EU airports have concrete plans or ongoing projects to add a long-distance connection in the coming years (including high-speed)?**

Please list all examples you can think of.

23. To your knowledge, which of the above-mentioned planned long-distance rail stations (including high-speed) could be through stations (no termini)?

Please list all examples you can think of.

Page 07

pagePM1

Potential and measures: Long-distance rail modal split (1/2)

24. What is currently the average modal split for long-distance rail (including high-speed rail) to major EU airports?

Please enter a value between 0 and 100. If exact figures are not available, please provide a rough estimate.

percent of all airport travellers

I do not
know

25. What measures could be taken to increase the modal split of travellers which reach major EU airports via long-distance rail (including high-speed)?

Please describe.

26. Please estimate the modal split of passengers reaching EU airports via long-distance rail (including high-speed) if such measures were taken?

Please estimate – enter a value between 0 and 100.

percent of all passengers

I do not know

Potential and measures: Air-Rail services demand (2/2)

27. How do you estimate the current share of passenger using air-rail services?

Air-Rail services, refer to a joint product (intermodal ticket) that allows travellers to use both the rail and flight under one booking/ticket. Please enter a value between 0 and 100. If exact figures are not available, please provide a rough estimate.

 percent of all passengers I do not know

28. What measures could be taken to increase the demand of integrated Air-Rail services?

Air-Rail services, refer to a joint product (intermodal ticket) that allows travellers to use both the rail and flight under one booking/ticket. Please explain your approaches.

29. Assuming that the measures you propose are implemented, what percentage of all airport customers would potentially use air-rail services?

Please enter a value between 0 and 100. If exact figures are not available, please provide a rough estimate.

 percent of all airport customers I do not know

30. What measures will most effectively increase the number of passengers arriving at major EU airports by long-distance rail (including high-speed)?

Multiple answers possible.

existing infrastructure (good platforms, short walking distances, etc.)

customer-friendly services (combined flight-rail products, high frequency, short transfer times, etc.)

other:

I do not know

31. How many passengers per year does a major EU airport need at least for a financially viable long-distance rail connection (including high-speed)?

If exact figures are not available, please provide a rough estimate.

passengers per year

I do not know

Please elaborate on (potential) reasons; using selected airports as examples

32. Who should be primarily responsible for planning and coordinating long-distance (including high speed) rail connections to major EU airports?

Multiple answers possible.

airport operators

national governments/ministries

regional/local authorities

EU institutions (e.g. European Commission, TEN-T coordinators)

railway infrastructure managers

railway undertakings

airlines

a dedicated intermodal coordination body

other:

I do not know

33. What are the most significant barriers for implementing integrated Air-Rail ticketing (i.e. a single booking covering both the flight and rail leg)?

Multiple answers possible.

lack of shared data standards between airlines and rail operators

commercial/revenue-sharing disagreements

liability concerns in case of delays or missed connections

absence of regulatory requirements for integration

technical IT infrastructure limitations

lack of awareness by operators

lack of consumer awareness/demand

other:

I do not know

34. Which (EU-level) measures would most effectively support the development of long-distance rail connectivity at major EU airports?

Multiple answers possible.

mandatory rail connectivity requirements for airports above a certain passenger threshold

dedicated TEN-T funding streams for Air-Rail intermodal nodes

EU-wide interoperability standards for Air-Rail ticketing

restrictions or taxation on short-haul flights replaceable by rail

guidelines on best practices for Air-Rail connections

other:

I do not know

35. How high do you estimate the proportion of car users who would switch to long-distance trains (including high-speed trains) if this were advantageous in terms of price or time?

Please estimate the percentage. If exact figures are not known, please provide a rough estimate.

less than 10 %

11 – 20 %

21 – 30 %

31 – 40 %

41 – 50 %

more than 50 %

I do not know

Final questions

36. Do you have anything else to add in terms of the entire survey?

Please make your comments here.

37. May we contact you for follow-up questions?

This information is voluntary and will not influence the evaluation! The information will not be forwarded to the client.

Yes, contact me for follow-up questions via **email**:

Yes, contact me for follow-up questions via **phone**:

incl. country code

No, but please keep me updated via **email**:

No, I am generally **not interested**

Last Page

Thank you very much!

Your questions have been saved. The questionnaire is now complete. You may now close the window.

**Christian Scherf, M-Five GmbH Mobility, Futures, Innovation, Economics –
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