

The potential of rail to replace short-haul flights

This paper considers the potential of rail to replace short-haul flights, focusing on Europe.

It is important to recognise that cheap flights have brought benefits for ordinary people

- Holidays in the sun for working people
- Many more people able to visit family and friends
- Many more of us a chance to see more of the world
- Helped facilitate trade between countries and so increase prosperity

It is equally important to recognise many more people will want to enjoy these benefits

- It is estimated less than 10% the world's population has ever flown
- As people become richer, many more will want to fly, long and short-haul

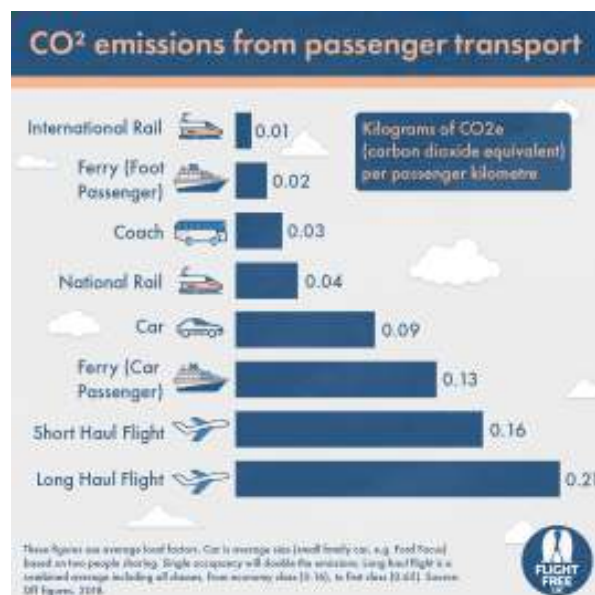
Train or Plane?

- Plane will win out over long distances
- But a switch to train makes sense for short-haul
- Especially if many more people will be travelling

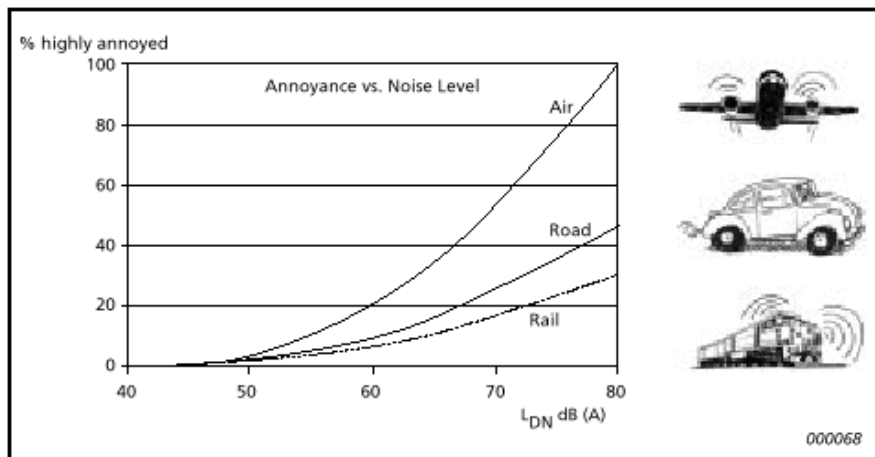
Environmental advantages of rail

- Lower CO₂ emissions
- Less noise
- Potentially fewer planes flying over communities

1. Climate emissions from rail are significantly lower than air



2. People are less annoyed by noise from trains than from planes (based on research from the World Health Organisation)



But trains *can* be noisy

- Trains *are* quieter than planes
- Trains *do* cause fewer noise complaints than planes
- *But* the speed of high-speed trains causes noise and vibration
- High-Speed trains require noise mitigation measures and a daily limit on the number of trains

Can trains compete with air?

- Time and Cost and Convenience the 3 key factors

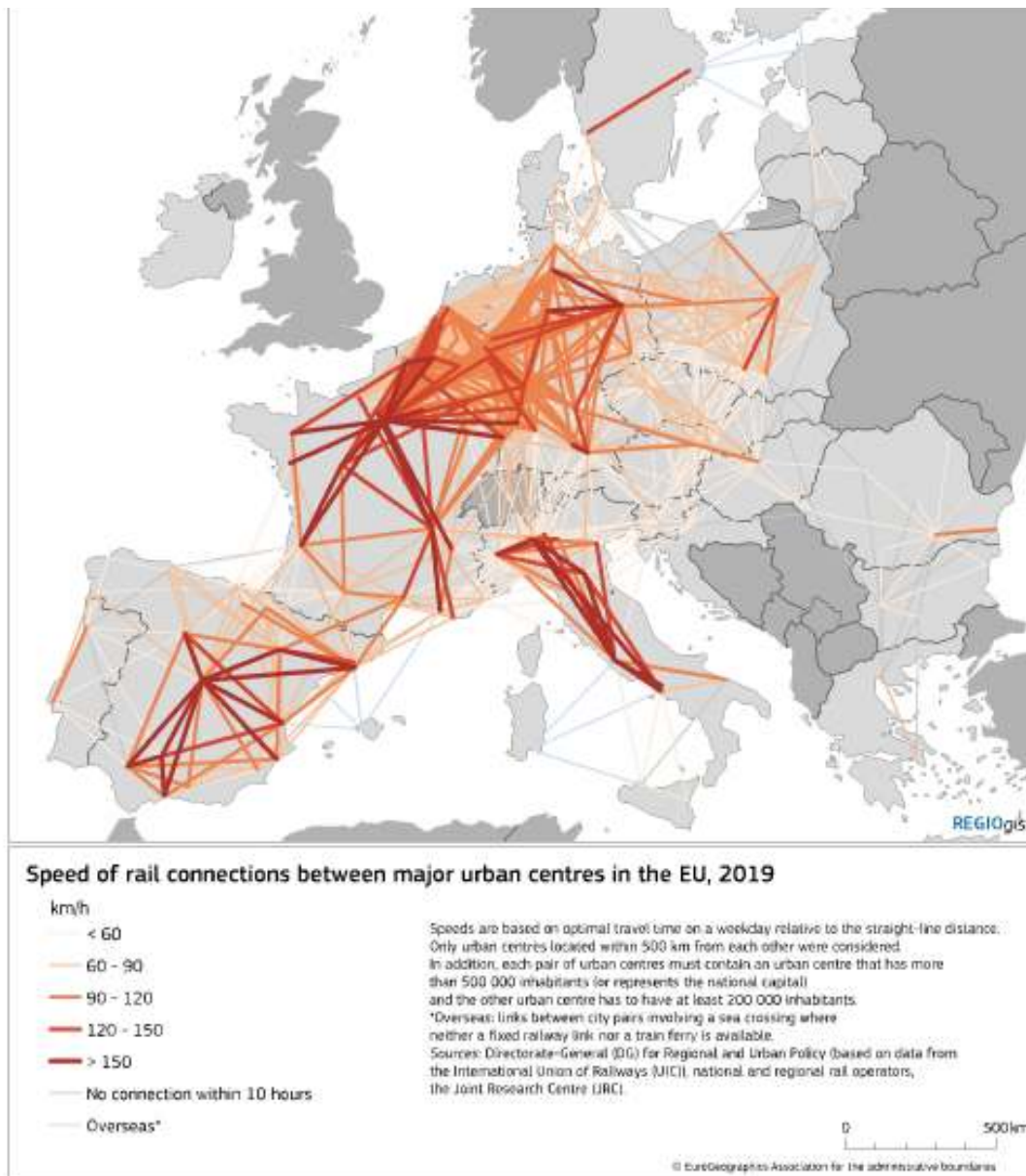
1. Time

- The EU has ambitious plans to increase the proportion of trips up to 500km made by rail.
- At present for most trips of less than 300km, train is quicker if you include waiting times at airports
- But for more 500 km trips to switch to rail, journey times need to speed up.

Journey times need to speed up

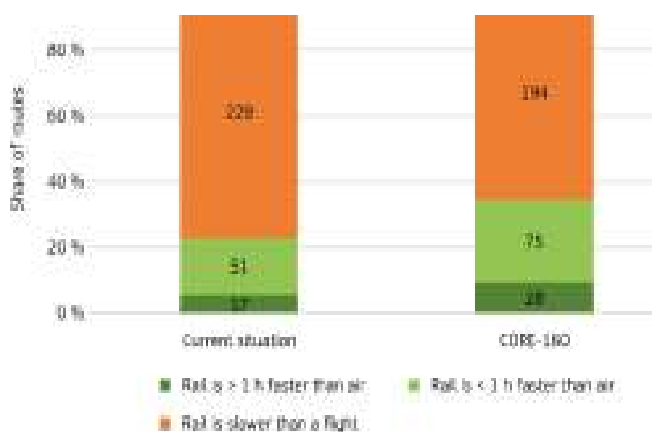
- 500 km is maximum distance the EU thinks rail travel could be an attractive option. You can read their report here: https://ec.europa.eu/regional_policy/sources/work/2023-rail-vs-air_en.pdf Some people argue the EU is not being ambitious enough and that there is the potential to switch to rail for journeys longer than 500 kms. This paper sticks with 500 kms as it uses much of the EU's research.
- For more 500 km journeys to be made by rail faster trains and more coordination between countries are required.

At present many trains are slow



If trains were speeded up.....

- If trains travelled at a speed of at least 160km/h, rail becomes faster on nearly 40% of routes of up to 500 kms. At present it is faster for less than 20% of those routes



People are prepared to spend longer travelling overnight on **night trains**.

2. Cost

A Greenpeace report* found:

- For 79 out of the 112 of routes analysed, flights were cheaper than rail.
- Rail trips are on average twice as expensive as flights
- *<https://greenpeace.at/uploads/2023/07/report-ticket-prices-of-planes-vs-trains-in-europe.pdf>

Actions Required

- Make it easier to book rail fares
 - in advance
 - across borders
- Introduce a fuel tax (or equivalent) on air travel and a tax on tickets.
- Lower rail fares
- This would give rail tax advantages over air but it can be justified on environmental grounds.

3. Convenience

- Convenience is harder to quantify. It includes things like arriving close to a city centre, shorter waiting times, quicker and easier boarding and the ability to move around more easily on a train.

Conclusions

- Choice is critical
- We must not return to the days when only the rich can travel abroad
- The challenge is to make rail a more viable choice with faster, cheaper trains
- Only then will people have a realistic choice
- Trains may have a 'mind-set' problem. Air is often still seen as sexy and modern. The reality can be very different. Compare a cramped trip on a Ryanair flight with Italy's [Frecciarossa 1000](#) with its cafe-bars, power sockets at all seats & free WiFi. Most rail companies need to get much better at advertising themselves, at 'selling' what they can bring to a journey which planes cannot.

Since The EU is investing 17bn euros in rail between 2021 – 2027, some of this may become a reality.

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