6th International Symposium on High-Speed Rail Socioeconomic Impacts

Gruppo FS

The Mobility Leader

The renaissance of night trains: would the future be on high-speed? A case study from Italy

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TRENITALIA
GRUPPO FERROVIE DELLO STATO ITALIANE

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Trenitalia at a glance



~270 FRECCIAROSSA



~40 euroCity

Open access



~126 interCity



~6000 Regionale

PSO

Our InterCity and HighSpeed Frecciarossa services run all over Italy

HS NETWORK



INTERCITY NETWORK



INTERCITY NIGHT NETWORK



Literature background

- Sustainability has emerged as a driving force behind many new developments, and it can also catalyze the resurgence of previously diminished markets, such as the reintroduction of European night train services (Bearne 2023).

- Modal choice for night trains is driven by price, comfort, time of arrival/departure, type of accommodation, e.g. seat, couchette or sleeping cabin (Moors, 2023; Kantelaar, 2019); perceived lack of security is a further barrier, especially for female travelers (Buh & Peer, 2022).

- Although liberalisation of European rails has led to more competition, night trains often do not compete with other night trains, but with other modes of transport like day trains, coaches and low-cost airlines (Gerosa & Cellina, 2024).

- Kortekaas (2024) highlights all sorts of problems regarding night trains such as track access charges, higher operating costs for staff, uneven competition with airlines, technical barriers, different regulations per country, electrification systems, signalling systems and lower capacity per carriage. Capacity of night trains is a thing that is also described by Abramovic and others (2025).

- Dömeny and Dolinayová (2021) found that night-train routes need at least a 60% occupancy rate to be profitable.

Strategic background

The renaissance of night trains

- With the Covid-19 pandemic, travellers all over Europe re-discovered the magic around night trains
- This was considered not only a ‘safe’ alternative over long distances thanks to the presence of insulated cabins (where to travel alone or with secure partners), but also a smart way to avoid the expenses of an additional hotel night
- The *flight shame movement* and growing environmental concerns played their role too
- There has been a “renaissance” of this segment on point-to-point routes on a 7-10 hour distance by train
- Many of these routes were in central Europe, between Austria and its neighborhood countries, and in Italy, on north-south corridors → in these countries, night trains were never suspended, even when this segment faced its darkest times (as it was done in other countries like France)

A new ‘concept’ for night trains

Besides traditional night-trains with ‘couchettes’ and ‘wagon lits’ a new transport mode was tested in Italy by Trenitalia





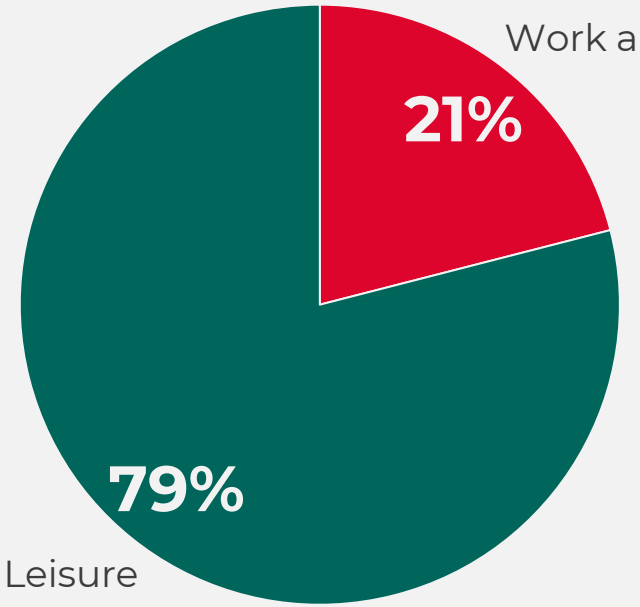


The exact same rolling stock used for daily high-speed rail services (equipped only with standard seats) was employed to run overnight on the HS rail network, with major time savings compared to traditional night rail services on the same routes

First trial in 2021

- The first trial was made on the Milan-Reggio Calabria route in 2021
- This service was initially conceived to add capacity on peak dates (e.g. in the summer, Christmas time, etc) as it was not possible to do so for daily services
- These services were quite successful → a second route was added in 2024, i.e. Milano-Lecce
- Those services had fewer stops compared to their counterpart high-speed daily services, to avoid overnight stops
- The socio-economic impact of these services is remarkable: with respect to the corresponding daily services on the same routes, these services could be more likely considered an alternative to late-evening/early-morning flights
- This directly translates into an impact for the environment thanks to CO2 emissions savings
- There are savings for the travellers too, since they can also save money on one hotel stay

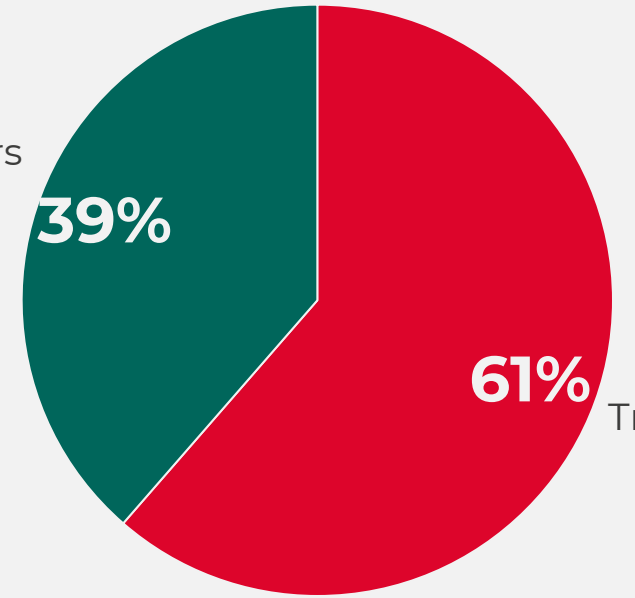
Travellers' profile



Work and Study reasons

Leisure

Travelling with others



Travelling alone

Milan to Reggio Calabria: FrecciaRossa vs FrecciaRossa Night vs Intercity Night

FRECCIAROSSA



10 stations served

Travel Time	
Milano-Paola	**6:47**
Milano-Lamezia T.	**7:18**
Milano-R.Calabria	**8:43**
Bologna-Paola	**5:40**
Bologna-Lamezia T.	**6:11**
Bologna-R.Calabria	**7:36**

FRECCIAROSSA NIGHT



9 stations served

Travel Time	
Milano-Paola	**8:36**
Milano-Lamezia T.	**9:11**
Milano-R.Calabria	**10:31**
Bologna-Paola	**7:14**
Bologna-Lamezia T.	**7:49**
Bologna-R.Calabria	**9:09**

Useful for Sicilians too

INTERCITY NIGHT



26 stations served

Travel Time	
Milano-Paola	**12:33**
Milano-Lamezia T.	**13:19**
Milano-Villa S.G.	**14:30**
Bologna-Paola	**9:38**
Bologna-Lamezia T.	**10:24**
Bologna-Villa S.G.	11:35

Milan to Lecce: FrecciaRossa vs FrecciaRossa Night vs Intercity Night

FRECCIAROSSA



Travel Time	
Milano-Foggia	5:44
Milano-Bari	6:52
Milano-Lecce	8:19
Bologna-Foggia	4:34
Bologna-Bari	5:42
Bologna-Lecce	7:09

FRECCIAROSSA NIGHT



Travel Time	
Milano-Foggia	6:24
Milano-Bari	7:31
Milano-Lecce	9:24
Bologna-Foggia	4:29
Bologna-Bari	5:36
Bologna-Lecce	7:29

INTERCITY NIGHT



Travel Time	
Milano-Foggia	7:57
Milano-Bari	9:30
Milano-Lecce	11:25
Bologna-Foggia	5:44
Bologna-Bari	7:17
Bologna-Lecce	9:12

Conclusions and open questions

- The Italian case study shows that there is potential for further developments of these services
- Many routes appear suitable for the case – not only in Italy but also abroad – and other rail operators could learn from the Italian experience, providing reliable more sustainable alternatives to air transport
- There is indeed much interest on the topic within UIC → ALT2FLY Opt-In Project
- Pros: add capacity on peak dates avoiding saturation issues on the HS line (an issue in Italy) / fleet optimization
- Cons: infrastructure maintenance slots during the night
- Competition with InterCity night trains or alternative to flights?
- Use same rolling stock for daily services or different ones?
- Only for domestic services of also for cross-border?

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Thank you

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