6th International Symposium on High-Speed Rail Socioeconomic Impacts

Gruppo FS

The Mobility Leader

Beyond Transport: Measuring Trenitalia's Value for Communities and Territories

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TRENITALIA
GRUPPO FERROVIE DELLO STATO ITALIANE

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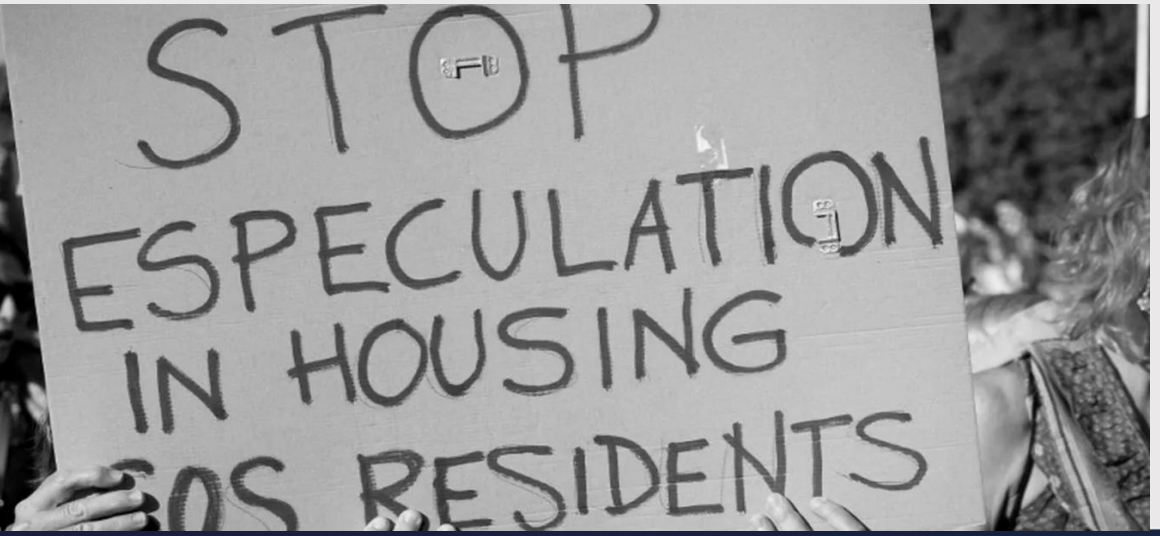
The Mobility Leader

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Introduction

Shared Value as a leverage for sustainable success





It is becoming critical for businesses to **measure their impact** beyond financial performance, in order to **anticipate risks** and **leverage emerging opportunities**

Business Value

Components contributing to organizational value (e.g., revenues and assets, cost reduction)

Social Value

Components creating value for the social context (e.g., business and household profitability, employment)

Shared Value

Embedding ESG variables into the core business ensures that financial success becomes intrinsically linked to **social development**

Context and Objectives

Trenitalia: Italian and European Passenger Transport Services by FS Italiane Group



TRENITALIA
GRUPPO FERROVIE DELLO STATO ITALIANE

FRECCIAROSSA

interCity

Regionale

25,000 employees

5,600 trains running every day

2,000 destinations served throughout the country

480 million passengers in 2025

€5.98 billion revenue in 2025

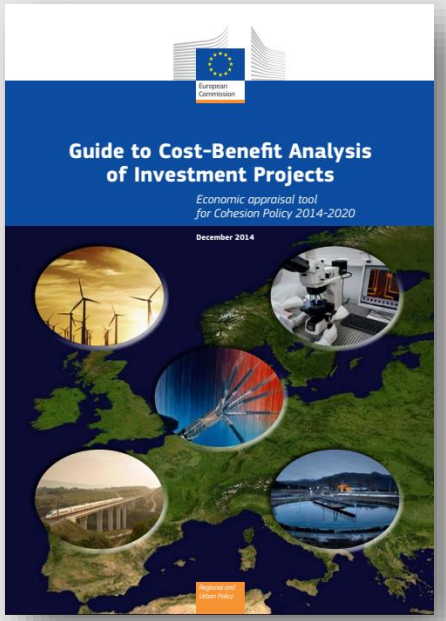
Enables access to

- employment
- education
- essential services

Promotes

- territorial cohesion
- social relations
- reduction of inequalities

Literature background



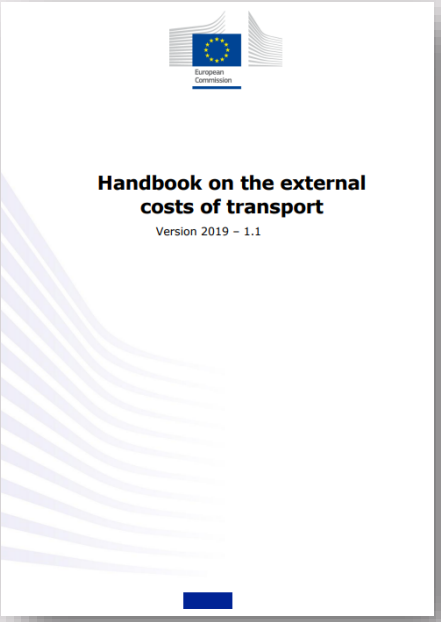
Guide to Cost-Benefit Analysis of Investment Projects, Directorate-General for Regional and Urban policy (European Commission), 2014



Handbook of Multicriteria Analysis, Constantin Zopounidis, Panos M. Pardalos, 2010



ISO 14075: Principles and requirements for social life cycle assessment, UNEP, Life Cycle Initiative, 2024



Handbook on the external costs of transport Directorate-General for Mobility and Transport (European Commission), CE Delft, 2020

Research Design: Methodology

Main Phases of the Study

In order to develop a comprehensive model capable of representing the shared value generated for communities and territories, **Trenitalia's impact assessment study was conducted across four main phases**

Phases

01 Definition of the Scope of Analysis

Two distinct scopes of analysis were selected: the first covers the entire **national territory**, while the second specifically focuses on the **Veneto region**

02 Identification of Relevant Impacts

Social and environmental impacts were identified by factoring in the effects arising **from commuter habits**, while the economic impact was assessed by considering Trenitalia's overall **contribution to national development.**

03 Data Collection

For each of the identified impacts, the **KPIs required** for their quantification were selected through the **engagement of the relevant corporate functions**

04 Impact Monetization

The impacts quantified were expressed in monetary terms, using **financial proxies**

Output



Impact Report 2025





Impact Assessment Model that can be used for regional applications or specific case studies (e.g., new lines)

Research Design: Methodology

Impact Monetization

The monetization of impacts **enables heterogeneous dimensions to be reduced to a single unit of measurement**, fostering an integrated and comparable assessment of the shared valued for people, the environment, and society

Impact Monetization Methodology

The model incorporates **different monetization methodologies** depending on the type of impact analyzed, based on **financial proxies provided by authoritative sources** and national and international statistical institutes

Example:



Research Design: Methodology

Model Input Data Overview

DEMAND

- Passengers
- Pax*km
- Boardings and deboarding at main stations

SUPPLY

- Trains/day
- Scheduled train-hours

TICKETING

- RMU
- Season-ticket cost and beneficiaries
- Fares dedicated to Junior, Young and Senior
- Disability concessions

OPERATIONS

- Arrival delays, by cause
- Total delay hours and affected passengers

CUSTOMER SATISFACTION

- Travellers' age
- Travel purpose

MOBILE PHONE

- Share of foreign travellers' train trips between TI-served provinces

OPERATIONAL SAFETY

Injuries and fatalities

- On-board passengers
- On-board staff
- Off-board accidents

Research Design: Methodology

Added Value to Tourism Locations

ISTAT CLASSIFICATION: Municipalities by "Tourism Index"

- Tourism offering
- Tourism demand
- Related economic activities

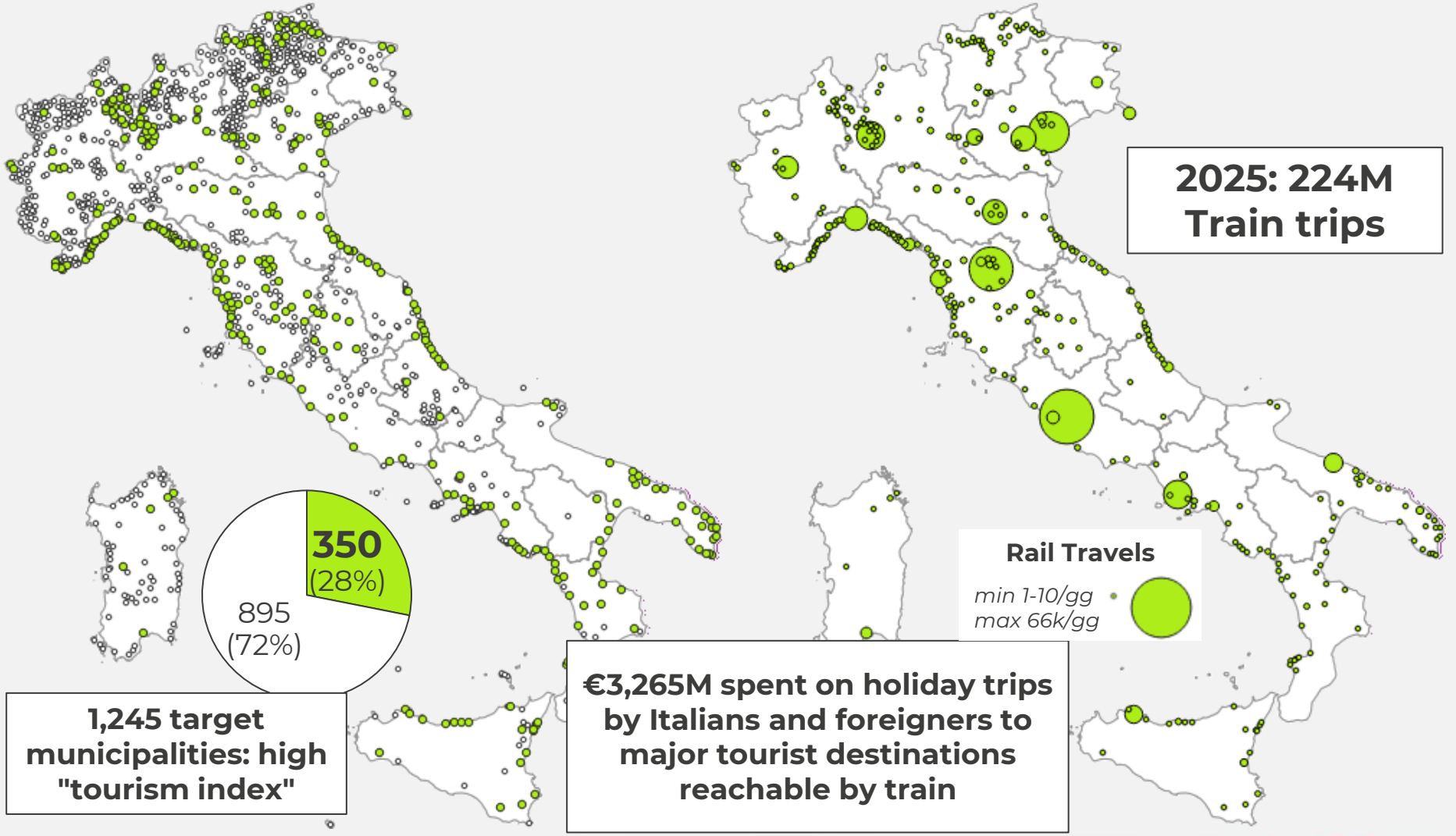
TRENITALIA TICKETING: Rail arrivals in "Very High" Tourism Index Municipalities (350): **224M**

CS SURVEY: Travel purpose, **short break (4.5%) and long holiday (1.3%)**

MOBILE PHONE: International tourists account for 12% of rail trips to/from Provinces with Trenitalia sales

EUROSTAT: Average tourist spending in Italy (excluding transport and accommodation):

- **€61** for short breaks (<1 day)
- **€705** for long holidays (>3 nights)



Research Design: Methodology

Additional Commuter Earnings

TRENITALIA TICKETING: Rail arrivals in Metropolitan Cities (15) from Municipalities <150km: **112M**

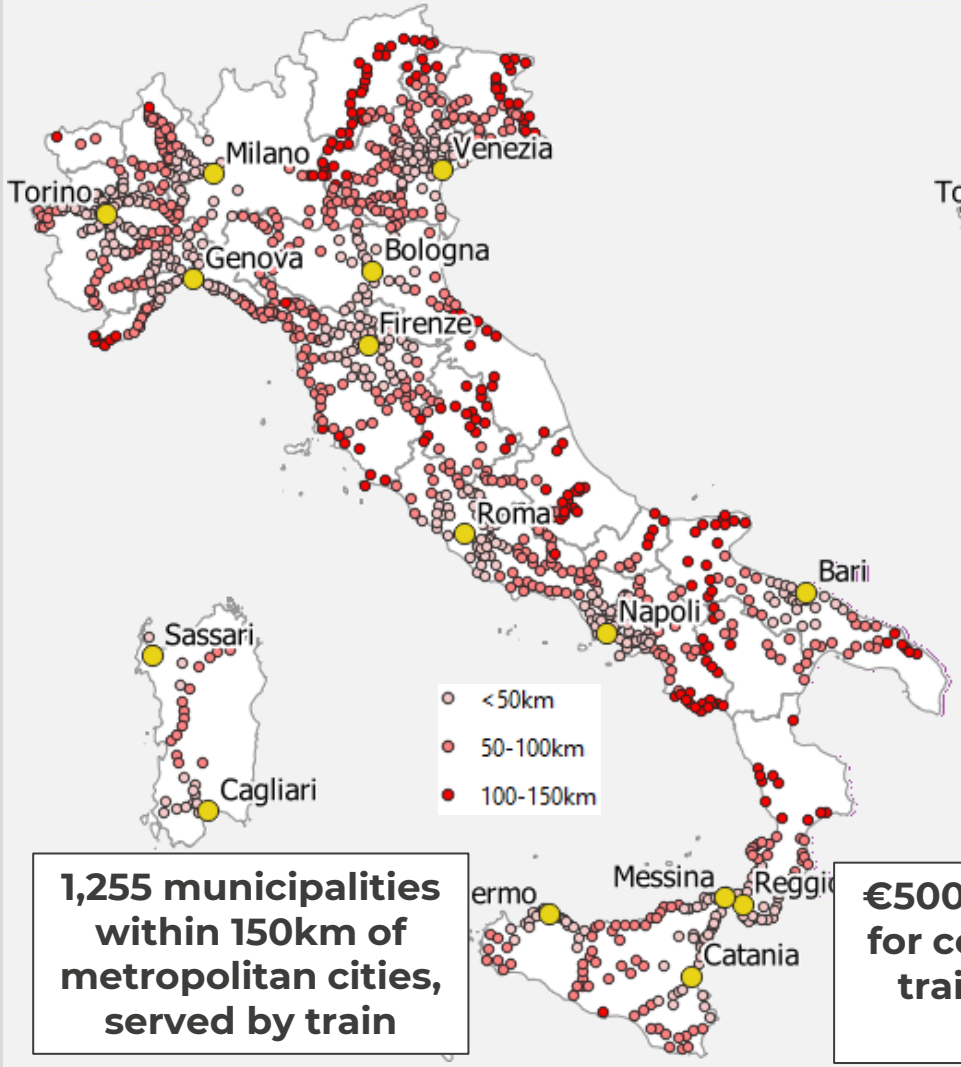
CS SURVEY: Travel purpose **usual work** (**52%**), adult customers

MOBILE PHONE: Foreigners 12% train travel to/from Provinces with Trenitalia tickets sales

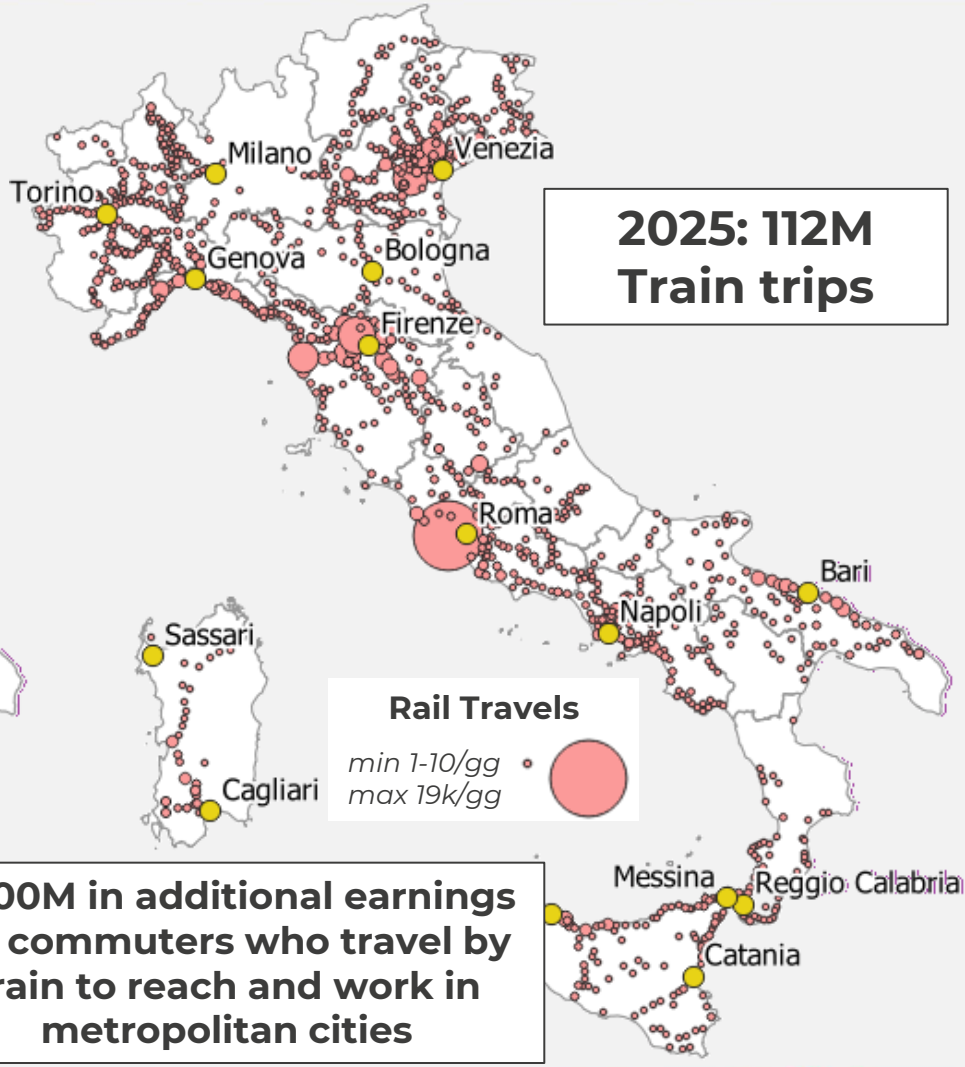
ISTAT: Motorization rate (**65%**), travelers without a car as an alternative to the train

SW OBSERVATORY: Days per year that commuters travel to their **workplace** (**152**, considering holidays and SW)

MEF: Average income by municipality of residence and income surplus in the closest metropolitan city



1,255 municipalities within 150km of metropolitan cities, served by train



2025: 112M Train trips

€500M in additional earnings for commuters who travel by train to reach and work in metropolitan cities

Research Design: Methodology

Avoided Costs for University Commuters

TRENITALIA TICKETING:

- **Rail arrivals** in top MUR* Cities (24 with >20k enrolled students), from Municipalities between 50 and 200km away: **76M**
- Average monthly **season ticket cost**: **€82**

CS SURVEY: Travel purpose **study,** for passengers aged **19-27 (14%)**

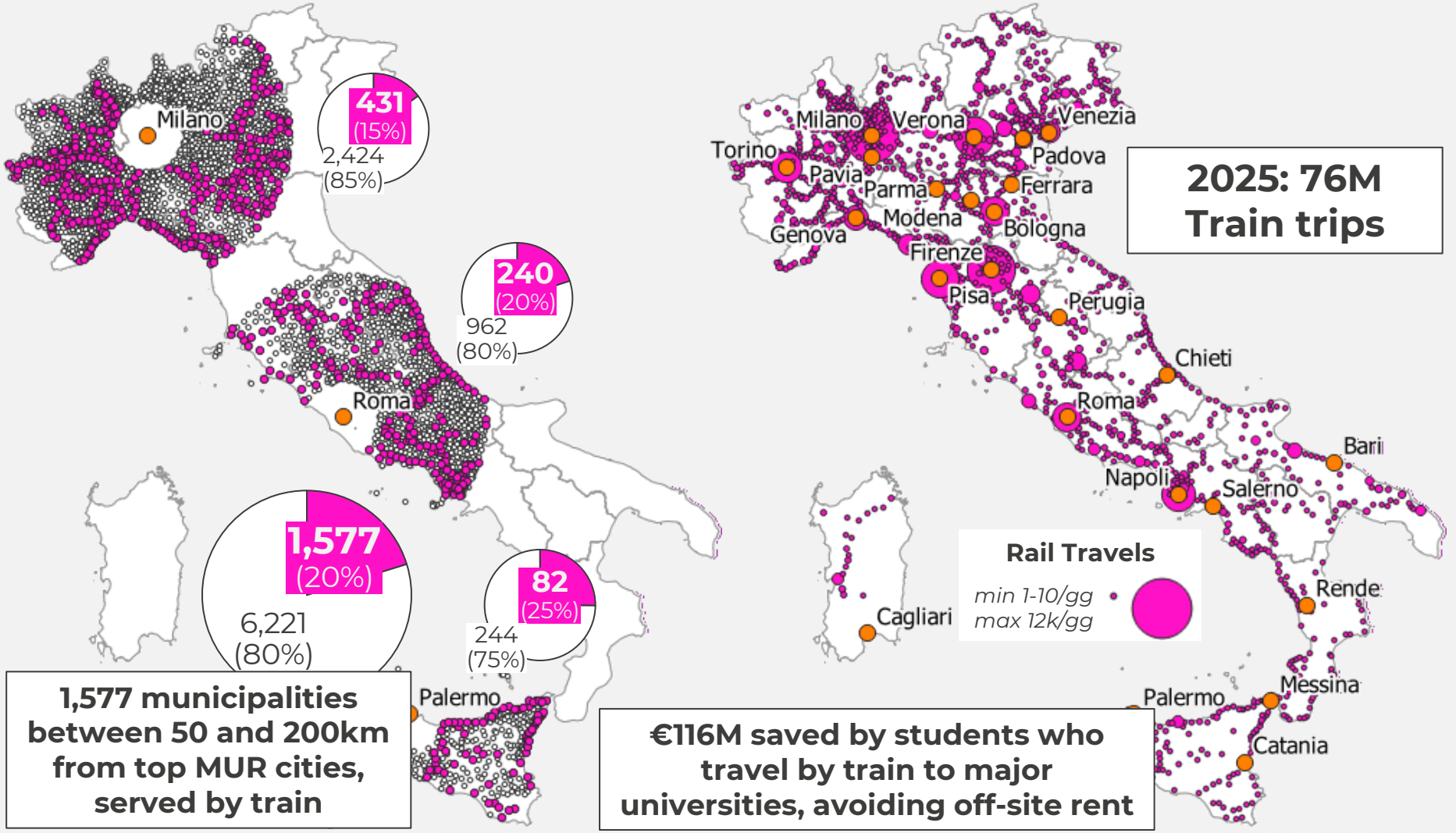
ISTAT: Motorization rate (**65%**), travelers without a car as an alternative to the train

UDU (National Student Union):

- Annual **attendance** days (**160**)
- Average monthly **rent** for a single room: **€430**

**Ministry University and Research*

NB: Municipalities associated with multiple MUR cities



Research Design: Results

Impact Assessment Results

Economic Impact | Social Impact | Environmental Impacts

GDP contribution	**€ 9,640 M**
Overall economic value generated by the railway service, resulting from direct, indirect, and induced effects on the economy	
Mobility Value	**€ 6,901 M**
Benefit resulting from the train transport service provided, which allows travellers to move along the routes covered by the service to meet their needs.	
Added Value to Tourism Locations	**€ 3,265 M**
Added value generated by the expenses that travellers make in tourist destinations reached by train.	
Avoided Accident costs	**€ 1,015 M**
Difference between the costs avoided for the community resulting from road accidents that did not occur thanks to the use of the train as an alternative to the car and the costs generated by railway accidents.	
Avoided Traffic Congestion Costs	**€ 912 M**
Avoided costs to the community resulting from road congestion that did not occur thanks to the use of the train as an alternative to the car.	
Avoided Car Operaitng Costs	**€ 708 M**
Avoided costs for travelers resulting from car operating expenses (e.g., fuel, maintenance, highway tolls, etc.) that were not incurred by using the train as an alternative to the car.	

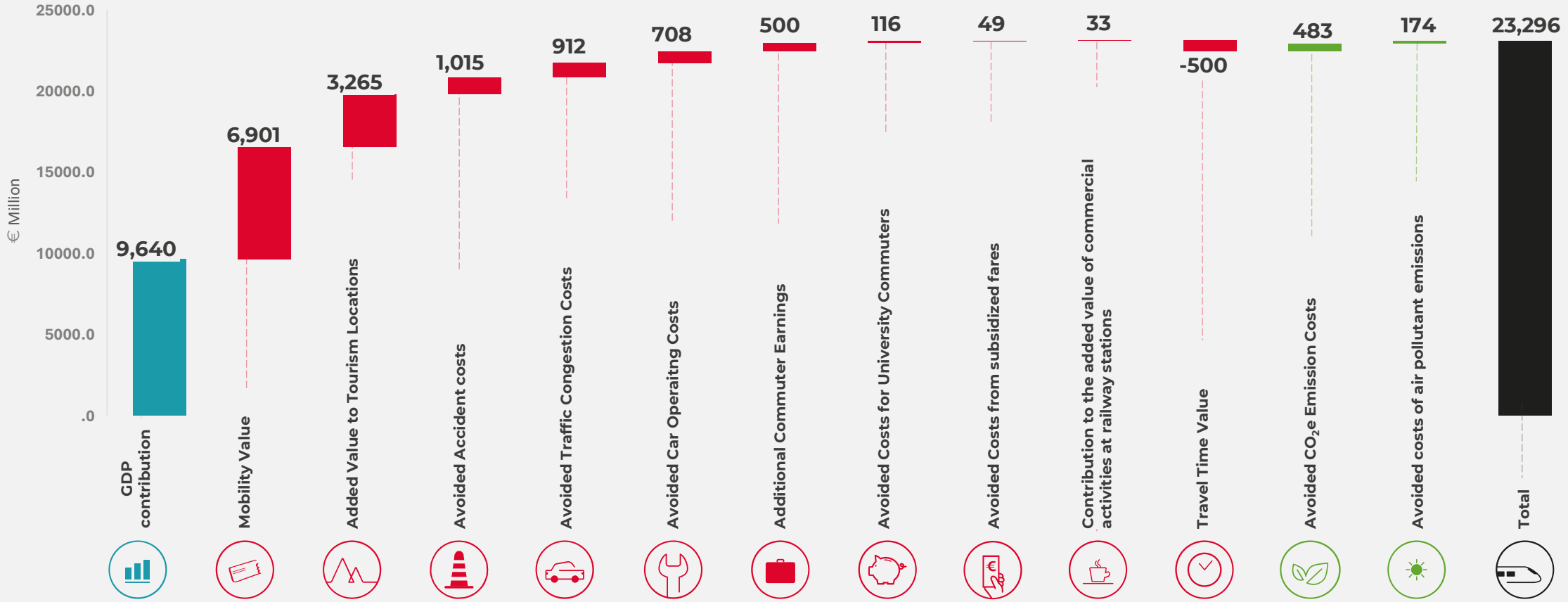
Additional Commuter Earnings	**€ 500 M**
Travelers benefit from access to higher incomes thanks to rail connections between peripheral areas and metropolitan cities.	
Avoided Costs for University Commuters	**€ 116 M**
Avoided accommodation costs for students due to train availability for university commuting	
Avoided Costs from subsidized fares	**€ 49 M**
Costs avoided for travellers resulting from the purchase of discounted travel tickets.	
Contribution to the added value of commercial activities at railway stations	**€ 33 M**
Added value generated by spending by travellers in commercial businesses located in railway stations.	
Travel Time Value	**€ -500 M**
Difference between the value of time spent on trains carrying out work activities and (ii) the value of time lost by travellers due to train delays.	
Avoided CO_2e Emission Costs	**€ 483 M**
Difference between the avoided costs for the community resulting from CO_2e emissions that were not generated thanks to passengers' choice to use the train as an alternative to the car andthe costs from the emissions generated by rail transport.	
Avoided costs of air pollutant emissions	**€ 174 M**
Difference between (i) the avoided costs for the community resulting from emissions of air pollutants that were not generated thanks to passengers' choice to use the train as an alternative to the car and (ii) the costs from emissions generated by rail transport.	

Research Design: Results

Impact Assessment Results

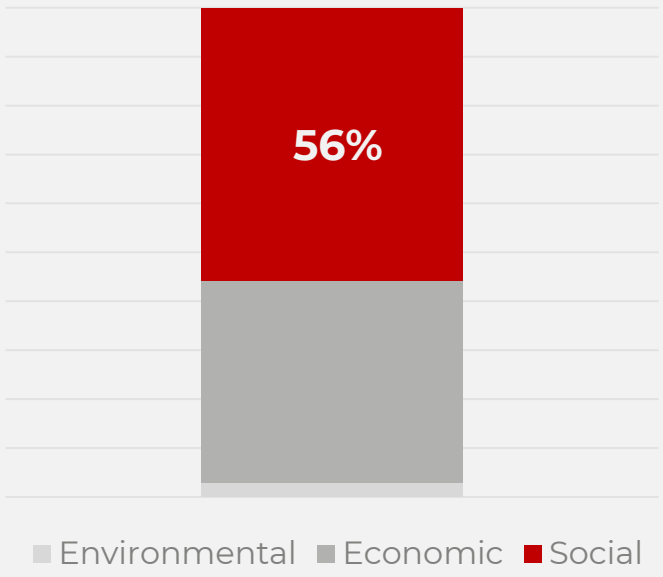
€23 billion shared value generated by Trenitalia's services in 2025

amounting to **four times the revenues**



Final Summary
Takeaways from the Study

Trenitalia Shared Value



While **rail transport** has long been recognized for its environmental sustainability and its significant economic impact, it also plays a **fundamental, yet often underestimated, social role**

Strategic Drivers

Service Quality Upgrades and Rail Offer Expansion: Enhancing rail transport services by introducing new routes, reducing headways (increasing frequencies), and **optimizing train capacity** (load factor) to drive passenger ridership growth.

Leisure and Tourism Rail Service Enhancement: Upgrading tourism-related services by **strengthening connectivity to high-demand tourist destinations**, launching dedicated commercial promotions, and ensuring intermodal integration with local transit networks.

Network Electrification and Rolling Stock Modernization: Promoting rail traction electrification and the **transition to renewable energy sources**, complemented by rolling stock renewal initiatives featuring **high-efficiency**, sustainable trains.

Ridership Retention and Fare Accessibility: Boosting the appeal of rail passes and season tickets through targeted fare policies and **improving accessibility for specific passenger segments** (e.g., students).

priority

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Thank you

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