



**Gruppo FS**

**The Mobility Leader**

## **Mobile Network Data for Mobility Analysis**

Understanding movement patterns through mobile data insights: a Strategic Value for FS Group

# Mobile Network Data as a Source for Mobility Analysis

Data characteristics

Data generated through the continuous interaction between **SIMs** in mobile devices and **cellular network antennas**

**99%**

population covered by the 4G network

**200,000+**

mobile cells distributed nationwide

**23 million**

active human SIMs

**1000+**

daily detections per SIM



Significantly higher data volumes compared with traditional surveys



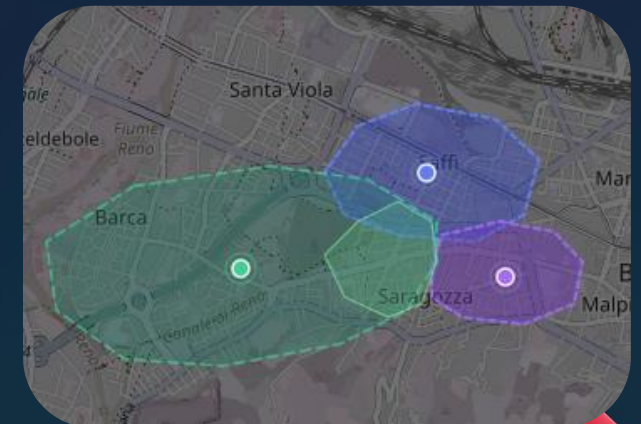
Continuous production over time



Broad population coverage



High spatial granularity



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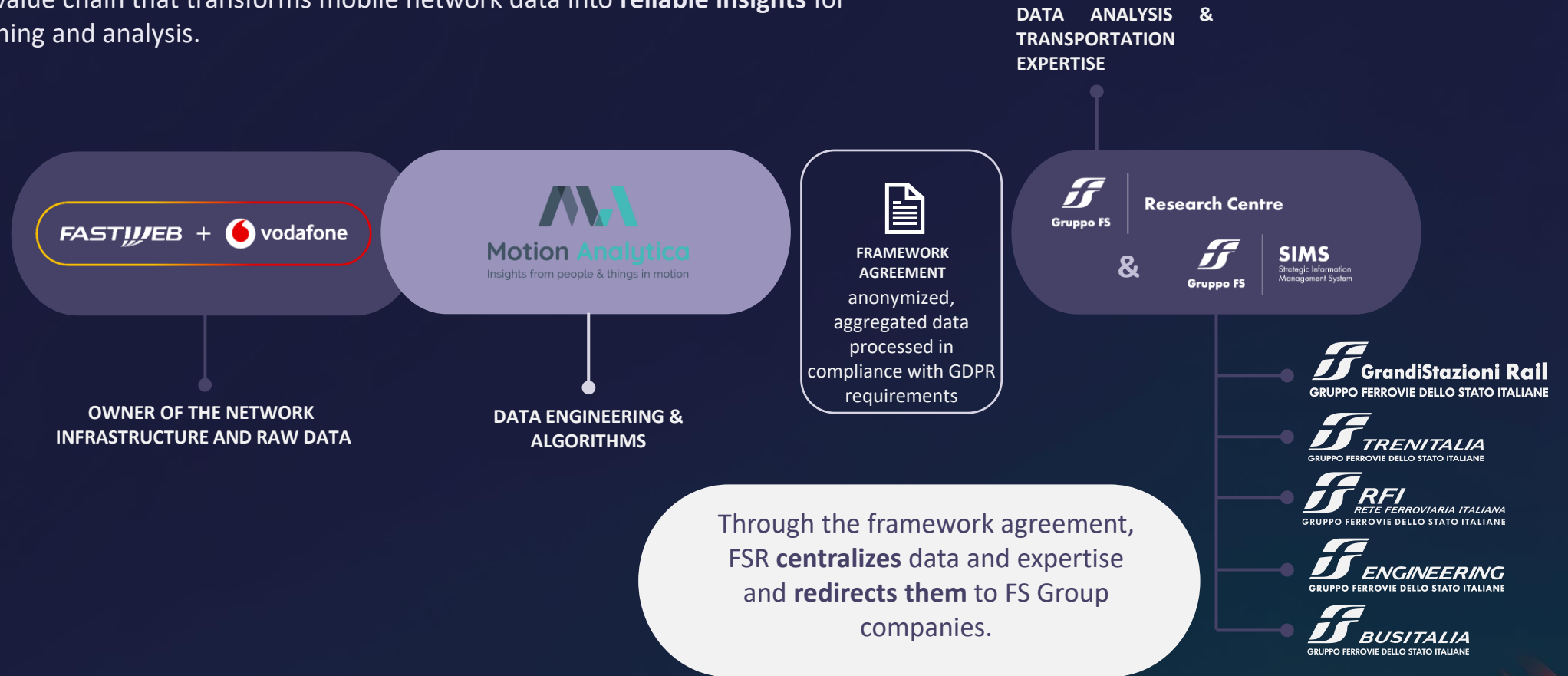
Research Centre

Mobile Network Data for Mobility Analysis

# The mobility data value chain

From the mobile network to strategic analyses for FS Group

A structured value chain that transforms mobile network data into **reliable insights** for mobility planning and analysis.



# OD Matrices and Mobility Indicators

How many people travel every day?

Every day, in Italy, on average

**35.8 million people**

make at least one trip.

Traveling an average of

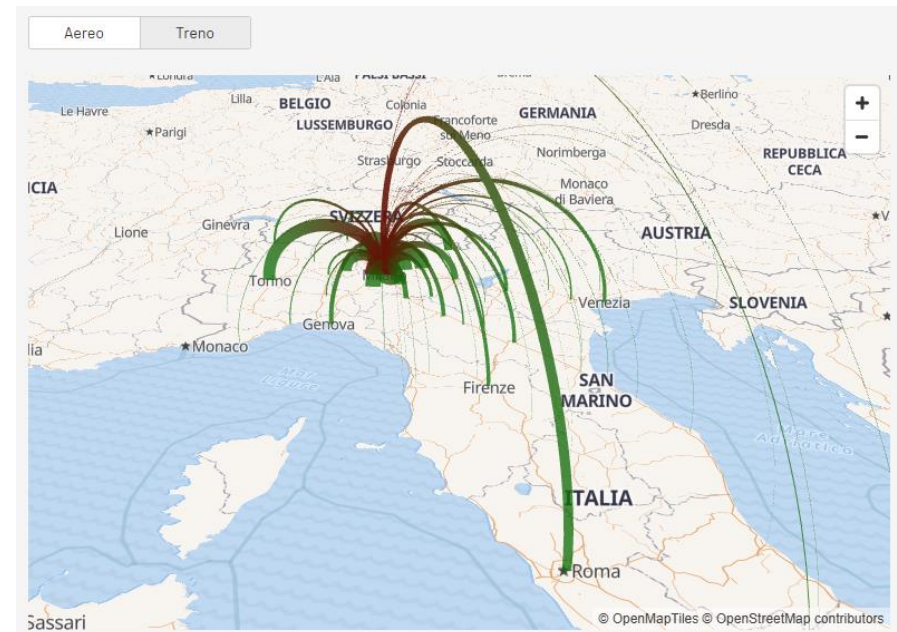
**59.9 km**

For a total of

**2.14 bn km**

across the national territory.

High territorial and temporal granularity enables different mobility dynamics to be distinguished, supporting policies and targeted strategies.



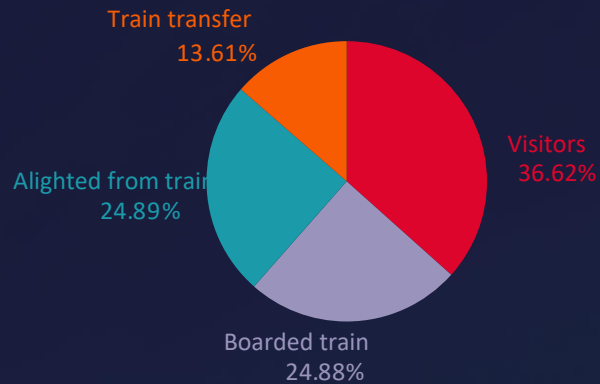
# Station Focus

Dynamic monitoring of major railway stations

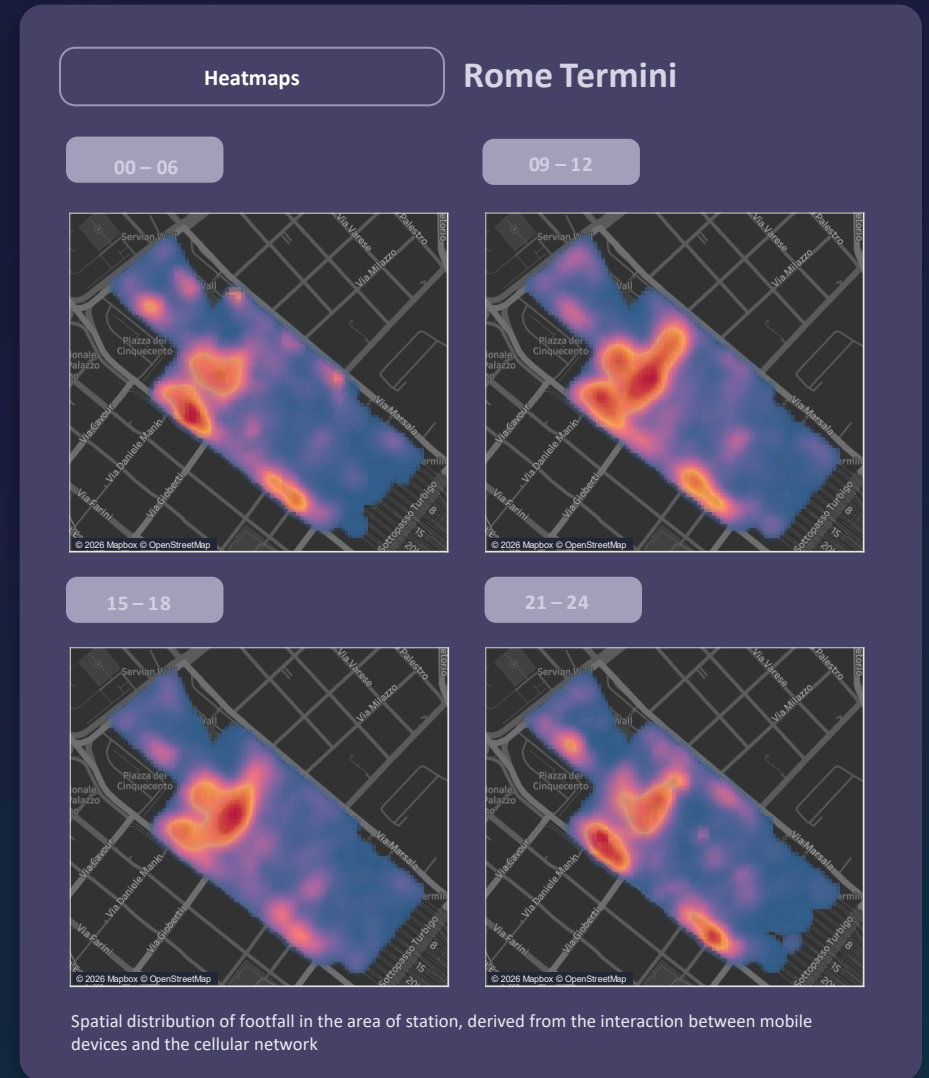
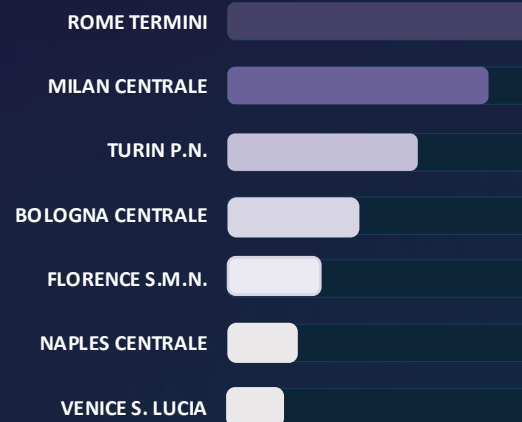
Intensity and spatial distribution of presence in station areas, throughout the day, for each day of the month.

- **No additional** infrastructure to install
- **14 stations** monitored
- Comparability across stations and **over time**
- User profiling of the user base, distinguishing by **Italians and foreigners, commuters and occasional users, visitors and travelers**

Traveler behavior (Rome Termini, January 2024)



Comparison of major stations by footfall (January 2024)



# Which Italian cities attract the most foreign tourists?

Analysis of the itineraries of **foreign tourists** who passed through one of our most central high-speed rail stations: Florence Santa Maria Novella

## 304,293

Foreign travelers passed through **Florence S.M.N.** station during January 2024



- = 1% Africa Other Countries
- Spain France Germany UK Asia
- Rest of Europe North America South America



Main overnight-stay chains of foreign travelers who made a train trip from or to Florence station during January 2024.

### 7

Median number of nights spent in Italy

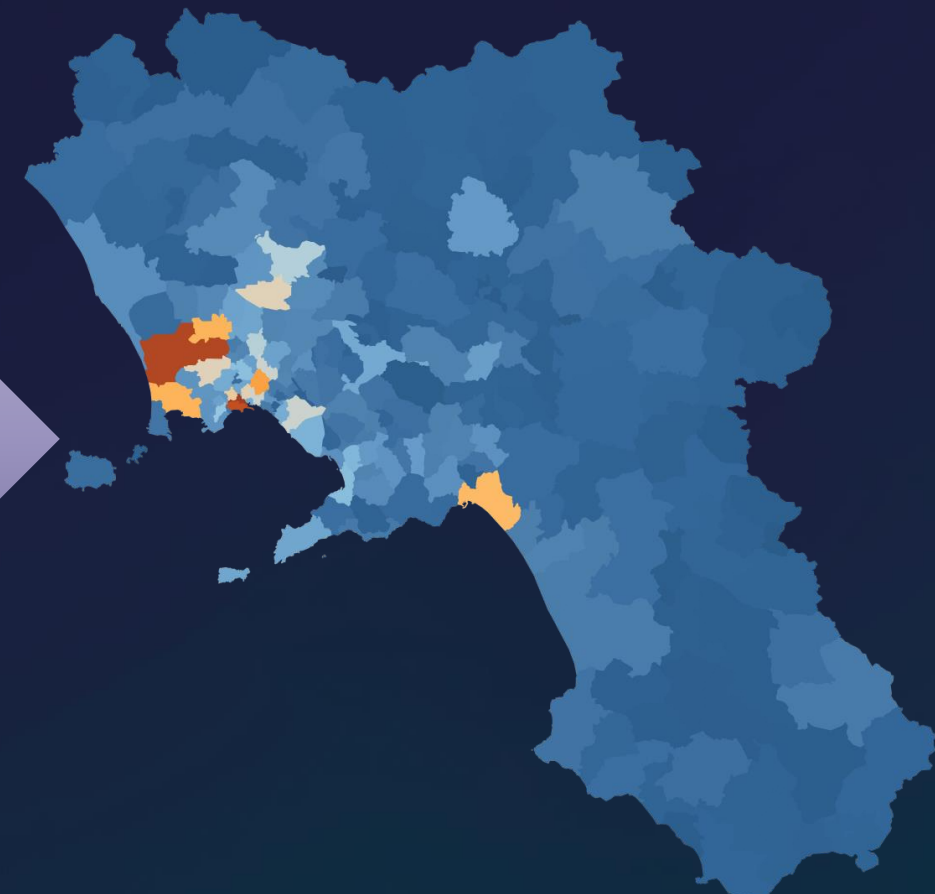
### 3

Median number of provinces where a traveler stayed overnight

# Forecasting framework

Coming soon: forecasting mobility flows

The forecasting framework developed by Fastweb + Vodafone with FSR and Trenitalia will integrate **TELCO mobility data** with **advanced predictive models** to estimate rail demand in ordinary and extraordinary scenarios.



## POSSIBLE USE CASE · AMERICA'S CUP 2027 — NAPLES

### Detection

TELCO tracking of inbound flows to Naples before, during and after the event

### Forecasting

Peak demand estimate by date/route with forecasting models

### Planning

Recommendation to add/reschedule HS services on the Rome–Naples route and corridors

### Dashboard

Near real-time monitoring and interactive dashboards for operational planning

# What They Say About Us

Subtitle Montserrat 12 pt

FSR is the *focal point* within FS Group for everything related to mobility intelligence based on mobile network data, but its role extends well beyond.

The sector is young but rapidly evolving methodologies are being standardized at European level, while institutional frameworks are consolidating.

FS Group, through FSR, is an active participant in this process, with publications, institutional partnerships and presence in the leading European forums where these standards are defined.

FSR is recognized as a primary player by the national and international scientific and professional community.

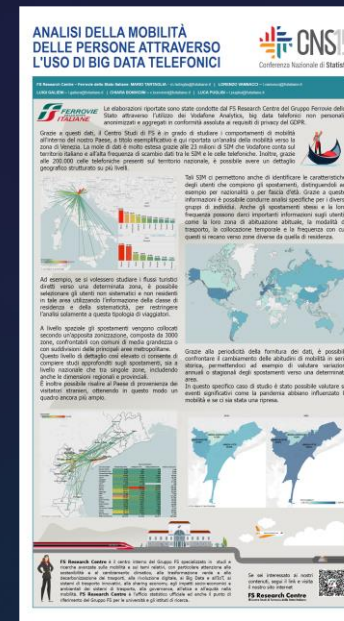
FS Group is a reference point for the MIT on mobility analysis.



1926 | 2026



Istituto Nazionale di Statistica





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*Better data, better mobility, better decisions*

**Lorenzo Vannacci**

Head of Research and Science advisor

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