

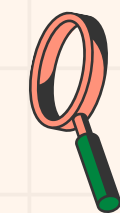
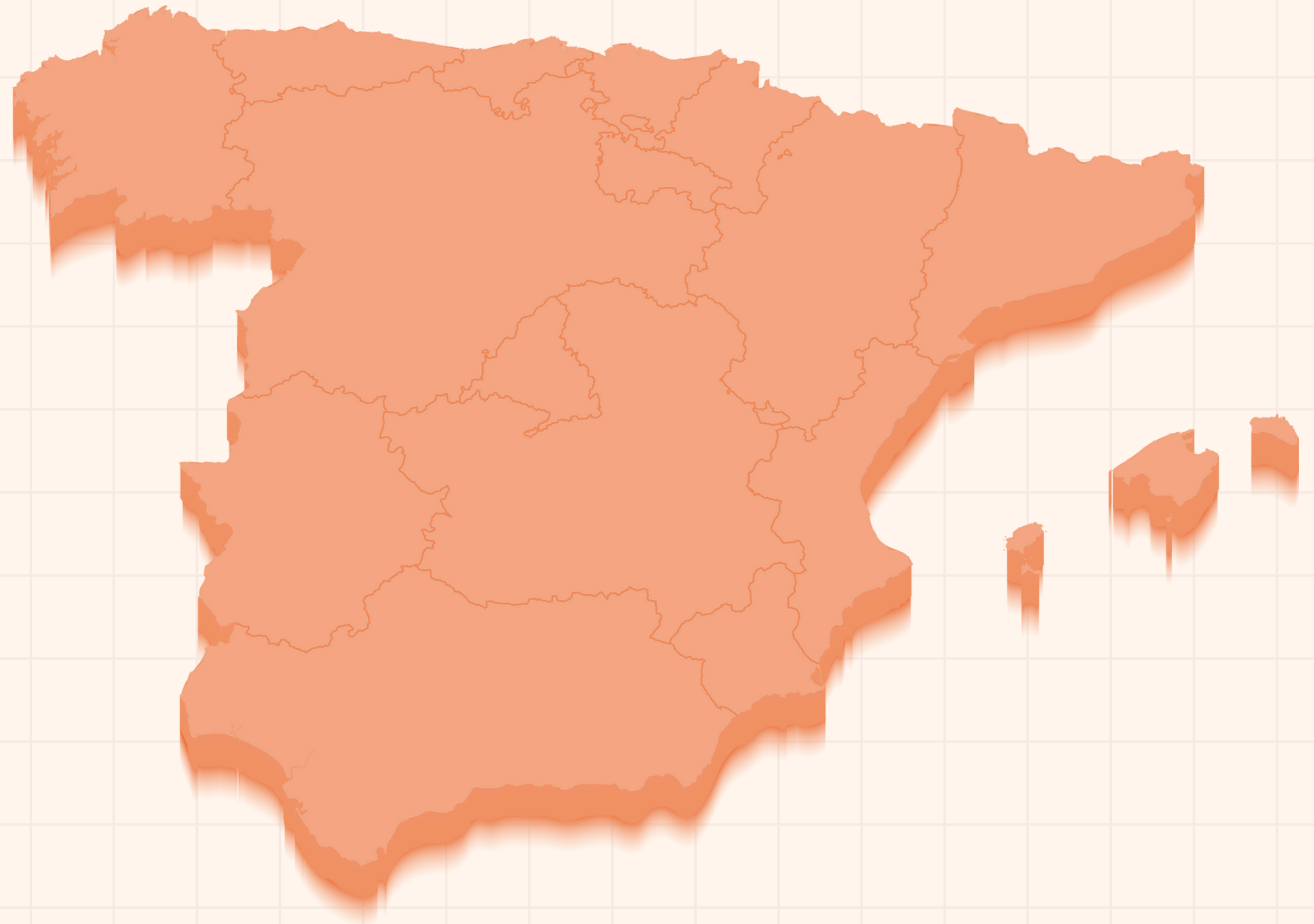


#SIGNALLING

# ERTMS IN SPAIN

Did you know that Spain  
implemented ERTMS around  
the 2000s?

But how does the country  
implement the technology?



LET'S FIND OUT...



# ERTMS IN SPAIN

Implementing ERTMS in Spain...



**Spain is a proven success story** in demonstrating the adaptability of ERTMS to operational needs, infrastructure constraints, and performance requirements.

For each railway line included in the **ERTMS National Implementation Plan (NIP)**, the network will feature a mix of ERTMS levels

Lines with low to medium traffic density, such as conventional lines, are equipped with ERTMS Level 1, guaranteeing **efficient and cost-effective operation**.

High-density corridors, i.e. many High-speed lines, incorporate either ERTMS **Level 1 or Level 2**, optimizing **safety and capacity**.

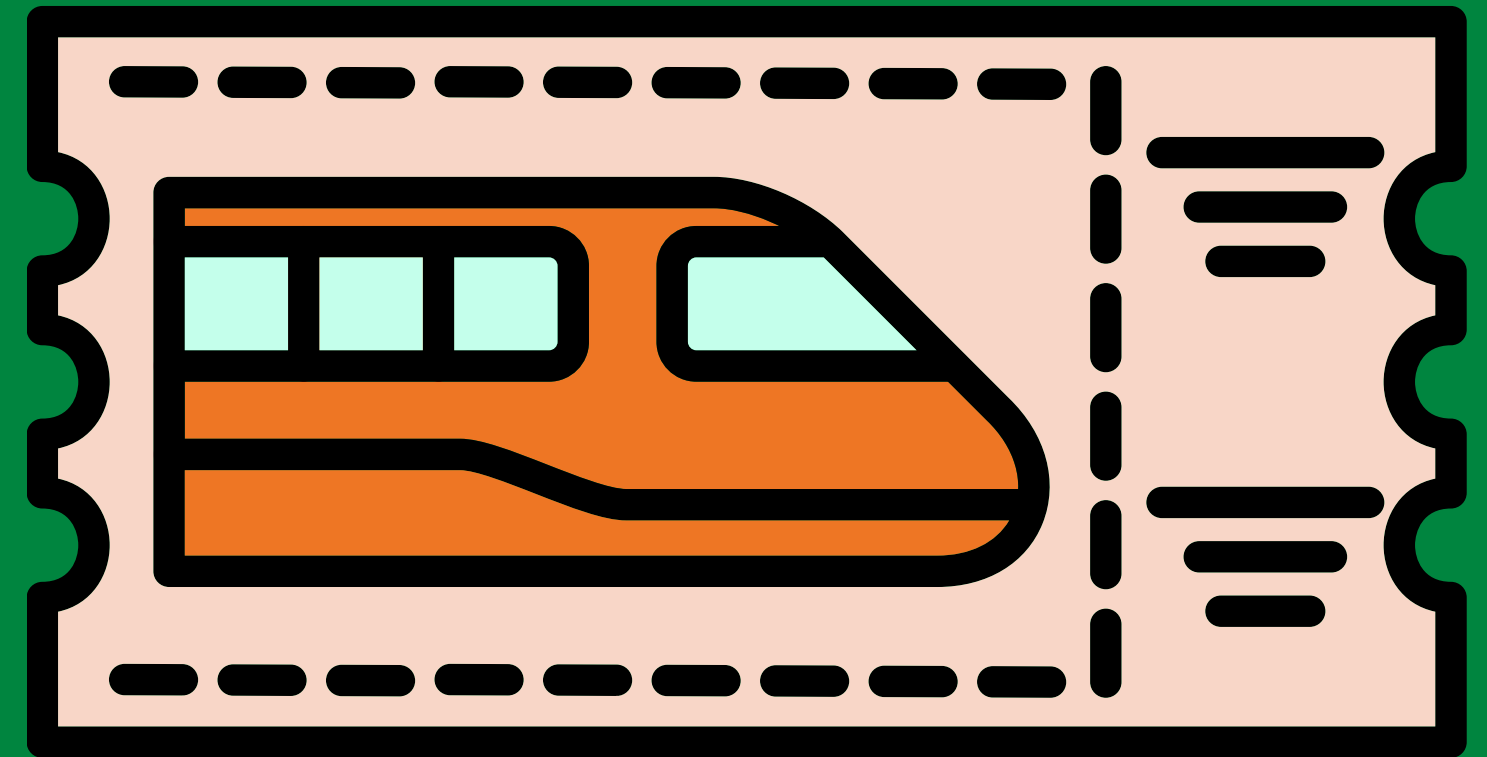
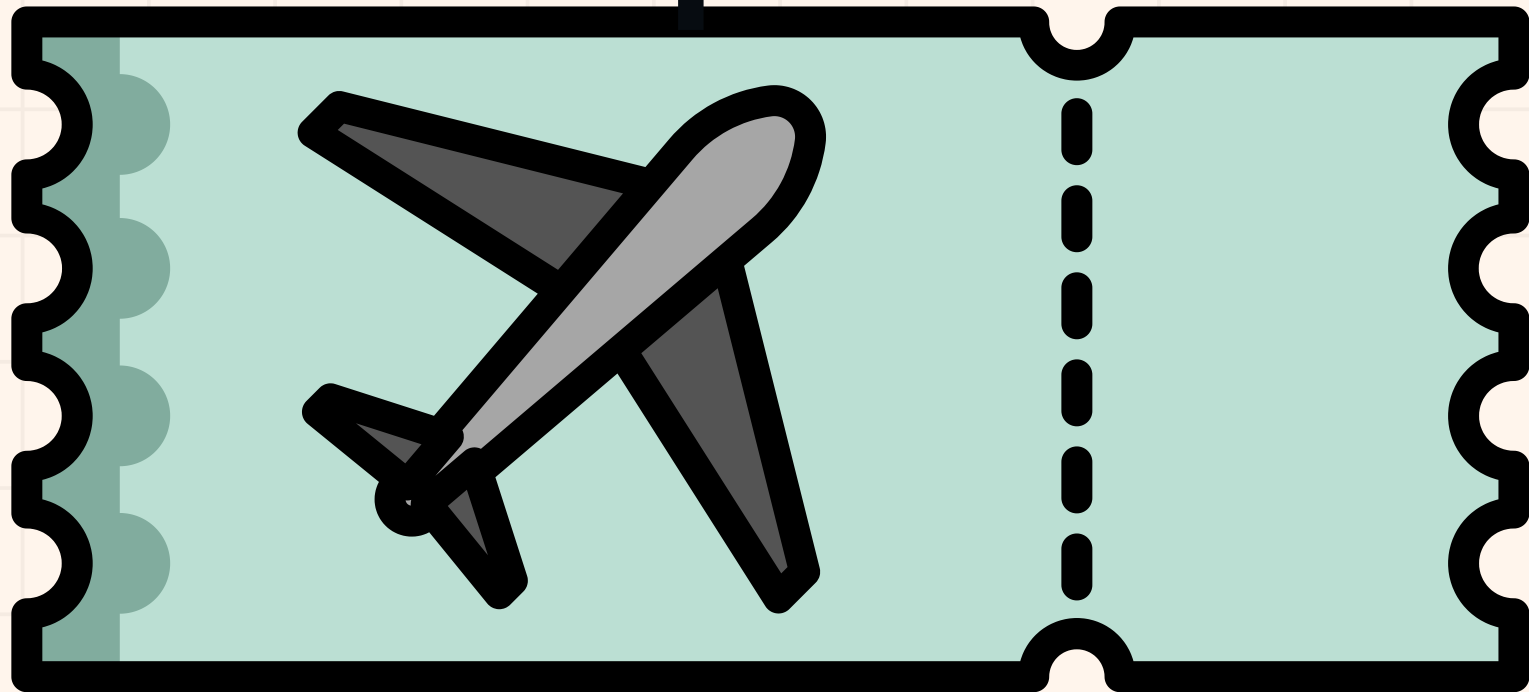
#SIGNALLING



# ERTMS IN SPAIN

Implementing ERTMS in Spain...

## From plane...



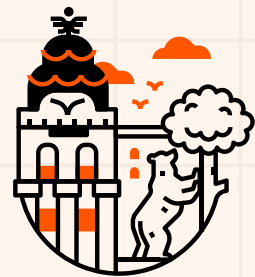
## To train!

#SIGNALING

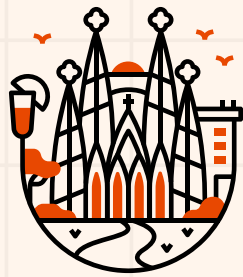


# ERTMS IN SPAIN

Implementing ERTMS in Spain...

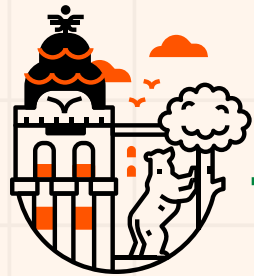


MADRID



BARCELONA

**Madrid-Barcelona:** After one year, **40%** of all trips between Madrid and Barcelona were made by train. By the end of 2023, this figure had grown to **82%**, reaching **8.7 million** trips per year.



MADRID

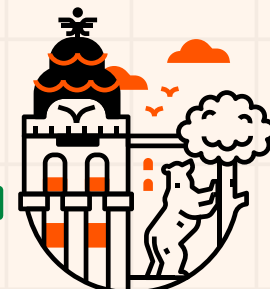


ALICANTE

**Valencia-Madrid:** **93%** of all travellers between Valencia and Madrid take the train, while only 7% travel by plane.



VALENCIA

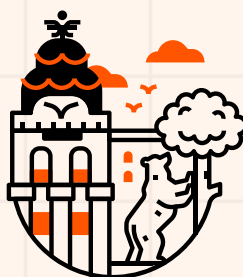


MADRID

**Seville-Madrid:** **87%** of travellers choose the train instead of the plane



SEVILLA



MADRID

**Madrid-Alicante:** **87%** of passengers travel by train rather than by plane.



VALENCIA

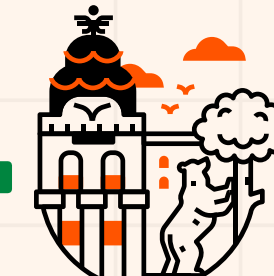


BARCELONA

**Valencia-Barcelona:** **96%** of almost all passengers choose the train on this route.



MÁLAGA

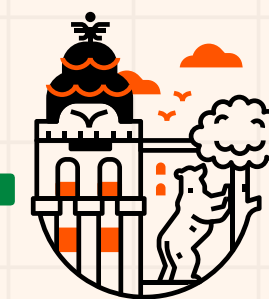


MADRID

**Málaga-Madrid:** **78%** of the market share on this route is held by trains, although air travel remains a more relevant option compared to other routes.



MURCIA



MADRID

**Murcia-Madrid:** Rail travel seems to dominate the Murcia-Madrid route by **99%**

#SIGNALLING