



# BOOSTING CROSS-BORDER REGIONS THROUGH BETTER TRANSPORT

14 NOVEMBER 2019 | BRUSSELS, BELGIUM



#EUBorderRegions

Regional and  
Urban Policy

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# Strategy for Development Portuguese Rail Network

## EFFICIENCY    COMPETITIVENESS    SUSTAINABILITY

### Constraints

- Existing infrastructure constraints (750m trains, electrification, capacity)
- Interoperability limitations with Spain (infrastructure and operations)

### Opportunity

- EU transport policy (TEN-T)
- Portuguese-Spanish cooperation agreement

### Strategy

- National transport policy: **FERROVIA 2020**
- National Rail Network Development Strategy – PNI 2020-2030
- Interoperability implementation plan



# Ferrovias 2020



## INCREASE COMPETITIVENESS

- ✓ Reduce travel times and transport costs
- ✓ Increase capacity (more and bigger trains)



## IMPROVE INTERNATIONAL LINKS

- ✓ North South Corridor (Porto/Vigo)
- ✓ Internacional North Corridor (Leixões/Aveiro – Vilar Formoso)
- ✓ Internacional South Corridor (Sines – Caia)
- ✓ Increase railway accessibility to national sea ports



## CREATE CONDITIONS FOR RAILWAY INTEROPERABILITY

- ✓ Electrification
- ✓ Electronic signalling
- ✓ Length of freight trains - 750 m
- ✓ Installation of dual gauge sleepers



GLOBAL INVESTMENT ~ € 2.000 MILLION € MORE THAN 1.000 KM OF LINES FOR INTERVENTION



## WHY THE NEED TO DEVELOP A IBERIAN RAILWAY NETWORK STRATEGY

- Existing infrastructure constraints - Interoperability limitations with the Spanish rail network
  - Electrification - 25 kV c.a. vs 3000 V c.c.
  - Signaling - Each country has its own system
  - Reduced capacity, in particular for longer freight trains
  - Train drivers - Each country requires its own certification
  - Trains - Adapted to the particularities of each country



# Strategy for a better cross-border railway

## WHY THE NEED TO DEVELOP A PORTUGUESE RAILWAY NETWORK STRATEGY

Better international railway connections are critical to promote:

- the Portuguese geostrategic location – Peripheral to Europe but central in the North Atlantic
- The modal shift from road to rail



Creating conditions for interoperability and eliminating constraints together with Spain is a critical factor for success for both countries



# Strategy for a better cross-border railway

## RELEVANT ISSUES

### Corridor socio-economic data

- Internal population of the corridor 4.6 million habitants
- Corridor area 15,408 km<sup>2</sup>
- Activity rate 59% resident population (corridor average)

Both in Galicia and in the North of Portugal the tertiary sector predominates with 65.15% and 51.59% respectively, while the secondary sector has a weight of 26.90% in Galicia and 36.75% in the North of Portugal



### GDP 2017

Region	Annual	Per capita
Northern Portugal	48.700 M €	16.000 €
Galicia	60.600 M €	22.400 €



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# MINHO RAILWAY

The modernization of Minho railway line is part of a broader plan to modernize the Portuguese national railways: **FERROVIA 2020**. The line is located in the North of Portugal and connects the metropolitan area of Porto to Galicia, in Spain. This modernization aims primarily at reducing travel times and transport costs, through electrification and capacity increase.





# MINHO RAILWAY MODERNIZATION

## MAIN GOALS

- ✓ **REDUCE TRAVEL TIMES**, as a result of using electric traction and elimination of disruption at Nine.
- ✓ **INCREASING COMPETITIVENESS OF FREIGHT RAILWAY TRANSPORT**, by allowing 750 m trains
- ✓ **TRIPLE TRANSPORT CAPACITY** : from 15 trains of 300 m per day to 20 trains of 750 m.
- ✓ **INCREASE SAFETY AND RELIABILITY LEVELS**, as a result of the installing a new signaling and telecommunications system
- ✓ **INCREASING THE SAFETY OF ROAD AND RAILWAY**, through level crossings closure and automatization.
- ✓ **IMPROVE INTERNATIONAL CONNECTIONS** of North South Corridor (Porto-Vigo)



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# MINHO RAILWAY MODERNIZATION

## PROJECT DESCRIPTION

### ELETRIFICATION:

- ✓ Completed: section Nine/Viana do Castelo;
- ✓ Ongoing: section Viana do Castelo / Valença;

### TRACTION SUBSTATION CONSTRUCTION:

- ✓ Completed: 1st phase concluded - construction of the substation in Vila Fria
- ✓ Ongoing: connection to the National Railway Network

### SIGNALING AND TELECOMMUNICATIONS SYSTEM:

- ✓ Ongoing: connection to Porto OCC

### LEVEL CROSSINGS:

- ✓ to launch: elimination and automatization of level crossings



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## MAIN BENEFITS PASSENGER AND FREIGHT SERVICES

- ✓ **Electric rolling stock** for passengers and goods
- ✓ **Reduction in the cost of freight transport** - electric traction and increase in length to 750 m
- ✓ **Possibility of implementing passenger services, without disruption**, between Porto, Viana do Castelo and Valença (electric trains)
- ✓ **Reduce travel time:**
  - International service – 10 min after completion of Viana-Valença modernization
  - Inter-regional – 12 min after completion of Viana-Valença modernization
  - Regional – 7 min between Nine and Viana do Castelo
- ✓ **improve international connections** of North South Corridor (Porto-Vigo)



# MINHO RAILWAY MODERNIZATION

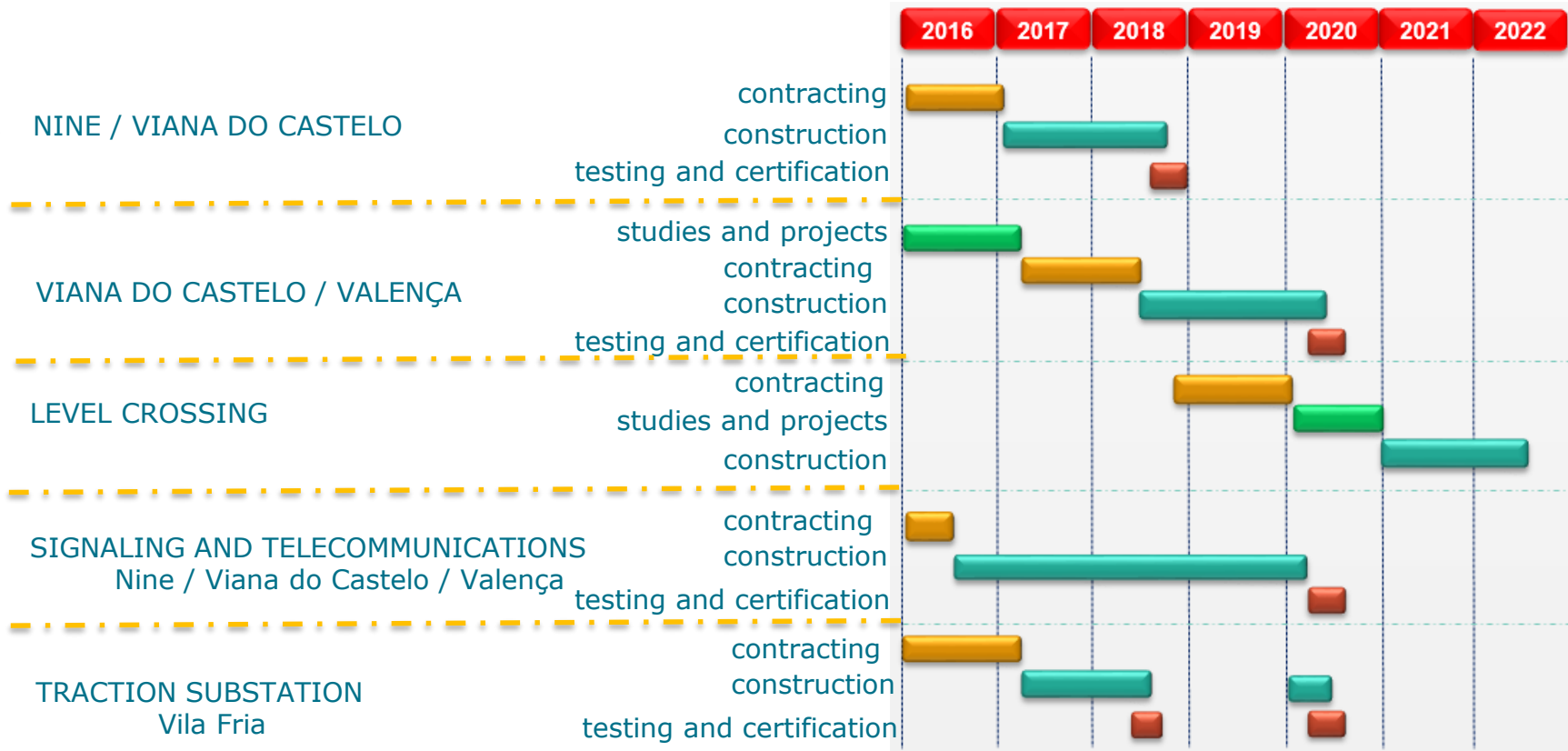
## MAIN BENEFITS ECONOMIC & ENVIRONMENTAL BENEFITS

- ✓ **Reduction CO2 emissions** – 300 million ton CO2 eq (by 2046)
- ✓ **Reduction of pollutant emissions and noise**- electric traction and increase in length to 750 m;
- ✓ **Reduction of the number of accidents and travel time**
- ✓ **Reduced cost for operators**



# MINHO RAILWAY MODERNIZATION

TIMELINE



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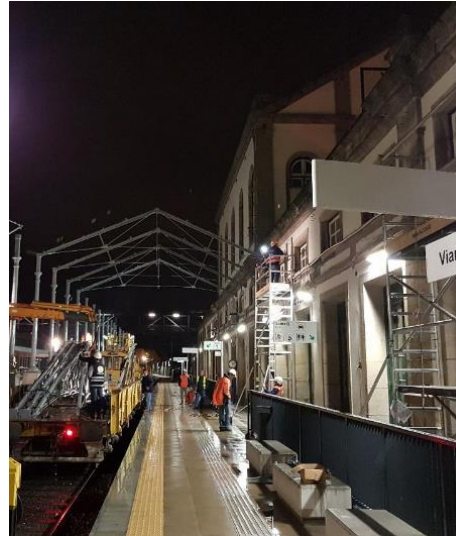
# MINHO RAILWAY MODERNIZATION

## MAIN WORKS Stations and halts – Viana do Castelo station

Before



During



After



Stations

5 un

Passenger canopies (new)

8 un

# MINHO RAILWAY MODERNIZATION

## MAIN WORKS stations and halts – Carreira halt

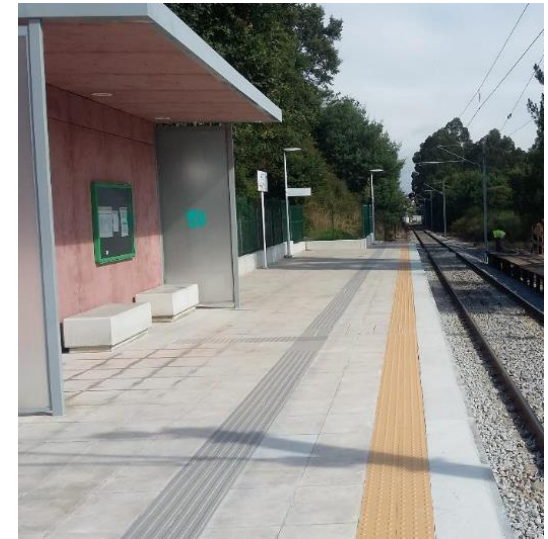
Before



During



After



Halts	7 un
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Passenger canopies (new)	7 un
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# MINHO RAILWAY MODERNIZATION

## MAIN WORKS track works – track lowering on Carreira

Before



During



After



New tracks	3 023 m
Ballast	8 350 m <sup>3</sup>
New switches	5 un

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# MINHO RAILWAY MODERNIZATION

## MAIN WORKS crossing stations 750 m: Midões, Barrocelas, Carreço e Carvalha

Before



During



After



# MINHO RAILWAY MODERNIZATION

## MAIN WORKS tunnels sealing: Carreira, Tamel e Santa Lucrecia

Before



During



After



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# MINHO RAILWAY MODERNIZATION

## MAIN WORKS catenary installation: Nine / Viana do Castelo

Before



During



After



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