

NEW HIGH-SPEED LINE PORTO-LISBON

A TRANSFORMATIVE PROJECT

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LISBON, APRIL 2024

KEY OUTCOMES

FERROVIA 2020



Programme Scope

Spans over 1,000 km

Investment of 2,000 M€



Improved international rail connections

Connections between seaports and key land borders



Increased competitiveness

Reduced transport costs and travel times

FERROVIA 2020
PROJETAR PORTUGAL NA EUROPA

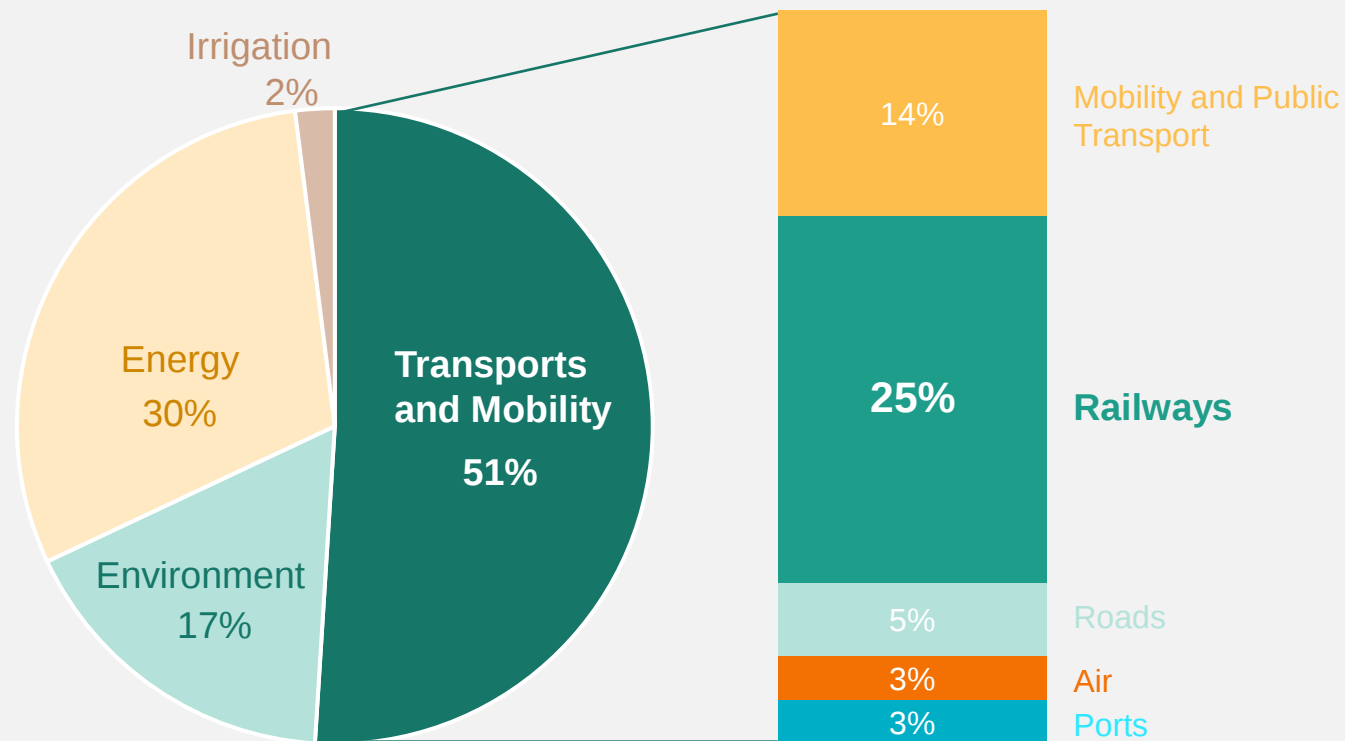




National Investment Plan 2030 (PNI 2030)

OVERVIEW

- ✓ Multisectorial Plan
- ✓ Large scale projects (> 75 M€)
- ✓ Horizon 2021-2030
- ✓ Global Investment 43 B€



LIST OF RAIL PROJECTS

PROJECT	ENTITY	INVESTMENT	HORIZON
New high-speed line Porto Lisbon	IP	4500 M€	2021-2030
Programme for increasing rail capacity in the metropolitan areas	IP	290 M€	2021-2026
Programme for increasing safety, noise reduction and adjustment to climate change	IP	375 M€	2021-2030
Programme for signalling and implementation of ERTMS/ETCS + GSM-R	IP	270 M€	2021-2030
Programme for electrification	IP	740 M€	2021-2030
Programme for telematics, stations and safety	IP	165 M€	2021-2030
Programme for improving multimodal terminus	IP	200 M€	2021-2030
Modernisation of the rail links to Faro and Beja	IP	230 M€	2021-2025
Modernisation of the Vouga Line	IP	100 M€	2021-2025
Connection between Cascais Line and Cintura Line	IP	200 M€	2023-2027
New high-speed line Porto-Valença-Vigo (1 st phase)	IP	900 M€	2021-2030
South International Corridor (2 nd phase)	IP	150 M€	2021-2030
North International Corridor (2 nd phase)	IP	600 M€	2026-2030
New rolling stock: Suburban services	CP	680 M€	2021-2030
New rolling stock: Long distance services	CP	650 M€	2021-2030
New rolling stock: Regional services	CP	385 M€	2021-2030
		10.5 B€	

MAIN BOTTLENECK OF THE PORTUGUESE RAILWAY SYSTEM

CAPACITY RESTRICTIONS ON 'NORTE LINE'



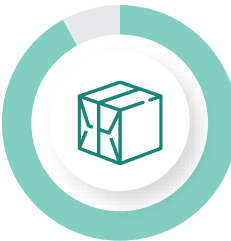
730

daily trains run along 'Norte Line'



44%

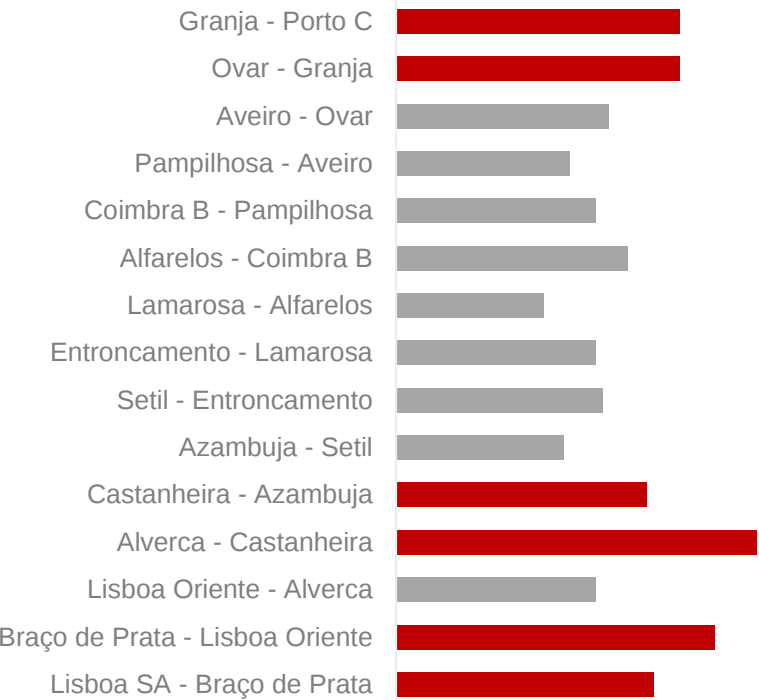
of the daily trains running in Portugal



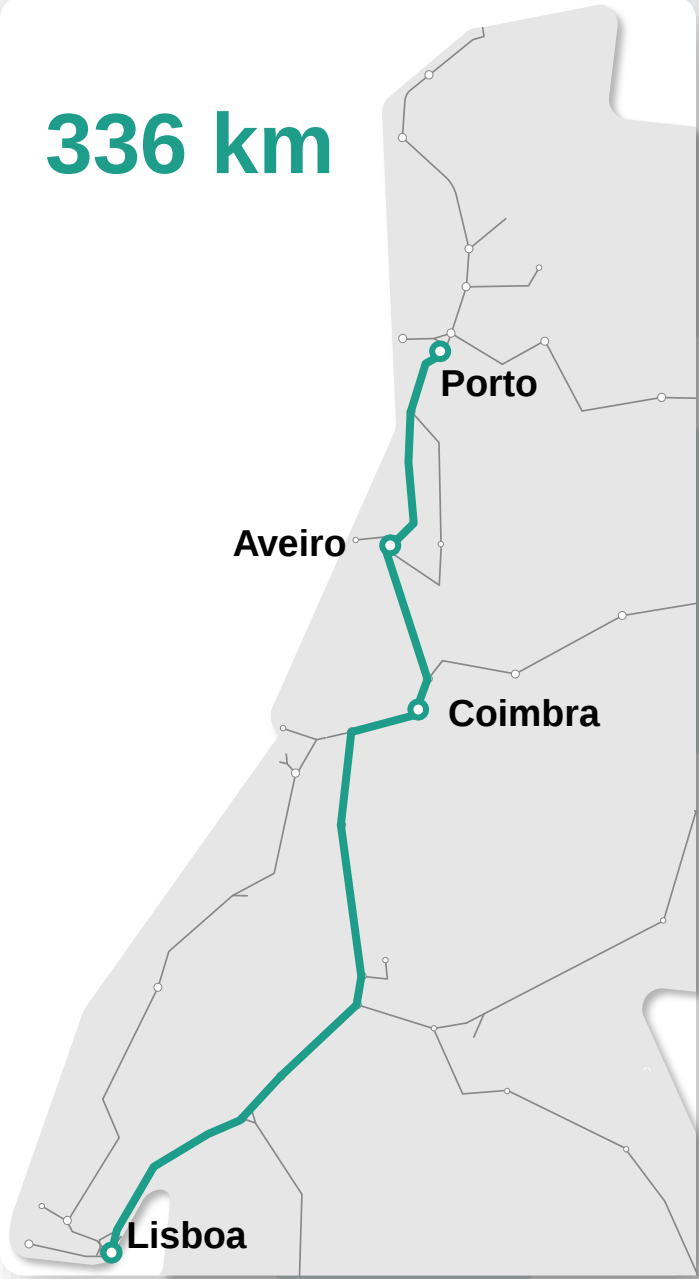
92%

of all freight trains running in Portugal

DAILY TRAINS/DIRECTION ■ > 75



336 km

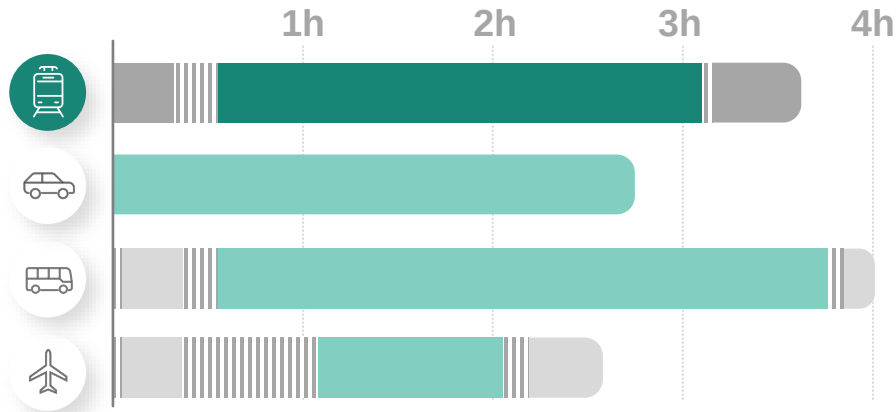


MAIN BOTTLENECK OF THE PORTUGUESE RAILWAY SYSTEM

LACK OF COMPETITIVENESS OF 'NORTE LINE'

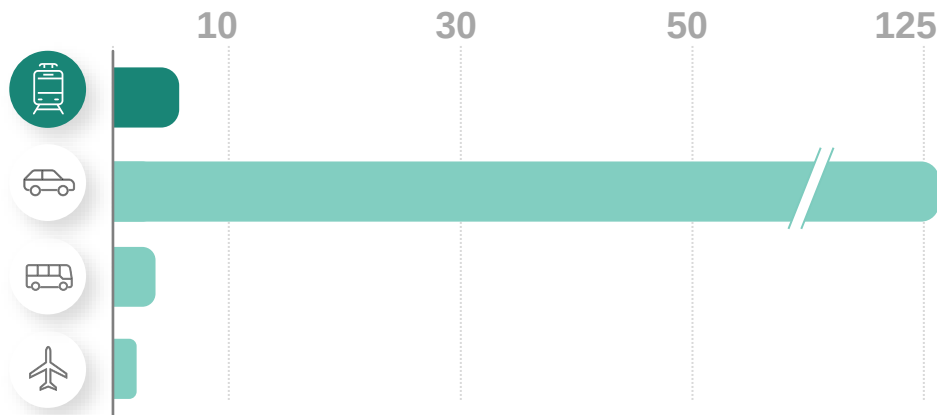
Travel Time Porto-Lisbon

- Main transport
- Complementary transport
- Waiting time



Current Demand axis Porto/Lisbon

Million
passengers/annum



KEY PROJECT FEATURES



Direct travel time between Porto and Lisbon: 1h15m

Overall reduction of journey times along the corridor



New double track line for high speed

Phased development

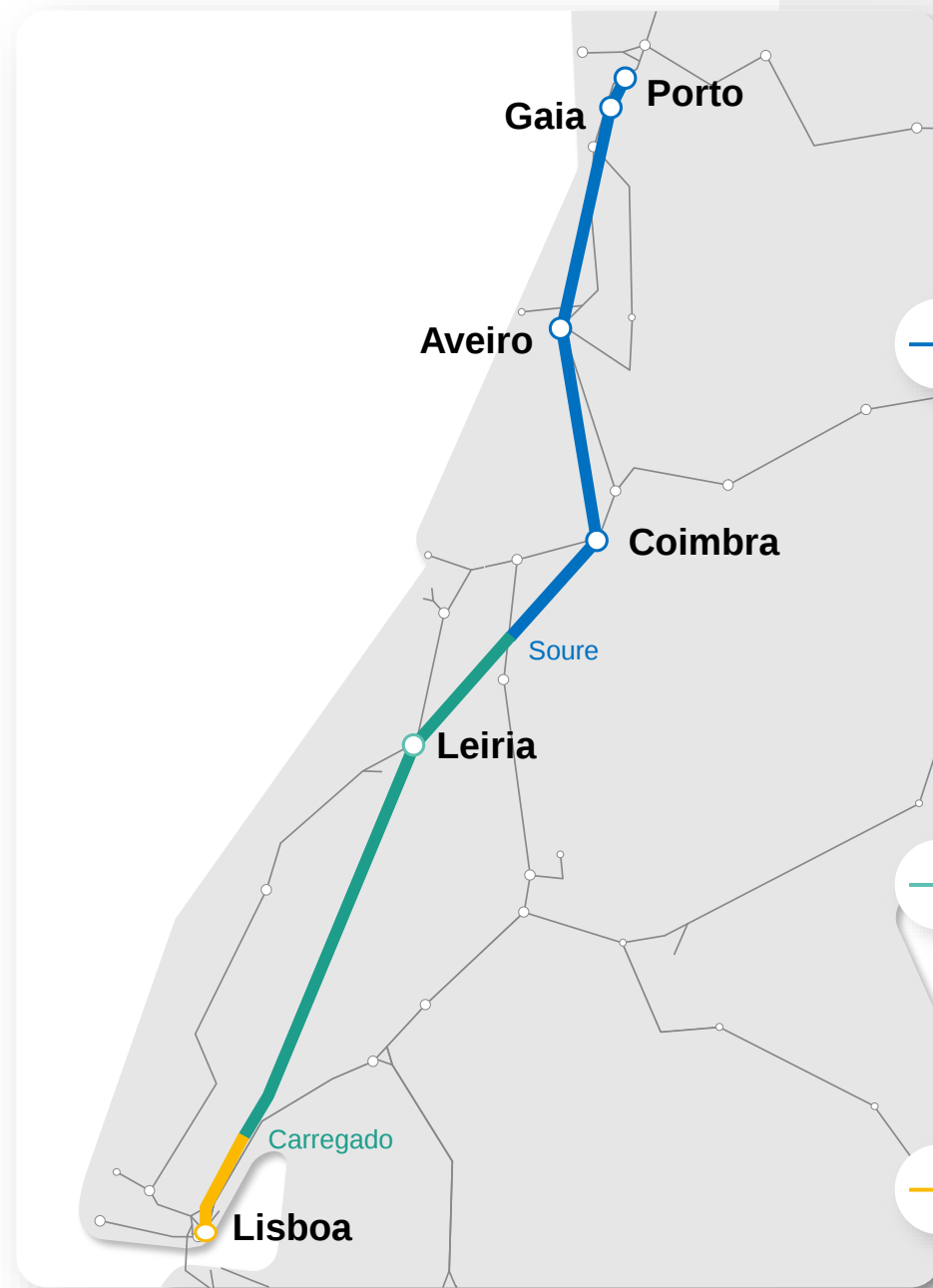
Installed with 1667 mm gauge track



Stations

Existing central stations adapted to HS

New station in Vila Nova de Gaia



PHASE 1

2025/2030

PHASE 2

2027/2032

PHASE 3

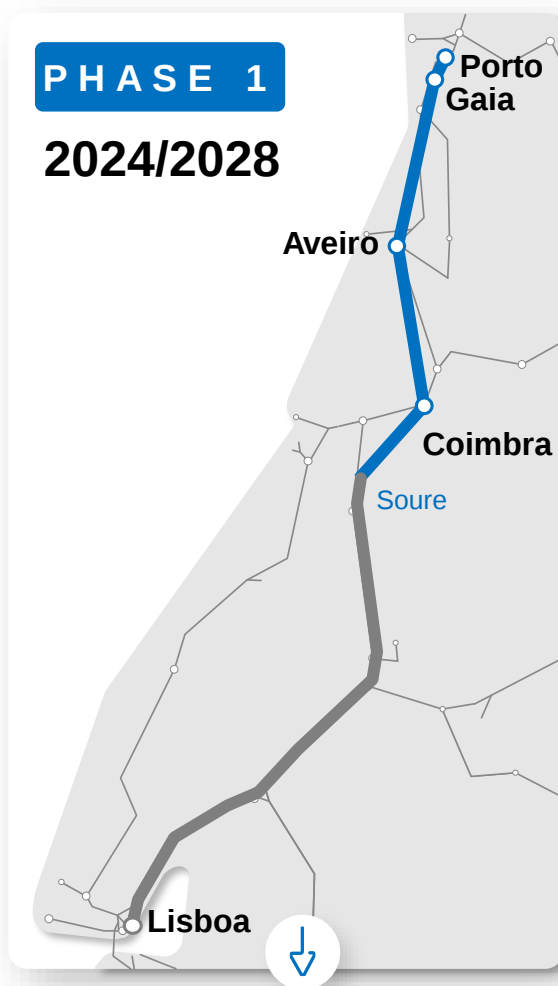
> 2030

TRAVEL TIMES

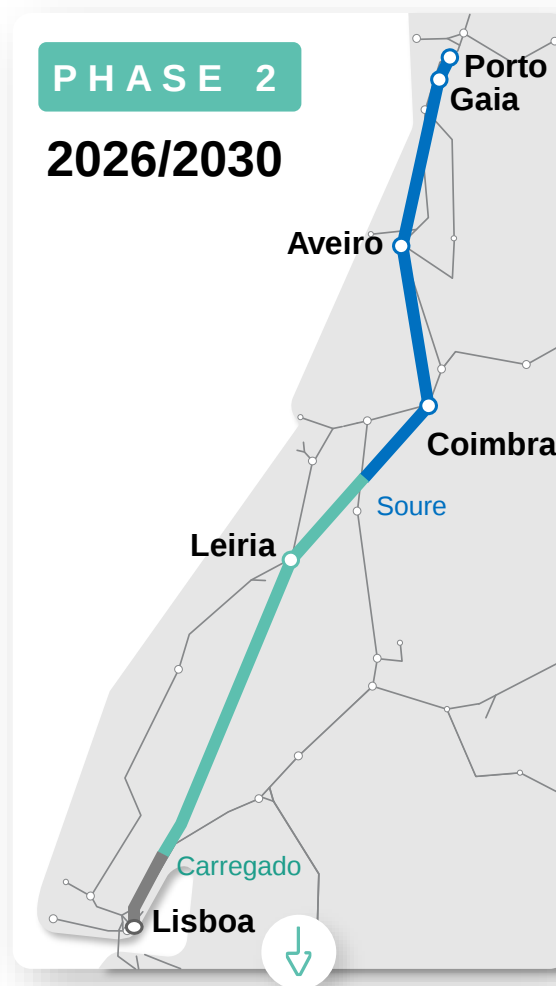
PORTO-LISBON (DIRECT SERVICES)



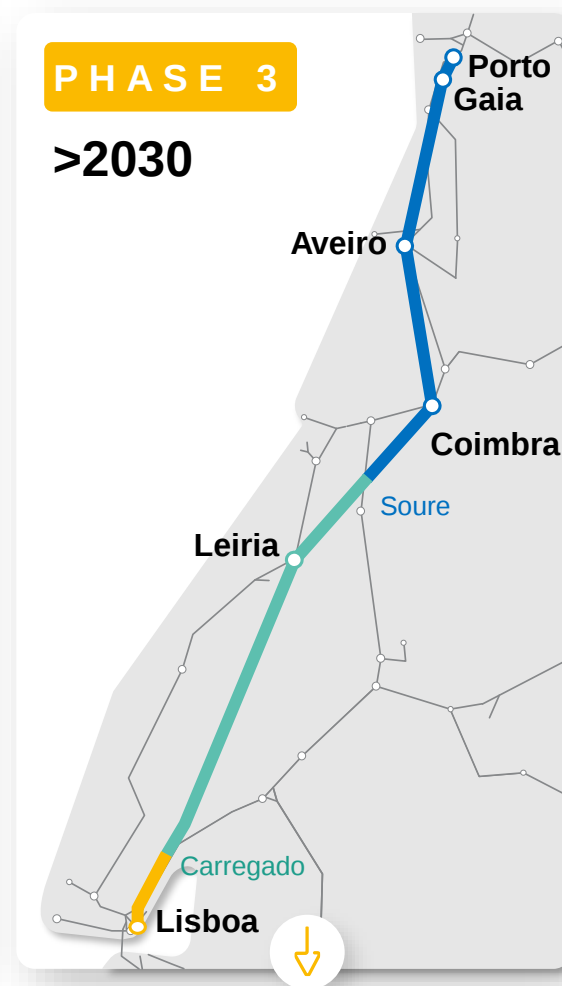
2h49m
3 Stops



1h59m
Direct



1h19m
Direct



1h15m
Direct

RAIL SERVICES

(Per day / Per direction)



ATUAL

11

Alfa Pendular
Services



PHASE 2

60

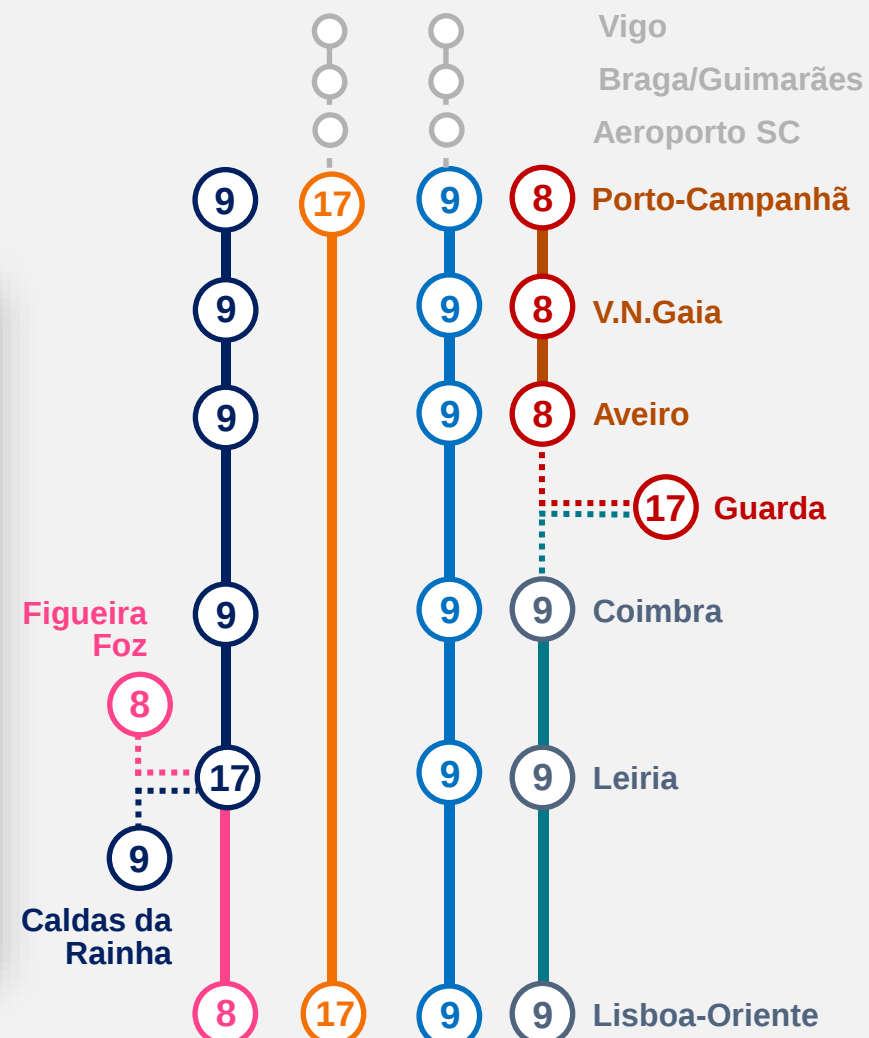
Services
on HSL

26

HS Services
Direct &
Stopping

34

Hybrid
Services
HSL - Existing
Rail Network



SERVICES SCENARIO

60

Services
on HSL

17/9

HS Services
Direct/
Stopping

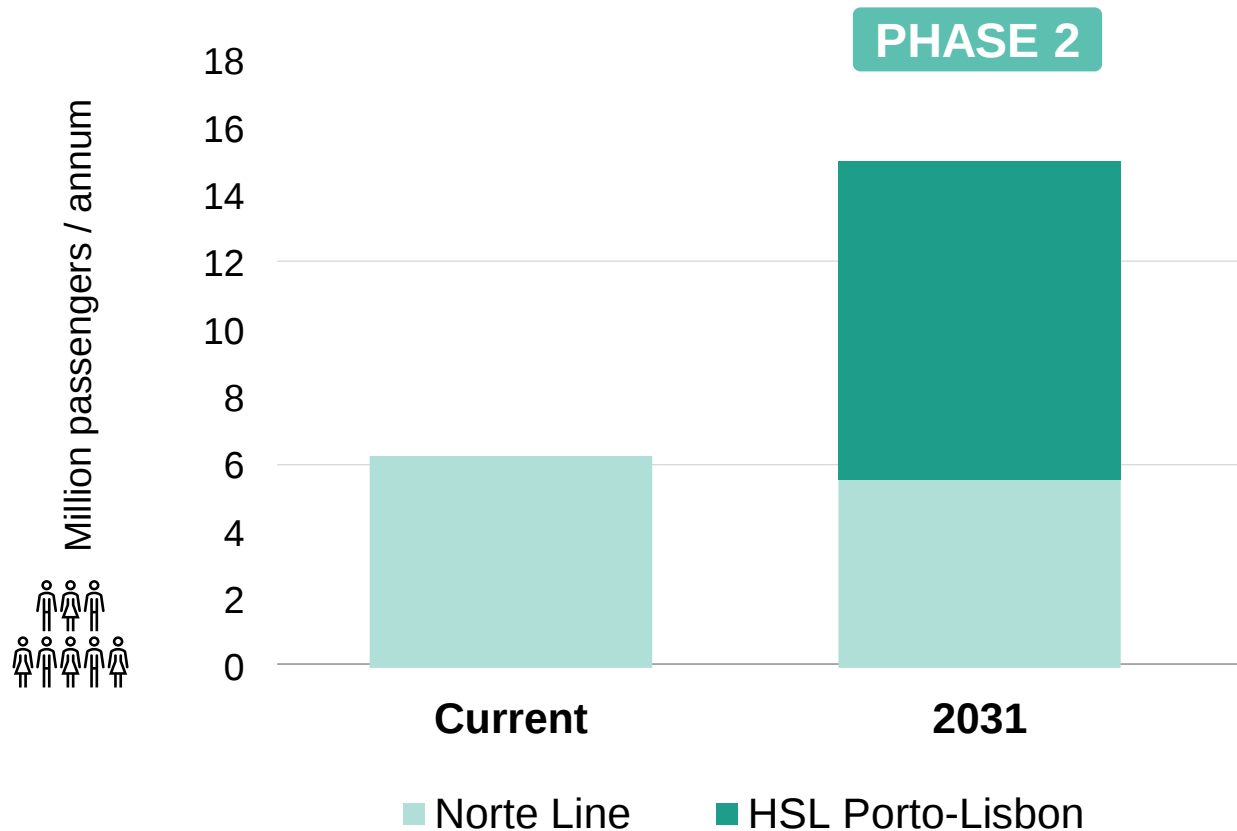
34

**Hybrid
Services**
HSL - Existing
Rail Network

17

IC Services
Existing Rail
Network

DEMAND FORECASTS PORTO-LISBOA



KEY PROJECT FEATURES



New double track line for high speed

Phased development

Installed with 1667 mm gauge track



High Speed Stations

New stations: Francisco Sá Carneiro Airport, Braga and Valença



Direct travel time between Porto-Vigo: 1h00 (Phase 1) and 0h50 (Phase 2)

Overall reduction of journey times along the corridor

Capacity released on 'Minho Line'



PHASE 1

2026/2030

PHASE 2

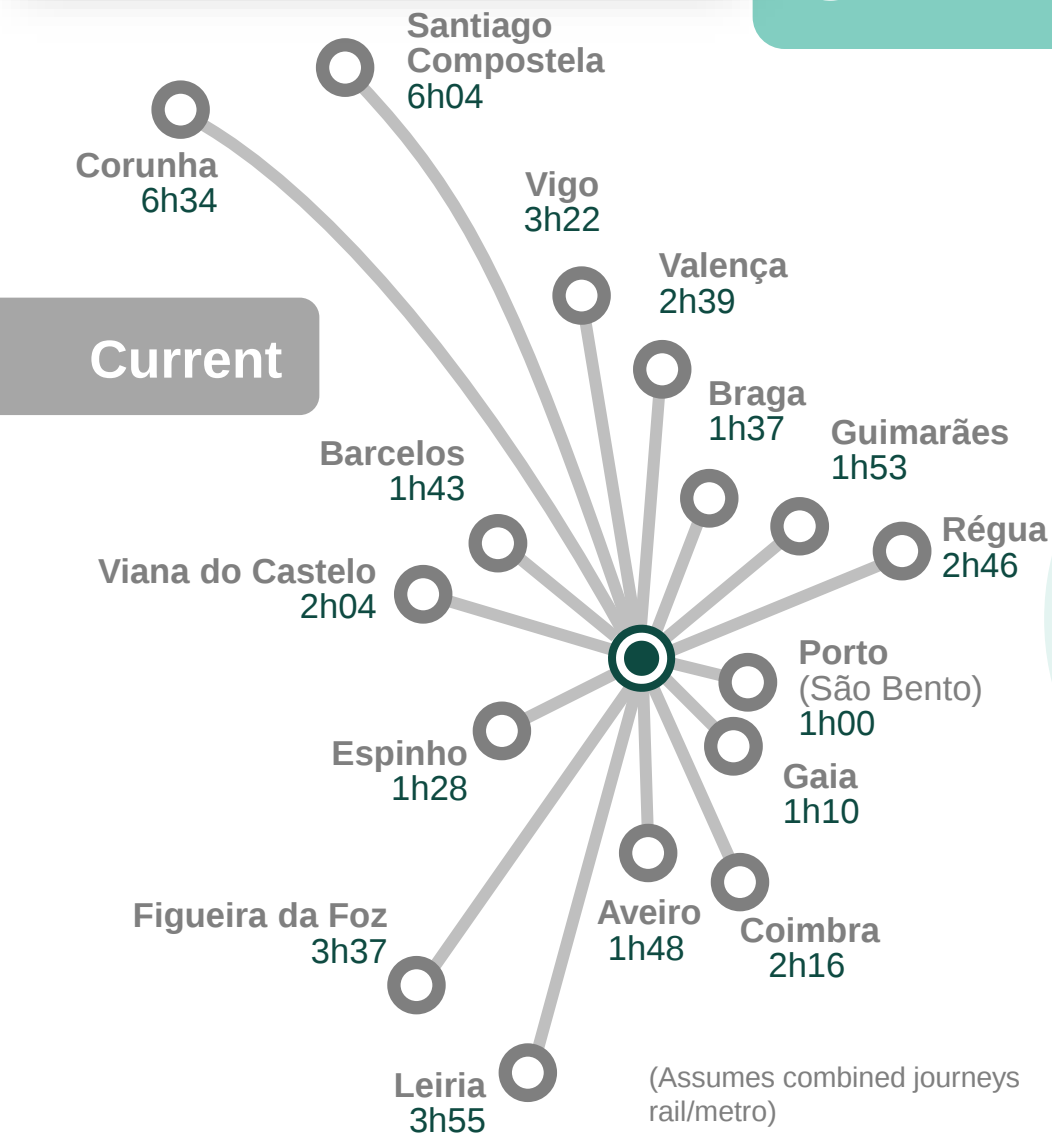
>2030

PHASE 1

2026/2030

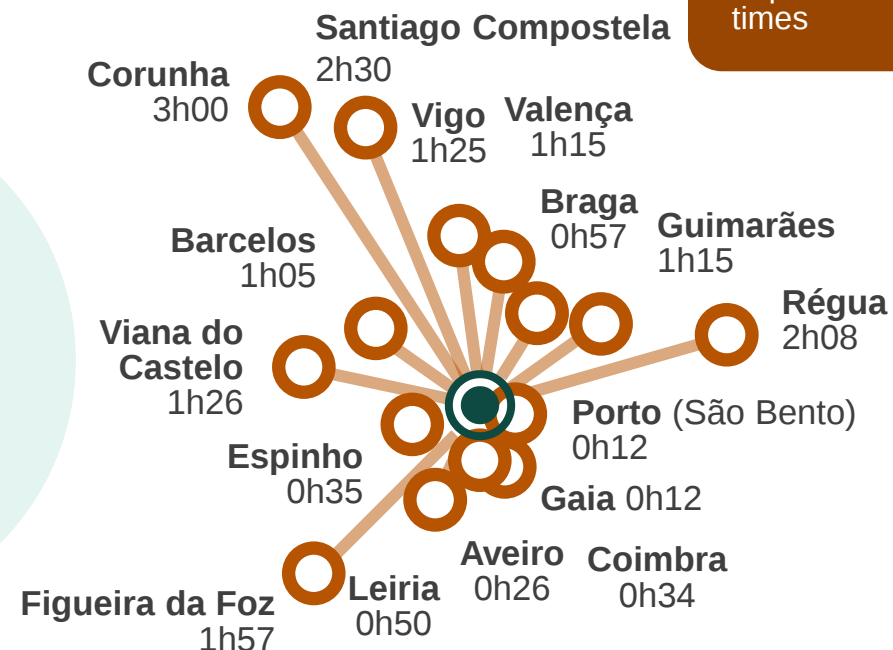


TRAVEL TIMES SÁ CARNEIRO AIRPORT



2030

Expected travel times



PHASE 2 PORTO-VIGO

Corunha 2h23 | Vigo 0h48

Overall Project Benefits



PERFORMANCE

Unprecedented opportunity to improve our railway system



CAPACITY

Increment of regional and freight **service slots**



CONNECTIVITY

Project benefits **extended** way beyond the metropolitan areas of Lisbon and Porto



VIABILITY

Planned project phasing adapted to available national financing sources and EU financing



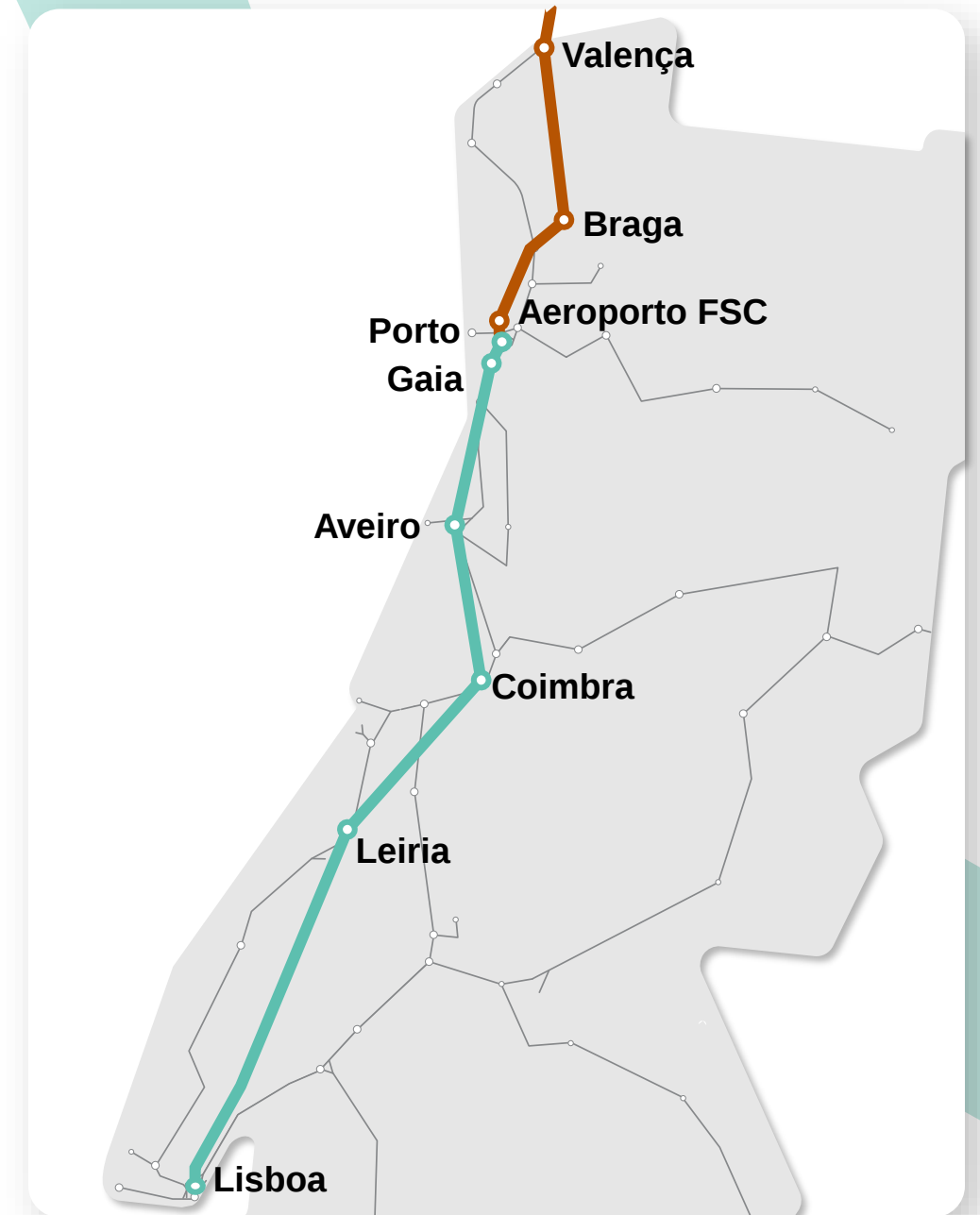
ANTECIPATION

Planned project phasing allows for **project benefits** to be **materialised earlier**



SUSTAINABILITY

Decarbonisation of the transport sector and reduction of road fatalities



PROJECT ALIGNMENT WITH European Objectives

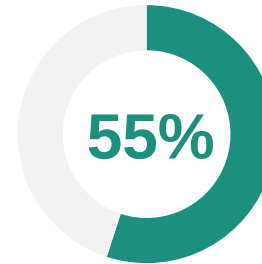


Benefits of High-Speed Line Porto-Lisbon



Objectives

Reduce greenhouse gas emissions by at least **55%**, compared to 1990 levels



Reduction of around **6 millions tons** of CO₂ equivalent by **2060**

By 2030, the HS rail traffic should have **doubled** and scheduled collective travel under 500 km should be carbon-neutral within EU



Passenger demand on Porto/Lisbon axis will more than double by 2030



Significant **modal shift** from road and air to rail



The European Green Deal

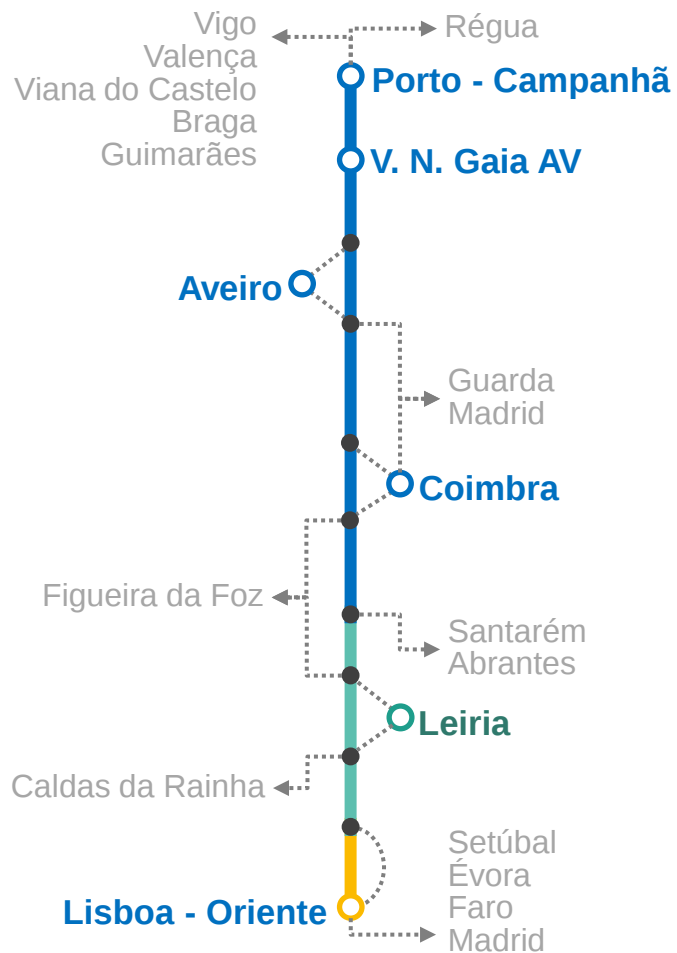


Sustainable & Smart Mobility Strategy



HSL PORTO-LISBON: IMPLEMENTATION PLAN

INTEGRATION WITH EXISTING NETWORK



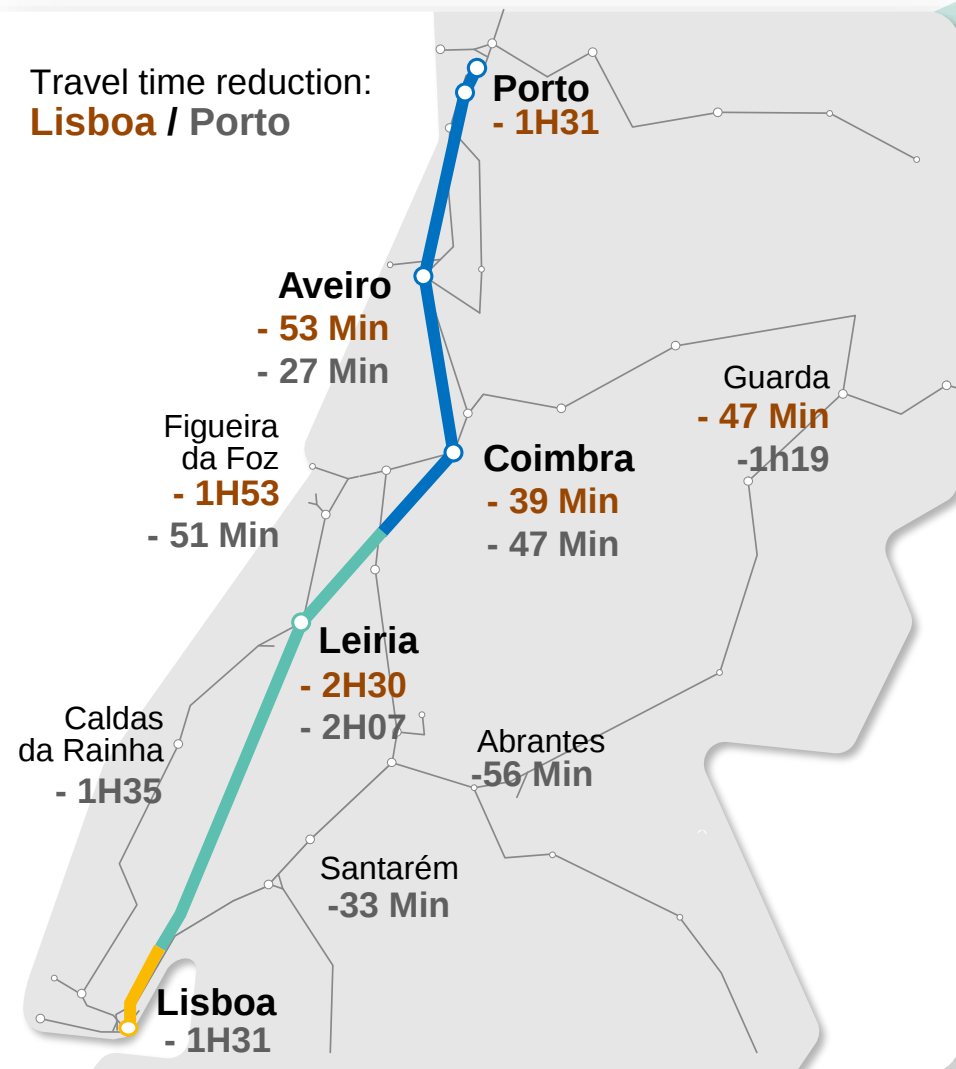
PHASE 1

PHASE 2

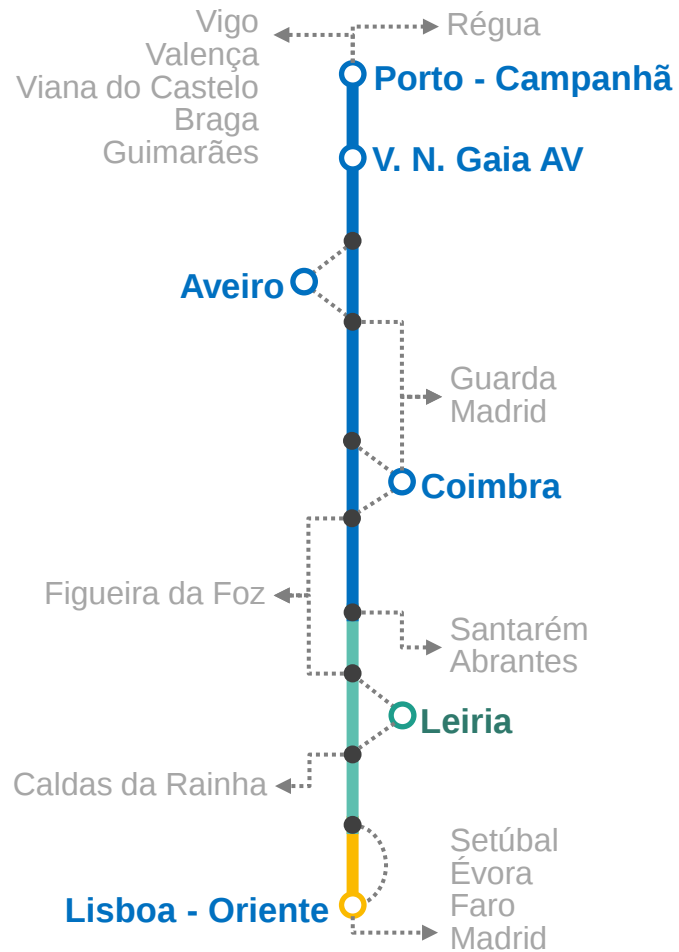
PHASE 3

- Connection points to existing lines
- High speed stations
- Existing lines

Travel time reduction:
Lisboa / Porto



INTEGRATION WITH EXISTING NETWORK

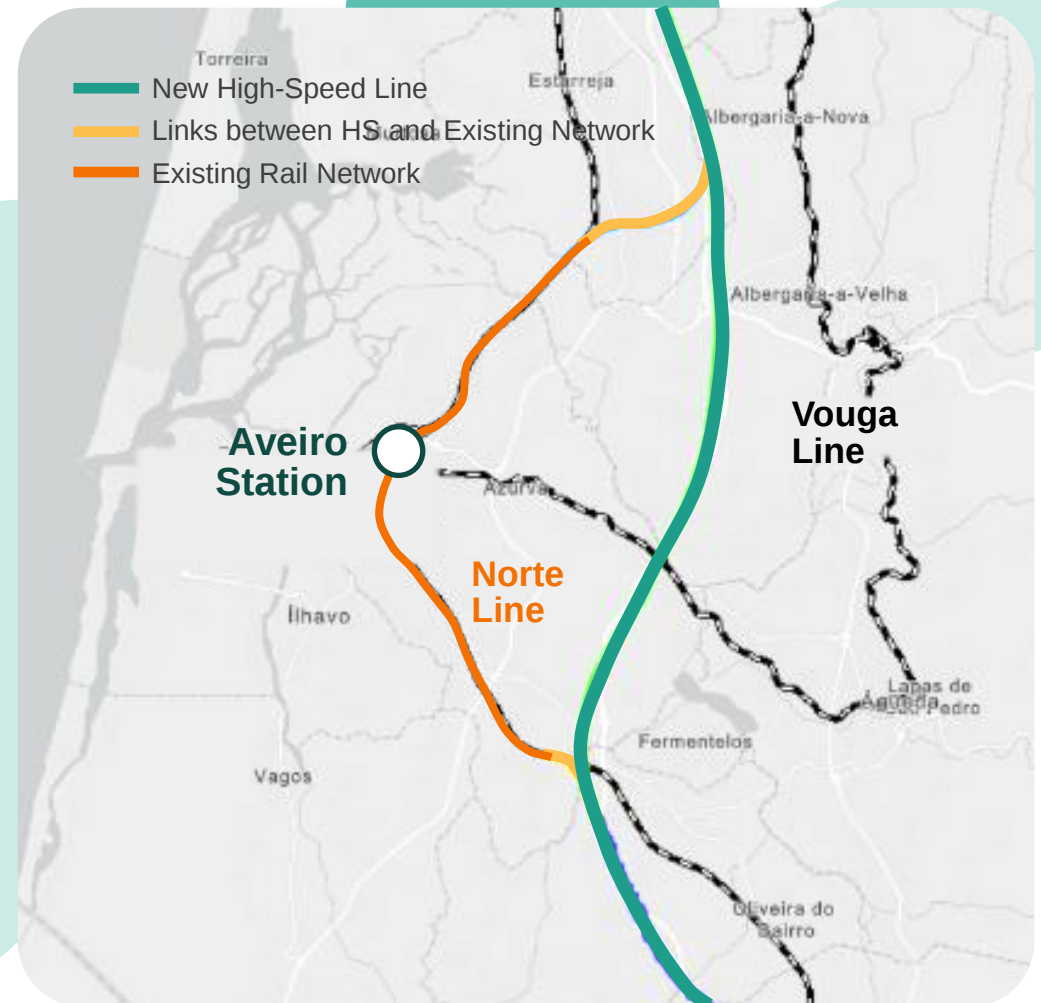


PHASE 1

PHASE 2

PHASE 3

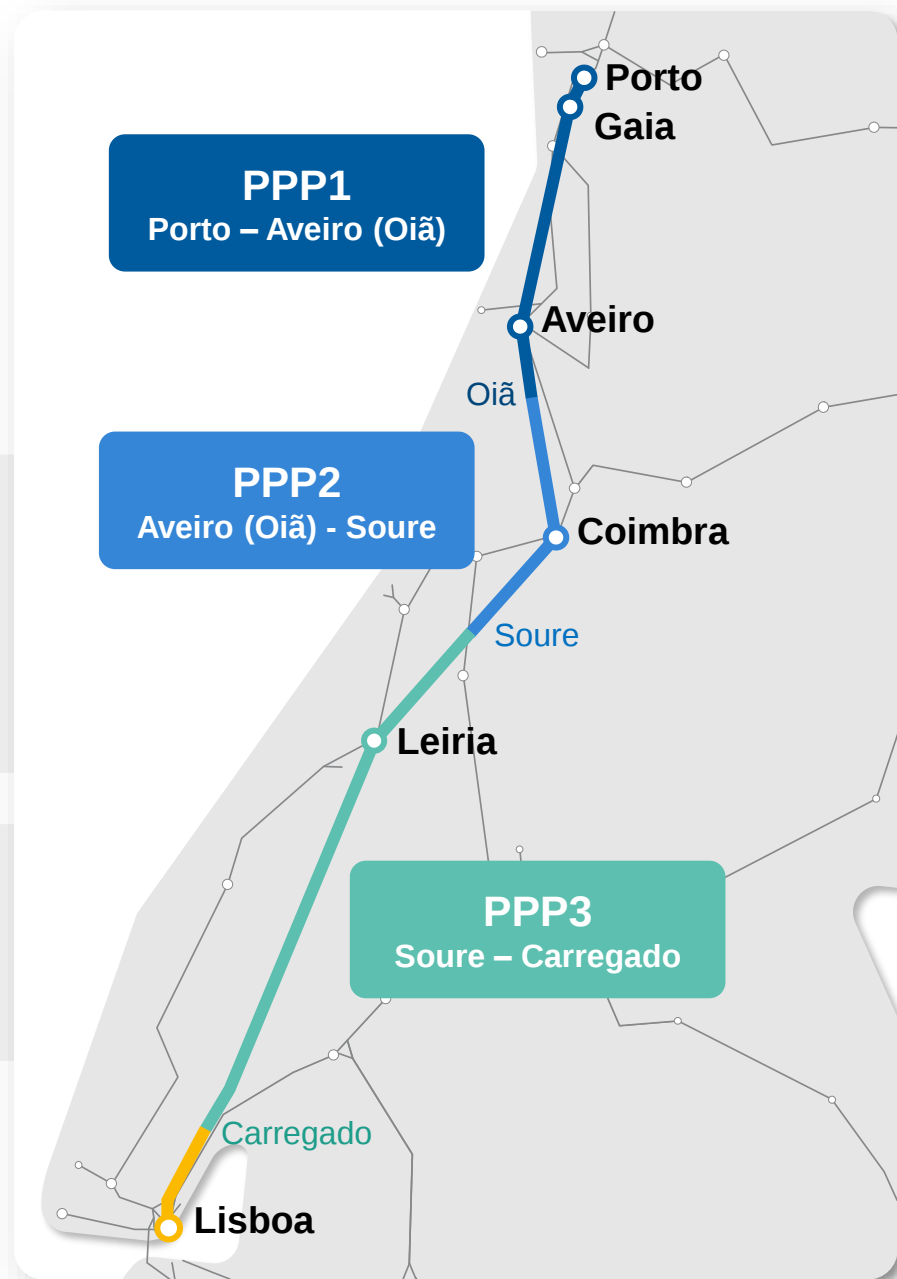
- Connection points to existing lines
- High speed stations
- Existing lines



Exemple: Aveiro station

PROPOSED CONTRACTING MODELS

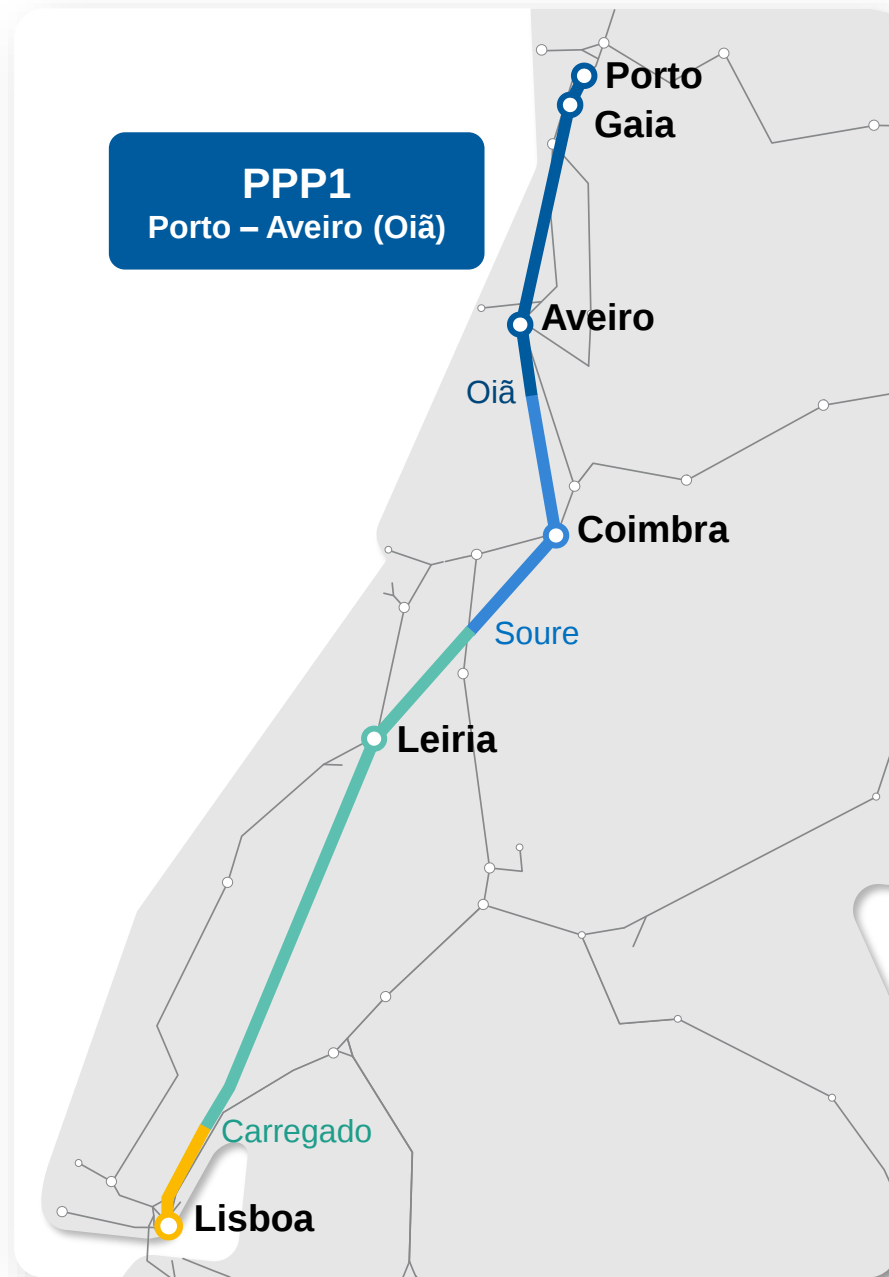
	SCOPE	RATIONALE
Substructure / Superstructure	3 Design, Build, Finance & Maintain (DBFM) contracts	Reduced project life cycle costs Optimisation of available resources Adjusted risk allocation
Signalling & Telecommunications	Design, Build & Maintain (DBM) contract	High technological risks and reduced asset lifespan Limited number of system suppliers



PPP1: PORTO - OIÃ SECTION

	SCOPE	
Contract Duration	30 years	Development Phase: 5 years Availability Phase: 25 years
Track Extension	71 km HSL (double line)	17 km connections to CRL (single line)
Tunnels	7	11,5 km
Bridges & Viaducts	17 & 18	10 km & 10 km
Electrical Substations	1	Estarreja (power lines not included)
Stations	2	Porto (Campanhã) Vila Nova de Gaia (Santo Ovídio)

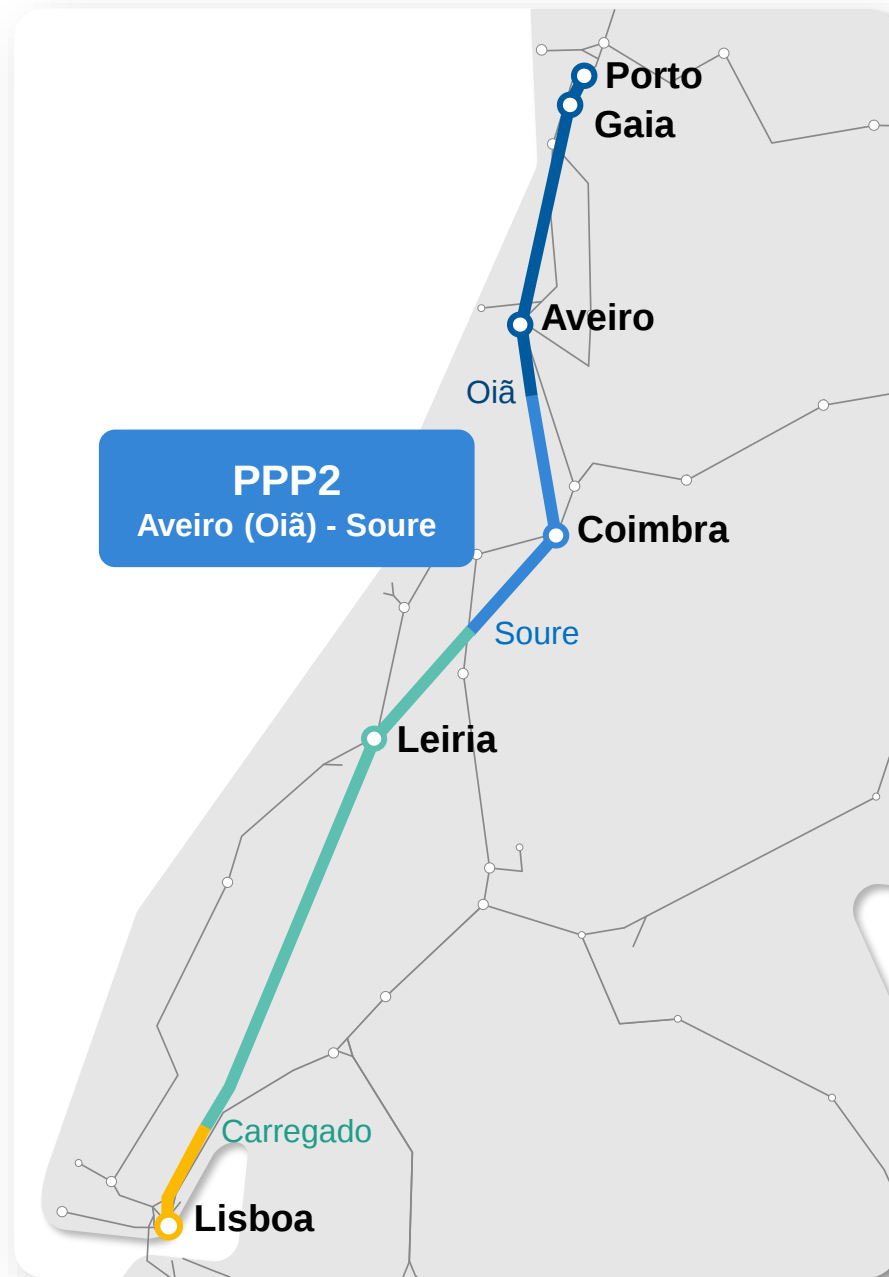
Additional information available at:
<https://www.anogov.com/infraestruturasdeportugal-ip/faces/app/dashboard.jsp>



PPP2: OIÃ - SOURE SECTION

	SCOPE	
Contract Duration	30 years	Development Phase: 5 years Availability Phase: 25 years
Track Extension	71 km HSL (double line)	34 km connections to CRL (single line)
Tunnels	4	1,5 km
Bridges & Viaducts	18 & 12	23 km & 6 km
Electrical Substations	1	Coimbra (power lines not included)
Stations	1	Coimbra

Additional information available at:
<https://www.anogov.com/infraestruturasdeportugal-ip/faces/app/dashboard.jsp>



INVESTMENT AND EUROPEAN FUNDING

PHASE 1

Porto-Campanhã -
Aveiro (Oiã)

Aveiro (Oiã) - Soure

Investment
(2021 prices)



1 978 M€

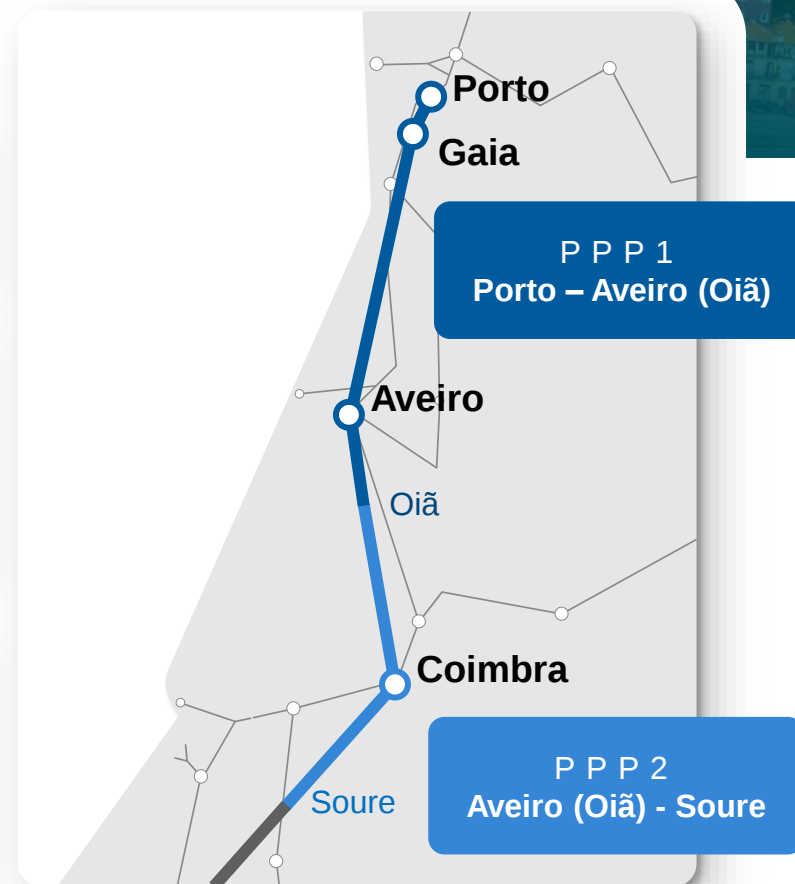
1 751 M€

Funds
(incl. CEF)



480 M€

395 M€





PROJECT SCHEDULE

Porto-Lisbon

PHASE 1 Porto - Aveiro (Oia)

Studies

EIA*

Tender

Detailed design + Construction

PHASE 1 Aveiro (Oia) - Soure

Studies

EIA*

Tender

Detailed design + Construction

PHASE 2 Soure-Carregado

Studies

EIA*

Tender

Detailed design + Construction

2021

2022

2023

2024

2025

2026

2027

2028

2029

2030

*Environmental Impact Assessment

O B R I G A D O



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