



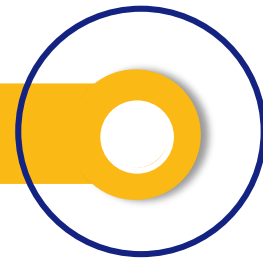
Metropolitano de Lisboa

Transport Networks in Lisbon Urban Management

Civil Engineering Summit 2019
Lisbon, 24-28 September

26 September 2019

VITOR DOMINGUES DOS SANTOS
Chairman & CEO



To speak about
MOBILITY..



somos
a sua companhia



Metropolitano de Lisboa

What is Mobility in the future?

The ability to go from point **A** to point **B** quickly, simply and as economically as possible, via multiple modes.



The way we travel from point A to point B is changing. The implications of this new mobility ecosystem affects all sectors of the economy, the Government and citizens.

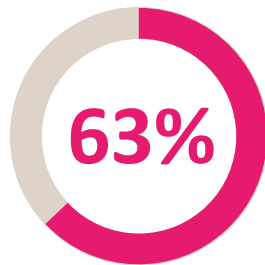


Mega cities and aspiring metropolises around the world are the key players driving growth, influencing the environment and contributing to social wellbeing.

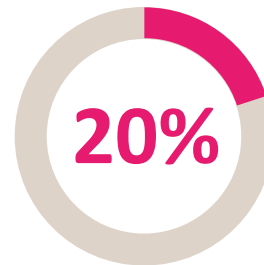
TRANSPORT

in Lisbon like other cities

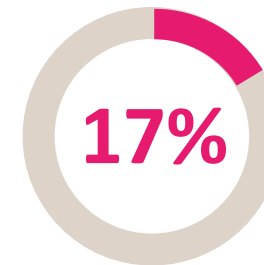
HAS AN UNBALANCED DISTRIBUTION



Private
Transport



Public
Transport



Walking

2011 data



TERRITORY AND MOBILITY

Commuting movements in Public Transport

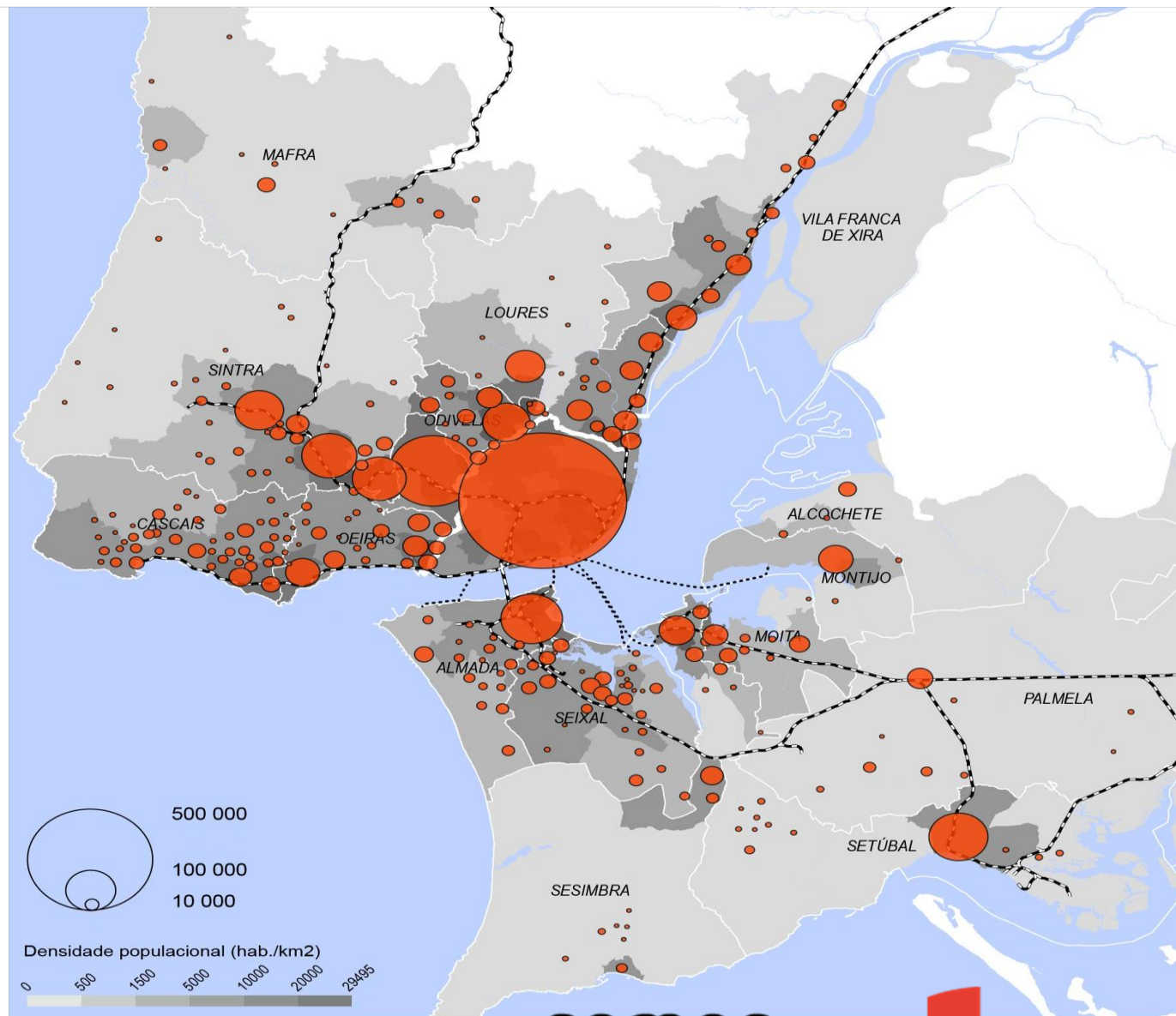
34%
Lisbon City

28%
Lisbon Metropolitan Area (AML)

In Lisbon's urban and suburban areas



53%
Surrounding municipalities of AML towards Lisbon



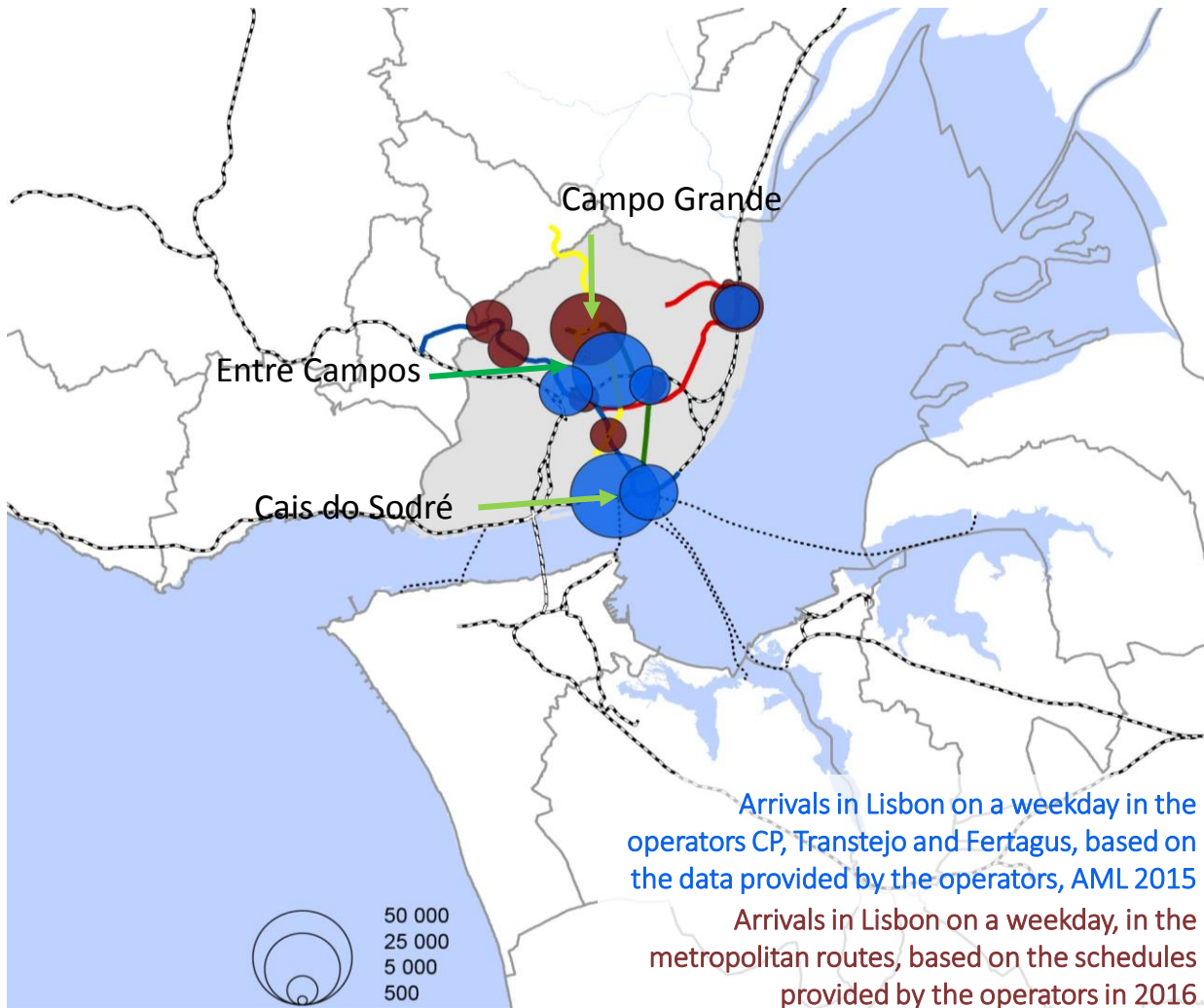
Source: INE – censos 2011 and TRENMO

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Number of journeys in the main interfaces Train, Ferry and Suburban Bus



Public Transport commuting to Lisbon

For people arriving by public transport, the options are:



Highest concentration of arrivals in Lisbon

Cais do Sodré **35 500**

Entre Campos **28 500**

Campo Grande **25 000**

¹INE 2011 and TRENMO



MOVING LISBON

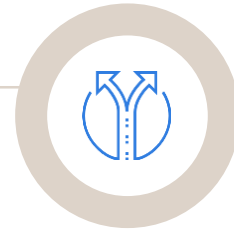
1st SEMESTER 2019



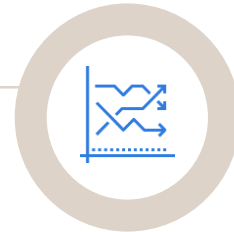
561 596
Daily
passengers



233 135
Train runs



2 514 302
Trains/km



46
Trains
at peak hours

AVAILABLE
MEANS



4
Lines



56
Stations



1 437
Staff



111
Triple Units

44,5 km
Network length

ROLLING STOCK RECOVERY

DECEMBER
2017

82 Uts
available

29 Uts
parked
*(waiting for bogie and
wheel regauging)*

DECEMBER
2018

105 Uts
available

6 Uts
parked

333 available cars
(111 Uts – Triple Units)

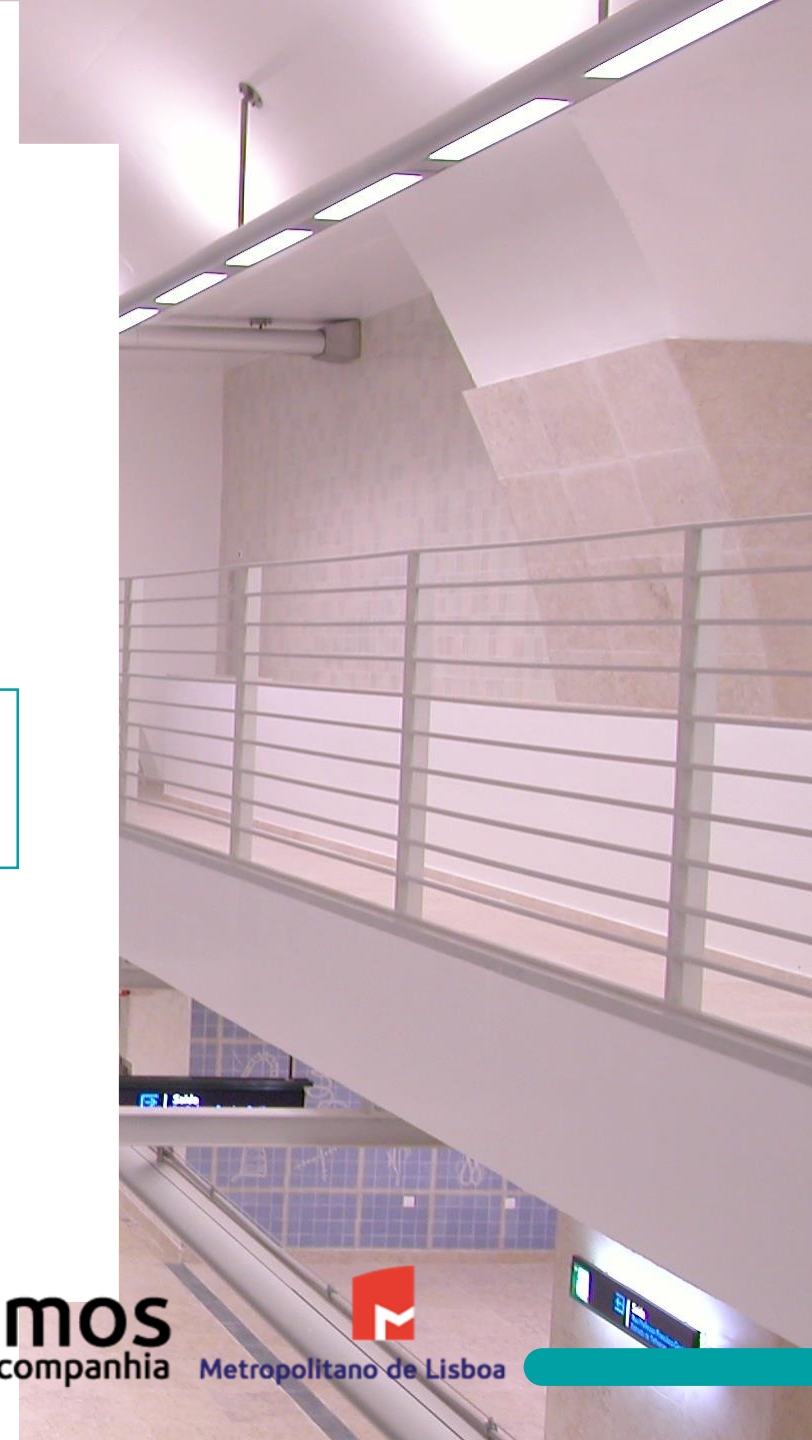
SEPTEMBER
2019

Responding to demand
with high quality standards

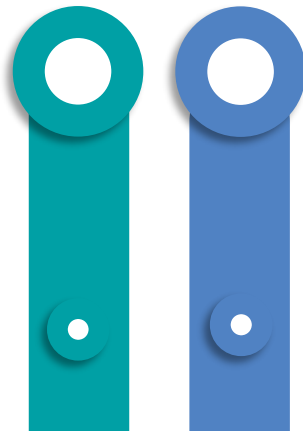
2 Uts
parked

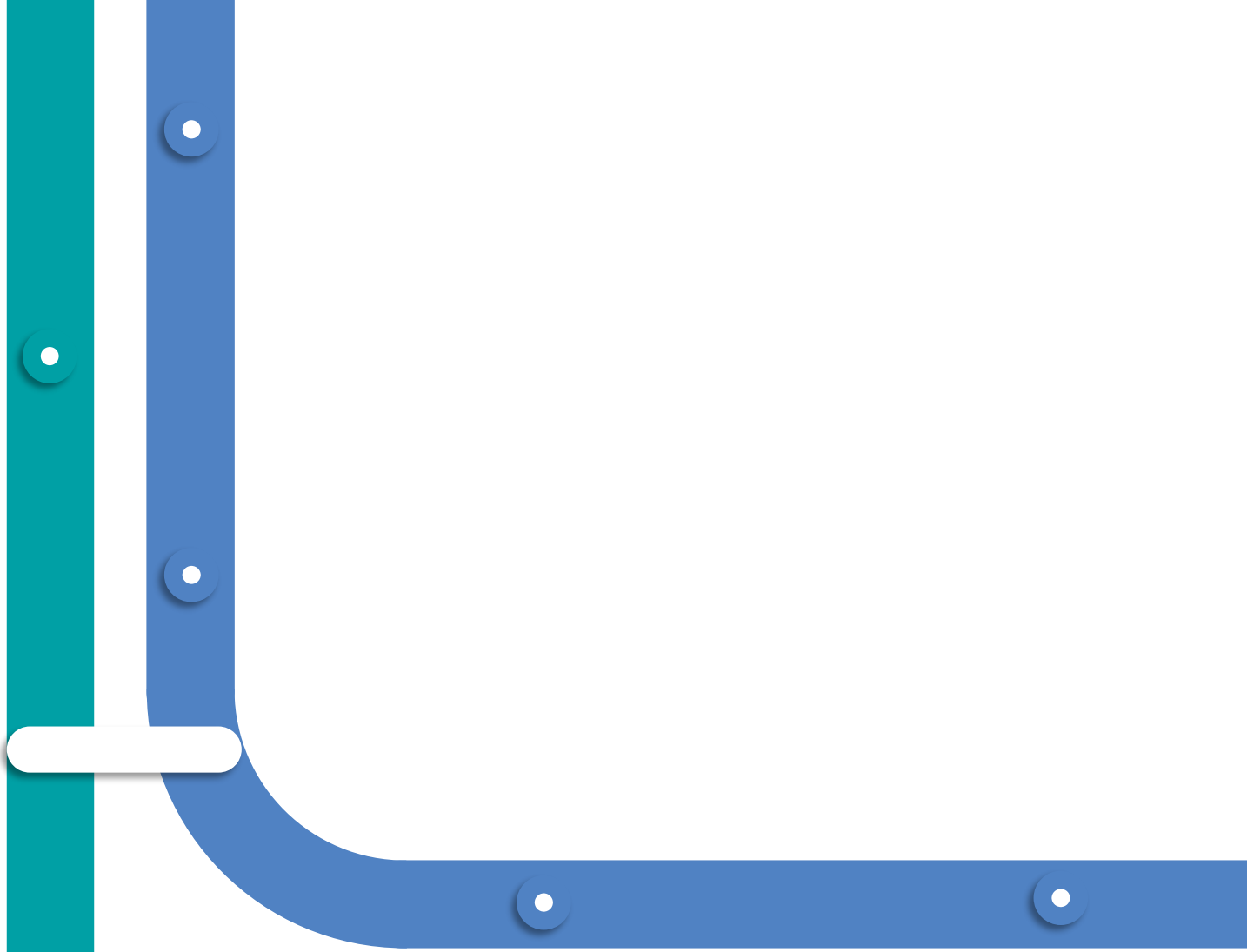
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LISBON METRO INCREASED EFFICIENCY LEVELS





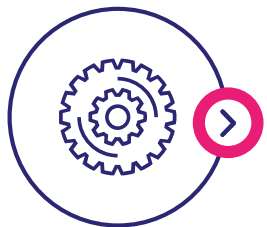
IMPROVING

Systems
improvement
and **modernization**





INFRASTRUCTURE and equipment



Improved
service quality
and safety



**Replacement and improvement
of the Train Doors System**

**Renovation of Technical Facilities
Supervision System - SSIT**

**Renovation of Centralized Video
Surveillance System - CITV**

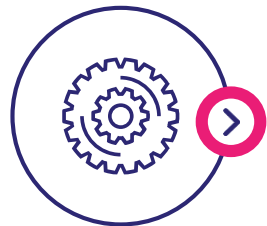
**Renovation and improvement
of customer information**

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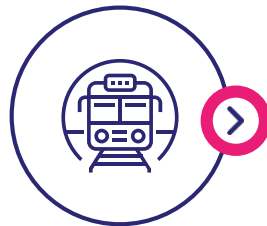

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INFRASTRUCTURE and equipment



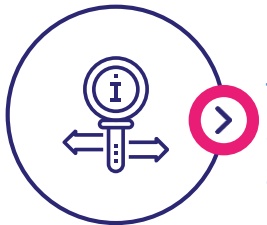
Improved
service quality
and safety



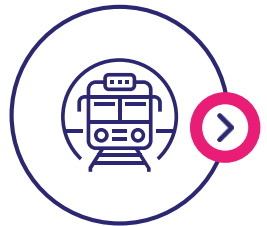
Purchase of
Rolling Stock



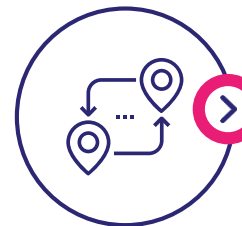
14 new
Triple Units



Modernization of
traffic signalling
and control
system



CBTC



Modernization
of infrastructures
and improvement
of accessibility



38 stations with full accessibility
in 2018

52 stations with full accessibility
in 2023 (not considering new
stations)

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TICKETING CHANGES >

ACCESS GATES

Other possible validation forms (eg. Bank Cards)
Modernization of centralized management systems



WEB TICKET PURCHASE

Dematerialize the **Viva Viagem Card app**



MOBILE TICKETING

Validation at access gates by **mobile phone**
Installation of **contactless readers** (payment by ATM card)



IMPLEMENTATION OF ELECTRONIC INVOICES

Semi automatic vending machines
Automatic vending machines

VIVA PORTAL

Validations by **NFC technology** Online reloading of tickets
in LISBOA VIVA card

VIRTUAL TICKETING

THINKING OF
URBAN MOBILITY

< INTEROPERABLE SYSTEMS

MULTI-SYSTEM TICKETING (IN STUDY)

- Multi-operator
- Modular
- Multi-customer
- Scalable
- Expandable
- More effective

ECONOMIC and SOCIAL SUSTAINABILITY 2018

5,21 M €
EBITDA of approx.

11,3 M €
Investment in
infrastructure and
services provided

107,5 M €
Fare revenue

3,9 M €
Non-fare revenue

€ 55,2 M €
Wages

Ongoing

At design
or study
stage

**Main
projects**

**Network
expansion
investments**

346,7 M €
Total investment

- 210,2 M €** Rato/Cais Sodré
- 67,6 M €** Rolling stock
- 68,9 M €** CBTC

AFTER SEVERAL YEARS OF UNDERINVESTMENT
SINCE 2017 WE HAVE ACHIEVED



Increase in frequent
and non-frequent
customers



Readjustment of
supply to new
demand levels



Lisbon Metro
infrastructure
requalification



NEW CYCLE IN THE LIFE OF METROPOLITANO DE LISBOA



Customer Focus



Renewed dynamics



New investments



Service quality and improvements



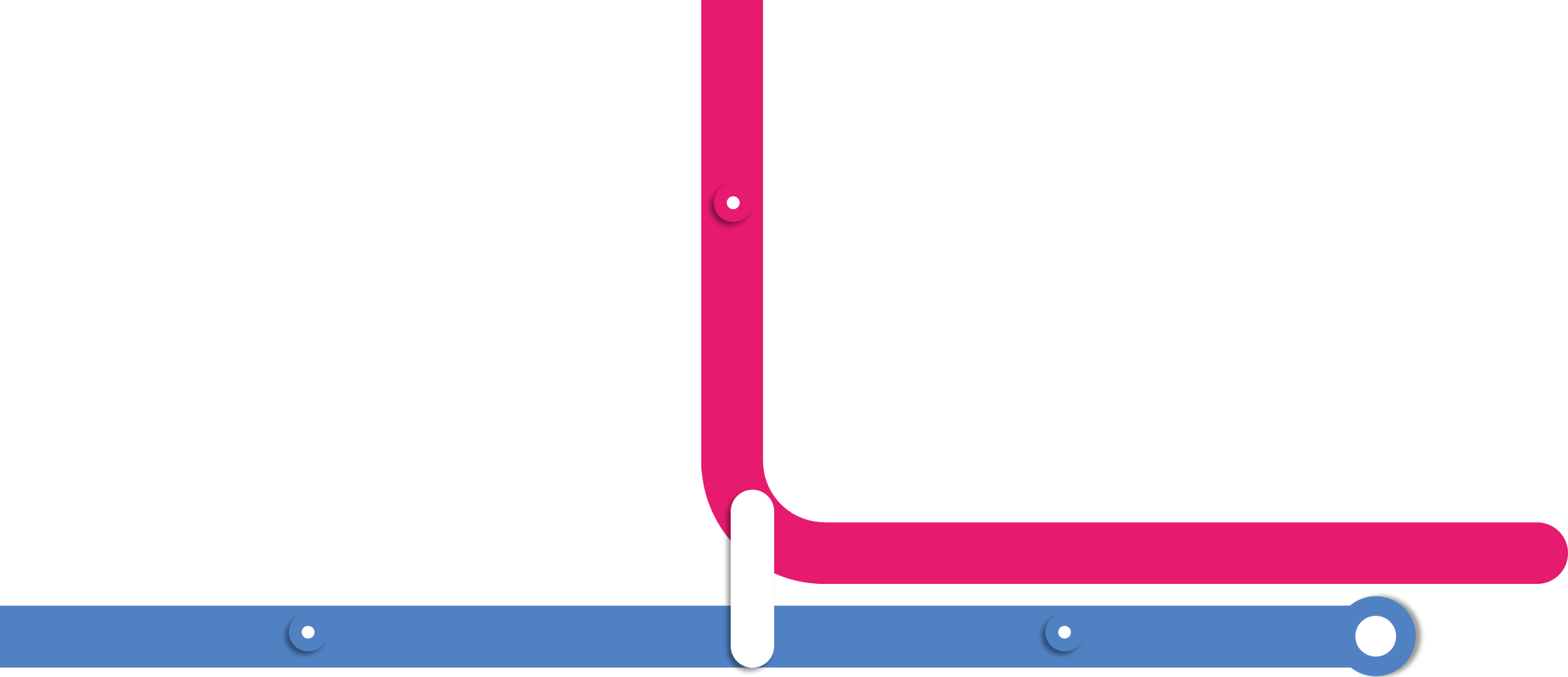
Innovative solutions

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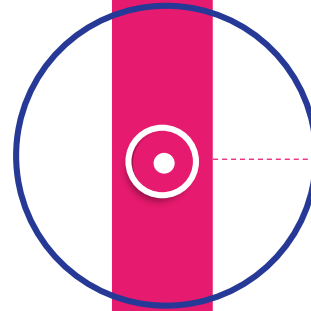

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LISBON METRO EXPANDING HORIZONS



PLANNING



**Future
projects**



EUROPEAN NETWORK 2024

Expansion
Rato - Cais do Sodré

Campo Grande
viaduct link

2 NEW stations:

- Estrela
- Santos

Line	Length (≈km)	Stations (nr.)	Network Expansion	
			Length (≈km)	Stations (nr.)
Blue Line Reboleira/Santa Apolónia	13	18	13	18
Yellow line Odivelas/Rato	11	13		
Yellow line Odivelas/Telheiras			6	7
Green line Telheiras/Cais do Sodré	9	13		
Green line Campo Grande/Campo Grande Rato/Cais do Sodré			16,5 2	22 2
Red line Aeroporto/São Sebastião II	11	12	11	12
Current network	44	56	46,5	58

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METRO EXPANSION Under study



Line	Length (≈km)	Stations (nr.)
Blue Line: Reboleira/Santa Apolónia	13	18
Yellow line Odivelas/Telheiras	(11) 10	(13) 11
Telheiras/Benfica	6	8
	4	3
Green line Rato/Campo Grande/Cais do Sodré	(9) 16,5	(13) 22
Rato/Cais do Sodré	14,5	20
	2	2
Red line São Sebastião/Campo de Ourique	(11) 18,7	(12) 19
Campo de Ourique/Santo Amaro	1,4	2
Aeroporto/Entre Campos	3,1	3
	3,2	2
Network after expansion (under study)	58	68



PART - Support Program for Fare Reduction in Public Transport

Government decision with implementation in Lisbon and Porto's Metropolitan Areas

Goals

- > Attract passengers to public transport by a hard discount on public Transport Fares
- > Tackling the negative externalities associated with private transport namely greenhouse gas emissions and air pollution

Strong contribution to achieving the goals of the UN 2030 and 2050 environmental agenda

Fares

€ 30
Navegante
Municipal

€ 40
Navegante
Metropolitano

€ 60
Navegante
Família Municipal

€ 80
Navegante Família
Metropolitano

> Results

Operators		Variation	Variation	Variation	Variation
		apri/18 - apri/19	may/18 - may/19	jun/18 - jun/19	jul/18 - jul/19
Validations	Metro Lx	4%	9%	4%	13%
	CP	10%	12%	13%	-
	Fertagus	30%	47%	44%	41%

• Source: AML data, sept. 2019

Investment timeframe for the main Public Transport Operators in Lisbon Metropolitan Area

Public Transport into Lisbon

For people arriving by public transport the options will be:

New Metro Expansions 
346,7 M€

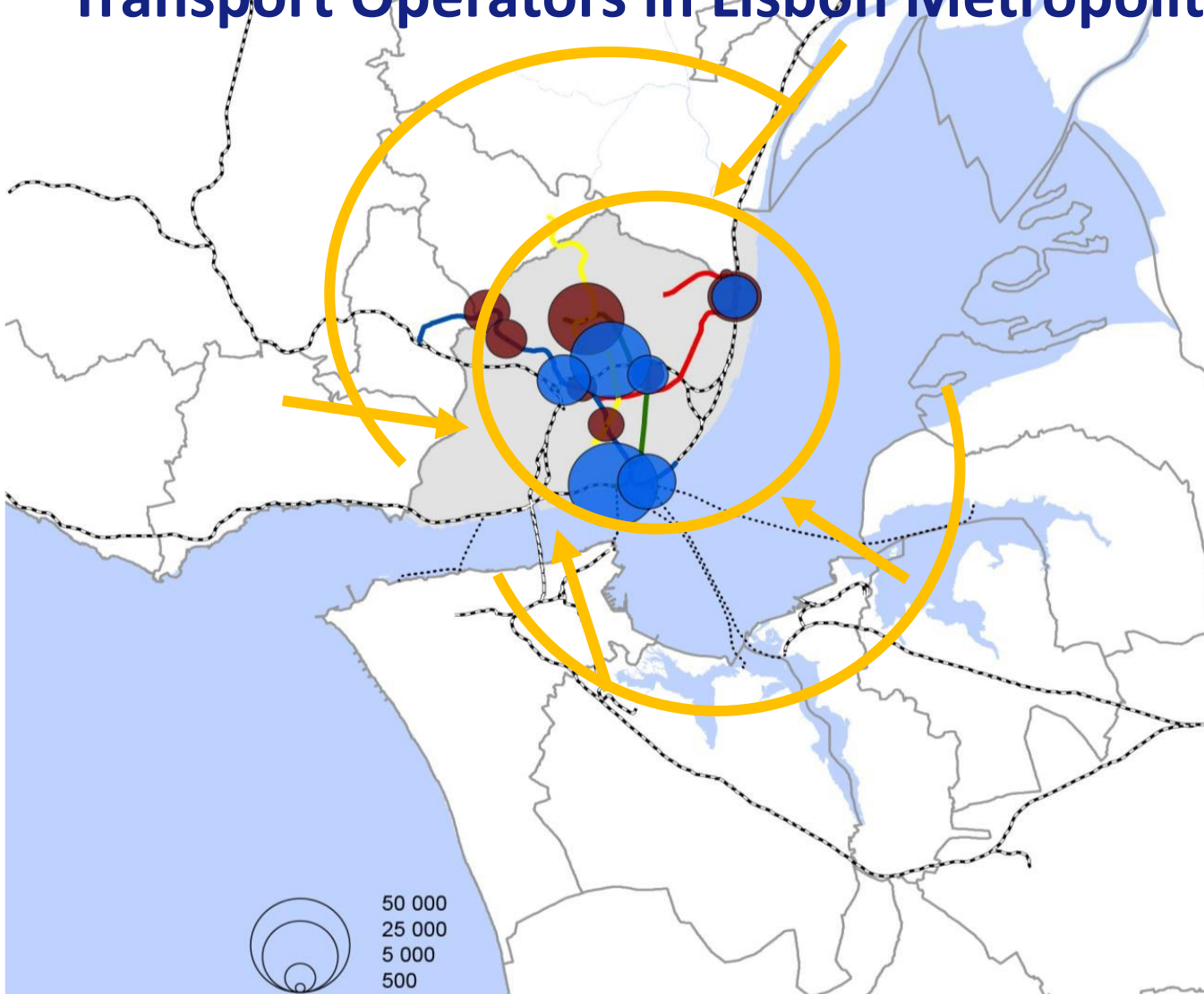
New Trains 
213,2 M€

New Buses 
54,6 M€

New Ferries 
90 M€

CONCLUSION

Continued investment in public transport is absolutely necessary to achieve the zero CO₂ emissions target by 2050



¹INE 2011 e TRENMO



THE WAY FOR URBAN
MOBILITY
**WITH THE
METRO**

