

## **LIS\_10: To improve the quality and efficiency of the bus service**

This measure aims to explore the perceived quality of public transport in Lisbon to address the need for a systematic approach to measuring the perceived QoS among different operators, as well as to improve the service performance in critical areas to promote a modal shift. This measure is composed of the following 3 actions:

1. Sub-task 1: Passenger Satisfaction Surveys (CARRIS & TML) – aims to create a working group involving different PT operators in the Lisbon Metropolitan Area, to exchange methodologies for assessing Passenger Satisfaction and past results. The main goal is to help understand how passenger satisfaction and operational performance are measured, identify gaps between passenger experience and service quality assessments, and promote the standardization of passenger satisfaction evaluation among operators.
2. Sub-task 2: New special tickets for large events (TML) – aims to address the bias of non-users or occasional users regarding the quality of PT services by promoting their experimentation during large-scale events in the city. It involves developing novel ticketing products designed for event participants, offering optimized fare and convenience. These ticketing products may evolve into digital ticketing solutions, to further enhance convenience for participants.
3. Sub-task 3: Analyse and implement PT improvements (CARRIS) – this sub-measure shall draw from the learnings of other measures to develop an analysis of the feasible solutions that can be implemented to make PT more attractive to both users and non-users.

Preparation of each sub-task is described in more detail below.

### ***Sub-task 1: Passenger Satisfaction Surveys***

Discussions between Carris and TML have begun to plan the creation of a working group among different public transport operators in Lisbon, starting with bilateral meetings between Carris and Carris Metropolitana. Initial meetings successfully facilitated discussions about their respective Passenger Satisfaction Surveys.

Carris, the bus and tram operator within Lisbon, uses a standardized survey since 2018, while Carris Metropolitana, operating since 2022, is finalizing its survey design. The comparison of Passenger Satisfaction Surveys from Carris and Carris Metropolitana highlighted both similarities and differences. Both surveys assess common indicators such as service quality, trip duration, and overall satisfaction, and they both include open-ended questions for improvement suggestions.

Differences include Carris's deeper focus on communication channels, while Carris Metropolitana's survey includes detailed sections on trip frequency and user motivations. Although aligning some aspects like customer profiling could improve comparability, the core survey structures need to remain stable for consistency and certification. Understanding these points helps in analyzing and comparing the survey results more effectively.

### ***Sub-task 2: New special tickets for large events***

In August 2023, Lisbon hosted World Youth Day (WYD), a major event that put considerable strain on the city's transport system. To encourage public transport use and avoid overwhelming the ticket sales network, Transportes Metropolitanos de Lisboa (TML) and other operators introduced special tickets for WYD participants and volunteers.

These special tickets were valid for specific consecutive days, designed exclusively for the event's attendees, and covered the entire Lisbon metropolitan area like the Navegante Metropolitano pass.

TML issued the tickets, and the WYD Foundation distributed them. Revenue was based on ticket validations, with no compensation for sales.

After discussions with the WYD Foundation, five types of tickets were created to cater to different needs:

- **WYD Ticket 4D:** 4 days from 04/08/2023 to 07/08/2023, priced at €14.40.
- **WYD Ticket 8D:** 8 days from 23/07/2023 to 30/07/2023, priced at €21.31.
- **WYD Ticket 9D7:** 9 days from 30/07/2023 to 07/08/2023, priced at €23.04.
- **WYD Ticket 9D8:** 9 days from 31/07/2023 to 08/08/2023, priced at €23.04.
- **WYD Ticket 16D:** 16 days from 23/07/2023 to 07/08/2023, priced at €35.14.

The WYD Mobility and Transport Plan estimated around 1 million pilgrims, with 45% expected to use public transport. Based on this estimation, the WYD Foundation ordered 437,000 tickets but used only 389,977. The remaining tickets were returned to TML as the two entities had beforehand agreed that up to 30% unsold tickets could be returned.

During the event, there were 4,025,524 ticket validations from July 23 to August 8, with usage peaking on August 4, when WYD tickets accounted for up to 43% of daily validations. The most popular tickets were the WYD 8D, making up 71% of all validations, followed by WYD 9D8 tickets at 12%. In terms of transport modes, the metro was the most used, accounting for 44% of validations, followed by buses at 28%, trains at 22%, and ferries at 4%.

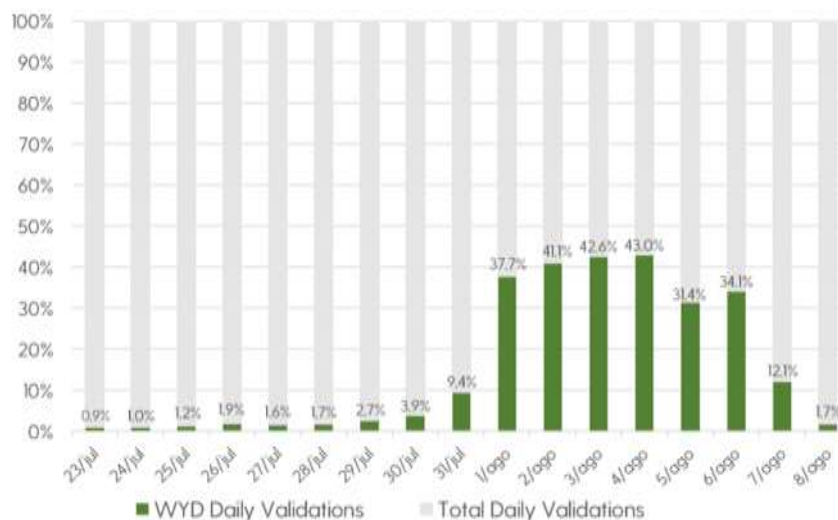


Figure 1 Daily WYD ticket validations compared to total daily validations [Carris data]

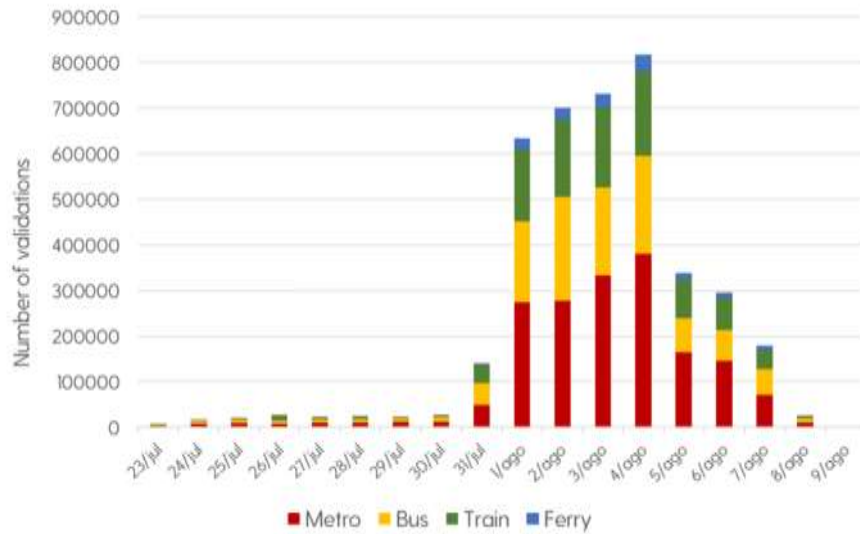


Figure 2 Daily WYD ticket validations evolution per mode [Carris]

### Sub-task 3: Analyzing and Implementing PT Improvements

This sub-measure will draw from the learnings of the other two sub-measures to develop an analysis of the feasible solutions that can be implemented to make PT more attractive to users and non-users. During the development of the measure, several challenges arose, requiring corresponding mitigation efforts.

Standardizing passenger satisfaction surveys was found unfeasible due to the need for certification and consistency. However, understanding the existing commonalities and differences allows for a more nuanced analysis and emphasizes the importance of including other passenger experience indicators like complaints and service features.

The development of new special tickets for large events faced several challenges such as the lack of an intermodal occasional ticket for all Lisbon operators. Simulations set a reference value of €12 per day, with discounts based on event duration, ticket usage days, and the number of sold tickets.

Another challenge was the adaptation of ticketing systems, as a single API was unavailable. Each operator had to adapt their systems to recognize WYD tickets, with specifications defined by TML. Fortunately, the implementation proceeded without major issues. The revenue distribution led to an agreement: 75% based on validation counting and 25% on the type of ticketing system.

#### Next steps

Next steps towards implementing Sub-task 1, Passenger Satisfaction Surveys, involve CARRIS and TML continuing inter-operator discussions and data sharing, engaging more public transport operators, and introducing new topics such as customer complaints.

Concerning the sub-task 2, New Special Tickets for Large Events, no further steps are needed since the measure has been fully implemented. The methodology used will serve as a basis for future large event ticketing.

As for sub-task 3, Analyzing and Implementing PT Improvements, this task will proceed once other measures are in place and start producing results.