

TML | Cohesive Transportation Story

ITS European Congress | Lisbon | 2023.05.24

TML is the road public transport authority of a bus operation that covers @Lisbon's Metropolitan Area



transportes metropolitanos de lisboa



Road public transport authority

Over **12 thousand** Stops

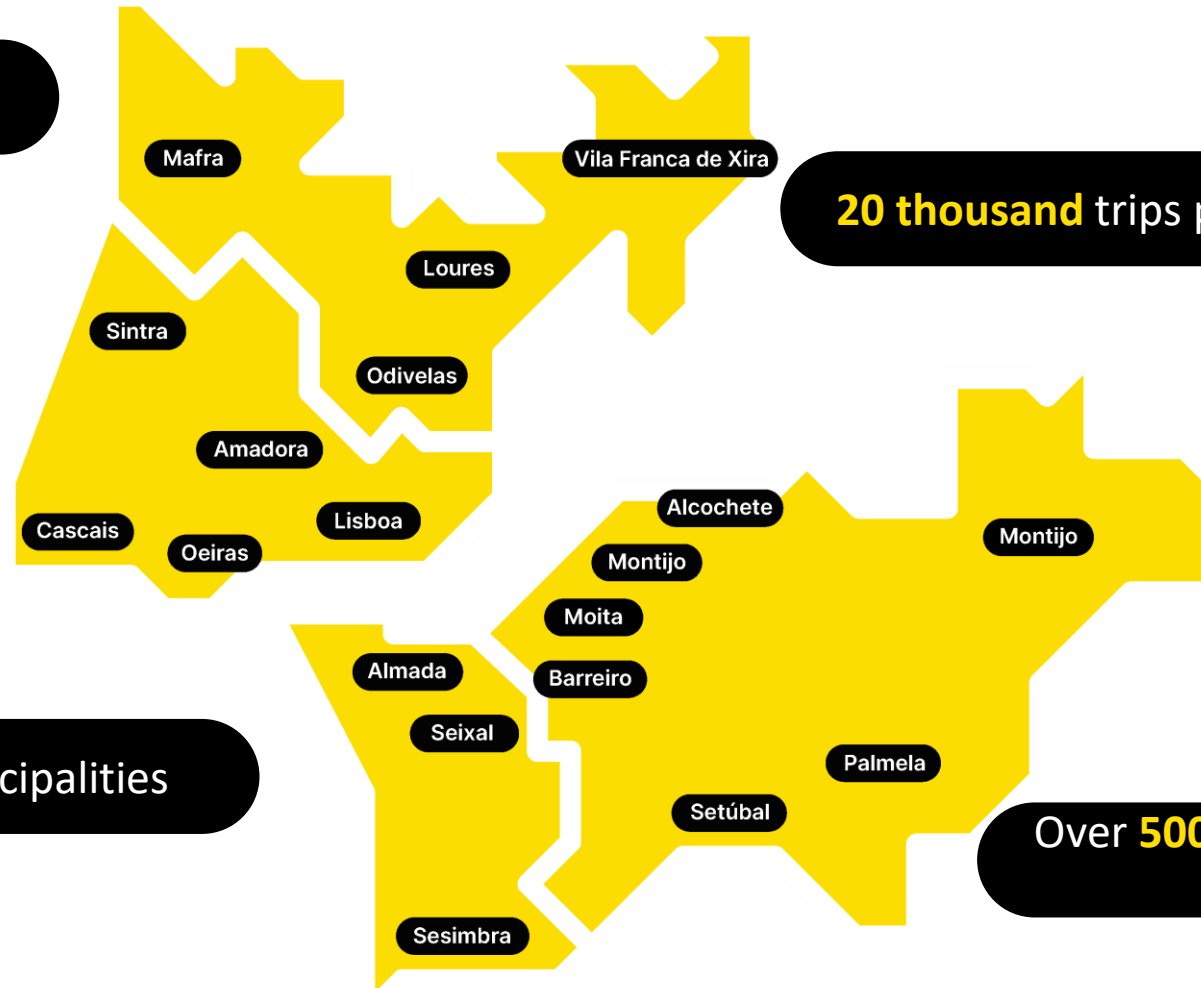
Over **700** Lines

18 municipalities

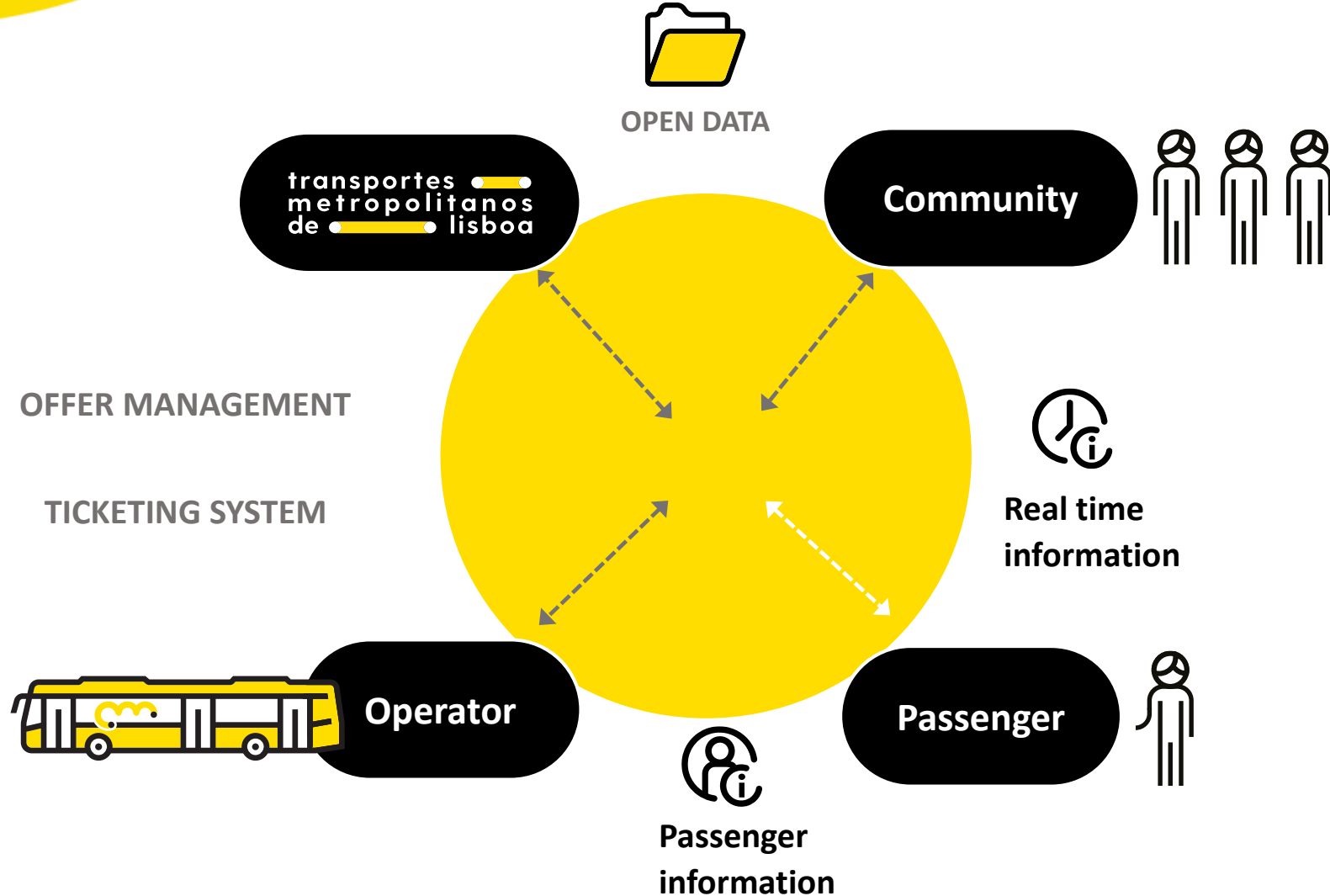
20 thousand trips per weekday

4 Bus Operators

Over **500 thousand** passengers
per weekday



Integrated management platform



Offer management

Integrated and interconnected information

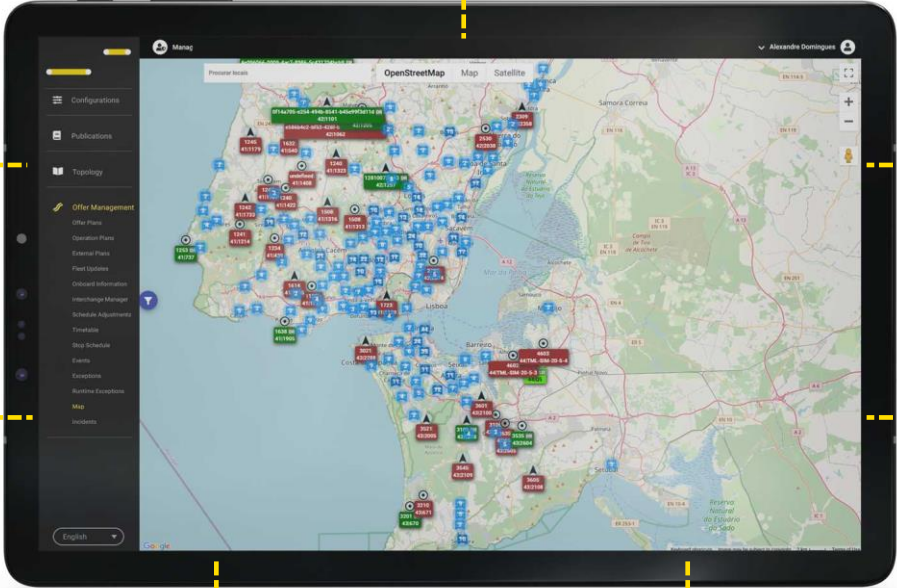
Routes

Schedules

Incident management services

Vehicle monitoring services

Passenger Information services



Real-time information

Common GIS platform

TML is responsible for managing the integrated ticketing system in the Lisbon metropolitan area



Introduce new technologies and elements:

- Open Loop
- Mobile App and Validation
Focus on **customer satisfaction** and **integration**





**our aim is to serve people with integrated and unified services
focused on the passenger**

**transportes ● — ●
metropolitanos
de ● — ● lisboa**

navegante



**carris
metropolitana**



TML | Consistent and predictable public transit

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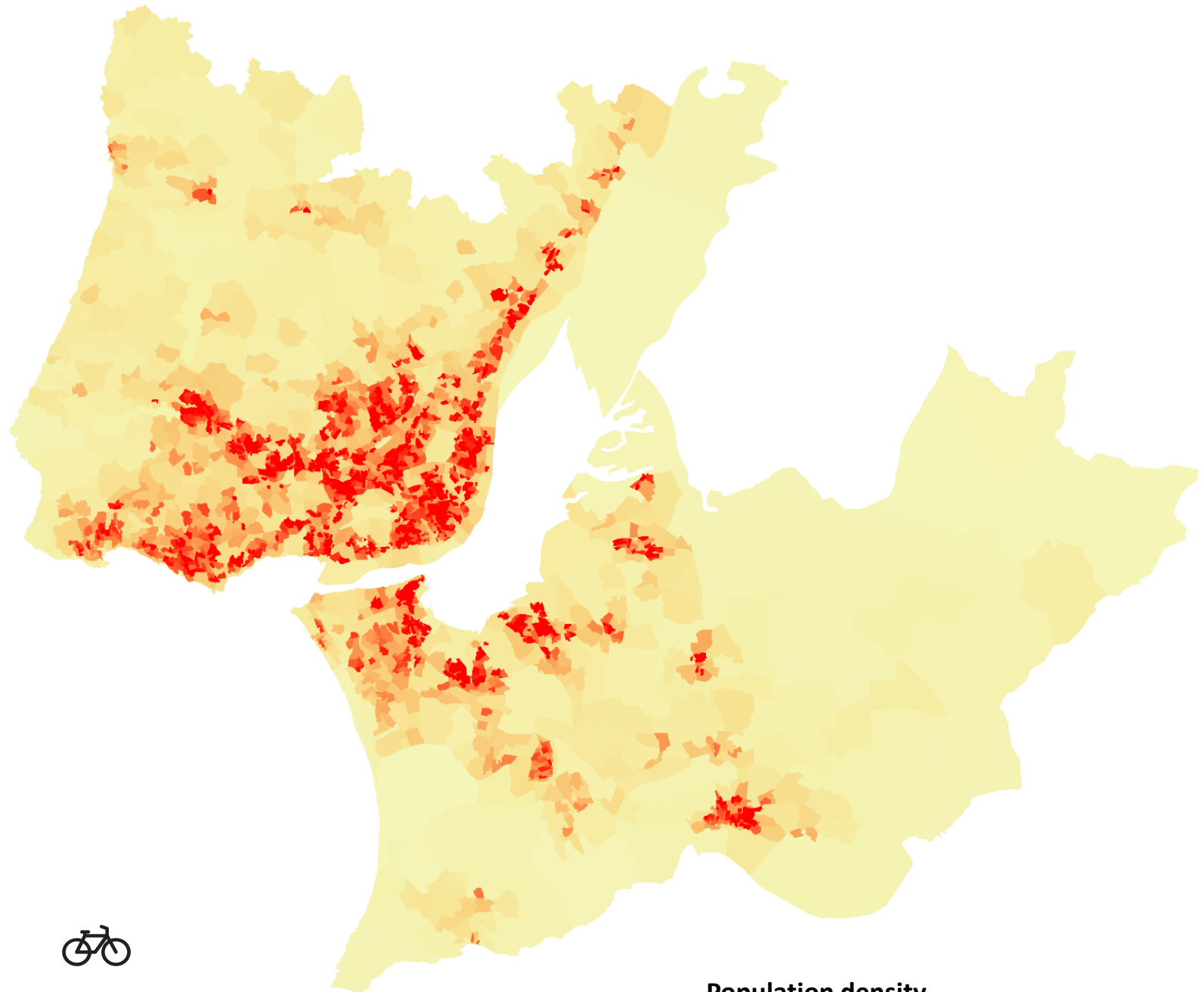


18 cities

2.870.208 residents

2.542.000 trips/day

6 modes



Population density



challenge

**How can we evolve in a sector
that cannot be exclusively digital?**



PIP



**Very dynamic information
Almost analogic**

Spider Maps



**Completely analogic
but very complex to generate**

MUPI



**Dynamic and Interactive
Easy for inexperienced users**

Planners



**Dynamic and Interactive
Smartphone generations only**

APP



Spider maps

320

outdoor panels across 18 cities

31-inch e-paper panel

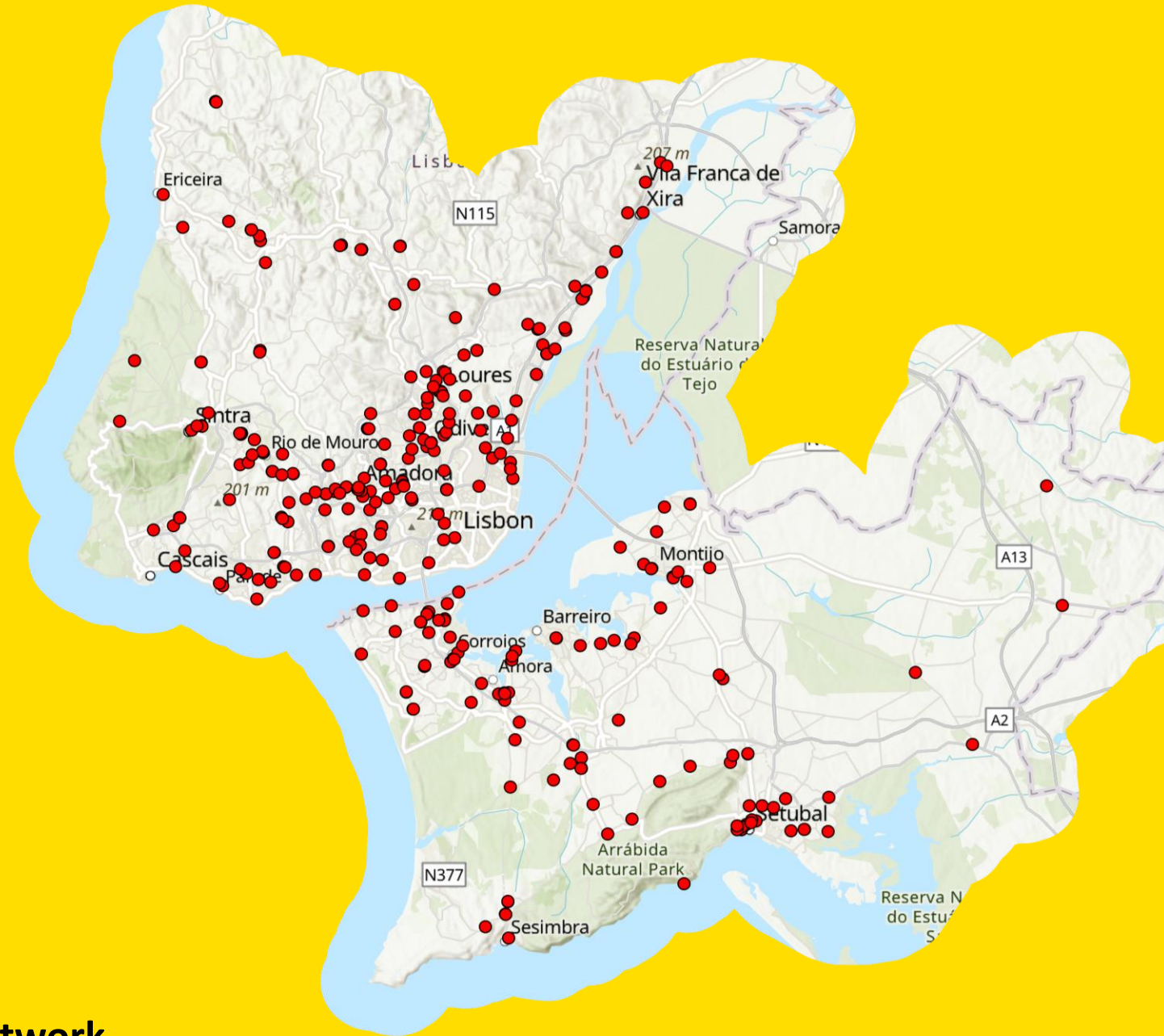
High contrast and low maintenance

Powered by a 90W solar panel

Self sustainable and location independent

Connected via 4G

Our digital connection to each stop in the network



urban area



EQUAL ACCESS TO UP-TO-DATE INFORMATION

Real-time Information both in urban and rural areas

rural area





Mupis

Interactive

Information Dense (network)

A few target many people
(intermodal connections)

Versatile but higher cost

Pannels

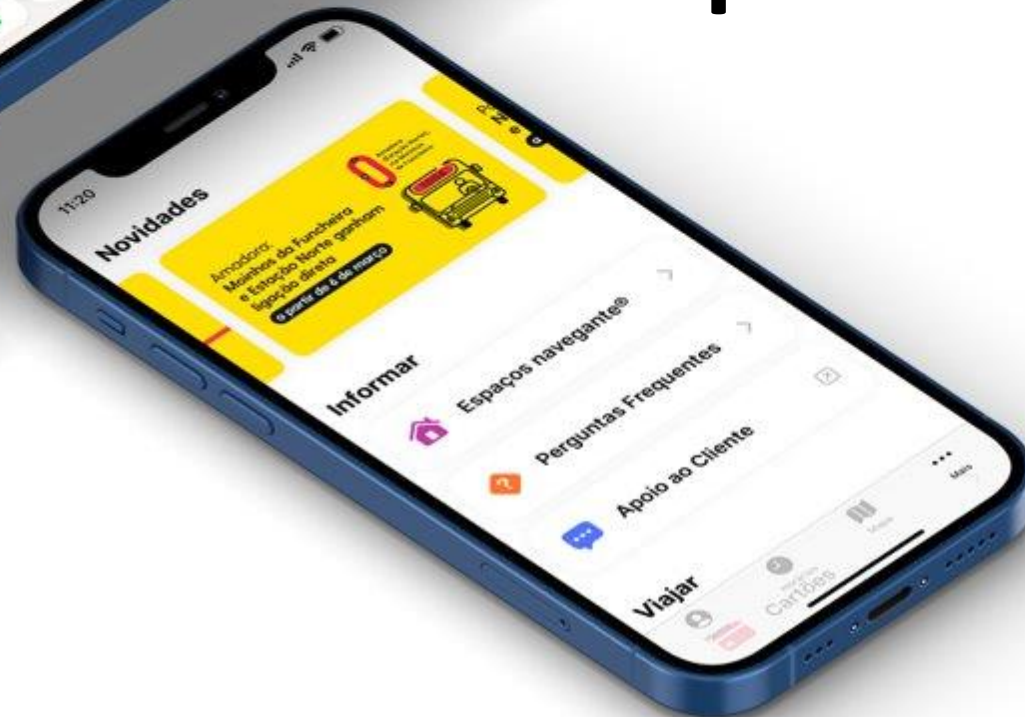
Non-interactive

Specific Information (stop)

Available even in remote areas
(rural stops)

Simple but lower cost

Personalised real-time updates



OUR GOAL:

A unified transit system
where real time information
is easily accessible
to every type of user







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