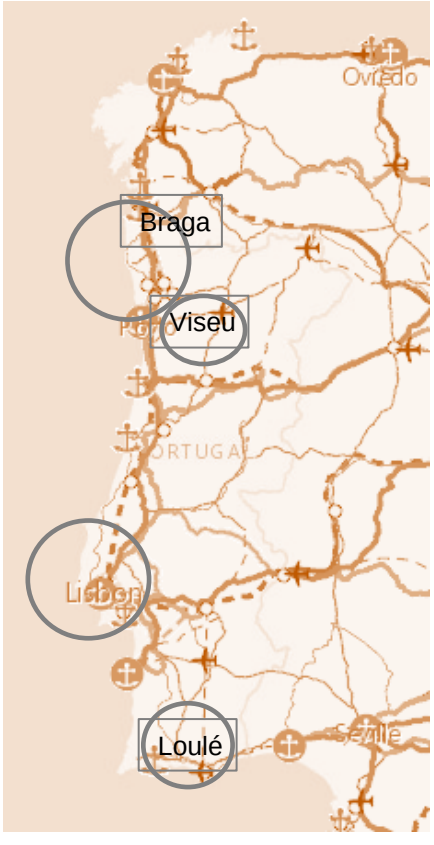
COOPERATIVE STREETS

TESTBED C-ITS SERVICES IN PORTUGAL MAJOR URBAN AREAS



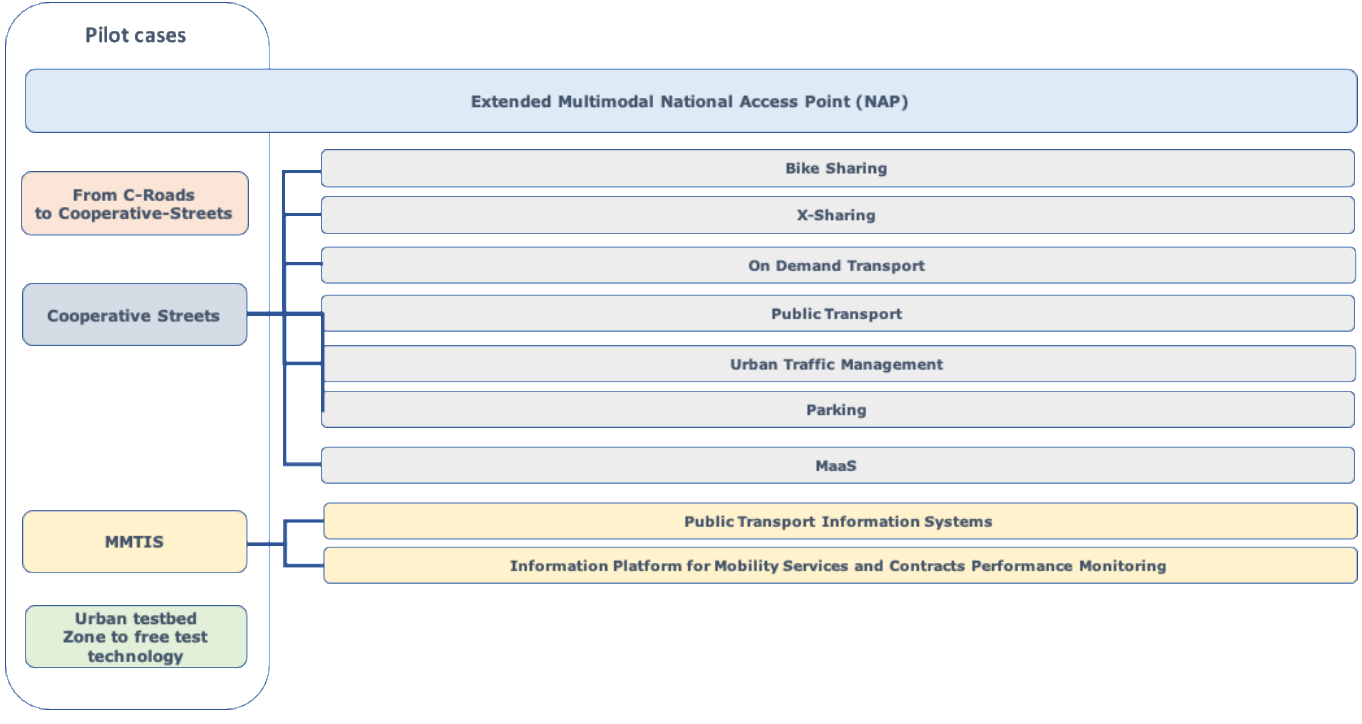
Cooperative Streets urban areas

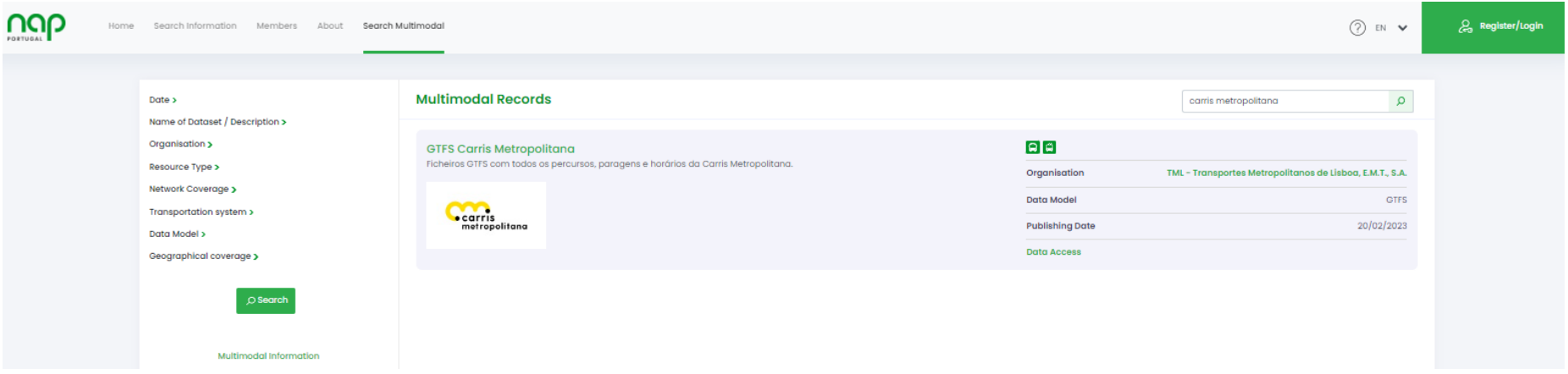
Map source:

MOBILITY AND TRANSPORT
TENtec Interactive Map Viewer

Cooperative Streets includes 5 macro pilot cases as facilitators and test bed, listed below:

- Pilot "Extended Multimodal National Access Point (NAP)"
- Pilot "From C-Roads to Cooperative Streets"
- Pilot "Cooperative Streets"
- Pilot "MMTIS"
- Pilot "Urban testbed - Zone to free test technology"

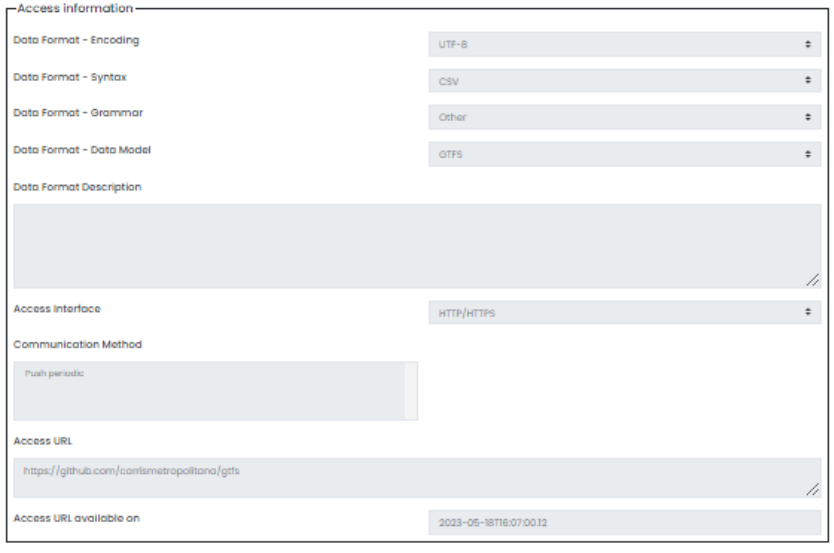


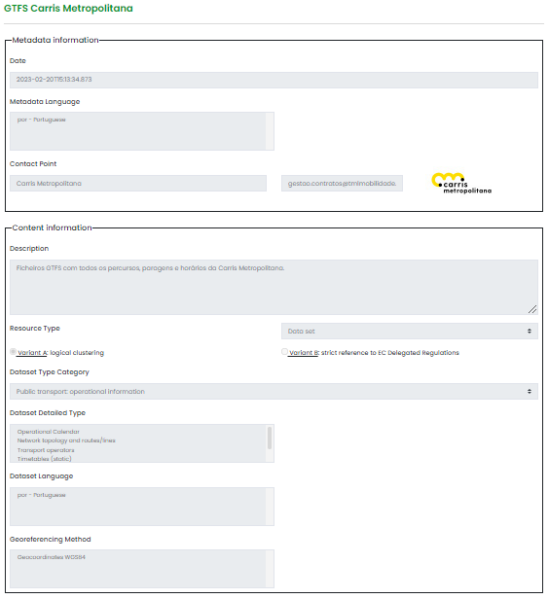


EXTENDED MULTIMODAL NATIONAL ACCESS POINT (NAP)

This pilot activity targets to pilot an extension of the current NAP designed mainly from a road transport operation to answer the challenges of MMTIS.

The expansion of the **Portuguese NAP,** to include the **new module with the data register**, was developed under the Connecting Europe Facility (CEF) action No2018-PT-TM-099-S (Cooperative Streets). This expansion become operational in 2021. The data register is available at **https://nap-portugal.imt-ip.pt/nap/multimodalsupply**





EXTENDED MULTIMODAL NATIONAL ACCESS POINT (NAP)

- Each dataset record has a set of metadata attributes, based on the EU EIP “Coordinated Metadata Catalogue”, allowing the users to filter and search the datasets by date, name, description, organisation, resource type, network coverage, transportation system, data model or geographical coverage.

This pilot sets the **links between C-Roads deployment pilots and the Cooperative Streets project**. Therefore, the **integration of connected and autonomous vehicles** on the road infrastructure within the framework of Cooperative Streets is taken on step further.
It is also taken into the connections with urban nodes and **sets the interaction of C-ITS various Day-1 and Day-1.5 services between non-urban and urban** environments.

Main objectives:

- Test the deployment of Day-1 and Day-1.5 cooperative ITS services
- Development of backoffice services to process data and segment drivers and behaviors
- Develop a set of services to disseminate in-route warnings and strategic information for selected drivers
- Contribute to interoperability of cooperative ITS in the EU
- Transition C-Roads to Urban context

FROM C-ROADS TO COOPERATIVE-STREETS

Bike Sharing

X-Sharing

On Demand Transport

Public Transport

Urban Traffic Management

Parking

MaaS

Pilot examples:

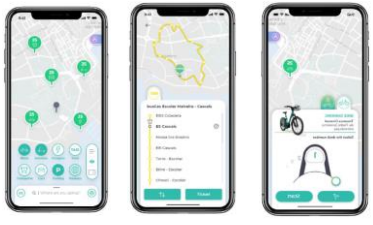
Public transport on demand by CARRIS (Lisboa)

carris

Variable message displays, STCP Bus (Porto)

Porto. STCP

MAAS “MobiCascais” (Cascais)



MOBI CASCAIS

Cooperative Streets

URBAN TESTBED ZONE TO FREE TEST TECHNOLOGY

Design and implementation of urban test beds for mobility solutions based on connected and automated vehicles.

These "Free Technology Zones" (FTZ) aim at creating technical frameworks for testing and validation in real-life environment of vehicle side solutions, V2V vehicular meshes/networks, V2I connectivity and V2G integration applied to existing and new mobility solutions and services.

Matosinhos FTZ was approved in 2022 by the National Innovation Agency, the organization responsible for the management of the network of FTZ in Portugal.

Leixões Port (APDL), that is now an official partner of the ZLT. Tests of an autonomous vehicle developed by CME begun in April 2023, within the area of the Cruise Terminal of APDL.

Moreover, several tests are foreseen within the Sustainable Mobility Agenda, involving mobility, energy and communication operators and companies, such as NOS, Simoldes, TMG, Iberica, Bright City, Caetano Bus, Toyota, etc. Small, low emission and connected vehicles (4-wheels, 2-wheels, and buses), connectivity devices and data platforms will be tested in the area of the ZLT (2023-25).

CEiiA

matosinhos

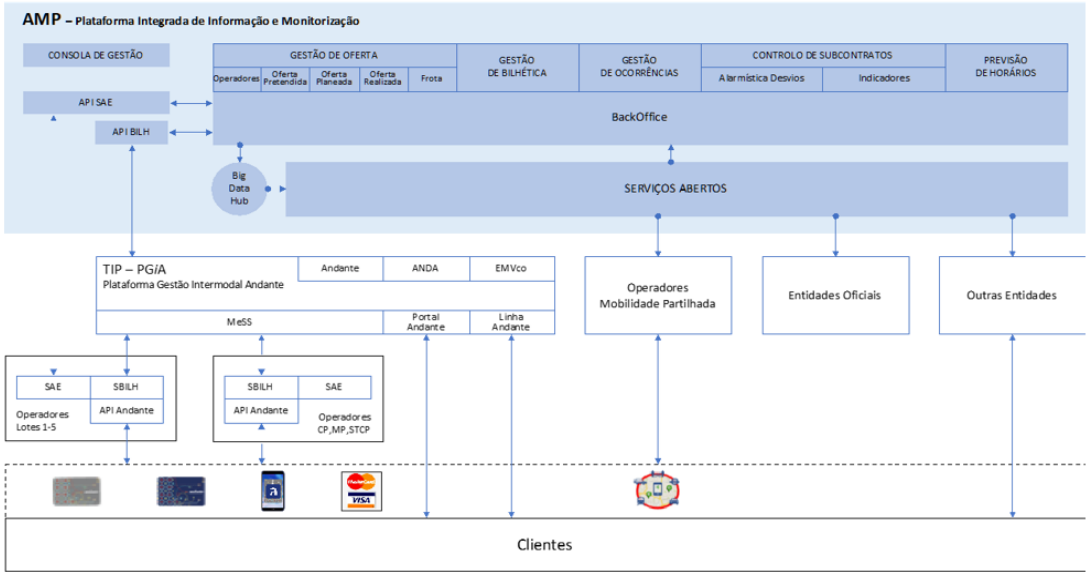
APDL
ADMINISTRAÇÃO DOS PORTOS
DOURO • LEIXÕES • VIANA

Public Transport Information Systems

MMTIS solution with the inclusion of real-time dynamic information, enabling public transport users to make more sustainable travel options according to their preferences (duration, number of transshipments, CO2 emission, ...).

This pilot will ensure the implementation of multi-modal multimodal travel information services on the TEN-T network

Pilot example:
PLIM - Integrated platform for monitoring the public transport system (Porto Metropolitan Area)



amporto

PLIM
amporto Plataforma Integrada de Monitorização do Sistema de Transportes Públicos

Information Platform for Mobility Services and Contracts Performance Monitoring

Implementation of an information platform for mobility services with the capacity to provide information not only to the National Access Point but also to the general public for multimodal travel, according to the European data exchange standard protocols.

Pilot examples:
Loulé Municipality (CML) / Loulé Concelho Global (LCG)

Mobility Platform (CML):

- The platform is intended to collect, store, consult and monitor the mobility systems operating in the municipality of Loulé.

Public Information System (LCG):

- Management platform for information dissemination
- It is planned to install electronic panels at bus stops and bus terminals
- The possibility of information dissemination through applications and websites is envisaged
- The dissemination of information in real time aims to improve the quality of the urban public transport service in Loulé.

Information Platform for Mobility Services and Contracts Performance Monitoring

QUADRILÁTERO
todos do mesmo lado

BARCELOS
BRAGA
FAMALICÃO
GUIMARÃES

Pilot examples:Associação Quadrilátero

Integrated Ticketing Systems

- Definition of a tariff model, with the creation of new tickets or forms of validation and greater integration of existing services

Real Time Information Systems

- In public passenger transport, with real-time information on information panels in terminals and bus stops
- In traffic management and parking, with the implementation of three pilot projects that provide real-time information to drivers and urban traffic management.

Minho Access Point (MAP)

- Sharing and connecting information on all aspects of mobility. Implement the principles of multimodality and interoperability between existing information systems, through the use of EU standards, extended data sharing, evolution towards real-time data management systems and digitalisation of transport data

AND NOW LET'S GO TO THE FIELD !

MMTIS

Information Platform for Mobility Services and Contracts Performance Monitoring

Pilot examples:
Trofa Municipality

MOBILITY PLATFORM - WAY FORSMART

- Repository of the database for each action and will link to the National Access Point (NAP).

PUBLIC INFORMATION SOLUTION – INFOPUB

- Storing and availability of information about the road passenger public transport, namely timetables, from various operators, making it available through spiders maps; infoboard; PIP's and Epapers.

move-T MOBILIDADE URBANA NA TROFA

IMT INSTITUTO DA MOBILIDADE E DOS TRANSPORTES, I.P.