

# **CASE STUDY**

# Braga

Better information through better data integration



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#### Context and rationale

Located in the north-western region of mainland Portugal, Braga is situated in the Cávado Valley. Administratively, the municipality of Braga is the capital of the Braga district, which comprises a total of 37 parishes. Situated on an important road axis, the city has experienced great economic, social and cultural development. By signing the Covenant of Mayors for Climate and Energy, the Municipality of Braga has committed itself to supporting the implementation of the 40% greenhouse gas reduction target by 2030, the reduction of energy poverty and the creation of a long-term vision to achieve climate neutrality by 2050. In this context, taking into account the Sustainable Development Strategy and the path already developed by the municipality, the most ambitious local objective is to reduce its CO<sub>2</sub> emissions by at least 55% by 2030. In this way, it is hoped to accelerate the carbon neutrality of the territory in an equitable and sustainable way.

## Initial challenges and needs

Braga is facing mobility challenges such as increasing motorisation rates, by-pass traffic in the city downtown, lack of intermodal facilities, ineffective parking management, and lack of a cycling network.

# Innovation developed

The Mobility Innovation "Roadmap to an effective traffic control centre" aims to develop an efficient strategy for traffic system management in Braga, and to implement this strategy to improve the current situation by combining all existing and new information sources. This requires the implementation of an interdepartmental traffic management centre.



Through the data collected, processed and integrated in a facility such as the Intelligent Traffic and Mobility Management Centre, the city will be able to have a deeper knowledge of, for example:

- Identification of urban areas with higher traffic volumes;
- Identifying roads with higher cycling demand and analysing the specific conditions of these roads (prioritising investments);
- Rewarding companies that pay particular attention to the sustainable mobility of their employees.
- Planning appropriate rules to strengthen multimobility and inter-mobility;
- Identifying key public transport connections and improving public transport services;
- Awareness of behavioural changes linked to personal incentives.

The information system of the service will automatically collect information from public space (environmental sensors, smart lightning, smart crosswalk, traffic sensors) thought APIs, process all the information with the platform of urban intelligence and send the results for the smart city server (the back office of the webpage/app) and external displays with useful information.

# Lessons learnt along the FastTracking way

Braga received many types of knowledge via FastTrack:

Knowledge of successful implementations:

 By investigating and analysing successful traffic management system deployments in other cities such as Bologna, Braga was able to pick up lessons and apply similar tactics to our own.

#### Technical understanding:

 Understanding of the technical components of traffic management systems, such as data analysis, system design, and equipment selection. This helped Braga in selecting the best technology and designing a solution that suits our specific requirements.

#### Regulatory understanding:

 Advice on regulatory requirements and standards for traffic management systems. Ascertain that our system complies with all applicable regulations and is interoperable with other systems in the region.

#### Organisational knowledge:

 Understanding of the organizational structure and processes required to effectively deploy a traffic management system. This will assist Braga in developing a clear and effective project strategy, allocating resources accordingly, and effectively managing stakeholders.



The workshop funded by the Innovation Fund and conducted by Bable was of significant importance for the city of Braga. Bable is a company that specialises in providing solutions and services for smart cities, mobility and transportation. The company has extensive experience and expertise in working with cities around the world to develop and implement innovative solutions for urban mobility. The workshop was designed to provide insights into best practices for real-time traffic management and other mobility solutions. Bable has worked with a range of cities and organisations and has developed a deep understanding of what works and what doesn't. The workshop provided the Municipality of Braga with access to this knowledge, enabling the municipality to benefit from the best practices and lessons learnt from other cities. Additionally, Bable offers valuable information about technology solutions and vendors in the smart city space. The workshop provided the Municipality of Braga with knowledge to make informed decisions about which solutions to implement and how to do so in the most effective manner. Collaboration opportunities are also possible between the two organisations, which can result in identifying areas of mutual interest and exploring opportunities for future collaboration. By leveraging the knowledge and experience of Bable, the Municipality of Braga can identify the most effective solutions and approaches to real-time traffic management and other mobility challenges, helping to create a more sustainable and efficient urban environment for its citizens.

### Acceleration factors

Introducing data-driven decision making into a traditional, bureaucratic organisational structure can be a challenge, but it we believe that we can accomplished that by:

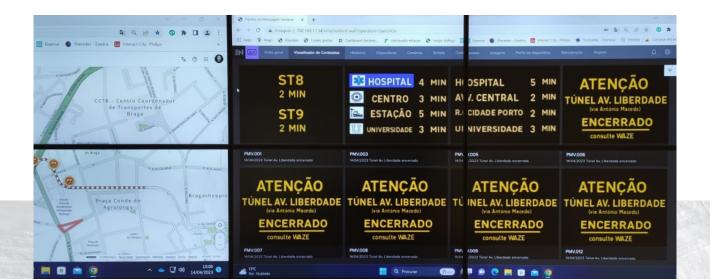
- obtaining buy-in from top-level executive;
- establishing a culture of data-driven decision making;
- creating a robust data infrastructure;
- streamlining processes;
- communicating effectively with stakeholders;
- implementing measures to hold those responsible accountable.

To achieve these goals, employees must be trained to embrace the use of data in decision making, processes must be reviewed and simplified, and stakeholders must be informed about the benefits of data-driven decision making.

This transition will take time and may require persistence, but with a commitment to continuous improvement, it is possible to successfully do it. Thus, the degree of experience in implementing such structures in other municipalities or public organisations, with the defined level of interdependencies, is a major need.

"Because of its emphasis on real, tangible solutions that can be executed quickly and efficiently, the FastTrack process is particularly well-suited to our needs. The curriculum stresses a hands-on, collaborative approach that includes government officials, industry leaders, academics, and residents from around our city. We believe that the FastTrack process will allow us to expedite mobility innovation while simultaneously ensuring that our solutions are effective, sustainable, and inclusive. We may prevent costly mistakes and build on the successes of our peers by leveraging the best practices of others."

**Pedro Moreira**, Head of Transport Authority and Mobility Management Unit, City of Braga



### Timeline - The deployment road ahead

Q1 2023 2023 Q3 2023 Q4 2023

Review of Best practices;

1st internal consultation about available data and potential use cases for data sharing;

Create a traffic data catalogue, including descriptions of all available datasets (type, contents, format, standards used, quality, update frequency, descriptive metadata etc.) Create an online platform for data sharing (e.g. CKAN)

Publish open or restricted access datasets on data sharing platform

Monitor and assess data sharing platform actual usage;

2nd internal consultation with other departments for additional processed datasets to be published and added value use cases (i.e. services to be developed using shared datasets a) for internal use and b) for use by the citizens)

#### Read more

Deployment plan

- Bicification project www.bicification.eu
- https://pinbike.web.app/opendata/21
- New project for intermodal data: Reactivity: www.reactivity-eit.eu
- Real-time information for our Bus Terminal: https://cctb.cm-braga.pt



