

# Integrated Action Plan (IAP) / Sustainable Urban Mobility Plan (SUMP)

## City of Braga

### Executive Summary

#### 1 City context and definition of the initial problem / policy challenge

##### 1.1 City context

Geographically, Braga is located in the Cávado valley, in the Northwest region of the Portuguese mainland. With an area of 184 square kilometres, at North Braga faces with the municipalities of Vila Verde and Amares, at Northeast and East with Póvoa de Lanhoso, at South and Southeast with Guimarães and Vila Nova de Famalicão and at West with the municipality of Barcelos.

The municipality's terrain is characterized by some irregularity with lowlands that spread throughout its territory, which at times contrasts with small mountainous formations, aligned with the main rivers. At the North it is limited by the Cávado River, at the South by a group of hills that form the Mountains of Picos (566m) and at the East by the Mountain of Carvalhos (479m). The territory progresses from Northeast to Southeast, following the valleys of its two rivers, which, along with smaller river courses, created two platforms.

Administratively, the municipality of Braga is the capital of Braga district, comprehending 37 civil parishes in total. The city is located in an important road axis and as result it has reached a great economic, social and cultural development.

Statistics	Data
Population	181,182 inhabitants (January 2017) <sup>1</sup>
Demography	<u>Population structure</u> (2014): <ul style="list-style-type: none"><li>• <b>110 women per 100 men;</b></li><li>• <b>Population change over 1 year:</b> 0%;</li><li>• <b>Age dependency ratio</b> (population 0-19 years and over 65 to population 20-64 years): 54.4%;</li><li>• <b>Young-age dependency ratio</b> (population 0-19 years to population 20-64 years): 33.8%;</li><li>• <b>Old-age dependency ratio</b> (population over 65 years to population 20-64 years): 20.6%;</li></ul> <u>Gender</u> (2014): <ul style="list-style-type: none"><li>• <b>Males:</b> 86,790</li><li>• <b>Females:</b> 95,320</li></ul> <u>Ethnicity</u> (2014): 176,691 inhabitants out of the overall population (182,110) were born in Portugal (97%).
Unemployment and employment statistics	<u>Unemployment rate</u> (2014): 13.2% <ul style="list-style-type: none"><li>• Unemployment rate <b>males:</b> 11.7%</li><li>• Unemployment rate <b>females:</b> 14.6%</li></ul> <u>Activity rate</u> (2014): 62.4% <ul style="list-style-type: none"><li>• Activity rate <b>males:</b> 66.8%</li><li>• Activity rate <b>females:</b> 58.5%</li></ul>
Industrial / employment composition	Braga is an extremely dynamic city with an intense economic activity in the areas of trade and services, education and research, construction, IT and new technologies, tourism and various branches of industry and crafts. The most important companies in Braga are the following: <ul style="list-style-type: none"><li>- BOSCH Car Multimedia Portugal, SA (electronic industry).</li></ul>

<sup>1</sup> Eurostat: <http://ec.europa.eu/eurostat/web/cities/data/database>

	<ul style="list-style-type: none"> <li>- The International Iberian Nanotechnology Laboratory.</li> <li>- Primavera-Business Software Solutions SA.</li> <li>- Navarra Aluminios;</li> <li>- DST;</li> <li>- Grupo CASAIS;</li> <li>- Delphi Automotive Systems;</li> <li>- Escala Braga, Sociedade Gestora de Estabelecimento Hospitalar;</li> <li>- Carclass, Comércio de Automóveis;</li> <li>- Torrestir, Transportes;</li> <li>- O Feliz, Metalomecânica;</li> <li>- Fhest, Componentes, Lda.</li> </ul>
Summary of relevant Operational Programmes (ERDF and ESF) covering the city	<ul style="list-style-type: none"> <li>a) Competitiveness and Internationalization;</li> <li>b) ESF Human Capital operational programme (OP);</li> <li>c) 'Social Inclusion and Employment' ESF operational programme (OP);</li> <li>d) Regional OP Norte</li> </ul>

## 1.2 Institutional framework

The following are the roles and responsibilities of the public administrations in the transport sector of Portugal:

- The **General Government** is responsible for decisional and financial levels. the General Directorate for Land and Inland Waterway Transport (*Direção-Geral dos Transportes Terrestres e Fluviais, DGTTF*) regulates the land and inland waterway transport sector and the the National Institute of Railway Transport (*Instituto Nacional do Transporte Ferroviário, INTF*) rules the railway sector.
- The **Municipalities** are responsible for urban and local transport: concessions for urban and municipal road operators, school lines and design of road municipal network (Law 10/90, LBTT).
  - The Urban Planning Department of the Municipality of Braga (*Direção Municipal de Urbanismo, Ordenamento e Planeamento*) is responsible for urban and local mobility and transport planning and management.
- The **Metropolitan Areas** (Lisbon and Porto) have specific responsibilities regarding transport and mobility.
  - Braga is not included in any of the metropolitan areas of Portugal.
  - However, since the 2013 local government reform the city of Braga is part of the intermunicipal community (*comunidade intermunicipal*) of Cávado (**CIM Cávado**; <http://www.cimcavado.pt/>). It is the NUTS III of the Cávado Valley and includes the Municipalities of Amares, Braga, Barcelos, Esposende, Terras de Bouro and Vila Verde.
  - Besides this, Braga is also part of another regional body, the **Quadrilátero** (<http://www.quadrilatero.eu/default.aspx>). The *Quadrilátero* is one of the five projects selected at national level to implement the "preliminary actions" for the program "*Política de Cidades Polis XXI*", co-financed by the Portuguese government. The *Quadrilátero* includes the following Municipalities: Braga, Barcelos, Guimarães and Famalicão.
  - According to the EUROSTAT database, the Functional Urban Area of Braga is PT003C1.

### 1.3 Current state of play

Braga is a city with a low sustainability mobility model, with increasing prevalence of the automobile, facilitated by policies of easy accessibility and parking in the centre.

The city of Braga is currently facing a series of problems and challenges in relation to sustainable urban mobility:

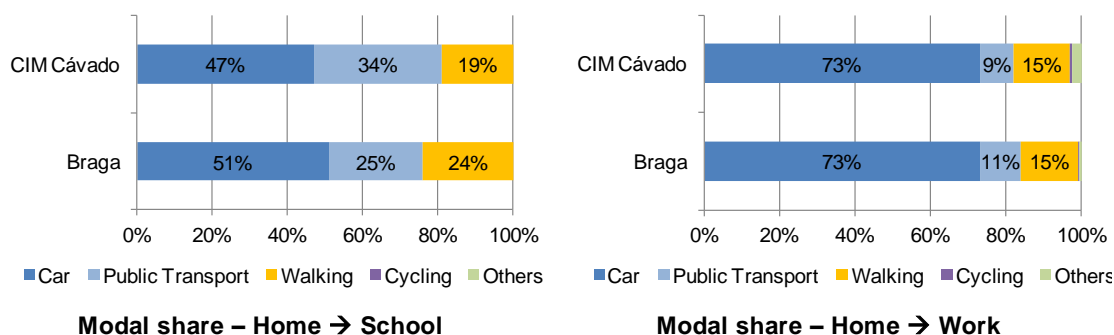
- Motorization rate is still growing.
- By-pass traffic in the city downtown.
- There are no intermodal facilities: the main bus station, the train station and the bigger parking facilities are not together.
- Parking management is not effective.
- Lack of a cycling network (it is still under development).

The **current modal split** of passenger transport is based on the data from a national survey carried out in 2011: **Car (66%); Walking (18%); Public Transport (15%); and Cycling (1%)**.

Despite most of Braga's inhabitants work and/or study within the municipality's boundaries (85%), there are 243,126 commuters in the CIM Cávado region (83,434 students and 159,692 students). Most of the trips for work and studies purposes have its origin in Braga (48% and 45% respectively).

Year 2011	Home → School	Home → Work
CIM Cávado	83,434	159,692
Braga	37,860	76,345

The following is the **modal share of the commuting trips** in Braga and the CIM Cávado region:



The **motorization rate** of Braga (526 vehicles/1,000 inhabitants) is higher than in the CIM Cávado sub-region (491 vehicles/1,000 inhabitants).

The **travel time of the commuting trips** in Braga and the CIM Cávado region is the following:

Commuting trips - Travel time					
Urban trips	< 15 min	16-30 min	31-60 min	61-90 min	> 90 min
CIM Cávado	69%	27%	4%	0%	0%
Braga	67%	29%	4%	0%	0%
Interurban trips	< 15 min	16-30 min	31-60 min	61-90 min	> 90 min
CIM Cávado	17%	44%	30%	6%	4%
Braga	9%	41%	38%	7%	5%

The **most important commuting trips with origin and/or destination Braga** are the following:

Commuting trips – Trips per day					
Trips	Guimarães	Porto	Barcelos	VN de Famalicão	Vila Verde
<b>Braga (origin)</b>	2.866	2.404	2.398	1.909	1.604
Trips	Vila Verde	Barcelos	Guimarães	VN de Famalicão	Amares
<b>Braga (destination)</b>	5.101	3.753	2.684	2.557	2.494

Finally, the following is a thorough analysis of the current situation of urban transport and mobility in the city of Braga:

- Walking:
  - Braga has one of the biggest pedestrian areas of Portugal in its city downtown.
- Cycling:
  - There are two major cycling paths. On the one hand, the cycling and walking path along the “*Rio Este*” river across the south part of the city of Braga (3 km). On the other hand, the cycling path of “*Lamações*”.
  - There is not a real cycling network.
- Public Transport:
  - The urban transport network is operated by a public company (TUB: Transportes Urbanos de Braga) and has 114 lines (72 are daily).
  - 89.0% of the population is covered by the public transport network.
  - 96.1% of the population lives at 350 meters of a TUB’s bus stops.
  - The interurban transport network is operated by several companies within the Quadrilátero municipalities and beyond.
- Parking management:
  - Currently the Municipality cannot implement any parking management policy because both on-street and off-street parking facilities are granted to private companies.

Sustainable urban mobility planning is a key priority for the Municipality of Braga. On 2015 the Municipality approved a **Strategic Plan for sustainable urban mobility (2015-2025)** that is integrated with some other policies (urbanism, social, etc.) such as the Urban Rehabilitation and Social Integration strategy (Action Plan for Disadvantaged Communities). Despite it includes the guidelines and main objectives of the city in terms of sustainable mobility development, it can’t be considered a Sustainable Urban Mobility Plan (SUMP).

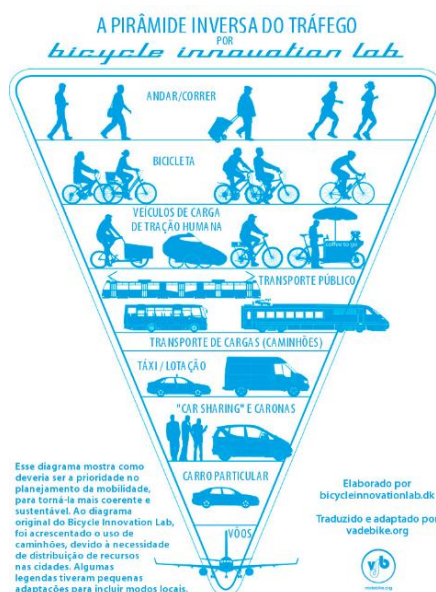
Therefore, **the new SUMP of Braga** will further develop the key areas identified in the Strategic Plan and define the aim and objectives of the mobility policy for the coming years.

## 2 Setting of focus and objectives

The main aim of Braga's SUMP is to reverse the "mobility pyramid".

Furthermore, the objectives of Braga's SUMP are the following:

- To reach an integrated mobility system;
- To turn around the current modal share (10% change);
- To reduce conflicts between public transport and cars;
- New parking management policy. Currently the Municipality can't implement any parking policy because both on-street and off-street parking facilities are granted to private companies.
- Improvement of intermodal facilities;
- New urban freight system.
- To improve transport for people with reduced mobility;



## 3 Actions and schedule

The above mentioned objectives will be reached by focusing in effective packages of measures in the following key areas:

- 1) Promoting soft modes (walking and cycling). By 2025 is expected that 55% of the population will be covered by the cycling network and 100,000 inhabitants will have a bike lane 2 minutes away from their home:

The "**Braga cycling**" project (MOB.01 - "*Braga ciclável*") is the core initiative of the new Braga's SUMP to improve walking and cycling conditions. This project includes the following measures:

- Improvement of the current cycling paths;
- Development of a cycling network;
- Traffic calming measures (new traffic scheme in the city downtown, zone 30, living streets, etc.);
- New loading / unloading bays to improve urban freight;
- New parking scheme (restrictions in the city downtown and new parking facilities in the outskirts);
- Improvement of walking accessibility;
- Increase safety in the school's surroundings;

Besides this major project, the SUMP also includes a **Walking Action Plan** (MOB.02) to improve walking conditions and implement new walking paths in the city downtown.

- 2) Improvement of the public transport system:
  - Implementation of a **priority corridor for public transport** (MOB.04);
  - New on-demand public transport services in the city outskirts (MOB.07);
- 3) Strengthen intermodal transport system:

- Improvement of the intermodal facilities (MOB.03);
  - New real-time information system (MOB.05);
- 4) Implementation of an intelligent traffic control system (MOB.06)

## 4 Funding scheme

The Municipality of Braga's budget for implementing the SUMP's Action Plan is the following:

Key area	Measures	Budget
Promoting soft modes (walking and cycling)	MOB.01 - Braga Cycling Plan (" <i>Braga ciclável</i> ")	3.900.000 €
	MOB.02 - Walking Action Plan	2.000.000 €
Improvement of the public transport system	MOB.04 - Priority corridor for public transport	4.600.000 €
	MOB.07 - On-demand public transport services	450.000 €
Strengthen intermodal transport system	MOB.03 - Improvement of the intermodal facilities	1.500.000 €
	MOB.05 - New real-time information system	1.000.000 €
Implementation of an intelligent traffic control system	MOB.06 - Intelligent traffic control system	1.600.000 €
<b>TOTAL</b>		<b>15.050.000 €</b>

## 5 Framework for delivery

The Municipality of Braga is responsible for drafting and implementing the new SUMP. To ensure the readiness of the new SUMP it is necessary to foster strong horizontal integration in the form of greater and better interaction and cooperation between a wide range of citizens, sectors and organisations.

The following are the key performance indicators for evaluating and monitoring the progress of the new Braga's SUMP:

Key Performance Indicator	Variable	Baseline	Objective	Greenhouse gas emissions (Ton CO <sub>2</sub> )	
		2018	Goal 2023	2018	Goal 2023
Priority corridors for PT implemented	Number	1	1	222.243	196.405
Intermodal facilities improved	Number	1	2		
Traffic calming streets / Living streets	Km	30	70		
Mobility Plans approved (to schools, to workplaces, etc.)	Number	1	3		



## 6 Description of the process

URBACT Local Support Groups (ULSG) are a fundamental building block of the URBACT programme. Each URBACT partner is required to set up a Local Support Group gathering key local stakeholders in order to co-produce the Local Action Plan (LAP).

The URBACT Local Support Groups (ULSG) of Braga integrates representatives of key local stakeholders as well as higher authorities responsible for regional or national transportation agendas:



- Public Administration:
  - *Câmara Municipal de Braga* (Municipality of Braga);
    - *Direção Municipal de Urbanismo, Ordenamento e Planeamento*
    - *Departamento de Engenharia Civil*
    - *Departamento de Sistemas de Informação*
    - *Departamento de Produção e Sistemas*
  - CIM Cávado – *Comunidade Intermunicipal do Cávado*;
  - Quadrilátero;
- Public bodies:
  - University of Minho;
  - *Comissão de Coordenação e Desenvolvimento Regional do Norte / Norte 2020*;
  - *Instituto de Ciências Sociais*;
  - Schools;
  - InvestBraga (local public enterprise for the development of economic investment in the city);
  - LABMOB;
- User's associations:
  - *Associação Braga Ciclável*;
  - ACAPO – *Associação de Cegos e Amblíopes de Portugal*;
- Transport operators:
  - TUB - *Transportes Urbanos de Braga* (local bus company);
  - CP – *Comboios de Portugal* (national train company);
  - *Administrador U-Bike*

The ULSG of Braga has been involved in all the phases of the SUMP. The following are two examples of the participatory tools during the ULSG meetings:

SUMP phase	URBACT tool
1) <b><u>Baseline definition</u></b>	<b><u>Problem three methodology</u></b>

SUMP phase	URBACT tool
<p>Assessment of the current mobility situation in Braga.</p> <p>The objective of this phase was to prepare a baseline analysis to identify and prioritise key problems to be addressed by the Integrated Action Plan.</p>	<p>The problem, objective and strategy tree analysis is one participatory tool of mapping out main problems, along with their causes and effects, supporting project planners to identify clear and manageable goals and the strategy of how to achieve them.</p> <p><b>Problem Tree methodology</b></p> <p>The tree branches represent the effects of the main problem</p> <p>Identify the core problem</p> <p>The roots of the tree represent the causes of the main problem</p>
<p>2) <b>Scenario building</b></p> <p>Describe different scenarios in a quantitative and qualitative way.</p> <ul style="list-style-type: none"> <li>- Do-nothing scenario;</li> <li>- Business-as-usual scenario;</li> <li>- Objective scenario;</li> </ul>	<p><b>Backcasting</b></p> <p>Backcasting is a planning method that starts with defining a desirable future and then works backwards to identify policies and programs that will connect that specified future to the present.</p> <p><b>Backcasting: Objective scenario</b></p> <p>Creating Ideas: What creative solutions can we think of that can help us achieve success?</p> <p>Down to action: What will our action plan look like? Does it provide a good Return on Investment (social, financial, etc.)?</p> <p>Current reality: What do we already have? Do our current tools and resources help us to be successful? What are our challenges?</p> <p>vision: What does our organization or community look like in a sustainable future? We are using four sustainability principles as our guiding instruments.</p> <p>Backcasting</p> <p>Previous ULG session: Baseline definition</p>

## 7 Risk analysis

Risk	Low	Medium	High
Operational	-	Information exchange between Municipality's departments	Cooperation between all Public Administrations (National, regional and Local level)
Financial	-	Lack of funding sources	-
Legal	-	-	Procurement constraints of the Public Administration
Staff	Lack of staff in the Mobility Department	-	-
Technical	-	Lack of expertise with regards to new technologies, new operational modes and new business models	-
Behavioural	-	General public acceptance of the new sustainable mobility model	-



