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**ANALYTICAL REPORT //**

## **Small and medium sized towns and cities in Portugal:**

Policies strengthening their role in achieving active, inclusive and functional territories

Case study of Fundão // October 2023

This analytical report is conducted within the framework of the ESPON 2030 Cooperation Programme, partly financed by the European Regional Development Fund.

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**Disclaimer**

This document is a final report.

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The final version of the report will be published as soon as approved.

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## Abbreviations

ARU	Rehabilitation Urban Area
BSE	Beiras e Serra da Estrela (NUTSII)
CCDR	Regional Coordination and Development Commissions
CIM	Intermunicipal Community
CIM-BSE	Intermunicipal Community of Beiras and Serra da Estrela
CMF	Câmara Municipal do Fundão (Municipality of Fundão)
DGT	Portuguese Directorate-General for Territorial Development
EIDTBSE 2020	Integrated Intermunicipal Development Strategy Beiras and Serra da Estrela 2020
EHL	Local Housing Strategy
EU	European Union
ICT	Information and Communications Technologies
ICTE	Information and Communications Technologies and Electronics
INE	Portugal's National Institute of Statistics
IoT	Internet of Things
IPCB	Polytechnic Institute of Castelo Branco
LAU	Local administrative unit
LLCB	Living Lab Cova da Beira
LoRa	LoRa (Long Range) technology
MAs	Metropolitan areas
NUTS	Nomenclature of territorial units for statistics
OPR	Urban Rehabilitation Operation
PAMUS	Action Plan for Sustainable Urban Mobility
PDM	Municipal Master Plan
PERU	Strategic Programme for Urban Rehabilitation
PNPOT	National spatial planning policy programme
PROT	Regional Spatial Plan
PRR	National recovery and resilience plan
QREN	National strategic support framework
RIS3	Centro Regional Smart Specialization Strategy
SMEs	Small and medium-sized enterprises
SMSTCs	Small and medium-sized towns and cities
UBI	University of Beira Interior



## Introduction

This report is the second part of a quantitative and qualitative study that analyses the territorial dynamics and policies addressing *Portugal's Small and Medium-Sized Towns and Cities (SMSTCs)* and the impact of European Union (EU) funding policies designed to support them, over the last two decades. Both documents form part of a larger territorial study covering Spain, Italy and Germany and a broader framework for funding policies at the EU level<sup>1</sup>. According to the Terms of Reference of this study:

*Small and medium-sized towns and cities play a particularly significant role in the growth of their respective regions, providing jobs and services that range from education and healthcare to public transport. They create opportunities for people to live and work in SMSTCs by providing conditions for a good quality of life. This is achieved by promoting policies targeting the digital transition, retaining young people and attracting new talent. These projects may become drivers of opportunities that can generate positive synergies and shape functional linkages between urban and rural areas to help combat depopulation and contribute to better economic, social and territorial cohesion.*

Understanding the role that SMSTCs<sup>2</sup> can play in the cohesion and development of the *low density/empty*<sup>3</sup> territories has been established as one of the priorities of the *Spanish Presidency of the Council of the EU(2023/2024)*. The aim is to focus on achieving more active, inclusive and functional territories, by strengthening their singular and unexploited potential and achieving better-balanced territorial development and an improved quality of life. Two fundamental questions were risen for this research:

- How could small and medium-sized towns and cities contribute more to the economy and demography of the EU, in general, and to those of the countries studied, in particular?
- How should national, regional and local policies support the development of small and medium-sized towns and cities from a long-term perspective?

This document presents a Case Study of a Portuguese SMSTC: Fundão. Fundão was chosen as it exhibits a set of territorial and sectorial policies that have been implemented at different levels of governance to tackle problems that are common to most low-density territories in the country.

The municipal and regional smart territory innovation strategies that were identified strongly rely on the development of technological and digital infrastructures and services. These foster innovation and have helped to reverse some of the settlement's economic weaknesses and loss of population. Urban Renewal and Migrant Welcoming Policies have complemented the strategies implemented at the municipal level.

This is also an interesting case study as the innovation strategy that has been applied since 2012 and has already produced significant results and raised relevant issues worthy of general discussion. Other key factors highlighted in this study are the use of EU funding and participation in European networks.

A number of direct interviews were conducted with stakeholders. These included: people who were involved in the development and implementation of the strategy (such as Fundão's Mayor and other administrative and technical staff responsible for the strategy); representatives of supra-municipal entities (such as the *Portuguese Association for Regional Development*); and people responsible for overseeing programmes and infrastructure related to the *Innovation Ecosystem* and the *Migrations Centre*.

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<sup>1</sup> ESPON, "Small and medium sized towns and cities in Spain, Portugal, Italy, Germany and the rest of Europe: policies to strengthen their role in achieving more active, inclusive and functional territories". A study carried out under the ESPON 2030 Programme and which will be implemented at the request of the Spanish Presidency of the Council of the EU within the framework of the ESPON TAP "Governance of new geographies".

<sup>2</sup> In the context of this study, the population range considered for SMSTCs was between 20,000 and 75,000 inhabitants.

<sup>3</sup> In Portugal, the term "Low Density Territories" tends to be used, while in Spain the equivalent is "Empty Territories".

This document is divided into 4 chapters. Chapter 1 describes the territorial context and the municipal structure, highlights the socio-economic trends over the past decade, and explains the EU Funding assigned to Fundão. Chapter 2 summarizes the key points raised in the interviews that were conducted. Chapter 3 analyses the *Intermunicipal Development Strategy*, which has been the reference framework for the *Strategic Plan for Innovation* applied in the municipality, and examines the associated infrastructure, programmes and results. Chapter 4 presents concluding remarks and makes some policy recommendations based on the experience of Fundão.

The authors would like to thank all the people who contributed to the drafting of this report.

# 1 Profile of Fundão

## 1.1 Territorial context

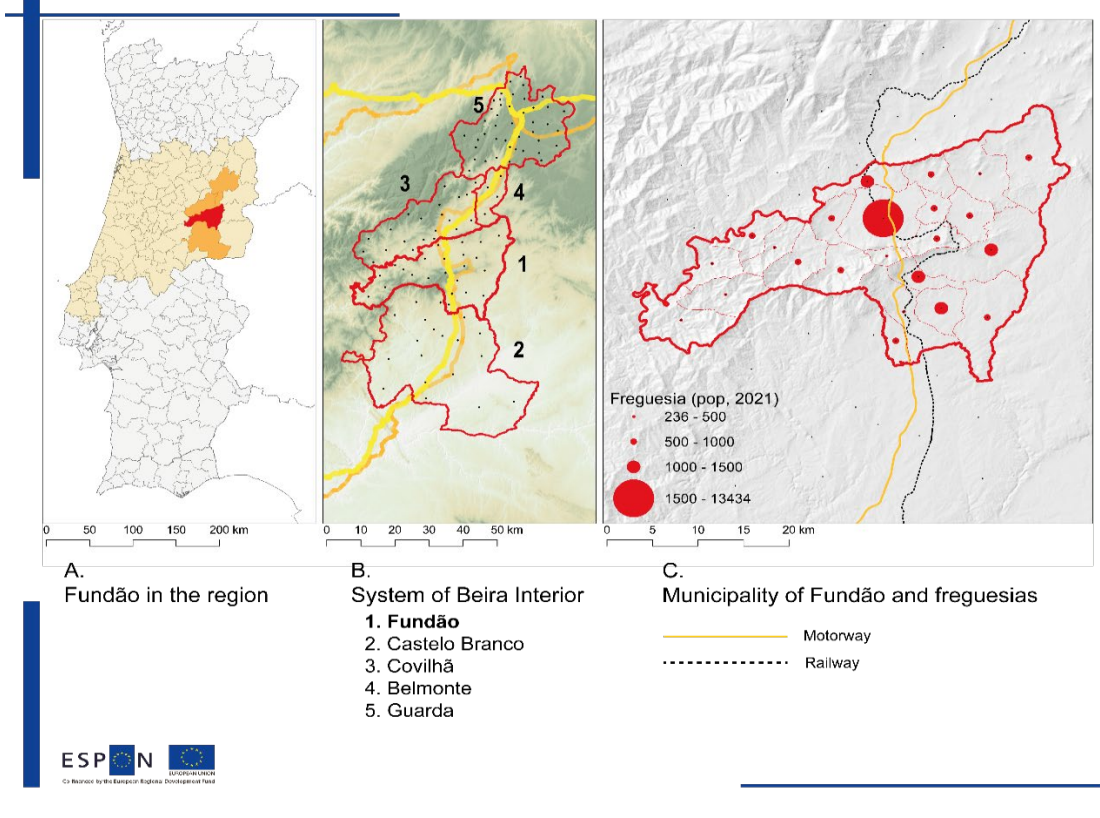
The *concelho*, or municipality, of *Fundão* (LAU 1) is located in the eastern cross-border area of the *Centro Region* (NUTS II) and forms part of the sub-region (province) of *Beira Baixa* (NUTS III), in the *District of Castelo Branco*. At the supra-municipal level, Fundão is part of the *Intermunicipal Community (CIM) of Beiras e Serra da Estrela (BSE)*.

According to the 2021 Census, Fundão has a population of 26,509 inhabitants and a surface area of 700 km<sup>2</sup>, which is divided into 23 *freguesias* (parishes) (LAU 2). The most populated parish is Fundão (13,434 inhabitants), which contains 50% of the municipality's population.

Fundão also serves as a functional pole within the SMTC regional corridor of *Castelo Branco, Fundão/Covilhã and Guarda*. Fundão borders on similar municipalities which also have SMTCs status and populations of between 20,000 and 75,000 inhabitants (including Covilhã to the north and Castelo Branco to the south). All of these settlements are located in what is a predominantly rural area.

Within the context of the 15 municipalities<sup>4</sup> that compose CIM BSE, Fundão's population is the 3<sup>rd</sup> largest, after those of Covilhã (46.455) and Guarda (40.117)<sup>5</sup>.

**Map 1 Fundão: location and the distribution of its freguesias**



Source: Data from INE<sup>6</sup>. Own research.

<sup>4</sup> Almeida; Belmonte; Celorico da Beira; Covilhã; Figueira de Castelo Rodrigo; Fornos de Algodres; Fundão; Gouveia; Guarda; Manteigas; Mêda; Pinhel; Sabugal; Seia; Trancoso

<sup>5</sup> <https://www.pordata.pt/censos/resultados/emdestaque-guarda-532>

<sup>6</sup> [https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_main](https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_main)

The 2014-2020 EU Community Funding programming cycle introduced the *Integrated Intermunicipal Development Strategy Beiras and Serra da Estrela 2020* (EIDTBSE 2020)<sup>7</sup> (see 3.1). This institutionalised pacts for territorial development and cohesion, placing emphasis on the multi-municipal scale and on the organisation of initiatives within the framework of the CIM. In addition, changes to the legal framework governing CIMs reinforced the position of their scale as the preferential level for municipal action. This effectively established the conditions required for an effective administrative decentralization of competences.

This territory occupies an area of around 6,300 km<sup>2</sup> and, according to 2021 census, has around 210,600 inhabitants. The CIM BSE has a more extreme ageing population problem than the Centro Region:

- It has a lower population density (79 inhabitants/km<sup>2</sup> in Centro, 33 in CIM, and 38 in Fundão);
- It has a smaller population of children under 15 years (11.83% Centro; 9.74% CIM; Fundão 10.11%);
- It has a significantly higher ageing index (229 Centro; 338 CIM; Fundão 322).

## 1.2 The Urban System of the Centro Region - Articulation networks<sup>8</sup>

The Centro Region has an urban system that could perhaps serve as an alternative to the two metropolitan areas. It is an area where small and medium-sized towns and cities provide a clearly differentiated job offer and quality of life. This is a territory with “multiple relationship geometries” in which it is possible to find the following four urban subsystems:

- The Coastal Centro urban subsystem
- The Viseu/Dão-Lafões and Planalto Beirão urban subsystem;
- The Beira Interior urban subsystem (which includes Fundão);
- The Pinhal Sul urban axis;

Fundão forms part of the urban subsystem of Beira Interior. This runs along the IP2/A23 and includes Guarda, Belmonte, Covilhã, Fundão and Castelo Branco. It is made up of a series of nodes that are only a few minutes apart and which act as nodes for the surrounding low-density areas.

This axis is deeply marked by traditional industrial activities, such as textile and dairy production. It also now has special relevance for tourism, mainly related to the Serra da Estrela/Serra da Gardunha mountain system and its heritage value.

*Guarda and Castelo Branco are renowned for their administrative functions, Covilhã for knowledge services linked to the University of Beira Interior, Fundão for the excellence of its local production, and Belmonte for the importance of its textile industry. The city of Guarda, occupies a pivotal position between two important roads (IP2/A23 and IP5/A25), has a railway line and will have the future logistics platform and so it plays an important role in connecting this area to the coast and to the rest of the Europe, and especially to Spain. The future construction of the IC31 should also further strengthen cross-border connections.*

The urban strategy that supports the *PROT Centro*<sup>9</sup> (which is still pending approval) requires the consolidation of a polycentric regional urban system based on a three-level urban structure consisting of: i) Regional urban centres; ii) Structuring urban centres; and iii) Complementary urban centres. Within this typology, Fundão is considered a Complementary urban centre.

However, according to the revised municipal master plan (PDM) for the *Municipality of Fundão*, which was approved in September 2023:

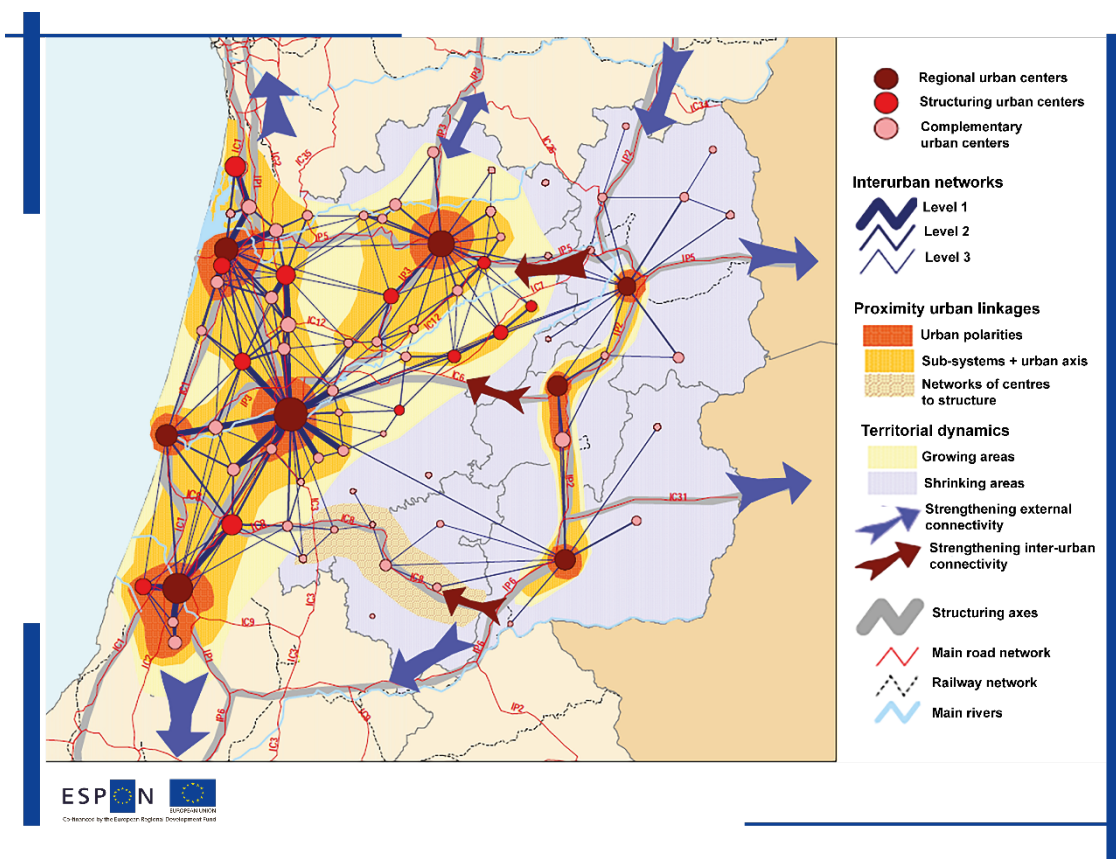
In a new approach to the regional urban system, the city of Fundão should be considered a Structuring Urban Centre due to its importance as a hub for structuring the development of the Castelo Branco/Fundão/Covilhã/Guarda axis.

<sup>7</sup> [Estratégia Integrada de Desenvolvimento Intermunicipal Beiras e Serra da Estrela 2020](#)

<sup>8</sup> This section includes information obtained from the [REVISÃO DO PDM DO FUNDÃO \(September 2023\)](#).

<sup>9</sup> The Law on Spatial and Urban Planning Policy (LBPOTU) establishes that Regional Spatial Plans (PROT) are: “instruments of territorial development, of a strategic nature and regional scope”.

Map 2 Centro Region urban system (PROT)



Source: PROT Centro Proposal - CCDR-C, May 2011<sup>10</sup>

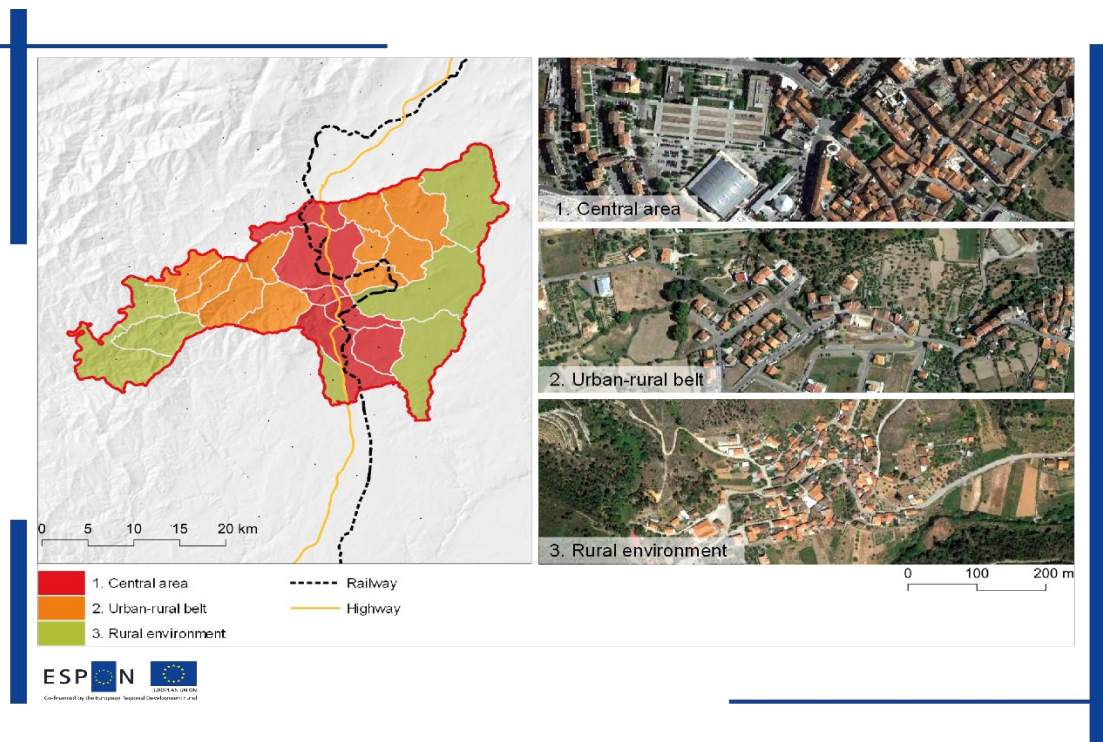
### 1.3 Municipal structure and infrastructure<sup>11</sup>

Fundão's SMSTC typology corresponds to that of a large municipality (700 km<sup>2</sup>) with a territorial structure defined by the centrality exercised by the *freguesia* and city of Fundão. The city concentrates most of the population and services and is surrounded by a periphery of rural *freguesias*, articulated by small settlements, whose economic base is linked to agriculture and traditional economic activities. The following three scenarios can be identified:

- (1) Central area: the city of Fundão is a compact urban core with residential and commercial uses. These are complemented by an important industrial area to the north which is connected to the regional road and railway corridor. Its hinterland (which extends for less than 6 km) is made up of *freguesias* that are currently undergoing processes of suburbanisation and where strategic infrastructure linked to urban services is located.
- (2) Urban-rural belt: this is formed by *freguesias* located at distances of 10-15 km from the city of Fundão and is accessible via direct, radial road infrastructure. The settlements in this area exhibit a low degree of compactness and have a tendency to grow along the main routes. There is a low-density urban fabric which has maintained its agricultural activity.
- (3) Rural environment: this is defined by the *freguesias* located on the boundaries of the municipality, which are 20-25 km from the city of Fundão. These *freguesias* also maintain close contacts and interactions with neighbouring municipalities. This territory includes small, compact settlements which are surrounded by agricultural land and natural ecosystems of high landscape and environmental value.

<sup>10</sup> [https://www.ccdr.pt/index.php?option=com\\_docman&view=download&id=1846&Itemid=739](https://www.ccdr.pt/index.php?option=com_docman&view=download&id=1846&Itemid=739)

<sup>11</sup> This section includes information obtained from from the [REVISÃO DO PDM DO FUNDÃO \(September 2023\)](#).

**Map 3 Fundão: territorial structure**

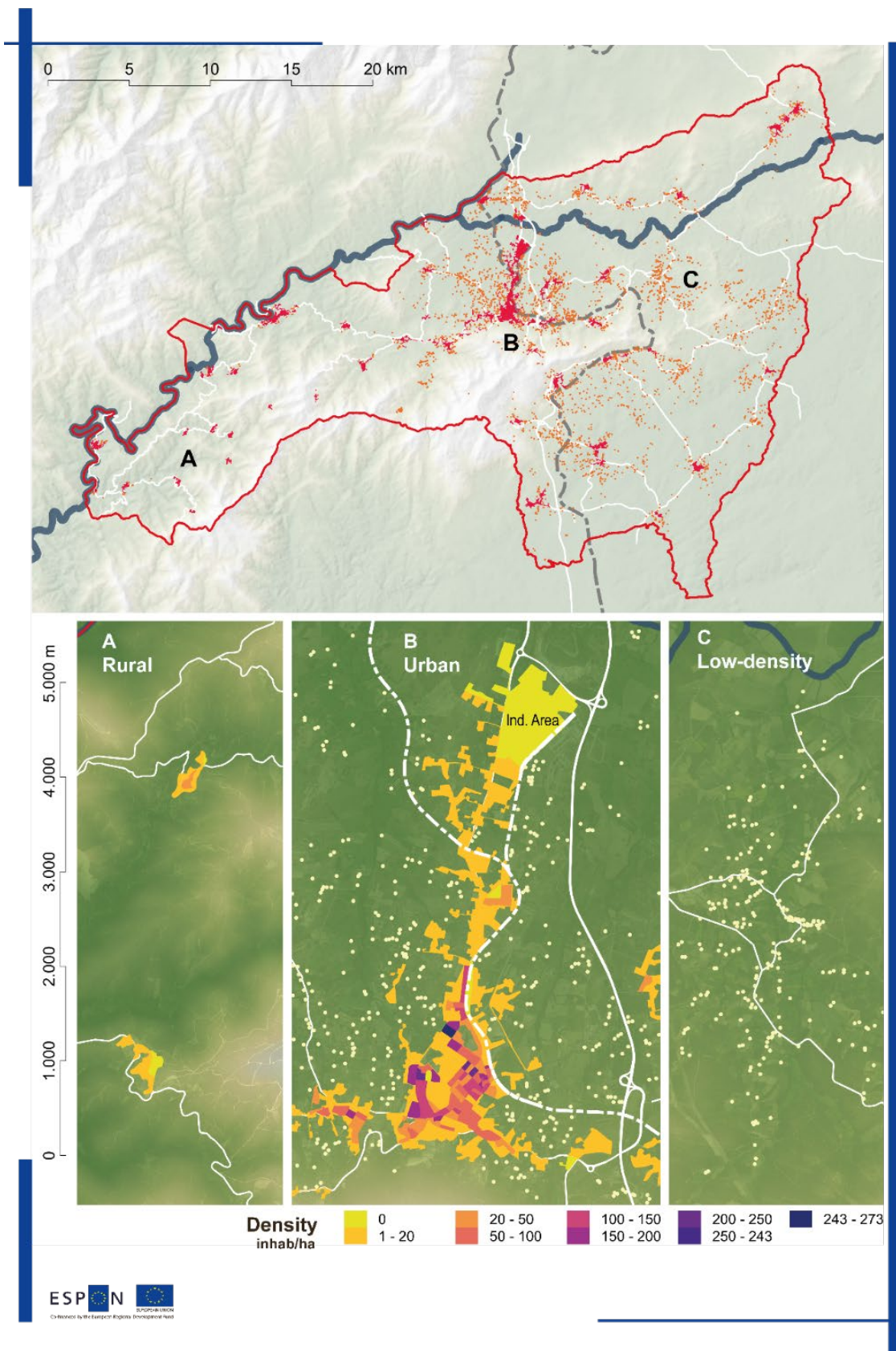
Source: Data from the Fundão PDM. Own research.

**Table 1 Fundão: City size, density and ratios**

N°.	Acronym	Description	Unit of measurement	Data
A1	PU	Urban population	N° inhabitants	13,434
A2	PR	Rural population	N° inhabitants	13,075
A3	SU	Urban surface area	Hectares (Ha)	2,580
A4	SR	Rural surface area	Hectares (Ha)	67,420
A5	DU	Gross urban density (DU=PU/SU)	N° inhabitants / hectare (pop/Ha)	5.21
A6	DR	Gross rural density (DR=PR/SR)	N° inhabitants / hectare (pop/Ha)	0.19
A7	PR	Population growth rate / 10 years)	Percentage (%)	9.28
A8	MB	Annual municipal budget	f/year (2021)	€34,952,565
A9	PT=PU+PR	Total population	N° inhabitants (2021)	26,503
A10		Per capita income (A8/A 9)	€/pop/year (2021)	€1,318.80

Source: Data from INE and DGT statistical data relating to the PDM. Own research.

**Map 4 Fundão: categorisation of settlements**



Source: INE and DGT. Own elaboration: Combination of census mapping (2021) with the *Carta de Áreas Edificadas* (CAE-2019) and satellite imagery (2022).

## Land use

For a SMSTC located in a regional corridor like Fundão, the diversity of its land uses is a key consideration, especially when it comes to promoting and/or improving urban-rural linkages and territorial intermediation.

**Residential:** Two types of residential land can be distinguished: I) Compact urban land, with the city of Fundão as the main population centre. This coexists with typologies characteristic of the historic centre, subsequent extensions, and the latest processes of low-density suburbanisation on the edges of the built-up area. In contrast, the small rural settlements in the peripheral *freguesias* have maintained a more traditional compact urban fabric, with a street structure adapted to the topography; II) Dispersed, isolated housing, mainly linked to agricultural exploitations. In recent years a large amount of low-density housing has emerged which is unrelated to rural activity. This has been especially notable in the nuclei of the parishes closest to the city of Fundão.

**Industrial:** The Silvares Industrial Park, located to the north of the city of Fundão, is connected to the main road and rail networks. It has an area of approximately 50 ha and its extension is planned to strengthen the industrial and logistic fabric of the region.

**Agricultural:** Agriculture is key to the municipality of Fundão and occupies a total land area of 12,014 ha. This largely corresponds to the plains and coincides with the highest concentration of livestock (bovine and ovine) farming. The main crops grown are cereals and fodder crops. Horticultural crops are mainly grown on a self-sufficient/subsistence basis and tend to occupy small fields in the areas around the towns and villages and particularly near watercourses.

**Forest:** This occupies a total of 52,203.2 ha, especially in more mountainous areas, combining with the agricultural land to form a powerful mosaic. It is essential for a municipality like Fundão to keep its forests in good condition in order to prevent the risk of forest fires. The predominant woodland species are pine (65%) and eucalyptus (18%).

**Special protection:** The Serra da Gardunha forms part of the Natura 2000 Network. It is worth highlighting the proximity of this area, which has great environmental and landscape value, to the city of Fundão.

## Mobility

As part of the *Castelo Branco, Fundão/Covilhã and Guarda* regional corridor, the local communication infrastructure is a key element that allows the movement of people, goods and services. The main components of the mobility infrastructure are:

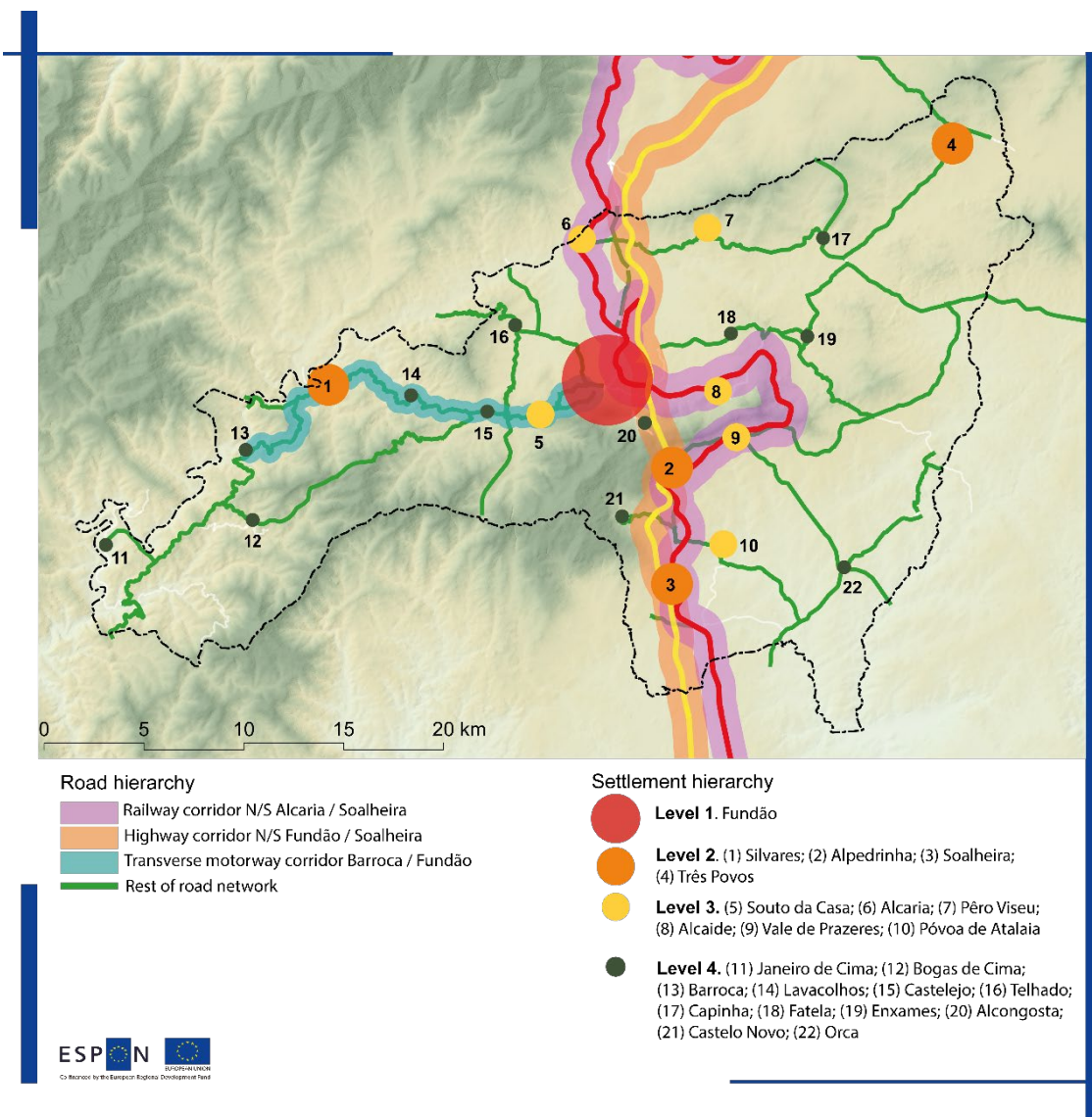
**Road network:** According to the national road hierarchy, the following types of road can be identified: sections of national motorway (68 km), regional motorway (25 km), various sections of the national main road network (82 km) and a heterogeneous local road network (194 km). These roads provide the backbone for the layouts of the different towns in the municipality and connect the peripheral rural settlements with neighbouring municipalities. There is a direct connection between the industrial and logistic areas of Fundão and the national motorway. In the case of the rural environment, a dense network of roads guarantees access to the area's agricultural and forestry activities. In total, the road network is approximately 430 km long, with a density of 615 m/km<sup>2</sup>. This could be considered high in relation to the size of the municipality and the structure of its rural settlements and implies a relatively high level of territorial coverage.

**Railway network:** The central part of the municipality is crossed by the Beira Baixa line (from Covilhã to Lisboa), which has a passenger station and a freight terminal in the city of Fundão. The Beira Baixa Line forms part of the Atlantic Corridor which includes Portugal, Spain, France, and Germany, and is included in Priority Project 8 of the Trans-European Transport Network (TEN-T). The line currently provides 11 services on working days (5 regional and 6 which are integrated into the high velocity Intercity Service). In addition to the station in the city of Fundão, the line offers stops at eight of the *freguesias*. Finally, it is worth mentioning the existence of a freight line connecting to the Industrial Zone of Fundão. This railway infrastructure is of great strategic importance: it has improved accessibility to the region and has also upgraded the connection to the border of Vilar Formoso and the *Raia*, with Spain.

**Public transport by road:** All the *freguesias* in the municipality are covered by a public transport system, although many of the services are very limited during school holiday periods. The CIM BSE is the authority responsible for providing these services and does so by working with two operators: TRANSDEV and Auto

Transportes do Fundão. In total, 10 local routes, two intercity routes and one regional route (Castelo Branco / Covilhã) are regularly operated. The municipality is currently introducing the technology required to offer an “on-demand” transport system, which will make the schedules, routes and stops more flexible. Even so, the physical reality of a system that must serve rural settlements and scattered housing makes it difficult to implement a quality public transportation service and the use of private vehicles therefore remains predominant.

**Map 5 Fundão: mobility network**



Source: Data from the Fundão PDM. Own research.

As part of the CIM-BSE, the *Municipality of Fundão* participates in the elaboration of the *Action Plan for Sustainable Urban Mobility (PAMUS)*. It is also involved in the planning and construction of an Intermodal Centre (combining road and rail transport) and in planning the layout of numerous urban and interurban cycle paths.

### Basic services

Fundão has made a substantial effort to improve the quality of its urban services in order to ensure a high-quality of life for its inhabitants. Action has been taken in the following areas:

**Water supply:** This serves 93% of the urban population and 85% of the total municipal population, with 17% of the supply being provided by autonomous systems.

**Wastewater:** 80% of the population were already served by the sewerage network in 2011. Since then, coverage has been further extended. While the needs of the main population centres are largely covered, some small rural settlements are still without an adequate sanitation system. The municipality is therefore introducing gravity drainage networks in small, more compact wastewater treatment plants.

**Solid waste:** Its collection and treatment have been undertaken throughout the municipality for several years now. It is worth highlighting the closure of the municipal landfill site and the construction of the Cova da Beira Solid Waste Treatment Centre. Recycling containers for the selective collection of waste are now also widely available. There is also a Waste Transfer Centre (CTRSUCB) located in Fundão's industrial zone. By 2018, there were 2,197 urban solid waste collection structures. In the rural *freguesias*, waste management is carried out through organised collection circuits. The management of "green waste" involves the use of forest recycling containers. A number of 1 ha isolated areas have been established where the local population can deposit the remains of pruning and vegetation cleared from agricultural land. These waste products are then sent to the biomass plant to be transformed into clean energy.

**Electricity:** Electricity supplies are guaranteed to the whole population. This is important for both urban and rural areas; in the latter, this service has been key to the modernisation of agricultural activity. Fundão has made a strong commitment to the introduction of clean energy and has one of the largest wind farms in the country ([Gardunha](#)). The vast majority of municipal buildings are also fitted with photovoltaic panels and the building of a [photovoltaic solar energy plant](#) is currently being negotiated.

**Telecommunications:** At present, municipal coverage is around 80%. This is due to the difficulties involved in providing optical-fibre cable networks in small rural areas. However, CMF is committed to achieving 100% coverage.

Since 2019, Altice Portugal has set itself the goal of providing full coverage across the whole of Portugal's territory, which includes providing 100 more parishes with 100% optical-fibre cable coverage. The municipality of Fundão and its parishes form part of this process.

The municipality of Fundão has also installed a LoRA communications<sup>12</sup> network. This uses radio frequency technology and enables secure data transmission over long distances (several kilometres) with low power consumption. Its introduction was a fundamental requirement for the implementation of Internet of Things (IoT) devices. The local system includes 12 antennae and this network provides full coverage to the municipality of Fundão.<sup>13</sup>

Another feature of particular note is the supra-municipal management of public services such as sanitation, water supply and waste collection and treatment. This service has already been operative for two decades and is run by an organisation that combines state and municipal authorities, working through public companies.

[RESIESTRELA](#) is responsible for the treatment and recovery of urban waste in the 15 municipalities in the region. It thereby contributes to the sustainable development of the region and creates added value. The current system serves a population of 184,457, in an area of 6,160 km<sup>2</sup>, corresponding to approximately 7% of Portuguese territory. The *Alto Zêzere and Côa Multimunicipal Wastewater Sanitation System* serves 14 municipalities; it belongs to three districts and has four different operational centres<sup>14</sup>.

[Águas do Vale do Tejo, S.A.](#) is a multi-municipal company that has provided Water for Human Consumption and Wastewater Sanitation in the Tagus Valley for the past 30 years. The management of this system has been delegated to EPAL. This multi-municipal system is comprised of more than 1,400 separate pieces of infrastructure and 3,538 km of pipeline for transporting the water supply. It includes more than separate 1,000 installations and 888 km of outfalls for wastewater outlets. It is estimated that the total population currently served by this system is around 1.1 million.

<sup>12</sup> [LoRa \(standing for "long range"\) is a radio communications system.](#)

<sup>13</sup> [IoTExchange Action Plan | Make Fundão an IoT City – July 2022](#)

<sup>14</sup> Northern Operational Centre (Figueira de Castelo Rodrigo, Almeida and Sabugal), Western and Central Operational Centre (Guarda, Celorico da Beira, Fornos de Algodres, Aguiar da Beira, Pinhel and Meda), Western Operational Centre (Oliveira do Hospital, Seia and Gouveia), and Southern Operational Center (Fundão and Penamacor).

## Collective facilities.

Quality of life, well-being and social cohesion are indicators that can all be measured in relation to the quantity and quality of collective public facilities that are available. These may be summarised as follows:

**School facilities:** These are provided at all levels, ranging from pre-school to higher education (through a partnership with the Castelo Branco Polytechnic Institute). There are 22 pre-school education institutions; 31 basic education institutions; and 2 secondary education institutions (which also provide vocational training). The secondary school population is slowly growing, but the number of students involved in vocational education has grown by around 72% in recent years. However, demographic contraction has meant that the less populated *freguesias* have been left without basic education centres and students have had to be sent to neighbouring *freguesias*. Fundão was one of the first municipalities in Portugal to introduce computer programming as a subject in state schools, starting from the first cycle. Although Fundão does not have any higher education institutions, it has the [Code Academy](#), and also a Programming Bootcamp to train software developers. In its vicinity there are the University of Beira Interior (UBI), in Covilhã, which is 23km away, and the Polytechnic Institute of Castelo Branco (IPCB), which is 42km away.

**Health facilities.** The [Fundão Hospital](#) is part of the [Cova da Beira University Hospital Centre](#) (Covilhã). This network is completed by the [Fundão Health Centre](#), which has a network of 25 associated centres that provide coverage to all of the local parishes. The Mobil Health Unit serves the whole municipality and helps to reduce disparities in access to health services, particularly in the most isolated areas. The system of day and community centres is currently being improved to cope with demand from an ageing population. The most sensitive area is that regarding providing assistance to elderly people. PDM proposals have tended to focus on providing homecare services. This is an approach to the problems of ageing and isolation which have been recognised as growing and persistent concerns.

**Social facilities.** Once again, the main focus of attention is that of providing services for the elderly people. There is sufficient coverage in terms of the provision of day centres. In fact, these are currently even underused (at 67% of their capacity). On the other hand, the provision of residence facilities is clearly insufficient to meet existing demand. This can be seen from the long waiting list, which stood at 398 people according to PDM data for 2016.

**Sports facilities.** There is a significant, albeit unbalanced, offer of sports facilities. While *freguesias* such as Fundão and those in its hinterland have significant sports facilities, 15 *freguesias* have insufficient installations, and 5 have no sports facilities at all.

## Housing

Between 2011 and 2021, the number of accommodations in the municipality of Fundão increased from 22,058 to 22,531, which translates into an increase of 2% (similar to the national dynamics).

Regarding occupancy in 2021, of the 22,496 classic family accommodations, 51% were habitual residences (11,565). From these, 33% corresponded to secondary residences (7,317).

In 2021, there was a significant amount of vacant accommodation -3,614- (16% of classic family accommodation), a potential housing resource, that increased by 5% when compared to 2011. Around 55% (1,982) were on the real estate market, a significant data, since in 2011 only 25% were available for purchase or rent. This could be an outcome of the urban regeneration taking place in the city centre, promoted by the *Municipality of Fundão*, that accounts for the rehabilitation of 57 private buildings and possibly a domino effect together with the municipal rental programme.

In 2021, from the 11,565 flats or houses of habitual residence, 79% were owned houses and 14% rented houses. This reflects the scarce expression of the rental market -1,631- especially taking into account that, according to the ELH 2020, demand far exceeds the supply of housing on the market.

Even so, looking at the dates of the rental contracts, a progressive increase is visible from 2016 onwards. If between 2006 and 2011 only 156 contracts were signed in the following four years, this value increases to 293 and up to 870 contracts were signed from 2016 onwards. This means that in 2021, around half of the existing contracts (53%) were signed between 2017 and 2021, possibly a reflection of the municipal rental programme, which at that time had 178 properties on its register. According to the CMF, until September 2023, this program led to the signing of 256 lease contracts.

## 1.4 Demographic trends

As seen from the Country Report<sup>15</sup>, all the demographic trends in the country for the last decade point to a fall in the overall population (of 2.1%, corresponding to an absolute loss of 214,000 inhabitants, according to the 2021 Census). This is due a combination of: negative natural growth, a negative migration balance, and an old and ageing population. Furthermore, of the eight sub-regions in Portugal's *Centro Region*, BSE was the one that experienced the greatest loss of population: a 10.7% decline over the last 10 years.

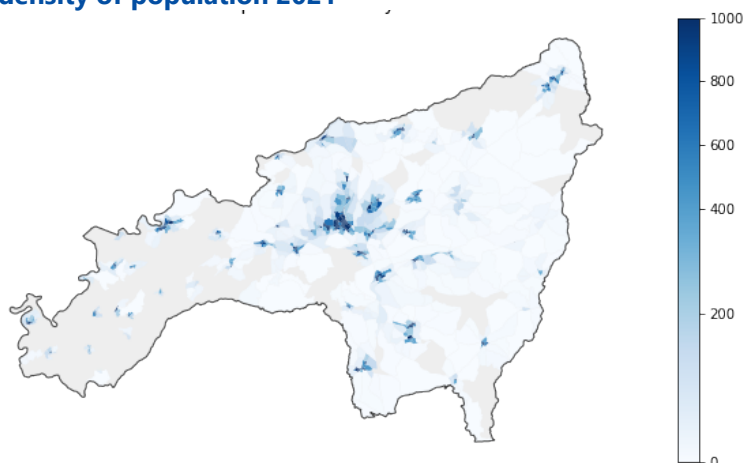
Fundão has been no exception to this trend, although it has exhibited slightly different features, especially with regard to new immigrants who have been attracted by the *Strategic Plan for Innovation in the Municipality of Fundão* (see Chapter 3.1). Within the context of the BSE region, Fundão is the municipality that, in relative terms, has suffered the second smallest loss of population: 9.28% since 2011. Only Guarda has seen a smaller contraction in its population, having lost 5.5% of its residents in the same period. Nevertheless, Fundão has lost 2,700 residents over a period of 10 years.

Another trend, which is common to SMSTCs in low-density territories, has also been identified: the polarization that the central city exercises over more peripheral and rural areas. According to the recent Revision of the PDM<sup>16</sup>:

*In summary, despite the municipality's continued population decline, there are some less negative demographic dynamics in the city of Fundão and in nearby territories/parishes (Alcaide, Alcaria, Telhado and Souto da Casa). On the other hand, and in general, the most peripheral parishes of the city of Fundão will lose more population in relative terms, as in the case of Barroca (24.2%), Lavacolhos (23.7%), Três Povos (19.1%), Fatela (19%), Orca (17.1%), Capinha (16.8%), Alcongosta (16.3%) and Enxames (16.3%).*

This polarization is also visible in the population density of the territory, which is largely concentrated in the city and in and around other nodes in its vicinity, while there is a vast area of dispersion over most of the municipal territory. It is important to underline that we are not talking about high population densities in these centres, as the maximum density in any of the different census districts was 1,000 inhabitants/Km<sup>2</sup>. On the other hand, it can be observed how population centres are more isolated in areas closer to the Serra da Estrela and the continuity of occupation is much less consistent than in the eastern part of the municipality.

### Map 6 Fundão: density of population 2021



Source: Data from INE. Own research.

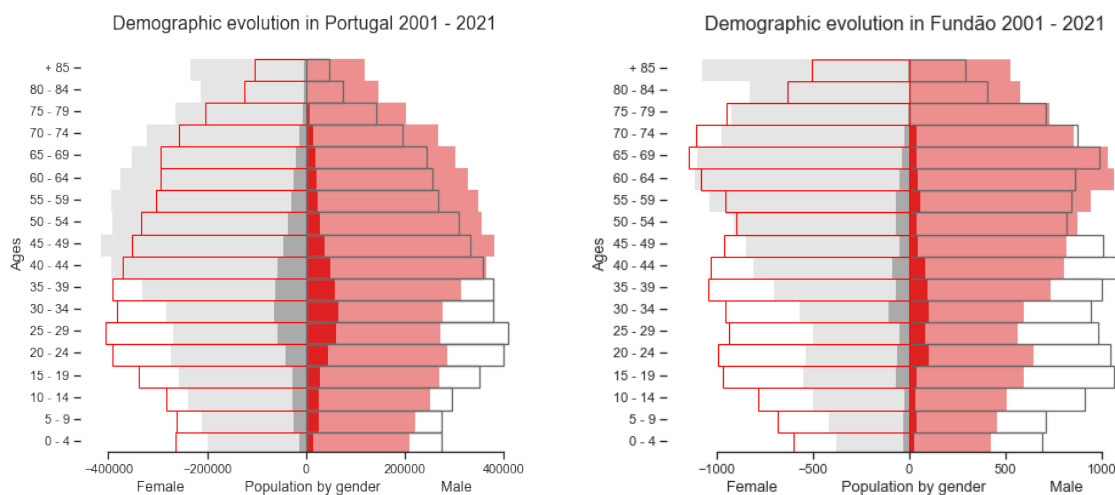
The age structure of the population reflects the ageing process that has been taking place for the last two decades. This is a reality that can be observed across the majority of Portugal's national territory and, indeed, even across Europe in general.

<sup>15</sup> Small and medium sized towns and cities in Portugal. Policies strengthening their role in achieving active, inclusive and functional territories – Country Report October 2023.

<sup>16</sup> [REVISÃO DO PDM DO FUNDÃO \(September 2023\)](#)

There has been a clear decrease in the number of young people under the age of 14, which coincides with an increase in the number of people over 65 years, as life expectancy has risen. The combination of the two phenomena has resulted in a significant increase in the rate of ageing (number of elderly people for every 100 young people): 236 in 2011 and 322 in 2021. This has been a characteristic of rural areas, from where young people have migrated to larger cities or to other countries, in search of better job opportunities.

### Chart 1 Evolution of the population structure in Portugal and Fundão, 2011-2021

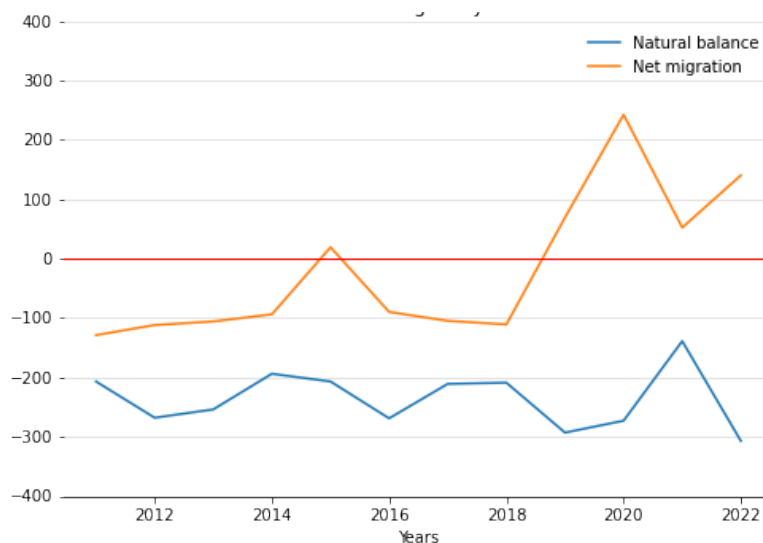


Source: Data from the INE. Own research.

This negative natural balance, which had already been identified in the 1990's, was also accompanied by a negative migratory balance in the following decade (2001-2011). Nevertheless, according to the recent revision of Fundão's PDM:

*In turn, between 2011 and 2020, the migration balance has shown less negative behaviour (in fact, in the years 2015, 2019 and 2020, it was positive). This seems to be a clear indication of a new change in the migratory component and its influence upon population growth. This could have been a result of the measures taken to improve the area's economic base and also those aimed at attracting immigrants.*

### Chart 2 Fundão: natural and migration balances 2011-2021



Source: Data from PORDATA. Own research.

The general trend towards an ageing population has been slightly offset by an increasing number of new foreign residents. On average, these have been somewhat younger than the rest of the population. While

the largest age group of residents corresponded to the 45-49-year age range, for both women and men, the most populated age group for foreign immigrants was 30-34 years old: a 15-year difference.

The total size of the foreign population residing in Fundão in 2021 was 1,206 (4.6% of the total), according to 2021 census data. The results of 2022 PORDATA showed that another 266 foreigners then arrived in the following year.

## 1.5 Economic trends

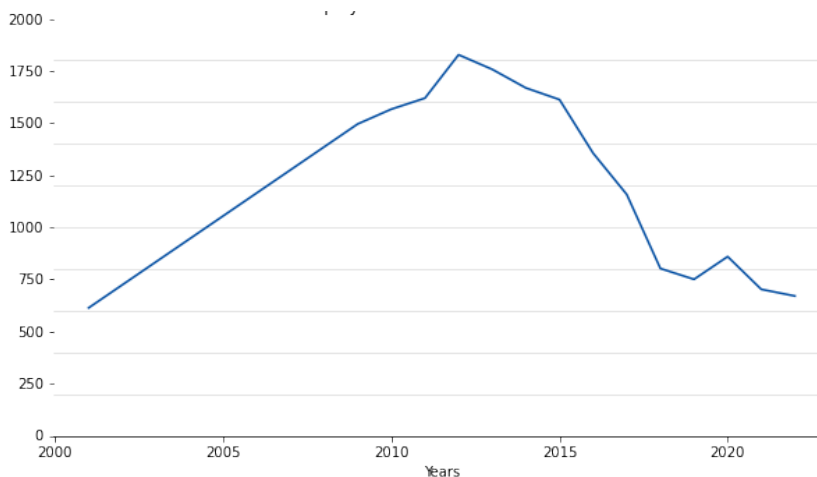
Services are the main sector that employs the population of Fundão today, providing occupation for 67.4% of its workers. This is a sector that has noticeably expanded since the 1980's, when the primary sector lost its previous importance. In the 1960s, around 68% of the population was employed in agriculture, but by 2011 this percentage had fallen to an all-time low of just 6.5%. There was, however, a subsequent slight increase to 6.8%, in 2021. Even so, in relative terms, the percentage of the local population dedicated to agriculture still remains at more than double the national average, of only 2.9%.

The population employed in construction and industry reached an all-time high of 35.4% in the 1990s, but has since declined. At present (2021 census), around 25.7% of the local population is employed in these sectors. This trend has been similar to Portugal's national average.

Average monthly earnings, per worker, currently stand at €1,055.20, which is very close to the national average of €1,082.80, and even slightly above that for CIM-BSE (which stands at €1,051.20). This represents a very significant improvement compared to 2011, when the national average monthly salary was €1,083.80, while that of Fundão was only €796.40.<sup>17</sup>

One of the important municipal trends has been the dramatic decrease in the rate of unemployment. The highest percentage was registered in 2013, with 1,892 individuals (10.9%) of the active population registered as unemployed, but it subsequently plunged to 744 registered as out of unemployed (2.8%) in 2022 (PORDATA). This decrease no doubt reflected the impact of the *Strategic Plan for Innovation in the Municipality of Fundão*, of 2012.

**Chart 3 Fundão: unemployment evolution 2000 - 2021**



Source: Data from PORDATA. Own research.

<sup>17</sup> Data from [PORDATA](#)

## 1.6 Municipal finances

This section contains a brief analysis of Fundão's local finances (2009-2019, 2022)<sup>18</sup>. The goal here is to assess whether its finances are robust in the short, medium, and long term.

Per capita expenditure was €1,105 in 2019, which was 7% higher than in 2009. The neighbouring municipalities of Castelo Branco and Covilhã had significantly lower values: €654 and €595, respectively. With a total expenditure of €29.5 million in 2019, this has decreased by 4% since 2009.

Current expenditure stands at €22.1 million (75% of total expenditure) and has increased by 28%.

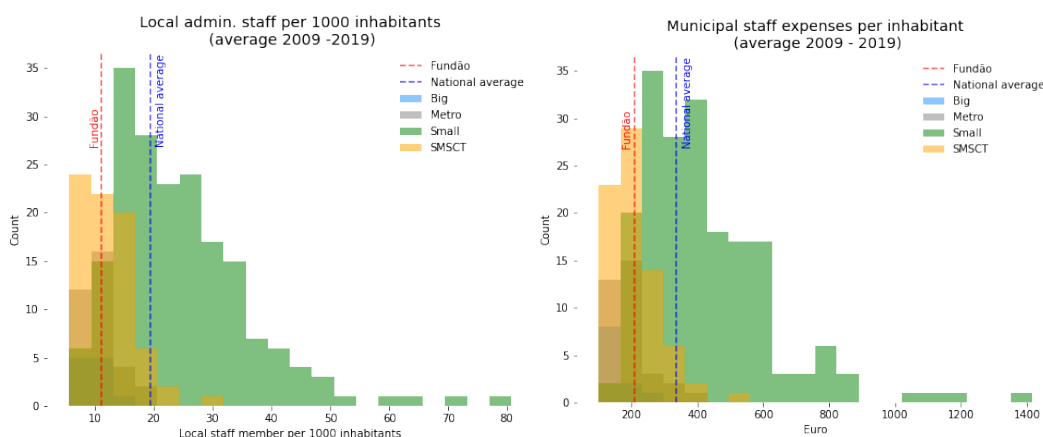
Current expenditure by type, has two areas that particularly stand out: personnel was €6.8 million (31% of the total) and the acquisition of goods and services was €10.9 million (49,3%).

Personnel expenditure per capita in 2019 was set at €258.50, which represented an increase of 28% since 2009. This was in line with the national average of €254.55 per capita and higher than that of the neighbouring municipalities of Castelo Branco (€152.21) and Covilhã (€165.50).

Current and capital income per capita totalled €1,033 in 2019, representing an increase of 24% compared to 2009. 84% of this revenue came from current revenue and the rest from capital revenue. Total capital revenue amounted to €27.5 million, which was 12% higher than in 2009. Broken down by type, 50% of this revenue came from current transfers, totally €11.4 million in 2019, which reflected a 41% increase since 2009.

Direct tax collection doubled compared to 2009, rising by € 6.1 million, which represented 26% of current revenue. On the national scale, Fundão ranks quite lowly in terms of the weight of its transfers (55.3% in 2019) while the neighbouring municipality of Castelo Branco had transfers accounting for 72.5% of its revenue.

**Chart 4 Fundão: local administration staff and staff expenses per inhabitant 2009-2019**



Source: Data from PORDATA. Own research.

Taxes per capita in Portugal are as follows: Property Transfer Tax stands at €97.6 and from real estate (property) tax, it is €143.80. In Fundão, these values are slightly lower: €67.50 and €137.20, respectively. It is worth noting that Fundão is amongst the municipalities with the lowest tax burdens related to roads: €23.60 per inhabitant.

Local Public Administration staff per 1000 inhabitants in Fundão ranks rather lowly in terms of the number of staff that it employs to guarantee its citizens an optimal level of service. In 2022, the number of workers was 22, which allows us to estimate a total staff of around 458. By gender, in 2009 only 35% of the municipal workforce was female (111 out of 317). However, a significant change subsequently took place, as women account for 55% of the municipal workforce in 2022 (254 out of 458).

<sup>18</sup> Data extracted from the portal <https://www.pordata.pt/tema/municipios/financas+autarquicas-58>

Current account balance. The adjustment policies undertaken during the last decade have meant that municipalities have had to run balanced budgets (between income and expenditure) in order to guarantee the financial sustainability of the local administration. Fundão is a solvent municipality, with a positive balance; this stood at €1.2 million in 2019, which was slightly above the national average. That represented a recovery from a previous position of debt, which stood at €6,111.86 million in 2009.

## 1.7 Assignment of European funding

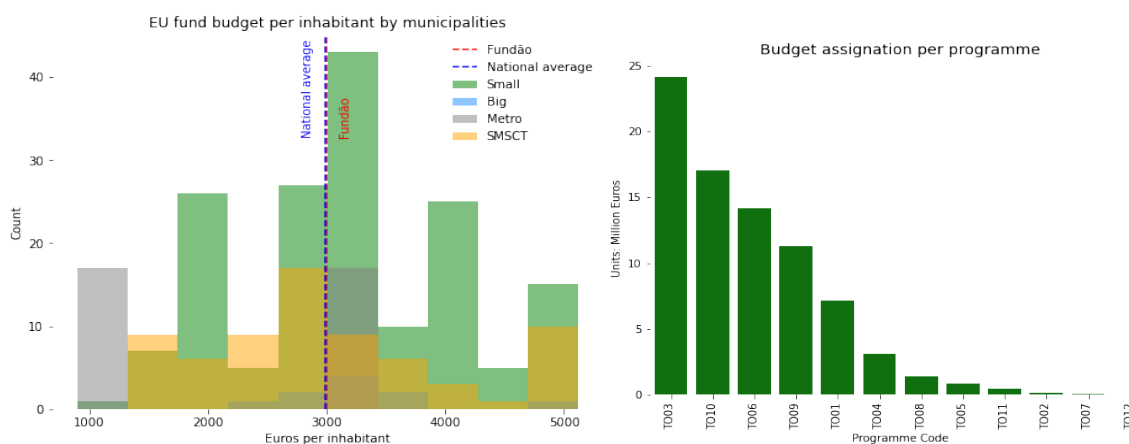
To estimate the total budget allocated to the municipality of Fundão, it was necessary to study the distribution of funds at the national level for each of the EU programmes. The total budget allocated has tended to depend on the geographical framework applied and has been distributed based on population, at both the municipal and regional levels. We used an approximation model, which may be more or less precise, but which at least helped us to put forward some figures for discussion. With the help of additional sector-specific information, we have also been able to evaluate the scope of the different objectives set for each of the thematic programmes that has received European funding.

Fundão has received a sum, per habitant, which is very close to the national average budget allocation: around €3,000. With regard the total amount, the used model estimated that projects in Fundão have received funding to a total value of €80,024,415.84.

The majority of this budget has been allocated to the *SMEs Competitiveness Programme*, which has received a total of €24.14 million. This accounts for almost one-third (30.17%) of the total budget used in the region based on European support. This was followed by *Education and Training*, with a budget of €17.02 million (21.27%) and *Environmental protection and the efficient use of resources*, with an allocation of €14.13 million (17.66%).

Lastly, one of the most significant programmes was that relating to *Social Inclusion*, on which €11.27 million (14.08% of the total budget) was spent. Other areas receiving less than 10% of the total budget included: *Research and Development* (€7.19 million) and *Low Carbon Economy* (€3.15 million) programmes (3.93% and 1.74% of the total). The remaining programmes either received slightly more than 1% of the total budget or did not even receive that level of funding.

**Chart 5 Fundão: European funds assignation 2011-2021**



Source: Data from InfoRegio Strata. Own research.

## 2 Interviews

### 2.1 Methodology

According with the proposed methodology, for the implementation of the case study, a series of interviews were conducted, giving voice to those directly involved in the development and implementation of the policies that contributed to the present reality of the *Municipality of Fundão*.

On August the 9<sup>th</sup>, a presential visit to Fundão took place. In-depth interviews were conducted with both the Head of the *Innovation, Investment and Planning Division* at CMF -Ricardo Gonçalves-(RG), and with the *Mayor of Fundão*, Paulo Fernandes (PF)<sup>19</sup>.

Visits to several of the facilities<sup>20</sup> related to the municipal smart territorial innovation strategy also took place. These visits were accompanied by two interviews with different responsible for programmes as well as networks and facilities: João Milheiro, Lab Manager at *Fab Lab Aldeias do Xisto*; and João Mota, responsible technician at Fundão Migrations Centre.

Another interviewed technician was Mariana Salgado from the *Innovation, Investment and Planning Division* at CMF. She was the contact person with whom a continuous dialogue was maintained during the elaboration of this study. She was also responsible for the coordination and elaboration of information that allowed us to deepen this report. Such was the case of the conversations maintained with Alexandra Bento for the *Municipal Rental Housing Program*. Detailing some questions raised in the interwies, CMF services provided several taylored information and documents for this report. Some were included in annexes 2 and 3 and others provided information that is presented and quoted in the narrative.

To provide a different approach to Fundão's experience and results, from a more territorial point of view, another in-depth interview took place on September the 6<sup>th</sup> with João Leitão (JL), President of the *Portuguese Association for Regional Development*, who is also a member of the *Fundão Municipal Assembly*.

Finally, we would a like to mention the two on-line meetings with DGT representatives, which provided relevant clues, both on the national framework as well as in the case study level. The initial suggestion to study Fundão, actually, resulted from these conversations with Elisa Vilares, Fatima Bacharel and Marta Magalhães.

The team that elaborated this report would like to express our acknowledgment to the mentioned people, thanking them for their availability and the time dedicated.

### 2.2 Lines of research from interviews contribution

From the interviews, key territorial strongholds and constraints came to light, as well as needs and opportunities. Beginning with the supra-municipal territory and going towards the local scope, several questions gave way to lines of research, taken into consideration these testimonials. The following topics were developed also bearing in mind the Country Report inputs.

#### **"Empty" Spain and low-density territories in Portugal**

Regarding the "empty Spain" and the low-density territories in Portugal, according to the Mayor of Fundão (PF), distances between centres, in Spain, are very large, while Portugal has a much more poly-nuclear network coverage. Even if in Spain there has been a significant reinforcement of SMSTCs, in the interland the "emptying" was even more serious than in Portugal. "Grey areas" were created which, despite support, investment and awareness, accentuated a problem that already existed. Asymmetries have become more extreme, over the last 25 years, because the response was not correct despite problems have been identified.

<sup>19</sup> See Annex 1 for the transcription of these interviews.

<sup>20</sup> Polynucleated Urban Enterprise and Business Incubator (IUPEN), Business Shared Services Centre (CNSP), Fab Lab Aldeias do Xisto - prototyping laboratory and Migrations Centre.

### **The uniqueness's of the territory and of the SMSTCs and the importance of size**

According to (PF), the Spanish model has the advantage that, when grouped by NUTII, the critical mass obtained is much more relevant than the one of the Portuguese model. In (JL) opinion CIM's have the capacity to improve the model, but there is still a lack of critical mass. For example, the CIM BSE has a population of less than 100,000 inhabitants, not even a medium-sized city. Within the 15 municipalities, there are fewer inhabitants than in Braga (193,324 Census 2021), which is the third largest city in the country. 150,000 inhabitants would be a more coherent reference threshold, despite the expected in-creasing coordination costs, (the equivalent of Beira Baixa+ Serra da Estrela + Pinhel, for example). Without critical mass, there is capacity for cooperation but no operationalization of supra-municipal projects.

On the other end, "Grey areas" require holistic, very transversal and multi-level plans, very specific to that specific area. The resource distribution model is very oriented towards the NUTII, while asymmetries are not always defended within the NUT itself. It must also be taken into consideration that SMSTCs are not exactly urban, they have an urban-rural character.

A specific phenomenon has also been identified in the SMSTCs, when positive change takes place in the city centres. When inhabitants abandon the more rural areas of the SMSTCs and re-locate themselves in the urban centre, a polarization phenomenon takes place, this reinforces the desertification process. In the smaller context of a SMSTC, it reproduces the desertification process that took place in the interior territory of Spain. Taking the cases of Fundão or Covilhã, for example, according to (JL), it is true that new population arrives, but there is also a sacrifice of smaller nuclei, as inhabitants leave to settle in the centre in search of proximity to essential services (education, health, social support, etc.), with better accessibility and lower transport costs. This does not mean that attractiveness has increased, just that the most peripheral rural areas are being sacrificed in favour of concentration in these micro clusters or urban nodes.

### **Multi-level governance and internationalization**

On the governance model side, internal networks and their ability to connect to larger urban points, from a more global perspective, have to be able to assert themselves in multi-level contexts. (PF) Says: a territory without the capacity to express itself on an international scale is a territory that has no future.

The demographic compensation that existed within countries themselves, before globalization, no longer works. The global and international flow comes into force, a scale that has long surpassed the national level. Internal transfer will no longer solve the demographic issues when the country, in general, suffers from the same problem and that is worsening in these low-density territories.

### **Leaderships and traditional lack of territorial collaboration**

We have difficulties defining policies within the region, says (PF). We do not promote, within public policy, what could be models of critical mass acceleration: the networks. (JL) believes that territorial collaboration is not operationalized due to political leadership issues at municipal level. Municipal leaders are responsible if there are no projects of a supra-municipal nature. The CIM has done its homework: namely the planning; the creation of links between the different municipalities and agents; informing in due time about operational programmes and financing funds available. But the municipalities do not work as a group in order to have a sense of community. (JL) says: there seem to exist two historical difficulties: one of a cultural nature, predatory competition: "I win if you lose"; and another of political incapacity of leaders to look at the territory as a whole. There is also a lack of training and qualifications in public administration at municipal level. As for the level of CIMs, it is necessary to increase the technical staff to be able to operate the resources. I would prefer to see energy efficiency projects that involve the 15 municipalities, rather than making a list of projects in which, for example, each municipality has an eco-efficient industrial infrastructure. The total is not equal to the sum of the parts, says (JL).

### **The need for competencies at local level.**

Contrary to what is common thought, with fewer individuals and densities there is actually a need for more local competencies of diverse nature. According to (FP) example: each citizen needs to have access to all competencies. We may not have a first-class central hospital, but health is essential. If there are 20 people, those 20 need to continue to be healthy.

On the other hand, as (RG) points out, the intra-municipal decision structure is complex and the decision-making process is slow, making collaborative processes difficult. Furthermore, the territorial scope of CIMs,

for example, does not always coincide with the scope of other administrative structures such as courts, law enforcement agencies, hospitals or social security, making the management of processes even more difficult.

### **Innovation as an opportunity, universities role and the territory presented as a common front.**

It is necessary to create links that allow to attract investment flows and drive the innovation that emerges in the region, particularly the one originated in higher education institutions (JL) believes. An additional piece in this multi-level governance model would be the creation of a regional innovation and investment agency. This agency should have delegated powers to reinforce cooperation and links between university and industry. In addition, should create investment dossiers, available so the region may present itself as a single unit to potential foreign investors. This can help create that sense of group. Presenting an investment dossier that includes several cities gains more strength than trying to attract the same investment by offering each municipality separately, which often results in a lack of results.

If we want to change behaviours, we have to change incentives says (JL). The mechanism for allocating funds must be revised. After a cycle that led to the presentation of the Strategic Plan, and which coincided with the pre-election period, we are now in a new cycle where more than half of the mayors are newly elected. If we want agents to change their behaviour, we would have to change the financing rules, conditioning the allocation of funds to requirements to be met in terms of territorial coverage, demanding the participation of multiple municipalities as a unit.

It is essential for these territories to highlight and link, any the pre-existing institutional recognition at international level, with the municipal entities and the companies. There should be more funding when universities participate<sup>21</sup>. (JL) believes that these funds cannot be left exclusively to municipal management, as they do not have the necessary specific resources: people, patents, research projects or networks.

(RG) believes that in Fundão, the municipality's availability to train people, and a clear perception of the municipality's president and political leadership, that it is important for these innovative areas to have capable support in terms of human resources, made the difference in achieving a technical structure far above average, when compared with other municipalities. Fundão is a paradigmatic case, they trained staff to meet their specific needs. Even so, it is necessary to find people with the right mindset and mental agility to assimilate these changes and acquire new skills. But even these are frustrated with the public administration's mechanisms to reward their efforts.

### **Communications infrastructures as key factors**

Infrastructures seem to be at the core of the territorial success, whether relating to the physical accessibility of the territory or to its telecommunications infrastructure. There are two levels on which to approach the subject of accessibility: by reducing daily travel time between rural and urban areas, and also from and to regional proximity centres; and through establishing quality connections with larger centres and cities, as well as 1st level infrastructure and equipment (such as airports, health, education and sports centres, and cultural equipment). Information infrastructure requires both quality and coverage and acquires particular relevance and importance when it is related to new models for remote working, or to technology companies and business activities

Municipalities are interested parties, as are the CIM and CCDR says (JL). But they have neither legislation nor regulation competencies. There are examples of existing technologies being used, such as the farmers in Fundão who are helping with the use of "LoRa" technology. But this is not the same as having a fibre connection in every home.

The lack of coverage is also related to the low population density of these "white zones". Even though these areas are currently in demand: either by alternative communities ("new rural") that seek other ways of life; or by foreign groups that have a "holiday home" in Portugal and spend half the year here. This is a phenomenon that started in the Algarve and is now also taking place in the interior. (RG) also agrees that connectivity is

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<sup>21</sup> As a given example see: [MEDWET – Intelligent Irrigation Project](#) from University of Beira Interior, together with Fundão Municipality, financed by FCT and PRIMA Programme (Mediterranean Area). Fundão created the Agrotech, that has an experimental field at the old seminar. An atypical municipal infrastructure, made possible by the partnership created.

fundamental and we still have technological deserts in the interior of the country. It is the state's role to require operators, to provide connectivity across the entire territory.

### **Fundão Strategy: endogenous resources; innovation; regional networks and internationalisation.**

AS explained by (PF), Fundão, at a certain point, realizes that it does not have a single resource that can be competitive without the regional network. We start with the most obvious, with endogenous resources: in a small city, its connection with the underlying territory is very relevant, particularly in mediating rurality, with urban space. The complementarity between rural and urban in SMSTCs is absolutely vital.

(RG) Highlights the importance of listening to people, in the early stages of the development of the innovation strategy. That brought to people a sense of belonging and that the strategy was somehow aligned with their expectations.

Beginning by setting up networks related to endogenous heritage resources, to Historic Villages, the “Xisto” Villages or protected areas, and also a first urban network of the Castelo Branco, Fundão, Covilhã and Guarda axis. An awareness that these cities would have to start doing things in common. This axis only worked as long as there were financial resources, but at least basic services, water, sanitation and waste collection and treatment were combined, a mixed management between state and municipalities, through public companies.

We then decided what would be the driving force for our intervention in terms of public policy: innovation, not only technological, but social and political, says (PF)

This was followed by the realisation that the interconnection of sectors is essential. It is necessary to link housing, with attracting investment, with urban regeneration, with people's training, with education, with social policies. They all have to be thought of together.

In Fundão, we decided to make decisions, was one of the proud remarks made by (PF):

- We introduced the public policy risk factor: the pilot project. It is not possible to get everything right the first time. You have to test and fail. But that's part of it. It is necessary to introduce public entrepreneurship. We must lose the fear of taking risks, we must lead by example;
- In terms of housing, we decided to positively discriminate qualified labour who wanted to come to Fundão. We created a new priority audience in our public housing policy;
- We developed a public rental policy, through a public sublease model as an accelerator for the public supply of housing;
- From the perspective of our innovation strategy to attract IT companies, it made sense that children from the age of 6 could learn programming. We partnered with the Code Academy to introduce this subject in public schools;
- We also introduced bilingual learning in public schools between ages 6 and 15;
- It was necessary to reposition people, requalify human capital. We didn't suddenly look for all new staff.

### **The need for anchor companies in the territory.**

A major problem in low-density territories is the lack of anchor companies. The first point of the innovation plan was to question how to achieve internationalisation. The initial actions were centred in what seemed to be the most obvious: endogenous resources in sectors where Fundão was stronger, such as agri-food and metalworking. In the metalworking sector we went from 200 to more than 1,000 employees, while in IT from 3 people to more than 1,000, states (PF).

### **The role of European funds.**

All available urban rehabilitation and city policies funds were channelled. From the funds raised, 90% was used to re-functionalize public buildings, reoriented for new urban functions, to create the idea of a hub within the city or “the city as a hub” in (PF) words.

### **The bridge between the urban and the rural.**

At this point, 43% of urban housing licensing takes place in rural areas. According to (PF) this means that the interconnection of a municipality that stands out for its rurality is really happening.

There are several advantageous aspects: 80% of the people we are attract to Fundão are international and qualified. The arrival point for the international population is the city centre, while the departure point for nationals is a mix. Nevertheless, there are more internationals living outside than in the centre. The centre receives many newcomers, but the pace is greater once they are settled and ready the establish themselves, moving then to more rural areas.

The rural space factor and the quality of life that Fundão offers are very relevant. In (PF) opinion, Villages can be relevant, although the winning concept is the farm, understood as the house in a more naturalized space. Neo-rural movements are also reaching out to Fundão, both international with alternative lifestyles, and national more within the scope of neo-rural. In some parishes this is very relevant.

It is the Mayor of Fundão's believe that: regarding health we are giving the same response as to those living in the city centre; in terms of education, we are able to ensure that those who come with their families can join the public school. Couples who arrive usually have very young children, which helps especially when it comes to language.

In the last year, Fundão began to be the targeted for pilot projects, given international exposure. This is expected to be an increasing tendency in the near future.

### **Demography: renewing the approach to a welcoming community.**

Regarding low-density issues, there is a relevant question for Fundão: how to promote the sustainability of this demographic replacement with international individuals? (PF) considers that an upgrade was made to the initial strategy, shifting from innovation as a key factor to: welcoming population:

We moved from the motto "Fundão Innovation" to "Fundão welcoming place". We strengthen the reception team, reinforcing profiles; We diversify areas developing the Migrations Centre; We promoted public rental housing, something that European policies does not respond to.

The public rental housing offer makes it possible to accelerate the process of migrants becoming autonomous. There is a first front office response, with an approach as holistic as possible, and then there is a coordinated effort to make people independent, in terms of housing and employment, as quickly as possible. Excessive institutionalization takes people's energy and they lose capacity and vigour to adapt, says (FP).

There are at the moment about 2.000 people in official statistics, which means residence permits, with 63 different nationalities. The Mayor believes that now, there must be at least tree times more residency applications undergoing.

### **Economic activity diversification and strengthening**

Currently, Fundão has a dual rural and urban matrix. The rural aspect is mainly based on the agricultural production of fruit. Large-scale almonds production<sup>22</sup> and the municipal flag: the cherry that helped to position the Municipality at international level, achieving brand recognition as "[Cereja do Fundão](#)". (JL) highlights that this is something well done and a competitive advantage for the municipality, which allowed it to achieve a certain notoriety and which was well used to attract foreign direct investment.

The arrival of [ALTRAN \(now Capgemini\)](#) and the re-functionalisation of the multi-use pavilion for its offices<sup>23</sup>, generated employment and diversified the basis of Fundão's economic activity, thus entering a more technological era.

Fundão is now known for cherry and technology service companies in a [Nearshore Centre](#).

In words of (JL): This is the Fundão in the present tense: a mix of cultures resulting, on the one hand, from attracting qualified people to work in these technology-based companies and, on the other hand, seasonal labour to work picking the fruit.

But Fundão still has infrastructural problems according to (JL): It has poor connections within the municipality; Access to the motorway network is limited due to toll constraints; It doesn't have a preferential connection

<sup>22</sup> Companhia Vera Cruz (Smart Farming – PDR 2014-2020).

<sup>23</sup> Recognized as "Good Practice" at European level.

to Spain despite its proximity, nor a straight connection to Coimbra. Besides, there is no sufficient public transport offer and there are deficiencies in the provision of health services.

The mineral sector is not often mentioned but there are several localities in Fundão intrinsically linked to the [Couto Mineiro da Panasqueira](#). Licensing for the exploration of [Serra da Argemela - Lithium](#) is also in the pipeline. In the opinion of (JL): this seems to be the future of Fundão, which is taking assertive steps to return to its origins: A strong investment in the primary sector, now with technology-based agriculture and a green energy industry, and linked to the extraction of lithium.

### What can we expect from the EU?

Policies that are not just territorialized but go to a more micro level. Place based policies, according to the place characteristics and specificities must be met to reinforce the cohesion mechanism at European level (place matters). The EU cannot give up these territories states (JL).

In the opinion of (JL) it is crucial the realization that the drivers of change and structural transformation in regions are not municipalities, they are universities and other higher education establishments. According to (JL): we have islands of development in Covilhã, Fundão, Castelo Branco, Guarda, because in these locations there are higher education establishments that have followed difficult paths, who overcome them and advanced to an international dimension that allows them to be innovative today. European policies must contemplate and value the use of universities as dynamos of structural transformation and increased productivity in regions.

The country, like the region, is more modern and more capable. But it did not achieve a balanced growth between the coastal strip and the strip closest to the border, there is no convergence. The interior has improved but not as much as the coast. We need the European Commission's attention to policies that allow us to meet the specific characteristics of our places so that we can converge.

### What's going wrong?

Since 2008/9, the central government was forced to follow strict specifications defined by the Troika and European financing agents. This meant that there was no more investment in critical areas. (JL) says: I understand that nowadays public investment must be more careful and demanding. This is why universities must also be included in the equation. But what I see is that to lower investment, greater rationalization and concentration of services and this translates into an "exit" of the state.

There are problems in terms of accessibility. Tolls make no sense in a territory with low population and industrial density. Roads that were built with structural funds, through public-private partnerships, make no sense to be paid. As example of the consequences of tolls (JL) explains that, companies that had been created in this territory ended up moving an important part of their operational base to the coast, taking investment elsewhere and failing to generate jobs here. This is serious, he stresses.

The lack of social response is also bad for both young and older people. In the opinion of (JL): we have institutions capable of training, we have companies that need more specialized and qualified human resources and we do not have the capacity to create conditions for these young people to enter our job market, because we do not pay them adequately. On the other hand, every year we witness the accelerated aging of the population without a level of social support that allows them to live with dignity. We have no response in terms of health centres or monitoring and counselling states (JL).

### What's going well?

On a very personal note from (JL): Starting with the scientific-technical system, the best territorial development policy originated in the reform of Professor Veiga Simão, even before the 25th of April 1974 (democratic establishment). The democratization of access to public higher education, that went well. We gave access to people who under normal conditions would not have access to advanced higher education. We internationalize institutions and consequently people and territories. We give people the ability to innovate and today's technology-based companies were created by these people. Today we produce patents in both Covilhã as well as in Lisbon. 50 years ago, it wasn't like that.

In addition to the innovation and qualification aspect, today we also have a reconversion of the productive base. It is no longer robust but, the ones that survived are more resilient and more modern in technological terms. They managed, even before the state, to turn to foreign markets. That went well. They took advantage

of the entry into the European single market and currently have an export orientation that allows an acceptable presence in international and national markets. And there are companies like these in our territory (BSE).

Another thing that went well, was the level of general infrastructure that the regions and the country obtained through the access to the different European Funding Frameworks. But the assessment made of these funds says that it is much more advantageous to invest in human capital than in business management or infrastructure, in that order.

## 3 Smart territory innovation strategy

### 3.1 Intermunicipal Development Strategy for Beiras and Serra da Estrela<sup>24</sup>

*"In the previous Community Funding programming cycle (2014-2020), the development of territorial strategies, which included the introduction of pacts for integrated and coherent territorial development and cohesion, placed great emphasis on the multi-municipal scale and the articulation of initiatives by the municipalities that form part of these CIMs. In addition, the changes made to the legal framework of the CIM reinforced its scale, making this the preferential level for municipal action, and created the conditions for an effective administrative decentralization of competences.*

All the municipalities that form part of the CIM-BSE consider the *Beiras and Serra da Estrela Intermunicipal Development Strategic Plan 2020 (EIDTBSE2020)* to be a cornerstone for this new model of territorial organization.

Fundão is no exception and its route map is clearly embedded in the EIDTBSE 2020. This chapter provides a quick review of the strategy, structure and priorities of the plan. Note that it is also necessary to consider the broader context of the *Centro Region* which is referred to in parallel here. To understand the wider framework of the Portuguese territorial and sectorial planning system, please see the Country Report<sup>25</sup> which preceded this study.

BSE includes 15 municipalities and 3 NUTS III areas, with a total population of 210,602 (according to the 2011 census) in a territory of 6,305 Km<sup>2</sup> (22% of the *Centro Region*), with a population density of 33 inhabitants/km<sup>2</sup>.

#### Map 7 CIM- Beiras and Serra da Estrela



Source: Data from EIDTBSE 2020. Own research.

Several of the key traits that still influence and define this territory were previously identified in the analysis carried out for the EIDT BSE 2020, in 2015 (the data has been updated based on the 2021 census, but the same tendencies remain):

<sup>24</sup> The information for this chapter has been obtained from the document: [Estratégia Integrada de Desenvolvimento Intermunicipal BSE2020](#)

<sup>25</sup> Small and medium sized towns and cities in Portugal. Policies strengthening their role in achieving active, inclusive and functional territories – Country Report October 2023.

- Population decline has fallen by 12% during the last decade (2021 census) and by 9.38% at Fundão.
- An ageing population with an already high ageing index 338 (2021 census) and 322 in Fundão.
- Improvements in the level of education, with a better performance than the NUTS II in *Centro Region*.
- A High unemployment rate (6.8% in 2021), which is greater than that of the *Centro Region* (6.0%), while in Fundão, it is 6.4%.
- A Lower per capita level of purchasing power (79.3%), which is below that of the *Centro Region* (88.7%) and similar in Fundão: 78.9%<sup>26</sup>.

Endogenous resources are the calling card of the BSE territory, which has a set of elements with the potential to leverage the area's economic, demographic and social dynamics.

Agricultural products have already been highlighted in *Centro Region RIS3*.<sup>27</sup> They provide the base for standardisation and specialisation and associate with activities such as livestock farming, fruit growing and the agri-food industry. BSE has a range of products, including dairy products, fruit, and processed meat products, whose production and processing is associated with traditional methods and cultural heritage; this makes them sought after in niche markets and by the ones that seek excellence.

Forestry activities are another economic area that helps to differentiate BSE. The territory is rich in natural heritage, although this requires adequate management and planning in order to exploit its value while ensuring its protection. In addition, this can serve to combat the soil loss and desertification. There is also an interesting potential for economic exploitation associated with biomass production.

Tourism is, without a doubt, an important economic activity for the BSE territory. It also serves as an umbrella for promoting a series of local products. Tourist offer of this territory is based on the following assets:

- Local products from the territory, derived from its agri-food activities;
- Patrimony and culture-related activities;
- Territorial brand networks and existing rural facilities: the Serra da Estrela, Aldeias de Xisto, Aldeias Históricas, Jewish Quarters network, etc.;
- Landscape heritage as a basis for investment in nature tourism
- Thermal and health facilities and networks, which could provide an opportunity for specialisation in senior and wellness tourism segments.

With regard to threats, the BSE area is not free from the larger macroeconomic context or the economic and financial difficulties that the country has experienced in recent years. Despite recent signs of recovery, structural deficiencies still persist, particularly related to accessibility and infrastructure. Their potential resolution is hampered by a lack of public investment and also by the low-density characteristics of the territory.

The strategic diagnosis also revealed that, both the *Centro Region* and BSE, suffer from a deficit in inter-institutional coordination and a limited culture of developing partnerships. The ability to mobilize agents towards a common goal is critical for the success of EIDTBSE 2020 and also seeks to respond to these structural problems.

Critical action areas were identified within the context of the European, national and regional frameworks:

- Investing in cooperation networks and developing projects with the joint participation of local stakeholders (municipalities, companies, entities working in the scientific and technological sectors, and other facilitators);
- Intelligent productive specialisation: developing virtuous combinations of different areas of knowledge and sectors of economic activity;
- Focusing on leveraging existing infrastructure, making them more dynamic and also developing intangible initiatives.

<sup>26</sup> [INE - Study on Municipal Purchasing Power - 2019](#)

<sup>27</sup> Central Regional Smart Specialization Strategy ([RIS3 do Centro](#))

Two other significant dynamics were also highlighted as critical factors for success:

Recognition of the importance of the area's low density in intervention policies (applying positive discrimination): As a low-density territory, it is important, on the one hand, to differentiate between actions associated with the *Urban Axis* and the *Lower Density Areas* and, on the other, to recognize the need to implement projects related to the provision of public health and transport services, which must be appropriately adapted to meet the needs of this reality and its reduced critical mass.

Recognition of the different connectivity geometries within the BSE territory, especially as the dimensions of the territory do not always coincide with those of the area of economic intervention:

- Cross-border cooperation (with Castilla y León and Extremadura)
- Other CIMs, namely CIM-Beira Baixa
- Local Action Groups

Four strategic and two transversal axes structure the BSE region's *Strategic Plan*, in accordance with two basic principles: i) Promote the inclusive involvement of entities in the plan, whether they are municipalities, companies, scientific and technological entities, health institutions, and the third sector organisations, or other facilitators; and ii) Invest in network/partnership projects.

**Table 2 BSE region strategy axes**

Governance and CIM training	
Axis I: Strengthen the attractiveness and connectivity of the territory	Networks, territorial cohesion, hard training - public infrastructure - logistics, water and sanitation, business incubators and ICT
Axis II: Affirm the strategic positioning of the region based on innovation and knowledge	Soft networks - cooperation with scientific and technological system, territorial promotional actions, entrepreneurship, internationalization, production specialization
Axis III: Promote an inclusive region	Qualifications, education, third sector, gender equality, young people and demography
Axis IV: Consolidate a sustainable region	Green technologies, efficient use of resources
Interconnectivity between the region and its external surroundings	

Source: Data from EIDTBSE 2020. Own research.

The first transversal axis refers to the governance of the plan and aims to explicitly recognise and highlight the importance of empowering the CIM to effectively manage, implement, communicate and negotiate the plan.

The second transversal axis refers to interconnectivity and aims to integrate all the projects and initiatives in line with the strategic development plan for BSE, including those whose characteristics, whether relating to scope or size, would normally exclude them from funding within the scope of the EIDT. This axis of interconnectivity also refers to projects and initiatives that relate the territory of BSE to its environment. These may relate to other NUTS III or NUTS II areas, or even involve cross-border contacts.

**Table 3 BSE anchor projects, thematic areas and respective base projects**

Thematic area	Anchor Projects (PA)	Base Projects (PB)
<b>A. Innovation, Internationalisation and Attracting Productive Investment</b>	1. Internationalisation: creation of A3I (Agency for Investment, Innovation and Internationalisation)	<b>1.1 Business Directory and Diagnostics</b> <b>1.1.1</b> Business and Producer Observatory <b>1.1.2</b> Preparation of the Internationalisation Diagnosis <b>1.1.3</b> Study of demand-supply relationships for industrial BSE land <b>1.1.4</b> Requalification of industrial infrastructure <b>1.1.5</b> Identification of Sectoral Centres of Excellence (excluding the Tourism and Agro-Industrial sectors) <b>1.2 A3I Services</b> <b>1.2.1</b> Setting up a formalities centre <b>1.2.2</b> Creation of a low-cost centre for patent registration <b>1.2.3</b> Structuring an international agency <b>1.2.4</b> Promotion of an Action Plan for Internationalisation <b>1.2.5</b> Preparation of Dossier Investment and Regional Attractiveness <b>1.2.6</b> Building the capacity of Sectoral Centres of Excellence (excluding the Tourism and Agro-Industrial sectors)
	2. Innovation through Regional Living Labs	<b>2.1</b> Beira Interior Norte Living Lab <b>2.2</b> Cova da Beira Living Lab <b>2.3</b> Cova da Serra da Estrela Living Lab
	3. Creation of an incubator for economic revitalisation	<b>3.1</b> Definition of Urban Rehabilitation Areas <b>3.2</b> Reconditioning of public and private properties for various purposes and changing the functions of certain buildings <b>3.2.1</b> Rental housing stock; <b>3.2.2</b> Encouraging second homes; <b>3.2.3</b> Promoting tourism. <b>3.3</b> School of Regeneration <b>3.3.1</b> Capacity building - vehicles and equipment; <b>3.3.2</b> Reorganisation of resources, regulations and training. <b>3.4</b> Energy efficiency
<b>B. Tourism and Agro-Industry</b>	1. Association between flagship brands, local products and tourist destinations	<b>1.1</b> Evaluation and training of Consortia according to a logic of joint promotion and association between Products and Brands from the local territory and its Tourist Destinations <b>1.1.1</b> Consortium of Aldeias Históricas <b>1.1.2</b> Consortium of Aldeias de Montanha <b>1.1.3</b> Consortium of Aldeias de Xisto <b>1.1.4</b> Consortium of the BI Urban Arco <b>1.1.5</b> Consortium of Protected Areas <b>1.1.6</b> Consortium of Jewish Heritage <b>1.2</b> Identification and Training of Centres of Excellence related to the Tourism and Agro-Food sectors
<b>C. Infrastructure, Logistics and Mobility</b>	1. Transport	<b>1.1</b> Infrastructure projects: road, rail, airport and port
	2. Constitution of an Intermunicipal Machinery and Resource Park	<b>2.1.1</b> Building the capacity of the Park, with machines and vehicles; <b>2.1.2</b> Training, joint-purchase centre and municipal transport management.
	3. Promotion of Sustainable Mobility in low density areas	<b>3.1</b> Sustainable Mobility <b>3.1.1</b> Mobility plans for contiguous urban areas <b>3.1.2</b> Digital strategies (ICT) <b>3.1.3</b> Promotion of smooth mobility
	4. Promotion of efficiency of basic infrastructure	<b>4.1</b> Infrastructural training in water systems: rainwater <b>4.2</b> Promotion of the efficiency of the existing model for solid waste management
<b>D. Human Capital and Administrative Modernisation</b>	1. Diagnosis assessing opportunity for shared services in the region	<b>1.1</b> ICT - training <b>1.2</b> Training Plan <b>1.3</b> Sharing of infrastructure, equipment and resources (see the PA for the Infrastructure, Logistics and Mobility area) - Intangible component
	1. Innovation through a Thematic Living Lab in the area of Health	<b>1.1</b> Active Ageing Programme <b>1.1.2</b> Training for the Research Pole in Telemonitoring <b>1.1.3</b> Project associated with bioclimatic and respiratory health.
<b>E. Health, Third Sector and Social Development</b>	2. Supra-municipal social network.	<b>2.1</b> Social network <b>2.1.1</b> Development of shared services and networking; <b>2.1.2</b> Certification and training activities
	3. Health infrastructure and equipment: training	

Source: Data from EIDTBSE 2020. Own research.

A set of anchor projects, based on the five thematic areas, shape the strategy and give structure to the intervention:

- Innovation, internationalisation and the attraction of productive investment;
- Tourism and agro-industry;
- Logistics, mobility and basic services;
- Human capital and administrative modernization;
- Health, third sector and social development.

The territorial impact of the projects is another important dimension of implementing EIDT BSE 2020 and must take into account the following areas:

- Network projects: intra-regional, within the area which encompass the 15 Municipalities;
- Projects with variable geometries: inter-municipal, involving two or more municipalities;
- Municipal projects: whose incidence is limited to a given municipality;
- Transversal projects: BSE projects which involve interaction with their surrounding areas (inter-regional).

Innovation is the final dimension of this strategic matrix. In fact, this is a transversal priority of EIDTBSE 2020, in line with the Europe 2020 Strategy, Portugal 2020 and RIS3. This concerns the contribution of projects to helping to differentiate the area of intervention and to provide it with added value. Innovation is understood in a very broad sense and may include new ways of approaching the market, new internal organization of activities, or the provision of new products and services.

### 3.2 Strategic Plan for Innovation in the municipality of Fundão

*“Since 2012, the municipality of Fundão has been implementing a determined smart territorial innovation strategy to reverse the scenario of economic weakness and population loss that has been suffering, and to thereby help bring about the economic transformation of both the county and the region.”<sup>28</sup>*

The strategy focused on innovation, on the offer of spaces and services for entrepreneurs and private initiatives, following a Living Lab methodology and with an open innovation culture (Rafael, 2022, pp. 75), which was applied in conjunction with an intensive urban rehabilitation programme.

The plan designed by the municipality aims to attract investment and create jobs by promoting innovation and entrepreneurship. The goal is to encourage the establishment of new companies and to bring people to the area. This should help to improve the municipality's socioeconomic status, diversify its economic fabric, and reinforce the attractiveness of this territory.

The four main points, or key goals, of the plan are:

- provide infrastructure and create the competitive conditions to attract technological companies;
- support an innovation ecosystem which is capable of leveraging creativity and entrepreneurship;
- promote urban regeneration by attracting new businesses and residents;
- involve the wider community and get it to work together, in a partnership, to help design the plan.

To carry out the strategy, a specialised support team has been created with professionals from various backgrounds and work areas, who already have experience as municipal workers and have undergone a requalification process. A set of infrastructures has been put into place to support this initiative and a wide range of partners has been developed. Fundão aims to assert itself as a living laboratory for the development, demonstration, maturing and scaling-up of new technologies. Specific action focused on:

- the creation of business hosting infrastructures, enabling the territory to establish new businesses;
- offering incentives and institutional support to establish new companies and attract new people;

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<sup>28</sup> See Annex 1: *Municipality of Fundão Innovation Facilities*.

- attracting human capital, promoting the retention of existing talent, and also training people and helping them to develop new professional skills;
- positioning the area with a view to receiving emigrants, immigrants and refugees;
- communicating to help consolidate Fundão's profile with regard to two fundamental strategic axes: its recognition as a centre of technology and innovation, and its condition as a welcoming destination.

*"We wanted to bring innovation to local public policies. Our development strategy has innovation as a central factor, and not only technological, but also social innovation ....and also in governance, by establishing a more open municipal management model."*

### 3.2.1 Innovation facilities

Considerable emphasis was placed on the rehabilitation of existing buildings, repurposing them, and making them available to investors, entrepreneurs and companies with innovative and technological profiles and/or which could have an important social impact. Since the beginning of the programme, in 2013, only one piece of infrastructure has been built from scratch: the CAET (*Centre for Technology Companies*). This is managed by a team of municipal technicians who were already part of the municipality's staff and who now work to ensure the operative capacity of these facilities:

- Business and Shared Services Centre
- Business Spot
- Polynucleated Urban Enterprise and Business Incubator (IUPEN)
- Cowork Fundão Network
- Fab Lab Aldeias do Xisto
- Places and Homes of Feeling Network
- Cova da Beira Advanced Training Centre
- Fundão AgroTech Centre
- Seminary Experimental Farm
- Fundão LoRa Network
- Biotech Plant Lab of Beira Interior

### 3.2.2 Agriculture and industrial endogenous products

One fundamental piece of infrastructure for the agricultural sector is the *Cova da Beira Hydroagricultural Development*<sup>29</sup> (2012), which provides services to an area of around 12,360 ha, spread across six different municipalities<sup>30</sup>. In Fundão, it serves around 4,020 ha, which are irrigated by a pressure irrigation system with hydrants that benefit agricultural land owners. It also has an electrical energy generating component.

*Local cherry production is currently the leading activity in the local economy, with production having even reached a value of over €20 million per year. This is a productive activity that already involves more than 300 local producers and that provides more than 2,000 seasonal jobs*<sup>31</sup>.

A broad partnership was established with a group of entrepreneurs in the agro-food sector to set up the *Fundão Producer's Club*<sup>32</sup>. This brand promotes a set of endogenous products which, apart from the cherry, include: peaches, chestnuts, honey, wine, olive oil, cheese, wild mushrooms, and processed meat products. These products also form the basis of the local gastronomy. Promotional activity includes: participating in national and international fairs, creating and developing new integrated products, opening shops, producing training plans for entrepreneurs, organising business missions, hosting investment missions, and developing partnerships. Some of the brands and companies have entered new export markets and found new consumers in countries such as China, Japan, Brazil and the Middle East, according to URBAN ACT III magazine. The organisation has also created the producer's organisation *Cerfundão*, within the framework of PDR2020<sup>33</sup>, in which private investors invest in enlisting the largest possible number of agricultural producers to work with them and thereby exploit economies of scale and improve their competitiveness.

<sup>29</sup> [Aproveitamento Hidroagrícola da Cova da Beira](#)

<sup>30</sup> Sabugal, Almeida, Pinhel, Penamacor, Belmonte and Fundão

<sup>31</sup> URBACT III - [Fundão Agri-Urban Action Plan | Local Products + Healthy Food = Happy Children](#) | N° 01/18 - April 2018

<sup>32</sup> [Clube dos Produtores do Fundão](#)

<sup>33</sup> [Programa de Desenvolvimento Rural 2014-2020](#).

As explained in relation to the [Agri-Urban Action Plan](#), agriculture provides probably the best example of collaboration between the traditional and technological sectors, with the *Cereja do Fundão* brand as the star product. This articulation is crucial to confront the main challenges that face the sector. At Fundão, the next step was in the field of experimentation and demonstrating the *Internet of Things (IoT)*, involving the application of robotics for agriculture. Projects and start-ups have the opportunity to test, in a real environment, the applications that they develop for the agricultural sector at the *Biotech Plant Lab of Beira Interior*, which was recently created in the old seminary building.

**Figure 1 Fundão: IoT Agro Centre infrastructure**



Source: CMF – Fundão365 dias à descoberta.

It is important to take into account Fundão's proximity to the *University of Beira Interior*, which is located in Covilhã (only 23 km away). This acquires even greater significance within the scope of the *Living Lab Cova da Beira* (see 3.2.3). This centre facilitates the participation of companies located in Fundão in the development of research projects and also provides training and qualifications that improve local human resources.

In addition, the *Cova da Beira Training Centre* was inaugurated in July 2017. It works with the CMF and several other institutions in the region, training qualified labour for work in such areas as agri-food and polishing of different materials.

### 3.2.3 Living Lab Cova da Beira (LLCB)

The *Living Lab Cova da Beira* is part of the "Strategic Plan for Innovation in the Municipality of Fundão" and one of the *Base Projects* of the *BSE Region's Strategy 2.2 (PA 2. Innovation through Regional Living Labs)*.

*"The involvement of the local and regional community, working in partnership, most notably through the informal consortium LLCB, has made it possible to bring together a series of entities that have a direct impact on the lives of companies and the local community. It was also of crucial importance to define the strategy based on a spirit of openness, sharing, and promoting participatory processes".<sup>34</sup>*

Aiming to develop a creative ecosystem, and following the open innovation principles established by the municipality, LLCB offers shared workspaces for companies, runs incubator and entrepreneurship projects,

<sup>34</sup> Report proposal for the recent revision of the [PDM DO FUNDÃO \(September 2023\)](#) (pp.17)

and provides shops in the old city centre of Fundão, and also in historical villages in the municipality. LLCB offers the following nine services:

- A Praça - social and business Incubator
- Cowork Fundão - shared workspace
- Fab Lab Aldeias do Xisto - prototyping laboratory
- Advanced Training Centre
- Casa-oficina – a home-workshop concept for entrepreneurs
- Escola Aldeia - a unique and highly differentiated teaching offer
- A research and development hub focusing on telemonitoring for health
- Producers Club – for excellence products and brands
- Business Centre and Shared Services - multipurpose Pavilion

The main partners involved in this initiative are highly diverse: public entities; civic associations; private companies; financing institutions; higher education institutions; schools; hospital centres; and existing networks<sup>35</sup>.

*The large number of private agents, and their sophistication, together with the progressive involvement of civil society, tends to invert the traditional “top-down” model of governance in favour of a more “bottom-up” approach. The transition from Government to Governance leads to new forms and patterns of collective action, such as networks, partnerships, cooperation for planning and territorial management (Rafael, 2022, pp.69).*

The *Municipality of Fundão* is responsible for the management and administration of the LLCB as well as for changing people’s mentalities towards the adoption of a much more proactive formula. In this way, LLCB seeks intends to assert itself as a territorial *cluster*, following a *Living Lab methodology* in which innovation is generated and applied through a logic of cooperation, sharing and experimentation, undertaken within a creative and open innovation ecosystem. (Rafael, 2022, pp.78).

### 3.2.4 Urban regeneration

The promotion of urban regeneration in Fundão is part of a wide sustainable strategy encouraging businesses and people to occupy city centre locations. Involving also the new non-polluting industries that were attracted to the municipality, offered an opportunity to recycle existing buildings while, at the same time, boosting the local economy.

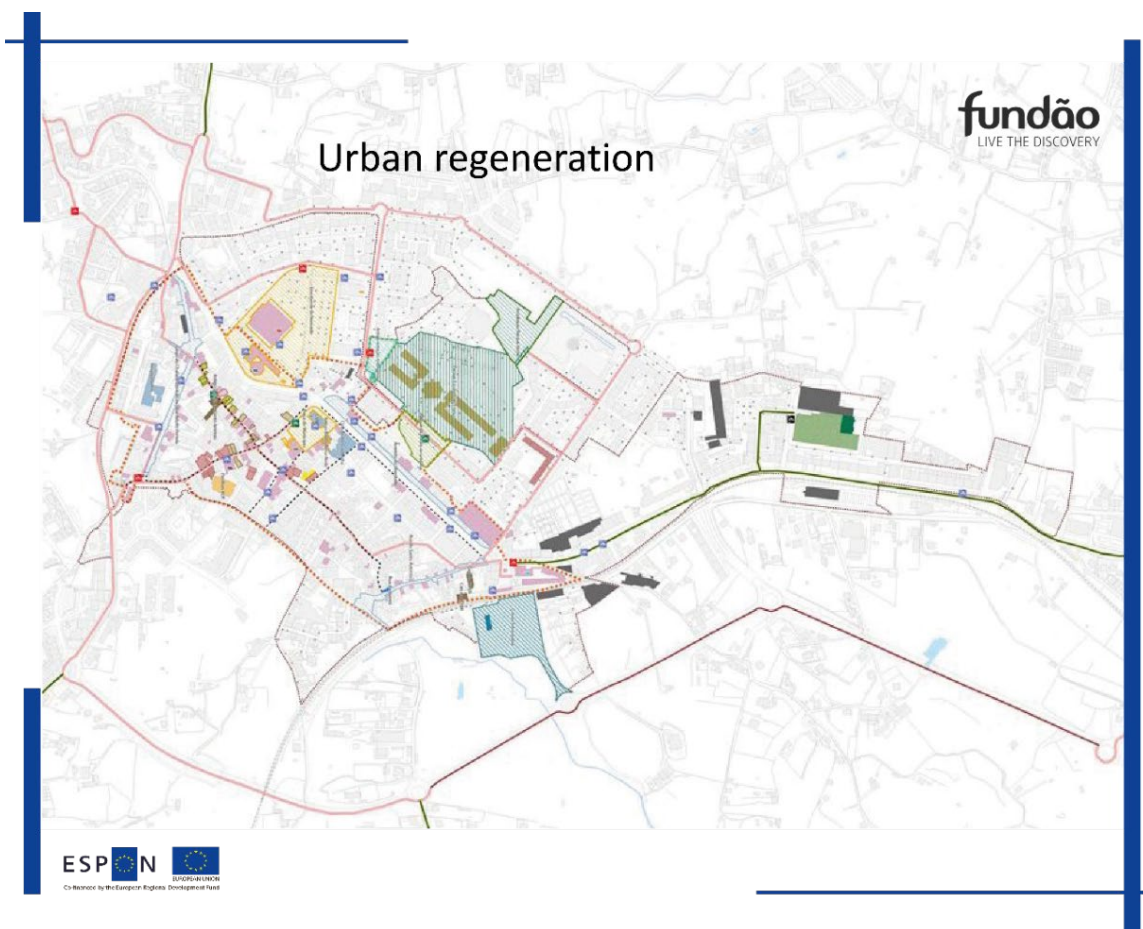
This strategy was further encouraged by the creation of an *Urban Rehabilitation Area (ARU)*<sup>36</sup>, which is a legal instrument subject to special governmental support through fiscal incentives, and also municipal support through funding. This generated growing dynamism, especially in the city centre, but also in some of the neighbouring parishes, as a result of the establishment of new residents and new families.

The ARU is guided by the *Strategic Urban Rehabilitation Programme* and the *Urban Rehabilitation Operation (PERU-OPR)*. The PDM revision highlighted that after only a few years, there had been a considerable increase in urban rehabilitation processes promoted by private parties.

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<sup>35</sup> Public entities: Municipality of Fundão; Institute of Employment and Professional Training – RD Centro; civic associations: Commercial and Industrial Association of the Municipality of Fundão-ACIF; Generation XXI; Business Association of the Castelo Branco Region; Portuguese Association of Digital Manufacturing Laboratories-APLFD; Association of Portuguese Open Source Software Companies-ESOP; Beira Biz-Association of Business Angels of Beira Interior; Institute Pedro Nunes – Ideas and Business Incubator; Companies: Altice Portugal; YDreams, VitalGreen; Cowork Lisboa; João Sem Medo Centre for Entrepreneur-ship; LX Factory; Covilhã Science and Technology Park, SA; Financing institutions: Caixa de Crédito Agrícola Mútuo of the Region of Fundão and Sabugal; Higher education institutions: (Beira Interior University and Polytechnic Institut Castelo Branco); Schools: School of Hotel Management and Tourism Fundão; Fundão Professional School Hospital centre: Cova da Beira Hospital Centre EPE; Existing networks: Agency for the Tourist Development of Aldeias de Xisto- ADXTUR, European Network of Living Labs; Smart Rural Living Lab Penela;

<sup>36</sup> <https://www.portaldahabitacao.pt/area-de-reabilitacao-urbana>

**Map 8 Fundão: urban regeneration interventions in the city centre**

Source: Proposal Report for the revision of the PDM DO FUNDÃO.

Within the scope of the ARU of the Old Zone of Fundão<sup>37</sup> and POLIX XXI programme – Partnerships for urban regeneration- 57 private buildings have already been rehabilitated, with a total investment of €828,532 of which €346,673 was provided by the municipality<sup>38</sup>.

Let's remember that a considerable emphasis was also placed on the rehabilitation of existing buildings, repurposing them as business hosting infrastructures of the municipal innovation plan. € 13,302,701 were invested in 6 of these buildings in the ARU (see table 5).

### 3.2.5 Municipal rental housing programme

As a result of the implementation of the *Strategic Plan for Innovation in the Municipality of Fundão*, which opened the way to the arrival of highly qualified professionals to work at the technological companies associated with the LLCB, there was an increase in demand in the housing market. The ARU document estimates the number of newcomers at around 500 workers/entrepreneurs over a period of three years (2015-2018), plus around 900 more, who were expected to arrive following the planned construction of the Technology Companies Centre.

To meet this demand, the CMF has facilitated access to *Municipal Rental Housing Stock* for specialized labour coming to work in Fundão. By establishing itself as an intermediary in the housing market, the CMF rents

<sup>37</sup> Area also submitted within the scope of the cities policy in the *Mais Centro* programme – Partners for Urban Regeneration – Urban Rehabilitation of the Old Zone of Fundão - known as Polis XXI, articulated with the Municipal Master Plan (PDM) and/or Municipal Urbanization and Building Regulations (RMUE)..

<sup>38</sup> Data from CMF

properties and provides guaranties to housing owners, on one side, while applying positive discrimination criteria and sub-letting these properties to qualified professions, on the other. A temporary grant is also provided, on condition that newcomers establish their tax residence in Fundão and that their contract with the technology company is maintained. When renewing their rental contracts, owners and tenants were recently encouraged to sign direct contracts, thus freeing the CMF from economic and/or management commitments. Furthermore, once they get settled in Fundão and realise they are capable of purchasing a property of their own, many of the initial tenants leave their rented accommodation, which then passes to another newcomer. Relationships with estate agents have been treated with care in order to avoid creating an unnecessarily competitive environment. Housing is also placed in their networks thereby converting them into allies and promoting the rental market in general.

The *Municipal Rental Housing Stock* has produced good results, both solving the demand for housing and also reinforcing the rental market. If, in its first years, finding new houses to rent was a slow process, it later picked-up momentum as owners saw the results and guaranties (see table 4). According to the municipal services, until now (September 2023), 356 contracts have been signed, with 198 of these still being in force. Since 2013, 60 families have left the programme and acquired their own housing property in Fundão. This could be considered a positive outcome, as it helps to establish new residents in the municipality.<sup>39</sup>

**Table 4 Fundão: evolution of the rental municipal housing stock 2013-2022**

Year	In Stock	Occupied	Vacant	New housing
2013	n.d.	n.d.	n.d.	20
2014	n.d.	n.d.	n.d.	44
2015	79	47	32	37
2016	83	81	2	47
2017	117	107	10	18
2018	146	143	3	28
2019	180	176	4	48
2020	183	183	0	27
2021	176	168	8	18
2022	188	180	8	51

Source: CMF services and Rafael, 2022. Own research.

This housing programme shares some of its objectives with urban regeneration policy by focusing on the city centre and proximity to LLCB facilities and the identified vacant housing stock. In parallel, proximity acts as a hub for promoting soft mobility and an improved quality of life.

Later, these resources can also later be adjudicated to migrants, with less qualified profiles, who face greater economic and social challenges, through the intervention of the *Migrations Centre*, and to the general population, as explained in the *Local Housing Strategy* (ELH 2020).

### 3.2.6 Migrations Centre<sup>40</sup>

In 2016, the *Migrations Centre* it is established in a protocol of collaboration between the CMF and the *High Commission for Migration*, to create a centre for housing temporary workers in the old Fundão seminary building, with a capacity for 100 people. Later the same year, the centre was expanded to serve as a students' residence, through a protocol signed between the CMF, the *Fundão Professional School* and the Councils of Cabo Verde, Guinea Bissau and São Tomé e Príncipe. This resulted in the centre's capacity being extended to accommodate 100 more people.

<sup>39</sup> Data from CMF Housing through interviews.

<sup>40</sup> Data from the Migrations Centre interviews..

In September 2018, Fundão responded to an international humanitarian appeal, and a request from António Guterres, Secretary-General of the United Nations (a native of Fundão), to welcome a group of 19 refugees from the Aquarius Boat.

At present, the *Fundão Migrations Centre* is a municipal facility which is managed by the multidisciplinary technical team from the *Office for Inclusion and Cultural Diversity* (GID), which provides it with cleaning, kitchen, maintenance and surveillance teams. This is a welcome centre for migrants, which currently hosts people of 23 nationalities, where activities are carried out to promote their reception, integration and autonomy. The capacity of the centre has been increased to accommodate 70 more people in its refugee area.

Based on its economic activity, Fundão attracts migrants due to its offer of seasonal agricultural employment. The Municipality focuses on extending its employment relationships as a driving force to help ensure the long-term retention of these workers. “*Cereja do Fundão*” stands out as a reference for social responsibility and for housing temporary workers in a dignified manner.

One important partner in attracting foreign investment and creating jobs is the *Agency for Investment and Foreign Trade of Portugal*. It forms part of a successful partnership that has fostered local socioeconomic development through initiatives such as its leadership of the consortium “*IoTExchange*”<sup>41</sup>, which is a European project that focuses on the area of technology (Rafel, 2022 pp. 67).

Until now, 264 refugees have requested asylum, 173 of whom are still resident in Fundão: 71 still live at the centre, while 99 are in the process of gaining full autonomy; 45 are involved in job insertion programmes, 7 are doing university studies, and 44 are enrolled at schools. A further 60 people have either returned to their countries of origin or gone to live in other European countries.

### 3.3 Renewable Energies

The use of clean energy is also a focus point for the municipality. Amongst the existing local assets, there is one of the largest wind farms in the country ([Parque Eólico da Gardunha](#)), which will be expanded in the future. The vast majority of municipal buildings are also equipped with photovoltaic panels and the creation of a [photovoltaic plant](#) is currently being negotiated. Several photovoltaic parks are also planned for the local area (in Fatela, Pêro Viseu, Valverde, Mata da Rainha and Salgueiro); their estimated budgets can be seen in table 5.

### 3.4 Tourism

The municipality’s tourism-sector activity aims to promote its landscapes, heritage and cultural resources, thereby reinforcing the identity of the territory and the local population’s sense of belonging. Since 2003, several instruments have been developed to do this: the *Strategic Plan for Tourism Development*, the *Municipal Tourism Company*, the *Tourism School* and the *Aldeia-Escola Project*.<sup>42</sup> These were all conceived within the *Strategic Plan for Innovation*.

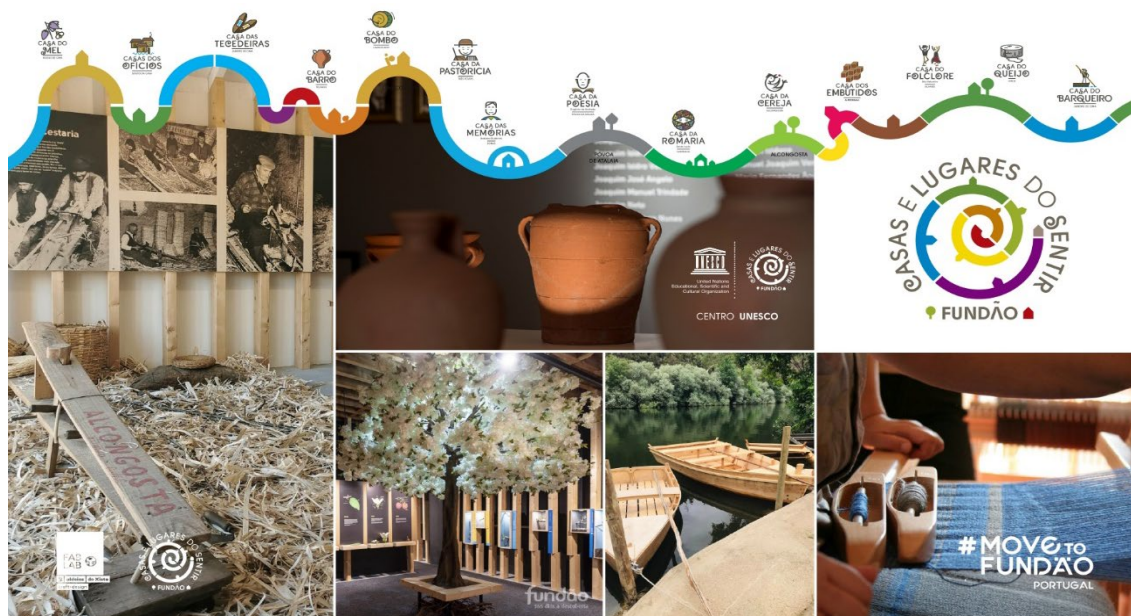
The main local tourism products are nature, culture, landscapes and gastronomy, and the main assets are: the *Historic Village of Castelo Novo*, the *Aldeias de Xisto* (Barroca and Janeiro de Cima), mountain biking and Segway hiking trails, the *Forest Houses*, the *Mountain Villages* (Alpedrinha, Alcongosta and Alcaide) and the proximity to the *Serra da Estrela* (for snow tourism). It should be noted that the Municipality of Fundão is part of the following consortiums: *Aldeias Históricas*, *Aldeias de Montanha*, *Aldeias de Xisto*, *Arco Urbano da Beira Interior* and *Áreas Protegidas*. It is also worth mentioning the importance of cherries in rural tourism, with the *Cereja Route*.

<sup>41</sup> The [IoTExchange project](#) encourages the creation of a network of European cities that is committed to the design of digitalization plans based on Internet of Things (IoT) solutions. Its aim is to increase the quality of life in small and medium sized cities in the EU.

<sup>42</sup> [Aldeia-Escola](#): A community-based project for Active Ageing, in which older people become transmitters of ancestral knowledge, while children challenge them to keep up with the modern world, in a relationship of reciprocal learning.

The *Innovation Strategy* also crosses paths with tourism, as in the recently established network “*Casas e Lugares do Sentir*” (Houses and Places of Feeling). This was created in 2017, through a protocol with UNESCO, and connects 14 thematic houses, each dedicated to the preservation of different artisanal techniques, knowledge or cultural traditions. Once again, the initiative seeks to bring schools closer to the local territory, through activities aimed at senior citizens and children, so that they can learn about the potential of the territory. In 2019, a *Craft Lab* project emerged which combines the use of design processes and digital manufacturing technologies with traditional tools. It was set up to support and improve artisanal production while adding a new and innovative component.

**Figure 2 “Casas e Lugares do Sentir” (Houses and Places of Feeling)**



Source: CMF – Casas e Lugares do Sentir.

### 3.5 Major investments<sup>43</sup>

A summary of the major public investments made in Fundão during the last decade is provided in table 5. As explained in this study, the creation of *business hosting infrastructure* (accounting for €15,013,924 in the projects listed in table 5) has been the major focus of investment plans, with a total of 10 buildings. Eight of these buildings have been rehabilitated, only one newly constructed, and the improvement of the supply market completes the 9 facilities list. There has also been relevant investment in education, either in the school complex or in programmes to fight school failure (€4,060,914), and in actions to promote the integration of refugees, within the scope of the *Migrations Centre* (€1,516,779). An urban green park project (€1,425,304) and drainage and wastewater treatment networks (€787,838) complete this list of the 10 most relevant investments, with a total financial outlay of €22,891,155.

<sup>43</sup> Information obtained from interviews with people responsible for municipal action.

**Table 5 Fundão: major investments in the last 10 years**

Programme	Project Code	Project Name	Framework	Total Investment	Eligible Investment	Contribution %	Contribution €
CENTRO 2020	<a href="#">CENTRO-02-0853-FEDER-000895</a>	Fundão Technological Companies Hosting Centre (9)	PMEs Qualification and Innovation	€4,138,536.68	€3,889,641.24	85%	€3,306,195.05
CENTRO 2020	<a href="#">CENTRO-09-2316-FEDER-000165</a>	Rehabilitation of the Gardunha Cinetheater (8)	PEDU - 1st Fase	€4,128,913.07	€3,274,313.33	85%	€2,783,166.33
CENTRO 2020	<a href="#">CENTRO-02-0853-FEDER-000056</a>	Business Hosting Operation - Industrial area (Supply Market)	Competitiveness and internationalization of the regional economy	€3,228,000.60	€1,017,067.24	85%	€864,507.15
CENTRO 2020	<a href="#">CENTRO-03-5673-FEDER-000096</a>	Fundão School Complex	PACT - Fundão	€3,105,186.87	€3,067,572.77	85%	€2,607,436.85
QREN	AAE_2013_21_017_5245	Polynucleated Urban Enterprise and Business Incubator (IUPEN) (2) + Business Shared Services Centre (CNSP) (1)	Strategic Plan for Innovation in the Municipality of Fundão Innovation Ecosystem	€2,474,370.82	€2,474,370.82	85%	€2,103,215.20
FAMI	<a href="#">PT/2019/FAMI/461</a>	House F - Refugees Welcome, Migrations Centre Actions to promote integration	Refugees Reception / Asylum	€1,516,779.20	€1,516,779.20	75%	€1,137,584.40
QREN	RUC_2009_03_041_3169	Green Urban Park	Cities Policy - Urban Networks for Competitiveness and Innovation	€1,425,304.20	€1,425,304.20	85%	€1,211,508.57
CENTRO 2020	<a href="#">CENTRO-09-2316-FEDER-000113</a>	Rehabilitation of the Old Santo António College (3)	PEDU - 1st Fase	€1,044,103.47	€905,768.83	85%	€769,903.51
CENTRO 2020	<a href="#">CENTRO-03-5266-FSE-000016</a> ; <a href="#">CENTRO-03-5266-FSE-000031</a>	Innovation Plans to Fight School Failure (Phase I and II)	PACT - Co promotion	€1,042,122.17	€993,341.39	85%	€844,340.18
POSEUR	<a href="#">POSEUR-03-2012-FC-000686</a> ; <a href="#">POSEUR-03-2012-FC-000683</a> ; <a href="#">POSEUR-03-2012-FC-000696</a> ; <a href="#">POSEUR-03-2012-FC-000688</a>	Drainage and wastewater treatment in the Municipality of Fundão	Urban water cycle	€787,838.51	€609,768.70	85%	€518,303.40

Source: CMF services. Own research.

From the data in Table 6, it seems clear that the next investment period will focus on meeting the housing demand: for temporary, urgent and accessible housing, and also for people with social needs. With an expected total budget of €48,736,074 for four programmes, this will make available a total of 424 homes until 2026. Some of these will be rehabilitated housing stock, while others will be of new construction. The *Industrial Area* remains on the investment list, with a total funding assignment of €7 million, as does the *Migrations Centre*, with €2.5 million. *Education* and the *Digitalization of Local Public Administration* have similar budgets, of €900,000 and €1 million, respectively, while *Urban Regeneration* and *Energy Communities* both receive less than half a million euros: €373,076 and €200,000, respectively.

**Table 6 Fundão: major investment and projects for the next 10 years**

Programme	Project Code	Project Name	Framework	Total Investment	Eligible Investment	Objectives
PRR RE-C02-i02-	HOUSING (SIGA 60237)	Urgent and Temporary housing grant Fundão	<a href="#">National Urgent and Temporary Housing Stock</a>	€10,687,532.61	€8,961,879.89	25 buildings - 77 homes (people with social needs, available until the end of 2025; new construction and rehabilitation)
PRR RE-C02-i02	-	Acquisition of Buildings to integrate BNAUT_ Acquisition Modality	<a href="#">National Urgent and Temporary Housing Stock</a>	€4,209,010.00	€4,209,010.00	13 buildings - 39 homes - 100 accommodations (people with social needs; acquisition modality, available until March 2024)
PRR - RE-C02-i05	-	Public Housing Park at Affordable Costs Fundão	<a href="#">Affordable Housing Public Park</a>	€30,531,500.00	€30,531,500.00	269 homes (affordable rental, available until June 2026)
PRR - RE-C02-i01	-	Support Program for Access to Housing 1st Right	<a href="#">Access to Housing support program</a>	€3,308,032.11	€3,308,032.11	8 buildings - 29 homes (people with social needs, available until the end of 2025)
PT 2020	CENTRO-09-2316-FEDER-000257	Nuclear Medicine Unit	Urban regeneration	€373,076.82	€373,076.82	
PT 2030	-	Promoting School Success - Phase III	4.k   Intermunicipal Programs to Promote Educational Success	€900,000.00		Estimated - No Call yet
PT 2030	-	Energy Communities	2.2   Self-Consumption and Renewable Energy Communities	€200,000.00		Estimated - No Call yet
PT 2030	-	Expansion of the Fundão Industrial Area - Phase 1	1.3   Territorial-based incentive system and new generation AAE and coworking spaces	€7,000,000.00		Estimated - No Call yet
PT 2030	-	Digital Villages Program	1.2   Digitalization of local public administration	€1,000,000.00		Estimated - No Call yet
PT 2030	-	Migrations Center	-	€2,500,000.00		Estimated - No Call yet

Source: CMF services. Own research.

### 3.6 Networking

The *Municipality of Fundão* participates in several inter-municipal and cross-border projects, namely the *AgriUrban* project, within the scope of *URBACT III*, which aims to rethink agricultural production in SMTCs in the EU, many of which have a specialization relative to that economic sector.

In 2021 he signed the *LIVING-IN.EU* declaration, to drive sustainable digital transformation in EU cities and communities. In another context, it signed the *Covenant of Mayors for Climate and Energy*, a global movement for local actions. Following the previous pact, in 2023, it developed its *Action Plan for Sustainable Energy and Climate (PAESC)*, a commitment to decarbonization, energy transition and adaptation to climate change.

The *Municipality of Fundão* is also a member of *OASC (Open and Agile Smart Cities)*, *ERRIN (European Regions Research and Innovation Network)* and *ENoLL (European Network of Living Labs)*.

Still at a European level, it is a signatory to the *Mission Charter*, within the scope of the *Adaptation to Climate Change Mission* launched by the European Commission, as well as the *Mission Soil Manifesto*, within the scope of the *Mission A Soil Deal for Europe*, which is concerned with the soil health.

It is amongst the 60 European cities selected in the *CrAft Cities* project, to test and share models of urban transformation towards climate neutrality. This reinforces its commitment to the *New European Bauhaus*.

At national level, Fundão integrates two networks, *ODSlocal* and *CESOPlocal*, which aim to monitor the indicators of the *UN Agenda* and the *17 Sustainable Development Goals (SDGs)*, as well as mobilize and train stakeholders to achieve the SDGs in Portuguese municipalities, until 2030.

Annex 3 presents a detailed description of the municipality's participation in programs, consortiums, movements and networks, both national and internationally.

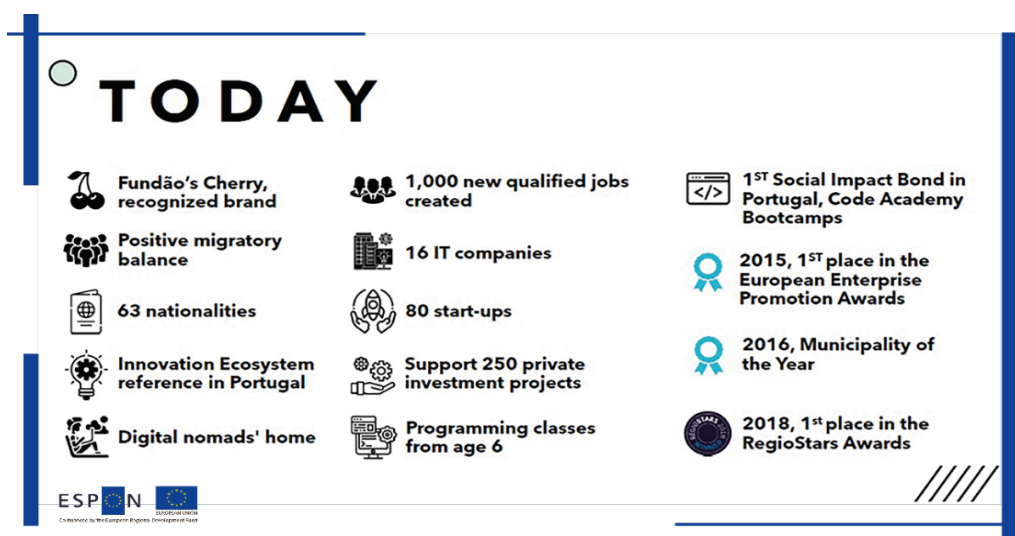
### 3.7 Transversal results

The strategy being implemented, of which the incentive system is an integral part, has made it possible to design an attractive global ecosystem for securing investment, creating jobs and promoting innovation, with several transversal results having been achieved since 2013.

These are some of the results highlighted at the recent revision of the PDM DO FUNDÃO (2023).

- 250 private investment projects supported and/or monitored by the municipality in various areas;
- 80 start-ups and new business ideas, which have been accelerated via the Incubator;
- 16 new companies in the ICTE area alone (four of which are multinationals);
- €150 million of private investment in productive and job-creating sectors;
- 700 people trained and certified by the *Advanced Training Centre* in the first two years;
- 100 jobs created at the Incubator;
- 1,000 new qualified jobs in the ICT sector (new employability);
- 1,000 new jobs in traditional sectors: agri-food, textiles, precision metalworking, energy, forestry, tourism and the social sector;
- 300 people have been taken out of unemployment through professional conversion bootcamps and are now employed as computer programmers in ICT companies, with average entry salaries of €900 per month;
- Unemployment has been reduced (there were 1,700 unemployed people in 2012, compared to 700 in 2020 (pre-pandemic));
- A positive migration balance was achieved in 2015 (+19 individuals), for the first time in many years, and this was repeated in 2019 (+69 individuals) and 2020 (+242 individuals);
- There was a 75% increase in urban planning processes between 2012 and 2020;
- Start-ups from Fundão featured in the top 25 national start-ups during the 2018 Web Summit;
- Some investments were classified as being *Projects of National Interest* for the first time in the municipality's history. One of these was in the technological area, another in the agri-food sector, and the third in the energy sector;
- Fundão is one of 5 locations in Portugal, in addition to Lisbon and Porto, where nearshore software development centres operate and are 100% geared towards exporting;
- Within the scope of the *Strategic Vision for Portugal's Economic Recovery Plan 2020-2030*, Fundão is recognised as a hub of competitiveness that can have a transformative effect upon the whole country.

Figure 3 Fundão today in a nutshell



Source: CMF

## 4 Policy recommendations

In order to assess the contribution of SMSTCs to the present and future of the economy and demography of EU countries, it is essential to look at their respective territories and to analyse the role which metropolitan areas (MAs), on the one hand, and rural areas, on the other, can play. In a context of demographic transition that heralds a painful loss of population, MAs will continue to struggle to maintain the *status quo* and their positions as the main driving forces of their national economies, absorbing resources from their administrations and concentrating decision-making power, population and employment. In rural areas, the impact of the climate crisis is already putting pressure on their ability to maintain the primary sector economy and this is accelerating the exodus of young working-age people. In this context, SMSTCs must emerge as "links" that are capable of generating a process of *counter-urbanisation* in the sense of providing key urban services and thereby generating what constitutes a dynamic economy at the territorial scale, thereby capturing and rooting population and, over time, gaining greater autonomy and the ability to directly manage the risks that threaten and condition their agricultural hinterlands and environmental ecosystems.

The unique nature of each SMSTC, and its own particular individual needs and expectations, makes it difficult to construct a shared development narrative as the one for MAs. The scale of local administration, which is always conditioned by the asymmetric decentralisation of human and economic resources, is ultimately responsible for channelling multilevel funding (EU, state, region) towards the implementation of policies that, in many cases, become outdated in the course of the process, or do not have the desired impact due to poor design.

Based on the research carried out, the contributions of the interviews, the experiences explained, and the results obtained by the Municipality of Fundão, the following policy recommendations have been put forward as a contribution to the discussion of the two key questions posed at the beginning of this work:

- **How can small and medium-sized towns and cities make a more substantial contribution to the economy and demographics of the EU as a whole and to those of the specific countries studied?**
- **What measures should be taken by national, regional, and local policies to support the long-term development of small and medium-sized towns and cities?**

Our first findings confirmed the general scenario of population decline which characterise SMSTCs and gives way to significant low-density territories. These raise concern on the Iberic Peninsula and in the EU in general, and gave rise to this research. A range of demographic factors have contributed to this decline in total population numbers: negative natural growth, a negative migration balance, and an old and ageing population.

As a consequence, there has also been a visible abandoning of the existing city and its built core and especially its historic centres, and a tendency for territorial fragmentation with the creation of new, monofunctional residential areas. This loss of population concentration has led to the degradation of public services and the commercial fabric, followed by a loss of employment and, again, population, largely as a result of the emigration of young and more qualified professionals. This is a "vicious circle" in which SMSTCs often find themselves trapped and in which isolation and dispersion affect the quality of life and increase threats associated with climate emergencies.

This demographic decline also has material consequences that are no less important. The large vacant housing stock, deteriorates due to lack of maintenance or, as a result of property fragmentation when it passes into the hands of its heirs. As we have seen in the country report for Portugal, phenomena such as population loss, its ageing, the number of housing units permanently occupied as main homes, and the proportion of those under rental, are closely correlated. Over time, housing has become an asset on the global market that has weakened the economic stability of the population due to the high cost of access to it, whether through rental or purchase.

Administrations must intervene, before the market positions itself, and offer alternatives to conventional tenancy regimes, while generating strategies for fixing the population of the local territory.

- The administration must, as far as possible, take the opportunity to monopolise control of vacant housing stock and create distribution policies to counterbalance the imbalances often generated by the

conventional real estate market. New tenure regimes must be considered, such as transfer of use or the introduction of mediation, based on cooperation and collaboration.

- It is imperative to rethink existing models for tourism and to control the excessive appropriation of housing resources for touristic purposes which are isolated from real population dynamics.
- Concurrently, it is crucial to detain urban sprawl, and particularly the prevalent decentralised patterns that are often driven by property market considerations. A more effective approach entails increasing efforts undertaken within established urban cores, while conserving their unique characters and urban structures. This viewpoint emphasises the need for municipalities to use their planning tools to make a commitment to conserving the density and human-centric nature of their urban environments. This requires adopting a proximity planning perspective in order to prevent the proliferation of development patterns that not only put a strain on maintaining the existing urban infrastructure, but also encroach upon valuable agricultural land and landscapes with cultural significance. In this regard, it is relevant to highlight the Portuguese initiative to remove the classification of “urbanisable land” and to give real meaning to efforts to conserve agricultural and natural soils.
- Rehabilitation, urban regeneration and the re-functioning of public buildings, to give them new uses and urban functions, should be made a priority. The Fundão strategy defines “the city as a hub”. Also, non-polluting industry can now be located in the city centre, instead of in peripheral industrial/technological parks. This takes advantage of these repurposed resources and contributes to social and economic urban regeneration, while also favouring soft mobility.

Another core issue designed to help retain population and attract new residents is communications, whether relating to the physical accessibility of the territory or to its telecommunications infrastructure. There are two levels on which to approach the subject of accessibility: by reducing daily travel time between rural and urban areas, and also from and to regional proximity centres; and through establishing quality connections with larger centres and cities, as well as 1<sup>st</sup> level infrastructure and equipment (such as airports, health, education and sports centres, and cultural equipment). Information infrastructure requires both quality and coverage and acquires particular relevance and importance when it is related to new models for remote working, or to technology companies and business activities.

- Improving accessibility by ensuring the provision of not only quality road infrastructure but also railway services. This is a fundamental requirement for SMSTC territories that still suffer from deficient connectivity. Public transportation should be guaranteed, even though it is not always profitable. It should not, however, exclusively rely on traditional formulas. Critical mass is again relevant, especially over short distances, as in SMSTCs. These may be between rural and urban areas, or involve access to basic services. More innovative formulas for public transportation should also be provided (such as the provision of community taxis on demand).
- Special attention should be given to telecommunications infrastructure, to ensure technological “connectivity”. This is key for 21st century solutions and for promoting innovation and improving the management of ecosystem resources. There must be quality access to the information highway and full territorial coverage is fundamental.
- When discussing quality of life and how to retain population, it is imperative to address the provision of the services required to cater for the diverse needs of both the elderly and younger populations, taking into account the issues identified relating to demographic trends. This encompasses the provision of amenities and services that can address their most pressing requirements, whether this involves providing support for the ageing population or providing the necessary infrastructure for self-development and the communication required by the younger generation.

Considering the size of SMSTCs and assuming their ability to function as nodal networks, there is a clear need for aggregation and it is important to gather critical masses through territorial association. This can be done to secure the existence, and appropriate functioning, of public services within the scope of interterritorial accessibility, to attract private investment, to obtain financial support and to define strategies capable of bringing value to their respective territories. These associations can be established either based on the proximity of municipalities or on functional territories, as there are different scales and variable geometries for different objectives.

- As identified in the country report, it is necessary to strengthen inter-municipal cooperation based on shared social, economic and environmental interests. SMSTCs need to generate an economy at the territorial scale and this necessarily implies establishing agreements of medium- and long-term

financial cooperation. In this sense, green energy, inter-municipal mobility and the creation of logistical and industrial poles can create new turning points for the design of infrastructure and have an impact on the territory that will also contribute to reducing the impact of the climate emergency.

- As clearly seen in the case of Fundão, economic activity should be based on both endogenous and exogenous resources. Specialisation within a local territory is essential for growth and cooperation and is capable of leveraging some of a region's most characteristic facets in order to give it a competitive advantage.
- It is of vital importance to start by adding value to the primary sector and to then encourage further associations throughout the production and distribution chain of its products.
- It is necessary to re-evaluate the concept of "rural areas", emphasising the notion of landscape and cultural components linked to the local territory and to the human involvement in its transformation. The concept of landscape extends beyond something to merely contemplate and is inextricably associated with the work done on the land and with its conservation.
- SMSTCs must assume a leading role in the management of "renewable energy" policies. This should be done by establishing a multi-level consensus to honour the commitments made to the 2030 Agenda, which involve ensuring a minimal environmental impact from the cycle of production and distribution. It may involve promoting the implementation of *Local Energy Communities* or launching complementary projects for both food and energy production, taking advantage of the existing agricultural infrastructure.
- Forestry activities are another differentiating area and require appropriate management, planning and exploitation, to achieve the dual goals of creating added value and protecting existing resources. In addition to tackling soil loss and desertification, there is an interesting potential for economic exploitation associated with biomass production. It is essential to maintain forests in good condition to prevent the risk of wildfires. In this case, maintaining the diversity of land uses is a key factor. Related to this, it should also be mandatory to review the wide range of possible approaches for exploiting the soil and to make a transitional shift to regenerative agriculture and the promotion of complex patterns of cultivation that improve the quality of soils at the same time as increasing biodiversity.

There is a need to promote public and private initiatives associated with circular, endogenous and social "economies".

SMSTCs are required to work with the rest of society to formulate creative and innovative lines of socio-economic action. This must be achieved at the same time as promoting sustainability, through the implantation of the circular economy, and meeting other strategic challenges with a reasonable guarantee of success. Within this alliance, it will be key to put companies at the centre of the circular economy process. It will also be necessary to include trades and professionals and to also get trade unions and social organisations actively involved.

- It is necessary to establish a system of horizontal, multilevel, bottom-up governance: local governments must have presence and decision-making capacity within national and regional policy-making. It is necessary to advance from urban and territorial planning towards strategic management. This will involve defining lines of action and identifying projects for providing each territory with added value. It is important condition territories to plan for action rather than to put too much emphasis on control.
- Planning should be promoted from the regional or *Intermunicipal Community* perspective to foster cooperation, rather than competition, between different administrations. This involves identifying the potential of each region based on complementarity and the ability to generate and distribute wealth. In this regard, financial incentives could be provided to those territories that voluntarily engage in collaborative efforts.
- It is important to promote the development of a *European Territorial Agenda*, following the model proposed by urban agendas, but adopting a broader, and more integrative, territorial perspective. This agenda should focus more specifically, comprehensively, and deeply on the strategic planning of rural areas and in developing the networks of intermediate cities that articulate them.
- As seen in the country report, Portugal has placed capacity building and training at the heart of the territorial policies this has an important impact on SMSTCs. The investment in human capital will be visible, in the immediate future, and will equip the territory with better tools and knowledge. Ensuring greater opportunities for SMSTCs will mean that new generations will be able to benefit from activities

linked to their immediate environments while still remaining committed to their internationalisation. Technology is essential in this process, and Portugal has been decentralising technology from the metropolitan heartland and transferring infrastructure to SMSTCs and their rural hinterland for some years now.

- If we want to change behaviour, we have to change the incentives logic. This implies changing the financing rules and conditioning the allocation of funding to meeting requirements in terms of territorial coverage or conditioning them to the participation of Universities. “To access the funds, it is necessary to work together”.
- Decentralisation is another key principle for low-density territories. The more competencies are available for local authorities, the better. Many competencies that are in the hands of central administrations need to be reconsidered at the local level, as municipalities provide the closest contact between governments and their citizens. All available tools are necessary as each person needs to meet all of their needs, even if this relates to only a small group of people.

SMSTCs have unique characteristics. In low density/empty territories there is a need for special attention and a sensibility for identifying “voids” within these regions. Statistical disaggregation is key in this process, as average values are misleading regarding these areas. There is also a need to develop specific measures for dealing with these “voids”. If this is not done, there will always be the risk of them being irremediably left behind. Detailed, place-based, policies should take into consideration the differences between urban nodes and empty areas, as well as considering the importance of the complementarity between rural and urban areas in and around SMSTCs.

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## **Annex 1 – Interviews**

## **Annex 2 – Municipality of Fundão Innovation Facilities**

## **Annex 3 – Networking**





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