

COMPREHENSIVE DIAGNOSTIC PROTOCOL FOR THE ACTION PLAN

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1. INTRODUCTION AND CONTEXT

The Basque Government's Department of Housing and Urban Agenda is promoting a policy based on comprehensive urban regeneration, understood as an approach that addresses the environmental, social, economic, urban planning and governance dimensions of cities in a coordinated manner. This approach is inspired by the 'Toledo Reference Document' (2010), which positions integrated urban regeneration as a strategic tool for improving urban environments in a holistic manner, moving beyond partial or exclusively physical interventions. This comprehensive approach has been consolidated at European and international level through the New Urban Agenda, set out in the 'Amsterdam Pact' (2016) and reinforced by the Quito Declaration adopted at Habitat III. Both frameworks emphasise that comprehensive urban regeneration must contribute to the achievement of the Sustainable Development Goals, particularly through access to adequate, safe and affordable housing, social inclusion, support for vulnerable groups and the prevention of segregation, thereby integrating the various dimensions of sustainable urban development.

In the Basque Country, where over 90 per cent of the population lives in urban areas, comprehensive urban regeneration has become a key pillar for making progress towards SDG 11 and the 2030 Agenda as a whole. In this context, the Opengela programme acts as a fundamental tool for implementing this approach across the region, alongside the BIRTUOSS project, which aims, amongst other objectives, to scale up the model to new municipalities and create a uniform regional network of Opengela community offices, coordinated by a management structure. As part of this line of work, the aim has been to develop protocols focused on those aspects that currently lack a clear systematic framework, and which are key to the functioning of the offices. These include the assessment of neighbourhoods undergoing regeneration across three levels – socio-economic, built environment, and public space and facilities – in line with the integrated urban regeneration approach.

Its aim is to establish a common methodological framework that enables a structured and multidimensional analysis of the social, economic, built and urban conditions of the local area.

This assessment is intended as a key tool for informed decision-making, facilitating the identification of issues, potential and priorities for action that will guide the subsequent design of the Action Plan.

2. PURPOSE, SCOPE AND OBJECTIVE OF THE PROTOCOL

2.1 PURPOSE

The purpose of the protocol is to define a structured methodology for the collection, analysis and interpretation of relevant information regarding the area of intervention across the three dimensions identified—socio-economic, built environment and public space—thereby providing a comprehensive understanding of the reality of the area subject to urban regeneration.

2.2 SCOPE

The protocol covers the analysis of the following dimensions:

- socio-economic conditions, including the demographic profile, the identification of types of vulnerability, the analysis of households' economic and employment situations, and the assessment of support networks and existing social capital.
- the building stock, incorporating architectural characterisation, the state of repair of buildings, the level of universal accessibility and energy performance.

- public space and the urban environment, with the aim of assessing environmental quality, social functionality and the availability of basic services.

2.3 PURPOSE

Taken together, these analyses enable a comprehensive assessment of the area subject to urban regeneration, which serves to:

- identify problems and opportunities within the area under study.
- establish priorities for action based on the issues identified.
- provide a technical basis for the measures proposed in the Neighbourhood Action Plan.

3. STRUCTURE AND USE OF THE PROTOCOL

This protocol is designed as an operational guide covering the various subject areas required for the preparation of a comprehensive assessment.

This document is organised into the following sections:

- Section 1. Socio-economic analysis
- Section 2. Building analysis
- Section 3. Analysis of public space and the urban environment
- Summary of the comprehensive assessment

3.1 STRUCTURE OF THE SECTIONS

Each section is organised according to a common structure that ensures the methodological consistency of the whole:

- Thematic scope, which defines the conceptual framework of the module and sets out the key aspects to be analysed using a structured outline

- Indicators: measurement tools associated with each thematic area, including:

- o Description of the indicator
- o Units of measurement and possible categories
- o Available sources of information and tools for their calculation and presentation

The set of indicators and variables to be analysed through a combination of , the use of statistical sources, and participatory processes involving local stakeholders.

It is recommended to follow the order set out in the document, in order to ensure consistency across the different levels and scales of analysis. The information gathered will form the basis for the preparation of the descriptive and graphical report of the assessment.

The protocol establishes a common framework of reference, but allows for a degree of adaptation depending on:

- The availability and quality of the information
- The specific characteristics of the study area
- The technical and time resources available

However, it is recommended that:

- Ensuring that a minimum set of key indicators is covered in each section
- To justify the selection or exclusion of indicators
- Ensure the consistency and comparability of the results

The aim is to prioritise analytical relevance, methodological consistency and the quality of information, rather than the indiscriminate application of all indicators.

With a view to guiding the subsequent development of the Comprehensive Action Plan, a synthesis will be produced by thematic blocks, setting out in a structured manner the main findings from the various dimensions analysed. For this reason, the protocol also includes a results summary sheet, accompanied by a tool in table format (Excel), designed to facilitate the integration and cross-cutting interpretation of the assessment.

4. EXPECTED RESULTS OF THE DIAGNOSIS

The application of this protocol will enable the following to be obtained:

- A descriptive report for each area of analysis
- A summary of results, structured using the standardised form
- Specific diagnostic plans (one for each thematic block)

These results will form the basis for drawing up the Action Plan and prioritising interventions.



SECTION 1

SOCIO-ECONOMIC ANALYSIS OF THE INTERVENTION SITE

1. SECTION 1: SOCIO-ECONOMIC ANALYSIS OF THE INTERVENTION SITE

This section focuses on the social dimension, concentrating on the demographic and economic profile of the area, which is essential for understanding the local population and the potential beneficiary homeowners' associations, and for ensuring that the regeneration process leaves no one behind.

1.1 DEMOGRAPHIC PROFILE AND TYPES OF VULNERABILITY

Content: Identification and quantification of specific groups within the intervention area. Where possible, it is advisable to collect data by gender.

1.1.1 SOCIO-DEMOGRAPHIC CHARACTERISATION OF THE AREA

Identification of the socio-demographic structure of the study area based on the following quantitative indicators:

Age structure

Description: characterisation of the resident population of the area according to different identified age groups.

☐ Units of measurement:

Old-to-young ratio: Population aged >65 / Population aged <16

Early old age rate: % of population aged over 65 / total population

Early Youth Rate: % of population aged under 16 / Total population

Sources and tools: LURDATA, EUSTAT.

Diversity and origin

Description: characterisation of the population in the area in terms of its origin.

Possible units of measurement:

Immigration rate: % non-Spanish population / total population

Source: LURDATA, EUSTAT.

1.1.2 CHARACTERISATION OF SITUATIONS OF VULNERABILITY:

Identification of specific situations of vulnerability related to household composition and the identification of special needs.

Household composition

Description: characterisation of households in the area, both in terms of the number of people living in them and the identification of potential situations of vulnerability, such as single-parent families, people aged over 65 and women living alone.

☐ Units of measurement:

Occupancy/Housing Density: No. of people living in a household / No. of households with registered residents (Average).

Proportion of single-parent households: % of households with 1 adult and 1 or more children under 18 / Total number of households with registered residents.

Rate of households with 1 or 2 residents aged over 65: % of households with 1 or 2 residents aged over 65 / Total households

Rate of Single-Person Households with Women Aged Over 65: % of households (with a woman aged over 65 registered) / Total number of households with registered residents.

☐ Source: LURDATA, EUSTAT.

Situations requiring special protection

- ☐ Description: characterisation of the resident population in the area by identifying situations requiring special protection.
 - ☐ Possible units of measurement or categories: number of victims of gender-based violence and people with disabilities residing in the area.
- Source: Contact with the local authority's social services responsible for the area.

1.2 PROPERTY STRUCTURE

Property structure of the area

- Description: characterisation of the property structure in the area.
- Possible units of measurement or categories: number of people receiving housing benefit in the area and percentage of homeowners and tenants in the CCPPs.
- ☐ Source: consultation with the local authority's social services responsible for the area and property managers.

1.3 ECONOMIC AND EMPLOYMENT SITUATION

Content: Analysis of the financial capacity of residents and property owners and their relationship with the labour market.

1.3.1 SOCIO-ECONOMIC PROFILE

Analysis of reliance on benefits.

- Description: quantification of the number of recipients of the Guaranteed Income Scheme (RGI) in the area
- ☐ Possible units of measurement:
RGI rate: % of people receiving RGI / total population
 - ☐ Source: Geoeuskadi publishes the percentage of RGI recipients and the number of unemployed people registered by the Basque Employment Service LANBIDE as a proportion of the total population recorded by EUSTAT.

Financial capacity and access to credit

- Description: Analysis of the financial capacity of households in the area, by quantifying known cases of non-payment within the area's owners' associations.
- Source: Municipal social services serving the area and property managers.

1.3.2 EMPLOYMENT

Labour intensity

- Description: Quantification of the percentage of households with low or no employment.
- Units of measurement:
- Very Low and Low Income Population Rate: % of households in the census tract where the median household income is $\leq$ the 57th percentile.
- Unemployment Rate: % of Unemployed Population / Total Working-Age Population
- Employment rate: % of employed population / total working-age population
- ☐ Source: LURDATA, EUSTAT

1.4 SUPPORT NETWORKS AND SOCIAL CAPITAL

Content: Assessment of the associative fabric and pre-existing institutional coordination in the area.

Civil society organisations and previous participation

Description: Analysis of existing neighbourhood associations in the area, their capacity for action, their roots in the community and residents' participation rates.

- Source and tools: The municipality's social services responsible for the area and property managers. These organisations will be characterised through interviews with their representatives.

Cross-system inclusion networks

- Description: Analysis of existing cross-system inclusion networks in the area (coordination between employment, health, education and social services).
- Source and tools: The local authority's social services responsible for the area. These networks will be characterised through interviews.



SECTION 2

BUILDING ANALYSIS

2. SECTION 2: BUILDING ANALYSIS

This section examines the physical conditions of the environment and the technical shortcomings that justify the regeneration project.

2.1 CONDITION AND CHARACTERISATION OF THE BUILDING STOCK

Content: Assessment of residential structures and their main shortcomings at building level.

2.1.1 ARCHITECTURAL CHARACTERISATION OF THE BUILDINGS

Identification of the parameters that help to define the residential buildings in the study area from an architectural and structural perspective, based on an analysis of the following aspects:

Building construction system

Description: Definition of the construction system for each element of the residential building's envelope, with a view to grouping the buildings into archetypes.

Possible units of measurement and categories: structural definition of the façade, roof, windows, (party walls and ground floor or lower floor slab where possible)

Sources and tools: visual inspection + data extraction from ITEs and/or CEEs (where available)

Year of construction of the building

Description: Definition of the year of construction of the building with a view to grouping buildings into archetypes.

Possible units of measurement and categories: year of construction

Sources and tools: Provincial Land Registry of Araba/Álava, Bizkaia and Gipuzkoa; urban3r viewer

Level of heritage protection of the building

Description: Definition of the heritage protection status of the residential building with a view to any potential restrictions on the works to be carried out.

Possible units of measurement and categories: Comprehensive, Structural, Environmental (façade), None

Sources and tools: Town planning schemes (PGOU)

Existence of previous works on the building

Description: Definition of the existence and type of previous work carried out on the residential building with a view to any potential restrictions on the works to be carried out.

Possible units of measurement and categories: Element affected and type of work, None

Sources and tools: visual inspection + data extraction from ITEs and/or CEEs (where available)

Layout of dwellings and premises in the building

Description: Determination of the number and floor area of dwellings and premises in the residential building in order to establish the contribution ratio (LPH) for future works.

Possible units of measurement and categories: Number and floor area of dwellings/premises and individual percentages

Sources and tools: Provincial land registry of Araba/Álava, Bizkaia and Gipuzkoa; urban3r viewer

Number of entrances in the building

Description: Definition of the number of entrances (CCPP) comprising each residential building/block, with a view to planning interventions that go beyond the scale of the individual building.

Possible units of measurement and categories: Number of entrances per building

Sources and tools: visual inspection; Provincial Land Registry of Araba/Álava, Bizkaia and Gipuzkoa; urban3r viewer

Homogeneous building complexes

Description: Determination of whether each building/residential block belongs to a homogeneous building complex, with a view to planning interventions that go beyond the scale of the individual building.

Possible units of measurement and categories: Membership (YES/NO)

Sources and tools: visual inspection.

2.1.2 STATE OF REPAIR OF BUILDINGS

Identification of the parameters that help define the state of repair of residential buildings, based on an analysis of the following aspects:

Compliance with the ITE for the residential building

Description: Characterisation of the building based on whether it complies with the requirement to have a valid ITE (age > 50 years + renewal every 10 years)

Possible units of measurement and categories: Compliant (valid ITE); Expired ITE; No ITE (never carried out)

Sources and tools: Euskoregite; opendata.euskadi.eus website; itedata.eus website

Result of the residential building's ITE

Description: Definition of the ITE result

Possible units of measurement and categories: Favourable; Unfavourable; Rectified

Sources and tools: Euskoregite; opendata.euskadi.eus website; itedata.eus website

Level of intervention required for each element of the residential building

Description: Definition of the level of intervention required for each of the elements analysed in the ITE: roof, foundations, structure, external walls, water supply and drainage.

Possible units of measurement and categories: Grade 1 (immediate, intervention within <24 hours); Grade 2 (very urgent, intervention between 24 hours and 3 months); Grade 3 (urgent, intervention between 3 months and 1 year); Grade 4 (required in the medium term, intervention > 1 year); Grade 5 (maintenance).

Sources and tools: Euskoregite; opendata.euskadi.eus website; itedata.eus website

2.1.3 UNIVERSAL ACCESSIBILITY OF BUILDINGS

Identification of the parameters that help define the accessibility status of residential buildings, based on an analysis of the following aspects. The analysis takes as its reference the new “Accessibility Seal for Existing Homes in the Basque Country”, which will come into force in 2025 and will enable the degree of accessibility of residential buildings in the Basque Country to be assessed and certified.

Level of accessibility in the urban environments surrounding the residential building

Description: Characterisation of the building according to its level of accessibility within the urban environment

Possible units of measurement and categories: as per the ‘Accessibility Seal for Existing Dwellings in the Basque Country’

Sources and tools: Euskoregite (web-based ‘Accessibility Seal’ tool)

Level of accessibility in the entrance hall and communal areas of the residential building

Description: Characterisation of the building according to the level of accessibility in the entrance hall and communal areas, assessing: entrance hall, lift, general-use staircases, horizontal access routes and communal areas: garage and storage room.

Possible units of measurement and categories: in accordance with the “Accessibility Label for Existing Dwellings in the Basque Country”

Sources and tools: Euskoregite (web-based ‘Accessibility Seal’ tool)

2.1.4 DEFINITION OF BUILDING ARCHETYPES

Based on the building-by-building analysis of the three points above (characterisation, conservation and accessibility), it is proposed to group buildings into archetypes that encompass groups of buildings with similar issues, with a view to proposing packages of measures in the Action Plan. The main objective is to propose joint actions that go beyond the scale of the individual building.

For each archetype, it is proposed to include, as a minimum, the information set out in the previous points.

Archetype n:

General description
Number of buildings comprising the archetype
Building construction system
Belongs to a homogeneous group
State of preservation of the building
Level of accessibility of the building
...

The archetypes will be shown on the ‘Summary of the comprehensive assessment’ block plan.

2.2 HABITABILITY AND ENERGY PERFORMANCE OF THE BUILDING STOCK

Content: Analysis of the hygrothermal behaviour of dwellings and their energy consumption.

2.2.1 THERMAL ENVELOPE AND INDOOR COMFORT (CONDITION OF FAÇADES, ROOFS, DAMP AND AIRTIGHTNESS).

The quality of the thermal envelope has a direct impact on the building’s energy demand and, consequently, on the level of thermal comfort of its occupants.

Given that the thermal envelope is a key element in complying with the CTE (DB-HE Energy Saving) and in obtaining the building’s energy efficiency certificate (hereinafter, CEEE), the identification of the parameters that define its quality is based on an analysis of the degree of insulation, the type of ventilation and airtightness.

Compliance with building thermal regulations:

Description: Characterisation of the building according to the thermal regulations in force at the time of its construction: prior to NBE CT 79, no insulation, natural ventilation and very low airtightness; from NBE CT 79 to CTE 2006, low insulation thickness, natural ventilation, low airtightness; post-CTE 2006: acceptable insulation thickness, mechanical or hybrid ventilation, and medium airtightness.

Categories: quality of the thermal envelope according to the thermal regulations in force at the time of construction; prior to NBE CT 79, very low quality; from NBE CT 79 to CTE 2006, low; after CTE 2006, acceptable

Sources and tools: Energy Performance Certificate Register; opendata.euskadi.eus website;
<https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

(Where no energy performance certificate is available for the building, an on-site inspection of the building will be carried out).

Result of the residential CEE for heating demand

Description: The CEE is defined (among other parameters) by the energy rating of the building's heating demand (from G to A).

Possible units of measurement and categories: standard heating demand rating, in accordance with the thermal regulations applicable to the building; prior to NBE CT 79, G–F; between NBE CT 79 and CTE 2006, F–E; after CTE 2006, E.

Sources and tools: Energy efficiency certificate register; opendata.euskadi.eus website;
<https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

Recommended level of intervention in residential buildings

Description: Definition of the level of intervention based on the report setting out recommendations and improvement measures contained in the CEE to improve the property's energy efficiency, thereby reducing heating demand.

Possible units of measurement and categories: Improvement in heating demand rating, including insulation in external walls, roof and floor (1-letter jump); Improvement in rating, including, in addition to insulation, the replacement of windows and doors and the installation of mechanical or hybrid ventilation, depending on the degree of airtightness and applicable regulations (2–3-letter jump).

Sources and tools: Energy efficiency certificate register; opendata.euskadi.eus website;
<https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

2.2.2 CONSUMPTION AND EFFICIENCY (ENERGY RATING AND DEMAND REDUCTION REQUIREMENTS)

The building's energy efficiency level, as determined by its energy rating, is expressed in terms of the estimated energy consumption required to meet the building's energy demands, taking into account not only the quality of the thermal envelope but also its heating and cooling systems and the type of energy used in these.

The building's estimated energy consumption is determined in the CEE and expressed by the building's energy rating.

Compliance with the Residential CEE

Description: Indicate whether a valid CEE is available (Law 4/2019 of 21 February on energy sustainability in the Basque Autonomous Community, Article 42(c)).

Possible units of measurement and categories: Compliant (valid CEE, expiry date); CEE expired; no CEE or not registered.

Sources and tools: Energy efficiency certificate register; opendata.euskadi.eus website;
<https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

Residential EEC result

Description: The CEE is defined by the building's energy consumption rating (from G to A) Possible units of measurement and categories: standard rating according to the thermal regulations applicable to the building; prior to NBE CT 79, G–F; between NBE CT 79 and CTE 2006, F–E; after CTE 2006, E.

Sources and tools: Energy efficiency certificate register; opendata.euskadi.eus website;
<https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

Recommended level of intervention in residential buildings

Description: Definition of the level of intervention based on the report containing recommendations and improvement measures set out in the CEEE to improve the property's energy efficiency, reducing energy consumption and increasing comfort.

Possible units of measurement and categories: Improvement in the building's energy rating (consumption). Improvement to heating and cooling systems (2–3-letter jump); Simultaneous improvement to the building envelope and heating and cooling systems, including renewables (3–4-letter jump)

Sources and tools: Energy Efficiency Certificate Register; [opendata.euskadi.eus](https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/) website; <https://opendata.euskadi.eus/catalogo/-/registro-de-certificados-de-eficiencia-energetica-de-euskadi/>

Where no Energy Efficiency Certificate (CEEE) is available or is not registered, the heating systems that meet the heating and domestic hot water requirements shall be identified by means of a visual on-site inspection, as follows:

Heating system:

Individual/Centralised/District or neighbourhood/None

Heating system (domestic hot water):

Individual/Centralised/District or neighbourhood

Energy used in the heating system:

Natural gas/Heating oil/LPG/Electricity

☐ Energy used for the domestic hot water system:

Natural gas/Heating oil/LPG/Electricity

☐ Renewable energy sources:

Solar thermal (Yes/No)

Biomass (Yes/No)

Air source heat pumps (Yes/No)

Geothermal energy (Yes/No)

☐ Electricity generation:

Photovoltaic (Yes/No)

Energy community (Yes/No)



SECTION 3

ANALYSIS OF PUBLIC SPACE AND FACILITIES

3. SECTION 3: ANALYSIS OF PUBLIC SPACE AND FACILITIES

This section examines public space and facilities from a physical perspective in order to identify any shortcomings that warrant regeneration measures.

3.1 ASSESSMENT AND DIAGNOSIS OF PUBLIC SPACE

3.1.1 ENVIRONMENTAL QUALITY OF PUBLIC SPACE

Identification of the parameters that contribute to the environmental quality of public space, based on an analysis of the following areas:

Vegetation and green infrastructure

Description: Assessment of the integration of natural elements into public space through a differentiated analysis of tree cover, grassed areas, functional green spaces, etc., taking into account their continuity, distribution and capacity to provide shade, relative humidity, noise protection, air quality improvement, resources and conditions that support wildlife, biodiversity, etc.

- Possible units of measurement and categories:
 - Presence of vegetation in the area (m² per inhabitant)
 - Population's access to green spaces (distance or time).
 - Density of urban trees (number of trees per 100 inhabitants, number of trees or shrubs per hectare)
 - Quality of the tree population (10-20-30 standard — within the inventoried urban tree population, there should be no more than 10 per cent of specimens of the same species; 20 per cent of specimens of the same genus; 30 per cent of specimens of the same botanical family)
 - Identification of Opportunities (Vacancies) such as derelict plots, underused inner courtyards or the roofs of public buildings where green infrastructure can be implemented.
 - Identification of productive spaces
- Sources and tools: Municipal maps (1:500 scale), municipal tree inventories, the Habitat and Vegetation Map on GeoEuskadi, green infrastructure in the Basque Country, the General Urban Development Plan (PGOU), fieldwork, etc.

Rainwater management

Description: Assessment of the types of existing paving and the incorporation of Sustainable Urban Drainage Systems (SUDs) in public spaces. This analysis will also include the identification of areas prone to flooding or with recurring problems of water accumulation, taking into account topography, gradients, the capacity of the drainage system and soil sealing. Furthermore, information from flood risk and hydrological risk studies will be considered, with the aim of identifying critical points within the neighbourhood and assessing possible adaptation measures and improvements to stormwater management.

- Possible units of measurement and categories:
 - Flood risk (number of dwellings in flood-prone areas, % of area in flood-prone zones)
 - Land Sealing (% of land that is sealed or impermeable)
 - Runoff coefficient (% of water that runs off the surface and does not infiltrate, evaporate, transpire or be retained)

○ Inclusion in the inventory of Potentially Contaminated Sites (yes/no)

- Sources and tools: Municipal maps (1:500 scale), flood risk studies and hydrological risk maps available from the relevant authorities, Basque Country flood risk maps available on GeoEuskadi, Ihobe's Inventory of Contaminated Sites available on GeoEuskadi, fieldwork.

Noise pollution

- Description: Assessment of the impact of the main sources of noise associated with road traffic and leisure activities.
- Possible units of measurement and categories:
 - Traffic noise (dBA)
 - Density of leisure activities (number of leisure venues per 100 m, operating hours, events per year)
 - % of population exposed to >65/70 dB
 - Night-time and daytime decibels

Sources and tools: Strategic noise maps from each local council, fieldwork.

Air pollution

- Description: Assessment of the presence of emission sources linked to road traffic and potentially polluting activities, industries and power stations. This information will also be cross-referenced with the prevailing winds in the area, in order to identify possible directions of pollutant dispersion and detect areas of the neighbourhood potentially most exposed to air pollution.
- Possible units of measurement and categories:
 - Pollutant concentration
 - GHG emissions from traffic (kg/day)
 - Population exposure (% of population exposed to high levels according to WHO values, number of homes in areas with poor air quality)
- Sources and tools: Cartographic and environmental data from GeoEuskadi, information from air quality monitoring stations, traffic count maps, and meteorological data on prevailing winds.

Microclimate

- Description: Assessment of the territorial and urban factors influencing the neighbourhood's microclimate. Factors such as the topography and orientation of the land, the predominant orientation of the urban fabric, the presence of large green spaces or nearby bodies of water, as well as the prevailing winds in winter and summer, will be considered in order to identify elements that shape the local climatic conditions of the urban area.
- Possible units of measurement and categories:
 - Municipal heatwave vulnerability/risk index
 - Shade capacity due to tree cover (no. of trees/ha, no. of trees per 100 m of street, average distance between trees)
- Sources and tools: Municipal maps (1:500 scale), topographical and environmental maps, meteorological data (predominant winds), Ihobe's Climate Change Vulnerability Maps, the Basque Government's Cartographic Portal (GeoEuskadi), fieldwork,

Urban design

Description: Assessment of the provision, state of repair and distribution of existing street furniture (benches, lighting, cycle racks, drinking fountains, litter bins, etc.)

- Possible units of measurement and categories:
 - Architectural richness (typological variety)

- Density of street furniture in public spaces (elements/ha, elements/100 m)
- Density of benches (no./100 m, average distance between benches)
- Level of lighting (lighting points per 100 m, uniformity across the area)

Sources and tools: Municipal maps (1:500 sheets) and fieldwork

Public-private interface

- Description: Analysis of the relationship between public space (streets, squares, pavements) and private spaces (residential properties, shops, buildings). In other words, how the transition between the public and private spheres occurs and what kind of relationship is formed with the street. The degree of permeability, accessibility and activity of building façades will be assessed, considering aspects such as the presence of doorways, entrances, shop windows, closures, setbacks or semi-private spaces. This analysis enables the identification of street sections with active or passive interfaces, which influence urban vitality, the perception of safety and the quality of public space. Possible units of measurement and categories:
 - Public-private boundary at ground floor level (degree of direct contact (yes/no))
 - Permeability of ground floors (% of permeable façade, average distance between entrances (m))
 - Visual transparency of ground floors (% of glazed area on the ground floor (%))
- Sources and tools: Municipal maps (1:500 sheets) and fieldwork and direct observation of the condition and use of ground floors.

3.1.2 PEDESTRIAN MOBILITY

To identify the factors that contribute to improving walkability for carrying out everyday activities, based on an analysis of the following areas:

Level of pedestrianisation

Description: Assessment of the allocation of public space between pedestrian traffic and motorised traffic, analysing the road hierarchy, street cross-sections and conditions for pedestrian mobility. This will also include the identification of the neighbourhood's main pedestrian routes and the degree of interconnection between them, in order to assess the continuity, accessibility and quality of pedestrian routes.

- Possible units of measurement and categories:
 - Allocation of public space (% of non-road open space, % of pedestrian area as a proportion of the total road network, m² of pedestrian space per inhabitant)
 - Road network (% of streets with pavements ≥ 2.5 m, average pavement width)
 - Pedestrian network and continuity (pedestrian connectivity index (nodes/links), length of pedestrian routes, pedestrian network density (km/km²))

Sources and tools: Municipal maps (1:500 sheets) and fieldwork

Urban accessibility

- Description: Assessment of the accessibility conditions of the pedestrian network in relation to gradients and the presence of physical barriers. Evaluation of accessible pedestrian routes to dwellings.
- Possible units of measurement and categories:
 - Accessibility to dwellings (% of dwellings with an accessible route, average accessible distance from dwelling to basic network (m))

- Continuity of accessible routes to dwellings (accessible linear metres, number of interruptions per km, % of accessible length out of the total)
- Physical barriers
- Road gradients
- Sources and tools: Annex II of Decree 68/2000, Geoeuskadi (MDT_maximum resolution) and Geoeuskadi basic mapping (BTA_Transport network), municipal maps (1:500 sheets) and fieldwork.

3.1.3 URBAN VITALITY

Identification of the parameters that contribute to fostering social interaction and meeting spaces, based on an analysis of the following areas:

Ground-floor uses and activities

Description: Assessment of the presence of commercial activity at ground floor level, taking into account the existence of vacant premises and the diversity of uses. Evaluation of commercial hubs that attract activity.

- Possible units of measurement and categories:
 - Intensity of ground-floor activity (% of active premises out of the total, number of active premises per 100 m of façade, density of activities (premises/ha))
 - Vacant premises (% of vacant premises, number of vacant premises per section, density of vacancies (vacancies/100 m))
 - Commercial continuity (% of active frontage length, number of interruptions (vacant premises) per 100 m, average length of active sections (m))
 - Diversity of uses (number of different categories)
 - Attractiveness / centrality (number of anchor businesses (per high street or area), average distance to high street (m), estimated pedestrian flow (pedestrians/hour))
- Sources and tools: Inventory of economic activities (DIRAE – EUSTAT), Traders' associations, OpenStreetMap, municipal business licences, fieldwork.

Uses and activities in public space

Description: Assessment of the intensity and diversity of social uses and activities taking place in public spaces.

- Possible units of measurement and categories:
 - Types of activities (social, leisure, transit) (% of each type of activity)
 - Intensity of use (observed activity) (number of people in public spaces (people/m² or people/ha), density of use (people/100 m of street or square), pedestrian flows (pedestrians/hour))
 - Duration of stay (average time spent (min/person), number of people resting per 100 m)
 - Hourly intensity (peak activity (people/hour), hours of effective use of the space per day, variation in use by time slots)
- Sources and tools: Direct observation, fieldwork.

3.1.4 PERCEPTION

An analysis of how citizens perceive, experience and value public space across the following areas:

Safety

Description: Assessment of perceptions of safety in public spaces, identifying problem areas and hotspots based on citizens' experiences. Consideration will be given to how factors such as the maintenance of streets and street furniture, visibility in open and enclosed spaces, lighting and street activity influence perceptions of safety. The information will enable the identification of sensitive areas and the creation of thematic risk maps or 'purple maps', reflecting perceptions of insecurity in different parts of the neighbourhood.

- Possible units of measurement and categories:
 - Subjective perception of safety (safety perception index 0–10, % of people who feel safe / % who feel unsafe, average perception score per urban section)
 - Perception by time of day (% of users who avoid the area at night, difference in perception between day and night, perceived safety index by day/night)
 - Problem areas (number of locations perceived as unsafe, % of area classified as a 'problem area')
 - Associated physical variables (state of maintenance (index 0–5), level of lighting, visibility of the space, pedestrian flow (people/hour), % of active shop fronts (eyes on the street))
- Sources and tools: Citizen surveys, interviews and participatory workshops, fieldwork, direct observation and thematic mapping.

Identity-defining elements

- Description: Assessment of the presence of urban elements with symbolic, historical or identity-defining value that contribute to the neighbourhood's identity. Architectural landmarks, monuments, spaces of remembrance, local traditions and characteristic features of the urban landscape will be analysed. Furthermore, information from historical analysis, interviews with local residents, and consultations with local associations and groups will be incorporated to complement the documentary evidence with the community's perception.
- Possible units of measurement and categories:
 - Density of identity-defining elements (number of identity-defining elements per hectare, number of landmarks per square kilometre, number of elements per 100 metres of urban route)
 - Accessibility and proximity (average distance to an identity-defining element (m), % of population within <300 m of an identity landmark)
 - Symbolic intensity (heritage relevance index 1–10, degree of social use of the element (high / medium / low))
 - Social ownership (percentage of the population that recognises elements of the neighbourhood)
 - Identity diversity (number of identity categories present: cultural, historical, industrial, religious, etc.)
 - Integration into public space (percentage of elements integrated into accessible public space, number of elements visible from main routes)

- Sources and tools: Fieldwork, municipal cultural and heritage mapping, historical archives, interviews and public participation.

Urban landscape

Description: Assessment of aspects of urban design relating to architectural and sensory richness and the state of conservation of the built environment.

- Possible units of measurement and categories:
 - Architectural and formal quality (architectural quality index, degree of typological coherence of the built fabric, formal diversity of façades based on the number of typologies per section)
 - State of conservation of the environment (% of buildings in good condition, urban maintenance index)
 - Sensory quality of the urban space (visual comfort)
 - Continuity and legibility of the landscape (facade continuity, legibility of the urban layout)
 - Visual complexity and richness (number of relevant visual elements per field of view, morphological variability per section)
- Sources and tools: Direct observation, fieldwork.

3.2 CHARACTERISATION AND DIAGNOSIS OF THE URBAN ENVIRONMENT

Identification of access conditions to basic services for carrying out everyday activities, based on an analysis of the average distance to the following facilities:

3.2.1 PROXIMITY TO ESSENTIAL SERVICES

Public and private facilities and services

Description: Assessment of accessibility to the various public facilities and services in the neighbourhood, taking into account their location and connectivity with pedestrian routes and public transport. This will include health, educational, cultural, social, sporting and commercial facilities, as well as green spaces and bodies of water, and relevant private services (e.g. pharmacies, nurseries, schools). This analysis will help to identify service gaps, areas with a high concentration of facilities and priority pedestrian routes.

- Possible units of measurement and categories:
 - Distance to healthcare facilities (health centres, pharmacies)
 - Distance to educational facilities
 - Distance to green spaces or bodies of water
 - Distance to sports and cultural facilities
 - Distance to shopping centres
- Sources and tools: Opendata Euskadi / GeoEuskadi (public and private facilities), municipal maps (1:500 scale), inventory of economic activities (DIRAE – EUSTAT) and fieldwork to verify and update information.

3.2.2 URBAN CONNECTIVITY

Identification of the area's connectivity with the urban environment, based on an analysis of the following elements:

Cycle network

Description: Assessment of the continuity, coverage and accessibility of the existing cycle network.

Possible units of measurement and categories:

- Network length and coverage (total km of cycle network)
 - Network continuity (% of continuous cycle routes, number of interruptions per km)
 - Quality of infrastructure
 - Integration with public bicycle schemes (number of stations per km², % of population within <300 m of a station)
- Sources and tools: Geoeuskadi (basic network of pedestrian and cycle routes), municipal maps (1:500 sheets), data from the municipal cycle service.

Public transport network

Description: Assessment of coverage and pedestrian accessibility to public transport stops, frequency of main connecting routes.

- Possible units of measurement and categories:
- Spatial coverage (% of population within <300 m of a stop, average distance to a public transport stop, density of stops)
 - Service frequency (average frequency of services, number of services per hour per route, average interval during peak hours)
 - Integration with the pedestrian and cycle network
- Sources and tools: Opendata Euskadi (GTFS Public Transport Euskadi), municipal maps (1:500 scale), data from municipal public transport companies.

Occupation of public space by parked vehicles

Description: Assessment of the extent to which public space is occupied by parked vehicles and its impact on pedestrian mobility.

- Possible units of measurement and categories:
- Surface occupancy (% of road surface area occupied by parking, m² of public space occupied by vehicles / total m² of street, m² of on-street parking per 100 m of street)
 - Parking density (number of on-street parking spaces per km of road, parked vehicles per 100 m of building frontage, proportion of streets with on-street parking)

Sources and tools: Municipal maps (1:500 scale), fieldwork.

Existence of park-and-ride and neighbourhood car parks

Description: Assessment of the existence, location and capacity of park-and-ride and neighbourhood car parks, taking into account their accessibility on foot and by vehicle, connections to public transport and proximity to the neighbourhood's main destinations. Their actual usage, availability and relationship to parking demand will also be analysed, identifying potential areas with a parking deficit or saturation.

- Possible units of measurement and categories:

- Parking provision (number of park-and-ride / neighbourhood parking spaces, ratio of spaces to estimated parking demand)
 - Level of use and occupancy (% average daily occupancy)
 - Public transport links
- Sources and tools: Municipal maps (1:500 scale), inventories of municipal car parks, mobility and transport data, fieldwork and direct observation.



SUMMARY OF THE COMPREHENSIVE ASSESSMENT

With the aim of facilitating a comprehensive understanding of the assessment and guiding the subsequent development of the Neighbourhood Action Plan, a summary is provided by thematic blocks, in a fact sheet and a visual representation of the results, which summarises the main findings across all the dimensions assessed.

The summary enables the rapid identification of strengths, weaknesses, opportunities and priority areas for intervention in the neighbourhood, as well as establishing a solid basis for strategic decision-making and the prioritisation of actions.

1. METHODOLOGICAL FRAMEWORK

In order to facilitate the production of consistent and comparable assessments across different local authorities, a matrix structured by thematic blocks is established, enabling each dimension of the study area to be assessed systematically.

The assessment is organised into three main sections:

Block 1. Socio-economic system

Block 2. Built Environment

Block 3. Urban Environment System

Each block comprises various specific areas of assessment that enable a cross-cutting analysis of the social, built and urban conditions within the study area.

1.1 ASSESSMENT SYSTEM

Each area is assessed using a five-level ordinal scale, where:

1 represents the most unfavourable situation

5 represents the most favourable situation

Scale for interpreting results

1	2	3	4	5
Low Poor	Acceptable Inadequate	Average Could be improved	Satisfactory Satisfactory	Very adequate Very suitable

1 'stable: Scale for interpreting results. Source: Compiled by the author.

The overall assessment of each block is derived from a combined analysis of the areas that comprise it. A summary sheet with an applied example is provided below for greater clarity.

SUMMARY SHEET OF THE COMPREHENSIVE DIAGNOSIS FOR THE ACTION PLAN BY BLOCKS		
BLOCK 1: SOCIO-ECONOMIC		
Area of assessment	Assessment by area (1–5)	
Demographic profile and types of vulnerability	2	Insufficient
Ownership structure	5	Very suitable
Economic, Employment and Inclusion Situation	1	Poor
Support Networks and Social Capital	3	Room for improvement
Interpretative summary: The socio-economic sector presents a mixed picture. The demographic profile reveals inadequate conditions, and there is also a significant shortfall in the economic and labour markets, which constitutes the sector's main vulnerability. Support networks demonstrate an existing social base, but there is scope for strengthening them. It is recommended that priority be given to measures aimed at improving employment, social inclusion and local economic revitalisation.		
SECTOR 2: BUILDINGS		
Scope of assessment	Assessment by area (1–5)	
Condition of the buildings	2	Inadequate
Universal accessibility of buildings	1	Poor
Thermal envelope and indoor comfort	2	Inadequate
Energy consumption and efficiency	4	Adequate
Interpretative summary: The building system has significant structural shortcomings, particularly in terms of: universal accessibility (high priority), state of repair and improvement of the thermal envelope. However, its performance in terms of energy consumption and efficiency is a positive highlight, providing a favourable basis for comprehensive refurbishment works. It is recommended that priority be given to the following measures: removal of architectural barriers, structural refurbishment, and improvement of habitability and comfort		
SECTION 3: PUBLIC SPACE AND FACILITIES		
Scope of assessment	Assessment by area (1–5)	
Environmental quality of public spaces	3	Room for improvement
Pedestrian mobility	3	Could be improved
Urban vitality	2	Inadequate
Perception	1	Poor
Access to basic services	3	Could be improved
Urban connectivity	5	Very good
Interpretative summary: The urban environment offers good connectivity and acceptable environmental quality, but significant shortcomings have been identified in: perceptions of safety and urban image, and the vitality and dynamism of public spaces. This points to the need for interventions aimed at: comprehensive urban regeneration; the social and economic revitalisation of public spaces; improvements to urban design and street furniture; and measures relating to lighting and safety.		

Table 2: Summary sheet of the comprehensive assessment for the Action Plan by blocks. Source: Compiled by the authors.

2. GRAPHICAL REPRESENTATION OF THE COMPREHENSIVE ASSESSMENT

The overall result of the assessment is complemented by a radar chart, which allows for a comparative visualisation of the performance of the different areas evaluated within each thematic block. The chart facilitates the immediate identification of:

- Critical areas (scores 1–2)
- Intermediate areas (score 3)
- Consolidated areas (scores 4–5)
- Internal imbalances between blocks

This summary forms the technical basis for defining strategies, planning actions and prioritising resources, ensuring consistency between the assessment carried out and the measures proposed in the Action Plan.

To produce these representations, a calculation and visualisation tool based on Excel will be used, which will automatically generate the average values for each block and provide an individualised representation of the various areas assessed.

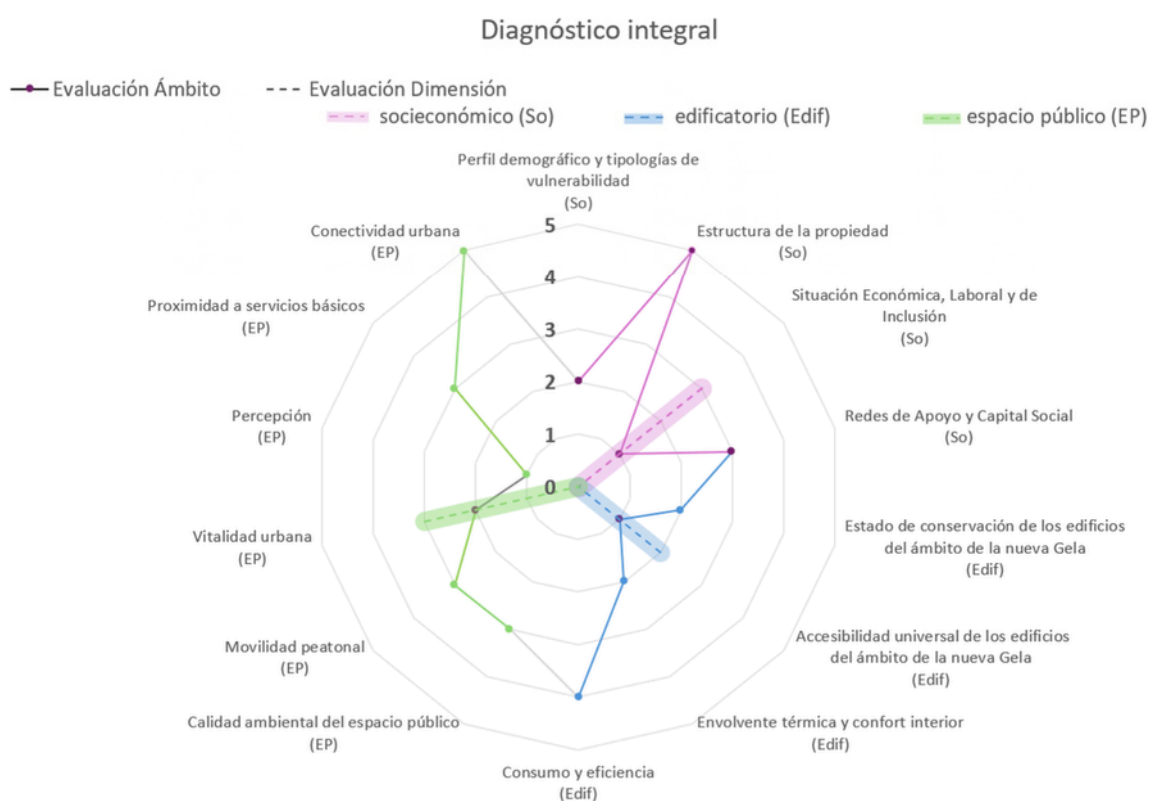


Figure. Graphical representation of the comprehensive assessment summary.

Overall interpretation: Overall, the assessment highlights that the area has significant strengths, particularly in terms of urban connectivity and energy efficiency, but also presents significant vulnerabilities relating to socio-economic factors, building accessibility and urban perception. Consequently, the Action Plan should be structured around four priority areas: socio-economic regeneration and inclusion; comprehensive regeneration with a focus on accessibility; the revitalisation of public spaces and the improvement of perceived safety; and the strengthening of social cohesion and community engagement.

3. -BASED SYNTHESIS MAPS

To complement the assessment, thematic summary plans will be drawn up, spatially representing the main findings of the assessment, organised by categories of analysis. Each plan will incorporate the most relevant elements identified during the evaluation process. For example:

- Building archetypes in the neighbourhood
- State of repair of the buildings
- Universal accessibility of the buildings
- Energy rating of buildings based on their heating demand
- Energy rating of buildings based on their consumption of non-renewable primary energy
- Graphical representation of the environmental quality of public spaces, indicating the location of green spaces, areas at risk of flooding, identified areas of opportunity, etc.
- Graphical representation of mobility, identifying common pedestrian routes and the accessibility of public and private spaces.
- Graphical representation of the uses and activities typically carried out in public spaces, areas perceived as unsafe, and those urban features that contribute to the neighbourhood's identity.
- Other supplementary maps may be included where deemed necessary, depending on the specific characteristics of the study area.

These summary maps enable an integrated understanding of the area to be formed, facilitating the subsequent definition of strategic lines of action, priority areas for intervention and specific measures within the Neighbourhood Action Plan.



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