OPERATIONAL DEPLOYMENT

zero CO2 plana

ENERGY AND ACCESSIBILITY REFURBISHMENT OF THE PUBLIC RENTAL HOUSING POOL

alokabide

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8. NZEB 2020-2050 REFURBISHMENT MASTER PLAN

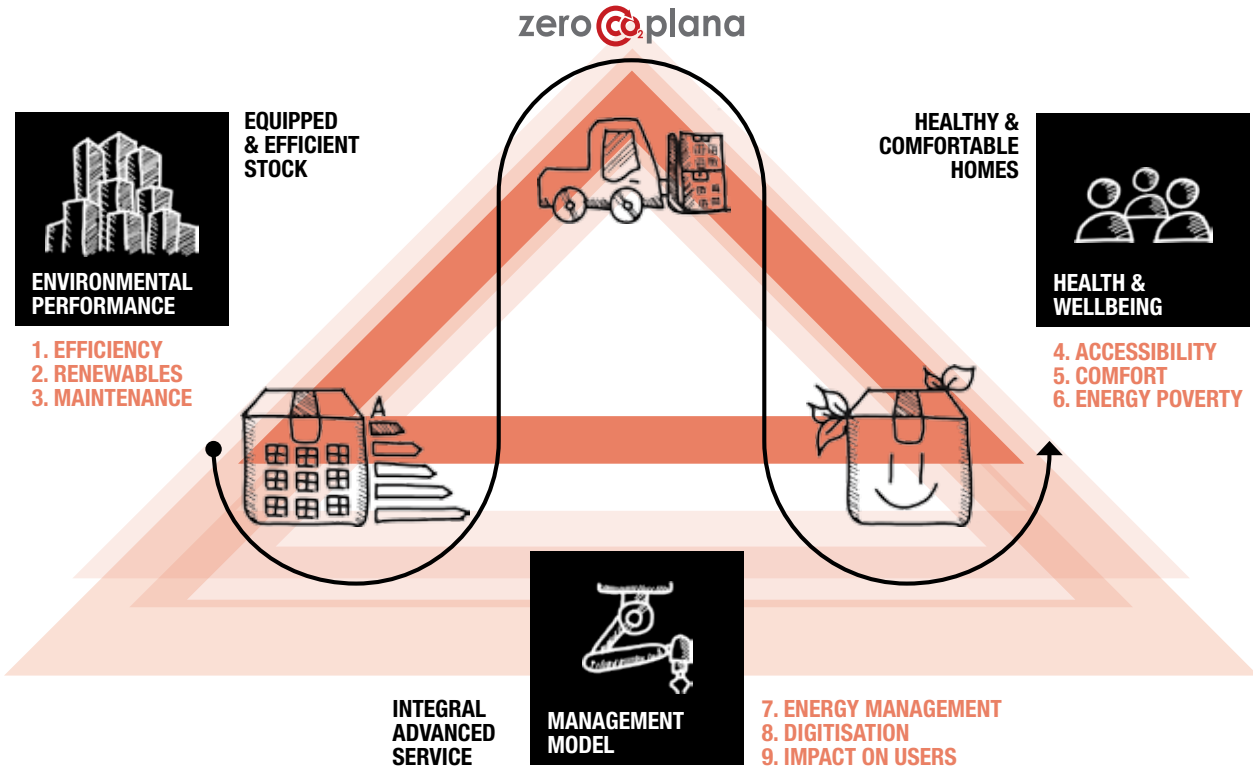
8.1. Dashboard Indicators

Background

The Plan ZERO Plana includes a **comprehensive study of the housing units and buildings** managed by ALOKABIDE, which has been used to inform the corresponding energy and accessibility intervention strategy.

Likewise, and faced with the challenges of digitising the stock, **a series of prior tasks** have had to be performed to ensure the **integration of the data** within the software platforms for managing the properties, thus facilitating accurate, reliable and consistent management.

All this information needs to be used to analyse refurbishment strategies and decision-making processes, being in turn **grouped in a way that is aligned with the project's challenges.**



Through the Plan ZERO Plana, public rental management therefore addresses the **analysis of different indicators,** grouped into strategic challenges and parameters for ensuring proper alignment with effective management, and not only with technical aspects and efficiency.

Definition and organisation of indicators: DASHBOARD

As stated in section 6.2. Main Challenges in VOLUME II. Catalogue of Solutions, the Plan ZERO Plana has **three strategic pillars,** each one with its associated parameters, which are as follows:

CHALLENGE 1:
Efficient Public Housing

1. Energy Efficiency
2. Renewable energies and self-consumption
3. Maintenance and repair

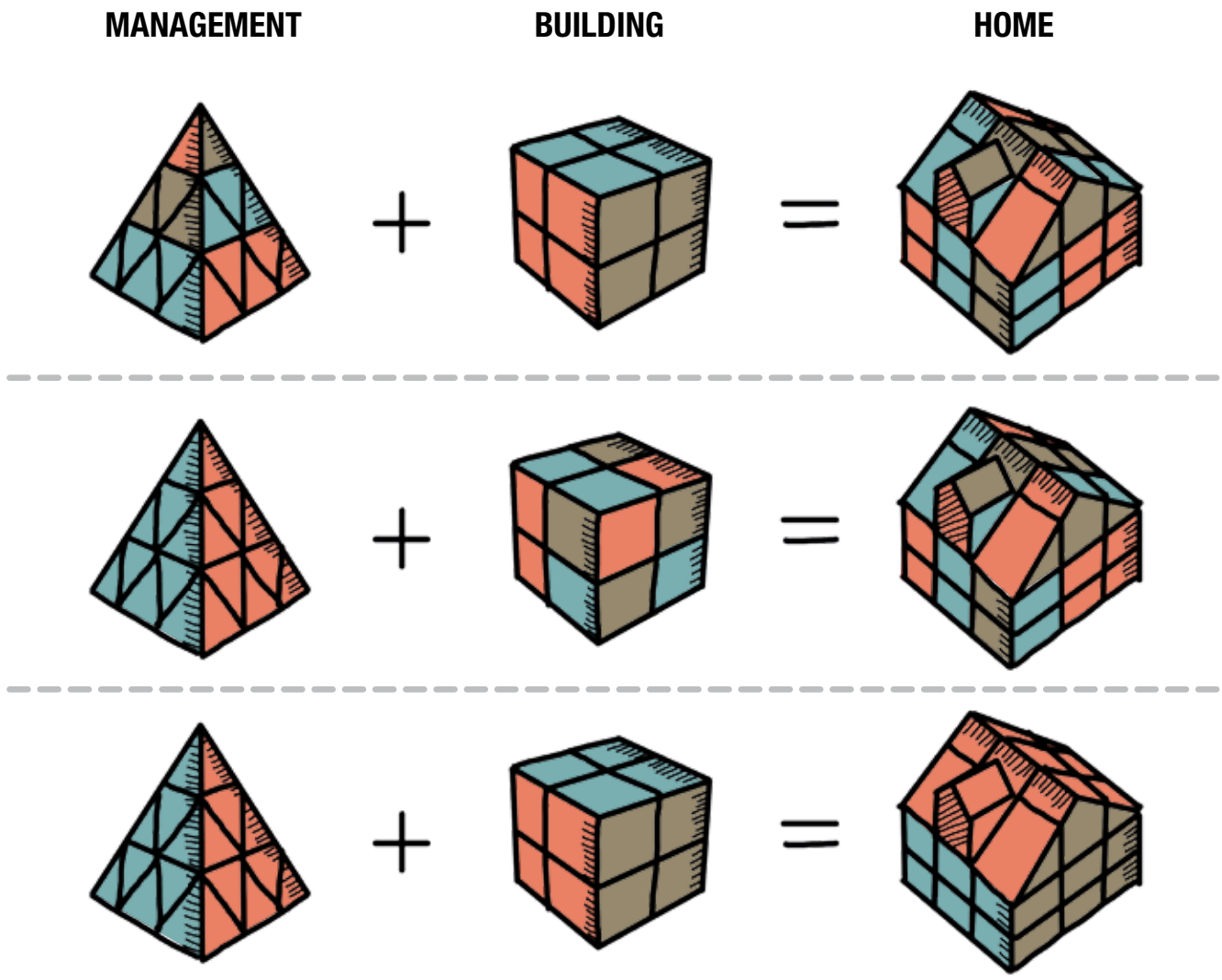
CHALLENGE 2:
The Health and Wellbeing of Tenants

4. Accessibility
5. Comfort and wellbeing
6. Vulnerability and energy poverty

CHALLENGE 3:
Advanced Management

7. Energy support
8. Digitisation
9. Impact on users

It is vitally important for the Plan ZERO Plana to respond to these three challenges in a balanced manner, giving each one their importance and necessary weighting, with this being the only way of ensuring the wellbeing of the tenants in an efficient housing pool:



The need to address these challenges and deploy the associated measures has given rise to the so-called ZERO Plana dashboard, with the aim of prioritising the buildings within the public rental pool in the forthcoming steps to be applied to them.

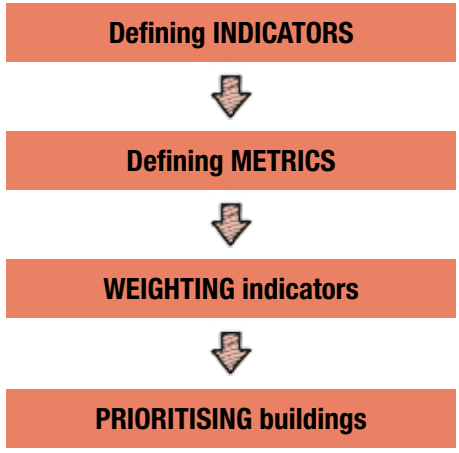
The following tasks have been involved in the definition of the ZERO Plana dashboard:

1.- **Definition of indicators,** whereby they respond to the needs of the challenges posed.

2.- **Definition of criteria for measuring the indicators,** considering the availability of initial data, as well as the usefulness of the figures obtained as regards the strategic challenges outlined**.**

3.- **Weighting of the set of indicators** defined.

4.- **Prioritising the buildings** in the Plan ZERO Plana



The following provides a detail of the work undertaken within each task, as well as their results:

1.- Definition of indicators:

In order to guarantee the operational success of the measures in response to the strategic pillars established, the ZERO Plana dashboard's three challenges have been deployed in a battery of indicators for our rental housing blocks. These indicators have been defined with a view to prioritising the buildings regarding the future measures that need to be applied to them.

The indicators chosen include a building's physical features together with other social and management aspects, whereby they respond to the requirements of the Plan ZERO Plana's strategic challenges.

The definition of the indicators has considered the criteria followed in parallel studies to the Plan ZERO Plana, such as the Analysis of the Housing Pool, Energy Audits, the Catalogue of Solutions and the Classification of Buildings.

In addition, consideration has also been given to the conclusions reached by related prior experiences in research projects at local, national and European level.

The following are a few examples of a long list of prior projects on this topic:

- Analysis of the need for refurbishment measures for the housing stock in the Basque Autonomous Community.
- Analysis and diagnosis of the Coronación neighbourhood for its energy refurbishment.
- SmartEnCity – Towards Smart Zero CO2 Cities across Europe.
- Baseline Diagnostic Studies for the Selected Metropolitan Municipalities.

The tree of indicators organised according to the three challenges established is in turn focused on three different levels:

BUILDING

for CHALLENGE 1. Efficient Public Housing

HOMES

for CHALLENGE 2. The health and wellbeing of tenants

HOUSING POOL

for CHALLENGE 3. Advanced Management

Each challenge consists of three prioritisation parameters, which in turn are broken down into several key indicators made up of sundry sub-indicators, which need to be carefully calculated for each building.

The following table shows the indicator trees for each one of the Plan ZERO Plana's challenges:

CHALLENGE 1 AN EFFICIENT HOUSING POOL

CHALLENGE	PRIORITISATION PARAMETERS	INDICATORS	SUB-INDICTORS		
AN EFFICIENT HOUSING POOL EDUCING ENERGY CONSUMPTION	**ENERGY EFFICIENCY** The building's energy performance	(CEE)	A / B		
			C / D		
			E / F / G		
		CO_2 emissions (Decarbonising the housing pol)	Emissions < 14 kgCO2/m² year		
			15 kgCO2/m² year > emissions < 30 kgCO2/m² year		
			Emissions > 31 kgCO2/m² year		
		Heating	Heating consumption (energy invoiced)		18,35 kWh/m² year
					75,40 kWh/m² year
					163,43 kWh/m² year
			Utility	Type	Gas
					Electricity
				Type	Individual (Individual gas + electricity)
					Communal (Communal system + electricity)
				Domestic butane or kerosene systems (at household level.% homes//building)	
		Hot water	Energy consumption invoiced		Gas
					Electricity
	RENEWABLES AND SELF-CONSUMPTION Situation and potential of renewables	% Renewables production	30-70% renewables production		
			15-30 % renewables production		
			≤ 15 % renewables production		
		Capacity for installing renewables	Space		No
					Yes (Roof or Boiler-room)
			Solar exposure		No
					Yes
			Rents		No
					Yes
		Capacity for self-consumption	No (% households in work) (5 pm - midnight)		
			Yes (% unemployed elderly) (8 am- midnight)		
	MAINTENANCE AND REPAIR Building's state of repair	State of repair	Aesthetic faults		Lack of maintenance, poor image (dirt, peeling paint, wiring, redundant installations, etc.).
			Complaints about rental service		Deficiencies in communal areas (problems with doors, communal installations (lighting, lift, intercom, etc.) damage to finishes on floors, walls and ceilings).
			Risks in habitability		Issues of damp/leaks roof, façade or ground.
			Risks in health and safety		Thermal bridges and condensation on opaque cladding and fittings.
			Risks to people		Detachment of material from roof or façade.
		Operating costs (maintenance/ IPES/ expenditure)	€/Year preventive maintenance		
			€/Year preventive maintenance		
			€/Year fixed costs fuel + electricity		
		Community charge	€/Year		
		Dregree of Compliance Prevention Plan	≥ 50 %		
			≤ 50 %		

CHALLENGE 2: THE HEALTH AND WELLBEING OF TENANTS

CHALLENGE	PRIORITISATION PARAMETERS	INDICATORS	SUB-INDICATORS	
THE HEALTH AND WELLBEING OF TENANTS GUARANTEE HEALTHY AND COMFORTABLE HOMES	**ACCESSIBILITY** State of the building's accessibility	Degree of physical accessibility to building	Lift	Yes
				Yes, but inadequate
				No
			Accessible entrance	Yes
				No
			Accessible stairwells and landings	Yes
				No
		Degree of sensorial accessibility to building	Adapted lighting	Yes
				No
			Adapted signage	Yes
				No
		Provision of adapted homes	Yes	
			No	
	COMFORT AND WELLBEING Level of comport for tenants	Level of discomfort	Heating	Yes
				No
			Relative humidity	40 % - 60 %
				< 40 %
				> 60 %
			Indoor air quality	CO_2: average annual concentration ≤ 900 ppm
				CO_2: 900 ppm ≥ average annual concentration ≤ 1,600 ppm
				CO_2: average annual concentration > 1,600 ppm
			Temperature	17-22 ºC
				≤ 17 ºC
	VULNERABILITY AND ENERGY POVERTY social condition of tenants/occupants	Income	General system + ASAP rental programme + public housing	€ 25,000 - € 39,000
			Special system	€ 21,000 - € 25,000
			BIZIGUNE	≤ € 21,000
		Household profile /user profile/ profile of energy requirements	Housing assigned to another type of group	
			Couple without children	
			Single occupant ≤ 65 years (ETXEBIDE 70 years)	
			Couple with children > 25 years	
			Single parent with children > 25 years (separated, divorced., etc.)	
			Couple with children ≤ 25 years	
			Single parent with children ≤ 25 years (separated, divorced, etc.)	
			Single occupant > 65 years	
			Disabled occupant with reduced mobility or impairment (hearing or visual)	
		Coexistence	No conflict	0 conflictive neighbours/building
			Medium level of conflict	≥ 1 conflictive neighbour/building.
			High level of conflict	≥ 10 % conflictive neighbours/building
		Energy poverty	Use: consumption/demand	Basic Payment Scheme (RPB) < 50% (not used)
				50 < RPB < 100% (used little)
				RPB > 100% (used)

CHALLENGE 3: ADVANCED MANAGEMENT

CHALLENGE	PRIORITISATION PARAMETERS	INDICATORS	SUB-INDICATORS
ADVANCED MANAGEMENT INTEGRAL MANAGEMENT OF SOCIAL RENTAL	**ENERGY MANAGEMENT** Responsible use of energy	Energy Self-Management (AUGE)	Implementation AUGE ≥ 75%
			75% > Implementation AUGE > 25%
			Implementation AUGE < 25%
		Energy support (E-Lagun)	Customising and optimising energy supply contracts (% homes/buildings)
			Energy instruction and awareness schemes for users (changing habits —> consumptions)
	DIGITISATION Technological advancement and automation	Degree of BIM modelling / Digitisation of housing pool	≥ 75% buildings modelled
			25-75% buildings modelled
			≤ 25% buildings modelled
		CMMS/CRM/NAVISION	Implementation of property management platform
		Safety, security and control (Sensor system)	Implementation of measuring devices
	IMPACT Does our effort reach the user?	Impact on users	Impact of instruction schemes on trends in the use of energy and consumptions
			Impact on the improvement in comfort, habitability and accessibility of homes and buildings
			Impact of ZERO Plana measures on tenants' health.
			Overall level of satisfaction
			Savings prompted in consumptions
		Impact on ALOKABIDE	Investment over return
		Impact on Basque Government	Investment over return

2.- Definition of metrics for indicators

In step with the definition of the tree of indicators for each challenge in the Plan ZERO Plana, the criteria have been established for their measurement, considering the **availability of initial data,** as well as the usefulness of the resulting figures regarding the strategic challenges defined.

The consistency of the metrics is essential over time to ensure that the log databases are useful for **drawing conclusions** and the ensuing **decision-making**.

The dashboard has been designed for the long-term management of the housing pool, and therefore contains indicators for which data are currently available, as well as indicators for which the data will only become available in the near future.

The aim is to load the dashboard with information on the indicators that are currently available and **reinforce management accuracy** as the data on indicators steadily become available thanks to the process of the advanced management and digitisation of ALOKABIDE properties.

The following tables present the **criteria for measuring the indicators,** arranged according to each one of the three strategic challenges:

CHALLENGE 1: AN EFFICIENT HOUSING POOL

INDICATORS (+ SUB-INDICATORS)			DESCRIPTION	METRICS
ENERGY RATING (CEE)			This indicator reflects the building's overall situation in terms of energy efficiency. Until it is possible to measure all the other indicators on energy efficiency, this indicator will enable the buildings to be graded into three tiers from greater to lesser efficiency.	Energy Performance Certificate (EPC)
CO2 EMISSIONS (Decarbonising housing stock)			The figure for this indicator is provided by the building's EPC and assesses each building according to its emissions in three tiers from lower to higher emissions.	Energy Performance Certificate (EPC)
HEATING	Heating consumption (energy invoiced)		The energy invoiced for the use of heating will reveal household user habits, as well as the building's efficiency or inefficiency in terms of both its operating systems and its envelope.	Individual: summer gas bill. Communal: Estate Manager.
	Utility	Type	This Indicator will not be used for prioritising purposes. It will provide useful information for interpreting other indicators and for deciding upon the measures to be taken. It is measured at the level of housing unit and then the calculation is made of % housing units/building.	Building Inventory
		Type		Building Inventory
		Domestic Systems		
HOT WATER	Energy consumption invoiced		This Indicator will not be used for prioritising purposes. It will provide useful information for interpreting other indicators and for deciding upon the measures to be taken	IIndividual: summer gas bill. Communal: Estate Manager.
% PRODUCTION OF RENEWABLES			This indicator will support decision-making on the convenience or not of installing renewables on the building. The figure is calculated at building level and then the buildings are arranged in three tiers from greater to lesser production.	Maintenance company's logbook
CAPACITY FOR INSTALLING RENEWABLES	Space		This is a binary indicator. The result will indicate whether or not renewables can be installed on the building. It is calculated at building level and considers the space available both for deploying panels and for storage equipment.	Building reports -Mod. BIM
	Solar exposure		This is a binary indicator. The result will indicate whether or not renewables can be installed on the building. If the solar exposure is insufficient, the installation/investment is pointless.	Building reports -Mod. BIM
	Rents		This is a binary indicator. The result will indicate whether or not renewables can be installed on the building. If the neighbours living in the building do not have the funds to pay for the installation's maintenance, and furthermore they consume little in the building, the installation is pointless. A figure is obtained per housing unit and an average value is provided for the building.	Social department - ALOKABIDE
CAPACITY FOR SELF-CONSUMPTION	NO (% households in work) (5 pm to midnight)		According to the profile of the households in the building, a timetable is obtained for the use of the housing units that reveals their energy requirements. According to the relationship between these timetables and production times, a decision can be reached on whether or not to install renewables on the building. A figure is obtained per housing unit and an average value is provided for the building.	Social department - ALOKABIDE
	YES (% unemployed + elderly) (8 am to midnight)			

CHALLENGE 1: AN EFFICIENT HOUSING POOL (CONT.)

INDICATORS (+ SUB-INDICATORS)		DESCRIPTION	METRICS
STATE OF REPAIR	Aesthetic deficiencies	A building's state of the deficiencies repair will make it easier to prioritise measures, depending on the seriousness if the deficiencies it might have. At the same time, it will provide information on the type of measures to be undertaken. The buildings are assessed according to five tiers of state of repair in relation to the possible risks that each one of them entails and arranged in ascending order of importance. Option of accumulating factors: e.g., risk to persons personas + risk to habitability + complaints over rental service = 5+2+1 = 8.	Preventive maintenance inspections of buildings (IPEs) + profiling of stock (CAVIAR)
	Complaints over rental service		
	Risk to habitability		
	Risk to health and safety		
	Risk to people		
OPERATING COSTS (MAINTENANCE/ IPEs/ EXPENDITURE).	€/Year preventive maintenance	This indicator reflects the building costs for ALOKABIDE, broken down into expenditure on preventive maintenance and each building's expenses.	Preventive maintenance inspections of buildings (IPEs)
	€/Year corrective maintenance		
	€/Year fixed costs fuel + electricity		
HOUSING FEE.	€/Year	This indicator reflects the building costs for its occupants, measuring through housing fees (yearly figure). The amount for the entire building will be used, adding up the fees for each household.	Inventory of buildings
DEGREE OF COMPLIANCE PREVENTIVE PLAN	≥ 50 %	≥ 50% This indicator measures the extent to which ALOKABIDE has fulfilled the Preventive Plan for each building. The result will be used to assess the results of other indicators: e.g., the building's state of repair in relation to the preventive measures undertaken on it.	Preventive maintenance inspections of buildings (IPEs)
	≤ 50 %		

CHALLENGE 2: THE HEALTH AND WELLBEING OF TENANTS

INDICATORS (+ SUB-INDICATORS)		DESCRIPTION	METRICS
Degree of physical accessibility		The building's degree of physical accessibility is to be measured according to the criteria of the analysis chart drawn up by the URBE Project (focusing on lift, entrance and landings).	Preventive maintenance inspections of buildings (IPEs + URBE Projekta)
Degree of sensorial accessibility		The building's degree of sensorial accessibility is to be measured according to the indicators of the analysis chart drawn up by the URBE Project focusing on lighting and signage).	
Provision adapted housing units		The number of adapted housing units will be counted in each housing block by verifying compliance with the current Regulations o Current Regulations on Accessibility.	
LEVEL OF DISCOMFORT	Heating	This indicator will identify those housing units without a heating installation. This factor will lead to the prioritisation of actions and the definition of strategies. It is linked to the indicator " Utility"/Parameter: Energy Efficiency/ Challenge: The Environment". The homes considered will be those with a hot water and heating circuit, whether individual or communal. Those housing units with variable domestic heating systems will not be included.	Inventory of buildings
	Relative humidity	Relative humidity is essential for estimating the level of tenants' comfort. It will be measured via a sensor in the homes (living-room). This will provide an average (night/ day) of the figures obtained for November - December + another average will be calculated (day) for May-August. If the figures are above or below the specified thresholds, they will be considered unsuitable for reasons of both thermal wellbeing and health.	Sensor system
	Indoor air quality	CO2 It will be measured via a sensor in the homes (living-room). This will provide an average (night/day) of the figures obtained from January to December.	Sensor system
	Temperature	It will be measured via a sensor in the homes (living-room). This will provide an average (night/day) of the figures obtained for November - December + another average will be calculated (day) for July-August. Note: the whole year is NOT measured because the process is designed to identify extreme temperatures and not define the housing unit.	Sensor system
Income		Household income is used to determine the socioeconomic vulnerability of the homes in a building and, in turn, the % of such homes in the building. This indicator will help to determine the social vulnerability of the occupants of a housing unit and/or building. This factor will inform decision-making on the type of measures to be taken on the housing unit and/or building.	Etxebide – Register of applicants for housing
Household profile/user profile/ Profile of energy requirements		The type/profile of the occupants of each household, rated from lower to higher levels of vulnerability, will allow determining the different user profiles for the housing units, as well as their energy needs. This indicator will also help to define the degree of social vulnerability of the occupants of each housing unit and/or building, and thus prioritise measures and make decisions in relation to the measures to be taken on the housing unit and/or building. Option of accumulating factors: e.g., single occupant > 65 years old + reduced mobility or physical disability (hearing or visual) = 4 + 5 = 9.	Social department - ALOKABIDE
Coexistence		The degree of conflict in a building is based on the % of anti-social occupants. This factor will help to decide what actions to take at both management and technical level (solutions to be introduced). It will be measured according to the number of neighbours in arrears, number of complaints made in each building, number of acts of vandalism in the building, etc.	Social department -ALOKABIDE
Energy poverty		This indicator reflects whether or not the occupants use their heating This factor will help to identify those occupants with energy poverty, which will allow prioritising actions and defining strategies.	Ratio-RPB (real heating consumption (bills))/ CEE heating demand

CHALLENGE 3: ADVANCED MANAGEMENT

INDICATORS (+ SUB-INDICATORS)		DESCRIPTION	METRICS
Energy Self-Management (AUGE)		Assessment and monitoring of the number of housing units with an AUGE system in place, as well as the identification of households in a situation of energy poverty and which require its implementation. The assessment will be conducted at the level of housing unit, with the ensuing percentage obtained for the housing pool as a whole.	ALOKABIDE database
ENERGY SUPPORT (E-Lagun)	ACustomisation and finetuning of energy supply contracts (% housing units/buildings)	Once tenants' consumptions have been assessed, through the data on indicators collected in the challenge "An Efficient Housing Pool" and the "Energy Efficiency" parameter, within this indicator, an evaluation will be made of the % of housing units/ buildings in which the electricity supply contract is or is not adequate. This evaluation is designed for potentially taking overall optimisation steps.	Data gathered from indicators for the parameter "Energy Efficiency" encompassed within the challenge "An Efficient Housing Pool"
	Instruction and awareness schemes for energy users	An assessment will be made of the degree of progress of instruction and awareness schemes held according to the established Plan.	ALOKABIDE
BIM MODELLING DEGREE / DIGITISATION OF HOUSING POOL		A count will be taken of the % of buildings in the housing pool managed by ALOKABIDE that have been modelled with an evaluation of this measure's degree of progress in three groups.	ALOKABIDE
CMMS/CRM/NAVISION		This will involve gauging the degree of progress in the implementation of the Property Management Platform.	ALOKABIDE
SECURITY AND SUPERVISION CONTROL (Sensorial)		This will involve gauging the degree of progress in the implementation of the measurement devices based on the percentage of buildings.	ALOKABIDE
IMPACT ON TENANTS		A measurement will be made of the instruction schemes involving guidelines on the use of energy ad consumptions, impact on improving the habitability and accessibility of housing units and buildings, the impact of ZERO Plana measures on occupants' health, the degree of overall satisfaction and the saving achieved in consumption. The measurements will be taken on a specific and regular basis at different stages of the implementation of the Plan ZERO Flat.	ALOKABIDE. The impacts will be measured via different means (occupant surveys, sensor system, consumptions, etc.)
IMPACT ON ALOKABIDE		A measure of the investment over return both in economic terms and regarding the impacts on occupants, as stated in the preceding indicator.	ALOKABIDE
IMPACT ON BASQUE GOVERNMENT		A measure of the investment over return.	ALOKABIDE

3.- Weighting of the set of indicators defined

The next step has involved weighting the indicators defined.

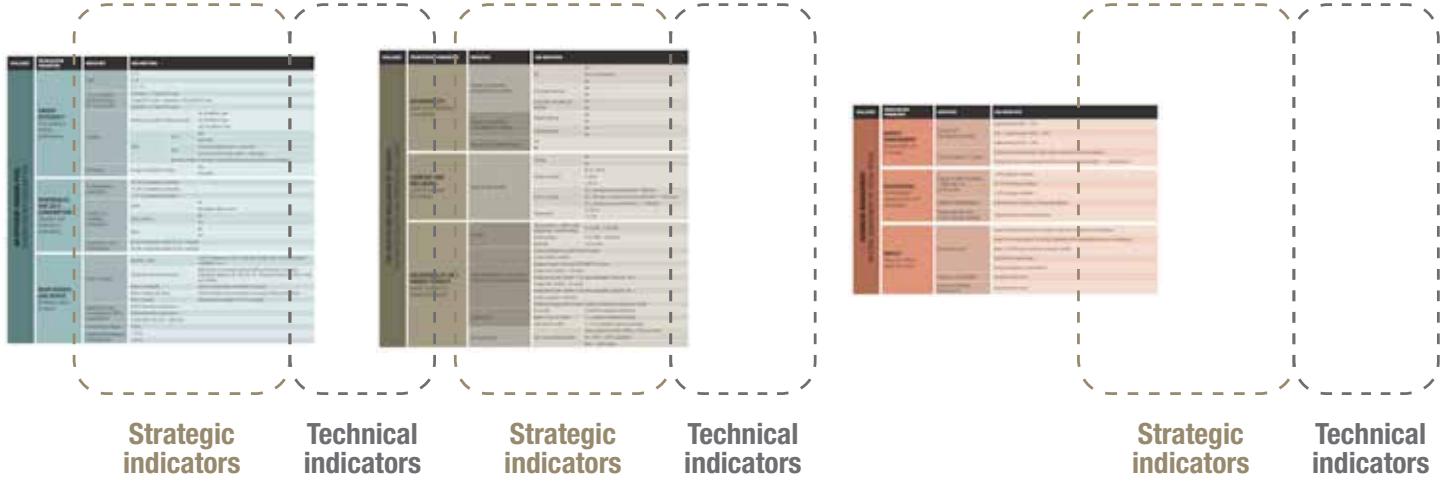
The method used for this weighting is based on the **Budget Allocation Process (BAP)** (*ref.: https://www.oecd.org/els/soc/handbookonconstructingcompositeindicatorsmethodologyanduserguide.htm*), whereby **experts in the field distribute a series of points** in the proposed set of indicators, depending on how much they contribute to the goals in question.

Firstly, it should be noted that the Plan ZERO Plana indicators are divided into two groups.

The so-called challenges, prioritisation parameters and indicators are considered STRATEGIC INDICATORS. In turn, the so-called sub-indicators are considered TECHNICAL INDICATORS.

The weighting has therefore been organised according to the following scheme:

- **Strategic indicators:**
  - Challenges
  - Prioritisation parameters
  - Indicators
- **Technical indicators:**
  - Sub-indicators



As far as the group of experts is concerned, the **strategic indicators** have been fully weighted by the **specialists in the field at ALOKABIDE** together with **experts from the different organisations that make up the ZERO Plana Steering Committee.** The **technical indicators** have been weighted by **specialists in the matter at the Tecnalia Applied Research Centre.**

Weighting strategic indicators:

Each expert has been given a portfolio of 10 points to be distributed across the three challenges in question. In addition, 10 points have been provided for each group of strategic challenges. Finally, 10 points have been made available for each group of indicators.

This means that each expert not only arranges the indicators in descending order of importance according to the goals, but also defines the difference in importance between them.

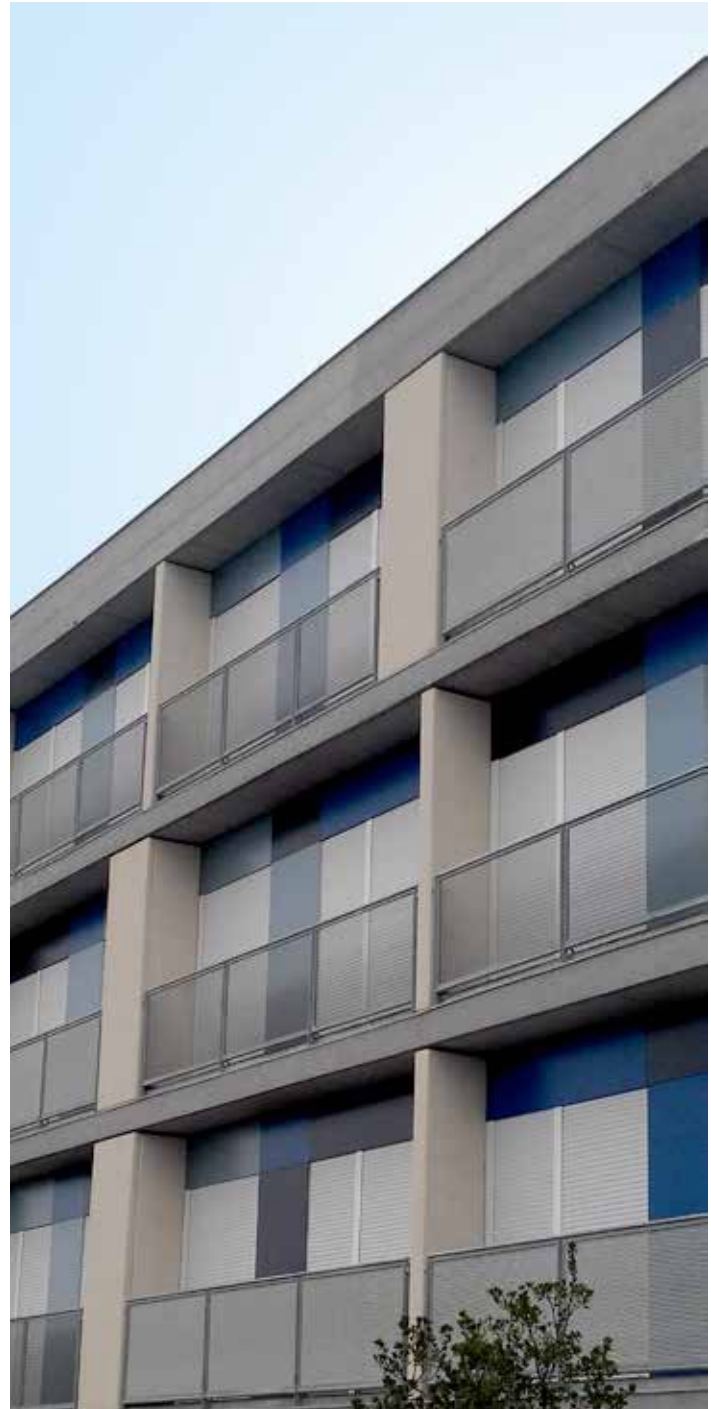
Once the weightings have been made by all the experts, the average figures have been calculated in order to obtain the final weighting for each value.

This procedure has provided a final weight for each challenge, prioritisation parameter, and each indicator.

Weighting technical indicators:

The same method has been used for the technical indicators, although they have been weighted by a single agency with expertise in the fields of energy, building and the social sciences.

This process has produced a weighting for each sub- indicator.



CHALLENGE	Weighting	PRIORTISATION PARAMETERS	Weighting	INDICATORS	Weighting
AN EFFICIENT HOUSING POOL. REDUCING ENERGY CONSUMPTION.	2.9	**ENERGY EFFICIENCY.** Building's energy performance.	4.2	Energy rating (CEE)	2.7
				CO2 emissions (Decarbonising the pool)	1.9
				Heating	3.2
				Hot water	2.2
		RENEWABLES AND SELF-CONSUMPTION. Situation and potential of renewables.	2.6	% Renewables production	3.0
				Capacity for installing renewables	4.1
				Capacity for self-consumption	2.9
		MAINTENANCE AND REPAIR. Building's condition.	3.3	State of repair	2.9
				Operating costs (maintenance / IPEs/expenses)	2.3
				Housing fee	2.4
				Degree of compliance with preventive plan	2.4

CHALLENGE	Weighting	PRIORTISATION PARAMETERS	Weighting	INDICATORS	Weighting
THE HEALTH AND WELLBEING OF OCCUPANTS. GUARANTEE HEALTHY AND COMFORTABLE HOMES.	3.9	**ACCESSIBILITY.** Situation regarding the building's accessibility.	2.8	Building's degree of physical accessibility	4.7
				Building's degree of sensorial accessibility	2.6
				Provision of adapted housing units	2.7
		COMFORT AND WELLBEING. Occupants' level of comfort.	3.6	Level of discomfort	3.6
		VULNERABILITY AND ENERGY POVERTY. Social situation of occupants/neighbours	3.6	Income	2.3
				Household profile/user profile/ profile of energy needs	2.2
				Coexistence	1.5
				Energy poverty	4.0

CHALLENGE	Weighting	PRIORTISATION PARAMETERS	Weighting	INDICATORS	Weighting
ADVANCED MANAGEMENT. INTEGRAL MANAGEMENT OF SOCIAL RENTAL.	3.2	**ENERGY MANAGEMENT.** Responsible use of energy.	3.6	Energy Self-Management (AUGE)	-
				Energy support (E-Lagun)	-
		DIGITISATION. Technological advancement and automation.	3.3	Degree of BIM modelling / Digitising the housing pool	-
				CMMS/CRM/NAVISION	-
				Security and control (Sensor system)	-
		IMPACT. Does our effort impact on user?	3.1	Impact on occupants	-
					-
				Impact on ALOKABIDE	-
				Impact on Basque Government	-

It should be noted that the indicators of the challenges 1, Efficiency of the housing pool, and 2, The health and wellbeing of tenants, focus on **prioritising the buildings in the housing pool** managed by ALOKABIDE. However, the indicators for challenge 3, Advanced Management, will not be used for prioritising the building, as they involve actions and measures for the housing pool as a whole.

8.2. Refurbishment Strategy

The Plan ZERO Plana refurbishment strategy simply involves the **implementation of the measures analysed in VOLUME II** on the stock of public buildings managed by ALOKABIDE, with a view to **achieving its goals in terms of efficiency, health and management** to improve their conditions in matters of the environment, wellbeing and satisfaction of tenants.

This strategy has been deployed with **a thirty-year horizon** with the overarching aim being to **decarbonise the public rental housing pool,** reducing atmospheric emissions to zero.

The implementation of a reasonably feasible strategy requires deciding **which solutions need to be applied to each building, how they are going to be implemented and how much they will cost.** The different lines of research prompted by the Plan ZERO Plana have therefore analysed and identified the measures to be adopted in each case.

Definition of measures

As already stated in VOLUME II, Catalogue of Solutions, the sundry challenges the Plan ZERO Plana faces are reflected in the steps to be taken, whereby **each challenge requires a series of measures.**

Each one of these has been analysed and budgeted for in order to gain a macro view of the project's scope and dimensions.

The suitability of their application to each building needs to be analysed in every case through **proximity and precision studies** that qualify and quantify each measure.

The following table lists all the individual steps to be taken:

Nº	CHALLENGE	TASK CODE	TASK	UNIT	COST PER HOUSING UNIT/BUILDING
1	CHALLENGE1 - ENVIRONMENT	ME01	Opaque enclosure- injected chamber	m² opaque façade	€ 28 / m²
2	CHALLENGE1 - ENVIRONMENT	ME02	Opaque enclosure- outside insulation of façade	m² opaque façade	€ 116 - 125 / m²
3	CHALLENGE1 - ENVIRONMENT	ME03	Opaque enclosure- roof insulation	m² roof	€ 84 - 100 / m²
4	CHALLENGE1 - ENVIRONMENT	ME04	Opaque enclosure- insulation of lower concrete structure	m² lower concrete structure	€ 40 / m²
5	CHALLENGE1 - ENVIRONMENT	ME05	Cavities	Number of cavities	€ 1,250 /cavity
6	CHALLENGE1 - ENVIRONMENT	ME06	Ventilation	Number of housing units	€ 7,000 / unit
7	CHALLENGE1 - ENVIRONMENT	ME07	Buildings with communal installations	Boiler output	€ 50 / kW
7	CHALLENGE1 - ENVIRONMENT	ME07	Buildings with individual installations	Number of housing units	€ 2,300 / unit
8	CHALLENGE1 - ENVIRONMENT	ME08	Renewable energies - thermal solar panels	Number of housing units	€ 2,000 / unit
9	CHALLENGE1 - ENVIRONMENT	ME09	Renewable energies – heat pump – Buildings with communal installations	HP output	€ 350 / kW
9	CHALLENGE1 - ENVIRONMENT	ME09	Renewable energies – heat pump – Buildings with individual installations	Number of housing units	€ 8,500 / unit
10	CHALLENGE1 - ENVIRONMENT	ME10	Renewable energies – photovoltaic panels	Peak power installed	€ 50 / kWp
11	CHALLENGE1 - ENVIRONMENT	CO01	Base thermal envelope	Building	Tbc
12	CHALLENGE1 - ENVIRONMENT	CO02	Complete thermal envelope	Building	Tbc

DESCRIPTION
Addition of thermal insulation onto the façade by injection into the air chamber from inside each housing unit with EPS foam, with thermal conductivity of 0.036 W/m·K.
Addition of thermal insulation onto the façade through the installation of a standard EIFS, using EPS panels with a conductivity of 0.037 W/m·K as thermal insulation. The proposed insulating thickness is 10 cm in coastal areas and 14 cm inland.
Addition of thermal insulation on the building's roof through the installation of XP panels with a thermal conductivity of 0.034 W/m·K and 16 cm thickness. A distinction is made between flat and sloping roofs.
Addition of thermal insulation on the building's lower concrete structure through the installation of mineral wool panels with a thermal conductivity of 0.04 W/m·K and 8 cm thickness.
Replacement of the exterior fittings on the building with others of better quality, with double-glazing, low emissions, thermal transmittance of 1.3 W/m²·K and solar factor of 0.7; frames with a thermal transmittance of 1.8 W/m²·K.
Installation of a dual-flow and star-shaped controlled mechanical ventilation system with a heat recovery unit with a seasonal performance of 85%.
Replacement of installations for the production of heating and hot water (generally natural gas boilers) with others of better quality, such as natural gas condensation boilers with a seasonal performance of 98%.
Replacement of installations for the production of heating and hot water (generally natural gas boilers) with others of better quality, such as natural gas condensation boilers with a seasonal performance of 98%.
Installation of a thermal solar energy system for providing 50% support for the production of hot water. In the event that such an installation already exists, the aim will be to improve it to reach 50% of the production of hot water.
Installation of an aerothermal heat pump for covering 50% of the building's hot water needs.
Installation of an aerothermal heat pump in each housing unit for covering 50% of the unit's hot water needs.
Installation of a power generation system for self-consumption using photovoltaic panels on the building's roof.
Combination of the measures of injection into the air chamber with the renewal of exterior fixtures.
Combination of the measures of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures.

Nº	CHALLENGE	TASK CODE	TASK	UNIT	COST PER HOUSING UNIT/BUILDING
13	CHALLENGE1 - ENVIRONMENT	C003	Complete thermal envelope and ventilation	Building	Tbc
14	CHALLENGE1 - ENVIRONMENT	C004	Installations and renewable solar thermal	Building	Tbc
15	CHALLENGE1 - ENVIRONMENT	C005	Installations and renewables heat pump	Building	Tbc
16	CHALLENGE1 - ENVIRONMENT	C006	Installations, ventilation, solar thermal	Building	Tbc
17	CHALLENGE1 - ENVIRONMENT	C007	Installations, ventilation, HP and photovoltaic panels	Building	Tbc
18	CHALLENGE1 - ENVIRONMENT	C008	Base thermal envelope and installations	Building	Tbc
19	CHALLENGE1 - ENVIRONMENT	C009	Complete thermal envelope and installations	Building	Tbc
20	CHALLENGE1 - ENVIRONMENT	C010	Complete thermal envelope, ventilation, and installations	Building	Tbc
21	CHALLENGE1 - ENVIRONMENT	C011	Complete thermal envelope, installations, and solar thermal	Building	Tbc
22	CHALLENGE1 - ENVIRONMENT	C012	Complete thermal envelope and heat pump	Building	Tbc
23	CHALLENGE1 - ENVIRONMENT	C013	Complete thermal envelope, heat pump and PV	Building	Tbc

DESCRIPTION
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. This includes the controlled mechanical ventilation system.
Renewal of the building's installations for producing heating and hot water and assembly or improvement of the solar thermal installation.
Renewal of the building's installations for producing heating and hot water and addition of an aerothermal heat pump for covering 50% of hot water needs.
Renewal of the building's installations for producing heating and hot water and assembly or improvement of the solar thermal installation. This includes the controlled mechanical ventilation system.
Renewal of the building's installations for producing heating and hot water and addition of an aerothermal heat pump for covering 50% of hot water needs. This includes the controlled mechanical ventilation system and the installation of power generation for self-consumption using photovoltaic panels on the roof.
Combination of the measure for injection in the air chamber with the replacement of exterior fixtures, together with the renewal of the building's installations for producing heating and hot water.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures, together with the renewal of the building's installations for producing heating and hot water.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. This includes the controlled mechanical ventilation system and the renewal of the building's installations for producing heating and hot water.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures, together with the renewal of the building's installations for producing heating and hot water, and the installation or improvement of a solar thermal energy system.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. The aim is to install a heat pump for covering heating and hot water needs.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. The aim is to install a heat pump for covering heating and hot water needs. This includes the installation of power generation for self-consumption using photovoltaic panels on the roof.

Nº	CHALLENGE	DESCRIPTION	TASK	UNIT	COST PER HOUSING Unit/Building
24	CHALLENGE1 - ENVIRONMENT	CO14	Complete thermal envelope, ventilation, installations and solar thermal	Building	Tbc
25	CHALLENGE1 - ENVIRONMENT	CO15	Complete thermal envelope, ventilation and heat pump	Building	Tbc
26	CHALLENGE1 - ENVIRONMENT	CO16	Complete thermal envelope, ventilation, heat pump and PV	Building	Tbc
27	CHALLENGE2 - HEALTH AND WELLBEING	S1	Attending to cases of energy poverty	Annual budget	150,000.00
28	CHALLENGE2 - HEALTH AND WELLBEING	S2	Campaigns for replacing baths with showers	Housing Unit	1,500.00
29	CHALLENGE2 - HEALTH AND WELLBEING	S3	E-Lagun Project	1,000 housing units (pilot project)	30,000.00
30	CHALLENGE2 - HEALTH AND WELLBEING	S4	Insulating the inside of housing units (cases)	Housing Unit	7,500
31	CHALLENGE2 - HEALTH AND WELLBEING	S5	Installation of ventilation equipment (cases)	Housing Unit	4,800
32	CHALLENGE2 - HEALTH AND WELLBEING	S6	Installation of lift	Entrance	25,000.00

DESCRIPTION
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. This includes the controlled mechanical ventilation system and the renewal of the building's installations for producing heating and hot water. A further proposal involves the installation or improvement of a solar thermal energy system.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. This includes the controlled mechanical ventilation system. The aim is to install a heat pump for covering heating and hot water needs.
Combination of the measure of renewing the façade using an EIFS, insulating the roof and lower concrete structure, together with the replacement of exterior fixtures. This includes the controlled mechanical ventilation system. The aim is to install a heat pump for covering heating and hot water needs. A further aim involves the installation of power generation using photovoltaic panels on the roof.
Project for guaranteeing comfort in those homes in which there is a proven case of energy poverty. This applies to those buildings with communal central heating systems, in step with the implementation of energy self-management systems to be remotely operated by ALOKABIDE.
Following the undertaking of task S19, which is designed to detect people with disabilities among its tenants, the aim is to replace the bath with a shower in those situations of justified need.
Energy support project for tenants, focusing on the following goals: 1. Verify and assess the procedures and tools used to **lay the foundations for an integral energy management model.** 2. Evaluate the **support processes for streamlining tenants' consumptions, costs and habits,** especially regarding the use of electricity. 3. Define and validate the model and method for subsequently developing innovative or advanced management solutions in energy consumption, and especially regarding the use of electricity. 4. **Reduce consumers' energy costs regarding the use of electricity,** briefing them on its management and empowering them in energy matters and providing the groundwork for a source of knowledge that will lead to the development of more efficient management and social policies. 5. Address the forms of market representation for both tenants and occupants of the public rental housing pool and for new registrations.
The agenda includes the interior treatment of outer walls in those housing units in those cases in which only a minority ownership is in public hands and it is not possible to undertake overall measures on the envelope.
A further step involves the treatment of indoor air using individual devices in those cases in which only a minority ownership is in public hands and it is not possible to undertake overall measures on the envelope.
Consideration has been given to **the installation of lifts in those buildings without one**; however, this measure will have a reduced impact because the majority of the buildings in the public rental housing pool already have a lift; in some cases, their installation is not feasible and the measures taken need to be of a preventive nature at the allocation stage. Nevertheless, the budgetary impact in the few buildings without a lift is significant and needs to be taken into account.

Nº	CHALLENGE	TASK CODE	TASK	UNIT	COST PER HOUSING Unit/Building
33	CHALLENGE2 - HEALTH AND WELLBEING	S7	Adapting lift accesses	Lift	12,000.00
34	CHALLENGE2 - HEALTH AND WELLBEING	S8	Adapting lift cabins	Lift	3,000.00
35	CHALLENGE2 - HEALTH AND WELLBEING	S9	Non-slip linoleum flooring	Lift	3,000.00
36	CHALLENGE2 - HEALTH AND WELLBEING	S10	Making entrances accessible	Entrance	2,500.00
37	CHALLENGE2 - HEALTH AND WELLBEING	S11	Minor brickwork on flooring	Case	2,500.00
38	CHALLENGE2 - HEALTH AND WELLBEING	S12	Double handrail on ramp or stairway	Stairway	1,000.00
39	CHALLENGE2 - HEALTH AND WELLBEING	S13	Sensor-operated lighting fixture in entrance, and on landings and stairwells	Entrance	2,500.00
40	CHALLENGE2 - HEALTH AND WELLBEING	S14	Accessible intercom	Entrance	1,500.00
41	CHALLENGE2 - HEALTH AND WELLBEING	S15	Accessible and signalled mechanisms	Unit.	25

DESCRIPTION
ADAPTING LIFT ACCESS by providing and installing partially transparent doors for the cabin and each floor in order to guarantee a free passage area of 90 cm. This includes dismounting and removing the existing doors and auxiliary work.
ADAPTING LIFT CABIN through the provision and installation of accessible button panels (endorsed plate, suitably endorsed button size, suitably endorsed high-relief and braille numbers, sonic warning of mechanism operation, message of beginning and end of run, etc.), provision and installation of laminated mirror and continuous handrail around the inside, etc. as per the current regulations in matters of accessibility and safe use. This includes dismounting and removing existing components and auxiliary work.
PROVISION AND INSTALLATION OF NON-SLIP LINOLEUM FLOORING of 2.5 mm thickness in a roll, with anti-static treatment, laid on the existing floor, attached with contact glue. It includes the preparation of the existing flooring and labour.
The plan involves **widespread measures in entrance halls to ensure uniform conditions of accessibility throughout the public stock,** regardless of where the building is located or its age. These measures will involve above all the access carpentry -facilitating the opening of doors and guaranteeing a minimum width of passage – and flooring in the entrance -designed to avoid falls through the general use of a non-slip finish throughout the pool -. In more specific cases, the plan is also to adopt measures that affect steps around the entrance, removing stairs, improving ramps and installing handrails.
SMALL ALTERATIONS ON FLOORING to remove occasional steps, overly steep slopes or uneven paving in the access to the entrance, or in the passage between the building's entrance and the access to the lift. This includes the breaking up and removal of minor features and conditioning according to the preceding terms.
PROVISION AND INSTALLATION OF A DOUBLE HANDRAIL ON RAMPS AND STEPS located in the immediate vicinity of the entrance or actually inside it, using metal tubing of 50 mm in diameter and up to 16 m in length, mounted on both sides and as per the regulations. This includes labour.
PROVISION AND INSTALLATION OF SENSOR-OPERATED LIGHTING FIXTURES IN THE ENTRANCE, ON LANDINGS AND IN THE STAIRWELL, consisting of a fixture that has yet to be decided, fitted with an LED bulb of a power that has to be decided and two sensors for automatic and timed operation, with twilight and movement detection, providing light levels as per current regulations on accessibility and safe use. The estimate is for an average figure of 20 units by adding the units to be installed outside (1 unit), in the entrance (4 units.), on the landing on each floor (5 units, one for each of the five floors -on average-) and in the stairwell (10 units, 2 on each of the five floors -on average-). This includes the dismantling and removal of the existing fixtures, as well as labour.
PROVISION AND INSTALLATION OF AN ACCESSIBLE VIDEO INTERCOM, adapting the outside panel to the terms and conditions required by current regulations on accessibility to the buttons in lift cabins, and catering for the needs arising from functional, visual, hearing and/or cognitive requirements. This includes, as appropriate, the dismantling and removal of existing interior units plus the provision and supply of the new ones. This also includes labour.
PROVISION AND INSTALLATION OF DOORBELLS, mounted on the outside wall, fitted with a visible pilot light and symbols in high relief. This includes the removal of existing mechanisms.

Nº	CHALLENGE	TASK CODE	TASK	UNIT	COST PER HOUSING Unit/Building
42	CHALLENGE2 - HEALTH AND WELLBEING	S16	Building signage - signs	Building	900
43	CHALLENGE2 - HEALTH AND WELLBEING	S17	Feature detectable with a cane under a overhang in the entrance	Building	1.000,00
44	CHALLENGE2 - HEALTH AND WELLBEING	S18	Adapting a housing unit	Housing Unit	18.000,00
45	CHALLENGE2 - HEALTH AND WELLBEING	S19	Campaign for identifying accessibility profiles	Public Stock	Tbc
46	CHALLENGE3 - ADVANCED PUBLIC MANAGEMENT	GE01	Digitisation of public stock	No. housing units (Building)	Four ratios as per type: €35, €60, €90 and €110
47	CHALLENGE3 - ADVANCED PUBLIC MANAGEMENT	GE02	Implementation of AUGE system	No. housing units (Building)	€ 1.600
48	CHALLENGE3 - ADVANCED PUBLIC MANAGEMENT	GE03	Instruction of tenants in the use of energy installation	No. housing units	€ 97,38
49	CHALLENGE3 - ADVANCED PUBLIC MANAGEMENT	GE04	Implementation of technology (CMMS)	Public stock	€ 375.000
50	CHALLENGE3 - ADVANCED PUBLIC MANAGEMENT	GE05	Shared self-consumption- communal areas	Public stock	Tbc

DESCRIPTION
The plan is to organise mass campaigns to furnish the buildings in the stock according to at least **the minimal uniform requirements in terms of sensorial accessibility,** thereby facilitating identification, orientation and communication in those environments deemed to be of greatest importance. On the one hand, the aim is to deploy sensors and automate the lighting installations in communal areas; this measure, together with the replacement of existing bulbs with very low-consumption ones, is in keeping with the main objective of the Plan ZERO Flat. On the other hand, the aim is to replace the outside panels on the video intercom system, adapting them to the conditions required by current regulations on accessibility to the buttons in lift cabins, which may constitute a challenge for manufacturers in the sector. Furthermore, and in relation to signage, rather than the indiscriminate signing of all the fittings and fixtures, the idea is to focus on those areas and accesses that occupants and visitors interact with. Finally, the plan is to replace the doorbells on homes.
PROVISION AND INSTALLATION ON A FIXTURE DETECTABLE WITH A CANE UNDER A PROJECTION IN THE ENTRANCE, such as groups of post boxes or areas with a headroom of less than 220 cm under the stairs, consisting of pieces of metal carpentry as yet to be decided, flower pots, etc.
ADAPTING HOUSING UNITS for tenants with disabilities affecting their movement, functions, vision or hearing. Measures to be determined depending on the diagnosis on the accessibility to the units. Once task S19 has been completed for detecting the presence of disabled people among occupants, the aim is to adapt the homes in those cases of justified need.
Within the scope of the management of a public service, it has been found that ALOKABIDE does not have any data or information related to tenants' functional diversity that allow introducing specific steps for improvements that match their true circumstances, both from the perspective of customer service (face-to-face meetings in the offices, phone calls, physical visits to the home by providers and technical services, etc.), as well as regarding the allocation of housing units and other related services. With a view to responding to this need, the aim is to conduct a **MASS CAMPAIGN FOR THE IDENTIFICATION OF TENANTS** in terms of functional diversity to discover the profile of the occupants of the public rental housing pool, as well as analysing a housing unit's suitability for each situation. These analyses will be supported by a diagnosis of the accessibility in the urban surroundings where the building is located, as this is information that could sway decision-making. This mass campaign will focus on all those buildings managed by ALOKABIDE with a view to enhancing its service and obtaining the relevant data management tools for analysis, strategy planning and the implementation of measures.
Process of digitisation and BIM modelling of the buildings in the public rental housing pool.
Implementation of the AUGE self-management system in all the buildings with communal installations for the production of heating and hot water.
Mass campaign for the instruction of tenants in the use of energy and the installations in their building. Annual ratio.
Process for the introduction of a software platform for managing the public stock in terms of maintenance and repair of properties, integration of BIM models and all the other applications for rental management. Five-year ratio.
Analysis of the process for implementing self-consumption processes in communal areas.

Study of the proximity and precision of measures

The Plan ZERO Plana follows a macro-operating strategy for a public stock of considerable size, numbering 136 buildings. As analysed in the previous two volumes, the rolling out of a refurbishment strategy within the deadlines set for the editorial team has required conducting **estimate studies by types of housing** to identify their main requirements and consider improvement measures.

It stands to reason that the macro description the Plan ZERO Plana has made for a specific type of housing needs to be subject to **a detailed and specific analysis in each case,** involving each building, to identify any particular characteristics that may affect the success of each measure, including significant features, true state of the housing association, impact of the measures foreseen on the maintenance fee, etc.

This review, which is to be submitted prior to the drafting of the various projects, **will confirm the feasibility of the measures considered** in the Plan. This will have an impact on the communication and management strategy involving tenants and housing associations, informing the specific measures to be applied.

The aim of the **estimate and precision studies on refurbishment measures** is to justify the steps to be taken in each building, based on the options considered in the plan (materials, buildings solutions and active systems) for the different challenges, **taking into account the true circumstances of each building and housing association** (efficiency of envelopes, type of installations, use and maintenance, non-payments, ownership, impacts on housing fees, etc.); as well as considering other possible options, clearly presenting their advantages and disadvantages in order to reach decisions on a specific project.

This analysis will be based both on costs (initial, usage and maintenance) and on **environmental and energy implications**, thereby clearly explaining the impacts on consumptions and the environment.

The content of the studies to be performed on each building to be refurbished will be as follows:

Energy analysis

The aim is to review the results of the energy analysis of the representative types of housing (VOLUME I) and further examine the specific case of the building in question. This analysis is designed to **reveal the building's true state in terms of structure and energy.** The Special Plan on Energy Audits undertaken in VOLUME I of the ZERO Plana has included an energy analysis of 11 individual buildings that represent the whole of the public rental housing pool.

The method followed and the results obtained are shown in VOLUME I and they are to be applied to each building before launching the project stage.

True consumptions will be analysed, together with the performance of infrared thermography tests and studies on the airtightness of envelopes, blower-door tests, and a CEE review for a more accurate and detailed analysis of each building.

The energy analysis will consist of the following:

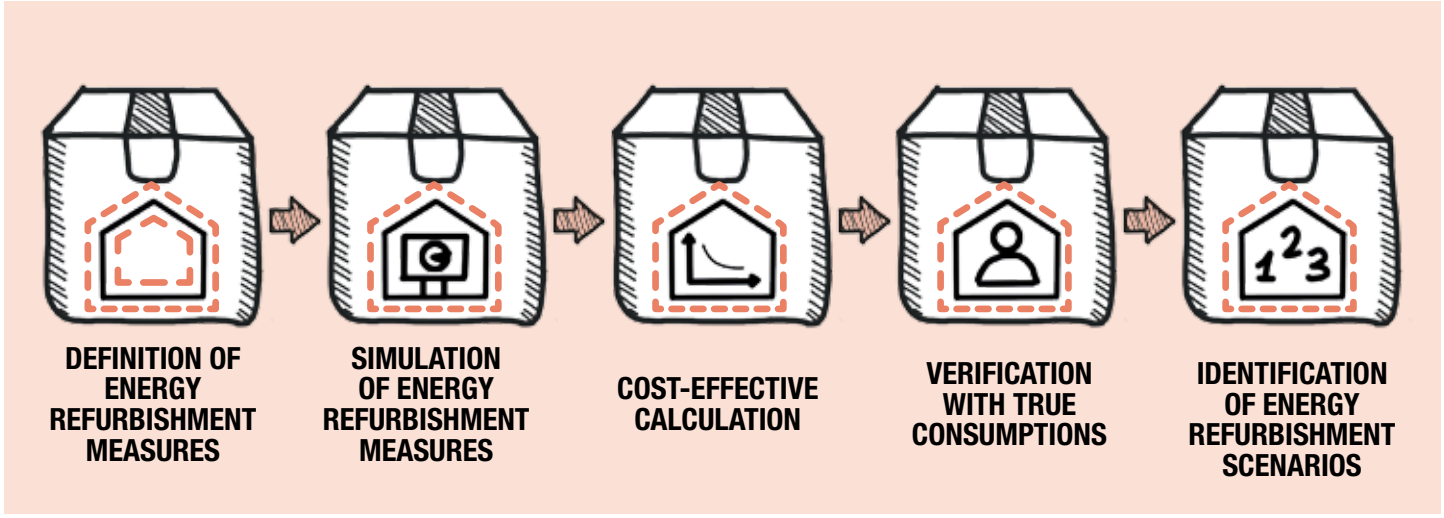
- **Compilation of documents.**
  - Task performance and completion project.
  - CEE.
  - Energy consumptions.

- **Analysis of energy consumptions.**
  - Consumption of energy in homes (kWh).
  - Consumption of heating in homes (kWh).
  - Consumption of hot water in homes (kWh or volume and temperature of hot water).
  - Consumption of fuel in installations producing heating and hot water (kWh or fuel flows).
  - Consumption of energy by air-conditioning installations (kWh).
  - Consumption of renewable energies (kWh).
  - Production of renewable energies (kWh).

- **In-situ inspections of buildings.**
  - State of repair, composition of cladding and cavities.
  - State of repair and main characteristics of the technical systems for producing heating and hot water: boiler output and performance, storage volume of hot water, state of insulation of the distribution network, etc.
  - State of repair and characteristics of renewable energy systems: condition of solar panels, state of insulation, condition of photovoltaic panels, etc.
- **Blower door tests**
- **Infrared thermography inspection**

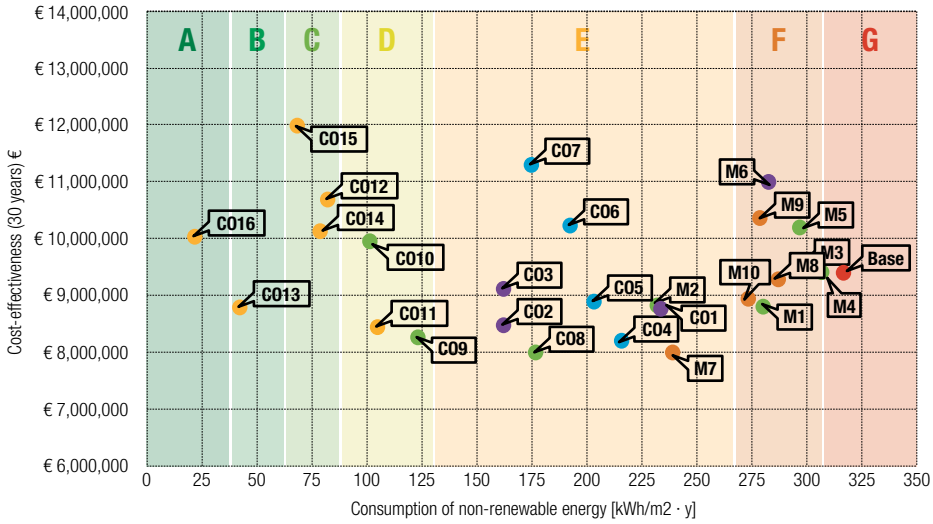
Cost-effectiveness of solutions

The energy refurbishment measures estimated in VOLUME II are verified using **the cost-effective method** to extend this process to include true consumptions, the study of fixed costs for this user profile, and the analysis of refurbishment scenarios.

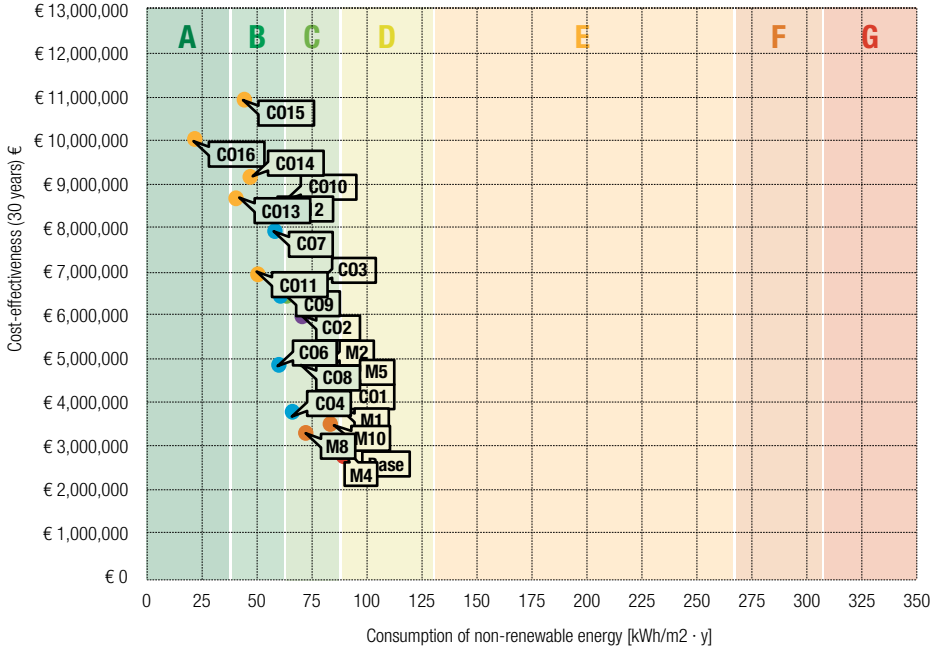


- **Definition of energy refurbishment measures:** this involves a review of the energy refurbishment measures among those proposed by the Basque Science, Technology and Innovation Plan (PCTI) (based on the experience of the project's members) that are going to be analysed, with a view to improving a building's **energy efficiency** (bettering the thermal cladding, improving the building's technical systems, installation of renewable energies, etc.), and any other energy refurbishment measures that can be included in the analysis.
- **Simulation of energy refurbishment measures:** the calculation of the energy saved by the refurbishment measures involves official energy certification software programs (CE3x, HULC, etc.).
- **Cost-effective calculation:** the cost-effective method is widely used in the world for **discovering the long-term economic performance** of energy refurbishment measures, as it takes into account the initial investment, replacement costs, the costs of energy and maintenance costs throughout the entire calculation period. This method reveals the most viable energy refurbishment measures, in both financial terms and regarding energy throughout a building's useful life-cycle. This method is described in the UNE 15459 standard on the energy efficiency of buildings.
- **Verification with true energy consumptions:** as explained earlier, the **results of the cost-effective method need to be checked** against the building's true energy consumptions, as the user profile of the tenants of this kind of housing means that the true energy consumption is very different to the CEE's theoretical energy consumption used in the cost-effective calculation.

Result of the cost-effective analysis



Result of the cost-effective analysis with true consumptions



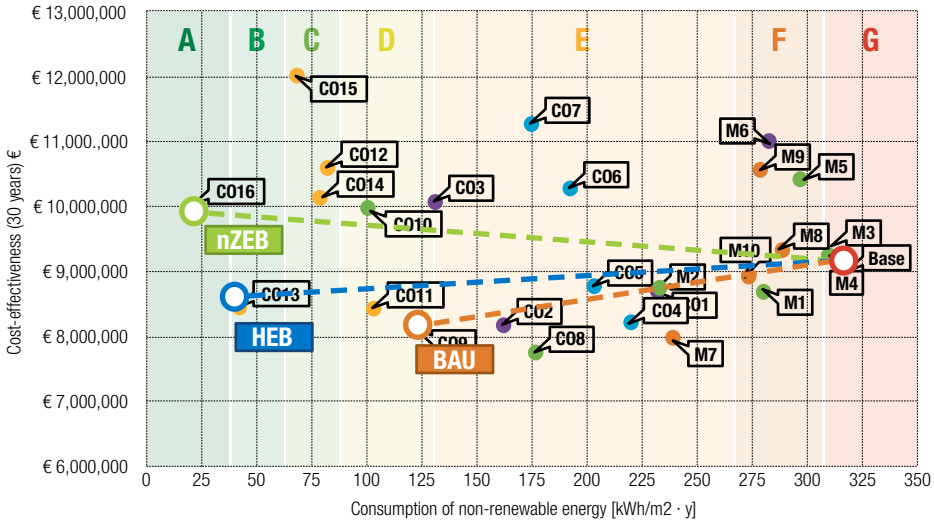
This analysis can be used to finetune the choice of energy refurbishment measures, above all when selecting basic ones; that is, those close to the basic building

The refurbishment measures for achieving a Nearly Zero-Energy Building (nZEB) should not be affected by this analysis, as the criterion has been established whereby as the building's energy efficiency improves, **the figures for true and theoretical consumptions will converge.**

Energy refurbishment scenarios

Once a definition has been made of the energy refurbishment measures that effectively lead to financial and energy saving for the buildings in question, **different energy refurbishment scenarios or alternatives** may be determined. In our case, there are three possible scenarios:

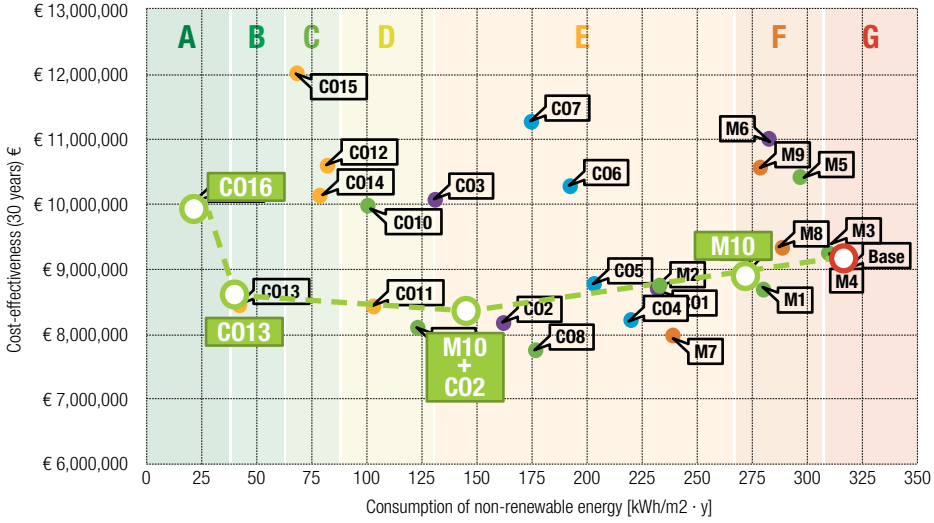
- **Business As Usual (BAU):** this involves a situation in which the best energy refurbishment measures are applied that lead to energy saving, but with no increase in cost at 30 years.
- **High Efficiency Building (HEB):** this involves a situation in which energy consumption is reduced to a minimum, albeit without any refurbishment measures inside the actual housing units that may considerably inconvenience the tenants, such as, for example, the installation of mechanical ventilation systems.
- **Nearly Zero-Energy Building (nZEB):** this is the situation with the greatest energy saving and decarbonisation.



This case involves the following refurbishment scenarios:

- **BAU:** CO9 refurbishment measure, which means the full replacement of the thermal envelope and the renewal of the technical heating and hot water systems.
- **HEB:** CO13 refurbishment measure, which means installing photovoltaic panels, the full replacement of the thermal envelope, and the replacement of existing technical systems by an aerothermal heat pump arrangement**.**
- **nZEB:** CO16 refurbishment measure, which is the same as CO13, but includes the installation of mechanical ventilation systems in each housing unit.

Stages of energy refurbishment



Once the three scenarios have been established, **the next step involves selecting the most appropriate one** for the building in question. This specific building will probably require the choice of the nZEB scenario in order to reduce its energy consumption as far as possible. Nevertheless, other scenarios might be enough for some buildings with a view to achieving the energy saving and decarbonisation goals considered in the PCTI 2018 – 2020 Plan ZERO Flat.

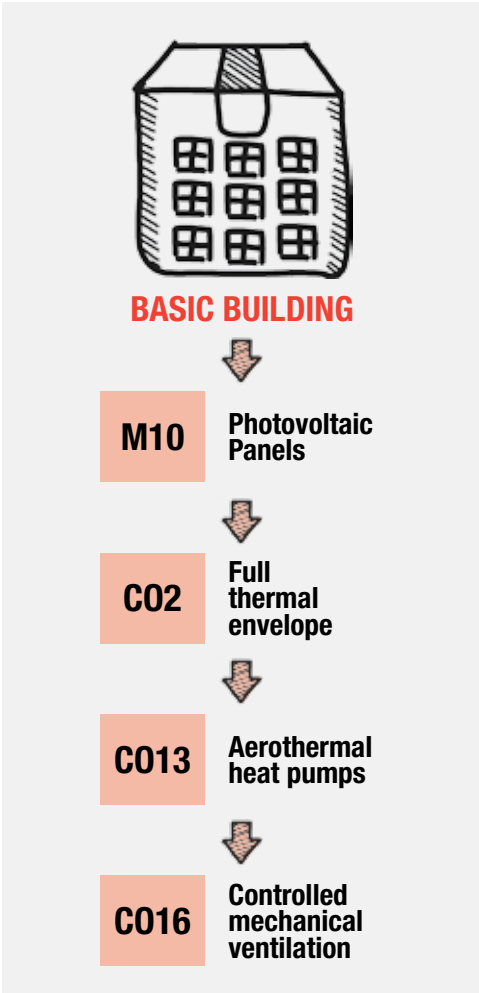
Once the most convenient scenario of the three has been chosen, the next step involves **identifying its component energy refurbishment stages.** Pursuant to the new CTE-DB-HE 2019, a nZEB will be all those that comply with the energy cap for new-builds. In other words, the primary energy consumption from non-renewable sources does not exceed 32 kWh/ m2·y in climate zone C in winter and 38 kWh/m2·y in climate zone D in winter.

Achieving this scenario of reducing primary energy consumption and the target of decarbonisation requires staggering the work to be undertaken. For example, in the case of the building in question, the scenario of nZEB has been chosen, which means applying the CO16 refurbishment measure: installation of photovoltaic panels, the full replacement of the thermal envelope, the replacement of current technical systems by an aerothermal heat pump, and installation of a mechanical ventilation system in each one of the housing units.

The graph shows the refurbishment stages involving each one of the refurbishment tasks.

The following diagram shows **the refurbishment steps for the work** involved in the nZEB scenario selected in this case.

Diagram of energy refurbishment stages



Analysis of housing association

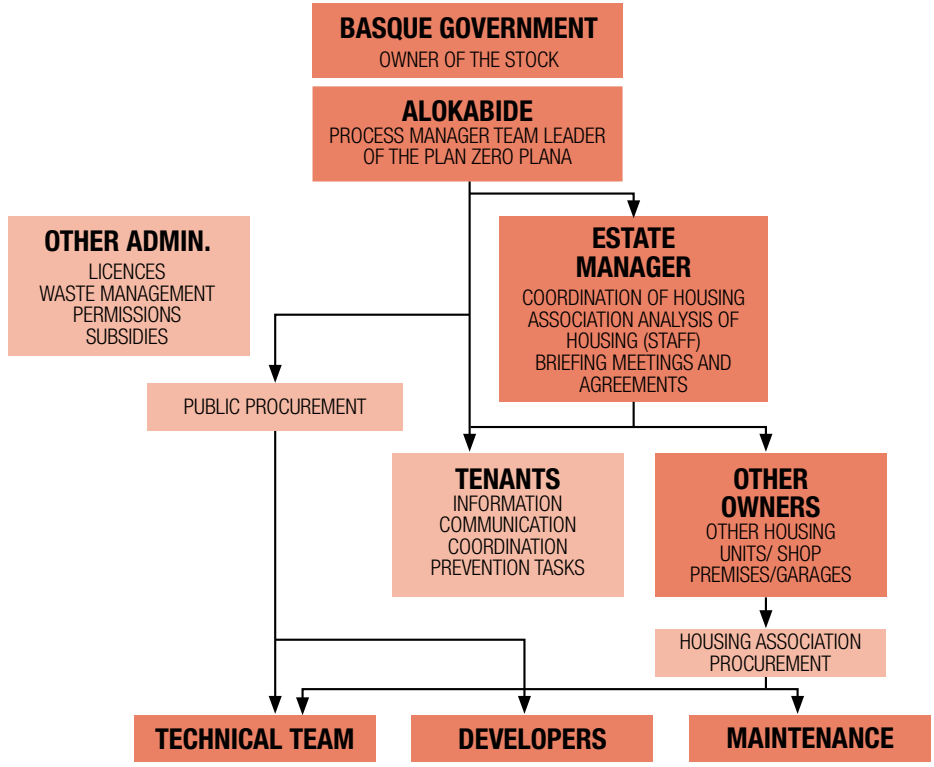
This is addressed under the section “Housing associations”.

An **audit of the housing association** is used to gain a first-hand understanding of each building’s legal and financial circumstances, identifying key points for the success of each project.

- **Stakeholders and coordinating team**

The implementation of the Plan ZERO Plana calls for the **coordination of the various** stakeholders, as well as the staff supervising the process and monitoring and overseeing the development of the different projects.

The following chart list the stakeholders involved:



Depending on the housing association involved, the refurbishment process will follow one of two paths (public or private tender) and will require the involvement of one or more stakeholders.

Coordinating team

The development of the Plan ZERO Plana constitutes an unprecedented challenge both for the Basque Department of Housing and for the public company ALOKABIDE, which manages the renting of those housing units and buildings; which means that the design of an organisational structure for undertaking such a project should **contemplate the different risk and opportunity parameters singled out in this Plan,** to ensure it proceeds efficiently and fulfils the Department's remit.

For the time being, the public company **ALOKABIDE does not undertake any building development work,** and its operations are circumscribed to the **management of the housing pool's preventive maintenance,** arranging each building's maintenance contracts and the supervision and management of complaints made by tenants and the occupants of housing units and buildings; this means that observing the Plan's dictates will require the creation of a team that is capable of heading this project.

The analysis of the team's organisational requirements for the pursuit of the refurbishment work provided for in the Plan ZERO Plana **has taken into account successful projects of a similar nature,** such as those of Sestaoberri, Nasuvinsa, and Visesa, among others, in which coordination and data-gathering are the main pillars.

Sestaoberri: under the auspices of the EU-GUGLE project, a company called Sestaoberri has undertaken the energy refurbishment of several buildings in Sestao, in the province of Bizkaia. This has involved the creation of a team made up of three social workers, one person with the profile of estate manager, an architect and a surveyor.

Nasuvinsa: the public company Nasuvinsa has a robust department that provides a comprehensive service in consultancy, advisory for individuals and housing associations, private developers and councils and local authorities in projects for refurbishing homes and buildings, as well as large-scale neighbourhood initiatives. Energy refurbishment schemes have also been undertaken under the auspices of sundry EU projects, with the aim being to extend them to other districts in the city of Pamplona-Iruña and towns throughout the province of Navarre. Each one of these projects organised by Nasuvinsa, through its Refurbishment department, involves the opening of a neighbourhood office for attending to and managing all the contingencies that may arise during the project. The process has involved setting up a team consisting of a social worker, one person with the profile of estate manager, an architect and two surveyors.

Visesa: within the framework of the SmartEnCity EU project, an ambitious plan is being rolled out that focuses on energy efficiency, sustainable mobility, and the use of information and communication technologies -ICTs- in an integrated manner, with the aim being to improve people's quality of life. Its development has involved forming a team consisting of four architects, two surveyors, an engineer, an economist, a solicitor, two social workers and an admin worker, with the additional support of estate managers for liaising with housing associations.

All three of these success stories have involved the creation of a **multidisciplinary team for managing the different tasks** involved in the refurbishment work carried out for housing associations. There now follows an overview of the different duties and tasks required by each profile in the team:

Technical sphere: coordination of the actual work projects, from the design (call for ideas) through to their completion; tenders, monitoring of timelines and costs; liaising with the building company and housing association. Social clauses for the work.

Social sphere: social investigation of the housing association in terms of its income and management of the climate in the building. Attending to specific circumstances of exposure and support. Coordination of social clauses.

Housing sphere: legal processing of the work in terms of ownership, housing association meetings, default payments, payment of arrears, etc.

The Plan ZERO Plana involves certain specific features that set it apart from previous projects that need to be considered:

Geographical dispersion of existing buildings.

The Plan extends to the whole of the Basque Autonomous Community, and the scattered locations of the buildings managed by ALOKABIDE means that the approach taken by the success stories analysed here in terms of the opening of "neighbourhood offices" for providing an "over-the-counter" service for the tenants affected by the refurbishment work is difficult to do. The proposed solution involves a "mobile neighbourhood office" that can be displaced to the different buildings under management.

Continuity over time.

The Plan's operating ambit consists of 133 buildings, with the work being planned with a long-term horizon, with the annual performance of 3-4 tasks depending on their scope. This means that the team involved will need to be maintained over time and have a structured organisation.

The project's social nature.

One of ALOKABIDE's mainstays as a public rental manager is the social support it provides for tenants, overseeing different areas such as coexistence, acting on behalf of the housing association, and energy poverty, among others. As in the aforementioned case of Sestaoberri, the presence of social workers will be both important and necessary for marshalling the project.

Public leadership.

It has already been stated during the description of the project for defining the Refurbishment Plan that the varied nature of the ownership of the various properties is one of the crucial aspects affecting the project's success. There needs to be seamless coordination between the institutions involved for the provision of incentives for the owners "affected" by the refurbishment work that is headed by the Department in those buildings of mixed ownership.

Housing associations

The critical point of the operational deployment of the Plan ZERO Plana for the Energy and Accessibility Refurbishment of the Public Rental Housing Pool involves **coordination and management with the different housing associations** in place in buildings governed by the Plan.

Before undertaking any refurbishment work, it is important to know the types of housing associations that exist in the public rental housing pool, with a view in each case to designing a strategy for refurbishing the buildings according to the scope set out in the Plan ZERO Flat.

The following table therefore identifies the different types of housing associations, including a number of initial considerations on the process to be undertaken:

TYPES OF HOUSING ASSOCIATIONS IN THE PUBLIC RENTAL HOUSING POOL

Type	TYPE OF ASSOCIATION		DDON / Statutes / Association rules	Feasibility of legal agreement as per the provisions of the" Ley de Propiedad Horizontal (LPH)" on housing associations
	Housing	Premises		
1.Basque Government (BG)	100 % BG	100% BG	SOLE OWNER	
2. BG + Unbound Premises	100 % BG	**Private Ownership**	**LPH** - Premises not bound by statutes. Communal features or expenses correspond solely to housing - BG pays for 100% of the work	**- Briefing Meeting with Premises** A housing association meeting should be held with the owners of these premises to brief them on the upcoming work.
3. BG + Bound Premises Exempt	100 % BG	**Private Ownership**	**LPH** - Premises bound to pay their share of expenses. Exempt.	**- Agreement with Premises. Unanimity. There are 2 possibilities:** 1. Premises carry out the work at their own expense. Exempt. 2. Task undertaken in premises. Non-exempt. There is no issue in exempting premises from paying for the work, provided that this is justified by the reasoning of material justice (whereby to achieve this level of efficiency/accessibility they need to pay for the cost of the work in the premises). This agreement may be contested in the courts within a period of one year. **NOTE:** assistance will be required for drafting the minutes of the meeting to ensure its clearly reflects the reasons for exempting the premises.
4. BG + Private owners + Unbound Premises	BG + **Private Owners**	**Private Ownership**	**LPH** - Premises not bound by the statutes. Communal features or costs applicable solely to housing.	**- Briefing Meeting with Premises** A housing association meeting should be held with the owners of these premises to brief them on the upcoming work. It should also be noted that these kinds of housing association rules have been considered in breach of binding law (given that in principle the envelope is a communal feature) and an occupant could file for its **annulment.**
5. BG + Private owners + Bound premises Exempt	BG + **Private Owners**	**Private Ownership**	**LPH** - Premises bound to pay their share of costs. Exempt.	**- Agreement with premises. Unanimity.** Option 1: premises carry out the work at their own expense. Exempt. There is no issue in exempting premises from paying for the work, provided that this is justified by the reasoning of material justice (whereby to achieve this level of efficiency/accessibility they need to pay for the cost of the work in the premises). This agreement may be contested in the courts within a period of one year.
6. BG + Private owners + Bound premises Non-exempt	BG + **Private Owners**	**Private Ownership**	**LPH** - Premises bound to pay their share of costs. Exempt.	**- Agreement with premises. Unanimity.** Option 2: carry out work in the premises. Non-exempt. The decision is made not to exempt the premises, and all the owners pay according to their share of the building.

Negotiation Housing Associations	TENDER	Observations on TAXATION
	LCSP ALOKABIDE	BG arranges the work in a building of which it is the sole owner.
	LCSP ALOKABIDE	BG arranges work on the majority part of the building of which it is the sole owner, and according to the statutes it is to pay for in fullZ
	LCSP ALOKABIDE	**Agreement of the housing association meeting** whereby BG pays in full for a job whose cost according to the share of the building should be lower, attaching a report detailing the exclusive benefit for the housing units owned by the BG and exonerating the premises according to the reasoning of material justice.
The negotiation with private owners is to be addressed in two ways: * Access to public grants (either through ordinary calls or direct subsidies) * Support from ALOKABIDE in the tender and financing arrangements **Note:** there may be personal situations involving private owners that require exceptional decisions-agreements.	HOUSING ASSOCIATION Supported by ALOKABIDE	The housing association arranges the work. BG pays according to the % of its share in the building.
Given that any exemption of the premises increases the costs for the owners of the housing units, it seems that the project's viability depends on the negotiations held with the private owners. This involves the same two ways: * Access to public grants (either through ordinary calls or direct subsidies) * Support from ALOKABIDE in the tender and financing arrangements	HOUSING ASSOCIATION Supported by ALOKABIDE	**Agreement of the housing association meeting** whereby BG pays more than it should according to its share of the building, attaching a report detailing the exclusive benefit for the housing units owned by the BG and exonerating the premises according to the reasoning of material justice.
The negotiation with private owners is to be addressed in two ways: * Access to public grants (either through ordinary calls or direct subsidies) * Support from ALOKABIDE in the tender and financing arrangements **Note:** it is likely that the agreement on the undertaking of the work, if there is one, will not be reached unanimously. Even though it may not be contested, this may lead to problems because of the extra fees charged, possible non-payments, owners disagreeing, etc.	HOUSING ASSOCIATION Supported by ALOKABIDE	**The housing association arranges the work. BG pays according to the % of its share in the building.**

Note 1: in the same way as the types of housing association are identified, an analysis of the strategy will be conducted in each case regarding the scope of each undertaking, as installing a lift is clearly not the same as an energy refurbishment involving the full replacement of the envelope, etc.

Note 2: in the case of those housing associations that do not involve 100% public ownership, the meeting's mandatory quorum will need to be upheld in order to reach valid agreements:

1.- Façade, Roof: 50% (mandatory in the event of the building's maintenance and repair. The approval in this case is not whether or not to carry out the work, but instead a double majority is required on choosing the contractor for the job and any additional housing fees).

2. Envelope: 60% (with the presumed vote of those absent).

3. Accessibility and Lift: installation of lift with access to ground floor, removal of architectural barriers…50% (double majority).

4. Renewable Energies, Telecommunications Service: 33% (those voting against do not incur any costs, including maintenance and repair).

Analysis of a housing association

As noted previously, a prior step to any work on the buildings will involve a mandatory **audit on each housing association** in order to gain a first-hand understanding of its legal and financial situation, identifying key points for the project's success.

The estate manager is to conduct a prior study to gather the following legal data and documents:

- Deed of creation, no. owners, participation shares in the building,% public ownership, location of % public ownership in terms of floors.
- Articles of the Housing Association.
- The Building's Rules and Regulations.
- Current situation regarding the association's constitution, organisation, leadership, administration, minutes, tax number.
- Quorum required for adopting agreements.

The following information is also to be gathered regarding the tasks and work to be undertaken:

- Cost of the work.
- The housing association's bank balance. Capacity for savings. Whether any jobs have been undertaken recently.
- Subsidies and grants.
- Financing.

Financial/social situation, regarding both tenants and all the other owners of the properties.

Action plan

The housing association's actions will depend on the **type of association** involved. The most complicated case of coordination will involve those associations in which public ownership is less than 100%, and support should therefore be provided for the association by the coordinating at ALOKABIDE, together with the nominated Estate Manager.

The **proximity study** will determine the housing association's precise status will provide a more accurate detail of the steps to be taken in each case.

1.- Disclosure of the project to the housing association.

The process of informing the housing association on the refurbishment project will require specifying the true costs as far as possible with a view to avoiding continuous modifications and additions as the work progresses.

To do so, and in step with the analysis of the housing association, calls will be made for technical and building quotations, as well as for public liability insurance, drawing up a comparative table of the different estimates submitted.

The following table summarises the sundry items involved in the work's end costs:

TOTAL WORK BUDGET	%
Cost of the contract (includes General Costs and Business Profit)	100.00 %
Building licence	5.00 %
Occupation of public throughfare	1.80 %
Technical project	3.50 %
Site management	2.00 %
Surveyor's fees	2.00 %
Health & Safety coordination	1.00 %
Developer's civil liability insurance	0.15 %
Administration	1.00 %
Electricity, water, others	0.10 %
Unforeseen expenses (10 %)	10.00 %
% to be added to cost of contract	**26.55 %**

Note:

- The developer's quotation should specify the total amount, including VAT and business profit.
- As regards the calculation of the occupation of the public throughfare, the developer is to be asked to provide the approximate time and square metres, with a review of council bylaws and the calculation of an estimation.
- The technical supervisor will decide upon the need to draw up a Technical Project, with the Architect and Surveyor, as well as the Coordination of Health & Safety…
- It is advisable to arrange a Civil Liability Insurance as project developer. The cost depends on the duration and cost of the work.
- The comparative table should include the developer's terms and conditions, including settlement, on the one hand, whereby depending on the method of payment the housing association can discuss and approve the necessary extra fees, and on the other hand, because the builder's terms and conditions may affect the choice made.
- Conditions: start of work, duration of work (months), method of payment, penalties, withholdings, guarantees…

2.- Refurbishment proposal submitted to the Housing Association AGM.

Following the analysis of the housing association's financial and legal situation, **the coordinating team and the Estate Manager will draft a proposal for the Housing Association's AGM.** A sound plan of action and an informed decision will require a thorough and accurate analysis.

Any shortcomings in the analysis will lead to a deficient agreement, false expectations, mistrust, etc., which may in turn prompt non-payments, wasted time, an increase in costs, and general discontent.

3. Agreements of the AGM.

In certain cases, the meeting will only involve briefing the premises and co-owners that are not involved in paying for the work. Nevertheless, each meeting is to follow these steps:

- Call. Agenda and notification.
- Inform and present documents, expected costs, required quorum, fees, subsidies, possible financing, election and powers of Chair.
- Voting and agreements.
- Drafting of minutes.
- Notification of minutes.

Several meetings will be required, which will provide for briefing, reaching agreements, and progressing toward the final agreement. The following are the agreements that need to be reached during the meetings before the work can start:

- Approval of the hiring of Mr/Ms XX as Estate Manager.
- Approval of the hiring of Mr/Ms. XX as Technical Supervisor.
- Appointment of Chair and Work Committee.
- Approval of the drafting of the Project or Technical Report.
- Approval of the work.
- Approval of the contracting of the Building Company XX.
- Approval of the arrangement of Civil Liability Insurance as Developer.

- Approval of the total budget for the work.
- Approval of the share paid for by the BG. If the BG pays a higher percentage than it is legally obligated, it would be advisable to record both circumstances in the minutes: the legal amount and the amount the BK is expected to effectively settle.
- Approval of the extra association fees to be paid for the work. The number of extra payments and their due dates.
- Approval of the application for subsidies XX.
- Approval of financing (if requested).
- Authorise and empower the Chair Mr/Ms XX, the deputy Chair Mr/Ms XX, the Estate Manager Mr/Ms, to open a bank account, sign the contract with the building company, receive and make payments, procurement, apply for and request licences, and, in short, proceed as necessary for the normal undertaking of the work.

4.- Preparing the work.

- Application for Building Licence, occupation of public throughfare.
- Hiring of technical staff: site management, Health & Safety coordination.
- Contracting of building company.
- Arrangement of Civil Liability Insurance by the Housing Association as developer.
- Opening of bank account, as appropriate.
- Paperwork on Subsidies.
- Paperwork on bank loan, as appropriate.
- Contracts on electricity, water… for the work.

5.- Action / Monitoring.

- Regular meetings attended by stakeholders: housing association, estate manager, technical staff and building company for reporting on the work's progress, pooling of any issues, approving matters for the work's normal undertaking, and approving the payment of invoices or certifications.
- Regular meetings between technical staff and building company.
- Meetings between estate manager and housing association.
- Answering queries of co-owners.
- Receiving complaints and relaying them to the corresponding party involved.
- Collections/Payments.

6.- Ending the work and closing the file.

- Close and presentation of financial statements.
- Settlements with each co-owner.
- Settlements with premises and/or other owners that may be entitled to tax rebates.
- Settlements with local council (licence, occupation of throughfare…).
- Paperwork on end of project. Subsidies and grants.
- Cancel developer's civil liability insurance.
- Close bank account.
- Paperwork on technical authorisation and inspection…

Prior to closure, it is advisable to hold a housing association meeting to explain the accounts, income and expenditure, settlements, and reach agreements on the approval of accounts, settlements, and the completion of the work.

8.3. Basic Inventory of the Plan ZERO Plana Housing Pool

Order of priority

As already stated in VOLUME I of the Plan ZERO Plana, the Basque Government's public rental housing pool consists of 234 buildings, with different percentages of ownership, and containing around 7,700 housing units. This stock is growing from one year to the next with the inclusion of buildings and units under public rental management.

The Plan ZERO Plana focuses on 136 buildings in which the tandem ALOKABIDE/BG is responsible for supervising and overseeing their repair and maintenance, either as the sole owner or as the majority owner. Furthermore, the legal status of each one of these housing associations will inform the manner in which each one of the measures provided for in the ZERO Plana will be undertaken, with this aspect being addressed in the corresponding section.

Of the 234 buildings managed by ALOKABIDE:

Public ownership (homes)

100 % → **97 Buildings**

>50 % → **39 Buildings**

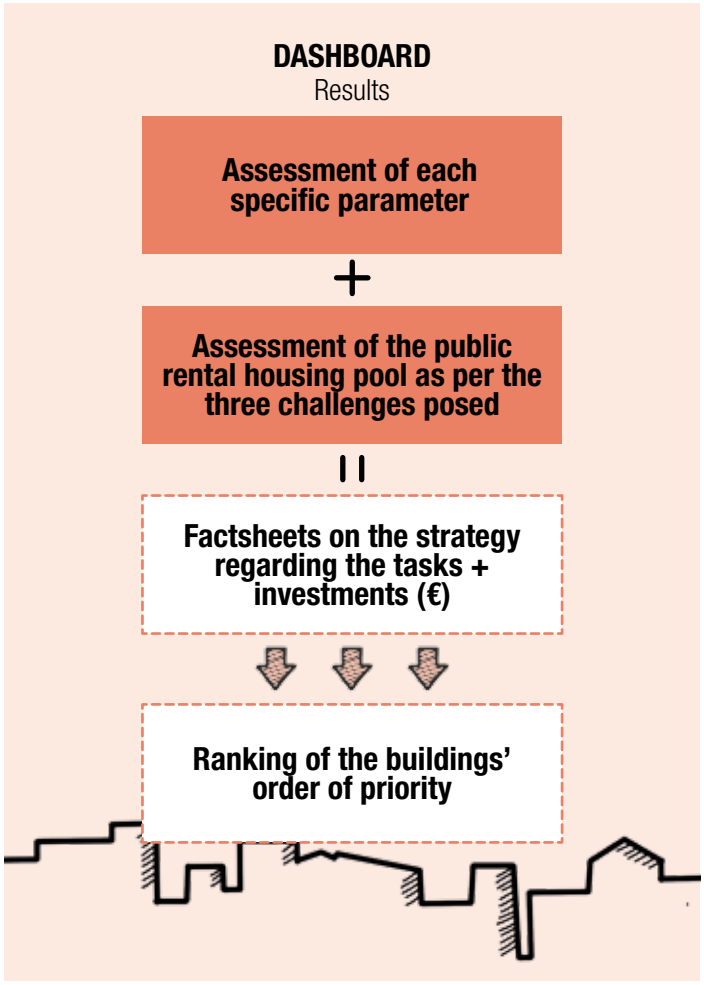
→ **136 (7,408 homes)**

These 136 buildings have been checked and characterised during the drafting of the Plan in order to gain a real snapshot of their state of repair, conditions of accessibility and energy efficiency, with a view to organizing the measures to be taken.

Once the indicators and their weighting have been established for each one of them as per the previous section, the next step has been to assess and rate the **136 buildings according to the data** available at the time of writing of this report. This has provided the following ranking of buildings by order of priority regarding their refurbishment requirements, according to the challenges set out in the Plan ZERO Flat. This shows how the buildings corresponding to building types C and D are the priority, followed in time by B, and finally by type A.

Insofar as it is possible to base the order of priority on more indicators, it will become more accurate, rendering it possible to obtain a definite order even among buildings with similar characteristics

There now follows a ranking of the 136 buildings:



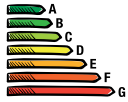
The 136 buildings in the public stock involved in the Plan ZERO Plana, as analysed in VOLUME I, have been described in the following factsheets, including the results of the identification of tasks described in VOLUME II.

The following factsheets set out the **basic characteristics of the buildings** involved in the Plan ZERO Plana and the tasks scheduled in each challenge.

GOB-G045	ITURRITXO 9	GIPUZKOA	1950	FAMILIA D	3i-DE	F	5	5	5	5	3	4
GOB-A010	AMURRIO 21 Bañuetaibar	ARABA	1994	FAMILIA D	3i-DE	E	5	5	4	5	4	4
GOB-B017	TRAPAGARAN 13 Bº ZABALLA	BIZKAIA	2001	FAMILIA C	3i-C	G	5	5	4	4	4	4
GOB-B034	BASAURI 80 Solabarria	BIZKAIA	1995	FAMILIA C	3i-C	E	5	5	4	4	3	4
GOB-B018	PLENTZIA 20 Casa cuartel	BIZKAIA	2002	FAMILIA C	3i-C	F	5	5	4	3	3	4
GOB-B024	SESTAO 35 C/CHAVARRI	BIZKAIA	2000	FAMILIA C	3i-C	E	5	5	4	3	3	4
ALO-A002	228 IBAIONDO	ARABA	2004	FAMILIA C	3i-DE	E	5	5	4	2	3	4
ALO-B002	MINA DEL MORRO 84	BIZKAIA	2005	FAMILIA C		E	5	5	4	2	3	4
ALO-B007	ARBOLEDA 15	BIZKAIA	2007	FAMILIA C	3i-C	E	5	5	5	1	1	4
GOB-B014	PORTUGALETE 66 Repelega (58)	BIZKAIA	1998	FAMILIA D	3i-C	E	5	4	4	5	5	4
GOB-A014	VITORIA 99 Sierra Urbasa-Roncesvalles	ARABA	1999	FAMILIA C	3i-DE	E	5	4	4	3	3	4
GOB-B044	ARRIGORRIAGA 73 LA PEÑA	BIZKAIA	2001	FAMILIA C	3i-C	E	5	4	4	3	3	4
GOB-G014	DONOSTIA 104 ATOTXA	GIPUZKOA	2002	FAMILIA C	3i-DE	E	5	4	4	3	3	4
GOB-B006	BERANGO 12 LANTZARTE	BIZKAIA	2004	FAMILIA C	3i-C	E	5	4	4	2	2	4
GOB-B059	REPELEGA 138 c/Federico García Lorca	BIZKAIA	2007	FAMILIA C	3i-DE	E	5	4	4	2	2	4
ALO-G008	ERRENTERIA 23	GIPUZKOA	2004	FAMILIA C	3c-DE	E	5	4	4	1	2	4
GOB-G006	IBARRA 37 PR-1 PARC 4 Y 5	GIPUZKOA	2009	FAMILIA C	3i-DE	E	5	4	4	1	1	4
GOB-B005	TXURDINAGA 32 Jesús Galíndez	BIZKAIA	2013	FAMILIA C	3i-C	E	5	4	2	1	1	4
GOB-G002	BERGARA 18 AREA 12 FASE 1	GIPUZKOA	2003	FAMILIA C	3c-DE	E	5	3	4	3	3	4
ALO-B003	OLABEAGA 11	BIZKAIA	2006	FAMILIA C	3i-C	E	5	3	4	2	3	4
GOB-B039	ZARATAMO 18 Arkotxa	BIZKAIA	1997	FAMILIA E	3i-C	E	5	2	5	5	5	4
GOB-B049	MUSKIZ 40 SAN JUAN PRCL-6	BIZKAIA	2006	FAMILIA C	3i-C	E	5	3	4	1	1	4
GOB-B002	BILBAO 58 Mina del Morro	BIZKAIA	2005	FAMILIA B	2i-C	D	4	5	4	1	1	4
GOB-G003	URRETXU 22 Nekolalde	GIPUZKOA	2005	FAMILIA C	3i-DE	E	5	2	4	2	4	4
GOB-G004	BEASAIN 24 Paseo Oria 14	GIPUZKOA	2000	FAMILIA B	2i-DE	D	4	4	4	3	3	4
GOB-B064	ELORRIO 15	BIZKAIA	2008	FAMILIA C	3c-C	E	5	3	1	1	1	4
GOB-B058	REPELEGA 97+2 c/Federico García Lorca - c/Unamuno	BIZKAIA	2007	FAMILIA B	2i-C	D	4	4	4	2	2	4
GOB-G008	LASARTE-ORIA 24 R-15	GIPUZKOA	2006	FAMILIA C	3i-DE	E	5	2	5	1	1	4
GOB-B003	BILBAO 140 Mina Morro S-2	BIZKAIA	2006	FAMILIA C	3i-C	E	5	2	4	1	1	4
GOB-G007	LASARTE-ORIA 18 R-15	GIPUZKOA	2006	FAMILIA C	3i-DE	E	5	2	4	1	1	4
GOB-A012	ABETXUKO 7 - Txarrakea	ARABA	1994	FAMILIA D	3i-DE	E	5	1	4	5	4	4
GOB-B001	BILBAO 57 Arangoiti	BIZKAIA	2004	FAMILIA B	2i-DE	D	4	4	4	1	1	4
GOB-B057	MINA DEL MORRO 84 c/Ortutxueta nº 2 al 14	BIZKAIA	2007	FAMILIA B	2i-C	D	4	4	4	1	1	4
GOB-A001	ABETXUKO 106	ARABA	2005	FAMILIA C	3i-DE	E	5	2	3	1	1	4
GOB-G001	ELGOIBAR 40 G. KRUTZALAEGI	GIPUZKOA	2003	FAMILIA C	3i-DE	E	5	1	4	3	3	4
GOB-G015	TOLOSA 12	GIPUZKOA	2007	FAMILIA B	2i-DE	C	4	3	5	1	1	4
ALO-G007	TOLOSA 16	GIPUZKOA	2009	FAMILIA C	3i-DE	G	5	1	4	1	1	4
GOB-A004	VITORIA 12 Correría	ARABA	2006	FAMILIA C	3i-DE	E	5	1	4	1	1	4
GOB-B010	AMOREBIETA 32 San Pedro	BIZKAIA	2004	FAMILIA C	3i-C	E	5	1	4	1	1	4
GOB-G021	ESKORIATZA 16 5.2 PAR.E-2	GIPUZKOA	2008	FAMILIA C	3i-DE	E	5	1	4	1	1	4
GOB-G023	ARETXABALETA 20 Bº Bedarretako San Migel	GIPUZKOA	2007	FAMILIA C	3i-DE	E	5	1	4	1	1	4
ALO-G004	ANDOAIN 60	GIPUZKOA	2005	FAMILIA B	2i-DE	D	4	3	4	1	1	4
ALO-G012	MUTRIKU 75	GIPUZKOA	2011	FAMILIA C	3c-DE	E	5	1	1	2	3	4
GOB-G31A	INTXAURRONDO 125 **ADAs**	GIPUZKOA	2011	FAMILIA B	3c-DE	E	5	1	2	1	1	4
GOB-A002	AMURRIO 24 Sector Resi IV	ARABA	1996	FAMILIA C	3i-DE	E	5	0	4	3	3	4
GOB-G017	EIBAR 23 Parc.C Ardanza	GIPUZKOA	2007	FAMILIA C	3i-DE	E	5	0	4	3	3	4
ALO-G002	HERNANI 48	GIPUZKOA	2005	FAMILIA B	2i-DE	D	4	2	4	3	3	4

ALO-A001.1
LAKUA 30 - ARABA

No. homes	**30**
No. public rental homes	**30**
Year built	**2003**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 768,000**
2	2	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 51,918**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,029**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: Issues in the past (bulging, detachment of panels), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

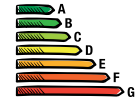
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A001.2
LAKUA 110 - ARABA

No. homes	**110**
No. public rental homes	**110**
Year built	**2003**



D

CHALL.	Diagnosis	Nature of task	Coste
1	4	Full thermal envelope, heat pump and PV.	**€ 2,242,395**
2	2	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 257,118**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 23,119**

No. BUILDINGS: 3 **No. ENTRANCES:** 10

ROOF: Sloping. No major issues.

FACADE: Issues in the past (ceiling porch), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

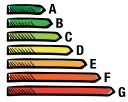
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A001.3
LAKUA 90 - ARABA

No. homes	**90**
No. public rental homes	**90**
Year built	**2003**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 2,304,000**
2	2	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 205,818**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 19,972**

No. BUILDINGS: 2 **No. ENTRANCES:** 8

ROOF: Sloping. No major issues.

FACADE: Issues in the past (detachment of single layer of mortar), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

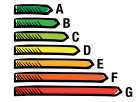
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A002
228 IBAIONDO - ARABA

No. homes	**228**
No. public rental homes	**228**
Year built	**2004**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 7,774,800**
2	3	Support for situations of energy poverty-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 336,268**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 35,990**

No. BUILDINGS: 1 **No. ENTRANCES:** 13

ROOF: Sloping. No major issues.

FACADE: Numerous issues in the past (damp and flaking, dislodged bricks, leaks in garage, linked property).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

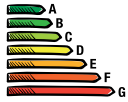
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-A003
SALBURUA 84A - ARABA

No. homes	**84**
No. public rental homes	**84**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,512,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 67,393**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 155,028**

No. BUILDINGS: 2 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Insulation on recirculation ring repaired, but it is hot on the landing where these pipes run.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

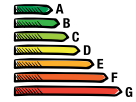
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A004
SALBURUA 84B - ARABA

No. homes	**84**
No. public rental homes	**84**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,512,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 85,393**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 155,028**

No. BUILDINGS: 2 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Insulation on recirculation ring repaired, but it is hot on the landing where these pipes run.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

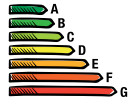
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A005
SALBURUA 50 - ARABA

No. homes	**50**
No. public rental homes	**50**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 900,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 56,721**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 96,527**

No. BUILDINGS: 2 **No. ENTRANCES:** 4

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Distribution issues.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

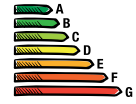
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: In 2014, a quotation was received for mounting a battery of 17.5 kVa condensers for compensating the' reactive energy invoiced.

ALO-A006
SALBURUA 80 - ARABA

No. homes	**80**
No. public rental homes	**80**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,440,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 85,172**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 149,998**

No. BUILDINGS: 2 **No. ENTRANCES:** 6

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (damp in entrances, stairways. And material falling from ceilings), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Distribution issues

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

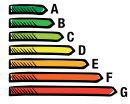
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A007
ZABALGANA 40A - ARABA

No. homes	**40**
No. public rental homes	**40**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 720,000**
2	2	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 31,370**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 79,703**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping.

FACADE: Issues in the past (leaks and detachments), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE. LEAKO System. The installation was renovated, the horizontal manifolds were removed. Issues in the past (change boiler), but they appear to have been resolved.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

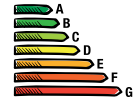
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A008
ZABALGANA 40B - ARABA

No. homes	**40**
No. public rental homes	**40**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 720,000**
2	2	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 31,370**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 79,703**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks and detachments), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

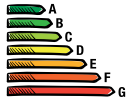
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A009
ZABALGANA 60 - ARABA

No. homes	**60**
No. public rental homes	**60**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,080,000**
2	3	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 41,371**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 114,350**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: Issues in the past (detachments), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

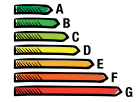
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-A010
ZABALGANA 65 - ARABA

No. homes	**65**
No. public rental homes	**65**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,170,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 38,147**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 123,262**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping. Issues in the past (detachments, leaks, tiles). Resolved.

FACADE: Issues in the past (cracks, monolayer repair), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof. Colectores solares verticales anulados.

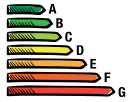
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A011
ZABALGANA 92 - ARABA

No. homes	**92**
No. public rental homes	**92**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,656,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 73,833**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 169,087**

No. BUILDINGS: 1 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (detachment of bricks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.

RENEWABLE INSTALLATIONS: With solar thermal in operation y there is additional space on the roof. Renovated solar thermal installation.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

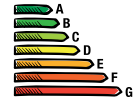
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: Working on façade.

ALO-A012
LLODIO 34 - ARABA

No. homes	**34**
No. public rental homes	**34**
Year built	**2004**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 612,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 42,440**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 68,859**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (windows), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

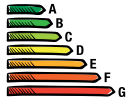
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: CADEM certificate with A rating, a 2013 certificate registered with the BG with a D rating, and an Amaiba report from 2015 with a C rating.

ALO-A013
SALBURUA 123 - ARABA

No. homes	**123**
No. public rental homes	**123**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,214,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 74,140**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 220,490**

No. BUILDINGS: 1 **No. ENTRANCES:** 5

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

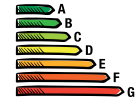
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A014
SALBURUA 48 - ARABA

No. homes	**48**
No. public rental homes	**48**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 864,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 29,811**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 92,962**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: Issues in the past (detachment of tiles), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

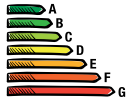
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Lanbide has proposed to use the roof of its future offices for a photovoltaic installation (650 m2 south-facing with no chimneys)

ALO-A015
SALBURUA 171 - ARABA

No. homes	**171**
No. public rental homes	**171**
Year built	**2014**



A

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 52,983**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 303,645**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. High-performance gas boilers, and 2 co-generation (not in service, pending regulatory clearance). Tweak la installation.

RENEWABLE INSTALLATIONS: Microgeneration not in service. Photovoltaic system managed by VISESA.

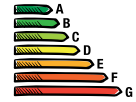
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-A016
ZABALGANA 126 - ARABA

No. homes	**126**
No. public rental homes	**126**
Year built	**2010**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,268,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lighting in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 76,705**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 225,688**

No. BUILDINGS: 2 **No. ENTRANCES:** 6

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

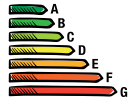
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: AUGE system registering temperature and humidity.

ALO-A017
ZABALGANA 156 - ARABA

No. homes	**156**
No. public rental homes	**156**
Year built	**2010**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,808,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 64,857**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 277,659**

No. BUILDINGS: 1 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks in garages).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof. Solar installation on a pergola (not on roof).

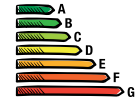
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A018
SALBURUA 156 - ARABA

No. homes	**156**
No. public rental homes	**156**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,808,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 75,957**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 277,659**

No. BUILDINGS: 1 **No. ENTRANCES:** 5

ROOF: Sloping.

FACADE: With issues (leaks in garages).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: Solar thermal in operation (but giving problems) and there is additional space on the roof.

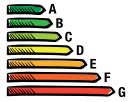
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A019
ZABALGANA 161 - ARABA

No. homes	**161**
No. public rental homes	**161**
Year built	**2011**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,898,000**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 138,832**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 286,321**

No. BUILDINGS: 1 **No. ENTRANCES:** 9

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

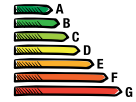
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A020
SALBURUA 111 - ARABA

No. homes	**111**
No. public rental homes	**111**
Year built	**2011**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,998,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 60,079**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 202,477**

No. BUILDINGS: 2 **No. ENTRANCES:** 4

ROOF: Mixed. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (detachments tiles, damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

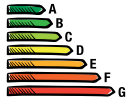
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A021
IRUÑA DE OCA 20 - ARABA

No. homes	**20**
No. public rental homes	**20**
Year built	**2011**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 360,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 14,869**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 43,555**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Issues in the past (change boiler), but they appear to have been resolved

RENEWABLE INSTALLATIONS: Solar thermal out of service, shared with 4 buildings and located in one of the buildings for sale.

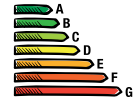
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-A022
LLODIO 29 ARANTZAR - ARABA

No. homes	**29**
No. public rental homes	**26**
Year built	**2011**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 55,564**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 54,730**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.Boiler room shared with entrances 3-5-7.

RENEWABLE INSTALLATIONS: Microgeneration. In service and with additional space on roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

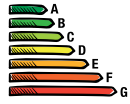
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Entrance Apaloeta 1 shared with GOB-A020 (3 homes).

ALO-A023
ZABALGANA 90 - ARABA

No. homes	**90**
No. public rental homes	**90**
Year built	**2013**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,620,000**
2	3	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 39,923**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 165,572**

No. BUILDINGS: 2 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: With issues (leaks in garages, boxrooms and waste rooms).

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

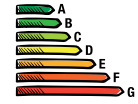
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A024
ZABALGANA 80 - ARABA

No. homes	**80**
No. public rental homes	**80**
Year built	**2013**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,440,000**
2	3	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 58,372**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 149,998**

No. BUILDINGS: 2 **No. ENTRANCES:** 4

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks, detached panels), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Following complaints from the occupants, the hot water pipes have been found to be poorly insulated. Nevertheless, an official inspection has found in favour of the engineering firm, as it apparently complies with the regulations of thermal installation (RITE).

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

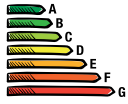
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-A025
ZABALGANA 314 - ARABA

No. homes	**314**
No. public rental homes	**314**
Year built	**2014**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 5,652,000**
2	2	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 190,456**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 551,375**

No. BUILDINGS: 1 **No. ENTRANCES:** 12

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: With solar thermal and photovoltaic installation, but out of service. Photovoltaic panels not operating. Solar thermal needs tweaking.

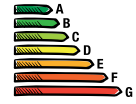
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-A030
ZABALGANA 155 - ARABA

No. homes	**155**
No. public rental homes	**155**
Year built	**2010**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,790,000**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 138,527**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 275,927**

No. BUILDINGS: 1 **No. ENTRANCES:** 9

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks in garages).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Issues in the past (change boiler body), supposedly resolved, but needs to be changed soon.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

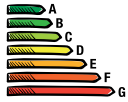
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-B002
MINA DEL MORRO 84 - BIZKAIA

No. homes	**84**
No. public rental homes	**84**
Year built	**2005**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 658,294**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 63,568**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 19,028**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. No major issues.

FACADE: With issues (cracks, detachment of bricks and tiles, badly insulated).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

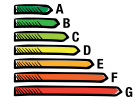
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-B003
OLABEAGA 11 - BIZKAIA

No. homes	**12**
No. public rental homes	**11**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 409,200**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 16,543**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,199**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

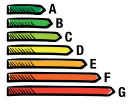
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-B004
MIRIBILLA 60 - BIZKAIA

No. homes	**60**
No. public rental homes	**60**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,536,000**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 65,468**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 16,750**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks in garages and boxrooms).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

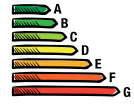
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-B005
MUSKIZ 40 - BIZKAIA

No. homes	**40**
No. public rental homes	**40**
Year built	**2007**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,364,000**
2	3	E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 48,170**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 79,703**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

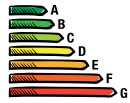
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-B006
ETXEBARRI 20 - BIZKAIA

No. homes	**20**
No. public rental homes	**20**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 360,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 28,269**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 43,555**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

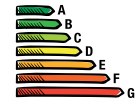
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Shared development (façade, etc.).

ALO-B007
ARBOLEDA 15 - BIZKAIA

No. homes	**15**
No. public rental homes	**15**
Year built	**2007**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 511,500**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 27,543**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,918**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: With issues (leaks in garages, deficient heating).

TYPE OF HEATING AND HOT WATER: Individual boilers. LPG boiler (butane, propane...) for heating and hot water. Tenants have complained about the LPG and asked ALOKABIDE to consider replacing it with a more economical one.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

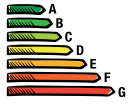
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-B008
MUSKIZ 80 - BIZKAIA

No. homes	**80**
No. public rental homes	**40**
Year built	**2010**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,440,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 30,572**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 82,103**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System. Boiler body changed (shared boiler-room).

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

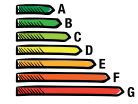
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-B009
ETXEBARRI 25 - BIZKAIA

No. homes	**25**
No. public rental homes	**25**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 450,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 42,944**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 52,592**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: With issues (leaks). Work recently completed, to be repeated if it happens again.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

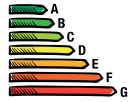
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-B010
BASAURI 90 - BIZKAIA

No. homes	**90**
No. public rental homes	**52**
Year built	**2010**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 58,923**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 101,071**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. VISESA has introduced pay-as-you-go.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

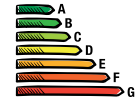
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-B013
GERNIKA 30 - BIZKAIA

No. homes	**30**
No. public rental homes	**30**
Year built	**2009**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 540,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 12,419**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 61,629**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (asphalt panels). Resolved.

FACADE: Issues in the past (detached plaquettes), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE. Issues in the past (new boiler and distribution pipe), but they appear to have been resolved.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

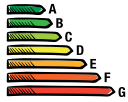
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-B014
BASAURI 40 - BIZKAIA

No. homes	**40**
No. public rental homes	**39**
Year built	**2012**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 720,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 29,370**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 78,005**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (falling tiles). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

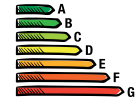
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-B016
SESTAO 52 - BIZKAIA

No. homes	**105**
No. public rental homes	**52**
Year built	**2019**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 25,624**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 101,971**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Sistema LEAKO.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Recent allocation to five new tenants.

ALO-B017
LEIOA 101 - BIZKAIA

No. homes	**101**
No. public rental homes	**101**
Year built	**2018**
	B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	E-Lagun Project.	**€ 3,404**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 184,903**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management.

RENEWABLE INSTALLATIONS: Microgeneration out of service: pending licence

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Recently assigned.

ALO-G001
24 LEGAZPI - GIPUZKOA

No. homes	**24**
No. public rental homes	**24**
Year built	**2004**
	D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 614,400**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 44,168**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,785**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Sloping. Issues in the past (chimeneas). Resolved.

FACADE: With issues (leaks in garages).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

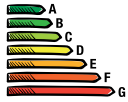
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-G002
HERNANI 48 - GIPUZKOA

No. homes	**48**
No. public rental homes	**48**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,228,800**
2	3	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 77,768**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 14,562**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Mixed. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks from garden into garages and entrances).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

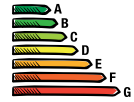
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-G003
HERNANI 24 - GIPUZKOA

No. homes	**24**
No. public rental homes	**24**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 614,400**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, adaptation of housing units.	**€ 82,568**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,785**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

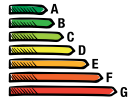
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-G004
ANDOAIN 60 - GIPUZKOA

No. homes	**60**
No. public rental homes	**60**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,536,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 55,468**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 16,750**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks, detachments), but they appear to have been resolved. Work performed on one façade.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

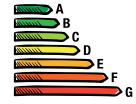
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G005
MARRUTXIPI 55 - GIPUZKOA

No. homes	**55**
No. public rental homes	**55**
Year built	**2006**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,408,000**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 109,543**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 15,839**

No. BUILDINGS: 1 **No. ENTRANCES:** 7

ROOF: Sloping. Issues in the past (chimeneas). Resolved.

FACADE: Thermal bridge issues. Other issues (leaks, detachments, condensation), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers. Cupboards have been installed to protect the boilers from the weather.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

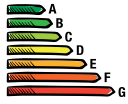
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-G006
RIBERAS DE LOIOLA 91 - GIPUZKOA

No. homes	**91**
No. public rental homes	**91**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,638,000**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, renovation of entrances, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 18,778**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 167,329**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks, detachments), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. LEAKO System annulled, but twin-pipe distribution maintained. Issues with hot water.

RENEWABLE INSTALLATIONS: Solar thermal and microgeneration out of service. Solar thermal annulled. Micro stoppage due to end of useful life.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

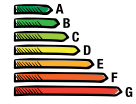
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

OBSERVATIONS: First pay-as-you-go installed in ALOKABIDE.

ALO-G007
TOLOSA 16 - GIPUZKOA

No. homes	**16**
No. public rental homes	**16**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 545,600**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 14,168**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,126**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

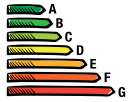
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G008
ERRENTERIA 23 - GIPUZKOA

No. homes	**24**
No. public rental homes	**23**
Year built	**2004**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 818,400**
2	2	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 16,064**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 49,087**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Mixed. No major issues.

FACADE: With issues (low rating, warped façade).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

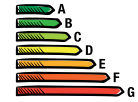
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: Following legal action by other entrances, repair of façade, cracks, settled by VISESA (ALOKABIDE entrance has supported the agreement).

ALO-G009
ARRASATE 100 - GIPUZKOA

No. homes	**100**
No. public rental homes	**95**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,800,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 59,474**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 174,659**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. With recurrent issues (leaks).

FACADE: Issues in the past (detachments, cracks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE. The heating installation often leaks.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

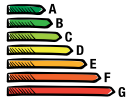
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G010
IZA 48 - GIPUZKOA

No. homes	**48**
No. public rental homes	**44**
Year built	**2008**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 864,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 19,411**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 86,172**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks, flaking, detachment of panels), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: Solar thermal out of service: ALOKABIDE is a minority owner.

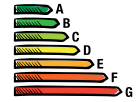
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G011
SORALUCE 16 - GIPUZKOA

No. homes	**16**
No. public rental homes	**16**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 288,000**
2	3	E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage sign panels, feature detectable with a cane under overhang in entrance.	**€ 16,649**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 36,326**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

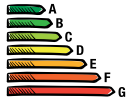
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-G012
MUTRIKU 75 - GIPUZKOA

No. homes	**75**
No. public rental homes	**75**
Year built	**2011**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,557,500**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 47,697**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 141,086**

No. BUILDINGS: 2 **No. ENTRANCES:** 3

ROOF: Flat. No major issues.

FACADE: Issues in the past (tiling), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.
Problemas con la cal del agua (provoca roturas en las tuberías).

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

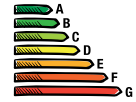
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

ALO-G013
PASAIA 68 - GIPUZKOA

No. homes	**212**
No. public rental homes	**68**
Year built	**2014**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 3,816,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 18,840**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 130,249**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

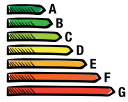
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G015
ARRASATE 140 - GIPUZKOA

No. homes	**140**
No. public rental homes	**140**
Year built	**2013**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 2,520,000**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 57,276**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 249,941**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Large capacity storage tank. Scheduled renovation of boiler-room.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof. Solar thermal recently renovated.

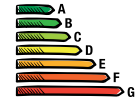
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G016
BEASAIN 25 - GIPUZKOA

No. homes	**25**
No. public rental homes	**25**
Year built	**2013**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 15,144**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 52,592**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Mixta. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

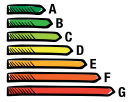
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

ALO-G018
HERNANI 34 - GIPUZKOA

No. homes	**34**
No. public rental homes	**34**
Year built	**2010**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 15,640**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 68,859**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks in garages), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal out of service. Pending commissioning. Shared installation.

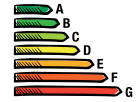
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

ALO-G019
IRUN 16 - GIPUZKOA

No. homes	**64**
No. public rental homes	**16**
Year built	**2016**



C

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,638,400**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 15,168**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,806**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof.

LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors

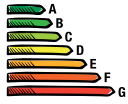
ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: Recently assigned.

ALO-G020
MORLANS 70 - GIPUZKOA

No. homes	**70**
No. public rental homes	**70**
Year built	**2019**



A

CHALL.	Diagnosis	Nature of task	Cost
1	**1**	NONE.	**€ -**
2	**2**	E-Lagun Project.	**€ 2,472**
3	**3**	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 132,174**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Hybrid. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management.

RENEWABLE INSTALLATIONS: Photovoltaic out of service. Not yet connected.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

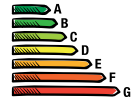
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Recently assigned. Aerothermal with photovoltaic, using hot air from a Trombe wall.

ALO-G021
IRUN 32 VS - GIPUZKOA

No. homes	**32**
No. public rental homes	**32**
Year built	**2018**



B

CHALL.	Diagnosis	Nature of task	Cost
1	**4**	Full thermal envelope, heat pump and PV.	**€ 819,200**
2	**3**	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 29,968**
3	**3**	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,444**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof.

LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors

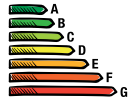
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: Recently assigned.

GOB-A001
ABETXUKO 106 - ARABA

No. homes	**106**
No. public rental homes	**106**
Year built	**2005**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 3,614,600**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 96,818**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 22,490**

No. BUILDINGS: 5 **No. ENTRANCES:** 7

ROOF: Flat. Walk-on roof, there may be issues of watertightness.

FACADE: Issues in the past (flaking), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers with individual storage.

RENEWABLE INSTALLATIONS: Solar thermal out of service in some buildings. Renovation required.

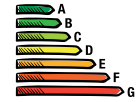
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-A002
AMURRIO 24 - ARABA

No. homes	**24**
No. public rental homes	**24**
Year built	**1996**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 818,400**
2	3	E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 44,168**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,785**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

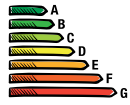
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-A003
SALVATIERRA 4 - ARABA

No. homes	**4**
No. public rental homes	**4**
Year built	**1996**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 136,400**
2	2	E-Lagun Project, installation of lift, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 35,868**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 6,637**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

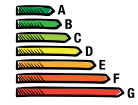
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: The building is in the old quarter of Salvatierra (refurbished Feb-96). An inspection was carried out and its structure revealed that it would be complicated to install a lift (therefore low priority). Any refurbishment would involve interior insulation.

GOB-A004
VITORIA 12 - ARABA

No. homes	**12**
No. public rental homes	**12**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 987,441**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 27,468**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,296**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: With issues (low rating).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

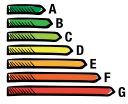
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-A010
AMURRIO 21 - ARABA

No. homes	**21**
No. public rental homes	**21**
Year built	**1994**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,242,395**
2	4	E-Lagun Project, installation of LIFT, non-slip linoleum flooring, ensuring entrances are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 115,093**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,163**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Sloping.

FACADE: Energy refurbishment scheduled.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: The plan is for three solar panels for hot water and a 500-l storage tank in each building.

LIFT: No.

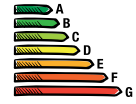
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

OBSERVATIONS: Going refurbishment. Scheduled installation of lifts within the PCTI's nZEB Strategic Initiative, but no plans for photovoltaic. All the individual boilers to be replaced by wall-mounted condensation boilers.

GOB-A012
ABETXUKO 7 - ARABA

No. homes	**7**
No. public rental homes	**7**
Year built	**1994**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 238.700**
2	4	E-Lagun Project.	**€ 368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 7,259**

No. BUILDINGS: 7 **No. ENTRANCES:** 7

ROOF: Sloping. No major issues.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: No.

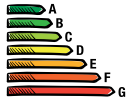
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

OBSERVATIONS: No options for installing a lift due to the following issues: two abutting two-storey blocks of flats (no entrances).
Some of the facades have recently been painted.

GOB-A014
VITORIA 99 - ARABA

No. homes	**99**
No. public rental homes	**99**
Year built	**1999**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 3,375,900**
2	3	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels feature detectable with a cane under overhang in entrance, adapting housing unit.	**€ 221,243**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 21,388**

No. BUILDINGS: 2 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (tiles and skylights). Resolved.

FACADE: With issues (detachment of mortar).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

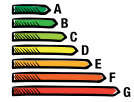
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-A015
LLODIO 32 - ARABA

No. homes	**32**
No. public rental homes	**32**
Year built	**2001**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 819,200**
2	2	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 51,968**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,444**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

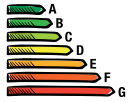
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-A017
VITORIA 104 - ARABA

No. homes	**104**
No. public rental homes	**101**
Year built	**2002**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 2,662,400**
2	3	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 190,768**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 21,883**

No. BUILDINGS: 1 **No. ENTRANCES:** 7

ROOF: Sloping. With issues (leaks, broken tiles), needs attention.

FACADE: Issues in the past (leaks through ventilated façade), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

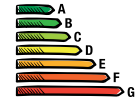
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-A023
LEGUTIANO 16 - ARABA

No. homes	**16**
No. public rental homes	**16**
Year built	**2013**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 409,600**
2	2	2E-Lagun Project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 27,568**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,126**

No. BUILDINGS: 2 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers. Son relativamente nuevas.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

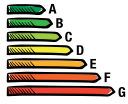
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-A025
SAN JOSE 12 - ARABA

No. homes	**10**
No. public rental homes	**8**
Year built	**2013**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 256,000**
2	4	E-Lagun Project.	**€ 368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 7,687**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers. Several homes do not have radiators.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: No.

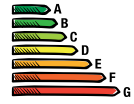
ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

OBSERVATIONS: Recently renovated building in which ALOKABIDE has acquired several housing units, although they need sundry alterations.

GOB-A21A
IRUÑA DE OCA 12 - ARABA

No. homes	**12**
No. public rental homes	**12**
Year built	**2014**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 216,000**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 11,428**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 29,096**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-A22A
CORONACIÓN 79 - ARABA

No. homes	**79**
No. public rental homes	**79**
Year built	**2015**
	B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 25,517**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 148,216**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Twin-pipe system, but not Leako.

RENEWABLE INSTALLATIONS: Microgeneration out of service: pending official licence.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Project for turning street-level premises into homes and communal areas.

GOB-B001
BILBAO 57 - BIZKAIA

No. homes	**57**
No. public rental homes	**34**
Year built	**2004**
	D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,459,200**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 54,843**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 13,964**

No. BUILDINGS: 2 **No. ENTRANCES:** 4

ROOF: Sloping. With recurrent issues (leaks).

FACADE: With issues (uralite materials).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

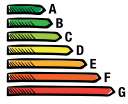
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B002
BILBAO 58 - BIZKAIA

No. homes	**58**
No. public rental homes	**57**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,484,800**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 42,018**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 16,288**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: With issues (Ventilated façade damaged, leaks).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

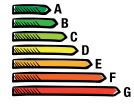
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B003
BILBAO 140 - BIZKAIA

No. homes	**140**
No. public rental homes	**108**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 4,774,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 60,468**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 21,225**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

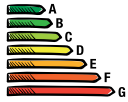
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: The housing units in one entrance belong to the local council.

GOB-B004
ARRIGORRIAGA 42 - BIZKAIA

No. homes	**42**
No. public rental homes	**42**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 756,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 56,280**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 82,268**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat.Issues in the past (loose roof tiles and leaks). Resolved.

FACADE: With issues (leaks).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

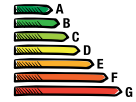
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B005
TXURDINAGA 32 - BIZKAIA

No. homes	**32**
No. public rental homes	**32**
Year built	**2013**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,091,200**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 14,568**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,444**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks, water coming through windows, low rating).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof.

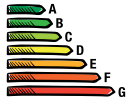
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B006
BERANGO 12 - BIZKAIA

No. homes	**12**
No. public rental homes	**11**
Year built	**2004**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 409,200**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 14,068**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,199**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With issues (cold homes).

TYPE OF HEATING AND HOT WATER: Individual boilers.

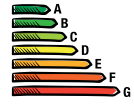
RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-B007
EL BURGO 48 - BIZKAIA

No. homes	**48**
No. public rental homes	**24**
Year built	**1982**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,636,800**
2	5	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,225**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. Issues in the past (eaves). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: No.

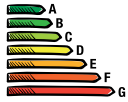
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: There is a slope with more than two steps leading up to the building.

OBSERVATIONS: Although all 4 blocks have a lift, the presence of steps in the access to them and the nature of the cabins themselves, which are significantly smaller than those required by the regulations- are reasons enough for making it a priority in terms of accessibility.

GOB-B010
AMOREBIETA 32 - BIZKAIA

No. homes	**32**
No. public rental homes	**32**
Year built	**2004**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,091,200**
2	2	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 27,968**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,444**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

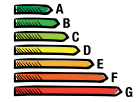
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B014
PORTUGALETE 66 - BIZKAIA

No. homes	**66**
No. public rental homes	**58**
Year built	**1998**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,250,600**
2	5	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 138,818**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 17,066**

No. BUILDINGS: 2 **No. ENTRANCES:** 12

ROOF: Sloping. No major issues.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: No.

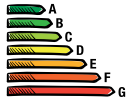
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: There is a slope with more than two steps leading up to the building.

OBSERVATIONS: Issues with the possible siting of the lifts on public land, although it is a major priority, the cost is very high.

GOB-B017
TRAPAGARAN 13 - BIZKAIA

No. homes	**13**
No. public rental homes	**13**
Year built	**2001**



G

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 443,300**
2	4	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 40,593**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,504**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: With issues (leaks).

TYPE OF HEATING AND HOT WATER: Individual propane boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

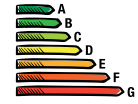
LIFT: Free access space of less than 150 cm. Lift cabin smaller than 105 x 140 cm.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

GOB-B018
PLENTZIA 20 - BIZKAIA

No. homes	**20**
No. public rental homes	**20**
Year built	**2002**



F

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 682,000**
2	3	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 26,268**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,955**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

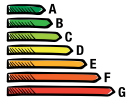
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-B024
SESTAO 35 - BIZKAIA

No. homes	**35**
No. public rental homes	**22**
Year built	**2000**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,193,500**
2	3	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 82,443**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 11,800**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping.

FACADE: Communal energy refurbishment under way.

TYPE OF HEATING AND HOT WATER: Individual boilers.The Individual boilers are to be replaced during the refurbishment by a connection to a communal biomass system through a Tifell panel on the building and a pay-as-you-go tablet.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: 80 cm lift door.

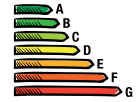
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

OBSERVATIONS: Refurbishment managed by Sestaoberri.

GOB-B034
BASAURI 80 - BIZKAIA

No. homes	**80**
No. public rental homes	**56**
Year built	**1995**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,728,000**
2	4	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 144,968**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 18,061**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. No major issues.

FACADE: With issues (leaks, detachments, problems with ventilated façade due to lack of maintenance). Steel façade needs repairing

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

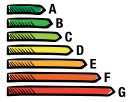
LIFT: Espacio libre de acceso inferior a 150 cm. Cabina del ascensor inferior a 105 x 140 cm.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-B039
ZARATAMO 18 - BIZKAIA

No. homes	**18**
No. public rental homes	**12**
Year built	**1997**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 613,800**
2	5	Support for situations of energy poverty, E-Lagun project, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible and signed mechanisms.	**€ 108,818**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,956**

No. BUILDINGS: 1 **No. ENTRANCES:** 6

ROOF: Sloping.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

LIFT: No.

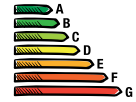
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with more than 2 steps leading up to building.

OBSERVATIONS: Problems with installing lifts: although it is a major priority, the cost is very high.

GOB-B043
ORTUELLA 8 - BIZKAIA

No. homes	**8**
No. public rental homes	**7**
Year built	**1999**



F

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 658,294**
2	4	Support for situations of energy poverty, E-Lagun project.	**€ 368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 7,369**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping.

FACADE: Energy refurbishment scheduled.

TYPE OF HEATING AND HOT WATER: Fully electric individual system: individual heating with electric radiators and electric hot water boilers.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

LIFT: No.

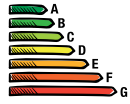
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

OBSERVATIONS: Refurbishment under way. Planned installation of lift as part of the PCTI's nZEB Strategic Initiative.

GOB-B044
ARRIGORRIAGA 73 - BIZKAIA

No. homes	**73**
No. public rental homes	**48**
Year built	**2001**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,489,300**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 81,393**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 16,687**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With issues (leaks, detachments).

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: 80 cm lift door.

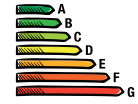
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

OBSERVATIONS: It is a sloping but accessible roof. One occupant has asked for the façade to be refurbished with ETICS. On entrances 17 and 19 ALOKABIDE is in a majority, but on 18 it is a minority owner.

GOB-B049
MUSKIZ 40 - BIZKAIA

No. homes	**40**
No. public rental homes	**40**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 4,271,229**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 54,968**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 14,103**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks, cracks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

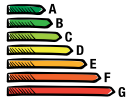
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B054
LEKEITIO 24 - BIZKAIA

No. homes	**24**
No. public rental homes	**12**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,359,260**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 27,768**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,616**

No. BUILDINGS: **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

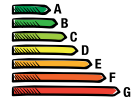
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B055
MINA DEL MORRO 70 - BIZKAIA

No. homes	**70**
No. public rental homes	**67**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,387,000**
2	2	2Support for situations of energy poverty, E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 139,118**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 18,282**

No. BUILDINGS: 5 **No. ENTRANCES:** 5

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

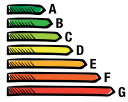
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B057
MINA DEL MORRO 84 - BIZKAIA

No. homes	**84**
No. public rental homes	**83**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 2,150,400**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 127,768**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 18,930**

No. BUILDINGS: 1 **No. ENTRANCES:** 7

ROOF: Flat. With issues (leaks).

FACADE: With issues (leaks).

TYPE OF HEATING AND HOT WATER: Individual electric systems for heating, night-time static accumulator and dynamic accumulator. Each housing unit has an individual electric hot water production/storage tank.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

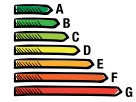
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B058
REPELEGA 97+2 - BIZKAIA

No. homes	**99**
No. public rental homes	**55**
Year built	**2007**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 2,534,400**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 204,443**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 17,104**

No. BUILDINGS: 2 **No. ENTRANCES:** 14

ROOF: Sloping. Issues in the past (falling tiles). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

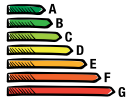
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-B059
REPELEGA 138 - BIZKAIA

No. homes	**138**
No. public rental homes	**133**
Year built	**2007**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 4,705,800**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 263,018**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 23,589**

No. BUILDINGS: 3 **No. ENTRANCES:** 18

ROOF: Sloping. Issues in the past (falling tiles). Resolved.

FACADE: Issues in the past (leaks, falling panels), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

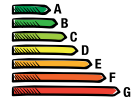
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-B064
ELORRIO 15 - BIZKAIA

No. homes	**15**
No. public rental homes	**15**
Year built	**2008**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 511,500**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 14,594**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 34,518**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major repair issues.

TYPE OF HEATING AND HOT WATER: Communal without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

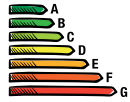
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B065
TXURDINAGA 33 - BIZKAIA

No. homes	**33**
No. public rental homes	**33**
Year built	**2009**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 594,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 42,385**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 67,051**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Three identical buildings, each one with a different heating system; A) gas-fired communal arrangement for heating and hot water, B) individual gas, and C) communal gas-fired central heating and individual hot water arrangement.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

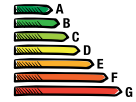
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Monitoring available, but not being used. Ground-floor premises turned into four homes.

GOB-B066
LAMIAKO 58 - BIZKAIA

No. homes	**58**
No. public rental homes	**58**
Year built	**2008**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,044,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€0,361**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 110,786**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks, cracks, detachments, falling glass), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

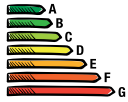
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: ETICS construction of unknown thickness.

GOB-B070
LUTXANA-MUNOA 39 - BIZKAIA

No. homes	**39**
No. public rental homes	**39**
Year built	**2010**



A

CHALL.	Diagnosis	Nature of task	Cost
1	**1**	NONE.	**€ -**
2	**3**	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 31,315**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 77,895**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with electric heat pump, communal electric hot water, and underfloor heating in homes. LEAKO System.

RENEWABLE INSTALLATIONS: Geothermal, in operation and there is additional space on the roof.

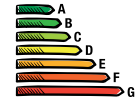
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-B071
SESTAO 29 - BIZKAIA

No. homes	**29**
No. public rental homes	**29**
Year built	**2010**



C

CHALL.	Diagnosis	Nature of task	Cost
1	**3**	Full thermal envelope, installations and solar thermal.	**€ 522,000**
2	**2**	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance	**€ 15,364**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 59,822**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System managed by Bical.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

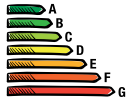
ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Refurbished police station.

GOB-B072
BILBAO LA VIEJA 25+30 - BIZKAIA

No. homes	**55**
No. public rental homes	**41**
Year built	**2011**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 990,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 56,996**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 81,675**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Hybrid. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Occupants have complained about the management of the boiler-room.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof. Horizontal vacuum pipes.

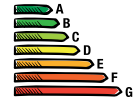
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B075
PORMETXETA 59 - BIZKAIA

No. homes	**59**
No. public rental homes	**44**
Year built	**2013**



C

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,062,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 70,616**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 87,107**

No. BUILDINGS: 4 **No. ENTRANCES:** 5

ROOF: Flat. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof. Tifell Drain-Back system installed.

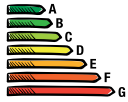
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B076
U.E. 19 ARAMOTZ - BIZKAIA

No. homes	**26**
No. public rental homes	**26**
Year built	**2012**



B

CHALL.	Diagnosis	Nature of task	Cost
1	**1**	NONE.	**€ -**
2	**2**	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 15,199**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 54,400**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Electric heat pump for communal heating, Communal gas-fired hot water, homes with underfloor heating, and Trombe wall on façade.

RENEWABLE INSTALLATIONS: Geothermal, in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

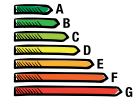
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: There is a renovation plan for the neighbourhood, for buildings built in the 1950-60s.

GOB-B081
SANTURTZI 24 - BIZKAIA

No. homes	**24**
No. public rental homes	**21**
Year built	**2013**



C

CHALL.	Diagnosis	Nature of task	Cost
1	**3**	Full thermal envelope, installations and solar thermal.	**€ 432,000**
2	**2**	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 55,289**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 45,693**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

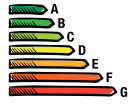
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-B083A
ERMUA 57 ADAS - BIZKAIA

No. homes	**57**
No. public rental homes	**57**
Year built	**2014**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,943,700**
2	2	Support for situations of energy poverty,, E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 13,906**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 109,003**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

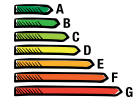
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: The distribution of electricity is shared. Need to remove blind slats.

GOB-B087
PORTUGALETE 32 - BIZKAIA

No. homes	**32**
No. public rental homes	**32**
Year built	**2016**



A

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	3	Support for situations of energy poverty, E-Lagun project, non-slip linoleum flooring, renovation of entrances, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 36,830**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 65,244**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management.

RENEWABLE INSTALLATIONS: Photovoltaic (with aerothermal) and Microgeneration (out of service). It needs tweaking: the photovoltaic system is to be adapted to use the output for self-consumption for self-consumption in the heat pump (heating).

LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

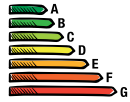
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: One standard façade, a Trombe wall and, finally, a solar-wall.

GOB-B100
URETAMENDI PEÑASCAL 45 - BIZKAIA

No. homes	**45**
No. public rental homes	**30**
Year built	**2018**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	Support for situations of energy poverty,, E-Lagun project, non-slip linoleum flooring, renovation of entrances, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 20,270**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 62,154**

No. BUILDINGS: 3 **No. ENTRANCES:** 3

ROOF: Flat.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. Heat pump exploiting residual temperature. Homes with underfloor heating.

RENEWABLE INSTALLATIONS: Aerothermal. In operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

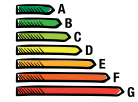
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Final adjustments under way.

GOB-B104
ARANGOITI 60 - BIZKAIA

No. homes	**60**
No. public rental homes	**60**
Year built	**2019**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	Support for situations of energy poverty,, E-Lagun project, non-slip linoleum flooring, renovation of entrances, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 2,171**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 114,350**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating with AUGE self-management. Geothermal, in operation and there is additional space on the roof.

RENEWABLE INSTALLATIONS: Geothermal, in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

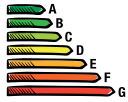
ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Recently assigned.

GOB-B88A
MINA DEL MORRO 86 - BIZKAIA

No. homes	**86**
No. public rental homes	**86**
Year built	**2016**



B

CHALL.	Diagnosis	Nature of task	Cost
1	1	NONE.	**€ -**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 2,953**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 158,542**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

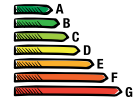
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G001
ELGOIBAR 40 - GIPUZKOA

No. homes	**40**
No. public rental homes	**40**
Year built	**2003**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,364,000**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 54,168**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 14,103**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

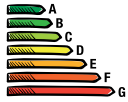
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G002
BERGARA 18 - GIPUZKOA

No. homes	**18**
No. public rental homes	**13**
Year built	**2003**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 613,800**
2	3	Support for situations of energy poverty-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 52,159**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 31,454**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System outdated.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

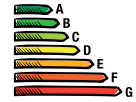
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G003
URRETXU 22 - GIPUZKOA

No. homes	**22**
No. public rental homes	**21**
Year built	**2005**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 750,200**
2	3	Support for situations of energy poverty,, E-Lagun Project, adapting lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 30,218**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,273**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (condensation in entrances, detachments), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

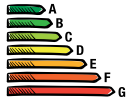
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Slope with 1-2 steps on access to building. Width of the door-leaf on the main entrance less than 80 cm. Main corridors <150 cm.

GOB-G004
BEASAIN 24 - GIPUZKOA

No. homes	**24**
No. public rental homes	**15**
Year built	**2000**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 614,400**
2	3	Support for situations of energy poverty,E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance, renovation of housing unit.	**€ 48,868**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,908**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (damp, bricks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

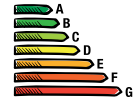
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G005
EIBAR 65 - GIPUZKOA

No. homes	**65**
No. public rental homes	**65**
Year built	**2005**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 1,664,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 73,993**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 17,662**

No. BUILDINGS: 1 **No. ENTRANCES:** 5

ROOF: Flat. No major issues.

FACADE: Issues in the past (bulging), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

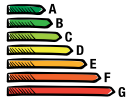
ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

OBSERVATIONS: The block belongs entirely to ALOKABIDE, but the bulging issues correspond to the whole garage owners' association.

GOB-G006
IBARRA 37 - GIPUZKOA

No. homes	**37**
No. public rental homes	**34**
Year built	**2009**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,261,700**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 41,493**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 13,189**

No. BUILDINGS: 2 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: Issues in the past (leaks, bulging), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

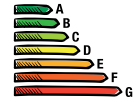
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Three of the housing units belong to the local council.

GOB-G007
LASARTE-ORIA 18 - GIPUZKOA

No. homes	**18**
No. public rental homes	**18**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 613,800**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 41,018**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,540**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

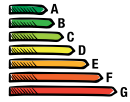
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G008
LASARTE-ORIA 24 - GIPUZKOA

No. homes	**24**
No. public rental homes	**24**
Year built	**2006**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 818,400**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 81,368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 10,785**

No. BUILDINGS: 1 **No. ENTRANCES:** 6

ROOF: Sloping. Issues in the past (damp). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

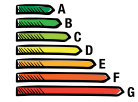
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G014
DONOSTIA 104 - GIPUZKOA

No. homes	**104**
No. public rental homes	**104**
Year built	**2002**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 3,546,400**
2	3	E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 106,068**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 22,175**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: With repetitive issues (leaks). Record of detachment of panels.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

LIFT: 80 cm lift door.

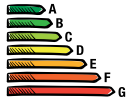
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

OBSERVATIONS: The building has a mixture of tenants and owners.

GOB-G015
TOLOSA 12 - GIPUZKOA

No. homes	**12**
No. public rental homes	**10**
Year built	**2007**



C

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 307,200**
2	2	E-Lagun project, adapting lift accesses, adapting lift cabin, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 26,068**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,101**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

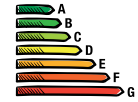
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G017
EIBAR 23 - GIPUZKOA

No. homes	**23**
No. public rental homes	**15**
Year built	**2007**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 784,300**
2	3	Support for situations of energy poverty,, E-Lagun project, adaptation of lift accesses, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 27,343**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,798**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they have supposedly been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

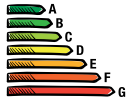
LIFT: 80 cm lift door.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G021
ESKORIATZA 16 - GIPUZKOA

No. homes	**16**
No. public rental homes	**13**
Year built	**2008**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 545,600**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 27,568**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 8,834**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No issues recorded.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

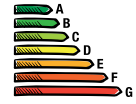
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G023
ARETXABALETA 20 - GIPUZKOA

No. homes	**20**
No. public rental homes	**20**
Year built	**2007**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 682,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 14,268**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,955**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. Issues in the past (leaks). Resolved.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

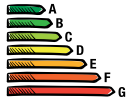
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G024
ANDOAIN 42 - GIPUZKOA

No. homes	**42**
No. public rental homes	**42**
Year built	**2008**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,432,200**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 41,618**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 13,468**

No. BUILDINGS: 1 **No. ENTRANCES:** 3

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

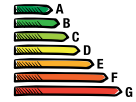
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G025
PASAIA 8 - GIPUZKOA

No. homes	**8**
No. public rental homes	**8**
Year built	**2011**



D

CHALL.	Diagnosis	Nature of task	Cost
1	4	Full thermal envelope, heat pump and PV.	**€ 204,800**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 27,368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 7,467**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Sloping. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal out of service: closed because of unaffordable maintenance costs for neighbours.

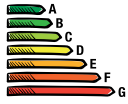
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and individual installations. Moderate risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G030
RIBERAS DE LOIOLA 70 - GIPUZKOA

No. homes	**70**
No. public rental homes	**70**
Year built	**2011**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 2,387,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 39,022**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 132,174**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System.

RENEWABLE INSTALLATIONS: No renewables system and there is space on the roof.

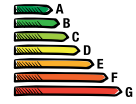
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-G032
TOLOSA 44 - GIPUZKOA

No. homes	**44**
No. public rental homes	**41**
Year built	**2011**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,179,630**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 19,190**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 80,740**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal out of service: closed because of unaffordable maintenance costs for neighbours.

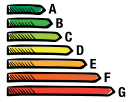
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G033
HERNANI 28 - GIPUZKOA

No. homes	**34**
No. public rental homes	**28**
Year built	**2011**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,159,400**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 18,490**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 58,674**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: Issues in the past (damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

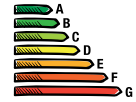
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

OBSERVATIONS: Bought off a private owner.

GOB-G035
BEASAIN 38 - GIPUZKOA

No. homes	**38**
No. public rental homes	**38**
Year built	**2012**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 684,000**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 56,060**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 76,088**

No. BUILDINGS: 1 **No. ENTRANCES:** 4

ROOF: Sloping. No major issues.

FACADE: Issues in the past (detached panels, damp), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

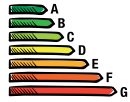
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G036
MORLANS 70 - GIPUZKOA

No. homes	**70**
No. public rental homes	**70**
Year built	**2012**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 1,260,000**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 76,222**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 132,174**

No. BUILDINGS: 1 **No. ENTRANCES:** 5

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

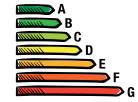
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-G037
HERNANI 27 - GIPUZKOA

No. homes	**27**
No. public rental homes	**27**
Year built	**2013**



D

CHALL.	Diagnosis	Nature of task	Cost
1	3	Full thermal envelope, installations and solar thermal.	**€ 486,000**
2	3	Support for situations of energy poverty,, proyecto E-Lagun, adaptación de cabinas de ascensor, pavimento de linóleo antideslizante, E-Lagun Project, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 32,654**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 56,207**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Mixta. No major issues.

FACADE: With repetitive issues (leaks in garages).

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

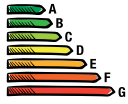
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Average energy consumption and communal installations. Moderate-low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G038
IRUN 32 - GIPUZKOA

No. homes	**32**
No. public rental homes	**32**
Year built	**2017**



B

CHALL.	Diagnosis	Nature of task	Cost
1	2	Installations – Individual buildings	**€ 62,400**
2	2	Support for situations of energy poverty, E-Lagun project.	**€ 368**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 12,444**

No. BUILDINGS: 1 **No. ENTRANCES:** 2

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

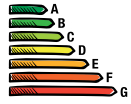
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and individual installations. Low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G042
HERNANI 20 - GIPUZKOA

No. homes	**20**
No. public rental homes	**20**
Year built	**2016**



B

CHALL.	Diagnosis	Nature of task	Cost
1	2	Installations – Individual buildings	**€ 39,000**
2	3	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 17,768**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 9,955**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: Solar thermal in operation and no spare space on roof. The solar installation also supplies other buildings.

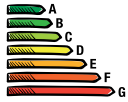
LIFT: Width less than 110 cm. No mirror opposite door, in cabins with facing doors.

ENERGY EFFICIENCY: Low energy consumption and individual installations. Low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

GOB-G045
ITURRITXO 9 - GIPUZKOA

No. homes	**12**
No. public rental homes	**8**
Year built	**1950**



F

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 1,179,630**
2	4	Support for situations of energy poverty,, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, minor building work on floor, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 35,993**
3	3	Digitisation of public stock, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 7,907**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Sloping.

FACADE: Energy refurbishment scheduled.

TYPE OF HEATING AND HOT WATER: Individual boilers.

RENEWABLE INSTALLATIONS: No renewables system and NO space on roof.

LIFT: No.

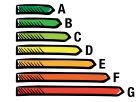
ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of leaf on main door < 90 cm. Some unevenness on main access to entrance.

OBSERVATIONS: Refurbishment under way. Planned installation of lift as part of the PCTI's nZEB Strategic Initiative.

GOB-G31A
INTXAURRONDO 125 - GIPUZKOA

No. homes	**125**
No. public rental homes	**125**
Year built	**2011**



E

CHALL.	Diagnosis	Nature of task	Cost
1	5	Full thermal envelope, ventilation, heat pump and PV.	**€ 4,262,500**
2	2	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels, feature detectable with a cane under overhang in entrance.	**€ 23,650**
3	3	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 223,955**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. Issues in the past (leaks). Resolved.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. LEAKO System. Medium tension mains electricity supply and then distributed to housing units and heating systems (heat pump with geothermal support). A support resistance also had to be installed.

RENEWABLE INSTALLATIONS: Geothermal and photovoltaic in operation and no spare space on roof.

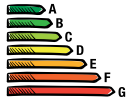
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: High energy consumption. High risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

GOB-G39A
HERNANI 53 - GIPUZKOA

No. homes	**53**
No. public rental homes	**53**
Year built	**2015**



A

CHALL.	Diagnosis	Nature of task	Cost
1	**1**	NONE.	**€ -**
2	**2**	Support for situations of energy poverty, E-Lagun project, adaptation of lift cabins, non-slip linoleum flooring, ensuring halls are accessible, double handrail on ramp or stairway, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 18,686**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 101,874**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: Issues in the past (leaks), but they appear to have been resolved.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE. There is a problem with the heating: if no one is using it, the upflow pipe cools and when a fifth-floor home requires heating it takes a long to arrive. The installation has been designed for recirculation within each housing unit and only one of the five upflow pipes has a bypass for recirculation.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

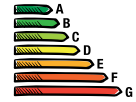
LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Width of passage through main access< 90 cm, although the door-leaf is 90 cm or more.

GOB-G41A
EIBAR 47 - GIPUZKOA

No. homes	**47**
No. public rental homes	**47**
Year built	**2016**



B

CHALL.	Diagnosis	Nature of task	Cost
1	**1**	NONE.	**€ -**
2	**2**	Support for situations of energy poverty,, E-Lagun Project, non-slip linoleum flooring, ensuring entrances are accessible, sensor-operated lights in entrance, on landings and in stairwell, accessible video intercom, accessible and signed mechanisms, building signage - sign panels.	**€ 13,355**
3	**3**	Digitisation of public stock, implementation of AUGE system, instructing tenants in the use of energy installations, deployment of technology (CMMS).	**€ 91,180**

No. BUILDINGS: 1 **No. ENTRANCES:** 1

ROOF: Flat. No major issues.

FACADE: No major issues.

TYPE OF HEATING AND HOT WATER: Communal heating without AUGE.

RENEWABLE INSTALLATIONS: Solar thermal in operation and there is additional space on the roof.

LIFT: Minor issues with call mechanisms. Lack of tactile flooring or gaps in handrail.

ENERGY EFFICIENCY: Low energy consumption and communal installations. Very low risk of energy poverty.

PHYSICAL ACCESSIBILITY: Details with no impact on normal use.

BIM rental, digitisation of the public housing stock

In addition to the preceding factsheets, the Plan ZERO Plana has undertaken a detailed characterisation of the whole of the pool under its management, with a view to unifying the technical data available on the buildings and housing units for a wholescale process of digitisation.

This process is based on two main pillars:

- **Digitisation of the public stock:** this involves Business Information Modelling (BIM) processes on both buildings and housing units in order to streamline the data available and facilitate their management.
- **Digitisation of management:** this requires the implementation of software management tools for overseeing the condition and operation of buildings and housing units, monitoring maintenance plans, gathering real-time data on conditions of comfort, etc.

These two pillars of digitisation have already been covered in VOLUME II, Catalogue of Solutions, **estimating the costs of their implementation.** Given their importance and the interest in technological innovation, we are going to provide an in-depth analysis of the BIM process of the rental pool involving in the Plan ZERO Plana, which will be used for **laying the foundations for creating models of buildings,** from the design stage, for their use in rental.

The process of digitising the public stock and implementing BIM rental has the following scope:

- Definition of the parameters to be included in virtual BIM for facilitating the maintenance management of the public rental housing pool, integrating it within the Property Management platform.
- Definition of BIM requirements for projects and developments.
- Definition of BIM requirements for existing buildings.

This scope will inform the deployment of the following specific objectives:

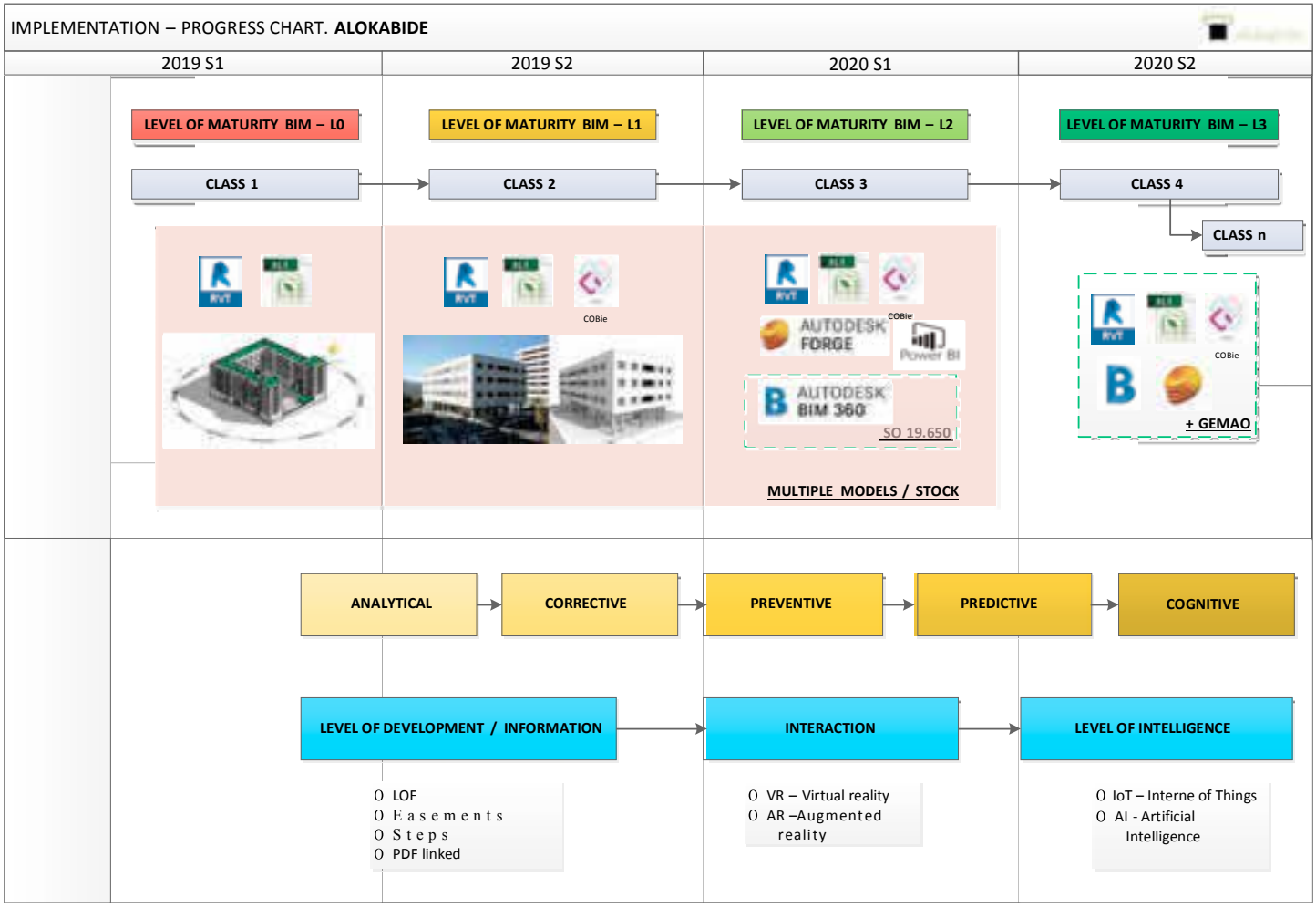
- Screen the data on the CHARACTERISATION OF PROPERTIES generated by the research team at the University of the Basque Country (UPV/EHU).
- Model a series of pilot buildings with BIM Autodesk Revit software.
- Interact and link the characterisation of BIM models, analysing their integration and screening it.
- Define the operating process for integrating BIM models with the Property Management platform.
- Investigate the scope for the use of BIM models by users that are not familiar with the methodology, as well as identify control variables, indicators and metrics, and reporting.

Roadmap for implementing rental BIM:

In order to assist with the understanding and scope of the tasks involved in implementing BIM within a two-year horizon, **a roadmap has been drawn up that includes technological variables, software, and data-sharing formats, as well as the progress of the technological LEVEL OF MATURITY** of ALOKABIDE's internal development team.

The roadmap has the following objectives:

- Incremental development at the level of integrations.
- Overview of tasks to be undertaken and type of related maintenance.
- From an analytical model to a cognitive one: digital twins; the use of BIM 10D.


IMPLEMENTATION – PROGRESS CHART. ALOKABIDE
2019 S1
2019 S2
2020 S1
2020 S2
LEVEL OF MATURITY BIM – L0
LEVEL OF MATURITY BIM – L1
LEVEL OF MATURITY BIM – L2
LEVEL OF MATURITY BIM – L3
CLASS 1
CLASS 2
CLASS 3
CLASS 4
CLASS n
COBie
AUTODESK FORGE
Power BI
AUTODESK BIM 360
SO 19.650
MULTIPLE MODELS / STOCK
+ GEMAO
ANALYTICAL
CORRECTIVE
PREVENTIVE
PREDICTIVE
COGNITIVE
LEVEL OF DEVELOPMENT / INFORMATION
INTERACTION
LEVEL OF INTELLIGENCE
O LOF
O Easements
O Steps
O PDF linked
O VR – Virtual reality
O AR –Augmented reality
O IoT – Interne of Things
O AI - Artificial Intelligence

Parameterisation

The data on the characterisation of buildings were used to validate each field in all the parameters with the systems for classifying the modelling program, and specifically the Autodesk Revit solution.

To render the process more accurate and identify conflicts with real cases, a parallel modelling was made of a housing block, thereby checking the parameters analysed.

This initial analysis was designed to **filter the parameters that defied the buildings in order to unify them in line with the COBie standard,** which is the exchange base with the property management platform (Computerized Maintenance Management System - CMMS).

These parameters will become part of a **future BIM project template to be delivered to each planner at the drawing-board and/or development stages** of the projects undertaken by both VISESA and the BASQUE GOVERNMENT. This means that from the very start the project will integrate the key parameters for ALOKABIDE's management, in the modelling software's native format.

The following table shows the nature of the data that of interest to a property rental management business:

CODE_GROUP NAME	CODE_SUBGROUP NAME
01_GeneralData	01_Identification
	02_OwnershipStructure
	03_BuildingTypesAdminData
	04_BuildingTypesCompositionalData
	05_InspectiondData
02_Installations&BuildinData	06_GraphicData
	07_ConstructionData
	08_Facade
	09_AverageData
	10_UniqueFeatures
	11_ExtCarpentry
	12_Roof
	13_Structure
	14_Costs
	15_Issues
	16_Installations
	17_MaintenanceProviders
	18_PreventiveMeasures
	19_ServiceProviders
	20_Electricity
	21_Gas
	22_Telephones
	23_Water
03_EnergyEfficiency	24_EnergyEfficiency
	25_OverallEnergyRating
	26_PartialRatingByHeatingDemand
	27_Heating
	28_HotWater
	29_AirConditioning
	30_Lighting
	31_RenewablesProduction
	32_ConsumptionsInvoiced
	33_Energy
	34_Transmittances
	35_BuildingData
	36_GroupData(Indirect)
	37_IntraGroupComparison
	38_OutsideAccessibility
04_Accessibility&Inclusion	39_AccessibilityBetweenFloors
	40_AccessibilityOnFloorsInBuilding
	41_ProvisionOfAccessibleFeatures
	42_Safe&SecureCommunalAreas
05_SocialConflictivity	
06_Functionality	43_Average
07_ProperHygiene	
08_Sustainability	

Data classification system adapted to Autodesk Revit.

One of the more complex tasks at this stage involved the discretisation of the parameters and their transfer to the language of categories, classes, types and examples of Autodesk Revit software, as well as the creation of the parameters in the program through the files in TXT format that feed it.

It was finally decided to add the prefix ALK_ to the file to ensure it was properly identified in the software environment.

RVT GROUP CODE	GROUP / FOLDER OF SHARED PARAMETERS	GROUP CODE+GROUP NAME	SUBGROUP	SUBGR CODE+SUBGR NAME	RVT GROUP/FOLDER OF SHARED PARAMETERS
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification
01.01	General Data	01_General Data	Identification	01_Identification	01.01_GeneralData_Identification

PARAMETER BASE NAME	RV AUX_PARAMETER	RVT_PARAMETER	CATEGORY	LOADED INTO REVIT	TYPE OF PARAMETER
FORMER CODE	FormerCode	ALK_FormerCode	Project Information_	YES	Text
STOCK	Stock	ALK_Stock	Project Information_	YES	Text
DEVELOPER	Developer	ALK_Developer	Project Information_	YES	Text
BATCH	Batch	ALK_Batch	Project Information_	YES	Text
DESCRIPTION	Description	ALK_Description	Project Information_	YES	Text
CERTIFICATE OF NEW-BUILD (CNB)	CNB_CertificateNewBuild	ALK_CNB_CertificateNewBuild	Project Information_	YES	Text

Image of the file of filtered parameters “ALK_OP_BEP_Parameters_v##”

Systemising the creation of parameters

The export of the **more than 280 parameters** generated in the Excel control spreadsheet “ALK_OP_BEP_Parameters” to the models of Autodesk Revit created has involved the use of Dynamo software for inter-operating between Revit and the Excel spreadsheet.

Shared parameter TXT files and example of the group “General Data Identification”

This visual programming routine in currently being fine-tuned and improved in order to apply it to any kind of model without it. Accordingly, a BIM PROJECT TEMPLATE is already being developed for its inclusion as part of the **Employer Information Requirements (EIR).**

Once the shared parameters have been created in.txt files, they can be bulk loaded into models for the first time using the RF Tools Parameter Scheduler.

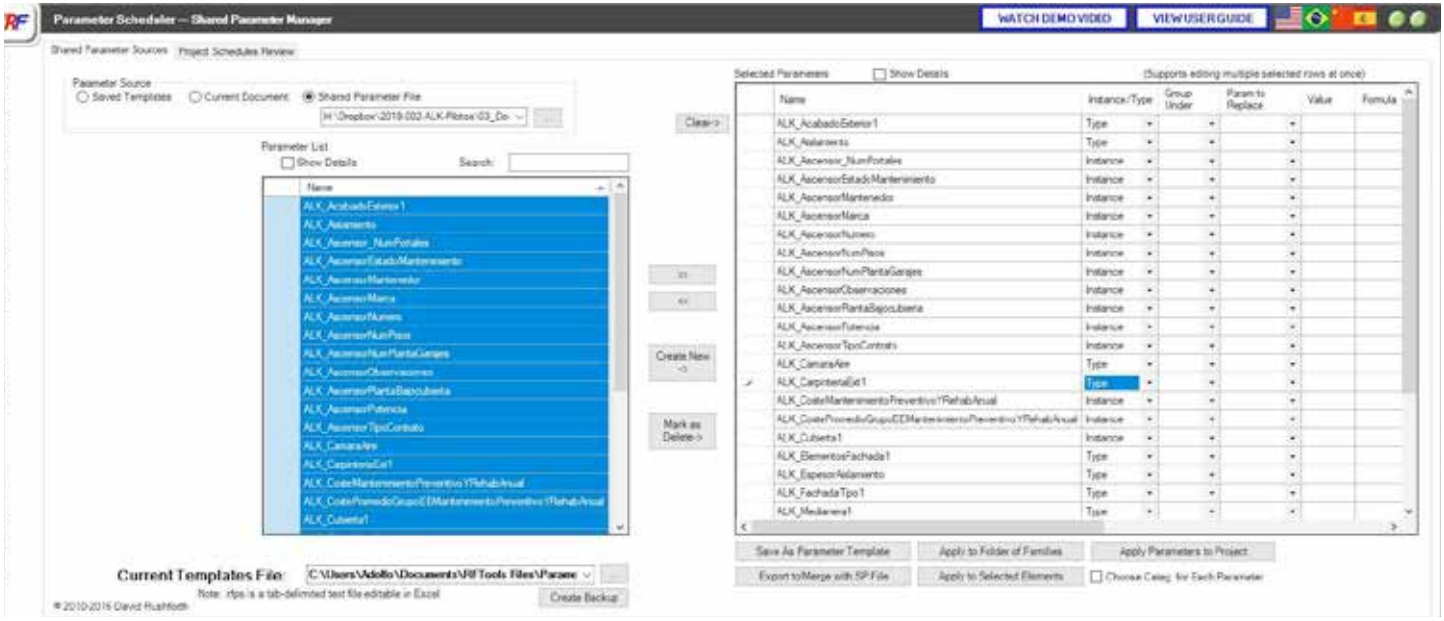


Image of the RF Tools Parameter Scheduler application in Autodesk Revit

EIR: Model requirements for Projects and Developments

In order to ensure that the work is consistent with the building and design process, the conclusions drawn from the project's development have been transferred to a document called Employer Information Requirements (EIR).

In this case, the point of departure is the work undertaken in coordination with the providers of public housing of ALOKABIDE (The Basque Government's Directorate General for Housing and Visesa), which has the following goals:

- The document will provide a **guideline** for the providers of buildings to the Directorate General for Housing and Visesa when planning and developing in BIM, from the perspective of property maintenance management.
- **Alignment with the objectives** of the Directorate General for Housing and Visesa.
- **Document the EIR tender process,** presentation of bids with a pre-BIM Execution Plan (BEP) and allocation and development of the contractual BEP.
- **Identify minimum requirements:** criteria on modelling, model organisation, naming systems, common data environments, and relationship with the CMMS.
- **Include the COBie standard** based on previously defined characterisation parameters.
- Establish the framework for relationships between agents, BIM roles, responsibilities.

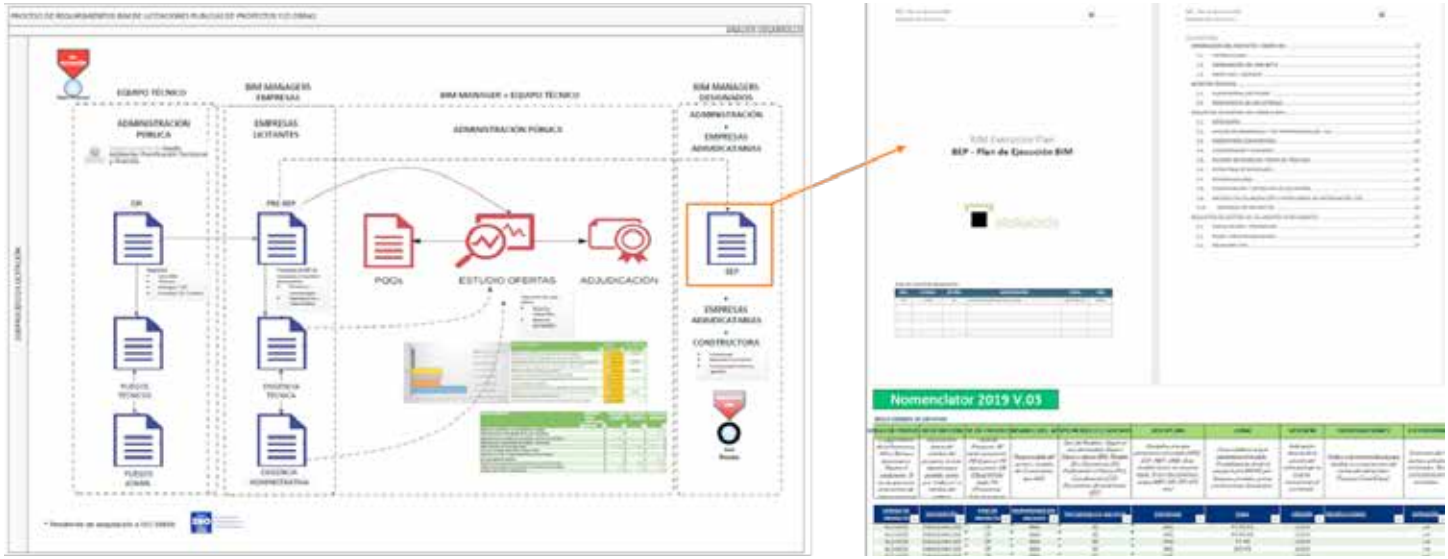
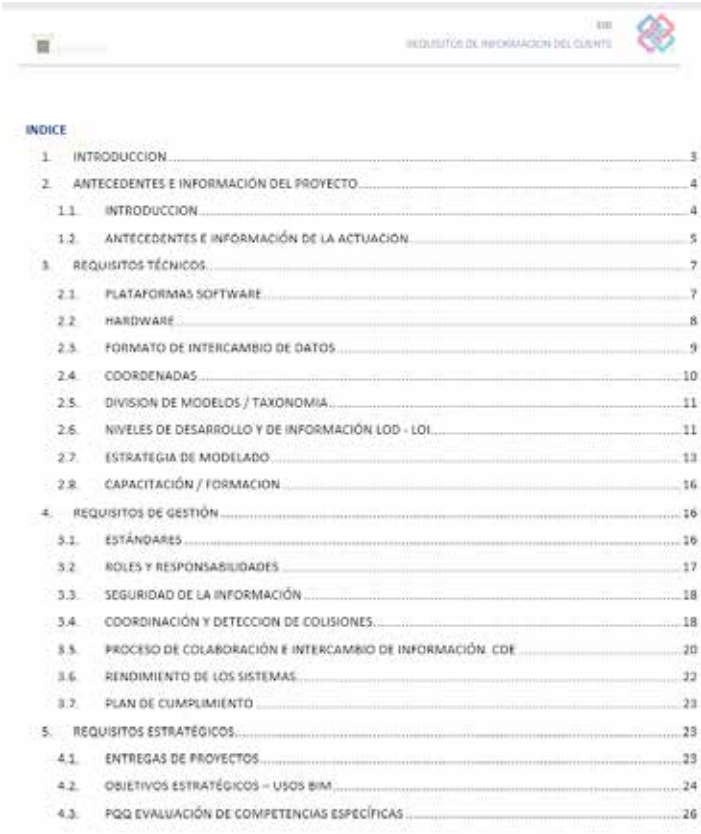


Chart of the tender process including BIM EIR, pre-BEP and BEP documents.

The tenders submitted by the main providers of public rental housing should therefore uphold the maintenance parameters required by the public agency ALOKABIDE.

This EIR document is understood to be **an annex to the technical rules of tender** that lay down the BIM uses that the customer (ALOKABIDE) plans to undertake according to the modelling generated for the Development Project and completed during the building stage. Catering for these BIM uses requires the modelled features to **abide by certain core criteria** and have certain data or parameters (native or created ad hoc) that allow for/facilitate these future BIM uses.



INDICE

Indice del EIR.

Implementation in the organisation

The staff at ALOKABIDE and all the other agents of the administration involved in these processes need to have a **basic understanding of project management in BIM environments** in order to establish the appropriate project requirements in both form and content, and thus oversee the necessary data in future maintenance.

In other words, they need to engage with the entire process and understand the different data sources they will be handling, such as the BIM models.

Tackling this challenge **will require the drafting of templates of project modelling documents** that include the different parameters to be reviewed with a checklist of requirements (work already undertaken in the process of supervising projects of the Directorate General for Housing).

These parameters should be introduced by each planner or model creator supervised by the Directorate General for Housing or Visesa. ALOKABIDE is to use the modelling software's own tools, or other supplementary ones specifically designed for reviewing these models to evaluate and validate the required parameters, for their subsequent inclusion in the CMMS.

Modelling of existing buildings and housing units

Once the BIM models of new-builds have been included in the management of public rental housing, the project is to focus on the digitisation of the existing stock. The Plan ZERO Plana has therefore provided for the gradual modelling of six representative classes:

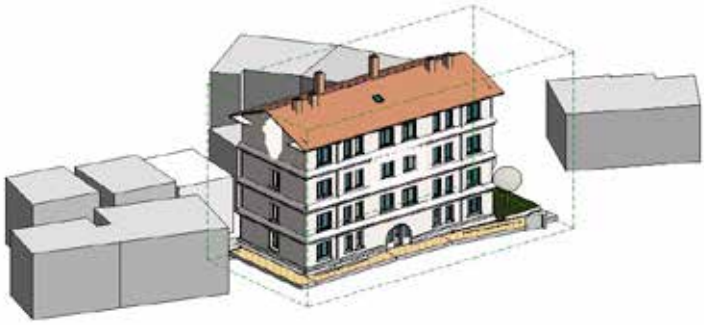
- CLASS 1: building with lift, energy rating A/B. Model Hernani 20.
- CLASS 2: building with lift, energy rating C/D. Model Zabalgana 155.
- CLASS 3: building with lift, energy rating E/F/G.
- CLASS 4: building without lift, energy rating A/B.
- CLASS 5: building without lift, energy rating C/D.
- CLASS 6: building without lift, energy rating E/F/G.

Block of housing units in Hernani in its current state and BIM model of Autodesk Revit

Based on these CLASS TYPES, identified for spearheading the testing and systemisation process, **the modelling process is to be analysed** with a view to identifying critical elements and repetitive methodologies, as well as the structuring of the BIM components used, with a view to linking them to the CMMS.

Furthermore, Autodesk Revit BIM models are to include the Excel parameters in the maintenance management process, increasing the data analysis in each model, the link to existing standards (COBie), as well as their validation in terms of usability and practicality. As explained in the preceding section, this process was automated through the use of Dynamo and RF Tools.

This stage has involved the modelling of two buildings in classes 1 and 2, with access to other modelled classes in projects undertaken by the Directorate General for Housing, such as Ortuella Class 3:



BIM model of the building in Ortuella

Criteria for modelling existing buildings.

The starting point for any process involving the modelling of existing buildings requires the definition of the corresponding criteria and strategies. In this case, the critical points have been as follows:

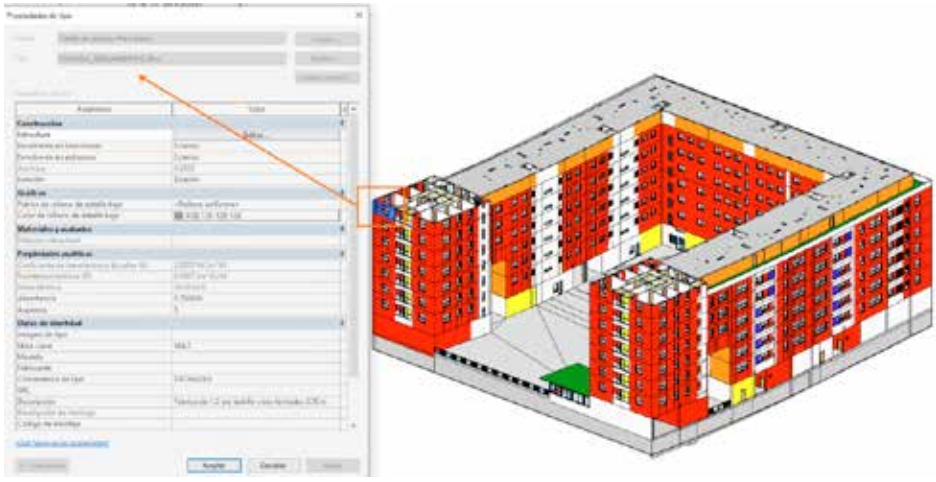
- UTM coordination strategy, outline of basic models (standard floor arrangements and standard housing units).
- Modelling of architecture based on AutoCAD drawings of the basic project provided by ALOKABIDE.
- Review of the inventory of basic architectural features: facades, divisions, finishes, carpentries.
- Modelling of visible structures in communal areas such as columns in garages and ground floors, although the logic of the building process means that the entire structure is modelled.
- Modelling of maintenance features: lifts, fire extinguishers, kitchen equipment.
- Program control:
  - Creation of rooms and areas for the management of surfaces and their related data.
  - Creation of groups of shared parameters in .txt files.
- Information control:
  - Loading of “ALK” parameters in the matrix “ALK_ Parameters_BBIM_v08_CamelCase_REV. xlsm”, of which V09 has already been created, with new comments and observations.
  - Creation of COBie parameters in the model. Verification is pending of the definitive map for each parameter with its corresponding ALK parameters.

Once the preceding process has been completed, the model is ready as an information receptacle for starting to download data and synchronise with the CMMS.

CAD outline of initial data for Zabalgana 155, modelling for standard floor arrangement and building.

Identification of features

All the modelled features are provided with the basic information for their easy identification as regards interior/exterior type. Control criteria of views are to be established for the proper verification of building features, which is very important information with a view to a possible future energy analysis or BIM 6D usage.



Colour chart for the quality control of the finishes on facades.

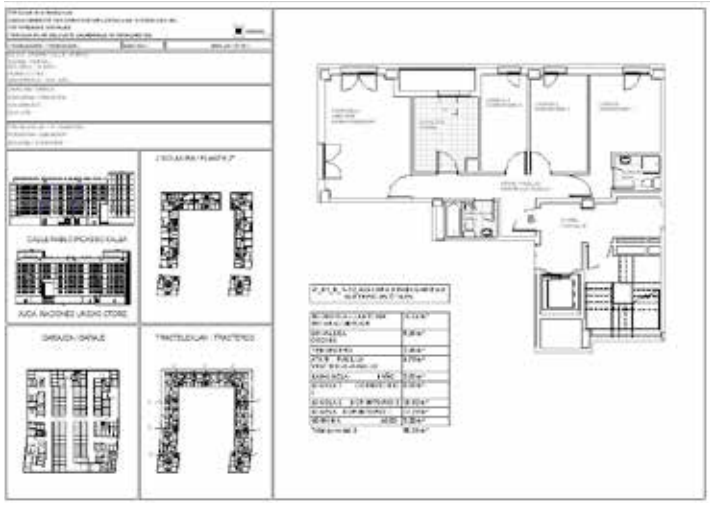
The potential of modelling programs such as Autodesk Revit is based on the capacity for analysing data from different perspectives or formats.

Excel spreadsheets are used to create tables with the values to be validated and for their subsequent integration the CMMS in later stages/challenges.

TIPO	HAB. DETALLE CLAVE	Acabado del suelo	Acabado de muro
BAÑOS	BAÑOS	S2. BALDOSA DE GRES ANTIDESLIZANTE G RESBALADICIDAD 2	P1. ALICATADO CON PLAQUETA CERAMICA HASTA EL TECHO
BAÑOS EXT.	BAÑOS EXTERIOR	S2. BALDOSA DE GRES ANTIDESLIZANTE G RESBALADICIDAD 2	P1. ALICATADO CON PLAQUETA CERAMICA HASTA EL TECHO
COCINAS	COCINAS	S2. BALDOSA DE GRES ANTIDESLIZANTE G RESBALADICIDAD 2	P1. ALICATADO CON PLAQUETA CERAMICA HASTA EL TECHO
COMUNES	ZONAS COMUNES DISTRIBUIDORES	S6. SOLADO GRANITO 60X40	P2. PINURA PLASTICA LISA
CUARTOS INSTAL. BAJA	CUARTOS INSTAL. BAJA	S2. BALDOSA DE GRES ANTIDESLIZANTE G RESBALADICIDAD 2	P3. ENFOSCADO Y PINTURA
CUARTOS INSTAL. GARAJE	CUARTOS INSTAL. GARAJE	S4. HORMIGÓN PULIDO IN SITU	P3. ENFOSCADO Y PINTURA
DISTRIBUIDOR	DISTRIBUIDORES Y VESTIBULOS	S1. SOLADO LAMINADO DE MADERA	P2. PINURA PLASTICA LISA
ESCALERAS	ESCALERAS ZONAS COMUNE	S2. BALDOSA DE GRES ANTIDESLIZANTE G RESBALADICIDAD 2	P2. PINURA PLASTICA LISA
ESTANCIAS	SALONES Y DORMITORIOS	S1. SOLADO LAMINADO DE MADERA	P2. PINURA PLASTICA LISA
ESTANCIAS FT	SALONES Y DORMITORIOS	S1. SOLADO LAMINADO DE MADERA	P2. PINURA PLASTICA LISA
GARAJES	GARAJE	S4. HORMIGÓN PULIDO IN SITU	P7. HORMIGON VISTO
SOTANOS	TRASTEROS Y PASILLOS GARAJE	S4. HORMIGÓN PULIDO IN SITU	P3. ENFOSCADO Y PINTURA
TENDEDEROS	TENDEDEROS	S3. BALDOSA DE GRES ANTIDESLIZANTE DE EXTERIORES. G.RESBL 3.	P6. LADRILLO CARA VISTA

Control planning table of finishes inside homes.

The template also includes formats of drawings that can be easily exported to DWG, PDF or printed. The same applies for the model factsheets corresponding to each housing unit to be managed:

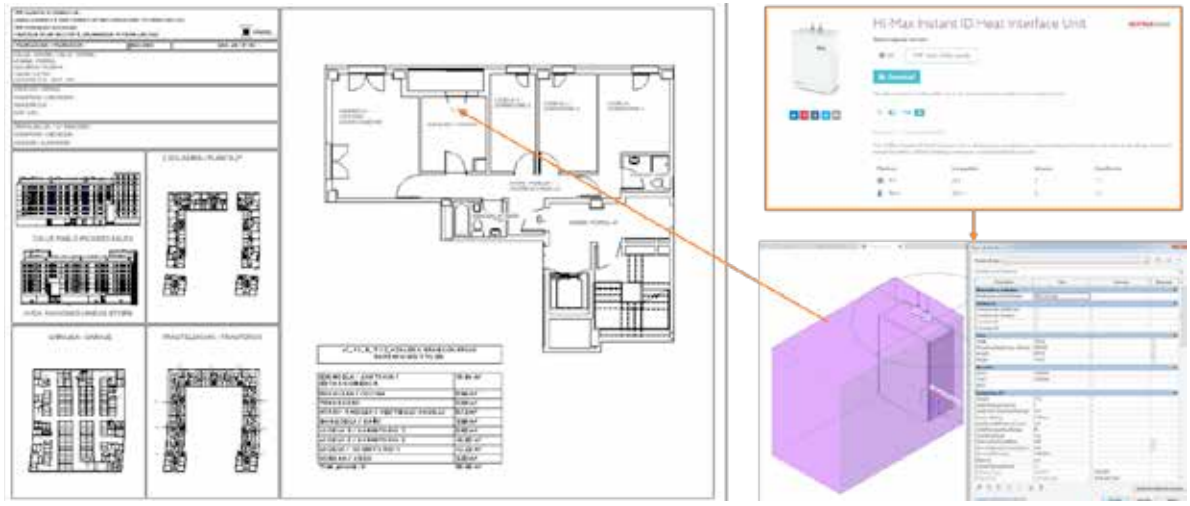


Example of representative type of housing with the ALOKABIDE format.

The **fine-tuning of these templates** in the future classes to be developed **will streamline the supervisory management process** to be conducted by HP Inc. and fully integrated within the process of drawing up projects and building housing, together with the Directorate General for Housing and Visesa.

Data control and management

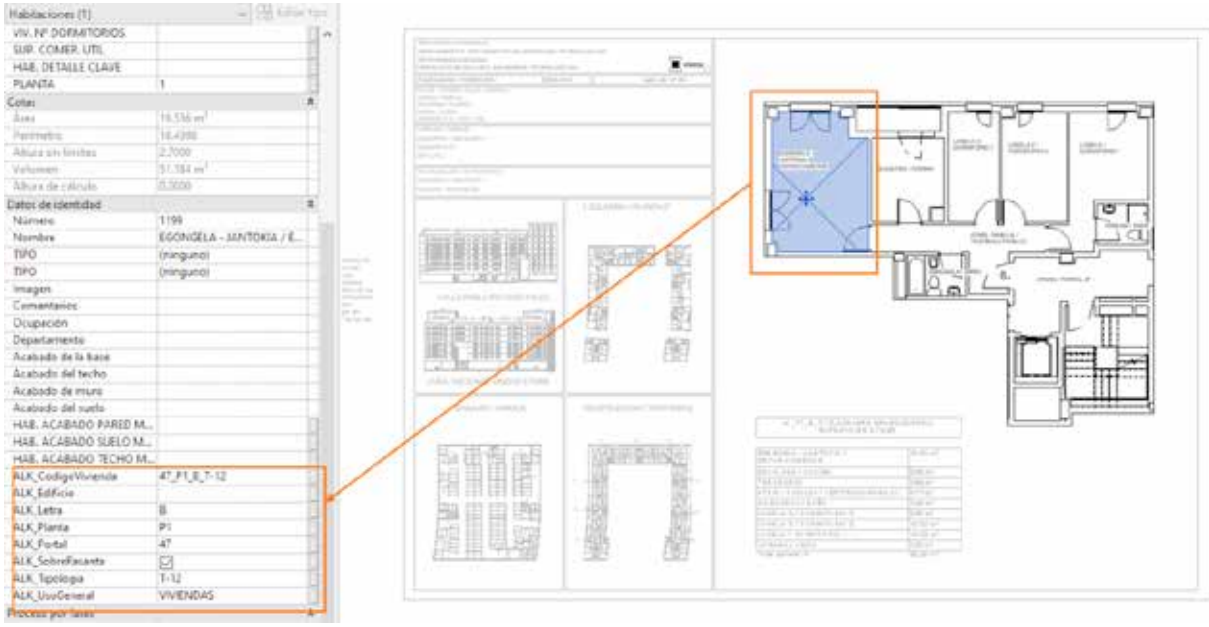
The following provides a number of examples of how the template for the modelling program may facilitate the control of data through factsheets, using colours for display purposes:



Example of a piece of equipment's inventory file

Colour chart for representative buildings and their relationship with the data in tables according to entrances and zoning.

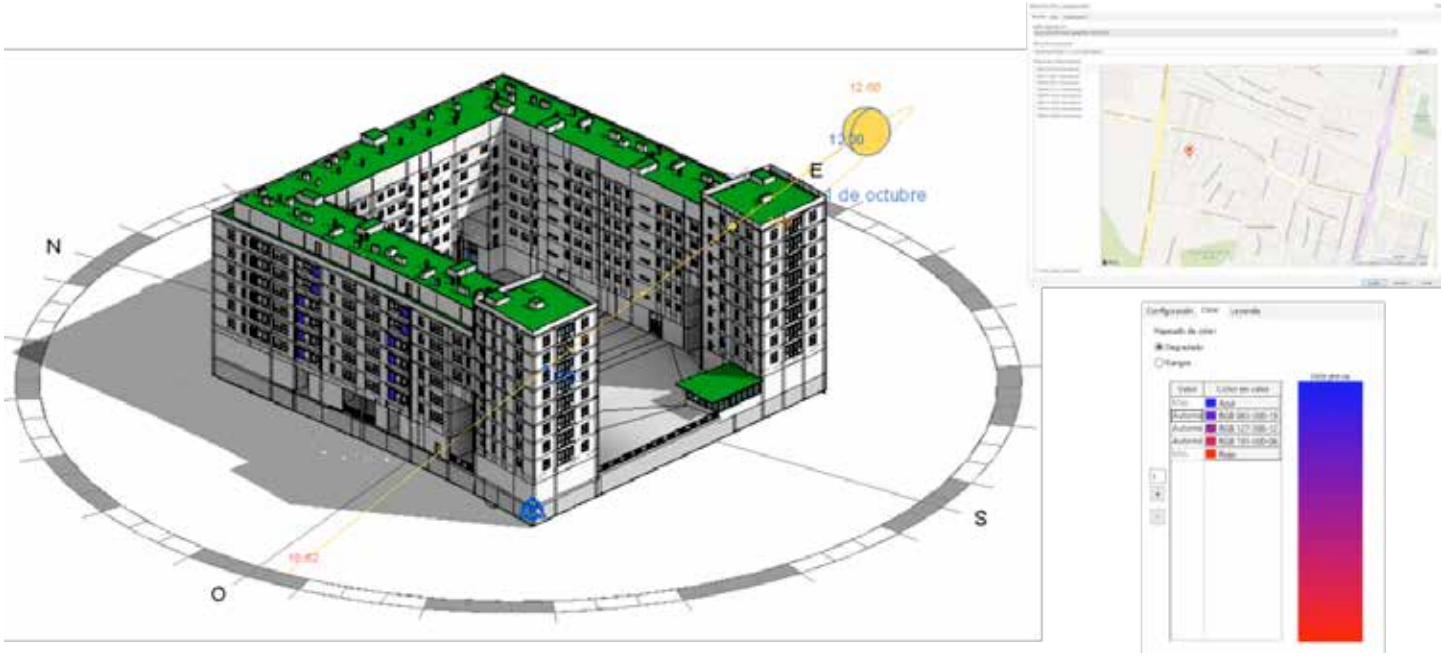
Each one of the aspects modelled and the housing units has all the parameters defined in the Excel spreadsheet for their control and subsequent transfer to the CMMS.



Information on the indoor layout of the buildings at Zabalgana 155 and Hernani 20 in the Autodesk Revit model

Location and energy

The combination of the virtual model's parameters and visual power of Autodesk Revit modelling software will allow **verifying the orientation of the building's various features.** Likewise, the integration with energy calculation programs, such as Green Building Studio or Insight, will reveal the user potential of BIM methodology.



Georeferenced location and orientation of the building at Zabalgana 155.

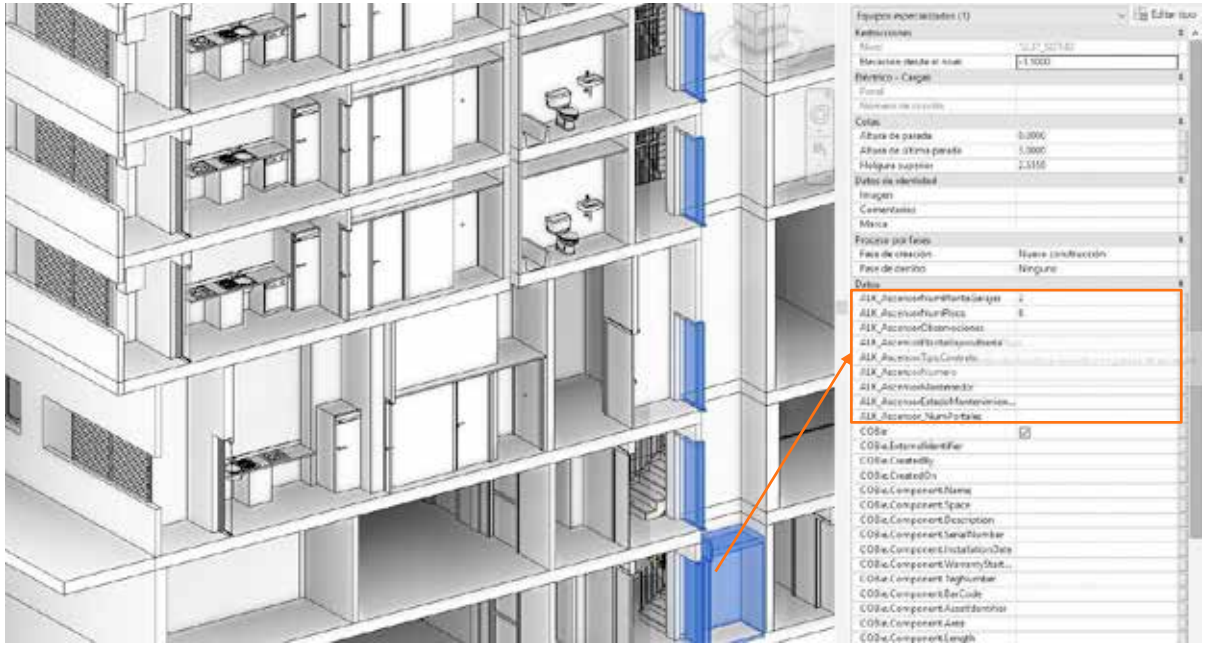
Integration of BIM & CMMS models

The overriding purpose of digitising and modelling the existing public rental housing pool is its **integration with rental management systems and the CMMS.** This stage will take into account the different sources of information for the BIM models:

- **Models of new-builds:** models enriched during the development of the building process, right from the design stage. These models will follow the aforementioned EIR, thereby catering for the integration of models in the management tool, to guarantee their operation and ensuring they are fit-for-purpose.
- **Models of existing stock:** models developed a posteriori with limited data (CAD, point cloud…). Models of this kind require defining specific parameters for the tender of the modelling of the various properties managed by ALOKABIDE and their integration in the management tool, to guarantee their operation and ensuring they are fit-for-purpose.

With a view to streamlining the work flow involving the export of data on housing units or buildings to the management of the housing stock, the analysis and modelling of the different classes of buildings **will be followed by the various types of export to be made,** their settings, and the file formats to be used for their integration in the CMMS adopted by HP Inc.

In addition, the Autodesk Viewer will be required to provide a simple display solution that could involve a BIM360, although it is beyond the scope of this contract.



Example of COBie information for the building at Hernani 20

A significant part of the work involves **compliance with the standard format of the Construction Operations Building Information Exchange (COBie),** which provides the platform for the connection between Autodesk Revit and the CMMS, integrating the data required for HP Inc. within it.

This calls for **dedicated technical meetings** for adapting to the new data processing system for the CMMS.

In the future, this work **will allow for monitoring through parameters** that will underpin the improvement in the management of the entire housing stock, ensuring an optimum analysis of future needs for finetuning timeframes, costs, and management in general.

Conclusions

Once the pilot projects have been fully integrated within the CMMS, the next step will be to model the existing housing stock, which may take 1-3 years depending on priorities and the resources available, and the integration of models in the CMMS.

ALOKABIDE will thus have the data integrated within a single CMMS platform and may make the best possible use of the public funds earmarked for public rental housing, based on BIM models, or also on **“BIM Rental”.**

8.4. CALENDAR 2020-2050

Investment planning

The deployment of the measures planned for the existing public stock will take **30 years,** from 2020 to 2050, according to the objectives set out in the Plan ZERO Plana.

Although the schedule for the refurbishments follows a time- and cost-based planning process, the measures in other spheres are to be introduced in the **first two five-year periods** and will be undertaken through far-reaching campaigns with an overall impact on the housing stock, such as its **digitisation,** which will logically be completed within a specific timeframe of **approximately five years.**

PLAN ZERO PLANA INVESTMENT PLANNING FOR FIVE-YEAR PERIODS

			2020-2025	2025-2030	2030-2035	2035-2040	2040-2045	2045-2050
CHALLENGE 1. ENVIROMENT PUBLIC STOCK	1.1 Efficiency	175,774,767	31,370,713	30,457,066	29,404,801	29,416,525	30,325,600	24,800,062
	1.2 Renewable energies and self-consumption	INCLUDED IN 1.1						
	1.3 Maintenance and repair	INCLUDED IN 1.1						
CHALLENGE 2. COMFORT AND WELLBEING. TENANTS / HOMES	2.1 Accessibility	7,457,075	4,319,671	864,100	298,500	640,500	652,652	681,652
	2.2 Comfort	Proposal in "Outlook for public rental management"						
	2.3 Energy poverty	1,506,607	753,304	753,303				
CHALLENGE 3. ADVANCED PUBLIC MANAGEMENT ALOKABIDE	3.1 Energy support	50,000	50,000					
	3.2 Digitisation	7,236,948	2,209,200	2,300,449	1,660,449	1,066,850		
	3.3 Impact on tenants	721,400	103,612	155,905	145,291	106,631	112,766	97,195
		192,746,797	**38,806,500**	**34,530,823**	**31,509,041**	**31,230,506**	**31,091,018**	**25,578,909**

In a more detailed manner, we have broken down the first five-year period to show the measures planned for the buildings with the highest score in prioritisation.

PLAN ZERO PLANA INVESTMENT PLANNING FOR FIVE-YEAR PERIODS

CODE	BUILDING DESCRIPTION	NUMBER OF HOMES	NUMBER OF RENTAL HOMES	PRIORITY	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
GOB-B007	EL BURGO 48 SANTURTZI	48	24	2,132	1,636,800.00				
GOB-B043	ORTUELLA 8 La Estación	8	7	2,125	658,293.68				
GOB-G045	ITURRITXO 9	12	8	2,109	1,179,630.12				
GOB-A010	AMURRIO 21 Bañuetaibar	21	21	2,105	2,242,395.12				
GOB-B017	TRAPAGARAN 13 Bº ZABALLA	13	13	2,087	443,300.00				
GOB-B034	BASAURI 80 Solabarria	80	56	2,071		2,728,000.00			
GOB-B018	PLENTZIA 20 Casa cuartel	20	20	2,053		682,000,00			
GOB-B024	SESTAO 35 C/ CHAVARRI	35	22	2,053		1,193,500.00			
ALO-A002	228 IBAIONDO	228	228	2,035			7,774,800.00		
ALO-B002	MINA DEL MORRO 84	84	84	2,035		658,293,68			
ALO-B007	ARBOLEDA 15	15	15	2,005		511,500,00			
GOB-B014	PORTUGALETE 66 Repélega (58)	66	58	2,000				2,250,600.00	
GOB-A014	VITORIA 99 Sierra Urbasa-Roncesvalles	99	99	1,932				3,375,900.00	
GOB-B044	ARRIGORRIAGA 73 LA PEÑA	73	48	1,932					2,489,300.00
GOB-G014	DONOSTIA 104 ATOTXA	104	104	1,932					3,546,400.00
				CHALL. 1	**6,160,418.92**	**5,773,293.68**	**7,774,800.00**	**5,626,500.00**	**6,035,700.00**
ESTIMATED INVESTMENTS 1ST FIVE-YEAR PERIOD - PLAN ZERO PLANA				**CHALL. 2**	923,900.00	984,125.00	1,037,300.00	914,100.00	1,213,550.00
				CHALL. 3	736,708.74	499,251.56	479,802.64	188,449.80	458,599.58
€ 38,806,500					7,821,027.66	7,256,670.24	9,291,902.64	6,729,049.80	7,707,849.58

Subsidies and Financing

At the time of drafting this Plan ZERO Plana, the outlook for subsidies and financing for refurbishment measures is **constantly being reviewed.**

A review of existing subsidies and types of financing is planned in order to analyse their corresponding request for some of the classes of buildings identified.

European Financing Measures

European Investment Bank (EIB): one of the EIB's remits is to transform Europe's energy system. It has a budget of €20 billion for measures to combat climate change, and in the field of energy efficiency the figure has doubled in recent years, with **75% earmarked for buildings.**

The projects financed by the EIB are seen as investments, providing financing products that are mainly loans:

- Direct loans to the public or private sectors (minimum loan of €26m).
- Brokered loans for financial institutions.
- Investment funds.
- Technical support.

The EIB lends up to **50% of the financing,** with a minimum of €26m. The advantage that the EIB has is its very high rating, which together with its not-for-profit status means that its interest rates are lower than the market's.

Strategic Energy Technology Plan (SET- Plan): besides the EIB, the EU is seeking to foster the refurbishment of buildings via **schemes for driving technological developments.**

The SET-Plan is the mainstay of Europe's energy policy on research and development.

Within this plan, the proposals or projects related to refurbishment over the past decade have been framed within the Horizon 2020 Energy Challenge.

Social Impact Bonds (SIBs): this is another tool of interest. An innovative financial mechanism whereby the public administration contracts one or more social service providers (social enterprises or not-for-profit organisations), and uses private investments to pay for the achievement of specific social outcomes.

SIBs -like other debt securities- offer a rate of return, but this gain is tied to a social or environmental achievement; with a significant rate of return in the form of savings on social spending for the administration.

Any measure funded by the private sector that reduces a public agency's social spending may be entitled to these bonds. As there is a market for their trading, they are in fact closer to a public-private initiative.

Another major difference with a standard bond is that **an investor only gains if the targets are met.** In the case of refurbishment, they allow financing projects in which other kinds of favourable impacts can be included, such as the jobs created or the savings in healthcare spending by improving the level of comfort in homes.

This could be a way of avoiding the problem of using energy saving figures as the sole indicator, which as we have already explained may not be the case in the refurbishment of housing occupied by low-income households.

Financing measures in Spain

The following table provides an overview of subsidies in Spain:

PUBLIC	**ERDF** EUROPEAN REGIONAL DEVELOPMENT FUND	**BASQUE GOVERNMENT**	**PRIVATE AND PPVS FOR REFURBISHING BUILDINGS**
			ACCESSIBILITY COUNCILS, LOCAL AUTHORITIES AND SOCIAL ENTERPRISES
			REFURBISHMENT OF EXISTING PROPERTIES OR URBAN DEVELOPMENT AND BUILDING
			EFFICIENT REFURBISHMENT OF HOMES AND BUILDINGS FOR INTERVENTION
			URBAN REGENERATION
		IDAE INSTITUTE FOR ENERGY SAVING AND DIVERSIFICATION	**PAPEER II**
			ERDF MULTIREGIONAL OPERATIONAL PROGRAMME (POPE)
PRIVATE	**FINANCIAL INSTITUTION**	**AD-HOC FINANCIAL AGREEMENT**	
		FINANCIAL PRODUCT	
	DEVELOPERS	**MODES ACCORDING TO CUSTOMER**	
PUBLIC PRIVATE			

Public financing measures adopted by the central government

Programa de Ayudas para la Rehabilitación Energética de Edificios Existentes del sector residencial (PAREER II) [Programme of Subsidies for the Energy Refurbishment of Existing Buildings in the residential sector. Part of the Planes Nacionales de Acción de Eficiencia Energética (PNAEE 2014-2020 and PNAEE 2017-2020) [National Action Plans for Energy Efficiency].

The second call for PAREER is currently under way (housing and hotel use).

CLIMA projects for the residential sector. Spain's Law 2/2011, of 4 March, on the Sustainable Economy, set up a fund for the purchase of carbon credits attached to the State Secretariat for Climate Change, for the purpose of **fomenting low-carbon business activities** and contributing to Spain`s targets in the matter **of reducing greenhouse gas emissions.**

National Plan for fostering the rental of homes, the refurbishment of buildings and urban regeneration and renewal. This includes a programme for driving the refurbishment of buildings with a view to improving their energy efficiency. The right to subsidies requires a reduction in the overall annual energy demand for heating and air-conditioning in a building, according to the energy certificate, of **at least 30% over the situation prior to the measures taken.**

ICO line for the "Refurbishment of homes and buildings". As part of the ICO Line for Businesses and Entrepreneurs, it also contemplates the financing of the refurbishment of private homes and buildings. In this case, housing associations, groups of housing associations and private owners are the ones entitled to the subsidies earmarked for this purpose.

National Energy Efficiency Fund. Article 7 of EU Directive 27/2012/EU on energy efficiency and policies and alternative measures provides for the financing of economic, financial, technical, training and other support measures with a view to **increasing energy efficiency across the different sectors,** including building.

PURPOSE

Incentivise and promote the performance of reform measures that favour the reduction in carbon dioxide emissions through energy saving. and improve energy efficiency and the use of renewable energies on existing buildings.

MEASURES

- **Improve the thermal envelope's energy efficiency**
- **Improve the energy efficiency of thermal and lighting installations**
- **Replacement of conventional energy by solar thermal**
- **Replacement of conventional energy by geothermal**

BENEFICIARIES

- **Owners of existing buildings**
- **Individual or collective housing associations**
- **Operators, rental companies or concession holders of buildings**
- **Energy service companies (ESCOs)**

SUBSIDIES

- **Non-repayable grant**
- **Qualified loans**

Financing measures adopted by the Basque Government

The Basque Government provides two main types of subsidies as part of the RENOVE programme (ORDER of 12 June 2019).

1. Programme of subsidies for private individuals and housing associations for the refurbishment of buildings and housing units. This might be expedient in associations in which the work is paid for mainly by private owners. Subsidies are granted for work and installations related to a building's strength, solidity, firmness and stability, as well as structural alterations and building work for improving energy efficiency:

- TYPE 1 measures: work on structural alterations and building work.
- TYPE 2 measures: work on improving living conditions.

The award criteria and the percentage involved are based on the beneficiary's weighted income.

2. Programme of subsidies in the efficient refurbishment of housing units and buildings for the arrangement of measures on existing property

PURPOSE	**Improve accessibility, fire safety, energy efficiency in developments involving several blocks or groups of buildings**
OPERATION	**Improve energy performance to a C rating**
	Improvement
	Improve fire safety conditions
	20% energy monitoring > 20 homes; 15% < 20 homes
BENEFICIARIES	**Housing associations of buildings grouped into entire housing blocks built < 1980**
	Councils, minor local authorities, public building societies and public housing developers.
SUBSIDIES	**Non-repayable grants**

Thus far, besides the housing associations involving home-owners, the beneficiaries could also be councils, minor local authorities, public building societies and public housing developers.

These beneficiaries may be shared or full owners of the buildings, but they **must be used for subsidised rental.** The aim as from 2020 is for greater opportunities for public housing companies.

The following are the main requirements:

- For buildings: built before 1980, have an ITE technical building inspection (generally excluding levels 1, 2 and 3) and not be in a derelict state.
- For refurbishment, they should comply overall with the following: improve energy efficiency to at least a C rating (including monitoring), improving accessibility and/or fire safety conditions. A minimum number of housing units is stipulated for buildings of groups of housing blocks, as per the arrangement.

  If the housing units do not meet the conditions for habitability, the refurbishment should involve measures to ensure the minimum conditions are met. They must not have been granted a building licence. The costs liable to a subsidy are to comply with the drafting of documents, site management and the undertaking of measures stipulated in the Order. Three different quotations are to be submitted, and payments are to be made according to the percentage of the work completed.

Quotations are to be made on the models provided for in the Order. **The project needs to be submitted for its approval,** although this is to be done once the decision has been notified. On a general basis, **the cap on the amount of the subsidy is 15,000 €/home.** The measures financed in 2019 are to have started in that year and finish before 31 July 2022.

Finally, the Basque Government has developed a framework for **bonds linked to both green and social projects** whereby it can issue bonds **associated with sustainability**. This framework for the issue of Sustainable Bonds is aligned with Green Bond Principles (“GBP”), Social Bond Principles (“SBP”) and the 2017 Sustainability Bond Guidelines (SBG), for facilitating the transparency, disclosure and integrity of the Basque Government’s sustainable bonds. One of the categories of programmes eligible for financing involves **affordable housing, renewable energy, EE, and adapting to climate change.**

At council level

As part of the mayors’ agreement, local councils in Euskadi-The Basque Country such as Irun, Donostia-San Sebastian, Basauri, Vitoria-Gasteiz, Areatza, Bilbao, Oñati, Amezketa, Abanto and Zierbana, Balmaseda, Tolosa, Usurbil, Portugalete and Hondarribia, among other, have planned to adopt energy efficiency measures.

Private funding measures

The following are two examples of the successful private funding of refurbishment measures:

- Within the EFI-DISTRICT refurbishment project undertaken in the neighbourhood of Chantrea in Pamplona. It is a **framework agreement between Nasuvinsa and the savings bank Caja Rural de Navarra** involving unsecured loans for 100% of the cost and without any additional guarantees.
- A financial product provided by Deutsche Bank for housing associations. It is a **fixed-interest personal loan for 100%** of the cost with a repayment period of up to 10 years.

Public-private funding measures

These are two recognised examples of public-private funding:

- IFRUU 2020 – Financial instrument for urban renewal and refurbishment. Government of Portugal: https://ifrru.ihru.pt
- KREDEX – Ministry of foreign affairs and communications of Estonia: https://www.kredex.ee/en

Fiscal measures

Urban development and refurbishment measures are exempt from VAT. The installation on housing of equipment that uses renewable sources of energy means **they can be classified as refurbishment measures,** with their transmission being considered the initial delivery of buildings for the purpose of VAT.

The tax authorities in each one of the three Basque provinces and in Navarre provide the following tax rebates:

- An **18% rebate** on the amount invested (including the interest incurred on third-party loans).
- **1,530 euros,** maximum annual deduction (which correspond to 18% of 8,500 euros).
- **Those aged under 30 and large families:** 23%, with a maximum annual deduction of 1,955 euros (23% of 8,500 euros).
- With a cap on the sum of the amounts deducted of 36,000 euros under the item of investment over the successive tax years (fiscal credit per taxpayer).
- Mortgage savings accounts may be used for the refurbishment of a first home within six years as from the date when the account is opened.

8.5. Steering Committee

Addressing a project of the magnitude of the Plan ZERO Plana, with so many variables and stakeholders, of such a diverse nature, in itself poses a challenge in terms of organisation and team coordination.

The organisation for developing the Plan ZERO Plana has revolved around the public company ALOKABIDE, which has supervised the project, directing the various collaborators as needs required so that all the ambits of the public management of social rental could be reflected in the different lines of research launched.

Monthly meetings have been held for monitoring the project with sharing of the progress and difficulties encountered, to assess the possibilities of addressing and overcoming them. This has clearly been an enriching experience that has revealed the different stakeholders, topics, sectors and businesses that coexist around the social management of the public housing stock.

It has not all been plain sailing, as transferring the social side of the management of public rental to an innovation project within the field of energy **requires a particular engagement and special commitment toward the project.**

ALOKABIDE

ALOKABIDE, as the Basque Government's own agent for public rental management, has become a **benchmark in the holistic management of the public rental housing pool in the Basque Country,** with a stock under management amounting to 14,000 housing units in 240 buildings. This public company's protracted experience has raised major issues in the fields of energy, design and management, which have thus far not found a place within a promotion strategy focused on subsidised housing (VPO in Spanish).

Therefore, as part of a strategy centred on public rental, the views and concrete approaches emanating from those that manage people and housing take on yet even further importance in the drafting of the Plan for the Energy and Accessibility Refurbishment of the Public Rental Housing Pool.

Project leaders:

ALOKABIDE

alokabide

Research line: coordination of the Plan for the Energy and Accessibility Refurbishment of the Public Social Rental Housing Pool.

Purpose: guarantee the use of management and analysis criteria regarding the idiosyncrasies of social rental in the Plan's design, whereby the future refurbishment and accessibility plan will successfully manage public rental.

Carlos Orbea

Gorka Sagasti

Iñigo Antepara

THE BASQUE GOVERNMENT'S DEPARTMENT OF THE ENVIRONMENT, TERRITORIAL PLANNING AND HOUSING

EUSKO JAURLARITZA
GOBIERNO VASCO
INGURUMEN, LURRALDE PLANGINTZA ETA ETXEBIZITZA SAILA
DEPARTAMENTO DE MEDIO AMBIENTE, PLANIFICACIÓN TERRITORIAL Y VIVIENDA

Research line: ECCN 2017 refurbishment.

Purpose: understand the impact of ECCN refurbishment work and projects on public social rental buildings undertaken in 2017, with a view to analysing the pool's overall strategy.

Pablo García Astrain

Ainara Sertutxa

Igor Cerrillo

Members of the Steering Committee:

Businesses and agencies that attend the project's monitoring meetings, **contributing their experience in the different areas of analysis** and conducting lines of research in specific ambits of their expertise to add to the common strategy of the Plan ZERO Plana:

UPV/EHU ENEDI BG's QUALITY CONTROL LABORATORY

Universidad del País Vasco / Euskal Herriko Unibertsitatea

Research line: overall energy assessment of the public rental pool.

Purpose: understand the current state of the public stock held for rental and its needs in terms of energy refurbishment to ensure certain standards of efficiency, and develop the Special Auditing Plan.

Juan María Hidalgo

Pablo Hernández

ACEDE/ CLUSTER DEL HOGAR DE EUSKADI/BASQUE HOUSING CLUSTER

acede CLUSTER DEL HOGAR DE EUSKADI

Research line: coordination of the project's disclosure both internally and externally.

Purpose: take part in the project's coordination by initiating a conversation that will help to spread the project's rationale and content messages in order to ensure its alignment and focus.

Xabier Gorritxategi

Eukene Barrenetxea

TECNALIA

tecnalia Corporación Tecnológica

Research line: identification of types of housing and design of the dashboard for the Plan ZERO Plana.

Purpose: initial definition of the public rental pool and identification of the types of housing used to conduct the detailed studies for focusing the analysis of solutions and the development of the dashboard of indicators according to the project's strategic approaches.

Maider Alzola

Ainhoa P. de Arrilucea

ENTE VASCO DE LA ENERGÍA/ BASQUE ENERGY AGENCY

Research line: overall energy assessment of the public rental pool.

Purpose: technical guidance for the project regarding the implications of the Decree on Sustainability in the measures provided for in the Plan ZERO Plana.

Álvaro Laborda

EFINER SERVICIOS ENERGÉTICOS/ ENERGY SERVICES

Research line: analysis of the use of energy in the public social rental pool and energy support for users. Energy self-management systems.

Purpose: discover the profile of energy use, coordinating the monitoring of homes, analysing the true consumptions recorded and supporting users in contracting advantageous supply rates to guarantee the most affordable use of household income on energy costs.

Luis María Sanchez

PROJEKTA URBES

Research line: analysis of accessibility in the Public Rental Pool.

Purpose: understand the current state of the public rental pool under management and its needs in terms of accessibility.

Patxi Galarraga

Miren Vives

UPV-EHU GRUPO CAVIAR UNIVERSITY OF THE BASQUE COUNTRY

Research line: description of the Public Social Rental Pool.

Purpose: define the parameters that classify the different buildings under management in order to include them in the latest generation management tools.

Rufino Hernandez

Matxalen Etxebarria

ERAIKUNE – THE BASQUE BUILDING CLUSTER

Research line: coordination of refurbishment work for housing associations.

Purpose: analysis of financing arrangements and searching for technical refurbishment measures that are consistent with the public rental pool's requirements.

Maialen Oregi

IDOM

Research line: cost-effective analysis of technical solutions in energy refurbishment.

Purpose: propose the most suitable technical solutions for each building depending on the various parameters for analysing energy, performance, orientation, etc, guaranteeing the best possible solutions in terms of cost and suitability in each specific case.

Blas Beristain

Eduardo Tello

BERRILAN

Research line: implementation of BIM for the public social rental pool.

Purpose: design of BIM protocol for the incorporation of models in ALOKABIDE's management tools, as well as the definition of the strategy for modelling the public rental pool, integrating advanced tools for the management of buildings.

David Barco

ASSOCIATIONS OF ESTATE MANAGERS IN THE PROVINCES OF GIPUZKOA AND ALAVA

Research line: coordination of refurbishment work in housing associations.

Purpose: design the basic management approach and support housing associations when undertaking the measures contemplated in the Plan ZERO Plana.

Eguzkine Uribesalgo

Other stakeholders:

Businesses and agencies that have contributed by taking part in one or other of the pilot projects to add their experience in specific areas of analysis or facilitating the design and dissemination of the Plan ZERO Plana:

ESETEK	**Contribution made:** auditing of communal systems of heating/hot water and renewables.	**Purpose:** hold energy audits on communal heating systems and the production of hot water, analysing the performance of production systems, within the Special Auditing Plan. It is part of the Special Auditing Plan. **Responsible:** Olivia Gonzalez
LKS	**Contribution made:** renewable installations and self-consumption (Pilot Sal171).	**Purpose:** discover the public stock's real options for the deployment of renewable sources of energy and explore self-consumption scenarios. **Responsible:** Victor Díaz de Arcaya, Garbiñe Sánchez and Carlos Beracierto.
CELLNEX	**Contribution made:** monitoring housing for modelling comfort and definition of the profile of energy use (Pilot Zab155).	**Purpose:** discover the level of comfort in homes with a view to identifying the use of energy; interconnection of data and export to platforms.
VAILLANT GROUP (SAUNIER DUVAL – VAILLANT)	C**ontribution made:** analysis of refurbishment solutions in the specific case of Individual boilers.	**Purpose:** analyse the various options for renovating the stock of Individual boilers from the perspective of decarbonisation and the efficiency of installations, in the specific case of IBAIONDO 228 (building owned by ALOKABIDE, with an obsolete stock of Individual boilers). **Responsible:** Fran Escabel
WOKO	**Contribution made:** layout of documents and presentations for the project's public dissemination, including a video presentation.	**Purpose:** visibility of the Plan ZERO Plana **Responsible:** Oto Whitehead and Xandra Garrido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quality of life in architecture


projekta
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