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# Conference Energy and Climate Challenges

Republic of Croatia, Dubrovnik

**EEA GRANTS 2014-2021**

Environment Programme



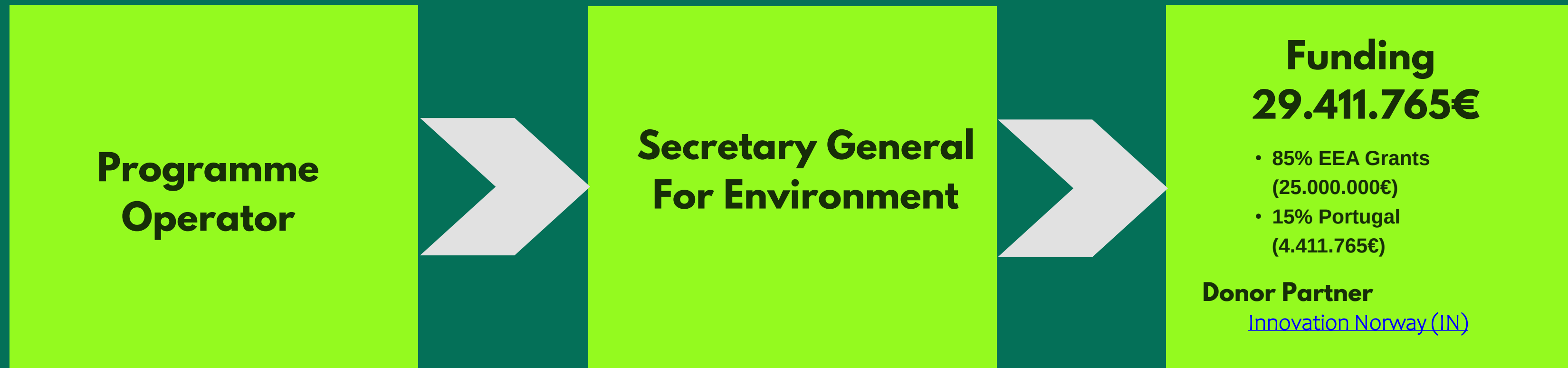
REPÚBLICA  
PORTUGUESA

AMBIENTE E AÇÃO CLIMÁTICA



SECRETARIA-GERAL  
DO AMBIENTE

# Environment Programme



# Strategic Objectives



- *Ensuring the good environmental status of ecosystems in Portugal*
- *Reduce the effects of pollution and other human activities harmful to the environment*
- *Increase resilience to climate change through mitigation and adaptation measures towards a low-carbon economy*
- *Reduce economic and social disparities*
- *Strengthen cooperation with donor and beneficiary countries*

# Environment Programme

**161**

Applications

**125**

Approved

**60**

Supported projects

**8**

*Calls/SGS*

**€ 52,390,148**

Total Investment

A Fund Demand  
2,25 times above  
the Available Fund

**3**

*PDP*

# 60 PROJETOS

**SGS#1** – Madeira, Aveiro, Porto, Braga e Viana do Castelo 2

**SGS#2** – Lisboa 2, Porto e Braga

**SGS#3** – Braga, Porto 2, Coimbra, Leiria, Lisboa 5, Setúbal, Beja 3, Évora 2 e Faro

**Call#1** – Açores, Braga, Vila Real, Aveiro, Leiria e Lisboa 3

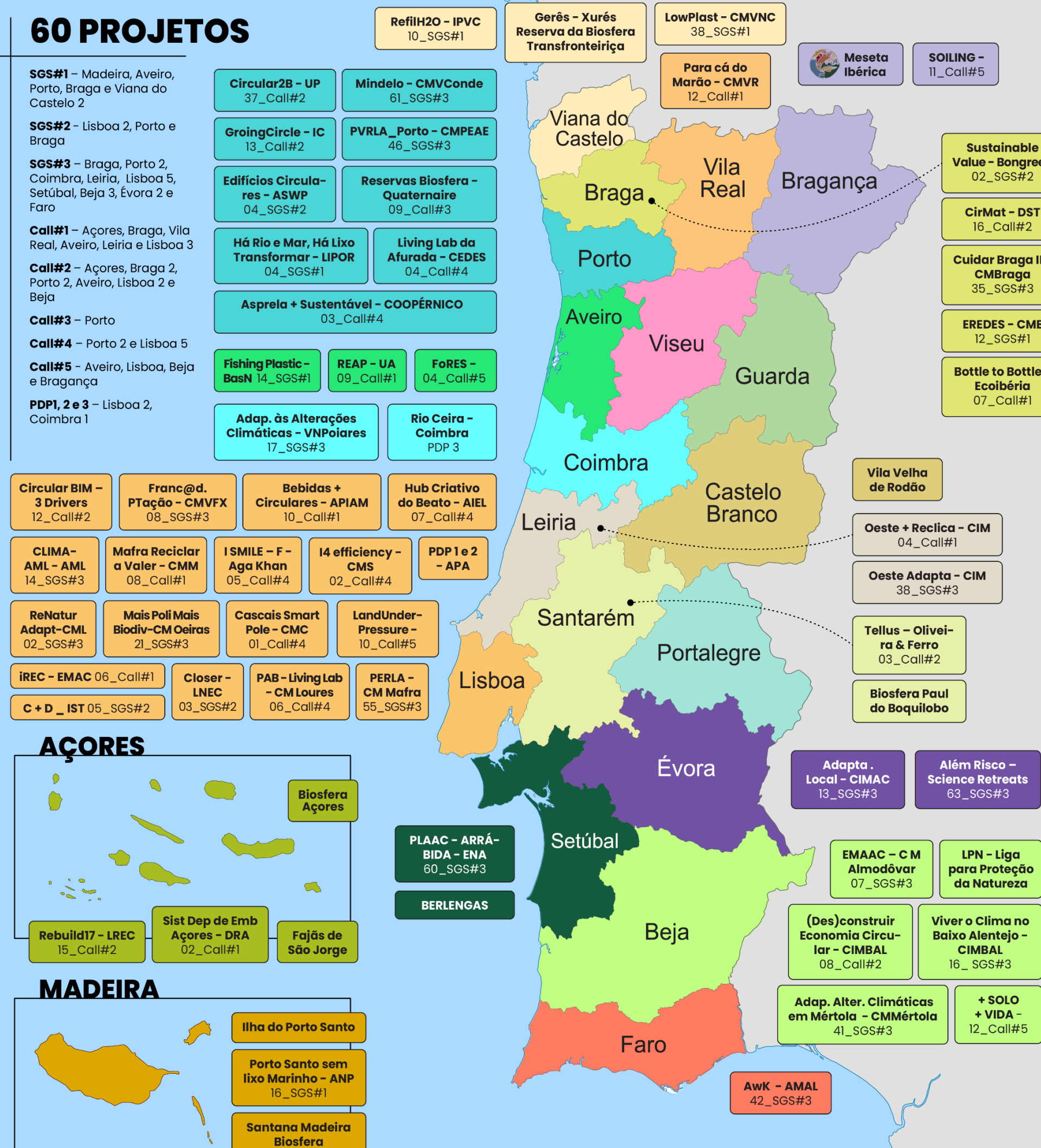
**Call#2** – Açores, Braga 2, Porto 2, Aveiro, Lisboa 2 e Beja

**Call#3** – Porto

**Call#4** – Porto 2 e Lisboa 5

**Call#5** – Aveiro, Lisboa, Beja e Bragança

**PDP1, 2 e 3** – Lisboa 2, Coimbra 1



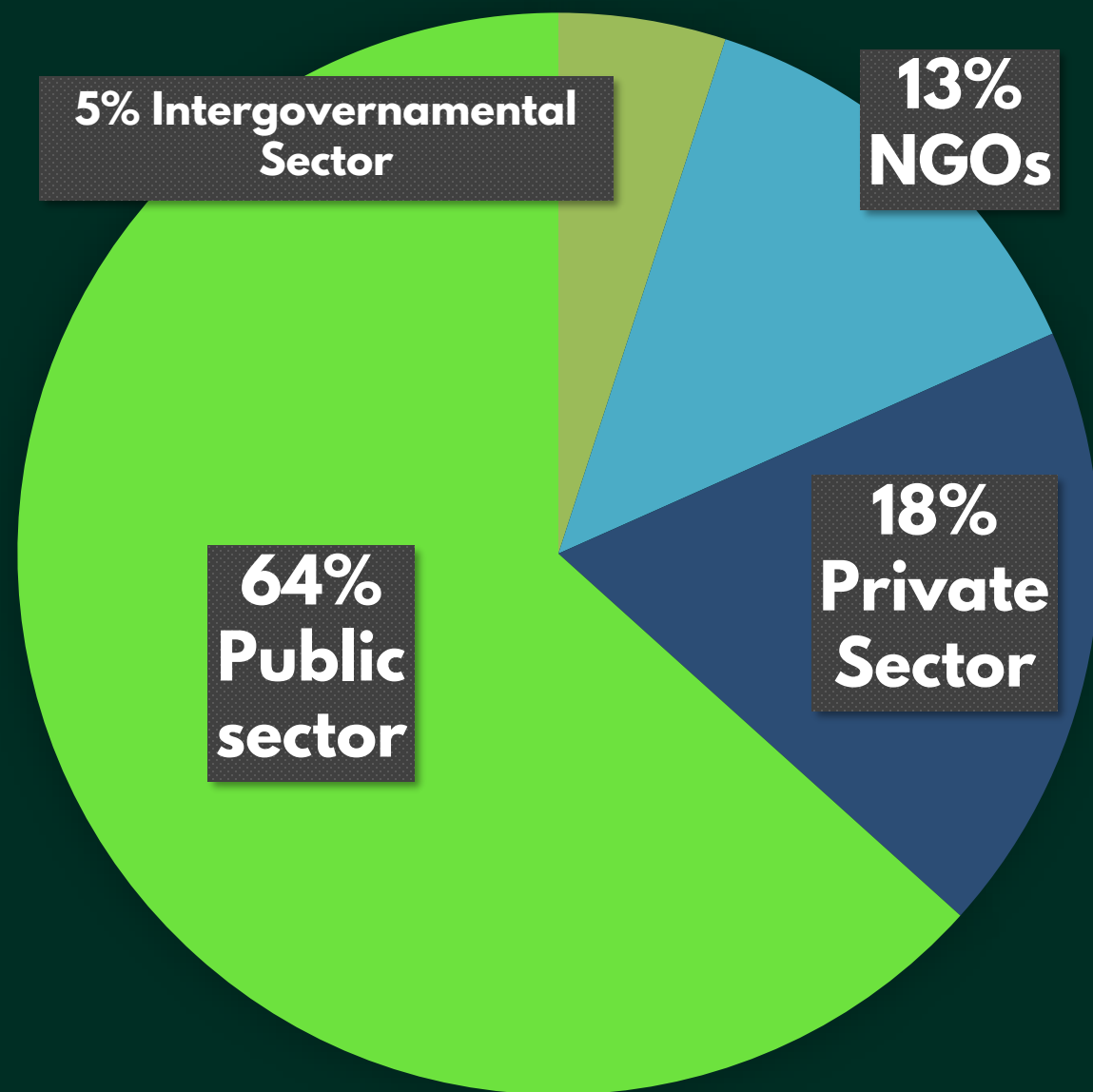
## Environment Programme

# Supported Projects

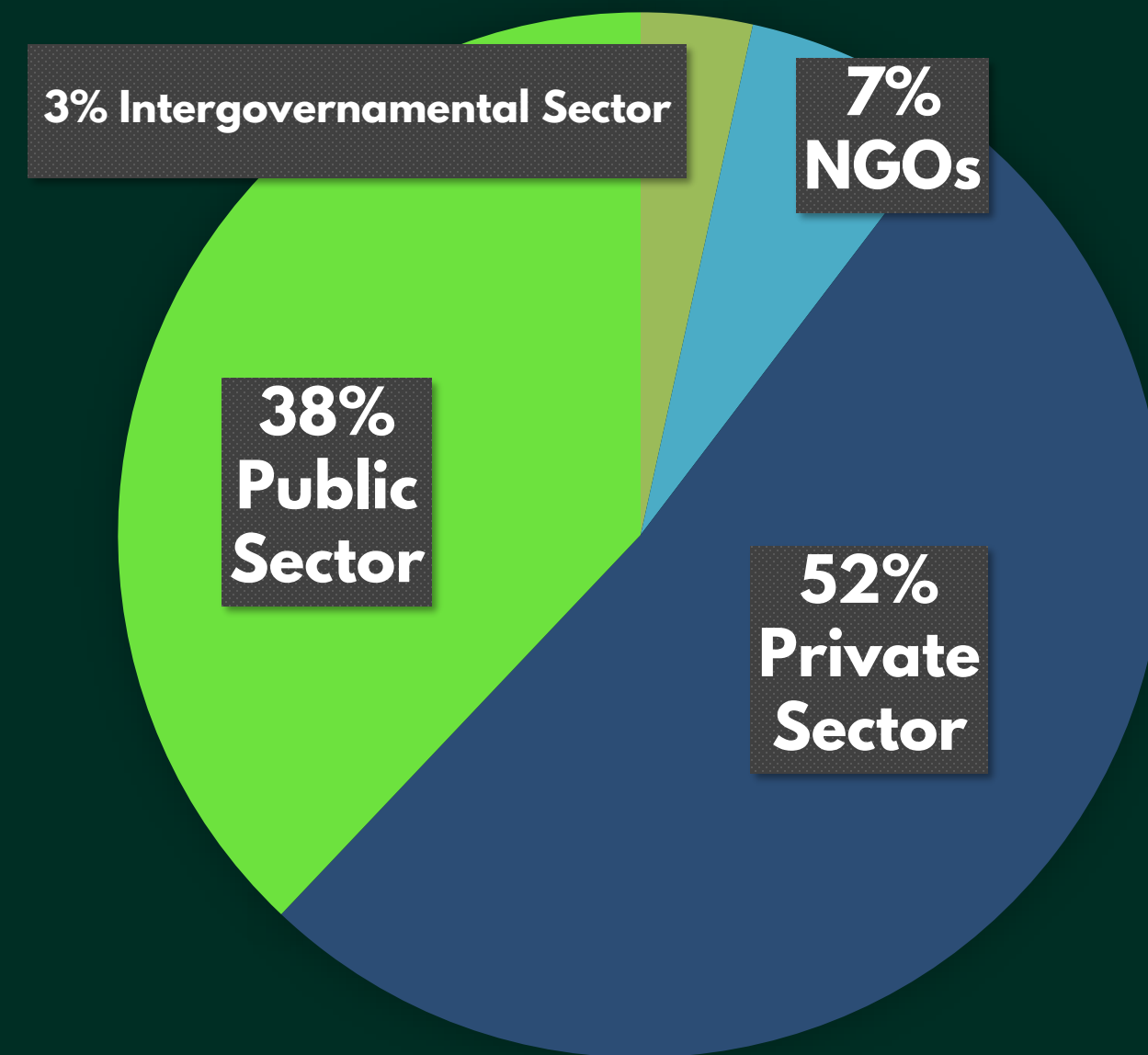
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# Promoters and Partners

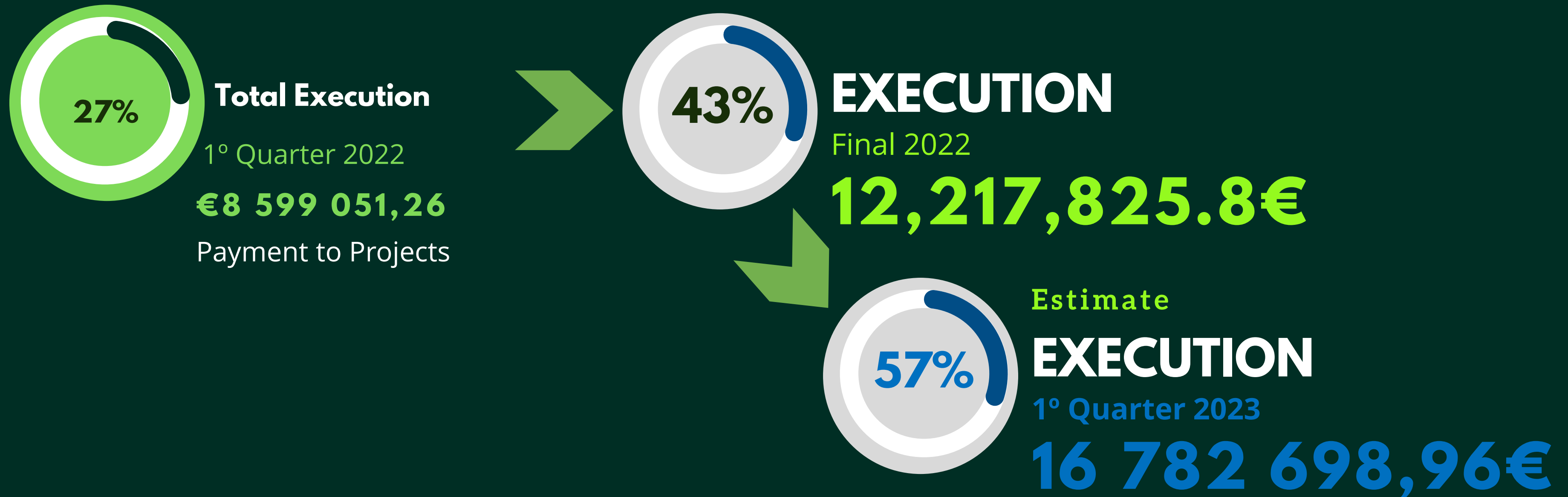
Project Promoters



Country Donors Partners



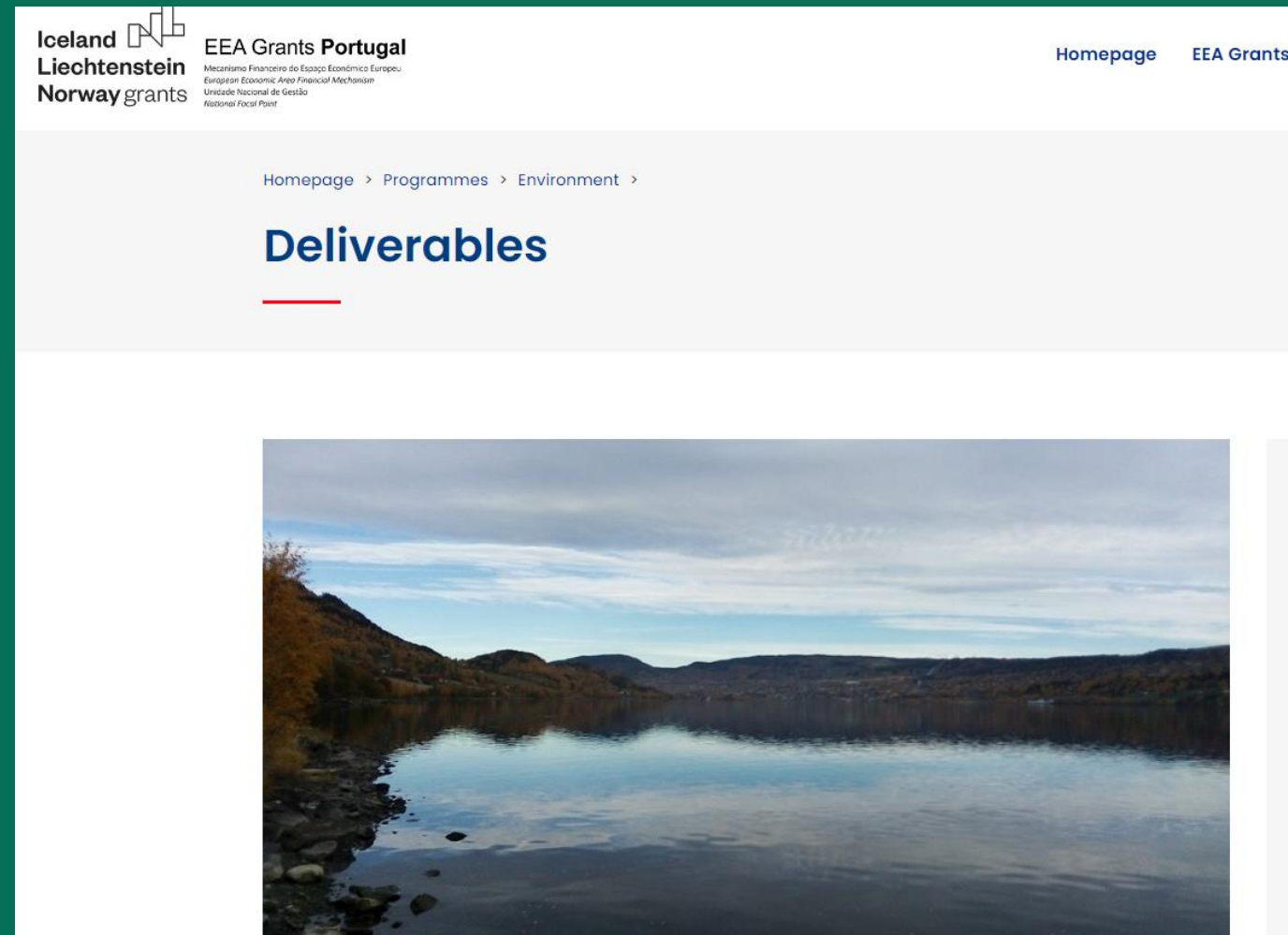
# Programme Evolution



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# Deliverables

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<https://www.eeagrants.gov.pt/en/programmes/environment/deliverables/>



# Deliverables



## Decision Support Tools for Construction and Demolition Waste



## Return Deposit Incentive System (Cascais Municipality)

<https://www.eeagrants.gov.pt/pt/programas/ambiente/resultados-dos-projetos/>

# Deliverables



**Deposit and Return  
System Regulation**



**Pre-Demolition Audits  
Guide**



**European Patent -  
Sustainable Construction  
Seal**

<https://www.eeagrants.gov.pt/pt/programas/ambiente/resultados-dos-projetos/>

# Deliverables



Ocean Protection,  
Preservation and Ocean  
Literacy



Production and Supply to  
Local Communities  
Biodegradable Fishing Nets



Involvement of the Local  
Fishing Community for  
plastic collecting actions

<https://www.eeagrants.gov.pt/pt/programas/ambiente/resultados-dos-projetos/>

# Deliverables



Creation of a Seal, which identifies the participating establishments in the collection of Porto Santo beverage packaging



River Monitoring in Vila Nova de Cerveira



Adaptation Measures to Climate Change (Poiares)

<https://www.eeagrants.gov.pt/pt/programas/ambiente/resultados-dos-projetos/>

# Results



# Targets | Results

35



28

Jobs Created

3



516

awareness-raising  
campaigns carried out

3



6

Civil Society Organisations  
supported

# Targets | Results

3



136

voluntary schemes supported

1



1

Regulation governing the deposit-refund system developed

4



29

projects involving cooperation with a donor project partner

# Targets | Results

20,000



103

Tonnes of plastic recycled through all supported schemes/measures

25



19

Retailers participating in the deposit refund system

30



33

Beverage industry organisations participating in the deposit-refund system



# Targets | Results

5



10



5



**14 + 1** (big company)

SMEs supported in the Increase Efficient Use of Resources in the Construction Sector

10

Product Environmental Declarations

6

Standards for Construction and Demolition Waste

# Targets | Results

182



4

Staff Training

13,000



4,911

Population covered with  
Climate Change Mitigation  
Measures

43,000



129

Annual Estimate Reduction of  
CO2 Emissions (tons)

# Targets | Results

8



26

Municipalities with Climate Change Adaptation Plans

9



19

Municipalities Implemented Concrete Measures Adaptation to Climate Change

# Targets | Results

4



11

Innovative Measures  
Mitigation and Low Carbon

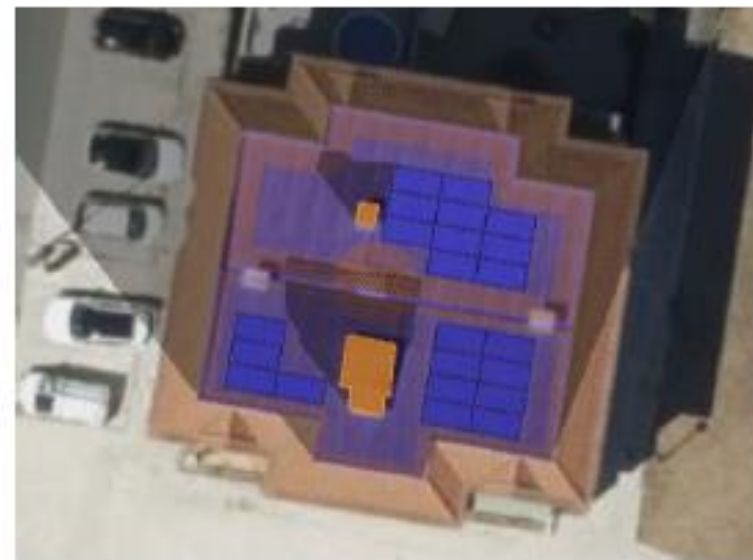
3



3

Municipalities Climate Change  
Mitigation Measures

# Energy Communities



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# Call#4

## Implementation of pilot projects of living labs for decarbonisation and climate change mitigation

Available Fund: 6,058,823 €

7 Approved Projects – 5 with Donor Project Partners

Eligibility for Living lab projects located in municipalities within the national territory with a resident population over 200,000 inhabitants

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# Call#4 | Cascais Smart Pole

Living lab resulting from the partnership between Fundação Alfredo de Sousa, NOVA School of Business & Economics, Cascais City Hall, Cascais Ambiente, Get2C, CEiiA, PRIO BIO, Veolia and Avfallsteknisk Montasje AS (Norway).

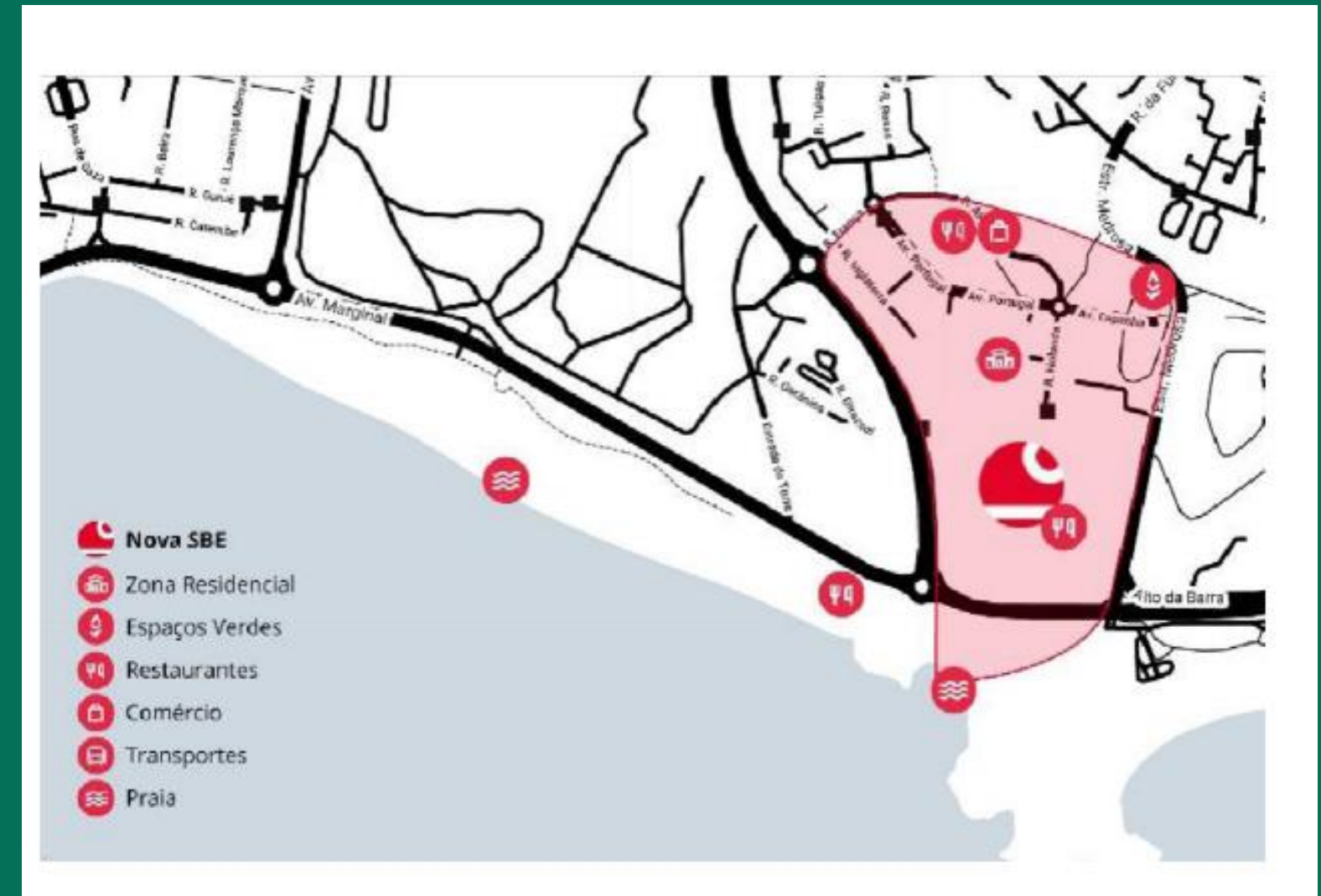
**EEA Grants:** 950.598,17€

**Total Amount:** 1.174.028,04€



# Call#4 | Cascais Smart Pole

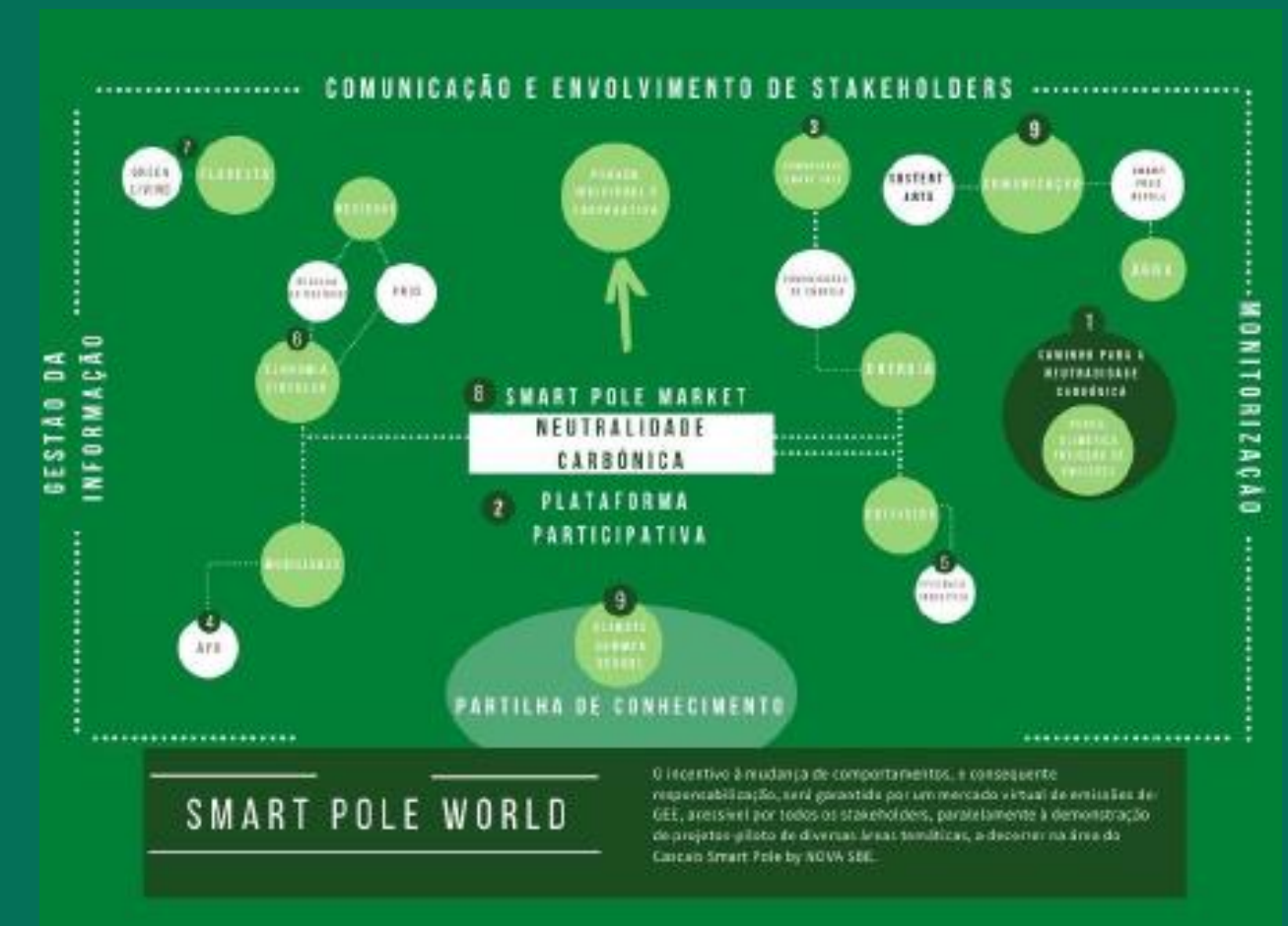
It will be implemented in a multifunctional area that integrates housing, commerce, equipment and public areas, acquiring local identity through the sociocultural interaction between residents, students and visitors and covering an area of 4.2ha of green areas.





# Call#4 | Cascais Smart Pole

Summary of the project potential	
Capacity (São Gonçalo Neighborhood + NOVA SBE)	<b>630 kWp (kilowatts peak)</b>
Annual Production	<b>1039 MWh</b>
Members of Renewable Energy Community	<b>100 - 200</b>



# Call#4 | Cascais Smart Pole

## Characterization of the installation of photovoltaic panels

São Gonçalo Neighborhood	
Number of buildings	27
Cost of panels, per building	3.000 €
Installed power (kWp)	200 <b>32% of total power</b>
Power per building (kWp)	7,40
Squared meters allocated to production	983,71
Squared meters per building	36,43
Number of solar panels	540

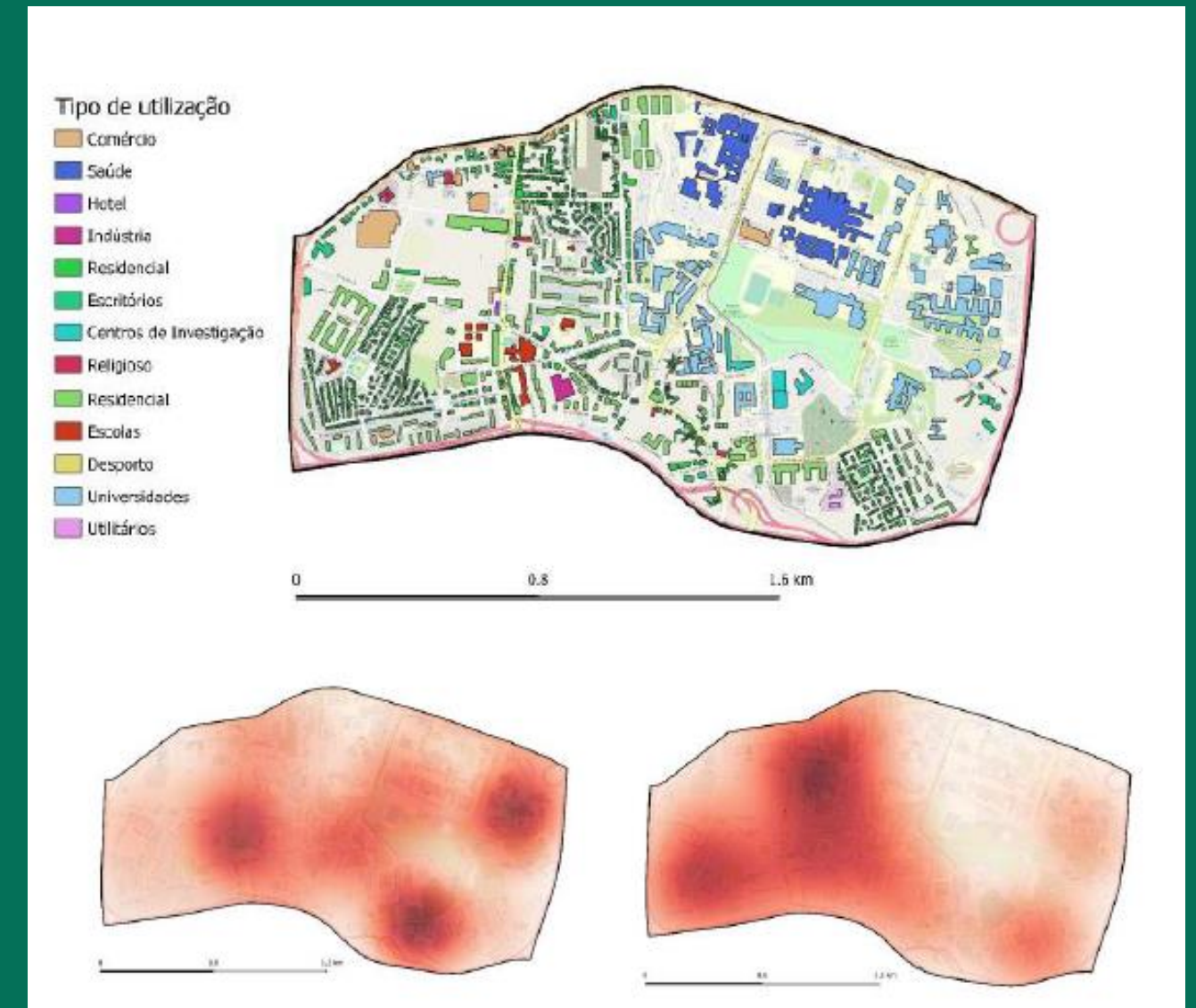
NOVA SBE	
Price per kWp	416 €
Installed power (kWp)	430 <b>68% of total power</b>
Power per square meter (kWp)	0,21
Square meters needed for production	2.058
Number of solar panels	796

# Call#4 | Asprela + Sustentável

Asprela + Sustentável has the energy sector as its central vector, developed around solar energy as a sustainable source of energy, seeking in a disruptive way to create the first renewable energy community in Porto.

**EEA Grants: 983.229,37€**

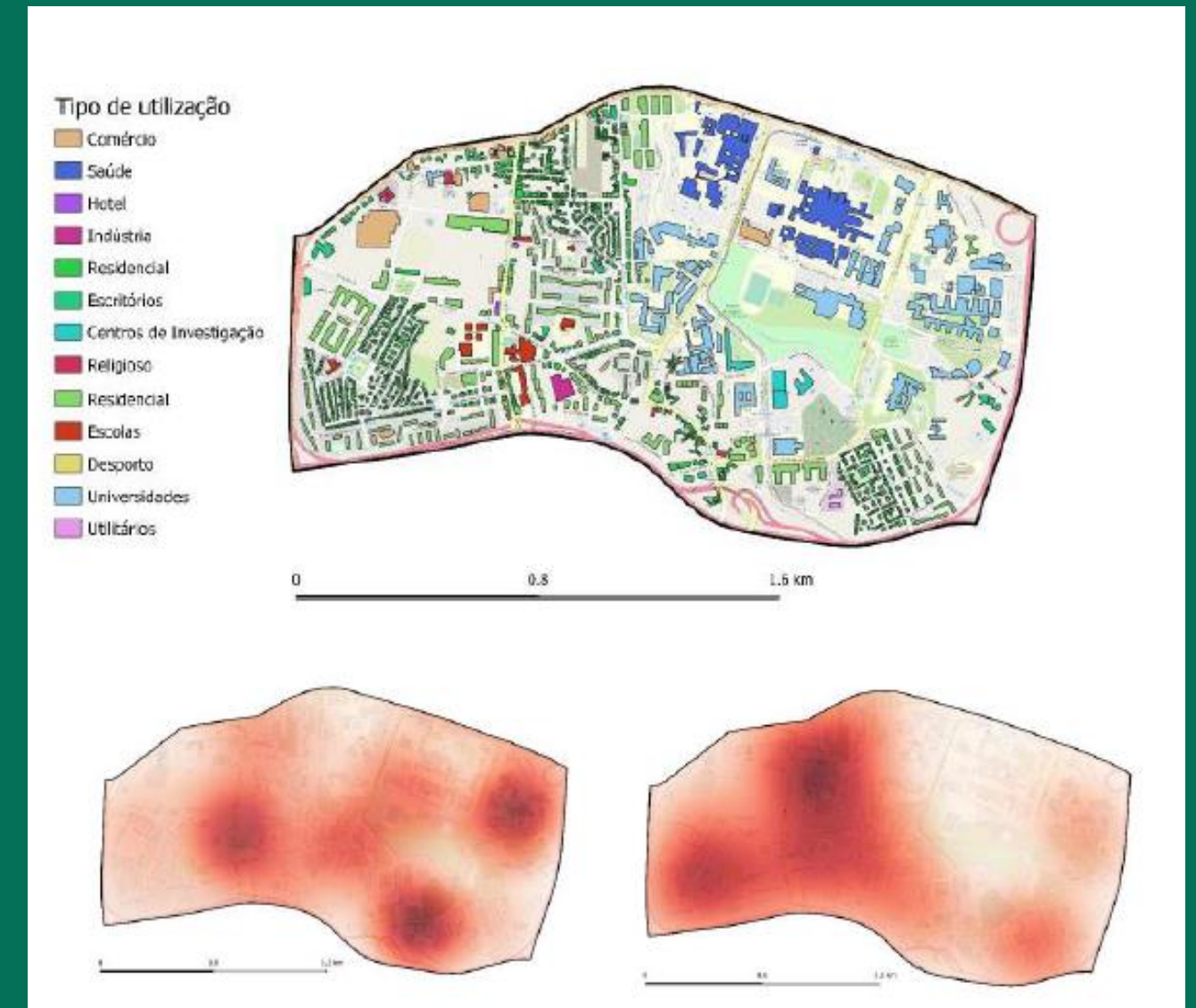
**Total Amount: 1.446.355,73€**



# Call#4 | Asprela + Sustentável

## Energy

- Development of the specifications and georeferencing of the building by typology
- Collection and simulation of all energy data (Electricity and Natural Gas)



# Call#4 | Asprela + Sustentável

## Energy

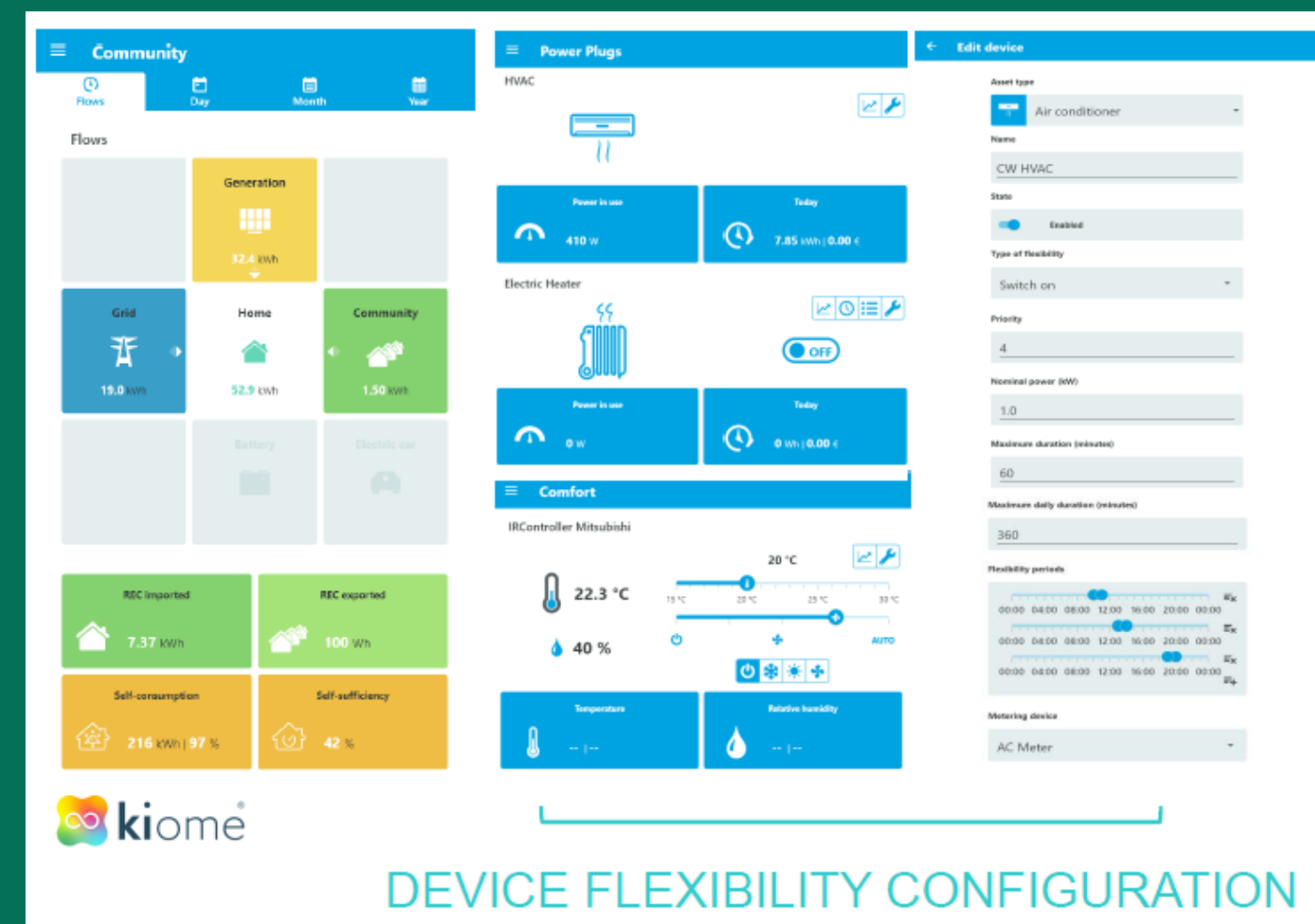
- Inflow and outflow estimates of population and mobility forms
- Analysis of the energy flows of the Asprela system
- Development of a tool to compare the baseline with the evolution of the measures to be implemented



# Call#4 | Asprela + Sustentável

## Energy

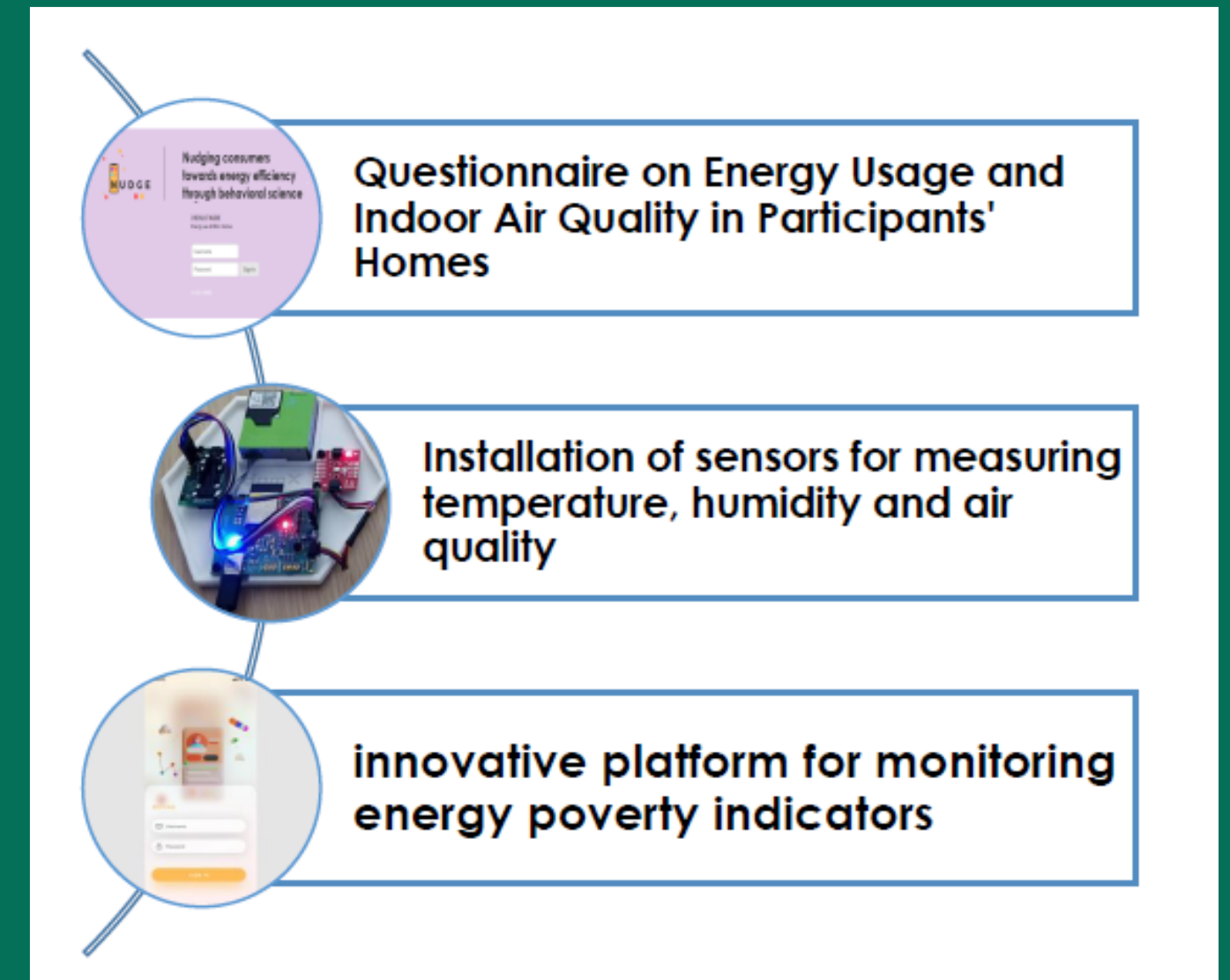
- The application targeting Residential Community Members is an app for mobile phone or tablet that can be downloaded on the Android or iOS app store
- Intends to raise awareness among the community about the advantages of solar energy and inducing behavior change



# Call#4 | Asprela + Sustentável

## Buildings

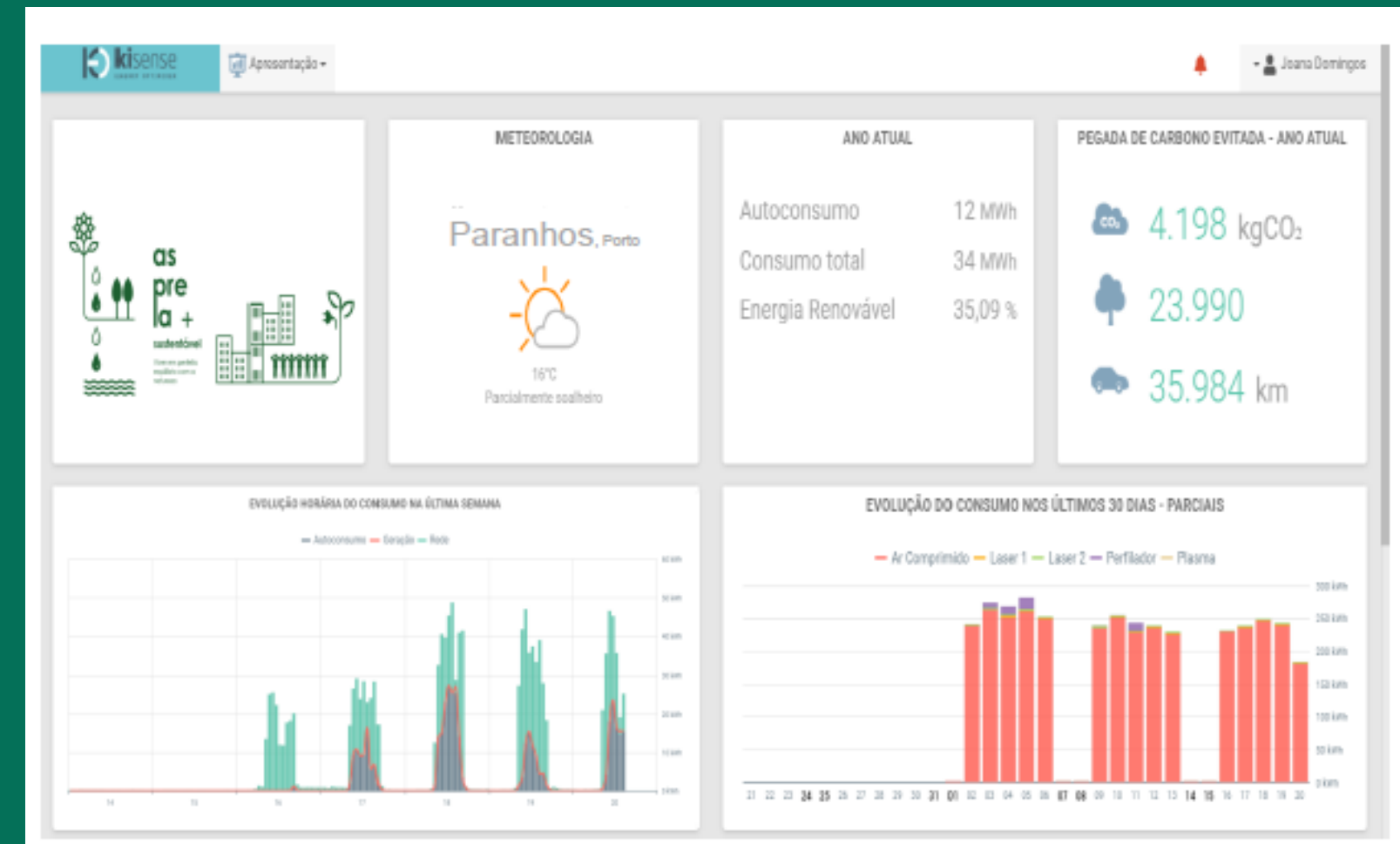
- Implementation of an energy efficiency management system to combat energy poverty (Social Housing)
- Characterize families that are in a situation of energy vulnerability
- Increase the quality of life of families improve thermal comfort conditions, health and general well being



# Call#4 | Asprela + Sustentável

## Buildings

- Implementation of a management, monitoring and gamification system for solar photovoltaic plants in municipal schools





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# Call#4 | Living Lab Afurada

The Afurada Living Lab project intends to test innovative technological solutions:

- Sustainable Urban Mobility
- Circular Economy and Environment
- **Buildings and Energy**
- Community, Management and Communication

**EEA Grants: 850.114,27€**

**Total Amount: 1.084.301,00€**



# Call#4 | Living Lab Afurada

## Energy

- Implementation and Development of an Intelligent Energy Community with a Storage System for 3 emblematic buildings in the intervention area



# Call#4 | Living Lab Afurada

## Energy

- Development, installation, and maintenance of a renewable energy community (CER) with focus on the optimized management of all energy flows



# Call#4 | Living Lab Afurada

## Summary table of the powers of installed photovoltaic plants

	Installed Peak Power	Installed Power	Storage
Afurada Market	10,260 kWp	8 kWp	5 kWh
School	10,260 kWp	8 kWp	5 kWh
Interpretive Center	10,260 kWp	8 kWp	5 kWh

# Call#4 | Living Lab Afurada

## Awareness raising event “Solar Workshop”

- Reduction of CO2 emissions
- Promotion of energy based on renewable sources
- Electricity bill reduction
- Energy poverty
- Decentralization of energy production



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# Call#4 | Smile

SMILE – Sintra Motion & Innovation for Slow Emissions intends to promote the development of innovative technological solutions, and in particular to create a living laboratory as a test centre for mitigating carbon emissions.

**EEA Grants: 849.269,31€**

**Total Amount: 1.178.617,86€**



# Call#4 | Smile

## Energy and Buildings

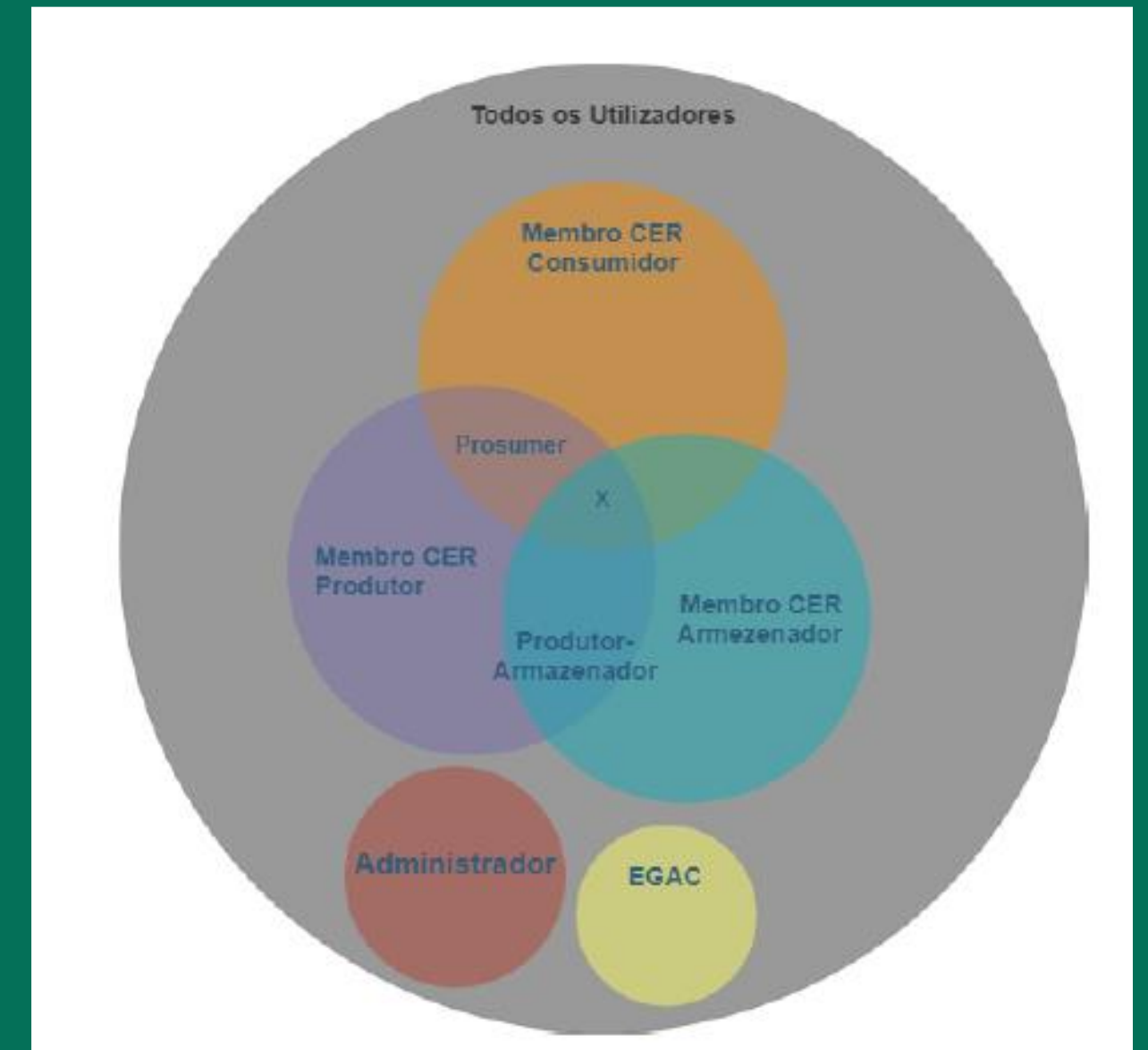
- Installation and maintenance of a renewable energy community
- Monitoring
- Application based on artificial intelligence and community involvement to fight energy poverty
- Promoting a group of citizen-scientists for energy efficiency
- Energy Literacy Programme



# Call#4 | Smile

## Energy

- Development of a digital platform for the management of self-consumption, in the modalities of collective self-consumption and Renewable Energy Communities.

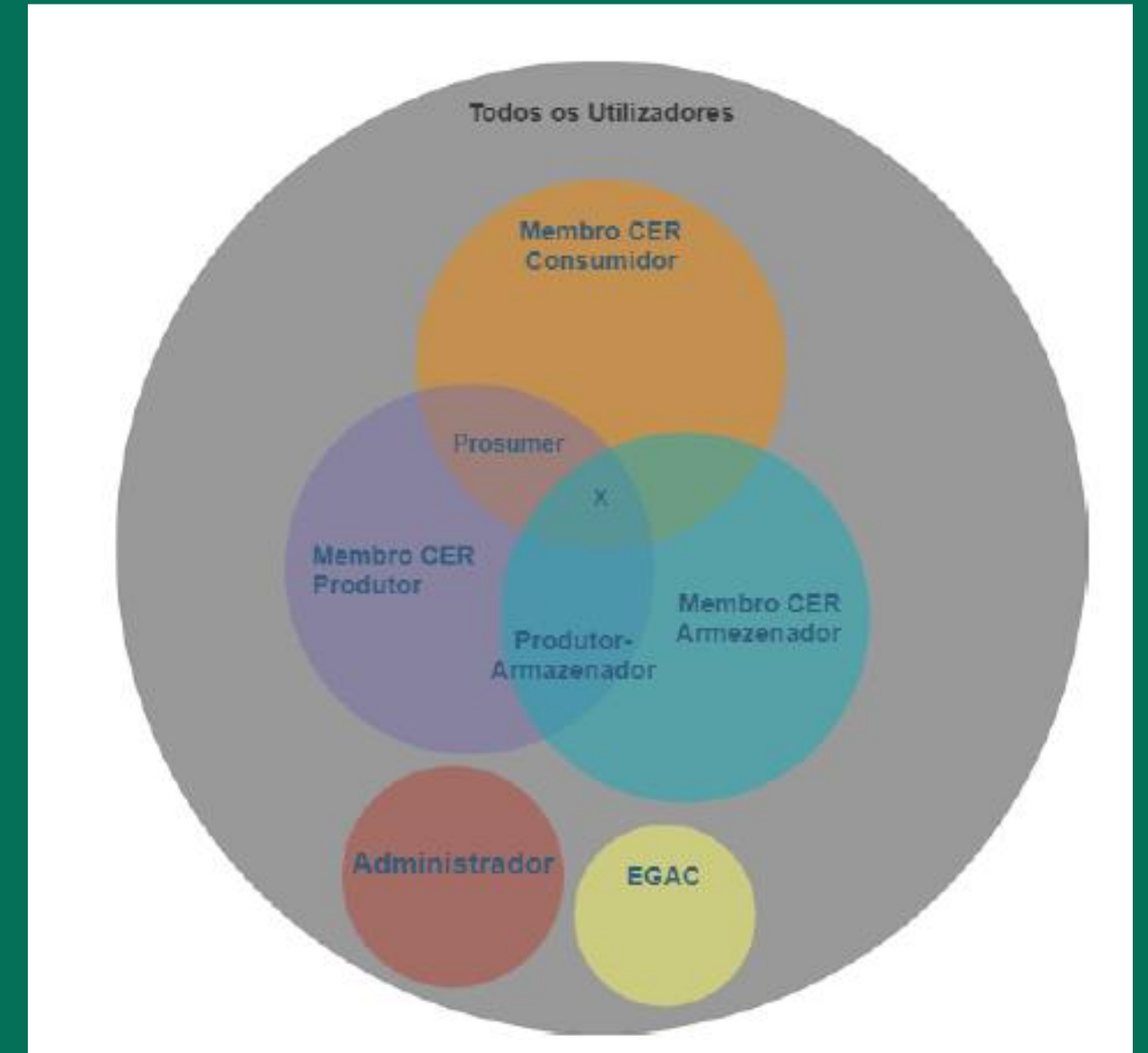




# Call#4 | Smile

## Energy Audit Guide

- Local support for the promotion of energy efficiency
- Training actions on energy literacy for residents



# Call#4 | Smile

## Results

Shared energy within the Community between the school and 16 social housing

- **65 MWh/year**

Annual reduction of CO2 emissions

- **16,8 ton**



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# Call#4 | PAB Living Lab

The project "PAB\_LivingLab" aims to reduce the carbon intensity of the activities and services of Park Adão Barata (PAB) by implementing innovative and integrated technological solutions.

The low-carbon measures are expected to benefit a total of **61 170 people**.

**EEA Grants:** 849.269,31€

**Total Amount:** 1.178.617,86€



# Call#4 | PAB Living Lab

## Energy

- Energy telemetering system
- Information system and integration of energy consumption data into the platform
- Renewable energy community through a photovoltaic system
- CER Energy Management Platform



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# Call#4 | PAB Living Lab

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## Buildings

Implementation of the "Building Information Modeling" concept and methodology with IoT, enriching an advanced management model of the building "Palácio Marqueses Praia e Monforte", contributing to the reduction of the building's carbon footprint.



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# Call#4 | Hub Criativo do Beato

This project aims to leverage and consolidate the overall HCB strategy, while pursuing and concretizing the objective to become a smart campus and a permanent urban living lab.

**EEA Grants:** 811.580,39€

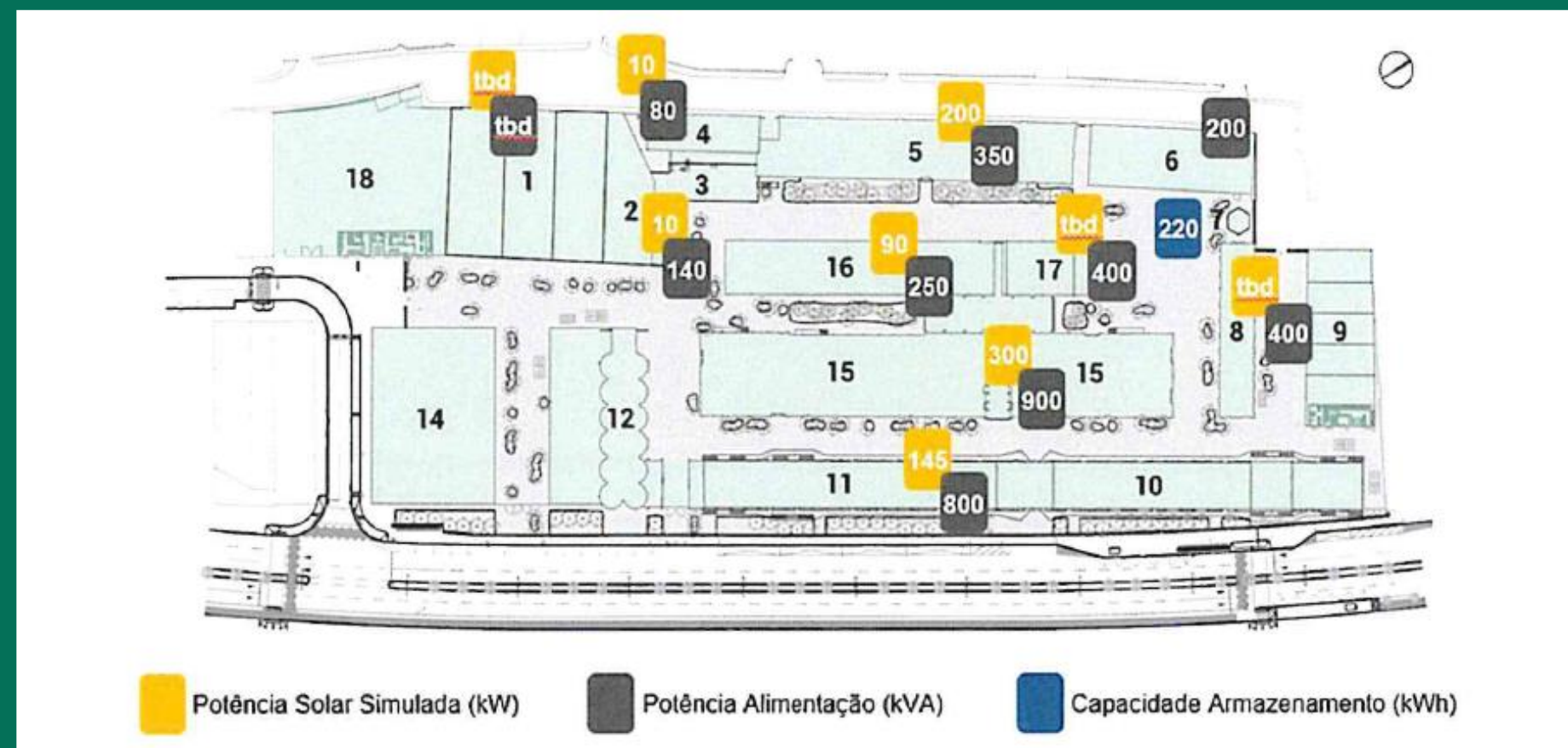
**Total Amount:** 2.000.000,00€



# Call#4 | Hub Criativo do Beato

## Energy

- Smart Energy Community and testing the solar solutions
- Simulated solar power
- Storage capacity



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# Call#4 | Hub Criativo do Beato

## Energy

- Smart lighting with calibrated sensors to adjust the light levels







The Team

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# Thank You!

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COMPETITIVE AND INCLUSIVE EUROPE

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## Environment Programme

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