Specific challenges of energy communities and cooperatives on islands

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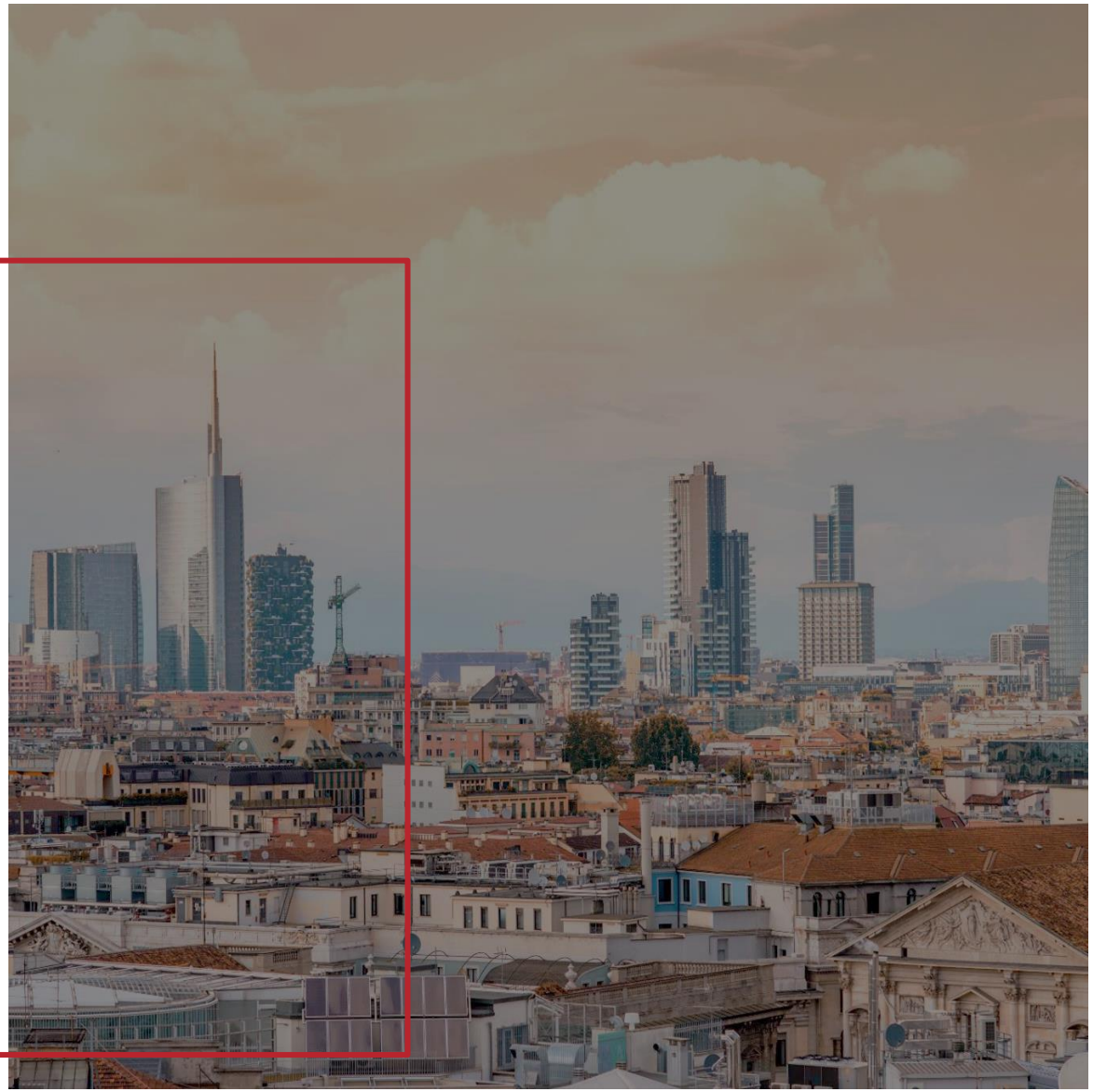
CE4EUislands, *Pantelleria 14/05/2024*



Agenda

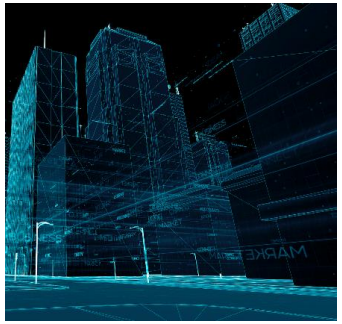
- R2M Overview
- Island themes encountered across four EU projects and commercial activities
- Discussion points related to lessons learned, challenges & solutions

About the organisation

Founded	People	Offices	Research	Funds raised	First time EU
2012	**125**	**8**	**130**	**600 M**	**48**
	5 branches	4 Countries	R&D projects	Total R&D Portfolio	Organizations

Innovation

Innovative Products & Services



- REAL ESTATE
- Digitalization
- Sustainability
- Smart Grid and Local Energy Communities

Sustainability Consulting + ESCO

GREEN BUILDING COUNCIL SOCIO ITALIA

LEED AP BD+C

LEED AP O+M

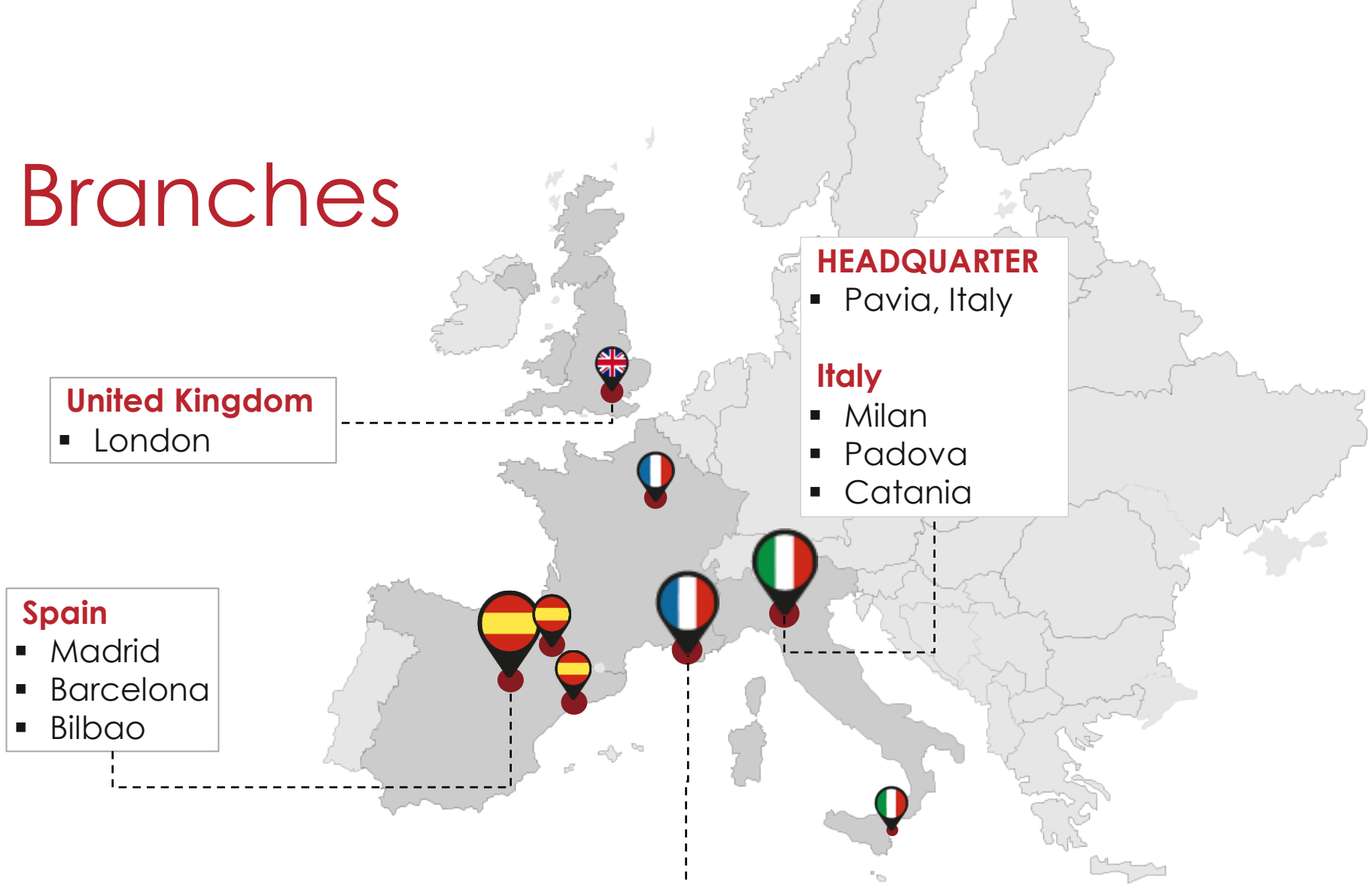
LEED AP ID+C

WELL AP

BREEAM LICENSED ASSESSOR COMPANY greenbooklive.com

CEPAS Commissioning Authority (CxA)

Our Branches



HEADQUARTER
- Pavia, Italy

Italy
- Milan
- Padova
- Catania

United Kingdom
- London

Spain
- Madrid
- Barcelona
- Bilbao

France
- Roquefort-les-Pins;
- Paris

REACT

The project: aimed to achieve island energy independence through renewable energy generation and storage, a demand response platform, and promoting user engagement in a local energy community.

N° of Partners: 23 partners from 11 EU countries
Duration: 4 years

- 100% potential energy autonomy
- 60% potential reduction of GHG emissions and energy costs
- 10% energy savings
- A cooperative energy management strategy

Fast facts / project in a nutshell

TOPIC	LC-SC3-ES-4-2018-2020 - Decarbonising energy systems of geographical Islands
STATUS	CLOSED (2019-2023)
HIGHLIGHTS	• PV – Batteries – Heat Pumps (from different suppliers) • Energy Communities • Grid Integration • PILOTS: Carloforte, Aran Islands, La Graciosa
R2M ROLE	• Innovation Manager • Pilot Manager (Carloforte)

Challenges & Discussion Points

- **Integration with the grid** was difficult / not effective
  - DSOs / Utilities not in the project = not their priority
  - Regulations on energy communities slow to develop / changing

- Integration of **different technology providers** was inefficient and cumbersome – each developing proprietary solutions (Inverters to Storage to Management / Controllers)

- **Supply Chain & Implementation Risk**. R&D Team / engineers signing the projects / installers carrying it out = delays, inefficiencies and errors.

Challenges & Discussion Points

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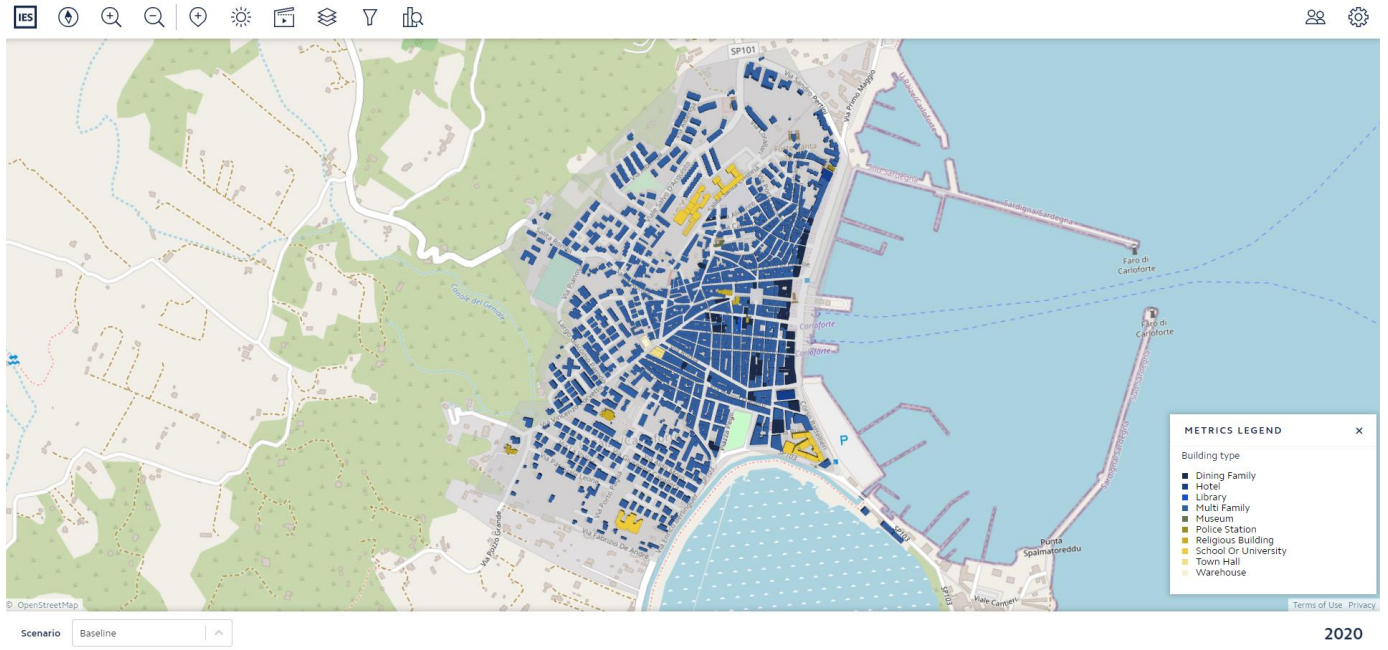
Challenges & Discussion Points

- **Lack of local installers / supplies**. Increased travel costs. Forgetting anything / discovering anything needed on-site = extra costly trips.
- **Lack of local capacity**. Solving even small problems once installed can be difficult leading to systems switched off / forgotten.
- **Lack of trust**. Installations happened during the energy price spike of 2022, homeowners thought it was faulty installations / equipment.
- **A better model?: Hard business for a small ESCO. One can understand how such markets require large players that have an integrated solution and ability to attain large critical mass bundled to selling energy or other services.**

Positive Results

- 500 expressions of interest in become part of the energy community
- Energy community as part of Carloforte SECAP
- ICL model / decarbonization scenario approach to urban modelling
- Award (Future4Cities - "Special Mention: Small Municipality")



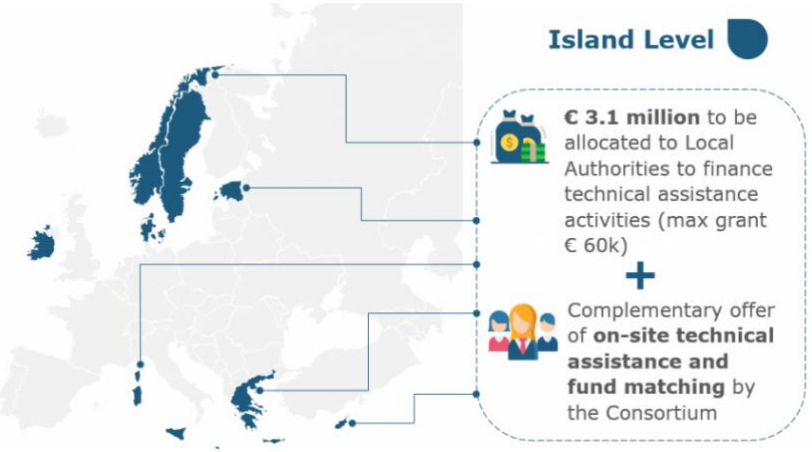
New Energy Solutions Optimised for Islands

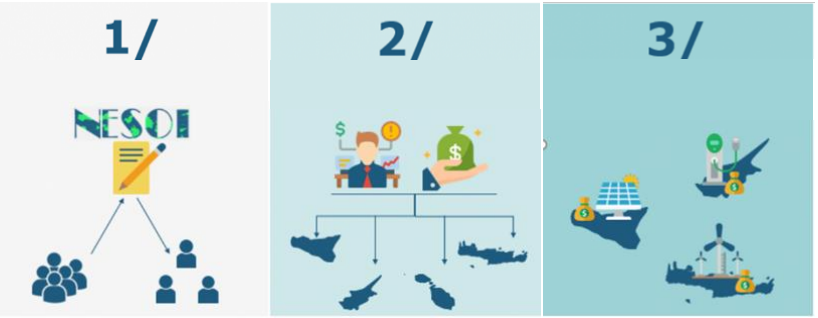
NESOI

EUROPEAN ISLANDS FACILITY

The project: offers services for European islands – to unlock and distribute funding for energy transition to support islands, to implement investment opportunities

N° of Partners: 10 partners from 7 EU countries
Duration: 4 years





Deloitte. R2M SOLUTION zabala innovation consulting e·on WOLF THEISS
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Fast facts / project in a nutshell

TOPIC

LC-SC3-ES-8-2019 - European Islands Facility - Unlock financing for energy transitions and supporting islands to develop investment concepts

STATUS

CLOSED (2019-2024)

HIGHLIGHTS

- Cascade Funding (60k cash + 60k consortium support)
- Capacity building to make island projects investible
- High demand for SECAP support

R2M ROLE

- Innovation Manager
- Capacity program leader
- Technical assistance
- Communication & Dissemination

NESOI

EU level

Needs mapping through **surveys**

Creation of a **platform for exchange of best practices** and communication and dissemination activities

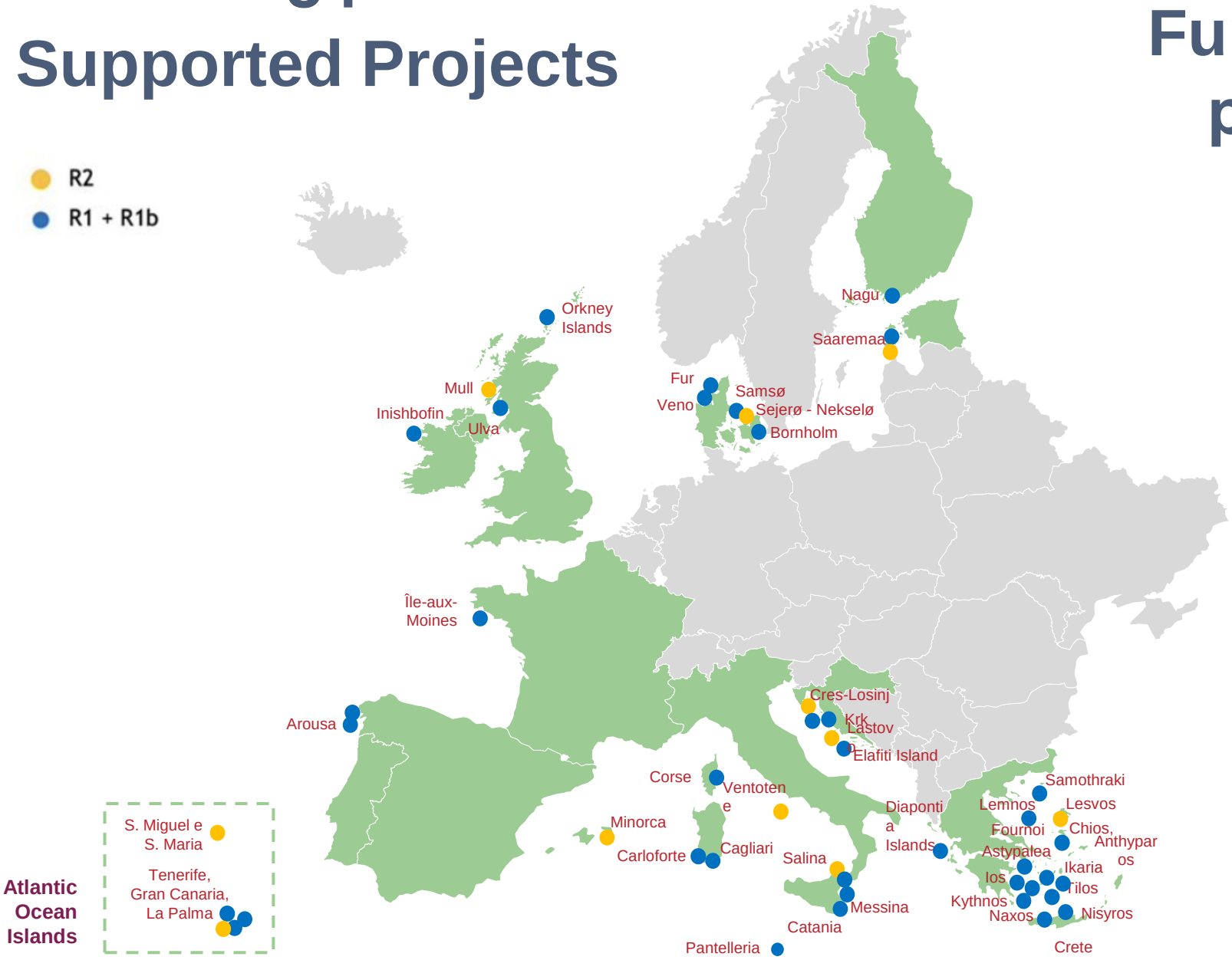
Coaching and **capacity building** for local entities

Islands level

€3.1 million to be allocated to Local Authorities to finance technical assistance activities (max. grant €60k)

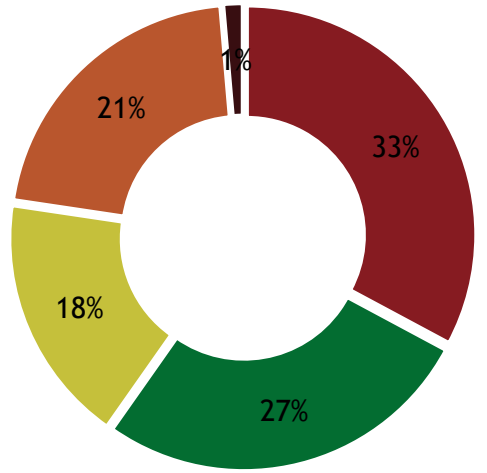
Complementary offer of **on-site technical assistance** and fund matching by the Consortium (worth €60k)

54
Supported Projects



R2M Solution 1 4 **Atlantic Ocean Islands**

Funding activated: 15 projects, 88 mln €



- National funds
- Private
- European Funds
- Local authorites and agencies
- Blending (national, Private)

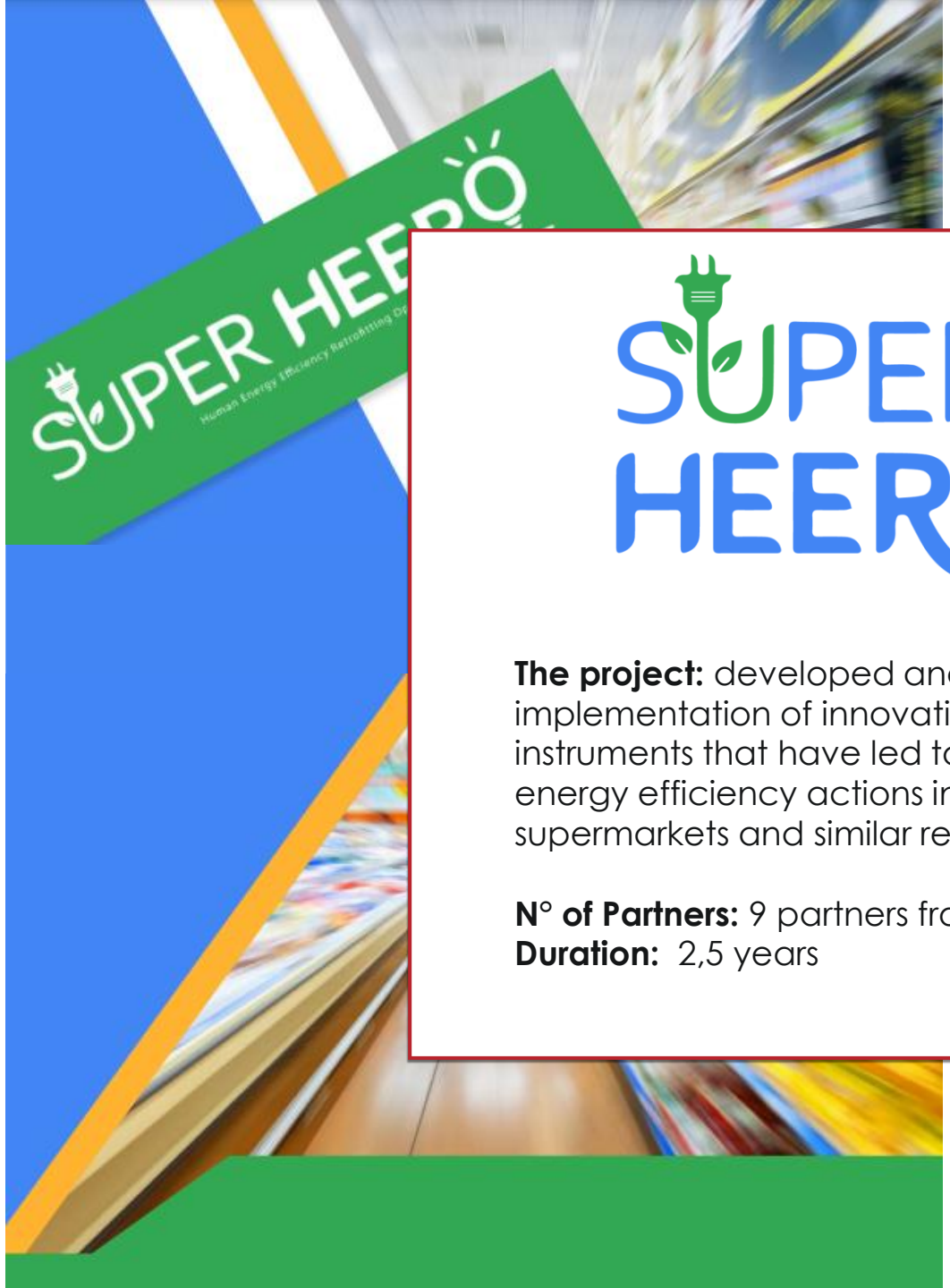
Positive Results

- **CEN Workshop Agreement** on NESOI methodology (cascade funding, implementation of open calls, technical assistance process)

- **NESOI Platform**
  - Matchmaking
  - Capacity Building
  - Equity crowdfunding

- **Experience and network** for contacts

- **54 Supported sustainability transition projects**



SUPER HEERO

The project: developed and supported the implementation of innovative financial instruments that have led to carrying out energy efficiency actions in small/medium supermarkets and similar retail businesses.

N° of Partners: 9 partners from 4 EU countries
Duration: 2,5 years

How it works:
Super-Heero 5 Step Process

1. Discovery & Audits
2. Technical Design & Business Plan
3. Marketing & Advertising Campaign
4. Fundraising via the Crowd
5. Implementation & Monitoring

OBJECTIVES

- Develop and engineer an innovative scheme for energy efficiency investment in small and medium supermarkets based on stakeholder and community engagement.
- Compile a portfolio of ad-hoc energy measures for supermarkets.
- Implement innovative financial instruments for energy efficiency investments in two relevant pilot case studies.
- Define a structured strategy and methodology for the replicability of the financial scheme at regional and national level.
- Identify barriers and needs to support the development of regulatory and policy frameworks that allow the uptake of innovative financial schemes for energy efficiency investment.

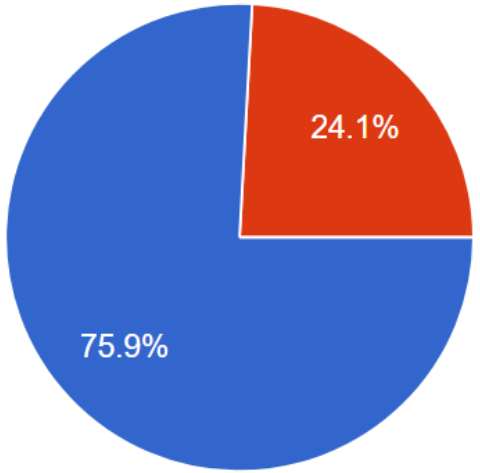
Fast facts / project in a nutshell

TOPIC	LC-SC3-EE-9-2018-2019 - Innovative financing for energy efficiency investments
STATUS	CLOSED (2020-2023)
HIGHLIGHTS	• Crowdlending energy efficiency projects on supermarkets • Value proposition = brand loyalty + EE • Rewards: Interest rate, cardholder points and coupons
R2M ROLE	• Project Coordinator • ESCO • Crowdlending Platform Manager

Community Engagement & Social Impact

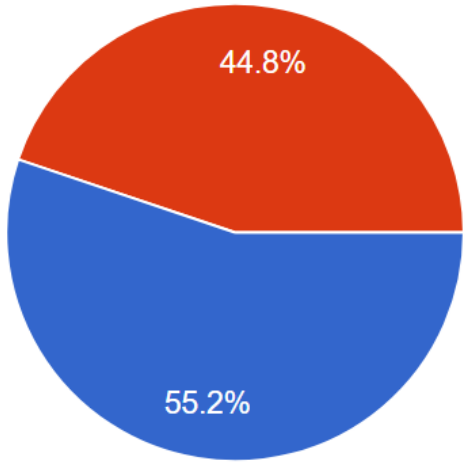
KPIs / Positive Results

- 3 Pilot Project Campaigns
- €185.534 Raised (PV, LED, Heat Pump, Refrigeration)
- 198 crowdvestors (#happyshoppers)
- Community event free tickets (Padova Anime Verde)
- Free EV charges
- Store coupons
- Tree planting



This project gives me a more positive impression of NaturaSì

My impression of NaturaSì is not influenced by this project



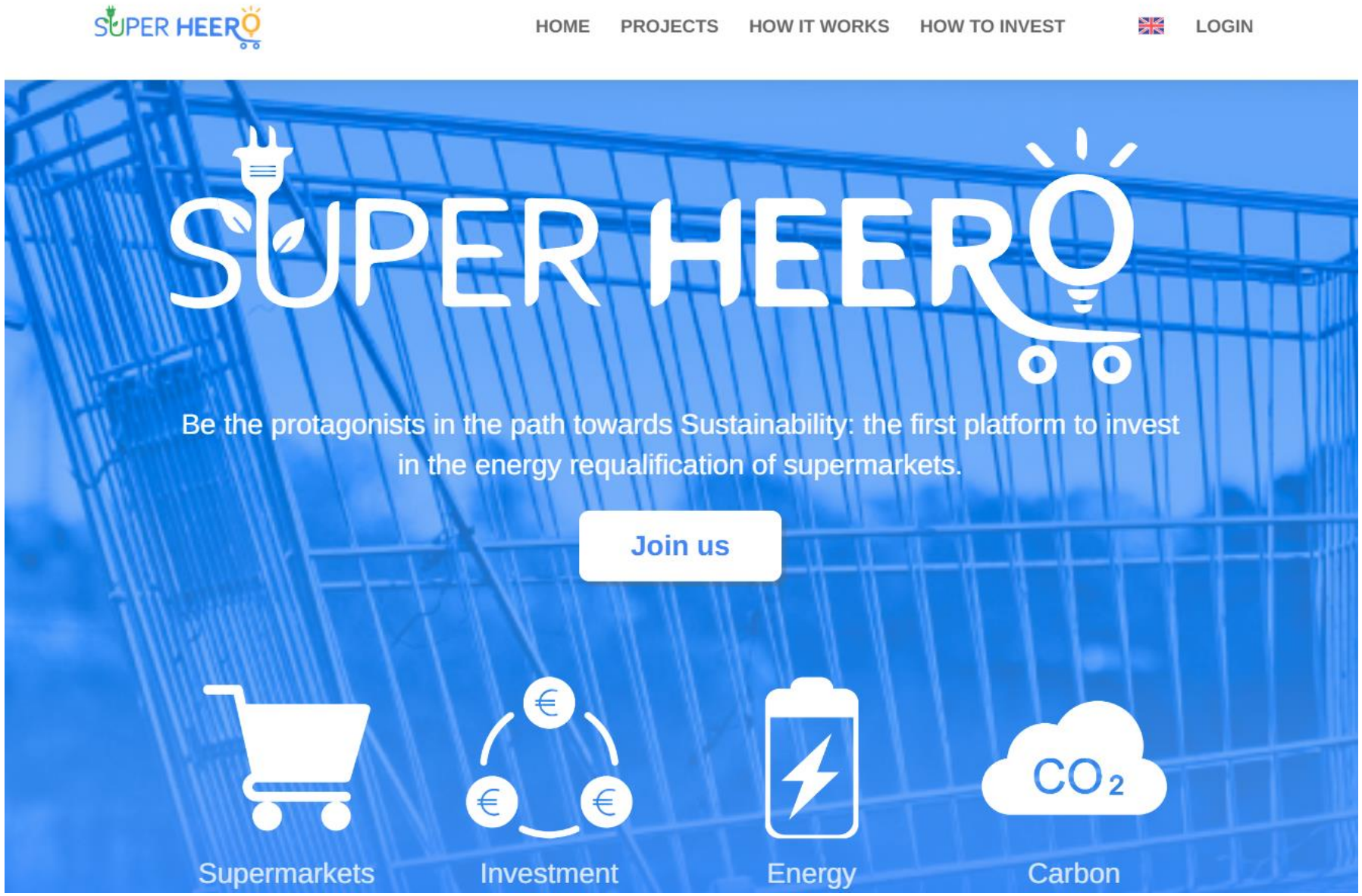
I am more likely to shop at NaturaSì resultant of this campaign

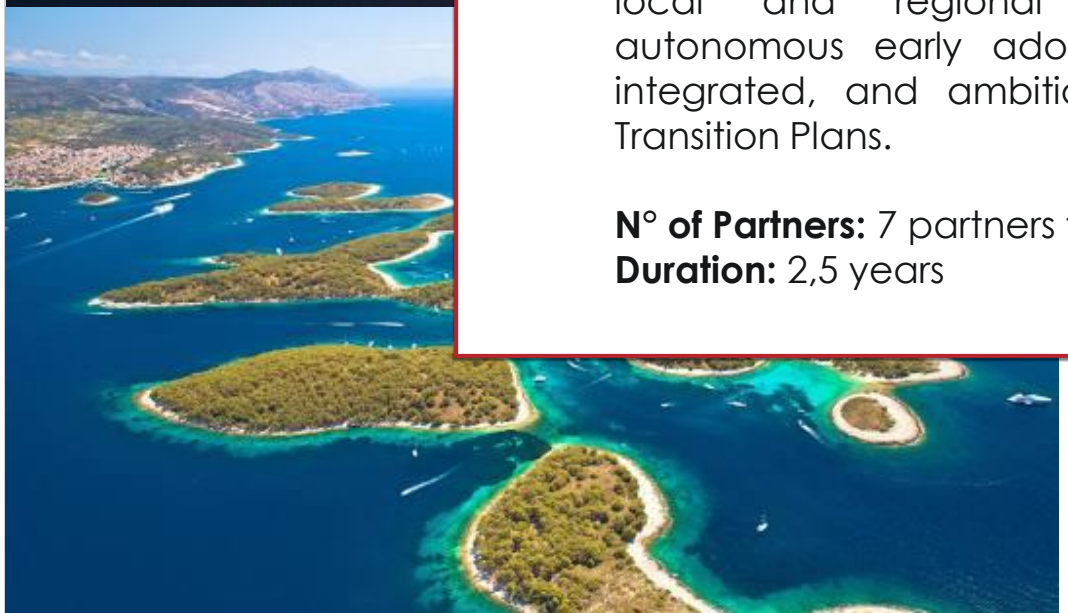
My shopping habits will stay the same

Challenges & Discussion Points

- **A lot of effort** to attain true local engagement by crowdvestors
- Simple, but different model. Takes time to educate / bring people on board (supermarkets, ESCOs, franchise owners, marketing, management, energy managers, ..).
- **Those that get it, get it,** but others have a hard time understand new value is being generated (brand loyalty) and only focus on additional costs into the energy efficiency retrofitting model (e.g. platform costs and attractive rewards to crowdvestors).
- Some decision makers haven’t caught up to the fact that interests are higher. Crowdlending projects are out typically at 10% (May 2024).

Come visit: www.super-heero.com

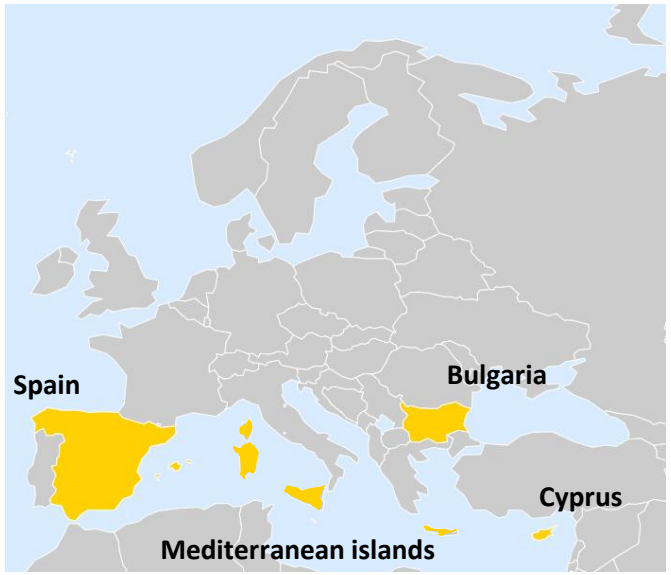


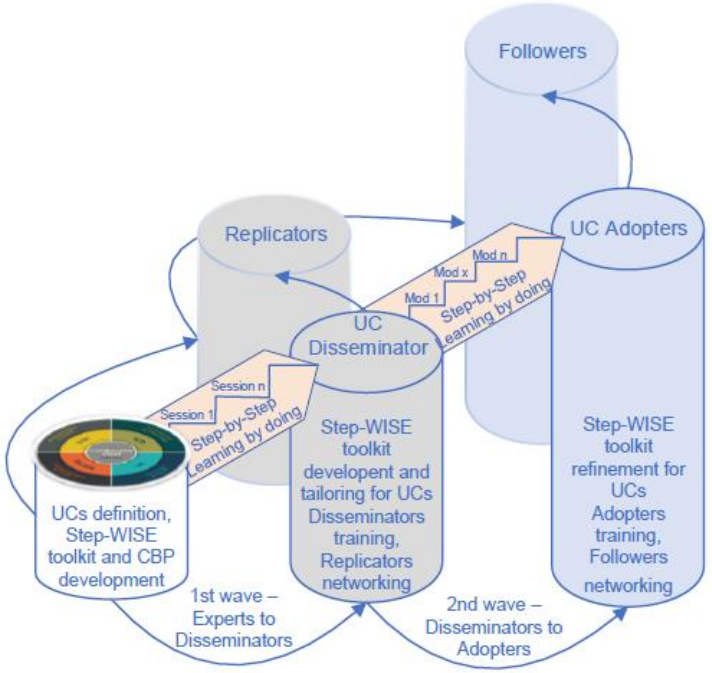


Step-WISE

The project: a tailored and dynamic capacity building programme to transform local and regional authorities into autonomous early adopters of digitised, integrated, and ambitious Clean Energy Transition Plans.

N° of Partners: 7 partners from 5 EU countries
Duration: 2,5 years





Fast facts / project in a nutshell

TOPIC

LIFE-2022-CET-LOCAL -Technical support to clean energy transition plans and strategies in municipalities and regions

STATUS

ONGOING (2023-2026)

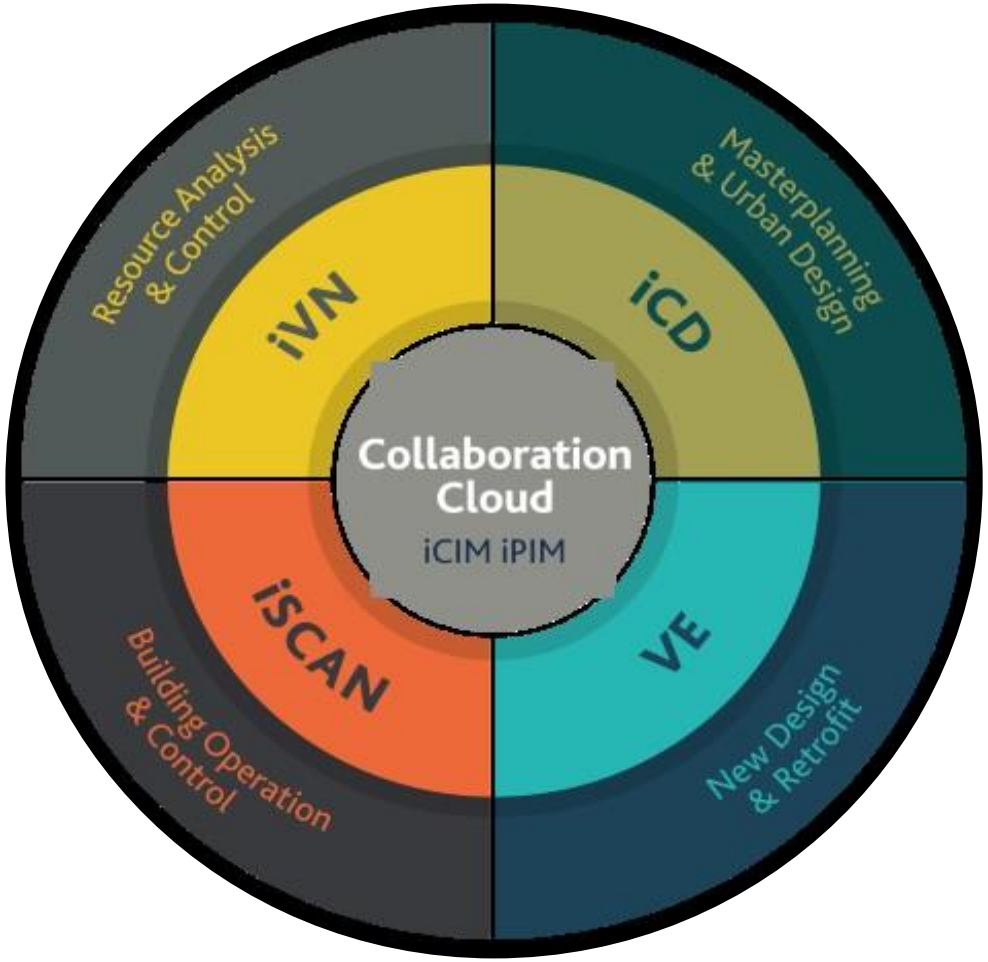
HIGHLIGHTS

- Clean Energy Transition Planning Capacity Building
- Small to medium size municipalities
- Focus on decarbonization scenario planning using urban area simulation environments

R2M ROLE

- Trainer for software environment
- Capacity building program leader
- Exploitation manager

Intelligent Community Lifecycle (ICL)



ICL is an ecosystem that helps create, plan, assess and manage the energy performance of individual buildings and property portfolios by creating dynamic 3D models that reflect the actual performance of the context they represent.

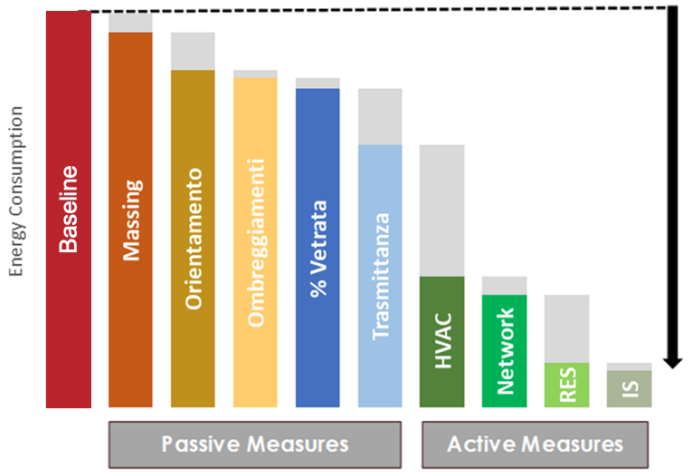
How?

- By concentrating, visualising and analysing data from any source and type of measurement
- Filling in missing data through simulation
- Creating customisable dashboards
- By supporting impact-informed decisions

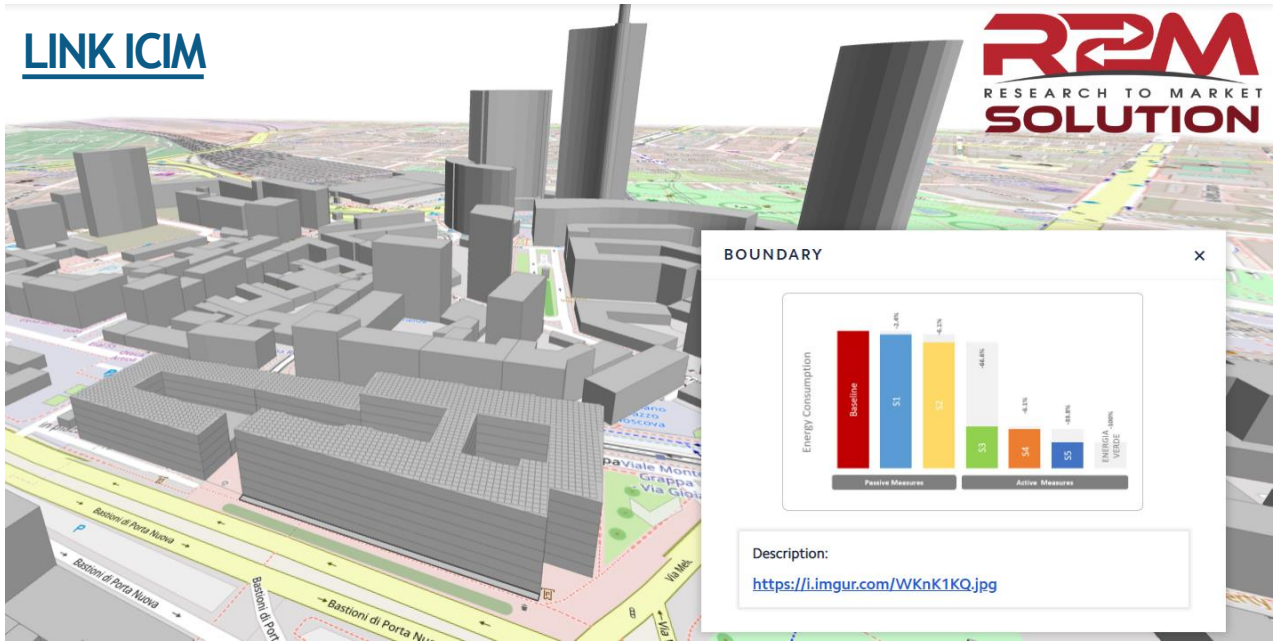
CASE STUDY

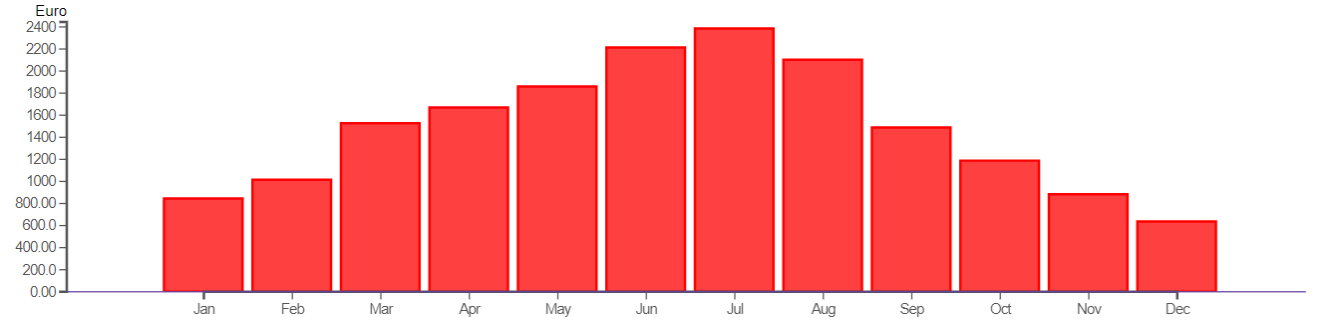
1 Support to design phase

Supporting the design of buildings or districts through PED methodology



- Analisi del modello di **baseline**
- Analisi scenari comparativi
- Individuazione **migliori scenari**
- **Analisi incrementale**

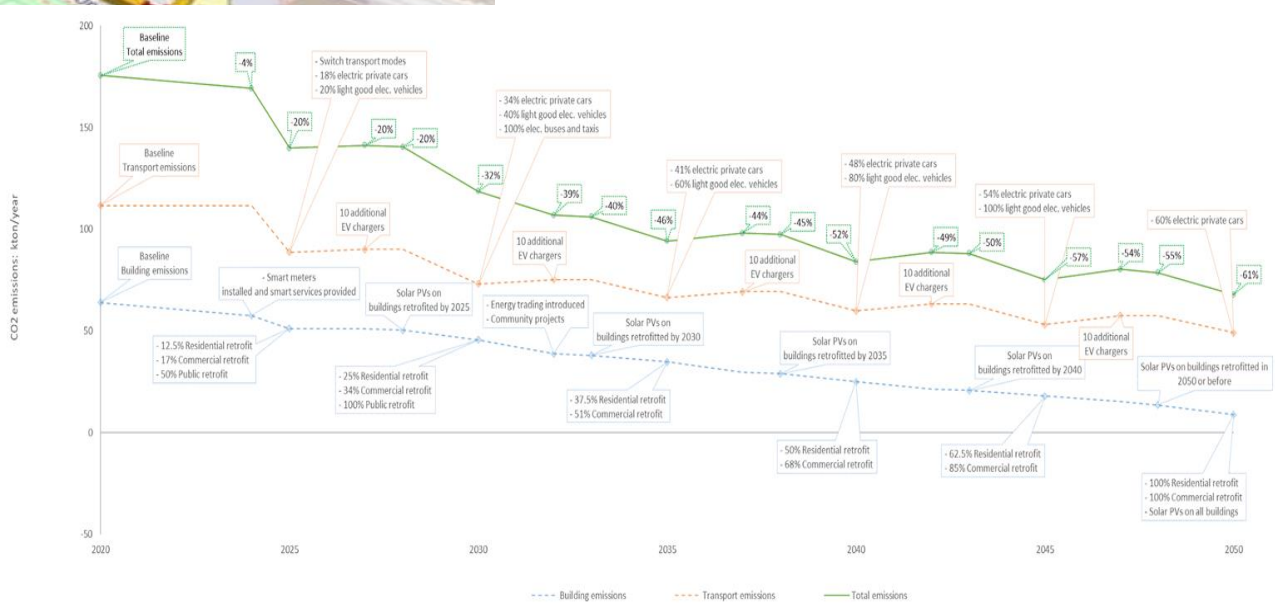




Monthly total	2022-01-01	2022-02-01	2022-03-01	2022-04-01	2022-05-01	2022-06-01	2022-07-01	2022-08-01	2022-09-01	2022-10-01	2022-11-01	202
0_Grant Virtual (Euro)	844.66	1014.46	1526.94	1670.71	1859.64	2213.89	2385.50	2102.33	1488.49	1188.64	882.50	

CASE STUDY

2 Scenarios for decarbonisation and optimisation on an urban scale



Challenges & Discussion Points from work to date

- **Data gathering** to support Clean Energy Transition planning (SECAP) is difficult for most small municipalities
- **Departmentalization** is common in municipalities (e.g. energy department vs. transport vs. others) can result in silos
- **Innovation Capacity** can be challenging. Simulation platforms and digital technologies hold a lot of promise – but not all municipalities are ready for them
- STEP-WISE focuses on a specific part of CET planning, many municipalities need help with all of it