

Online Workshop

Clean Energy Transition & Energy Vulnerability

Session Chair

Thomas Messervey

R2M Solution

thomas.messervey@r2msolution.com

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**SUSTAINABLE
PLACES 2024**

23-25 September 2024

Luxembourg

ONLINE – Join Us

WORKSHOP

25 September 2024 – 16.00

Clean Energy Transition Planning and Energy Vulnerability
Tools & Capacity Building opportunities from 6 European Projects



 www.sustainableplaces.eu

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AND TECHNOLOGY

LIST



R2M
RESEARCH TO-MARKET
SOLUTION



Opening | Paper Session #5 AGENDA

- 16:00 - 16:05 | **Welcome**, Thomas Messervey, Session Chair, CEO, R2M Solution
- 16:05 - 16:15 | **ENTRACK Project**, Virginia Dicuonzo & Marina Varvesi, AISFOR
- 16:15 - 16:25 | **LOCAL GoGREEN Project**, Dr. Uli Jacob, Dr. jakob energy research GmbH & Co. KG (JER)
- 16:25 - 16:35 | **NECPlatform Project**, Jérémy Cléro, IEECP
- 16:35 - 16:45 | **RENOVERTY Project**, Mara Oprea, IEECP
- 16:45 - 16:55 | **Step-WISE Project**, Amisha Panchal, Integrated Environmental Solutions (IES)
- 16:55 - 17:05 | **Energy Poverty Zero (EPOV0)**, Ruben Alonso, R2M Solution
- 17:05 - 17:25 | **Roundtable Discussion**, Moderated by Marina Varvesi, AISFOR
- 17.25 - 17:30 | **Closing**, Thomas Messervey, CEO, R2M Solution

Life clean energy transition sub-programme

Supporting the delivery
of the European Green
Deal and sustainable
energy policies



About *Life* clean energy transition

With a budget of around €1 billion for 2021-2027, the LIFE clean energy transition sub-programme eases the shift to an energy-efficient, renewable energy-based, climate-neutral and resilient economy.

Projects are supported with a 95% co-funding rate.

Find out more and apply for funding in the following link:

[cinea.ec.europa.eu/life/clean-energy-transition_en](https://ec.europa.eu/life/clean-energy-transition_en)

or scan the QR code below.



#CleanEnergyEU
#EnergyEfficiency
#EUGreenDeal



@cleanenergy_eu
@LIFEprogramme
@Energy4Europe
@cinea_eu



LIFE Programme
CINEA



LIFE programme



lifeprogramme

Energy performance contracting
Green jobs Project development assistance
Ecodesign and energy labelling Deep renovation
Energy communities European Green Deal
Home renovation Innovative financing schemes
EU carbon neutrality SECAPs
Energy Efficiency
Renovation wave
National finance roundtables
Resilience
Technology roll-out
Skills development
Municipalities
Local and regional investment
Energy audits
SMEs
Digitisation European City Facility
BUILD UP Skills Energy performance certificates
Clean energy transition leaders Energy efficiency business models
Energy governance Energy audits Private finance Energy poverty
Zero-emission building stock Renewable energy generation Covenant of Mayors
Smart services Sustainable Energy Investment Forum

LIFE Clean Energy Transition Sub-Programme Objectives

- Building a national, regional and local policy framework supporting the clean energy transition;
- Accelerating technology roll-out, digitalisation, new services and business models and enhancement of the related professional skills on the market;
- Attracting private finance for sustainable energy;
- Supporting the development of local and regional investment projects;
- Involving and empowering citizens in the clean energy transition.



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Online Workshop

Clean Energy Transition & Energy Vulnerability

Let's Get Started!

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LIFE22-CET-ENTRACK



*Empowering local and regional authorities to design clean
ENergy **TR**Ansition plans through **C**apacity and **K**nowledge
building actions*



Sustainable Places 2024

Virginia Dicuonzo, AISFOR
Online

www.entrack-project.eu



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Project Partners:

Topic: LIFE-2022-CET-
LOCAL

Project number: 101120704



Background

- Energy production and consumption is the main source of Greenhouse Gas emissions in the EU, with strong reliance on fossil fuels.
- The decarbonisation of the energy system is essential to reach carbon neutrality goals.
- Actions described in EU frameworks must be implemented locally and be facilitated through the essential role of local authorities.
- A multi-governance/multi-sectoral/multi-actor approach is necessary to design coherent policies that leave no one behind.



ENTRACK at a glance

ENTRACK is funded under the LIFE programme for **technical support to clean energy transition plans in municipalities and regions.**

It aims to contribute to the speeding up of the transition to climate neutrality by increasing the energy policy capacities of eight **Mediterranean rural municipalities.**

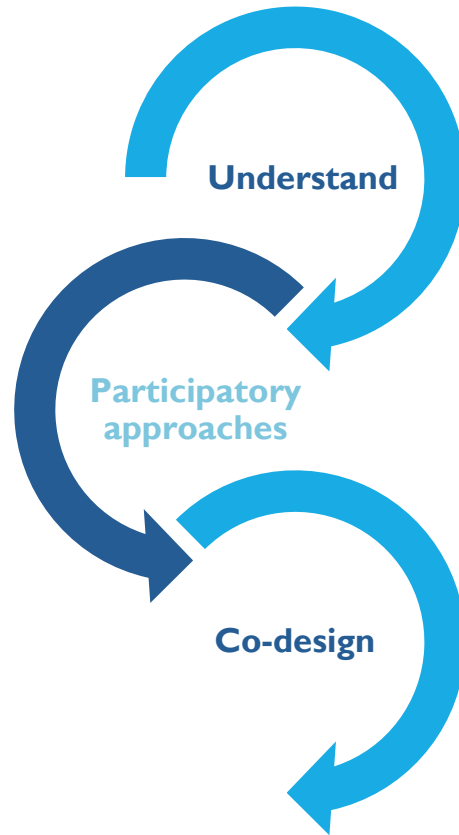


The objectives of ENTRACK are:

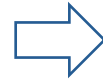
- Enhance the **knowledge and capacity** of local governments to promote a just and fair energy transition;
- Foster a structured dialogue with stakeholders in European municipalities to facilitate co-design of social energy policies addressing **real needs of citizens**, especially those vulnerable;
- Comprehend the factors influencing citizens' needs and priorities, and produce **policy recommendations** to inform decision-making regarding socially just energy transition policies.



ENTRACK methodological approach



Understanding the local policy content of the clean and just transition



Ethnography to collect insights from local stakeholders/citizens



Empowerment evaluation (self-assessment of local policy actors)



Co-designing new energy policy



ENTRACK activities

- Deliver social-energy **policy taxonomy** of strategies, plans, and policies operating at different governance levels;
- Understand citizens' needs and perception through **ethnography** research;
- **Self-assess impacts of ongoing policies** with the lens of citizens' understanding;
- Develop **energy modelling tools** to assess local energy - climate policies;
- Deliver **training courses addressing knowledge and capacity gaps** of piloting municipalities;
- Codesign **social energy policies** within the 8 piloting municipalities.

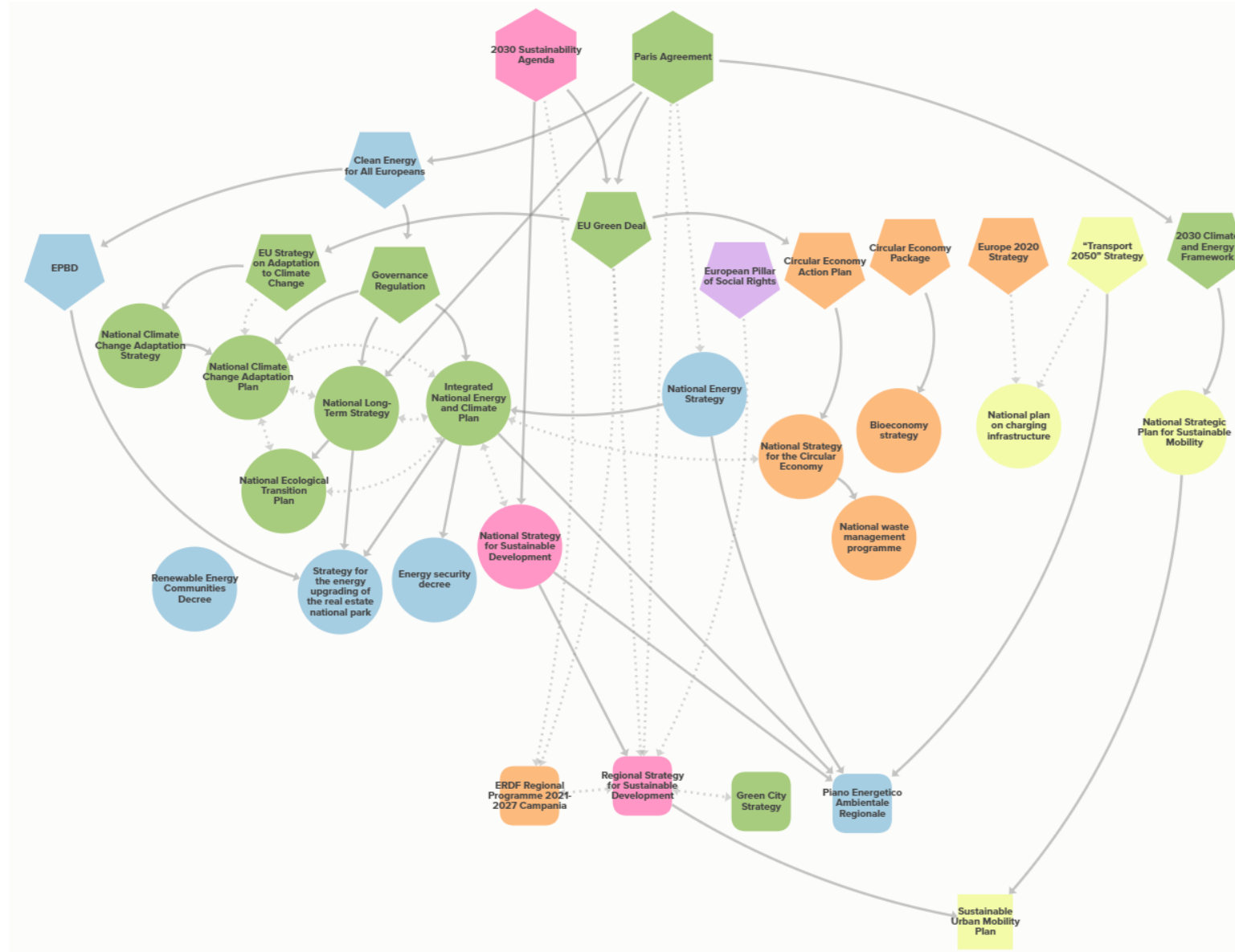


Stakeholders' involvement

- Establish **4 Municipality – Region Partnership** to collect inputs from key stakeholders;
- Establish a **Community of Practitioners** to investigate the key levers for fostering energy transition;
- Create **4 groups** of empowered local “**Climate Explorers**” that can act as observers for the **ethnography**;
- Establish **1 Advisory Board** to support the project development.



Taxonomy of social-energy plans



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Ethnography results

- It allows to learn about contexts directly from the interviews' results.
- The Climate Explorers were trained in the methodology to conduct interviews.
- 10 Climate Explorers trained in the largest regions, 5 Climate Explorers in the smaller ones.
- Over 575 citizens' interviews conducted.

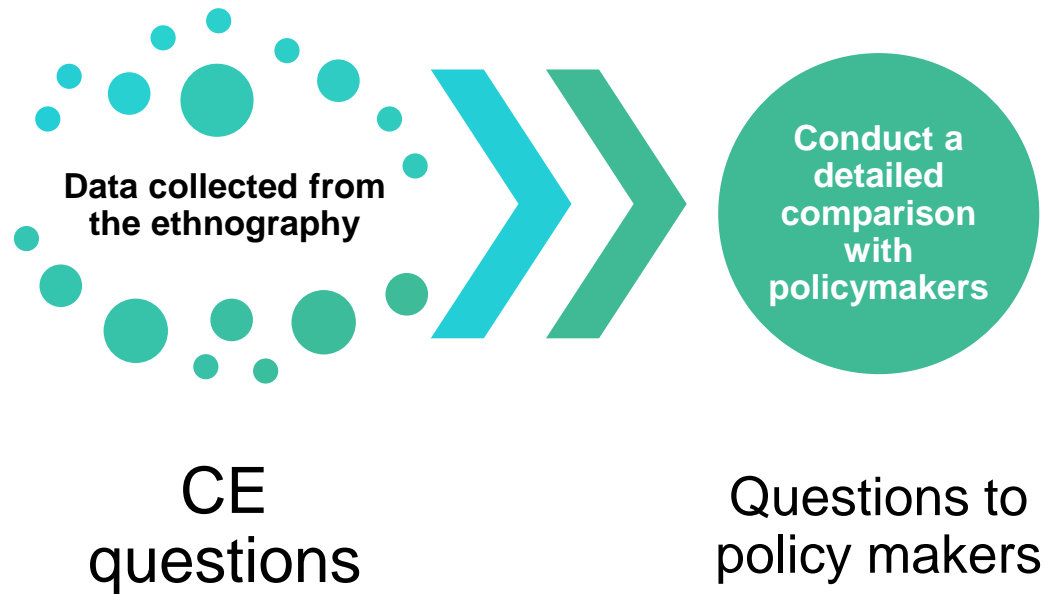
Initial results from the Italian case study:

- Practices/habits related to energy: recycling, sustainable mobility, efficient water use;
- Perceived obstacles: costs, bureaucracy, bad habits;
- Perceived necessary incentives: economic (eco-bonus), cultural (environmental education);
- General perceptions on the topic of clean energy: growing awareness, but unsustainable behaviors still persist;
- Expectations: greater spread of renewable energy, more sustainable public policies.

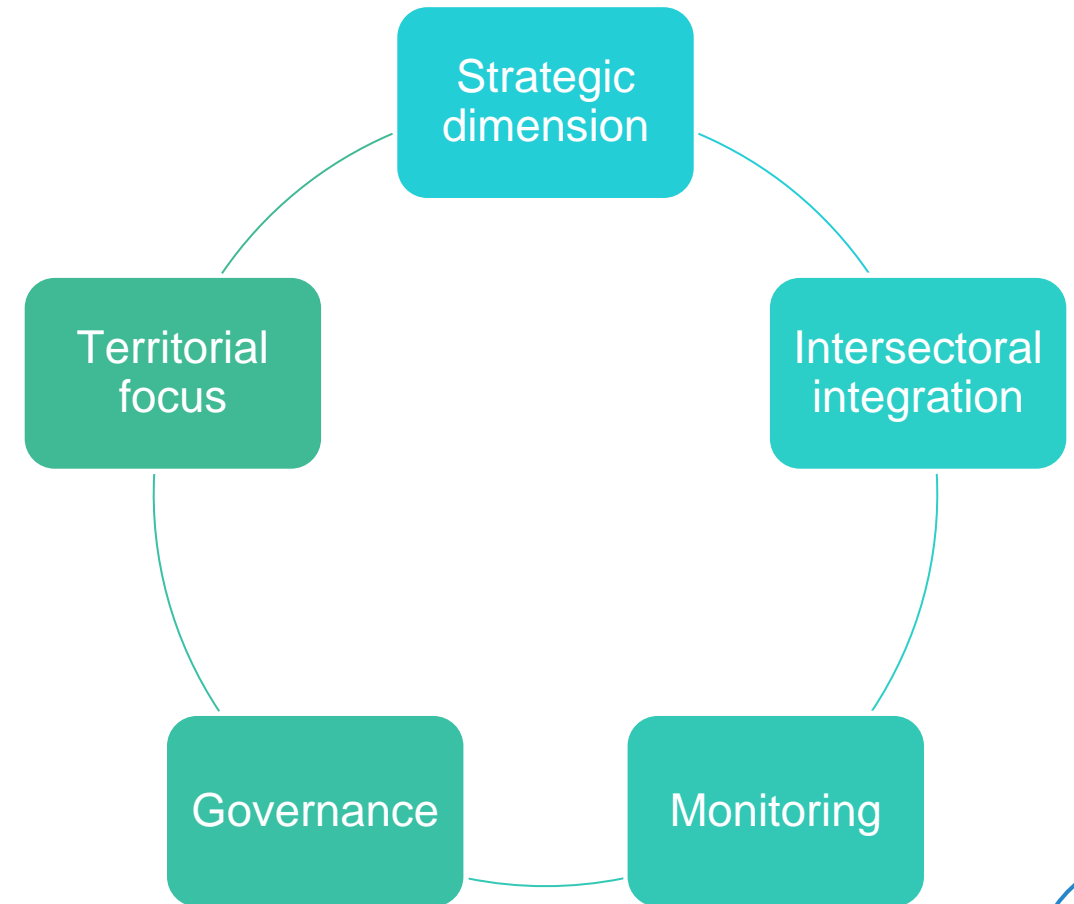


Self-evaluation of social energy policies implementation

1° step



2° step



THANKS FOR YOUR ATTENTION!



Contact us:
info@entrack-project.eu
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Project Partners:

Topic: LIFE-2022-CET-
LOCAL

Project number: 101120704





EMPOWERING LOCAL AUTHORITIES FOR ACCELERATING THE CET

Dr. Uli Jakob (JER)

25.09.2024, Online Workshop
“Clean Energy Transition Planning and Energy Vulnerability”

SP2024 conference Luxembourg

PROJECT CONSORTIUM

START 1. November 2023

END 31. October 2026

EU contribution

1,399,294 €

8 partners from 7 countries

LEASP	SME	Slovenia
CNR-IMAA	RTO	Italy
TARTU	RTO	Estonia
ABERON	SME	Bulgaria
A3E	SME	Spain
ENERKON	SME	Croatia
EIFI-TECH	SME	Germany
JER	SME	Germany



PROJECT AIMS – CLEAN ENERGY TRANSITION

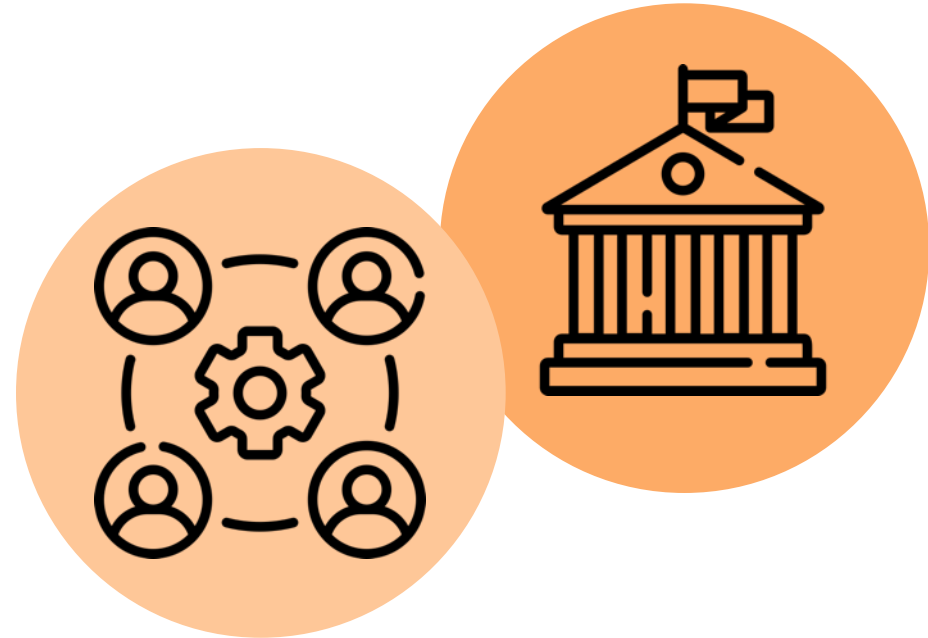
LOCAL

- CET on a local scale
- Local potential and needs



SUPPORT

- Direct support for policy makers
- Establish networking of stakeholders

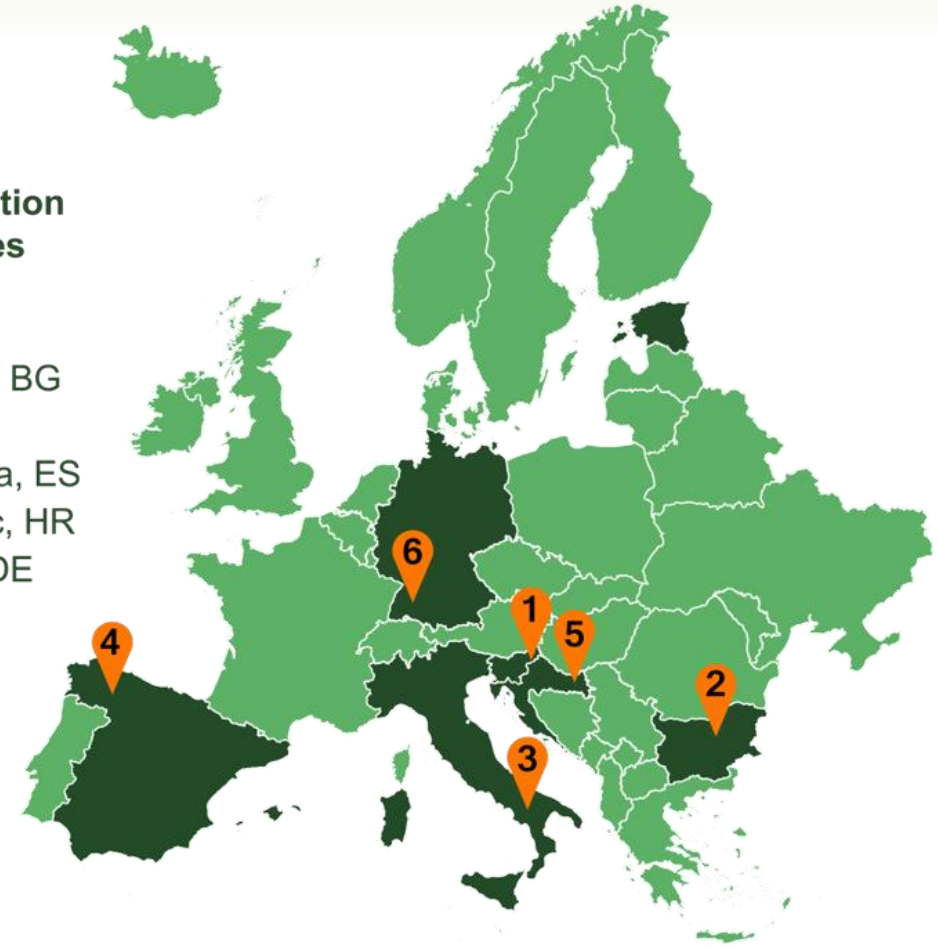


6 DEMONSTRATION MUNICIPALITIES

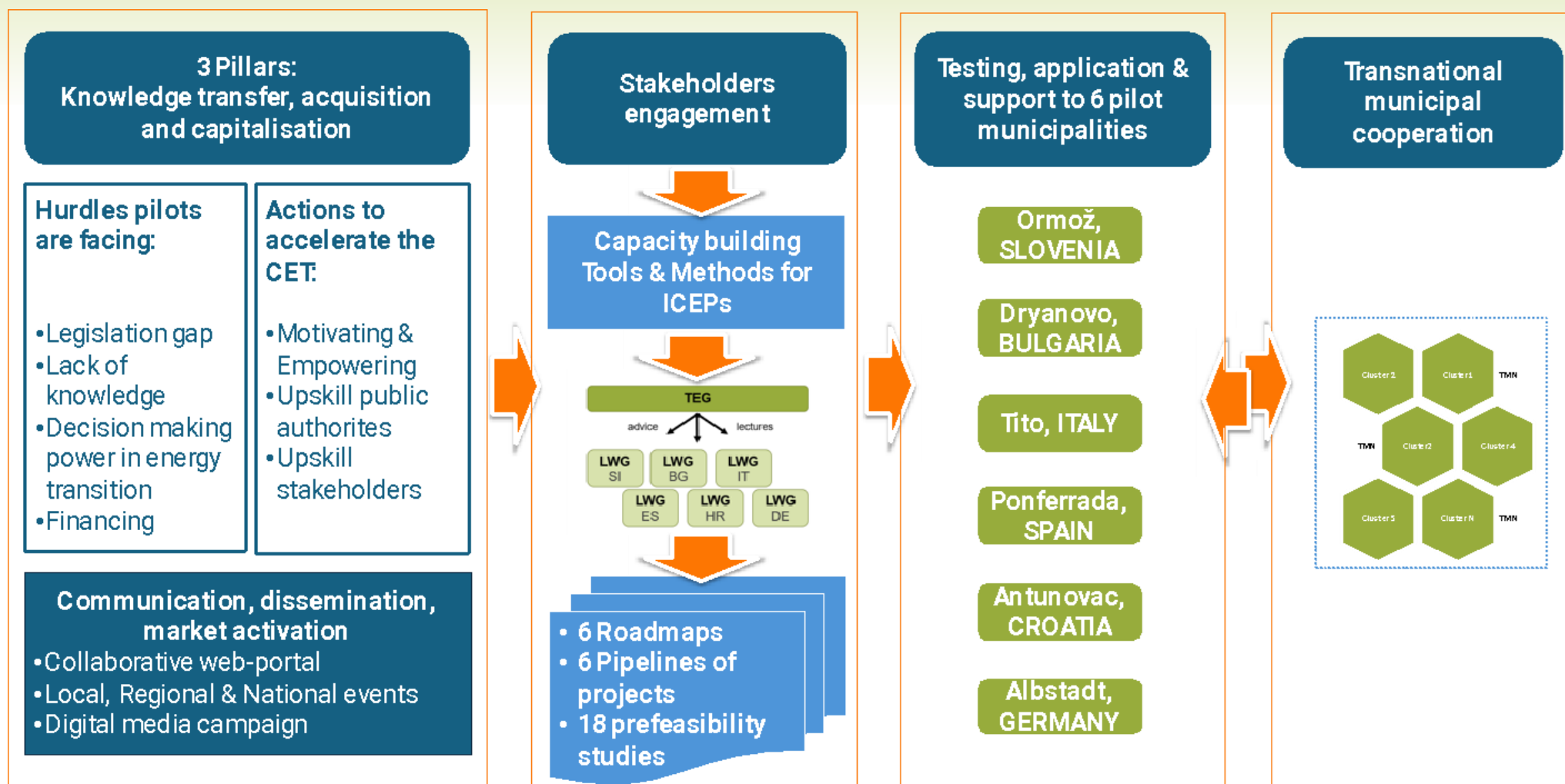
- Bottom-up approach
- Involvement of local stakeholders – development of a regional cluster: **Local Working Groups (LWG)**
- Support to build **Integrated Climate and Energy Plans (ICEP)**
- **Transnational Expert Groups (TEG)** provide intelligence knowledge, expertise and capacity on technical, commercial, regulatory and policy assistance
- Local **Workshops** for stakeholders and experts

6 demonstration municipalities

- 1 Ormož, SI
- 2 Dryanovo, BG
- 3 Tito, IT
- 4 Ponferrada, ES
- 5 Antunovac, HR
- 6 Albstadt, DE



METHODOLOGY



5 PRIORITY AREAS



Land use planning for
increased carbon absorption



Expansion of renewable
energy generation



Waste-to-energy



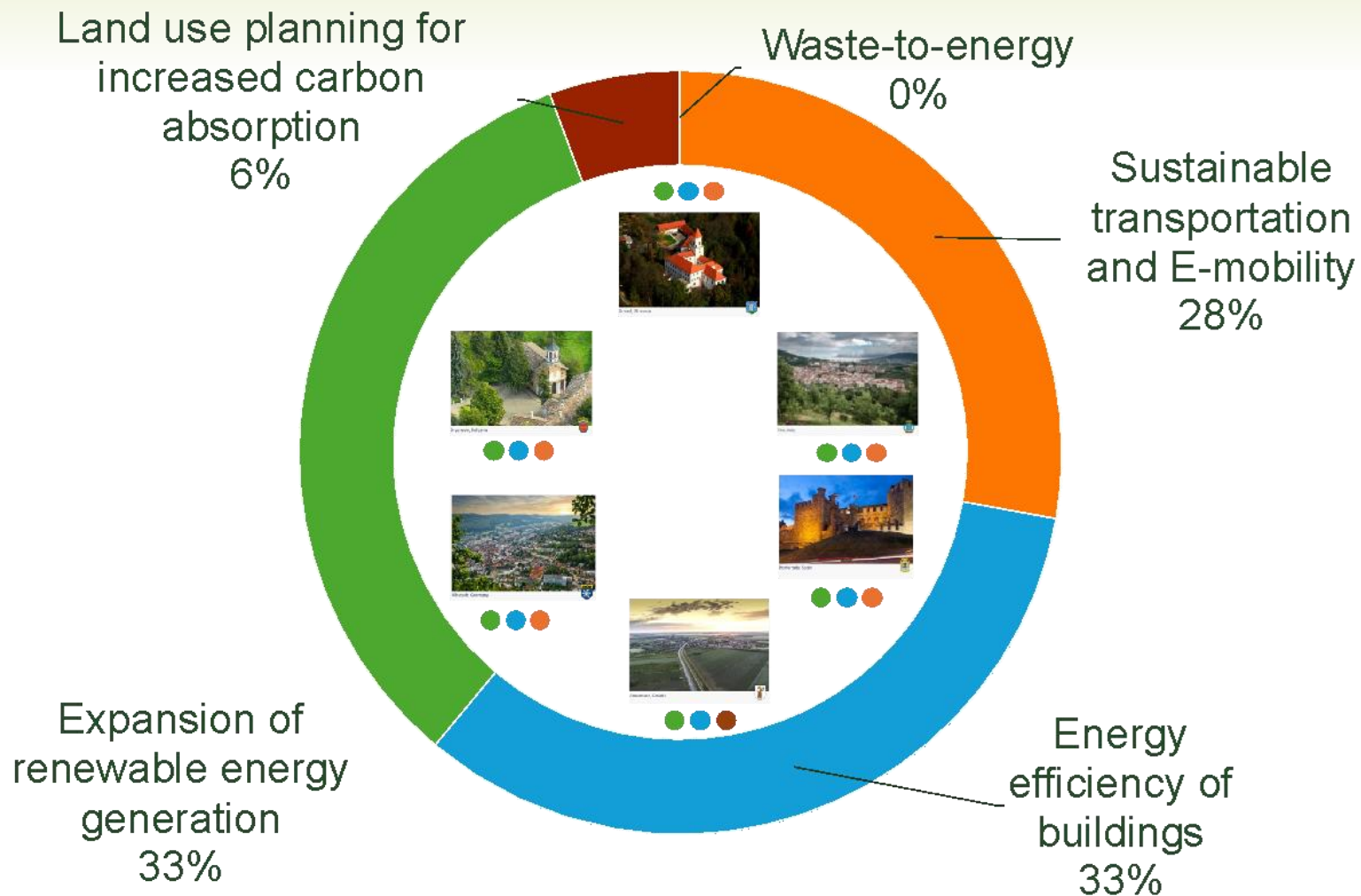
Energy efficiency
of buildings



Sustainable transportation
and E-mobility

PRELIMINARY RESULTS

Overview of the key priority areas selected by pilot municipalities



ACHIEVEMENTS AND NEXT STEPS



Building of a database of plans that describe the main characteristics and goals of the climate and energy plans in place in each pilot.

- **Analysis and comparison:** Identification of a comprehensive set of key performance indicators to characterise the **climate and energy plans approved** (or being approved) by pilot municipalities.
- **GAP analysis:** Identification of barriers to the implementation of energy transition measures.
- **Training materials:** Development of 3 modules including general info about ICEPs, the five priority areas and funding opportunities (later available on e-learning platform).
- **Pre-feasibility studies:** Development of 3 actions for each of the 6 pilot municipalities.

LOCAL GoGREEN ON THE WEB



Website



Newsletter

LOCAL GoGREEN ON SOCIAL MEDIA



X (Twitter)



Instagram



YouTube



LinkedIn

LOCAL GoGREEN PROJECT



Website



Linkedin



X
(Twitter)



YouTub
e



Instagram



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NECPlatform



Multi-Level Climate and Energy Dialogues':

First results from implementation in six Member States

25th September 2024

Jérémy Cléro - IEECP

www.energy-cities.eu/project/life-necplatform



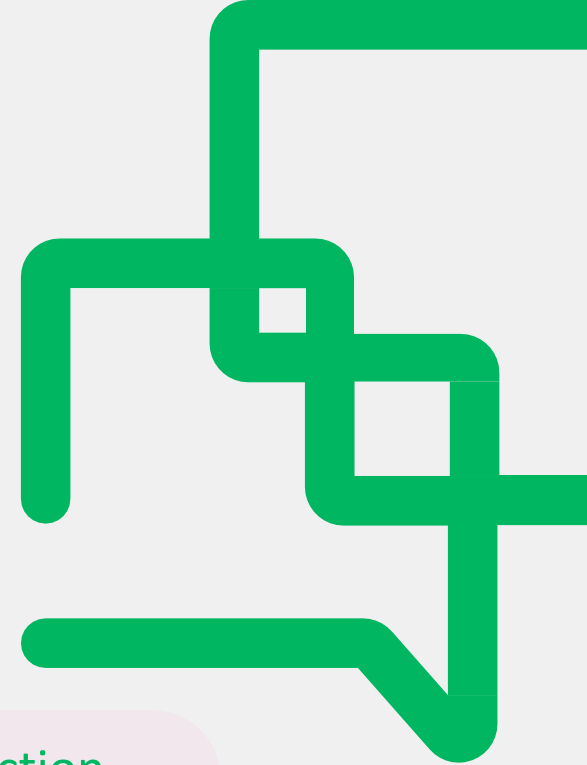
The NECPlatform project

→ support to 6 EU Member States in setting up
and managing multi-level dialogue platforms
→ foster **vertical and horizontal integration** of
national energy and climate policies

Article 11 of the **Regulation on the Governance of the Energy Union and Climate Action** (1999/2018) requires Member States to:

“establish a multilevel energy and climate dialogue, bringing together local authorities, civil society organisations, the business community, investors and other relevant stakeholders to discuss the different options envisaged for energy and climate policies”.

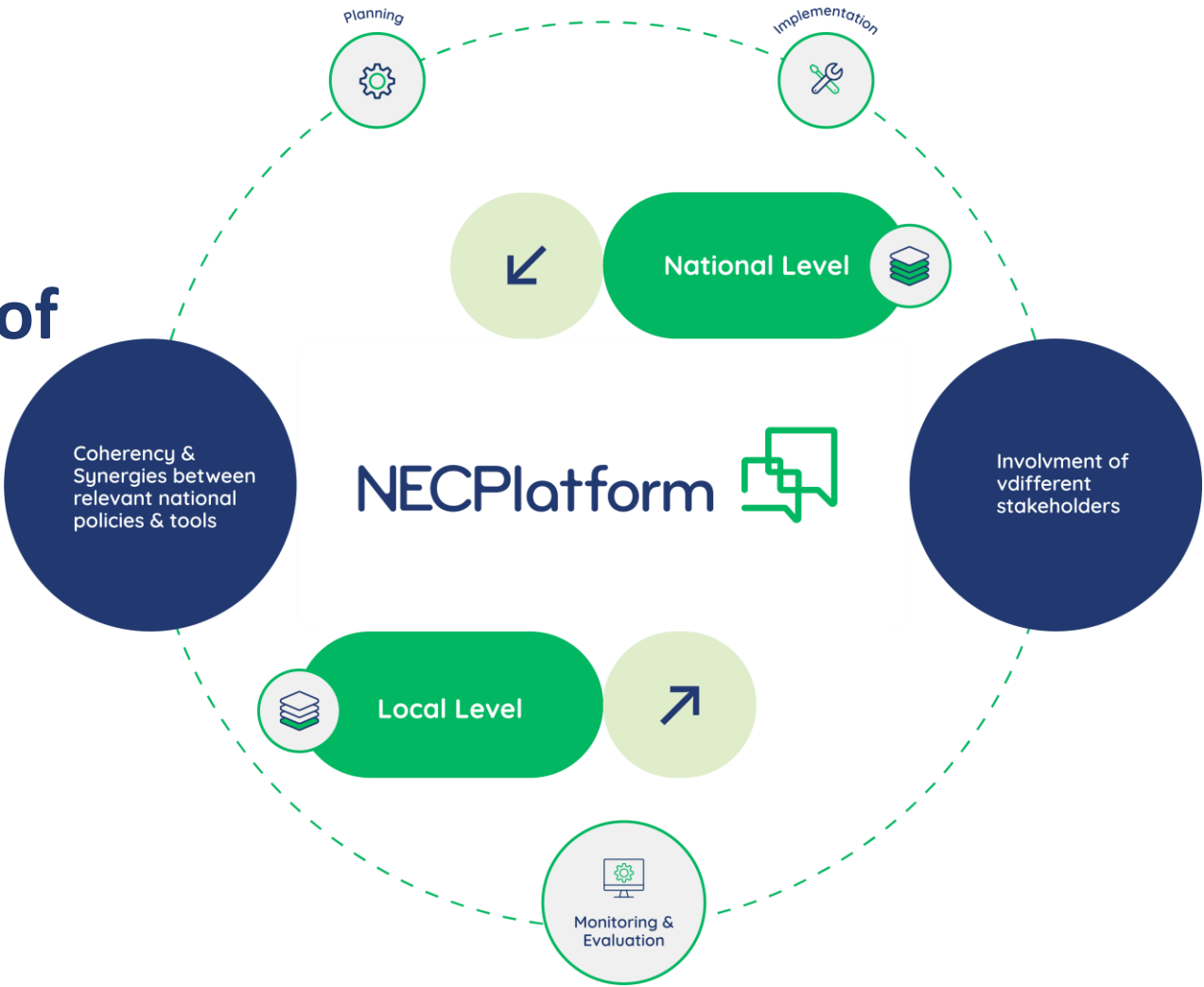
*the guidance to MS for the update of the 2021-2030 NECPs mentions NECPlatform as a supporting tool



Multi-level governance facilitated at different stages of the policy cycle

Horizontal Integration

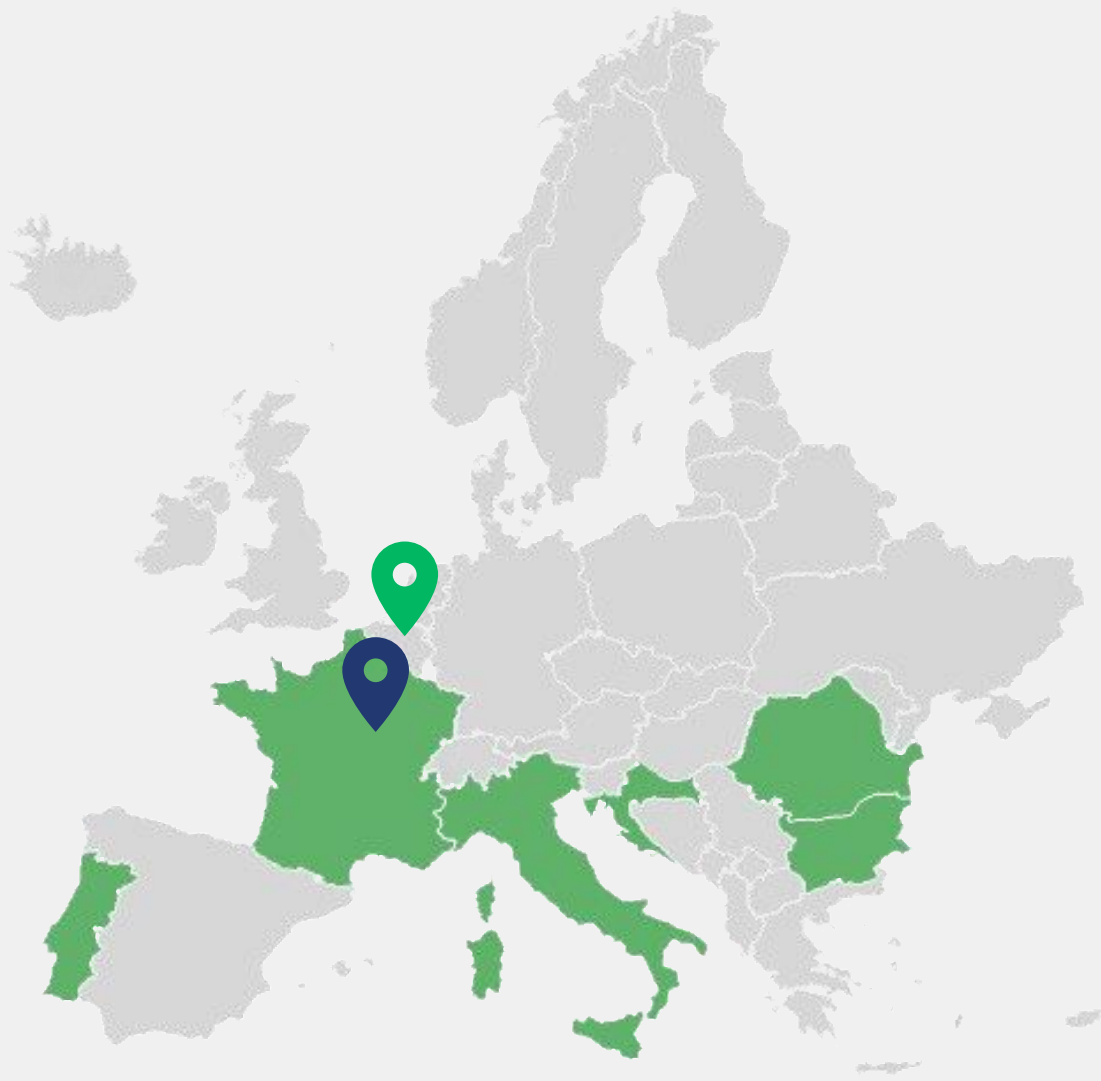
Engage peers at the same level to ensure synergies and avoid overlaps



Vertical Integration

Enhance higher-level decisions and align them to sub-national needs;

Who?



EU Level

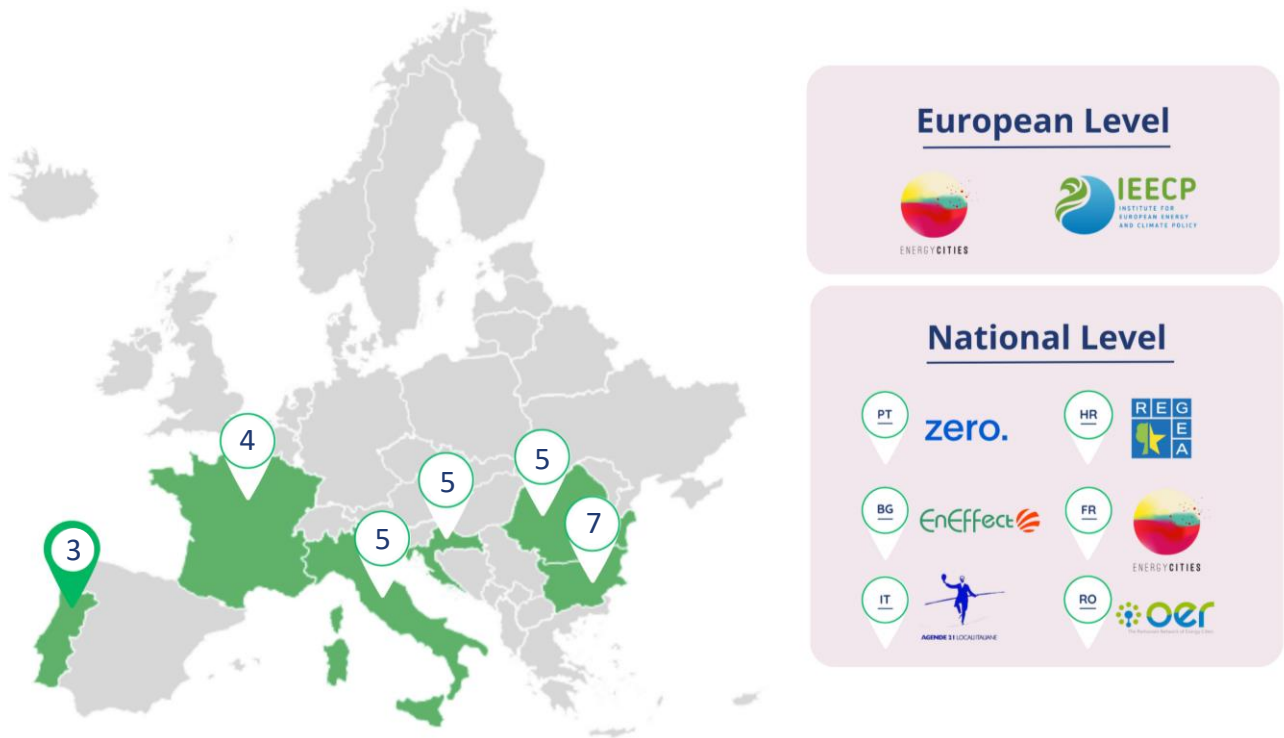


National Level



Where do we stand in September 24?

Number of dialogues and lead organisers



Multi-level dialogues, what for?

-  bring together relevant stakeholders
-  become a privileged fora to discuss updated NECPs
-  foster vertical & horizontal integration of energy & climate policies
-  help Member States comply with the EU Governance Regulation

The tool: Climate and Energy Dialogues

What for?

- ✓ Align E&C policies between EU, national and local
- ✓ Include bottom-up decision-making
- ✓ Provide feedback and support on
 - ✓ NECP drafting
 - ✓ NEC Progress Reporting

Climate and Energy Dialogues: A tool that works?

Example of Croatia

Art. 11:

Who?

- National authorities
- Local authorities
- Civil society organisations
- Business community
- Investors
- Academia

CED 1

49 people

- 8 Ministries (Economy & Sustainable Development – Finance – Regional Development – Spatial Planning – Labour – Agriculture – Science & Education)
- Regional energy agency (REGEA)
- Croatian Chamber of Commerce
- Association of Croatian Cities
- Academia & research institutes
- NGOs

Outcome

The role of involving local & regional authorities in tailoring NECP measures was highlighted. The dialogue advocated for more structured implementation plans better policy coordination and facilitated financing.

First steps towards more integrated, transparent and effective approach to Croatia's NECP.



CED 3

45 people (online)

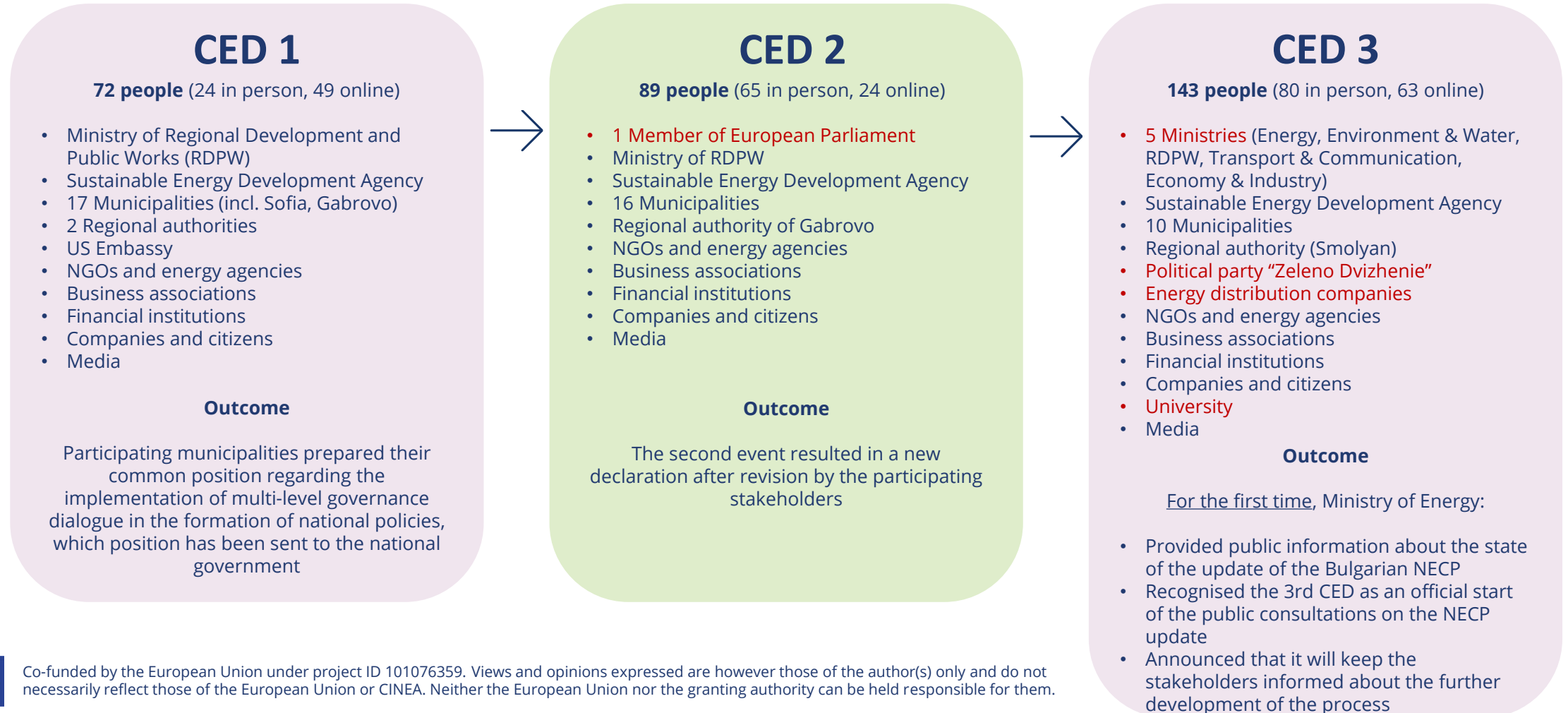
- 9 Ministries (Economy & Sustainable Development – Finance – Regional Development – Spatial Planning – Labour – Sea, Transport, Infrastructure – Agriculture – Science & Education)
- Local governments representatives
- Regional energy agency (REGEA)
- Croatian Chamber of Commerce
- Association of Croatian Cities
- Academia & research institutes
- NGOs

Outcome

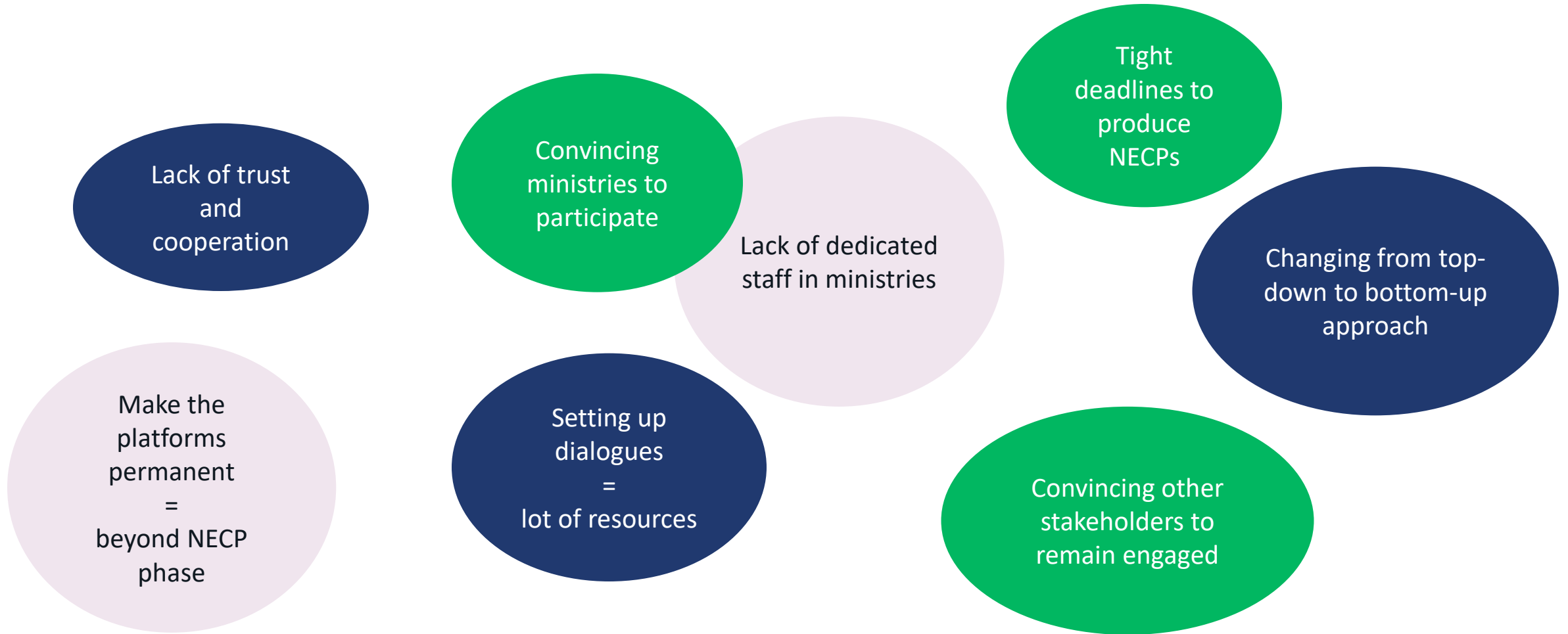
Framework for further refinement and implementation of NECP's measures to put Croatia on the path of neutrality

Climate and Energy Dialogues: A tool that works?

Example of Bulgaria



Remaining challenges



Climate and Energy Dialogues: A tool that can work

Obstacles

- ✗ Political instability
- ✗ Central State's top-down culture
- ✗ Lack of resources
- ✗ Parallel initiatives

Success factors

- ✓ Strong participation from ministries
- ✓ Avoid/prevent parallel initiatives
- ✓ Persistence of local authorities and agencies
- ✓ Patience!

Work in progress...

➔ Climate & Energy Dialogue Platforms

Replication programme in
6 other countries

➔ Dialogue Platforms implementation guide

Started in June 2024



Jérémie Cléro
Energy Policy Expert





*Home Renovation Roadmaps to Address Energy Poverty
in Vulnerable Rural Districts*

Renovation Roadmaps to Address Rural Energy Poverty

Mara Oprea

Institute for European Energy and Climate Policy (IEECP)

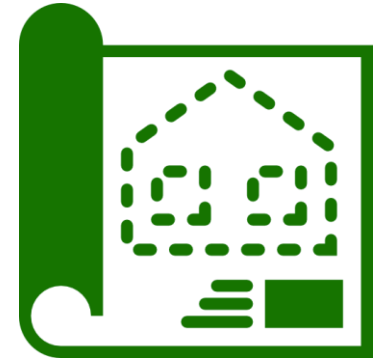


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RENOVERTY's Objectives

Design and promote the renovation and energy efficiency of 17 vulnerable rural areas across 7 regions by:

- Establishing a knowledge base about rural energy poverty, using this to develop rural **Renovation Energy Efficiency Roadmaps (REERs)** according to the characteristics of households in CEE, SEE, and SE regions.
- Supporting **local stakeholders** in the building, co-creation and implementation of roadmaps.
- Delivering **a scalable operating model** to support the replicability of the roadmaps and guide other public actors to renovate new rural vulnerable districts.

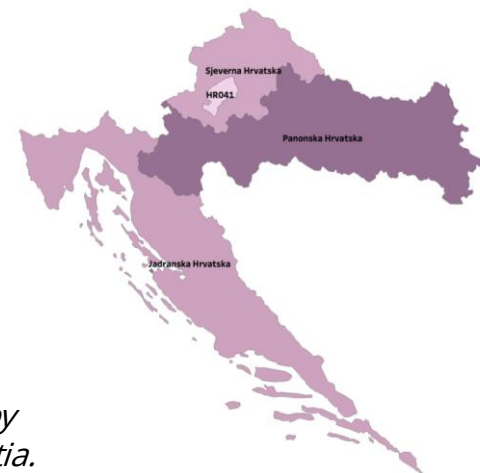
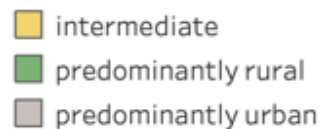


Why focus on rural areas?

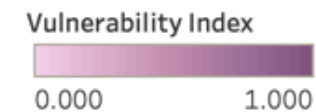
- The causes for energy poverty have become clearer, yet an **absence of practical and theoretical understanding** of how to address the issue, particularly in rural areas, exists.
- **Rural areas** across CEE, SEE and SE Europe are increasingly being left behind in the energy transition.
- Despite their need for support due to increased levels of vulnerability, **practices to reduce energy poverty are lacking**.



Division of NUTS 3 Regions by Rural-Urban Typology in Croatia.



Observed Risk of Poverty and Social Exclusion in Croatia, NUTS 2 level.



Barriers and Gaps

Financial barriers

Lack of capital, high upfront cost
Higher energy burdens, low income
Credit access, debt Aversion

Geographic barriers

Geographic isolation
Shortage of local energy efficiency workers
Lack of expertise

Awareness / Access barriers

Lack of awareness, skepticism
Lack of time, priorities
Lack of access to marketing channels

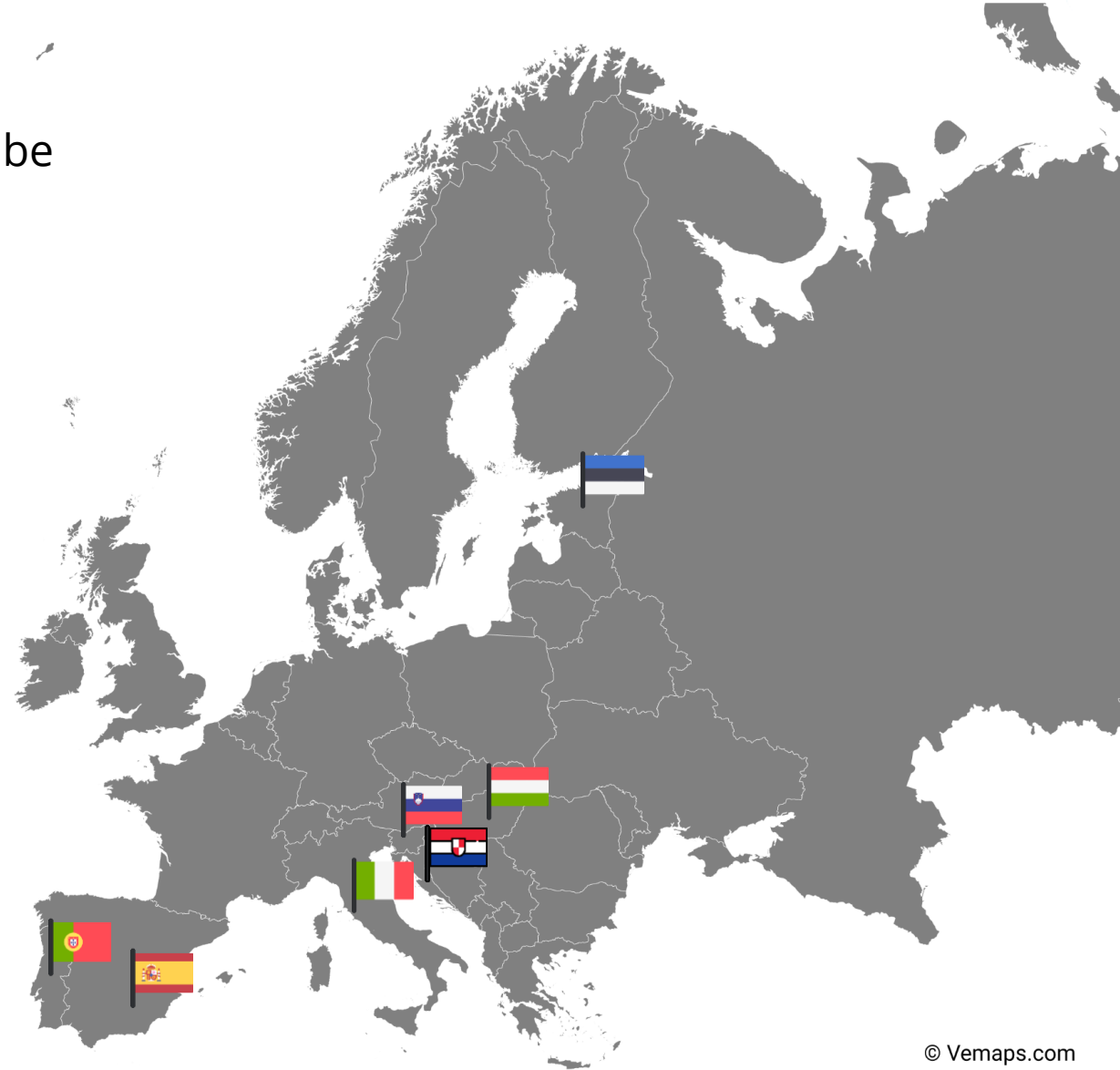
Regulation barriers

Unsupportive & inconsistent policy setting
Lack of strong sub-national territorial
components in policy making

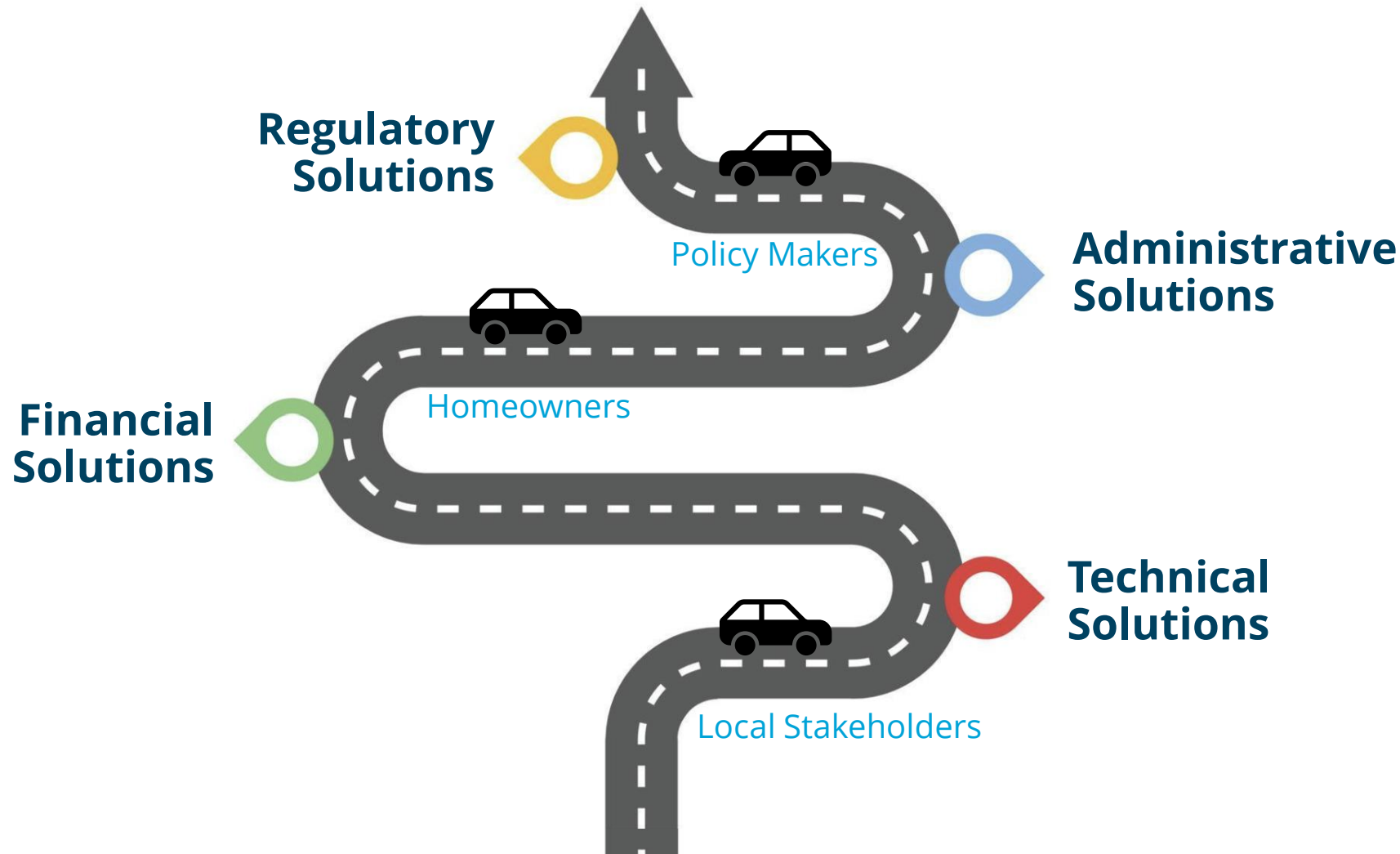
Pilot Areas

Over the project's three years, the roadmaps will be implemented by seven pilots:

1. Sveta Nedelja (*Croatia*)
2. Tartu (*Estonia*)
3. Bükk-Mak & Somló-Marcalmente-Bakonyalja Leader (*Hungary*)
4. Zasavje (*Slovenia*)
5. Parma (*Italy*)
6. Coimbra (*Portugal*)
7. Osona (*Spain*)



What are renovation roadmaps?



A combination of:

Technical data about renovation, such as measures to be implemented, costs, timelines, etc.

Non-technical aspects of renovation focused on social and cultural factors, such as cooperation between the community, process of implementing decisions, etc.

Structure of the REERs



Technical considerations for renovation of households

- Energy Audits
- Setting renovation expectation and indicators for rural households
- Planning the renovation
- Identifying and overcoming barriers and challenges
- Types of contractors to contact



What's next? Conceptualising and applying actions to reduce energy poverty in rural areas

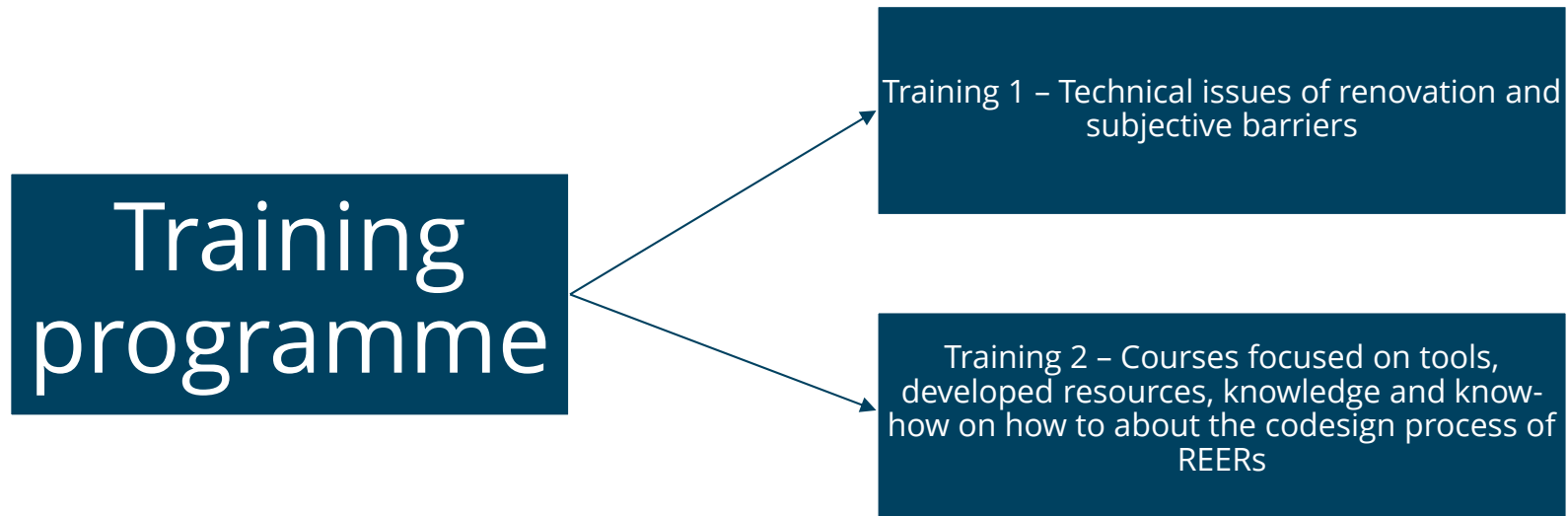
- Key characteristics of the housing in the region based on energy audits
- Setting renovation objectives
- Identifying barriers and challenges
- Overcoming barriers and challenges
- Scalability and replicability

Training programme for main stakeholders



Training programme for **stakeholders** with the aim to increase the capacity of operators to guide rural citizens into renovating their households.

- It is ***multilingual and online*** (moodle platform)
- 2 different courses focused on different topics



Training Programme



	Title	DURATION (minutes)	TOPIC of the course
M0	Basic concepts of energy use in dwellings	20	Energy analysis of the home: consumption and installations; changing habits from a psychological point of view (ex ante)
M1	All the benefits of renovation	122	
	intro M1	5	Presenting the structure and contents of the module
M1.1	Difference between single family building and multi family	15	Differences between the two; How to motivate in the multi family buildings
M1.2	Economic benefit for citizens	40	From audit to decision of works to implementation; Demistifying myths
M1.3	Type of renovation measures	40	Deep and Step-wise Renovation: Differences and common steps; Promote energy renovation vs conservation renovation
M1.4	Best case examples	10	Best case examples
Test module	Multiple choice quiz with 12 questions (3 questions for each of the 4 lessons in module 1)	12	
M2	Managing the process	132	
	intro M2	5	Presenting the structure and contents of the module
M2.1	Financial mechanisms and funds	30	Financing plan that takes into account reserves, funding and external financing, specialized loan (HOA)
M2.2	From project development to implementation	30	How to select companies and professionals; Direct contact with the persons who supervise the project; Problem solving in case of damage; Building renovation passport; building life cycle
M2.3	Life in house going through renovation	15	How to organise habits and life during a soft and deep renovation (from deciding the best time in the year for the renovation according to the weather, how to manage the basic daily needs, how to manage transposrt of furniture, etc.)
M2.4	Consumption habits to be adopted after renovation	20	Education about the correct behavior after renovation (e.g. ventilation, heating system)
M2.5	Non financial support	25	OSS, Associations, LAGs, Legal support, Energy Communities
Test module	Multiple choice quiz with 15 questions (3 questions for each of the 5 lessons in module 1)	12	

Next steps together?

- **Capacity Building** – Capacity building and **training materials for stakeholders** such as Local Action Groups, energy agencies, municipalities, etc. will be offered online for those learning to support their rural communities to alleviate energy poverty and overcome renovation barriers.
- **Policy** – By October, the **REERs will be finalised, setting the base for the implementation of the solutions in the roadmaps**, as well as for policy recommendations within each participating country. Additionally, stakeholders relevant to the renovation value chain such as regulatory bodies will be addressed with recommendations on how to increase support for rural renovation. Once implemented, the REERs can also be replicated by local authorities.



— RENOVERTY

Home Renovation Roadmaps to Address Energy
Poverty in Vulnerable Rural Districts

November 2022 - October 2025

You will be able to
find the RENOVERTY
REERs on
<https://ieecp.org/projects/renoverty/>



Thank you.

For more info, follow our hashtag, visit our website or contact us:



#RENOVERTY



<https://ieecp.org/projects/renoverty/>



mara@ieecp.org



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Home Renovation Roadmaps to Address Energy Poverty in Vulnerable Rural Districts



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Clean Energy Transition Planning & Energy Vulnerability Workshop

Energy Poverty 0

Speaker: Rubén Alonso (R2M Solution)

Date: 25/09/2024



Our Journey



Innovation



Innovative Products



**Sustainability Consulting
& Energy Services**

R E S E A R C H T O M A R K E T

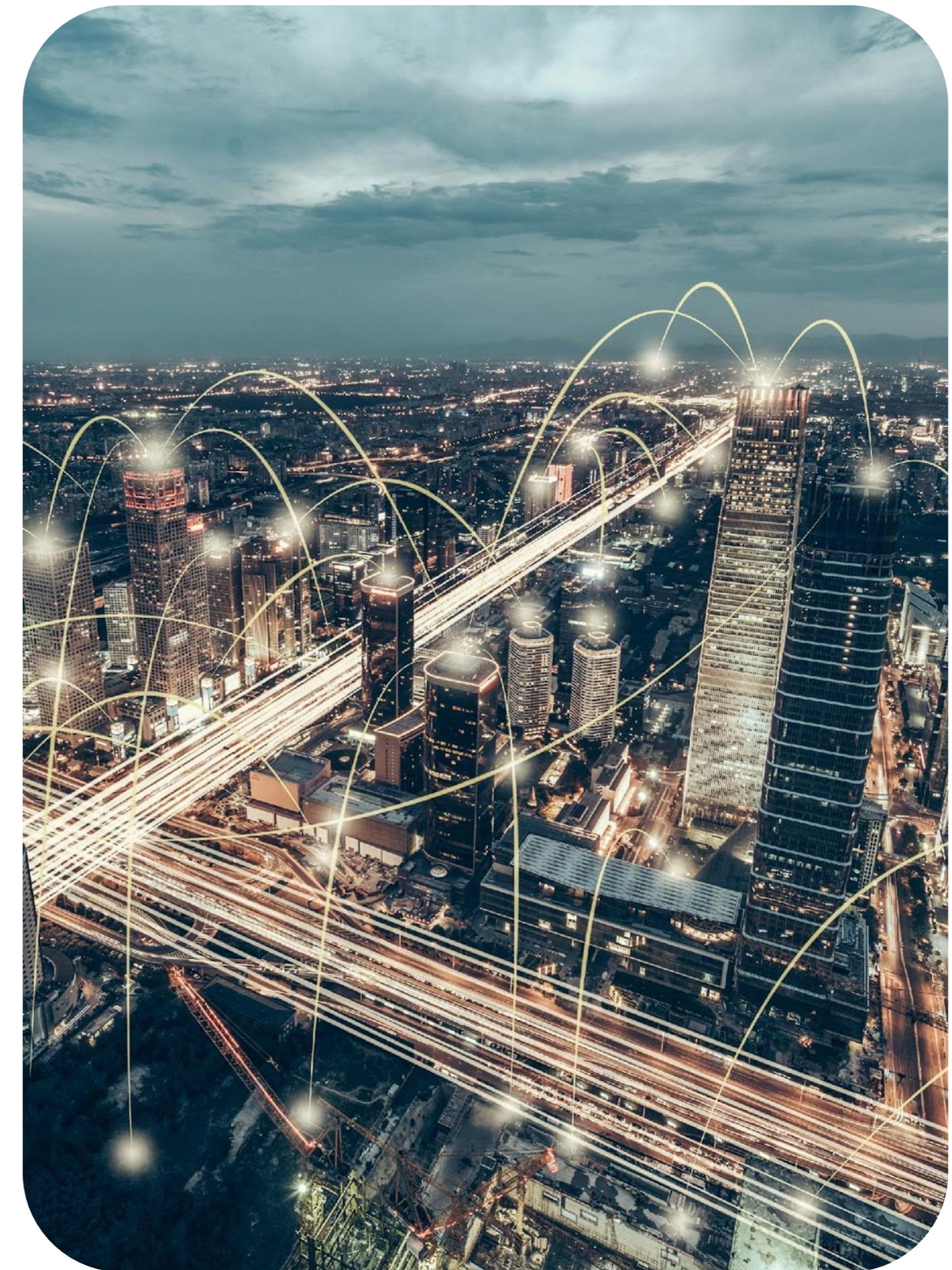
Thematic Areas

SSC – Smart and Sustainable Communities

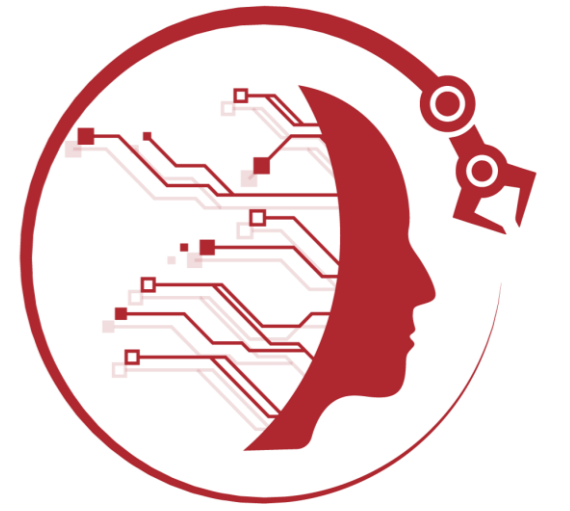


TOPICS

- Demand-Response
- Energy Communities
- Positive Energy Districts
- District Heating and Cooling
- Smart Building Energy Management Systems (BEMS)
- Smart grids
- Local energy planning
- Sustainable Energy and Climate Action Plan (SECAP)
- E-mobility
- Citizen's engagement
- Energy Poverty
- Smart contracts

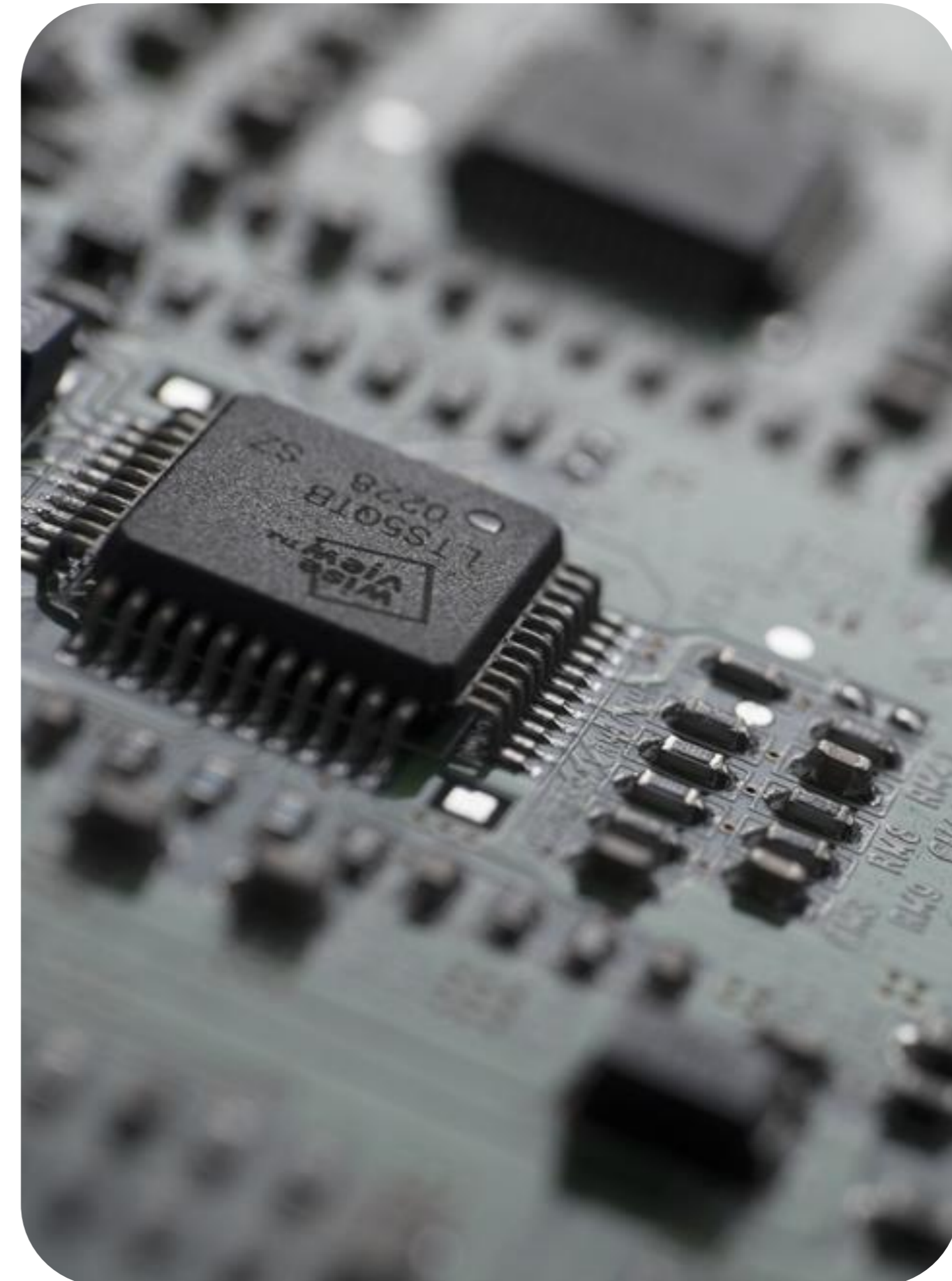


ITF – Industries of the Future



TOPICS



- Digitalisation of industry
- Composable digital platforms
- Augmented and Virtual Reality
- Digital Twins and 3D navigable models
- Data augmentation
- Artificial Intelligence and Machine Learning
- Natural Language Processing
- **Data visualization and processing**
- ICT & Robotics



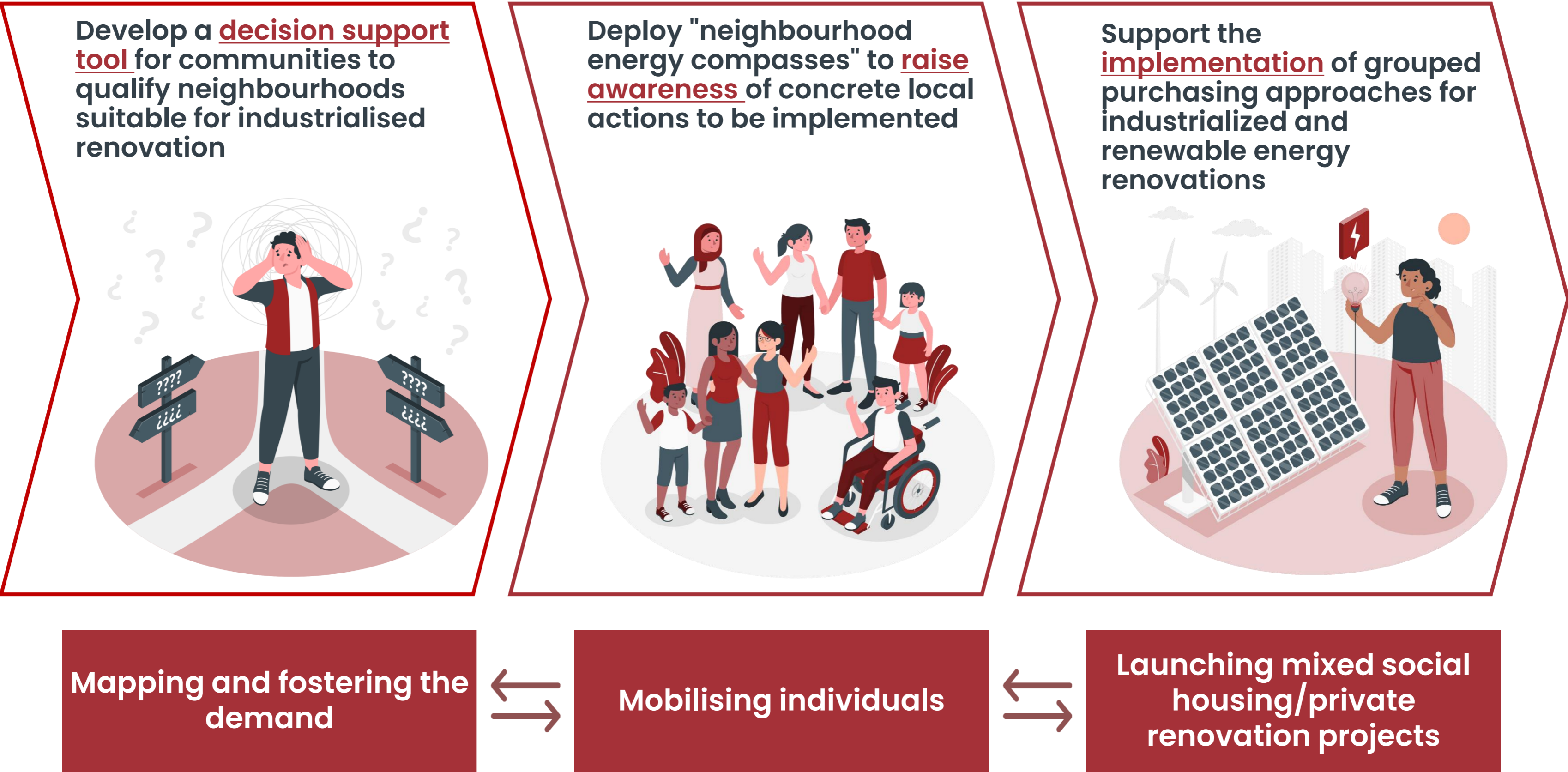
Energy Poverty 0

Exploring new frontiers for the massification of energy renovation

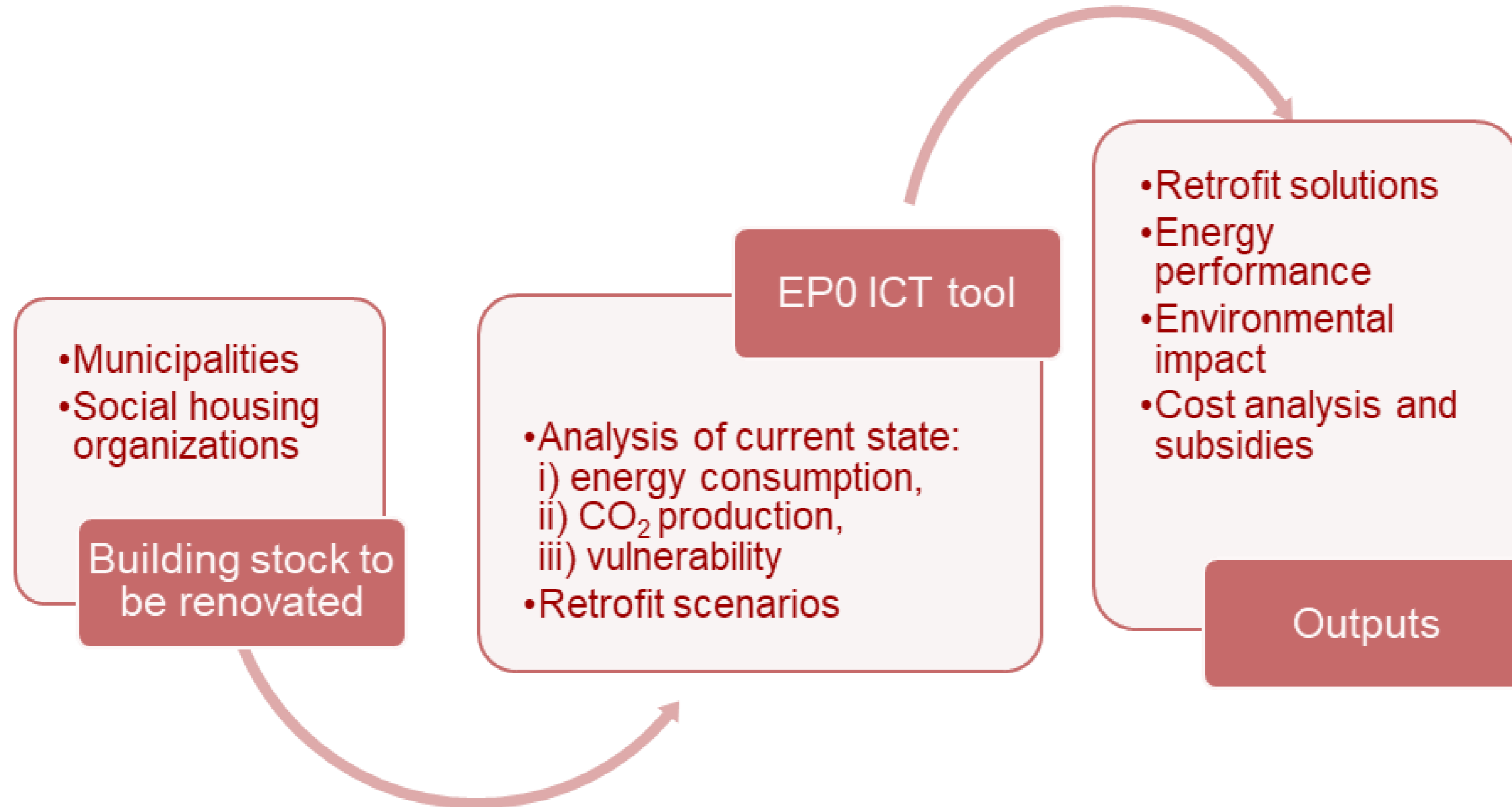


-  Support and promote progress toward deep energy rehabilitation of city neighborhoods, increasing its reach to combat energy poverty
-  Capitalise on the learnings of actors of the EnergieSprong movement to deploy technical solutions developed for the social-housing market to private households

An ambition to work on 3 axes



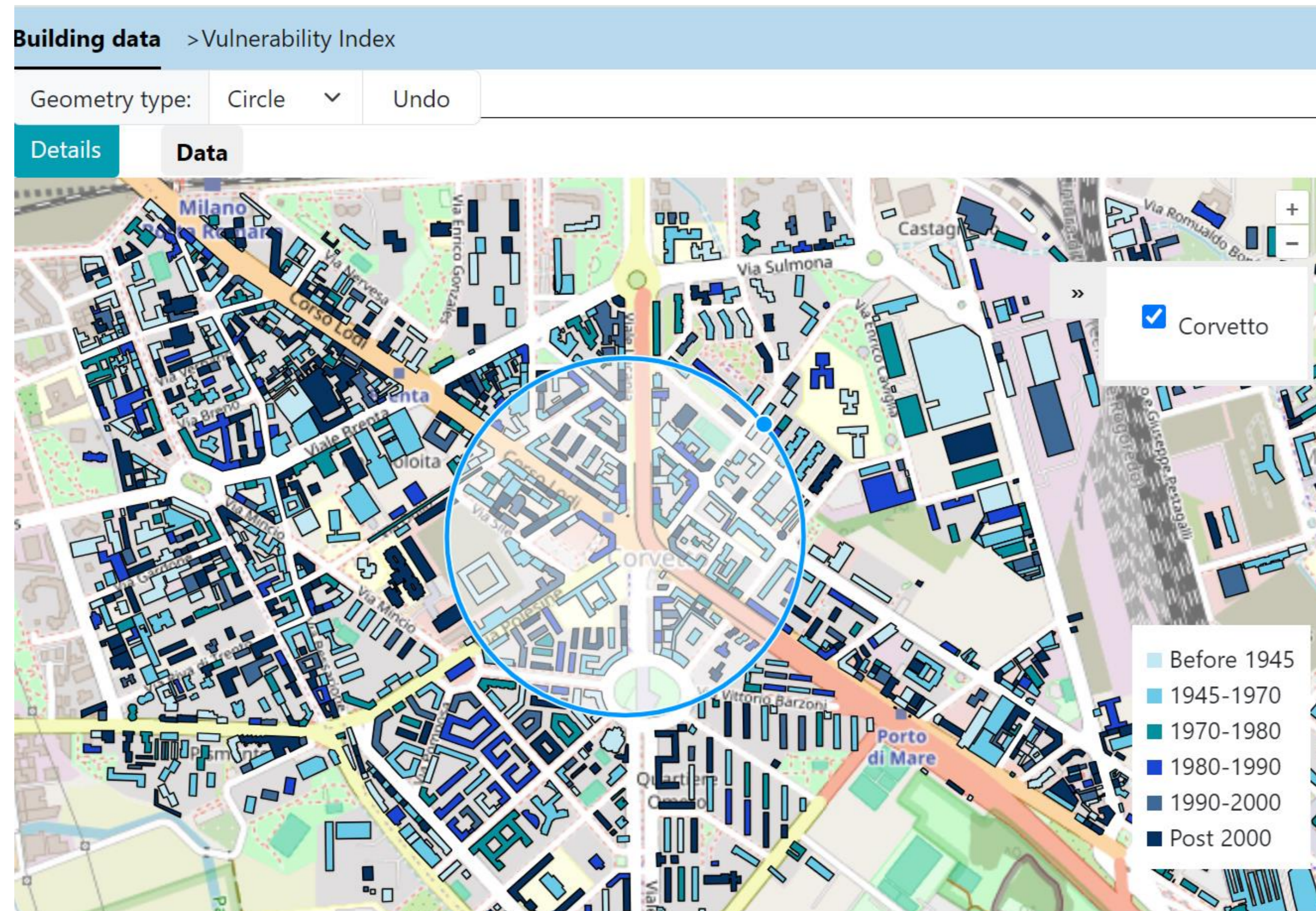
EP0 decision support tool



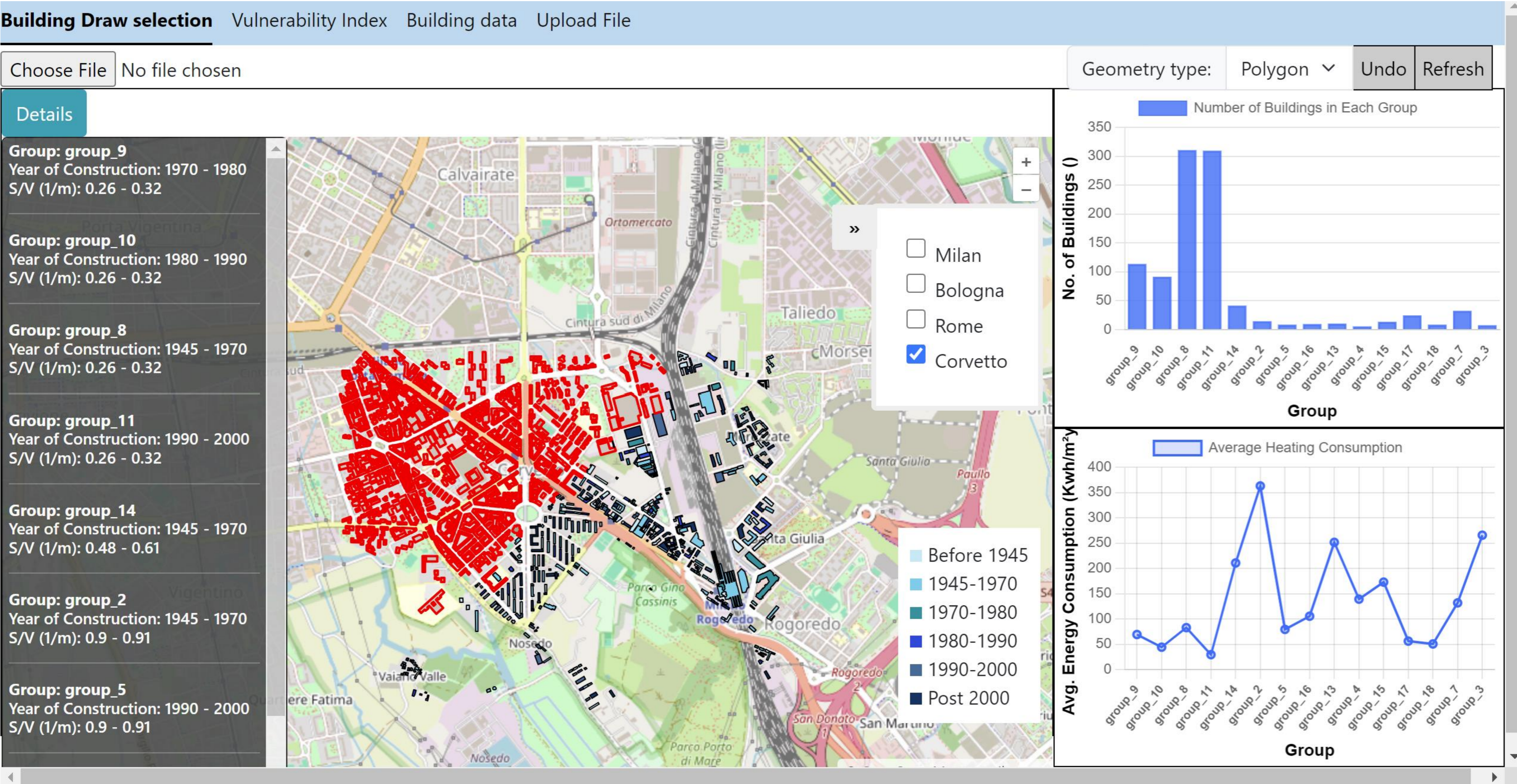
EP0 Tool Functionalities

- Analysis of the current state of buildings, according to years of construction, geometries, energy demand for heating and cooling (kWh/m²y), and CO₂ production (kg/m²y).
- Evaluation of different areas of a municipality based on the vulnerability of the population, according to a global vulnerability index and various vulnerability indicators.
- Delivery of different retrofit scenarios according to different energy retrofit levels, integrating various retrofit packages.
- Supply of a repository of prefabricated retrofit solutions, linked with the retrofit packages integrated in the scenarios.
- Environmental impact and cost analysis based on the specific solutions.

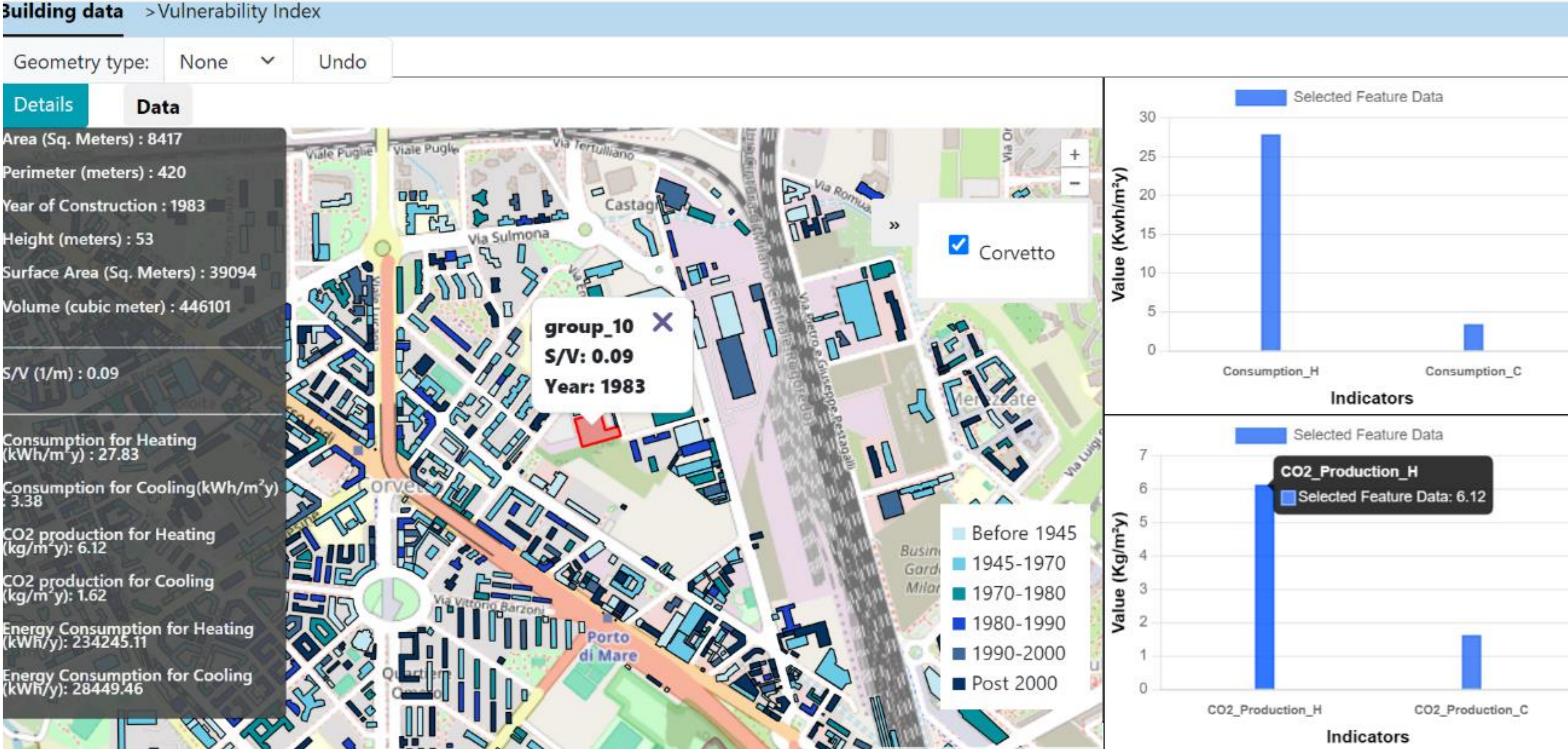
Area selection tools



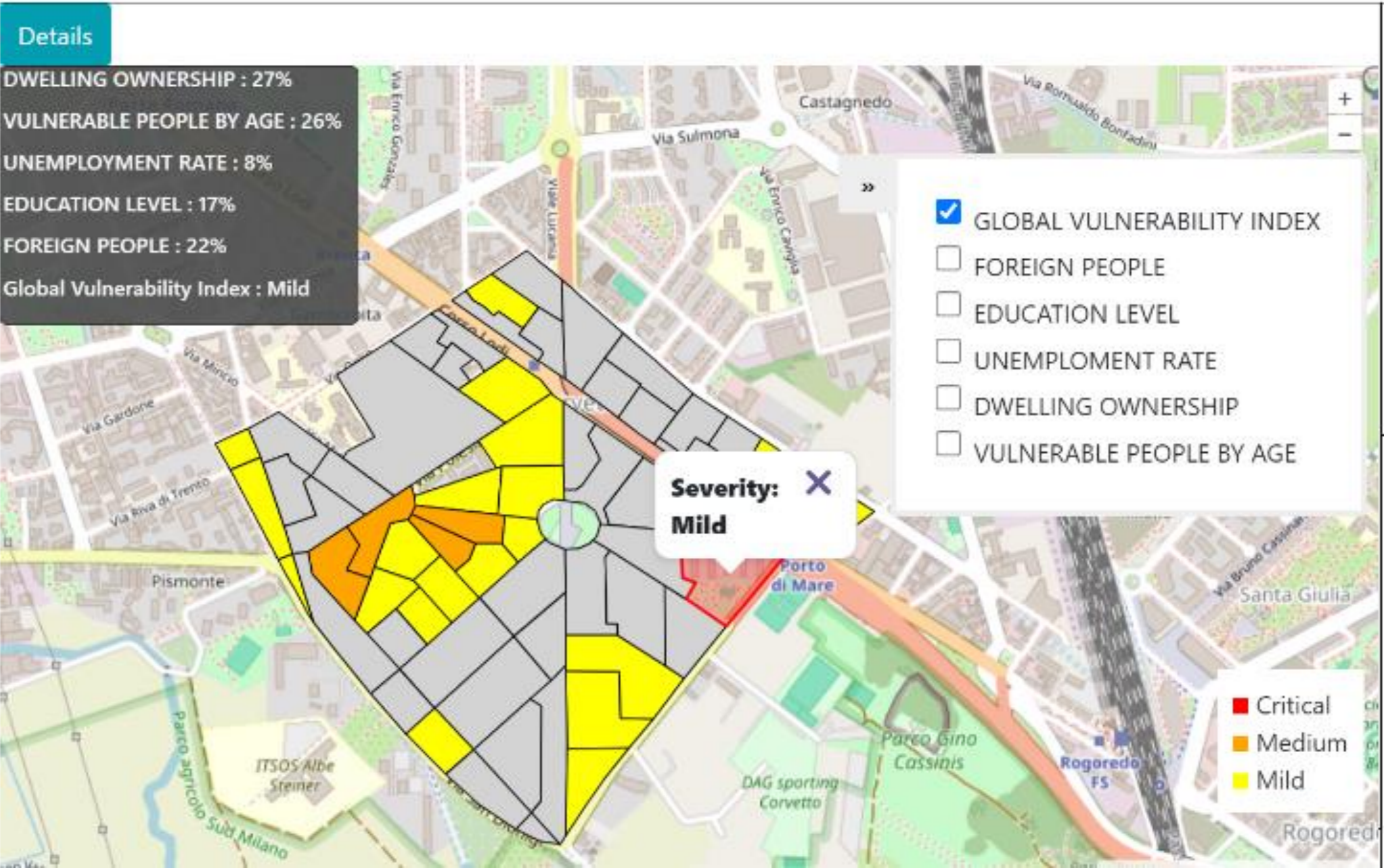
Area selection and archetypes



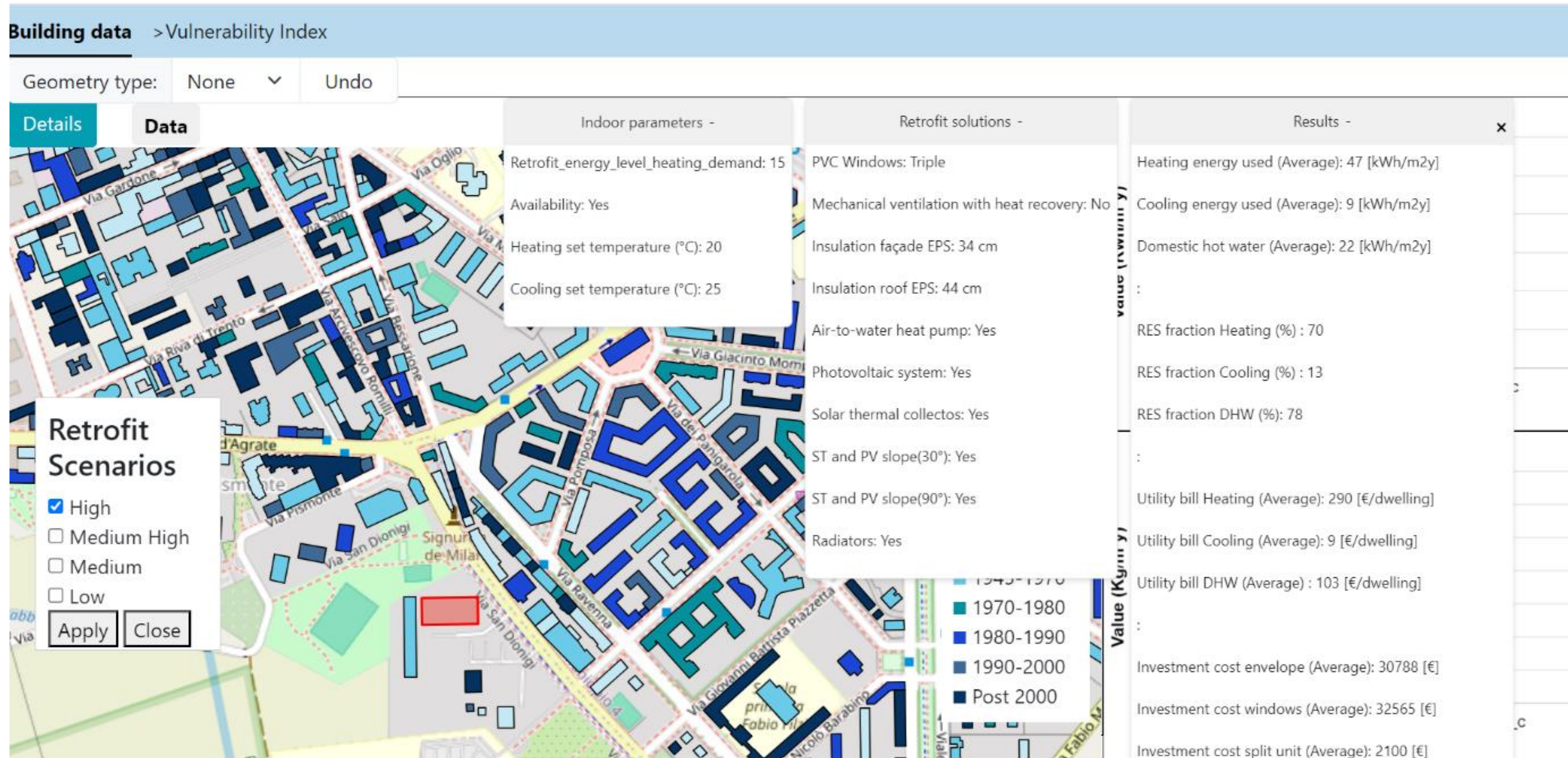
Building baseline information



Vulnerability index



Generation of retrofit scenarios





Thank you



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