one team

EU-funded Horizon R&I projects

BIM based fast toolkit for Efficient rEnovation in Buildings

BIM Management System with open source CDE based on hybrid SQL / Graph databases and linked data

Project budget: 7M €

Duration: Jan 2019 – Jun 2022

bim4eeb-project.eu

Affordable and digital solutions to Build the next generatiON of smart EU buildings

Digital Building Logbook and Digital Twin platforms

Project budget: 6.7M€

Duration: May 2023 – Oct 2026

buildon-project.eu

Industrialised durable building envelope retrofitting by all-in-one interconnected technology solutions

BIM-Platform: open source CDE with advanced functionalities to manage IFC models

Project budget: 10.1M€

Duration: Nov 2020 – Apr 2026

infinitebuildingrenovation.eu

Crete Renewable Energy Valley

AR applications for citizens' involvement in REV planning

Project budget: 25.2M€

Duration: Dec 2023 – Nov 2028

cretevalley.eu

ECO-innovative Energy FACTory Management System based on enhanced LCA and LCCA towards resource efficient manufacturing

Autodesk Platform Services-based Digital Twin Platform as Energy and Resource Management System

Project budget: 12.3M€

Duration: Oct 2020 – Jun 2025

ecofact-project.eu

Urban Adaptation and Alert Solutions for a TIMEly (re)Action

Building Renovation Passport platform

Project budget: 5.5M€

Duration: May 2024 – May 2028

retime-project.eu

one team

RETIME
Inclusive Urban Resilience

PROJECT PRESENTATION

Urban Adaptation and Alert Solutions for a Timely Reaction

Project
Overview

Project Coordinator

iscte
— Conhecimento e Inovação

Horizon Europe
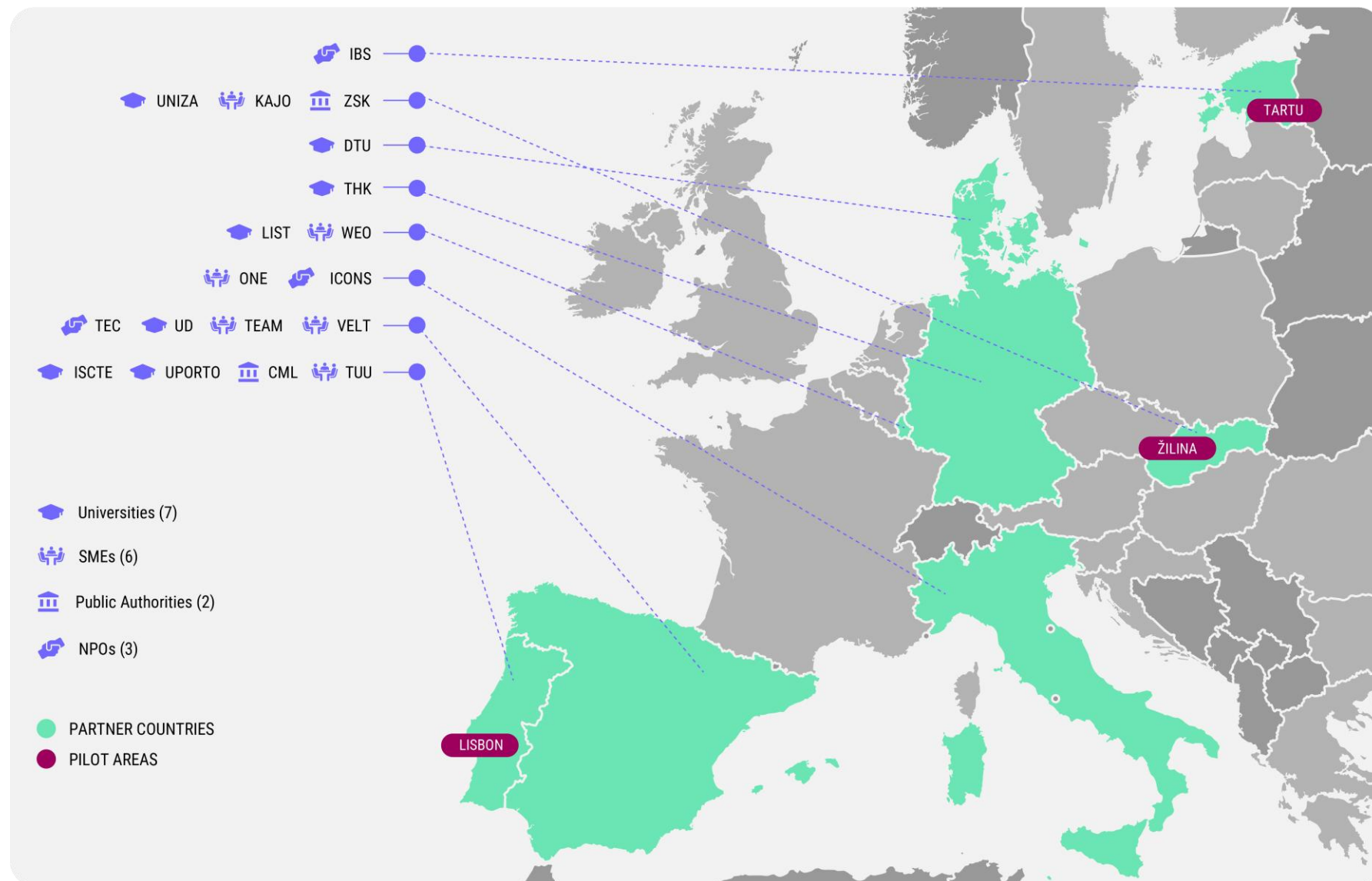Efficient, sustainable and inclusive energy use
(HORIZON-CL5-2023-D4-02)
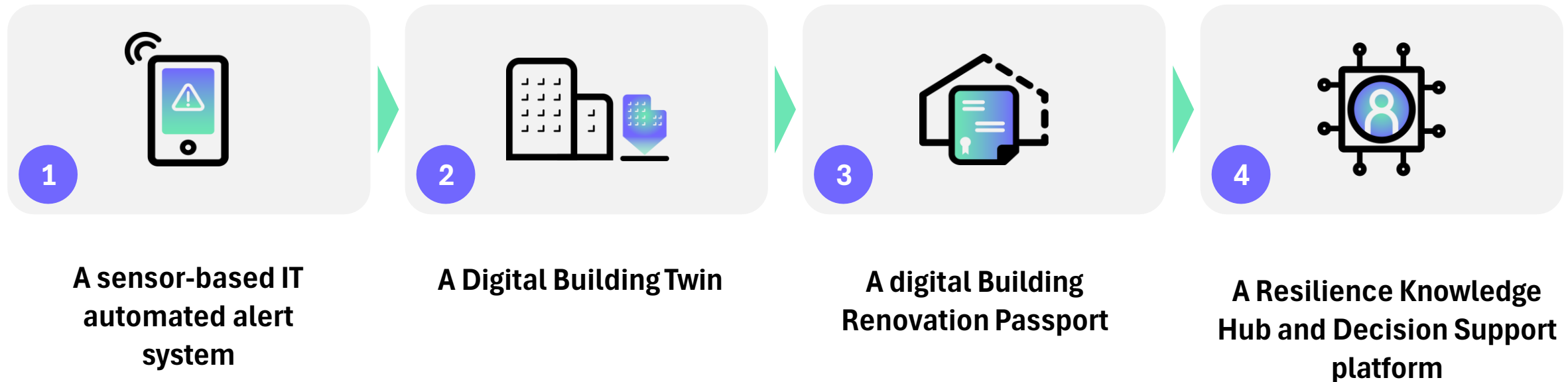
Total Budget: €5,475,761

18 partners

48 months
Start date: 1 May 2024
End date: 30 April 2028

IBS

UNIZA   KAJO   ZSK

DTU

THK

LIST   WEO

ONE   ICONS

TEC   UD   TEAM   VELT

ISCTE   UPORTO   CML   TUU

TARTU

ŽILINA

LISBON

Universities (7)

SMEs (6)

Public Authorities (2)

NPOs (3)

● PARTNER COUNTRIES
● PILOT AREAS

Digital Solutions for urban adaptation and risk reduction

1   **A sensor-based IT automated alert system**

2   **A Digital Building Twin**

3   **A digital Building Renovation Passport**

**4**   **A Resilience Knowledge Hub and Decision Support platform**

Building Renovation Passport (BRP)

A digital tool providing building owners and managers with a step-by-step renovation roadmap.

The Building Renovation Passport helps identify <u>measures</u> to enhance building resilience and outlines the expected benefits, including energy savings, reduced energy poverty and improved comfort.
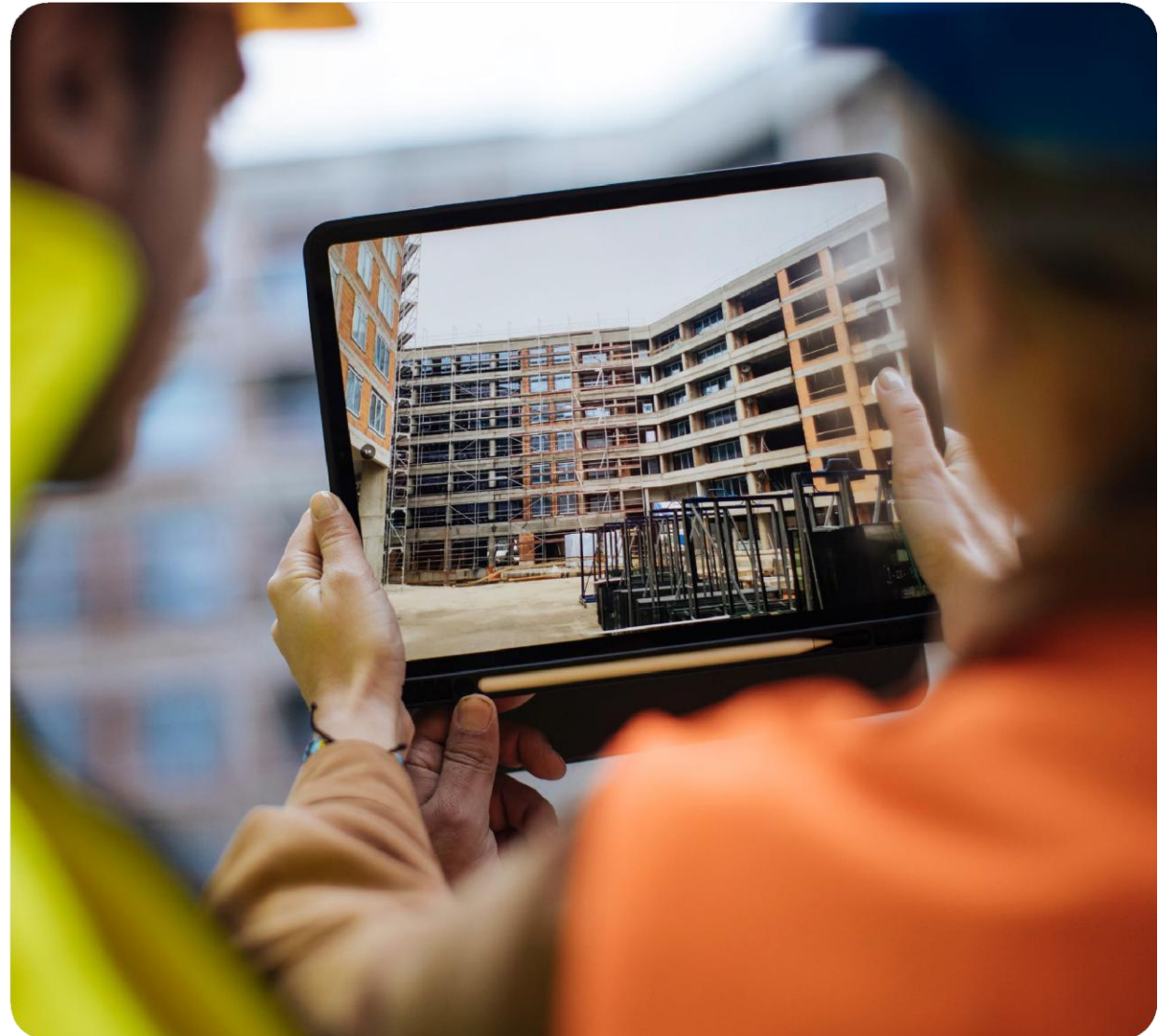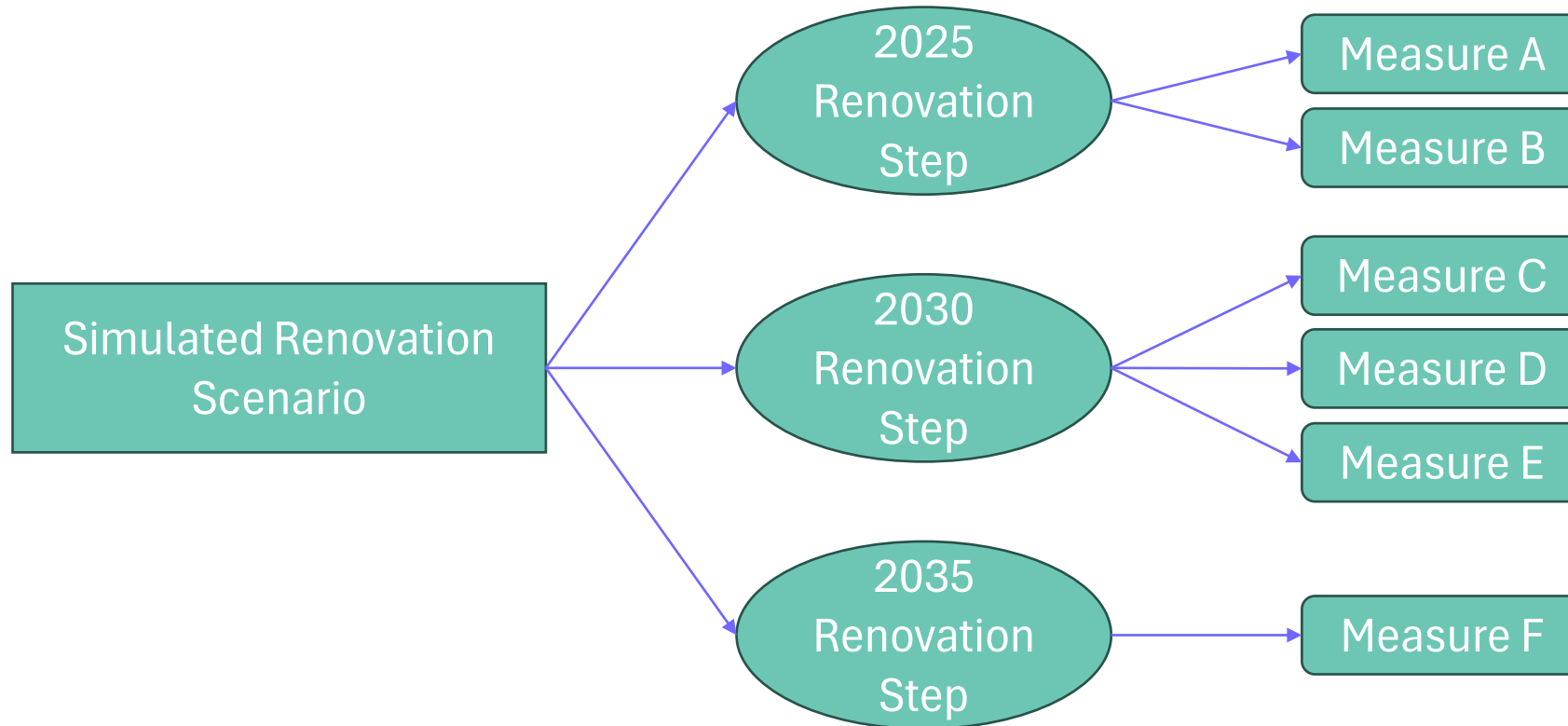
Building Renovation Passport

BRP "roadmap" logic

End-users: building/flat owner(s) or professional(s)

BRP "roadmap" set-up

RENOVATION SCENARIOS > NEW SCENARIO > ROADMAP

Select the year in which implementing a specific action

	Roadmap	Description
Indoor walls / internal insulation	2030	As old as the building (1960)
Windows / doors	ASAP	As old as the building (1960)
Floor / cellar	2035	As old as the building (1960)
Electrical system	2045	Safety compliant until 2045
Heating system	2035	After walls, floor, windows etc.
Hot water system	2035	Jointly with floor
Cooling system	2040	After walls, floor, windows etc.
Ventilation	2040	End of service / life in 2042
Sensors	2050	Introduce a monitoring system

2035 Renovation Step

End-users will outline their own renovation scenario, guided by the information contained by BRP's Digital Building Logbook module

Measures per BRP renovation step

Measure(s)

Mitigation

Adaptation

Target
Increased building energy performance based on
- unexploited energy saving potential
- aging building components

Target
Improved building resilience based on
- existing exposures
- vulnerabilities for higher likelihood hazards
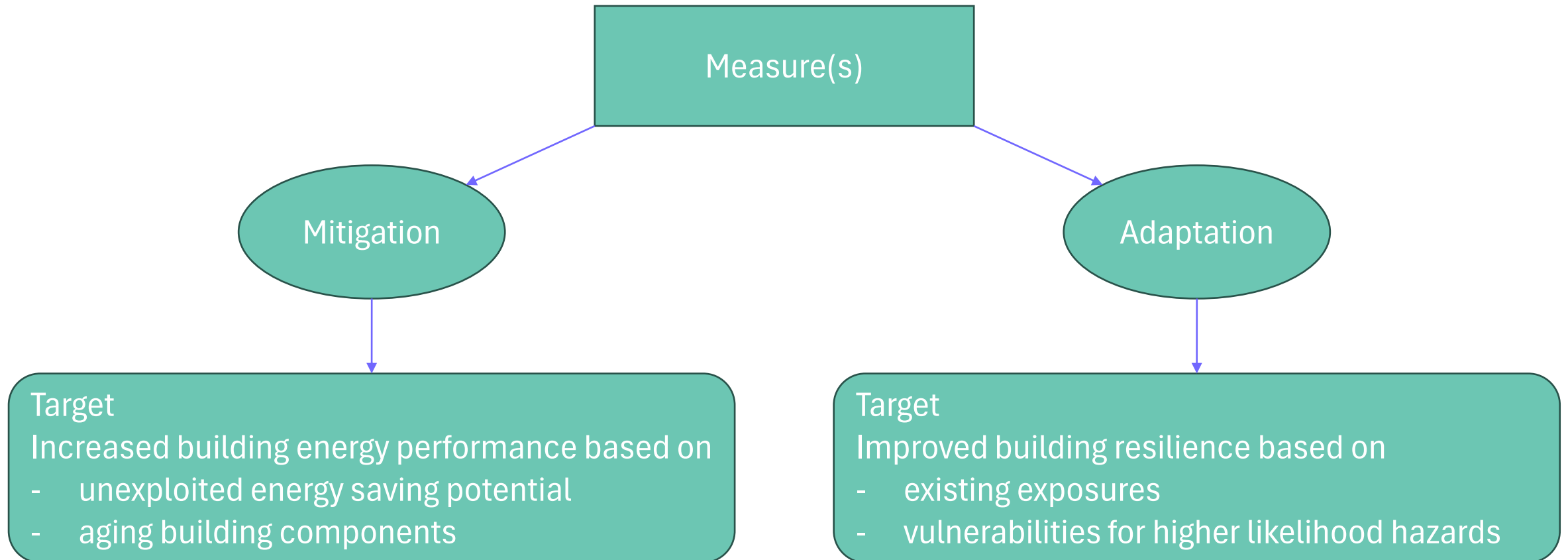
BRP renovation scenarios/"roadmaps"

RENOVATION SCENARIOS > NEW SCENARIO > 2025-06-12_9:30 RESULTS

Access local regulations ⓘ

Renovation steps vs baseline

	Investment [€]	Energy consumption [kWh/y]	Savings [%]	CO$_2$ emissions [kg/y]	Savings [%]	Return period [y]
Baseline	---	1844279	---	359552	---	---
ASAP	22000	1693397	8.2	326230	8.9	4.6
2030	45000	1447380	14.5	272563	12.4	6.1
2035	33000	1317010	12.3	224131	11.1	4.8
2040	50000	1150188	16	189023	13.6	6.9
2045	12000	1099081	5.7	169980	4.9	2.3
2050	21000	1027622	8.3	127995	7.1	3,7

BRP renovation scenarios/"roadmaps"

RENOVATION SCENARIOS > SIMULATED SCENARIO

Which simulated renovation scenario do you want to access, update or delate?

Key Performance Indicators (KPIs)

	Total investment ▼	Energy savings ▼	CO2 savings ▼	Return period ▼	Targeted EPC ▼			
2025-06-12_9:30	◔	◔	◔	◔	D	🚪	✏	✕
2025-06-09_15:01	◔	◑	◑	◑	B	🚪	✏	✕
2015-05-15_10:05	◑	◔	◑	◔	A1	🚪	✏	✕
2015-05-14 _11:34	◕	◔	◑	◔	C	🚪	✏	✕

Thank you!