MULTI-hazard low-CArbon REsilient technologies and multi-scale digital services for a future-proof, sustainable & user-centred built environment

Simona Bianchi, Delft University of Technology

Funded by the European Union

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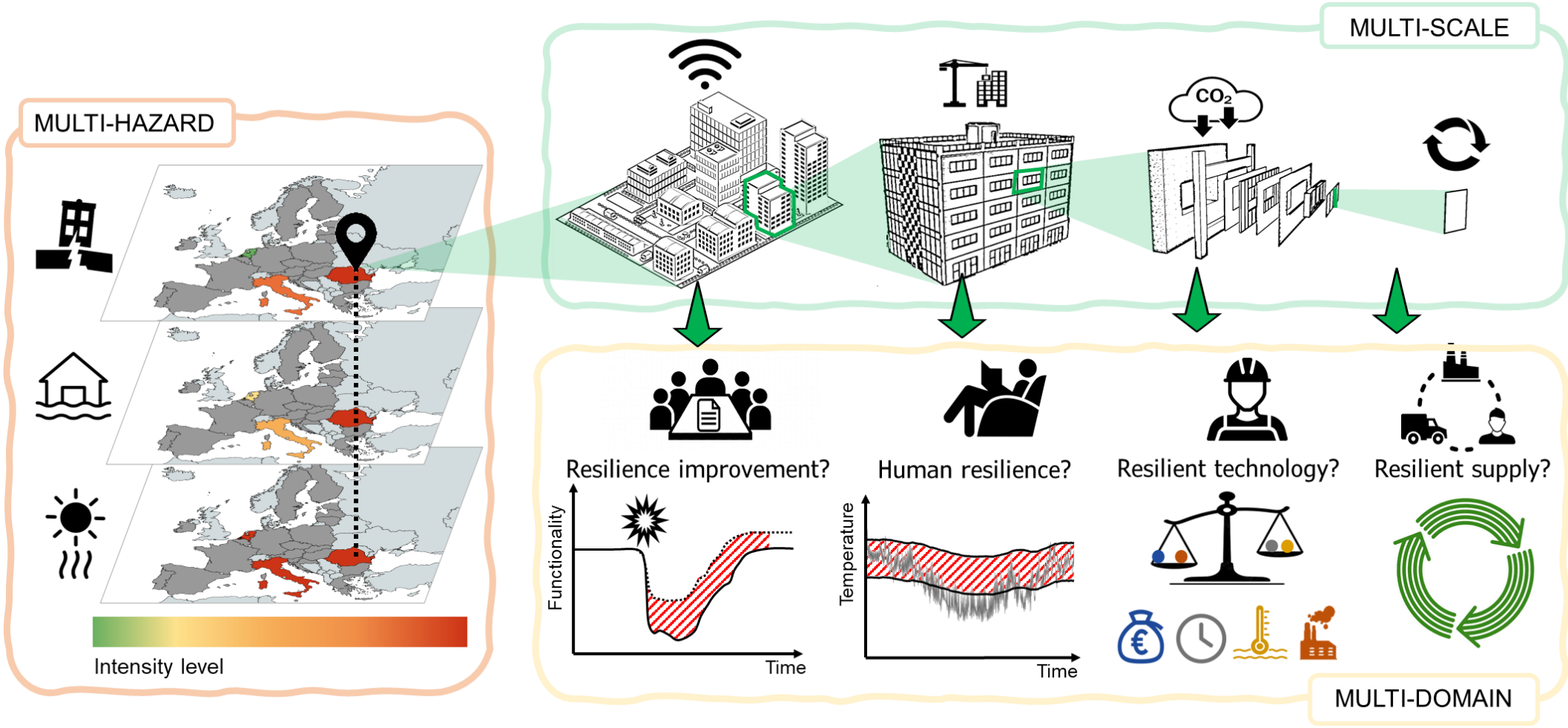
Project Concept



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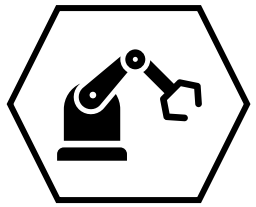
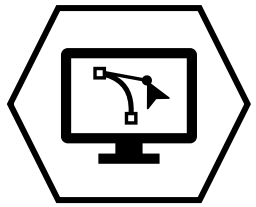
Project Objectives

TECHNOLOGY DEVELOPMENT



Develop **low-carbon resilient** technologies for resilience-enhanced and climate proof buildings

DIGITAL DEVELOPMENT



Develop **multi-disciplinary decision-making** frameworks and **digital tools** for resilience design

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Contribution to B4P

A Develop **holistic solutions** in a systemic approach

B Demonstrate **overall performance in the life-cycle** perspective

F Demonstrate **affordability and cost-effectiveness**

GO1

KPI 2. **7** innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created

KPI 4. **>10** training programmes developed for the sustainable built environment

GO2

KPI 5. Energy savings (MWh)

KPI 6. GHG emission reduction (tCO2e) / Pollution reduction

KPI 8. Share of buildings designed and constructed based on a life cycle approach

SO1

KPI 13. **3** demonstrated innovative solutions and packages for sustainable construction and renovation

SO2

KPI 16. **>6** living labs established and involved in the partnership's projects

SO3

KPI 17. **>50** buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities

SO4

SO5

KPI 18. **>21** heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock

SO6

SO6

KPI 19. **>50** building occupants and users involved in the partnership's projects demonstration activities

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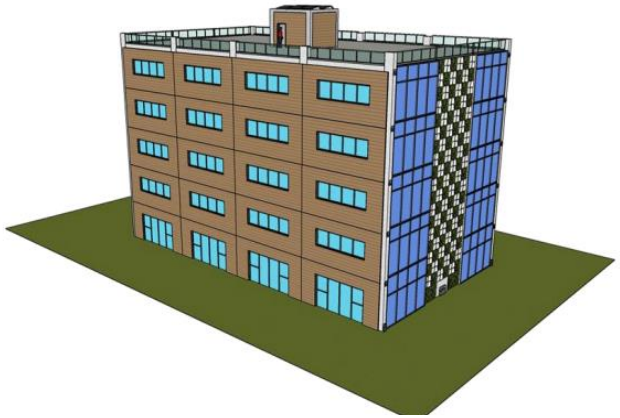
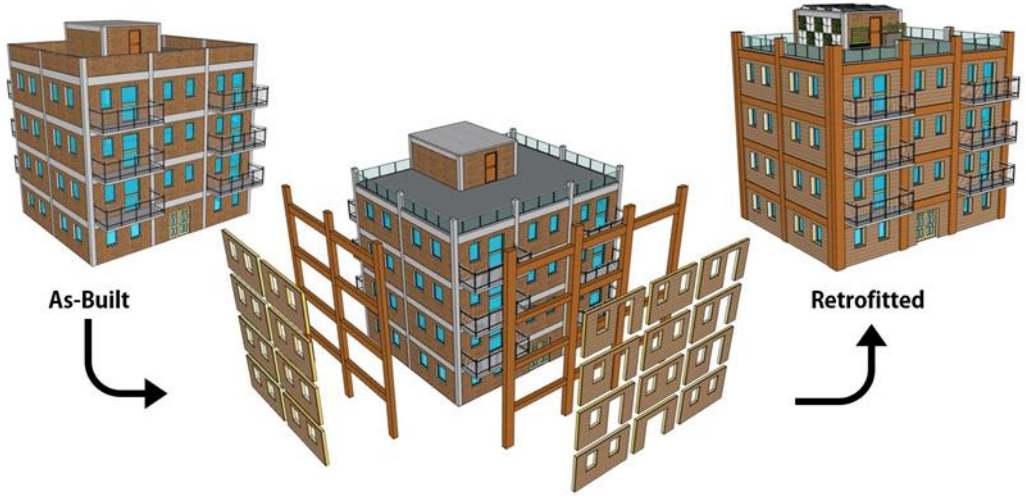
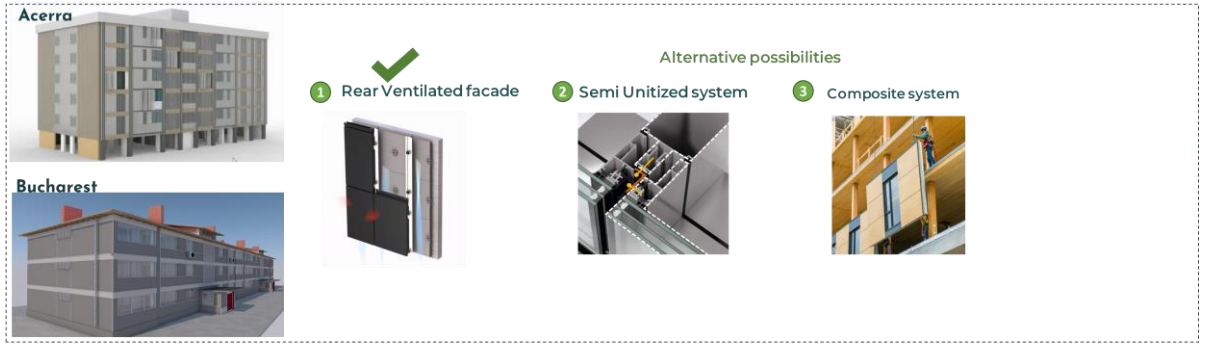
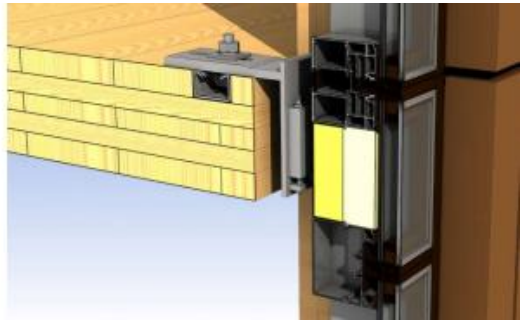
Key Results and Innovations









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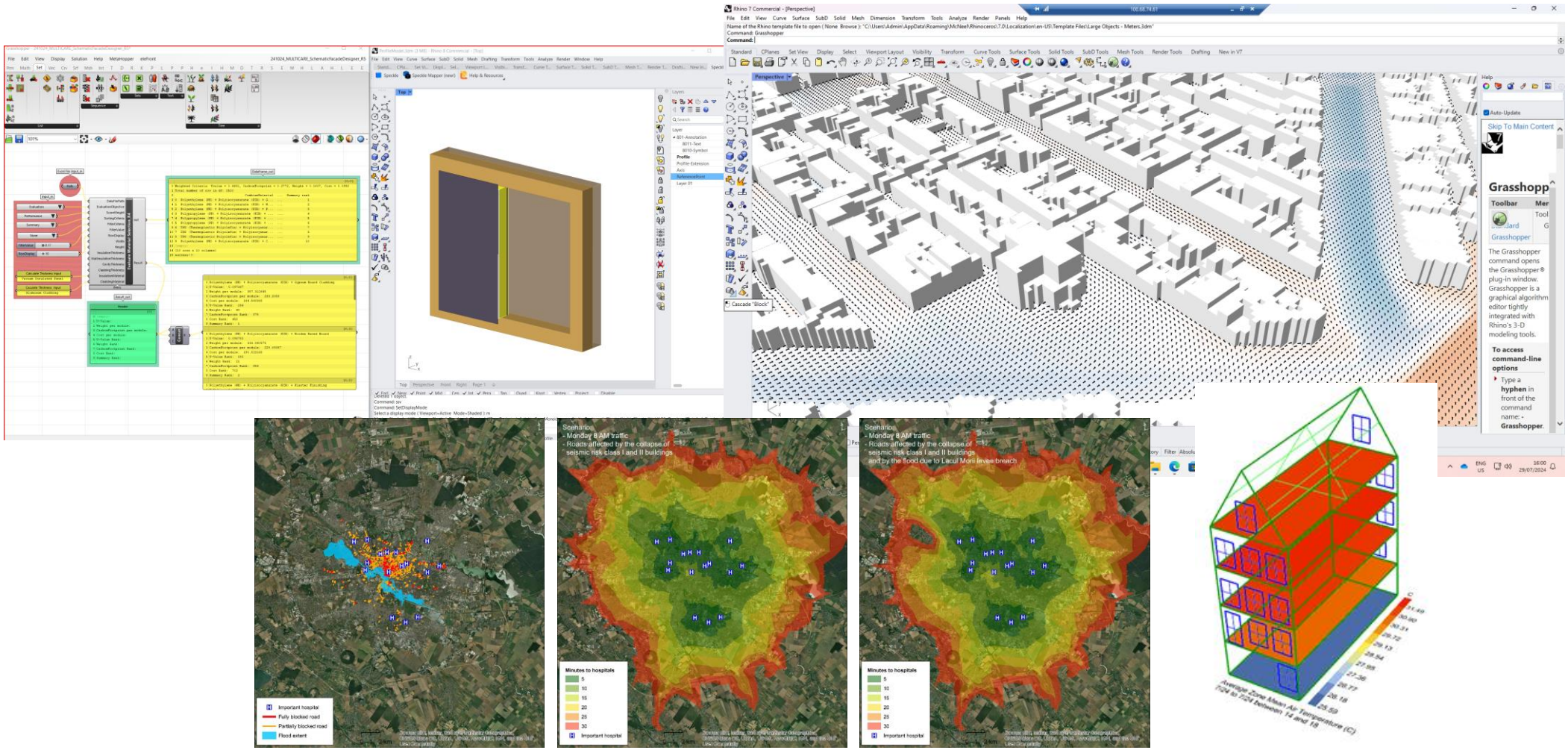
Key Results and Innovations



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MULTICARE Demonstrators

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MULTICARE Demonstrators

Italy	Netherlands	Romania	
Existing **Reinforced Concrete** building 	New **Timber** construction 	Existing **Masonry** building 	
Neighborhood in **Campania** 	Inner city of **Amsterdam** 	Neighborhood in **Bucharest** 	Municipality of **Tecuci** 
			
			
			

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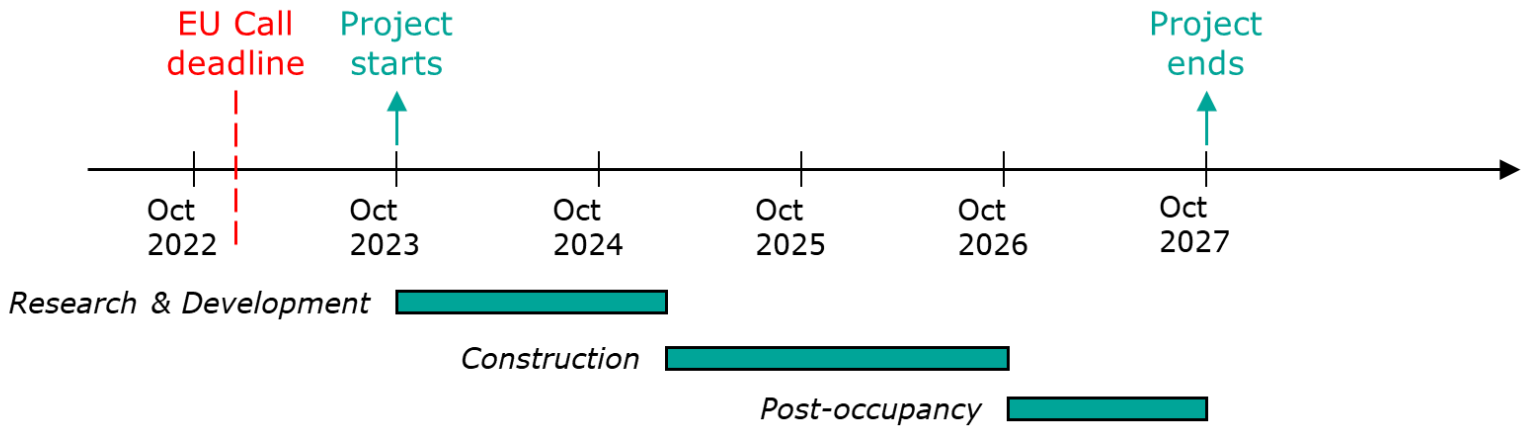
Challenges so far

1. Aligning **research with demonstrator** activities
2. Coordination across activities at **multiple scales**
3. Project **procurement** process timeline
4. Interaction between the MULTICARE and **broader activities** in the demonstrators



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MINORITY REPORT

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ClimRes
LEADERSHIP FOR CLIMATE RESILIENT BUILDINGS

MULTICARE

RETIME

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THANK YOU

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MULTICLIMACT

Celina Solari, Eng. R&I Project Manager

RINA Consulting S.p.A, 19 November 2024

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WHAT ARE THE PROJECT OBJECTIVES?

- Safeguard Europe‘s built environment against the rising threats of natural & climatic hazards
- Adress multiple hazard types: heatwaves, extreme weather, earthquakes and floods
- Develop 18 tools that are reliable, easy-to-implent & cost-efficient
- Test on 4 demo sites

MULTICLIMACT logo

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HOW DO WE CONTRIBUTE TO B4P?

Affordability & Cost-Effectiveness (F)

- 18 cost-effective tools
- Scalability, especially for implenting the tools of guidelines
- Low ongoing costs for digital solutions

Overall Life Cycle Perspective (B)

- One tool is a guideline to the life cycle perspective
- Focus on applications in infrastructure development & cultural heritage
- 16 best practices were selected
- Pilot testing in Latvia

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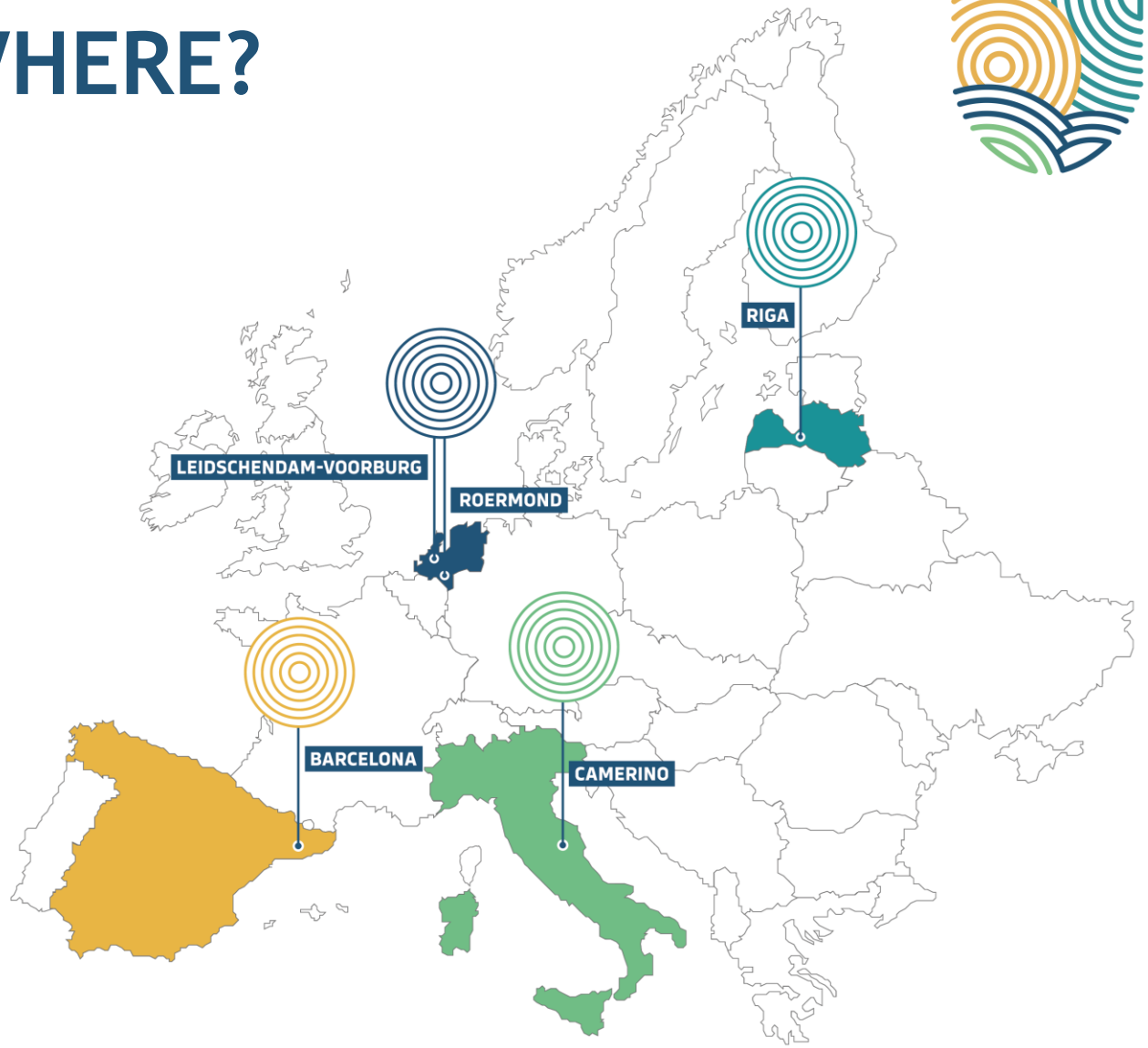
WHAT DO WE TEST WHERE?

- Netherlands: Tools for floods in territorial scale
- Latvia: Tools for extreme weather in urban & building scale
- Spain: Tools for heatwaves in urban scale
- Italy: Tools for earthquakes in building scale



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OUR DEMO SITES

CAMERINO - ITALY

Potential hazards:
Earthquakes, Heatwaves

BARCELONA - SPAIN

Potential hazards:
Heatwaves, Floods, Rain Water Management

RIGA - LATVIA

Potential hazards:
Extreme Temperatures, Heatwaves, Floods, Drought

LEIDSCHENDAM-VOORBURG & ROERMOND – THE NETHERLANDS

Potential hazards:
Floods, Drought

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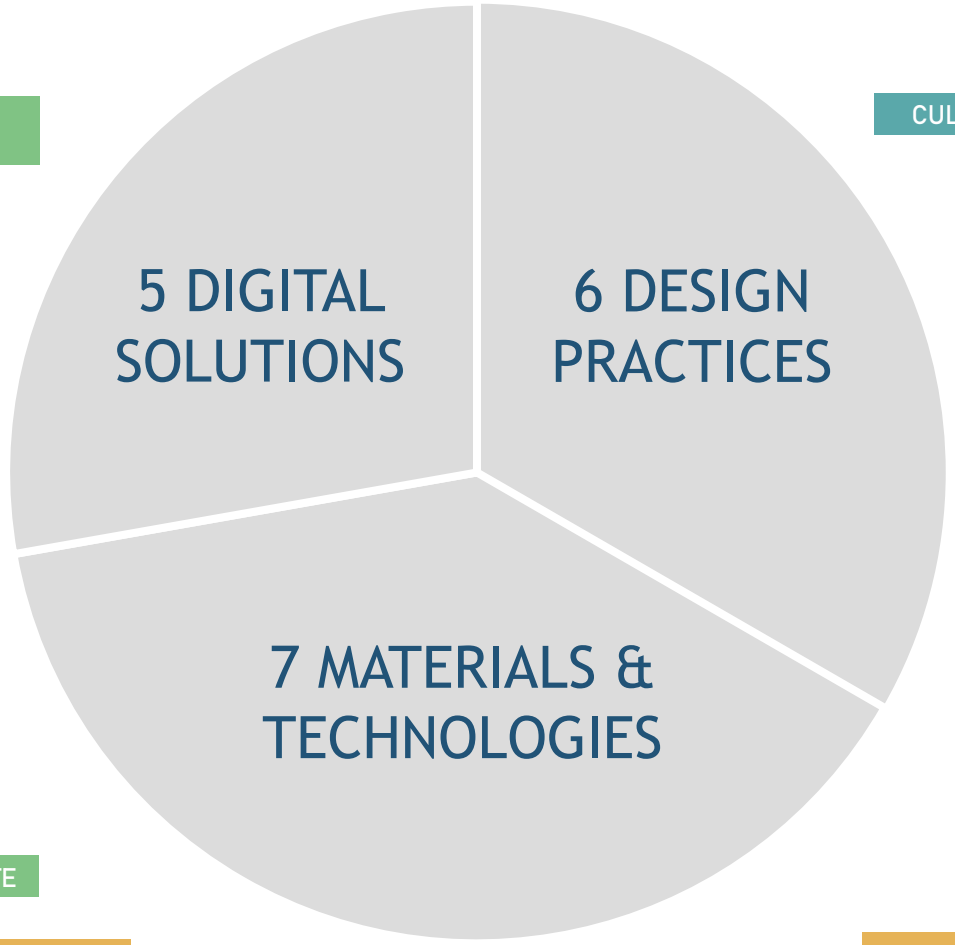
WHAT ARE THE KEY INNOVATIONS?

Italy | Netherlands
Latvia | Spain
Color Legend



- ENVIRONMENTAL & STRUCTURAL MONITORING OF BUILDINGS
- EXTREME WEATHER PREVENTION & DAMAGE ESTIMATION
- ENERGY & HEAT EVALUATION
- ENERGY SOLUTION PLANNING
- EARLY-WARNING OF FLOODS

- CULTURAL HERITAGE PROTECTION
- GUIDELINE TO SUPPLY CHAINS
- LIFE CYCLE APPROACH
- GUIDELINE TO POLITICAL POLICIES
- GUIDELINE TO ENERGY & WATER
- HUMAN-CENTEREDNESS

- WEARABLE VITAL SIGNS SENSORS
- ECO-FRIENDLY MORTAR
- SELF-SENSING FLEXIBLE CONCRETE
- NBS TO REDUCE URBAN FLOODS

- FIBER OPTICS FLOOD MONITORING
- PASSIVE SYSTEM FOR HOUSING
- RECYCLED COOL PAVEMENTS

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WHAT DO WE TEST IN THE NETHERLANDS?

- Focus on tools for floods in territorial scale
- Fiber optics flood monitoring
- Early-warning of floods

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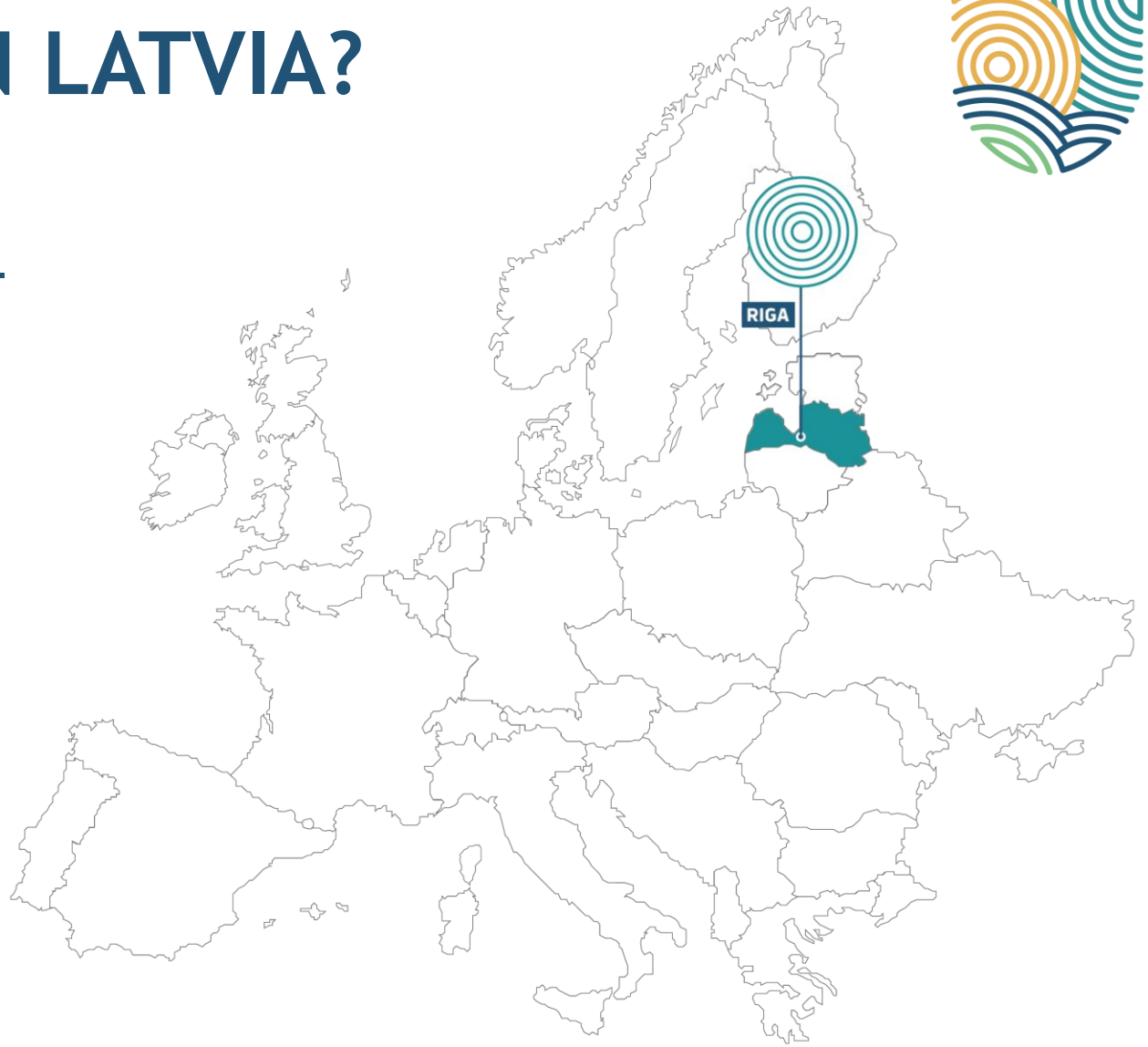
WHAT DO WE TEST IN LATVIA?

- Focus on tools for extreme weather in urban & building scale
- Guideline to supply chains
- Life cycle approach
- Cultural heritage protection
- Passive system for housing
- Energy solution planning



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WHAT DO WE TEST IN SPAIN?

- Focus on tools for heatwaves in urban scale
- Guideline to political policies
- Recycled cool pavements
- NBS to reduce urban floods
- Energy solution planning
- Energy & heat evaluation

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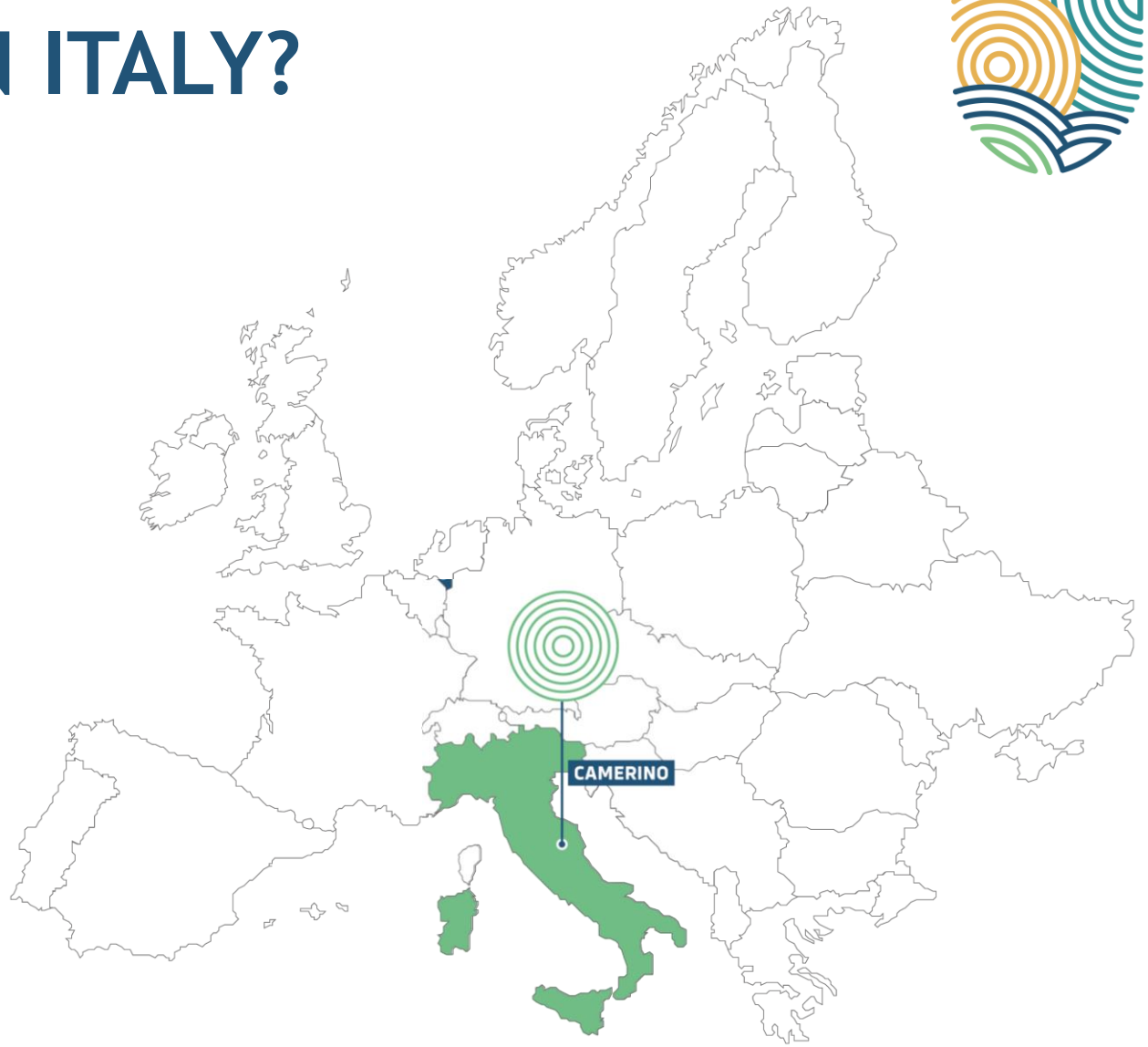
WHAT DO WE TEST IN ITALY?

- Focus on tools for earthquakes in building scale
- Guideline to energy & water
- Human-centeredness
- Self-sensing flexible concrete
- Natural-based thermal insulation panel & Eco-friendly mortar
- Wearable vital signs sensors
- Extreme weather prevention & damage estimation
- Environmental & structural monitoring of buildings



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WHERE ARE WE NOW?

- ✓ 1st Year Project Phase completed
- ✓ 24 submitted Deliverables
- ✓ 2 achieved Milestones
- ✓ 3 General Assemblies
- ✓ 6 Attended Events
- ✓ 8 Scientific Publications

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WHAT CHALLENGES DO WE FACE?

Data

- Collecting data on events like floods & droughts are seasonal
- Accessing quality data for risk analysis in heritage sites
- Ensuring digital tools remain accurate despite limited data

Location

- Maintaining active engagement with local stakeholders which is impacting the project timeline
- Adapting tools to different environments & heritage regulations

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WHAT SYNERGIES ARE WE OPEN TO?

Topics

- Cultural heritage sites
- Advanced data analytics
- Community engagement strategies
- Adapting tools in the Netherlands, Latvia, Spain and Italy
- Call/Topic HORIZON-CL5-2023-D4-02-02 & 2022-D4-02-01

Activities

- Cluster meetings
- Presence at events
- Social Media posts
- Policy briefs
- Webinars
- Publications

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Clustering Roadmap

Joint publications, policy briefs or recommendations

Collaboration on existing activities e.g. webinars

C&D: Cross-promotion on project channels

Joint presence at events

EURESFO

ECCA

High-Level Construction Forum

and more...

Regular check-ins: every 3 months

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MINORITY REPORT

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ClimRes
LEADERSHIP FOR CLIMATE RESILIENT BUILDINGS

MULTICARE

RETIME

THANK YOU VERY MUCH!

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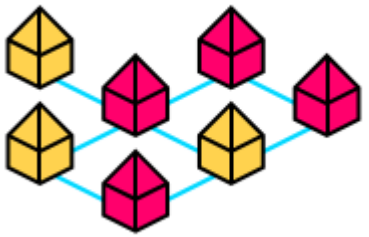
Nebula

A Built**4People** Project

GINNGER



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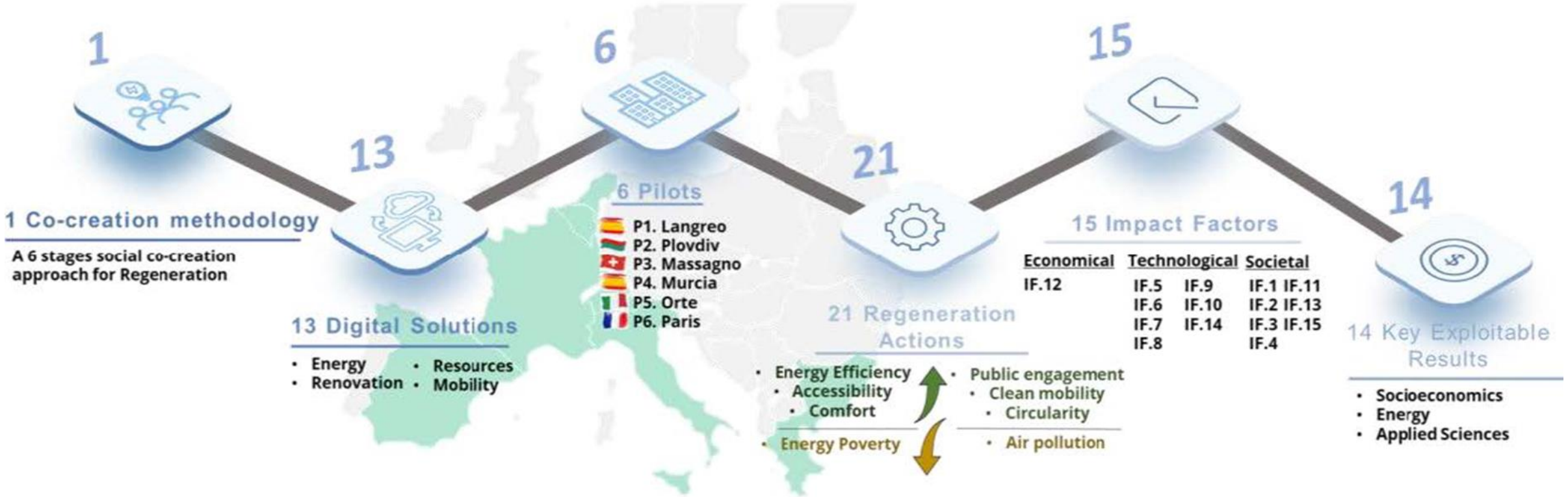
GINNGER – General project overview



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GINNGER - Objectives

The **main objective of GINNGER** facilitate the **regeneration of neighborhoods and constructed new environments** to implementing **co-creation** processes involving diverse groups of **heterogeneous stakeholders**.

To do so, GINNGER will progress in **two innovations** of high relevance **for built environments**: Innovation on **Social-Science and Humanities** and innovation on **digital solutions**. GINNGER innovations **will tackle the different lifecycle phases of a regeneration action**, namely: **planification**, **design**, **implementation** and **verification**, impacting **four areas**: **Energy**, **Renovation**, **Resources** and **Mobility**.

To ensure integration and market uptake across the data lifecycle, GINNGER will be **demonstrated in 6 different countries and mixed typologies**, showing its adaptability and performance in **real-case scenarios**.

SO1: To provide a detailed understanding of the main boundaries' conditions needed for co-creation based approaches to regenerate neighbourhoods.

SO2: To promote more sustainable, low emission, inclusive and affordable neighbourhoods through the implementation of ad-hoc regeneration actions.

SO3: To increase participation in participatory processes for the regeneration of neighbourhoods through the development of a co-creation methodology.

SO4: To assist both decision-making processes and implementation actions using a group of digital solutions for the regeneration of neighbourhoods and built environments.

SO5: To ensure demonstration and validation of GINNGER solutions in 6 pilots to obtain reliable results on its replicability and attractiveness in scenarios where the local conditions are different

SO6: To make certain the exploitation of GINNGER results by developing the corresponding business plans as well as their dissemination including the knowledge exchange with other relevant projects.

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GINNGER – Challenges and Key Exploitable Results

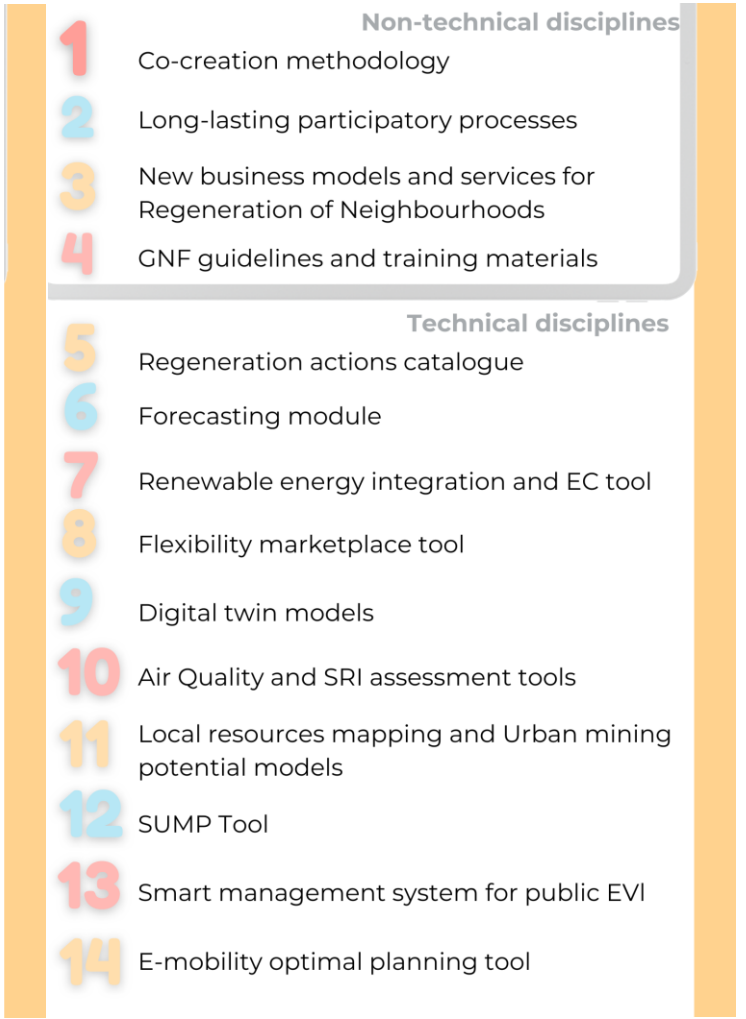
B4P SPECIFIC OBJECTIVES :

- **A.Develop holistic solutions in a systemic approach. [1, 5-14]**
- **E.Demonstrate sustainable, circular business and value chain. [2, 3, 4, 11]**
- **F.Demonstrate affordability and cost-effectiveness. [5, 6, 8, 14]**

CHALLENGES

- **Lack of holistic innovation with systemic approach and life cycle perspective.**
- **High carbon and environmental footprint of the built environment and construction.**
- **Low uptake of innovation and limited potential to produce lasting change models**

14 KEY EXPLOITABLE RESULTS



Socioeconomic

Energy & Applied Sciences

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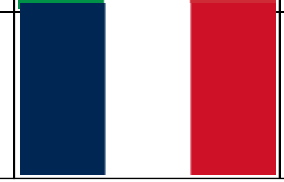
GINNGER – Pilots overview

	City	Neighbourhood	Equipment Installed	Partner	Country	Lead
P1	Langreo	Residential buildings, social housing, public building, businesses	Renewables sources: PV (30 KWp), Biomass (1.5 MW), Geothermal (1.5 MW), DHN Control & Monitoring System	LANG, FAEN, VIPASA, HUNOSA,	Spain 	CTIC
P2	Plovdiv	Residential buildings	PV (26 kWp), Energy/electricity storage (70 kWh Li-Io batteries), 14 flat solar thermal collectors, smart metering for electricity generation	EAP, PLOV	Bulgaria 	PLOV
P3	Massagno	Residential buildings	PV (60 kWp), V2G-ready EV charging column (DC, 10 kW), heat pumps (15-20 kW), smart metering infrastructure	AEM, SUPSI, HIVE	Switzerland 	HIVE
P4	Murcia	Residential building, businesses	2 private shared PV plants (10.8 kWp), 3 private EV chargers	MURCIA, MIWE	Spain 	MIWE
P5	Orte	Cultural public building, public buildings, private buildings, train station	None	RIMOND, BIO	Italy 	RIMOND
P6	Paris	Social housing, residential buildings	None	APC	France 	APC

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Built4People – KPI´s on general objectives

G01. Generate holistic innovation in the built environment towards sustainability

a) R&I investment in the sustainable built environment area catalysed by the partnership
   a) Not sure if applicable

b) # innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created
   a) 13 new digital solutions are created as services to citizens

c) Contribution to the successful deployment of relevant EU instruments and frameworks
   a) Not sure if applicable

G02. Revitalise the sector through decarbonisation and sustainability transition

5. Energy savings (MWh)
   a) Al least 191 MWh/year
6. GHG emission reduction (tCO2e) / Pollution reduction
   a) 7,2 t/CO2e/year
7. # buildings with on-site RES production
   a) More than 136 kWp (PV) and more tha 70 kWh (storage) in 372 buildings

G03. Induce lasting behavioural change towards sustainable living.

11. Share of the EU population living and working in green neighbourhoods
   a) 770 users of building users and occupants engaged, 180 interviews done, and 6 workshops developed through the co-creation methodology.

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Built4People – KPI´s Specific objectives

1. Duration of the co-creation methodology 6 to 24 months applied in the long-term for new plans
2. Co-creation methodology validated in 6 pilots
3. 770 users of building users and occupants engaged, 180 interviews done, and 6 workshops developed through the co-creation methodology.
4. Catalogue of regeneration plans to be discussed with 6 pilots
   [
5. 9 DS are envisioned for the planification of regeneration plans
6. 6 pilots are subject to implement a total of 21 Regeneration Actions
7. 3 DS focused on integrated and sustainable mobility solutions
8. 3 pilots include mobility-related actions
9. 13 DS to plan and implement low carbon solutions & renovation packages
10. Application of the DS in 6 pilots
11. New skills creation for 6 GNF and at least 60 key stakeholders trained
12. At least 6 new business models proposed for the pilots
13. 8 DS dealing with indoor and outdoor quality, and affordability of renovation solutions
14. 4 DS dealing with deep renovation and 1 heritage building renovated
15. 2 DS dealing with smart growth models

demonstrated innovative solutions and packages for sustainable construction and renovation

3 DS focused on sustainable renovation actions

innovative services developed and demonstrated

13 DS to plan and implement low carbon solutions & renovation packages

Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities

More than 50 000 m2 and more than 100 buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities

and type of heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock

A specific heritage building is mentioned in the Orte, Italy pilot. This building is the Palazzo dell'Orologio, which will undergo renovations focused on energy efficiency, seismic improvements, and circularity principles.

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WILSON – Challenges and synergies

SYNERGIES

- **Contribution to the B4P objectives**

Objective	Synergy with SOs
A (Systemic approach)	SO1, SO3, SO4
B (Life cycle perspective)	SO5
C (Clean energy)	SO2, SO4
D (Decarbonization)	SO2
E (Circular economy)	SO2, SO5, SO6
F & G (Affordability and quality)	SO1, SO2, SO4, SO5, SO6

  - Promote holistic, balanced approaches with community and digital integration
  - Align with clean energy, sustainability, and ensuring no trade-offs on quality of life
  - Emphasize life-cycle perspectives, sustainable business models, and economic viability

- **Workshops/events to share business models based on data and project results**
  - Are this business models interesting for stakeholders? Who is demanding them?
  - KPIs and result comparison with other project developments
- **Dissemination events of common interest**
  - Data management
  - Life-cycle tools in building environment
  - Interoperability

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THANK YOU!
QUESTIONS?

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REGEN

REGENeration of neighbourhoods towards a low-carbon, inclusive and affordable built environment

REGENeration of neighbourhoods towards a low-carbon, inclusive and affordable built environment.

REGEN Project Overview
B4P Clustering Event

Sylvain Kubicki. Brussels. 2024/11/19

Built4People

A co-programmed public private partnership in Horizon Europe's Cluster 5, Built4People (B4P) brings together projects on climate, energy and mobility.

REGEN Objectives

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REGENeration of **neighbourhoods** towards a **low-carbon, inclusive and affordable** built environment

- **Socio Ecological** Objectives
  - Influence and confirm virtuous **lasting behavioural changes** towards lower carbon footprint
  - Develop the **Assessment Framework for Urban Regeneration**
  - Propose innovative **participatory planning processes** for our Neighbourhood Regeneration Offices
- **Socio Technical** Objectives
  - Construct an **urban and rural regeneration interventions catalogue**
  - Develop the **REGEN Toolbox**, a citizen-focused software environment
  - Establish sustainable interventions enhancing **mobility planning**
- Exploitation and dissemination Objectives

Regeneration interventions

DOMAINS	SubDomain	#
Energy systems	Reduce energy use in buildings	I10
		I2
		I3
	Social awareness	I11
		I12
Mobility and transport	Promotion of sustainable mobility	I15
		I20
		I21
		I22
	Reinforce local economic ecosystem	I18
	Improve accessibility (universal acessibility)	I19
	Foster pedestrian mobility and walkability	I16
		I17
Water and circular construction	Water management	I23
	Circularity in construction sector	I5
		I4
		I6
AFOLU - Agriculture, foresty and other land use	Green infrastructure	I8
	Promote confortable & healthier spaces	I14
		I7
Built environment	Building retrofit	I13
		I1

*Raw … *think like …*

REGEN

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Contribution to B4P Specific Objectives

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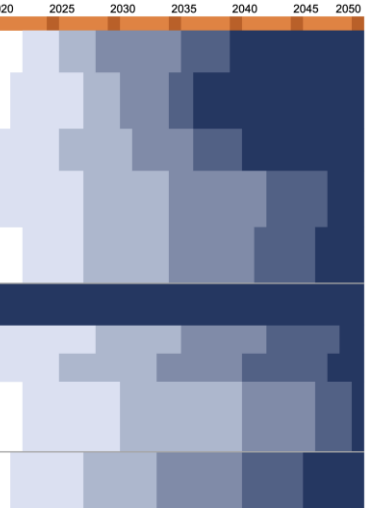
Specific Objective D: Demonstrate sector **decarbonisation pathways**

Goal	Proposed Intervention	Impact	Spatial implications and impact on GR	Type
Buildings and Cities				
Reduce GHGE related to building sector	Conceive modular buildings according to Circular Economy principles	**GHG, AP, M**	New building typologies Regional labour markets	R, I
	Decrease steel and concrete in construction, increase of timber structures, decrease the amount of materials	**GHG, M, BW**		R, I
	Regional sourcing of building materials	**GHG**, AP, **M**, LS	Regional sourcing of construction materials / components	R, I
	Reduce net floor area per capita, Prefer multifamily houses to single (detached) houses	**GHG, M**	New typologies which are both: more dense and more porous. Integration of shared spaces	R, I
	Fuel switching for heating purposes (from oil, gas, to biomass, heat pumps, district heating)	**GHG, AP, BW**		R, I
Reduce energy use in buildings	Push for a stringent building code, with high standards for insulation and energy efficiency	**GHG, M**		R
	Renovate buildings with low-quality insulation	**GHG, M**	Visible construction only during renovation period	R, I
	Educate citizens on their energy use (deploying smart metering)	**GHG**, LS		O, I
	Install green roofs to regulate indoor air temperature and save energy, purify air, increase biodiversity, provide rainwater buffer	**GHG**, AP, B, **LS**	Visibly greener cities	R, I
Reduce GHGE in cities	Increase cold air corridors by decreasing sealed land, increasing parks and urban albedo	**GHG**, LS	Visibly greener cities	R, I

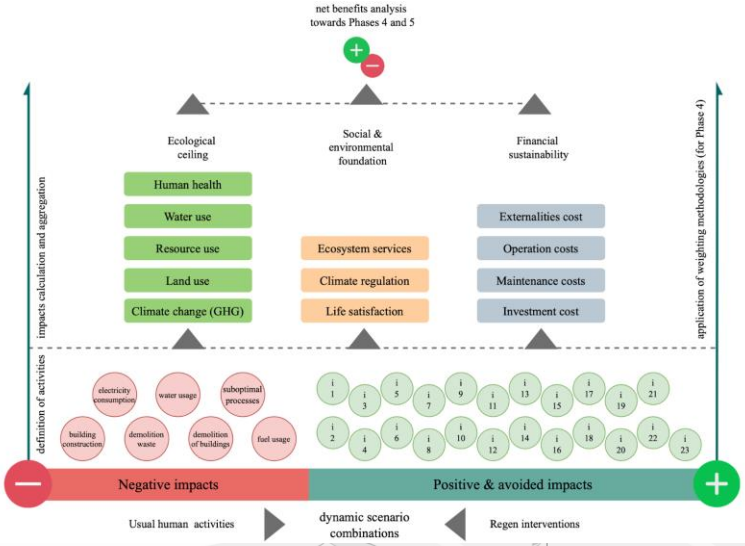


REGEN

Extract from *Luxembourg in Transition consultation*
Team “A guide to repairing a broken territory”. Report Phase 1

https://luxembourgintransition.lu/wp-content/uploads/2023/06/lit_report_unilu_20210201.pdf

Specific Objective A: Develop **holistic solutions** in a systemic approach



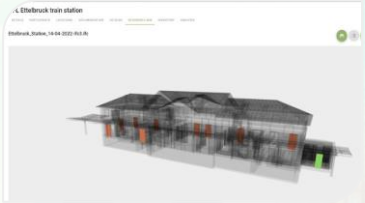
Assessment Framework for Urban Regeneration

Decision making Urban Digital Twins

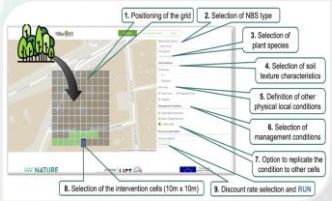
DIGITAL TOOLBOX FOR NEIGHBOURHOODS REGENERATION

IES ICL
Decarbonisation

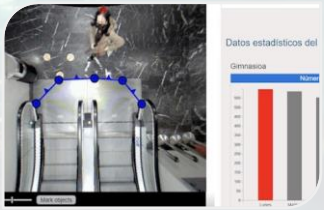
Re Suite
Real estate



Digital Deconstruction
Circularity & reuse



Nbenefit$
Nature based solution

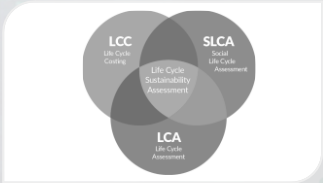


DINYCONT-Flows
Accessibility

PARTICIPATORY DESIGN

MUST

ASSESSMENT



AFUR

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Digital Tool for Participation & Engagement of citizens


#urban spaces
LAREDO, SPAIN
#renovation
#accessibility
#cultural Heritage


#rural
BECKERICH, LUXEMBOURG
#urban mining
#renewable energy


#energy Poverty
#social housing
MILAN, ITALY
#nature based solutions
#quality of urban spaces


Clontarf Promenade
#energy Poverty
#renewable energy
Ringsend Park
DUBLIN, IRELAND
Sandymount Beach
Irishtown Nature Park, Dublin
#energy cooperative

REGEN Contribution to B4P Objectives

GO1	Generate holistic innovation in the built environment towards sustainability	1. R&I investment in the sustainable built environment area catalysed by the partnership	*11 private organisations*	SO1	13. # demonstrated innovative solutions and packages for sustainable construction and renovation
		2. # innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created	*6 Technos + participation Processes* *New jobs in NROs*	SO2	14. # demonstrated innovative solutions for the sustainability of the built environment value chain
		3. Contribution to the successful deployment of relevant EU instruments and frameworks	*Green deal, EU Taxonomy, SRI*	SO3	15. # innovative services developed and demonstrated
		4. # training programmes developed for the sustainable built environment	*REGEN training + elearning*	SO4	16. # living labs established and involved in the partnership's projects
GO2	Revitalise the sector through decarbonisation and sustainability transition	5. Energy savings (MWh)	*All monitored impact in 4 demo sites + 10 replication virtual cases*	SO5	17. Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities
		6. GHG emission reduction (tCO2e) / Pollution reduction		SO6	
		7. Share of reused/recycled materials used in construction (%)		SO7	18. # and type of heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock
		8. Share of buildings designed and constructed based on a life cycle approach		SO8	19. # building occupants and users involved in the partnership's projects demonstration activities
		9. # buildings with on-site RES production	*2 neighbourhoods with RES (Dublin, Beckerich)* *3 new buildings with RES (Milan)*	SO9	20. # people trained across the whole value chain in the deployment of innovative sustainable technologies, systems and methods
		10. # of workers trained on working methods and tools in the fields covering the B4P objectives		SO10	
GO3	Induce lasting behavioral change towards sustainable living	11. Share of the EU population living and working in green neighbourhoods	*Total population = 29.295*		
		12. # of private and public building owners with sustainable behaviour in their building stock	*Monitored in demo sites*		

REGEN

50 regeneration Interventions In the catalogue

6 techno components

4 Neighbourhood Regeneration Offices

52,1 sq.km

40 (Laredo, Beckerich)

REGEN

Legend

abc = Direct contribution of REGEN to B4P KPIs.

def = Indirect contribution of REGEN to B4P KPIs

Challenges and knowledge sharing

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Involvement of **municipalities**

- Two consortium meetings - 3 mayors
- Recruitment processes / allocation of resources
- Our ‘interventions’ are local processes which need to comply with **broader decarbonisation policies** at city or nation -level

Citizen engagement challenges

- Interventions ready / convincing
- Digital tech available
- Political ‘filter’

Thierry Lagoda, Mayor of Beckerich (LU)

Miguel González, Mayor of Laredo (SP)

James Geoghegan, Lord Mayor of Dublin (IE)

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Potential synergies with other projects

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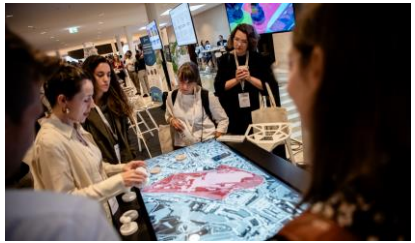
Crafting Sustainable and Inclusive Neighbourhood *180'* Workshop
REGEN Booth on B4P megabooth
@Sustainable Places 2024 (25/09/2024)



Watch the replay here:
https://www.sustainableplaces.eu/sp2024/sustainable-and-inclusive-neighbourhood-regeneration/

- Horizon Results **Booster** initiative for Dissemination and Communication
  - Projects involved **REGEN**, LEGOFIT, REN+HOMES, **GINNGER**.
  - Unified D&C assistance to start in the upcoming months
- *TBC* Clustering Workshop at **SP2025** + Publication in ORE SP Collection

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Thank you

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sylvain.kubicki@list.lu

REGEN

REGENeration of neighbourhoods towards a low-carbon inclusive and affordable built environment

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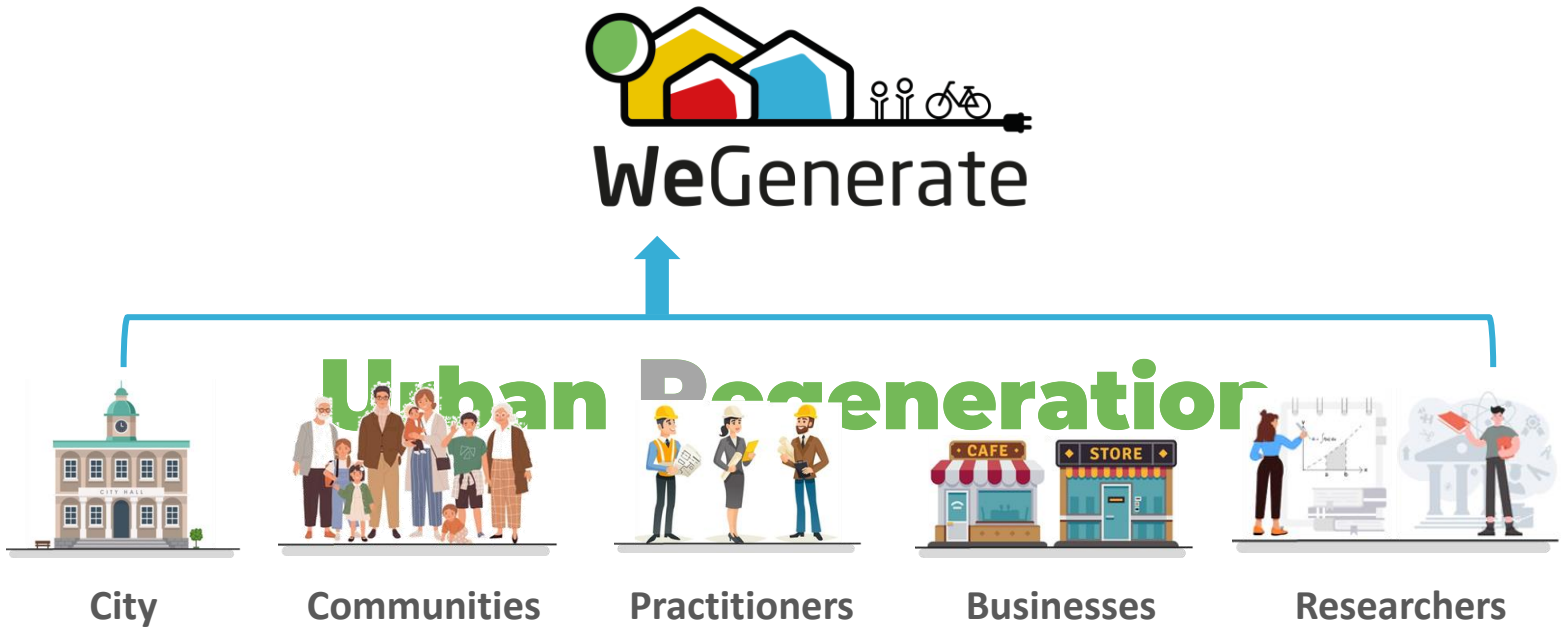
WeGenerate

Co-creating people-centric sustainable neighbourhoods through urban regeneration

Vicky Albert-Seifried
Fraunhofer Institute for Solar Energy Systems (ISE)

Built4People Partnerships | 2nd Clustering Event | Brussels, 19.11.2024

What is the project about?



The project fully embraces the paradigm shift from building for the people to **building with the people**. **We** take ownership of the urban regeneration processes and **co-create together people-centric, sustainable and beautiful neighbourhoods**.

Contribution to Built4People Specific Objectives

WeGenerate

A Develop **holistic solutions** in a systemic approach

C Demonstrate **clean energy transition** potential

G Demonstrate **no trade-offs** on economy, comfort, health, functions, cultural heritage

Contribution to Built4People KPIs

KPI's on general objectives			KPI's on specific objectives
GO1	**Generate holistic innovation in the built environment towards sustainability**	1. R&I investment in the sustainable built environment area catalysed by the partnership 2. **# innovative products/services/processes linked to sustainability that are catalysed by the partnership** and number of jobs created 3. Contribution to the successful deployment of relevant EU instruments and frameworks 4. # training programmes developed for the sustainable built environment	SO1 SO2 SO3 SO4 SO5 SO6 SO7
GO2	**Revitalise the sector through decarbonisation and sustainability transition**	5. **Energy savings (MWh)** 6. **GHG emission reduction** (tCO2e) / Pollution reduction 7. Share of reused/recycled materials used in construction (%) 8. Share of buildings designed and constructed based on a life cycle approach. 9. **# buildings with on-site RES production** 10. # of workers trained on working methods and tools in the fields covering the B4P objectives	13. **# demonstrated innovative solutions** and packages for sustainable construction and renovation 14. # demonstrated innovative solutions for the sustainability of the built environment value chain 15. # innovative services developed and demonstrated 16. # living labs established and involved in the partnership's projects 17. **Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities** 18. # and type of heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock 19. **# building occupants and users involved in the partnership's projects demonstration activities** 20. # people trained across the whole value chain in the deployment of innovative sustainable technologies, systems and methods
GO3	**Induce lasting behavioural change towards sustainable living**	11. **Share of the EU population living and working in green neighbourhoods** 12. # of private and public building owners with sustainable behaviour in their building stock	

Four Cities Four Stories

Tampere (Finland)

Human-Centric Walkable City

Cesena (Italy)

Re-Activating Urban Space from City Gateway to Neighbourhood

Cascais (Portugal)

Social Neighbourhood as an Active Energy Community

Bucharest (Romania)

Open Campus for Neighbourhood and Climate

WeGenerate Fellow Cities Network

	Cartagena, Spain	Kadikoy, Türkiye	Liepaja, Latvia	Szombathely, Hungary	Zagreb, Croatia
Population:	213 943	483 064	67 088	75 000	767 445
Replication Site:	Pedestrian Mobility in Ensanche zone	Livable Neighborhood Caferaga Project (Sustainable mobility)	Redevelopment of the old railway station (solar solutions, mobility)	Connection from the train station (E) to the University area (W), extending to the scenic Csónakázó Lake.	Reactivating the urban space from the city gates to the neighbourhood; Pedestrian city focused on people

Initiators of local reinvention

Early adopters of WeGenerate solutions

Facilitate capacity building, replication & upscaling

WeGenerate Key Results 2024

Local Circle

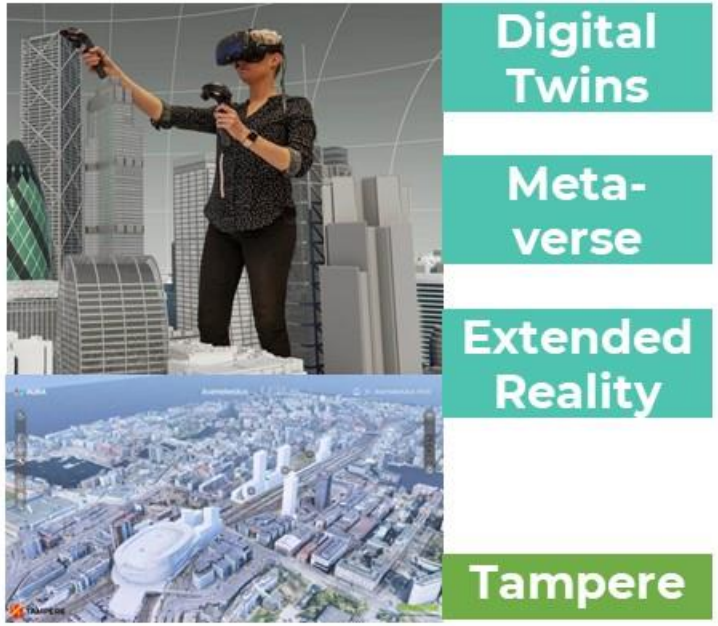
WeGenerate Social Innovation Cookbook

WeGenerate

See the **Cookbook** is here!

LET'S GET COOKING!

WeGenerate
Impact Model for Sustainable Inclusive Neighbourhoods



Authored by:
Social Innovation Cluster Leader

ICLEI
Local Governments for Sustainability

Sharing of Common Challenges

1. **Business Case:** How do you convince other cities to replicate the new urban regeneration approach and innovations developed?
2. **Digital Twins:** How are digital twins being used in your project?

Potential Synergies

1. Joint workshops targeted to Demo cities for sharing challenges and solutions.
2. Joint webinars/coaching sessions for Demo cities to learn from experts of specific topics.

THANK YOU!

WeGenerate

PEOPLE-CENTRIC SUSTAINABLE NEIGHBOURHOODS

FOLLOW US / GET INVOLVED

communication@wegenerate.eu

https://www.wegenerate.eu

@People-Centric Sustainable Neighbourhoods

@WGenerate325841

@WeGenerate

Fraunhofer ISE

Comune di Cesena

CASCAIS

TAMPERE

PRIMĂRIA SECTORULUI 2 BUCUREȘTI

KAПE CRES | CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING

VTT

ICLEI Local Governments for Sustainability EUROPE

eupportunity european affairs consulting

eit Urban Mobility Co-funded by the European Union

PARKUNLOAD

Greenvolt Comunidades

ENGIE

LNEG Laboratório Nacional de Energia e Geologia, I. P.

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

UTCB Universitatea Tehnică de Construcții București

NOVA SCHOOL OF BUSINESS & ECONOMICS

IREC Shaping Energy for a Sustainable Future

FACULTY OF TRANSPORTATION SCIENCES CTU IN PRAGUE

ROMA TRE UNIVERSITÀ DEGLI STUDI

NTNU Norwegian University of Science and Technology

ClimRes

LEADERSHIP FOR CLIMATE RESILIENT BUILDINGS

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Built4People

Funded by the European Union

ClimRes
LEADERSHIP FOR CLIMATE RESILIENT BUILDINGS

18/11/2024 B4P Clustering Event

Sotiris Aspragkathos

SingularLogic S.A.
Contact: saspragkathos@singularlogic.eu

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Built4People

Funded by the European Union

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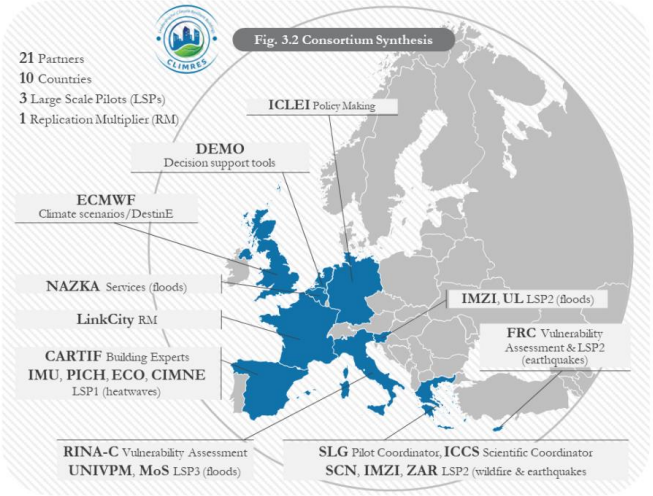
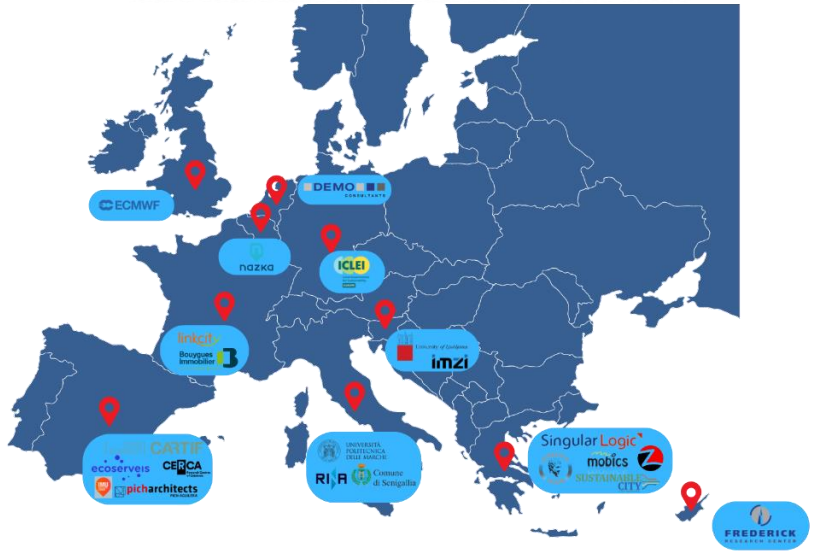




CLIMRES Objectives

Co-creating and Stakeholder Engagement	Engage stakeholders in a co-creation process to define future-proofing implementation pathways for vulnerable buildings

Architectural Analysis and Innovation	Analyze architectural interventions, novel designs and materials for renovating vulnerable buildings and future-proofing new ones.
	Propose a framework for assessing building vulnerability and quantifying impact within the building ecosystem.

Development and Validation of Solutions	Build an ICT platform and AI tools for data gathering, harmonization, sharing, and data-driven decision-making.
	Facilitate the replication and upscaling of renovation packages through a capacity-building program

CLIMRES contributions to B4P Partnership

B4P Specific objectives

- Develop **holistic solutions** in a systemic approach
- Demonstrate **affordability** and **cost-effectiveness**
- Demonstrate the **overall performance in the life-cycle perspective** (The complete building's life-cycle will be considered, to define all the needs to be considered in the CLIMRES solutions.)

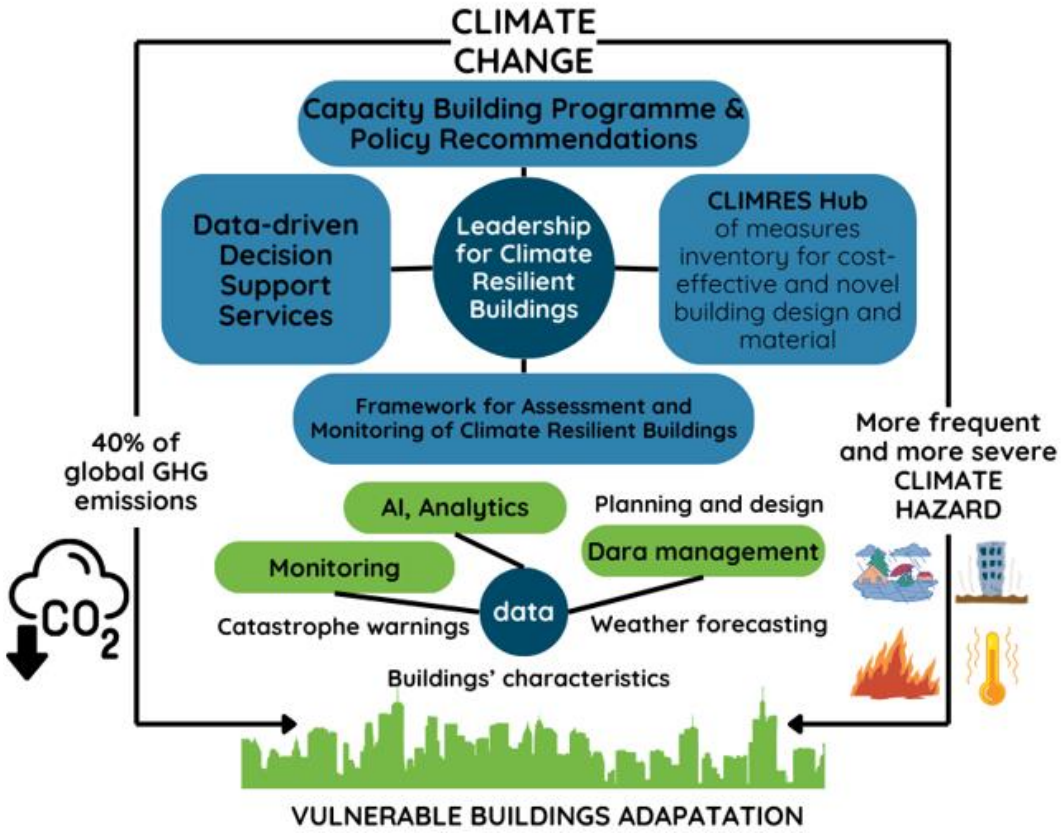
B4P KPIs

- KPI's on general objectives
  - Generate holistic innovation in the built environment towards sustainability (GO1 – 1 through 4)
  - Induce lasting behavior in their building stock (GO3 – 11 through 12)
- KPI's on specific objectives
  - Share of the demonstrated innovative solutions (13, 14, 15, 19 and 20)

KPIs in numbers..

KPI	Qunatification
Innovative services developed and demonstrated	6
Living labs established and involved in partnership’s project	3
Total floor area and #buildings (residential or non-residential)	6 non-residential
#people trained across the whole value chain	50
#building occupants and users involved in the partnership's projects and demonstration activities	100

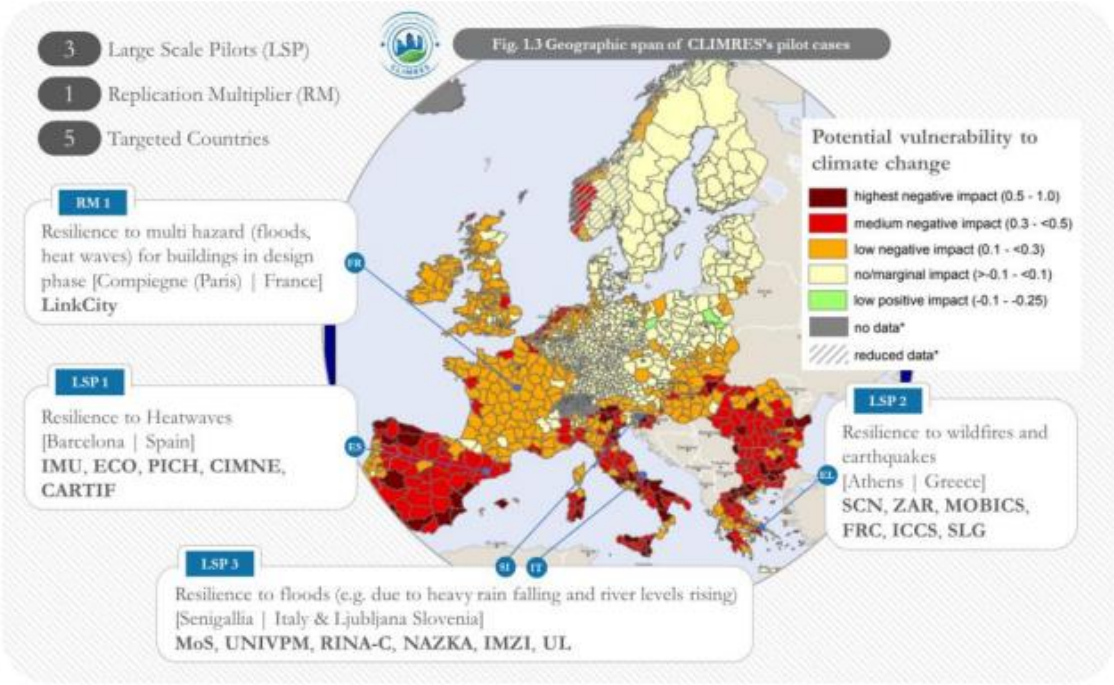
Key Results and Innovations



Engage Stakeholders	Co-create future-proofing pathways for vulnerable buildings.
Propose Methodological Framework	Assess buildings' vulnerability and impact within the broader ecosystem.
Analyze Architectural Interventions	Identify novel designs and materials for renovation and future-proofing.
Design ICT Federated Platform	Develop AI-based tools for data-driven decision-making.
Test and Validate Renovation Solutions	Conduct large-scale pilots across the EU.
Facilitate Replication and Upscaling	Implement a capacity-building program with replication guidelines.
Disseminate and Promote Results	Execute a comprehensive communication strategy.

Large Scale Pilots (LSPs)

- LSP 1: Resilience to Heatwaves [Barcelona|Spain]
- LSP 2: Resilience to wildfires and earthquakes [Athens|Greece]
- LSP3: Resilience to floods (due to heavy rain falling and river levels rising) [Senigallia|Italy & Ljubljana Slovenia]
- Replication Mulitplier (RM): Resilience to multi hazard (floods, heat waves) for buildings in design phase [Compiegne|France]



Challenges faced so far

Project is at M4; No particular challenges faces so far. However, potential challenges are related

- **Stakeholder Engagement and Training:**
  - Engaging a wider range of stakeholders with varying resources and needs in co-creation and capacity-building efforts.
- **Data integration and standardization**
  - Integrating diverse data sources (e.g. IoT, Copernicus) for accurate, real-time analysis across regions
- **Pilot Adaptation vs. Scalability:**
  - Balancing innovative solutions with practical replication across the aforementioned pilot locations.

Synergies to be needed

Topics for synergies:

- **Data Interoperability and Federated platforms:**
  - Collaborate on developing connectors for data interoperability between building resilience data sources and EU-wide data platforms, enhancing the precision and utility of predictive models for climate events.
- **Community Engagement and Social Resilience:**
  - Exchange best practices in community involvement for CLIMRES's co-creation sessions, especially for addressing local social vulnerabilities and climate risks in urban areas.
- **Policy Standardization and Sustainable Building Guidelines:**
  - Develop joint policy recommendations and contribute to standardization for resilient building materials and designs across Europe, leveraging the policy insights from each project to guide public authorities and urban planners.
- **Sister HE projects for synergies:**
  - Mitigating Environmental Disruptive Events Using People-centric Predictive Digital Technologies to Improve Disaster and Climate Resilience **(Minority Report)**
  - Urban Adaptation and Alert Solutions for a TIMELy (re)Action **(RETIME)**

THANK YOU

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ClimRes

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MINORITY REPORT

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Mitigating environmental disruptive events using people-centric predictive digital technologies to improve disaster and climate resilience

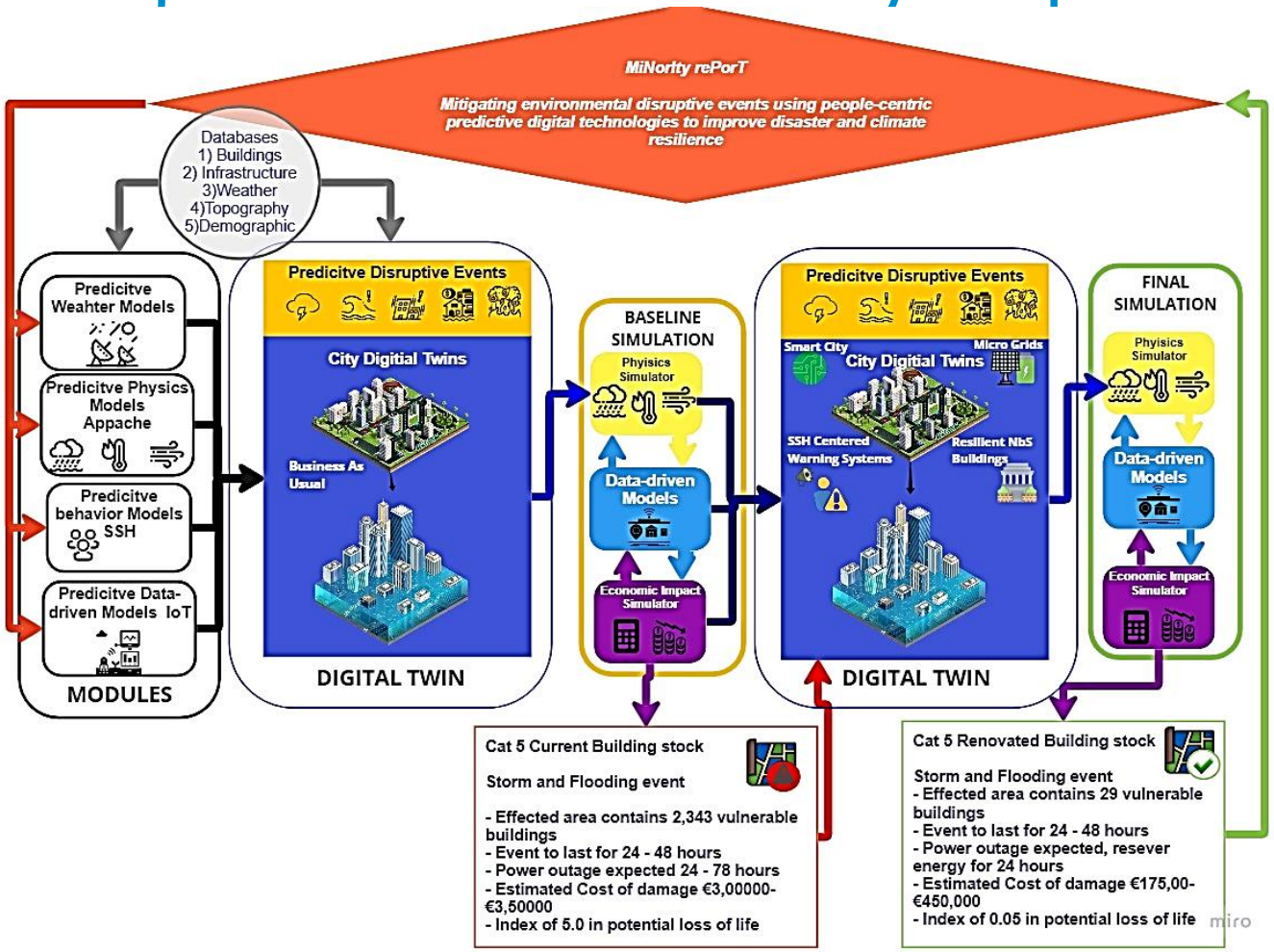
Anna Bozza, **IES R&D**

Built4People 2nd clustering event
19/11/2024 CINEA Bruxelles (BE)

MINORITY REPORT

Table of Content

Objectives of Minority Report



- ✓ **Demonstrate MR people-centric, co-creation framework for mitigating climate risks and enhancing climate and disaster resilience in 3 demo sites**
- ✓ **Develop/Deliver the integrated Minority Report people-centred technology platform and core modules (MR resiliency toolkit)**
- ✓ **Build awareness on the MR framework, to promote sustainability and circularity within the construction/renovation value chain for climate change mitigation/disaster management**

Minority Report contribution to the B4P SOs and KPIs

A. Develop **holistic solutions** in a systemic approach

D. Demonstrate sector **decarbonization pathways**

E. Demonstrate **sustainable, circular** business and value chain

1. **R&I investment in the sustainable built environment area catalysed by the partnership**

   ✓ **5M€ (2024 - 2028) / 15-20M€ (2028 - 2033)**

2. **# innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created**

   ✓ **12+ innovative services delivered, 10+ NEB and decarbonisation technologies promoted, 68-102 new jobs (2024 - 2028) / 300 new jobs (2028 - 2033)**

5. **Energy savings (MWh)**
6. **GHG emission reduction (tCO2e) / Pollution reduction**

   ✓ **70% energy savings, 30% kgCO2 reductions, 60% Environmental (Pt) impact reduction [targets tested and validated for MR decarbonisation roadmaps to be implemented]**

12. **# of private and public building owners with sustainable behaviour in their building stock**

    ✓ **>5,000**

13. **# demonstrated innovative solutions and packages for sustainable construction and renovation**

    ✓ **3 decarbonisation roadmaps developed, tested and validated, including 10+ net-zero technologies and decarb strategies in each demo**

15. **# innovative services developed and demonstrated**

    ✓ **12**

17. **Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities**

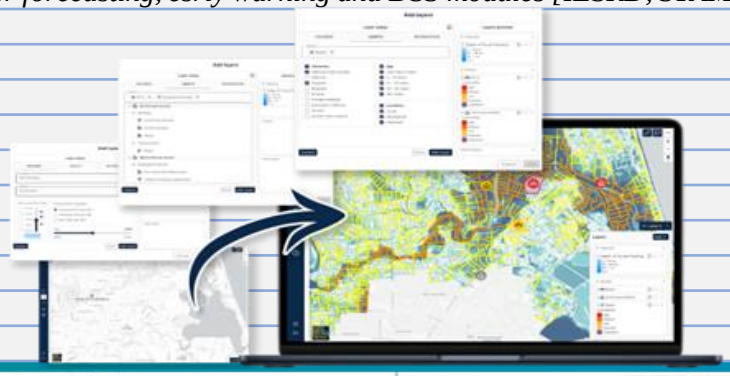
    ✓ **6,338 (2024 – 2028)**

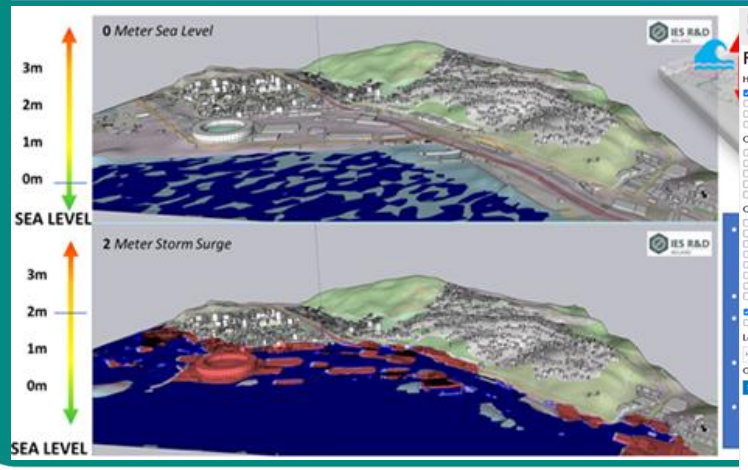
19. **# building occupants and users involved in the partnership's projects demonstration activities**

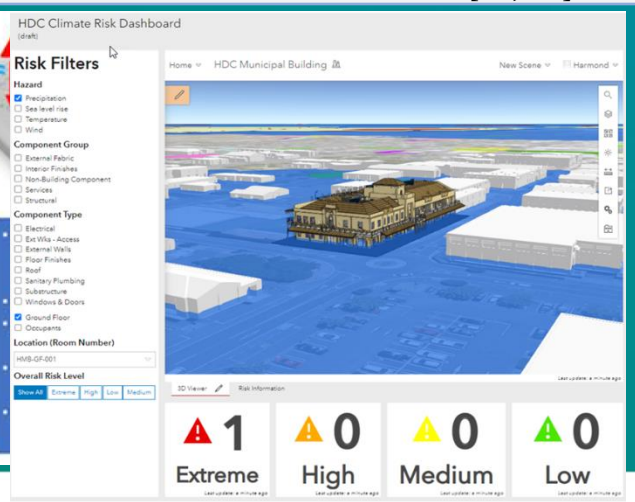
    ✓ **10,225 building occupants and users / 1,000-1,500 stakeholders reached in the value chain (2024 – 2028)**

Minority Report key results and innovations

R1. Minority Report people-centric co-creation framework for climate mitigation and adaptation, and resilience enhancement [PI, TCD, IESRD, UoA, UoC]
R2. Three Minority Report demo-specific methodologies for vulnerability assessment and categorisation, targeting climate events and natural disasters [UI, UCL, UoC, UoA, UPAT]
R3. Minority Report people-centric technology platform, integrating predictive technologies, AI simulation algorithms, weather forecasting, esrly warning and DSS modules [IESRD, STAM, UI]
R4. Predictive Weather module [BK, IESRD]
R5. Predictive physics (buildings and infrastructures) module [STAM, UI, UoA, UCL, UPAT]
R6. Predictive behaviour Module, including evacuation modelling [UI, UoA, UoC]
R7. Baseline Data-driven Module IoT [IESRD, BK]
R8. Advanced Renovation Roadmapping Decision Support (DSS) Module [UI, UoA, IESRD]
R9. Minority Report dashboards and dedicated user interfaces (UIs) [IESRD, STAM, PI, UI]
R10. Minority Report renovation roadmaps, including NBS [E2Arc, LASIA, IESRD, UI, UCL, UoA]
R11. Automated, simplified LCA module [IESRD]
R12. RE LCC and Circularity assessment module [DMO, UoA]
R13. Probabilistic Early Warning System for identifying Extreme Climatic / Natural Disaster Events [UI, BK]







Minority Report key results and innovations

Boost existing Vulnerability Assessment (VA) methodologies through dynamic digital tools leveraging predictive models and demo-specific methodologies, focusing on cascade impacts

Increasing the low renovation rate for the built environment, combining advanced solutions and materials design to improve safety and resilience of buildings within deep renovation roadmaps

Bridging knowledge gaps on deep retrofit of built environments, that are ill-equiped to cope with current intensity and frequency of climate and natural events

Unlock the potential of weather and warnings data combining it to predictive modules and building monitoring to increase overall awareness and resilience

Promote a collaborative, life-cycle-oriented approach to resilience planning and budgeting

Minority Report demonstrations

3 demos in diverse pedo-climatic zones

(climatic marine, temperate oceanic, Mediterranean)

4+ climatic risks characterised per demo

(heat waves, category 5 storms, windstorms, fire → 12 risk models and mapping efforts)

5+ natural risks characterised per demo

(flood, earthquake, landslide, drought, debris flow → 20 risk models and mapping efforts)

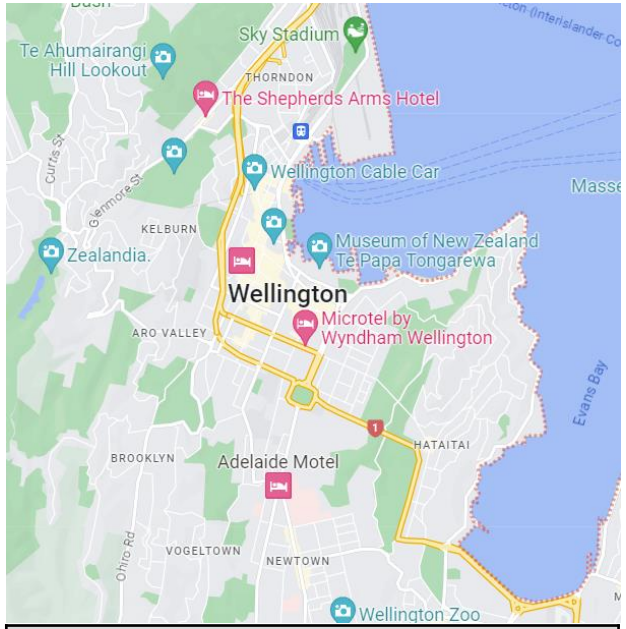
5,700+ buildings targeted

(residential, commercial, industrial, public, etc.)

6,000+ end-users targeted

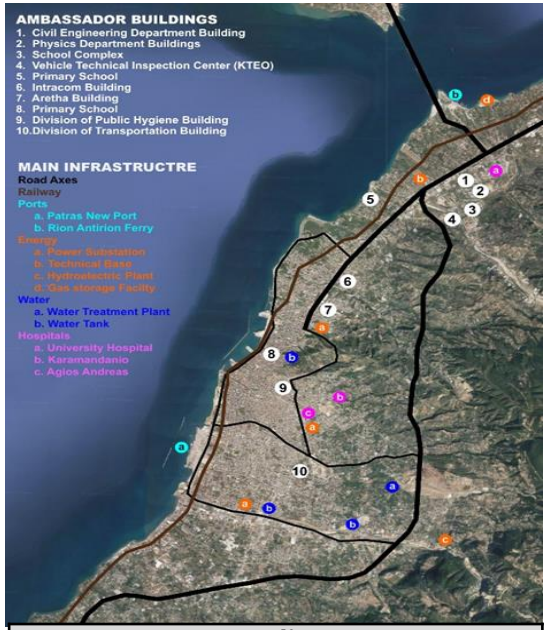
(including protected categories)

Minority Report demonstrations

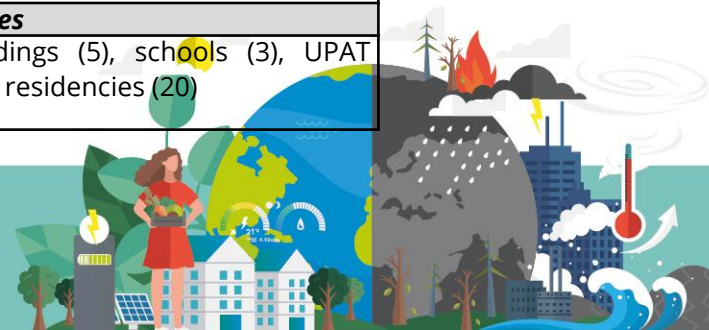


DEMO SITE 1: Climate Zone 1, Climatic Marine – Wellington, New Zealand			
Geographical location			
Wellington Central	Wellington, Te Aro	Wellington, Pipitea	Wellington, Oriental Bay
N° buildings			
270	300	185	53
N° end-users			
1,815	2,035	242	218
Building types			
Residential			

DEMO SITE 2: Climate Zone 2, Temperate Oceanic – Dublin, Ireland
Geographical location
Ringsend/Poolbeg decarbonisation, Zone Dublin City [DCC]
N° buildings
5,000
N° end-users
Total population is approximately 5,500
Building types
mix of residential and non-residential buildings



DEMO SITE 3: Climate Zone 3, Mediterranean – Patras, Greece
Geographical location
Region of Western Greece (Patras, Greece)
Number of buildings
30
Number of occupants/end-users
915
Building types
Public buildings (5), schools (3), UPAT facilities (2), residencies (20)



Minority Report – challenges and opportunities for sharing knowledge and best practices

Political barriers: heterogeneity of policies and standards on the use of digital technologies in the construction sector

✓ **Opportunity:** Stakeholders synergies to ensure reliability and circularity of the digital construction value chain

Social barriers: Consumer negative perception on deep renovation causing disruption and on the integrated digital technologies to violate privacy

✓ **Opportunity:** Increase users awareness on climate and natural risks, and acceptance of renovation approaches

Technical barriers: Old/traditional practices governing the construction and renovation sector, that hinder reshaping the value chains and delivering through companies' business models

✓ **Opportunity:** Integration of digital technologies within construction and renovation value chains, along with a clear understanding of cascading and social-physical impacts of climate and natural compound events

Environmental barriers: Lack of clear interdependence between data on the environmental impacts of built environments when designed/constructed, in operation, within renovation processes, and when subjected to different adverse events

✓ **Opportunity:** Reduce environmental impacts of built environments throughout their lifecycle

Legal barriers: data heterogeneity, lack of understanding of the proposed measures from all the involved stakeholders

✓ **Opportunity:** policy and legal framework involving all players towards the circularity of deep renovation processes, also including the social dimension, while being compliant with EU regulations

www.minorityreport-project.eu/en/

@Minority Report

@EU_MinorityRep

@MinorityReport_EU

MINORITY REPORT

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement number 101147385. The European Union is not liable for any use that may be made of the information contained in this document, which is merely representing the authors' view.

Thanks!

RETIME
Inclusive Urban Resilience

istar _iscte
Information Sciences,
Technologies and Architecture
Research Centre

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

Catarina Ferreira da Silva

Catarina.Ferreira.Silva@iscte-iul.pt

19/11/2024

Co-funded by the European Union

iscte UNIVERSITY INSTITUTE OF LISBON

IN A NUTSHELL

- RETIME combines advanced tech with thorough socio-environmental analysis to **build hazard exposure resiliency and informed urban environments** for all
- RETIME intends to **meet citizens' real-time needs** while supporting monitoring and **decision-making processes**

Co-funded by the European Union

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> RETIME OBJECTIVES OVERVIEW

1

Support public authorities in enhancing the safety and resilience of the built environment by implementing site-specific emergency protocols.

2

Increase awareness of building occupants and other vulnerable key stakeholders on the available solutions in case of extreme climatic events, and natural disasters.

3

Test innovative and practical adaptation measures for at-risk urban areas.

Co-funded by the European Union

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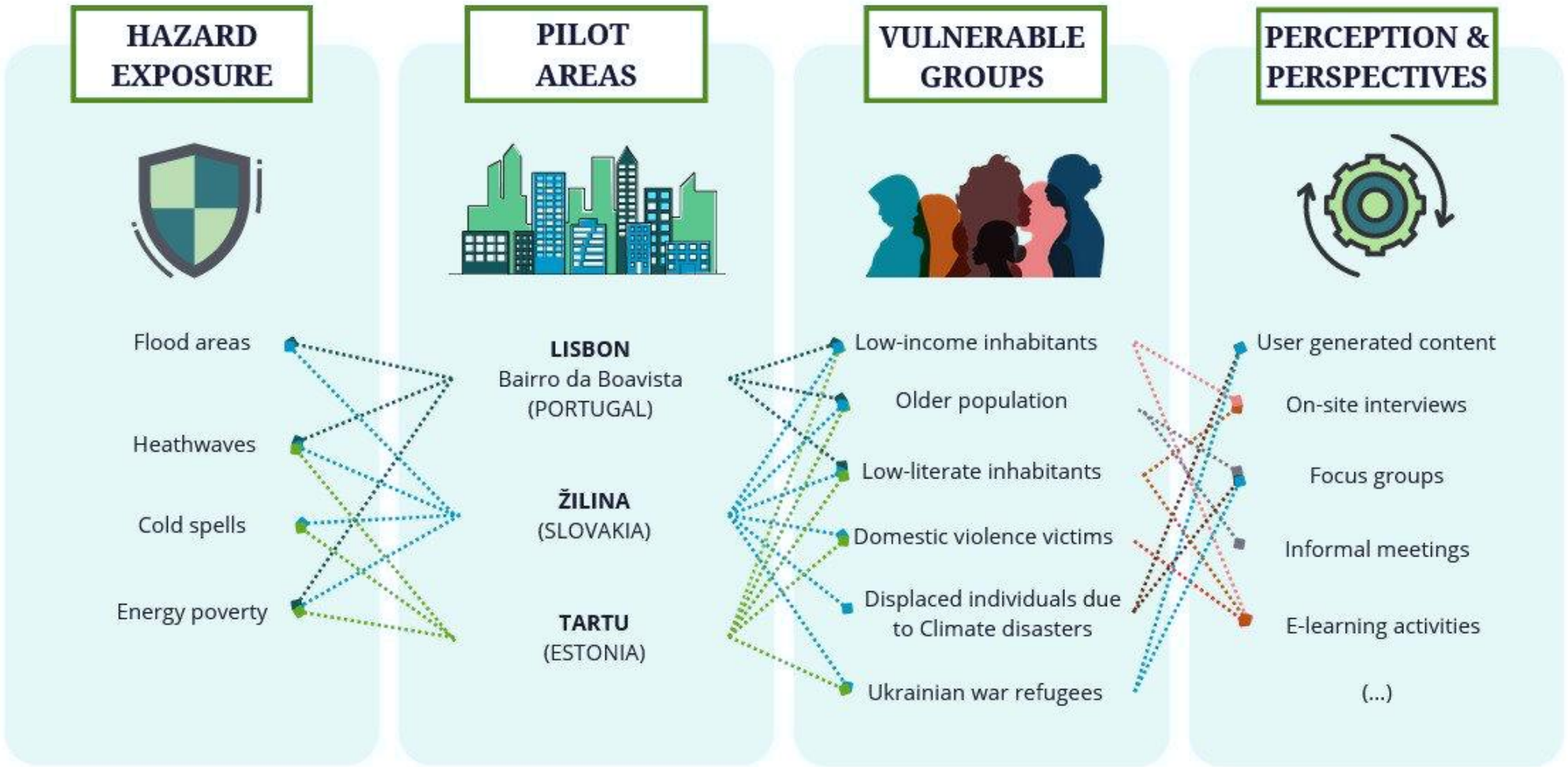
> RETIME PILOTS ANALYSIS



Local stakeholder-centric approach: **current** and **future** needs

Co-funded by the European Union

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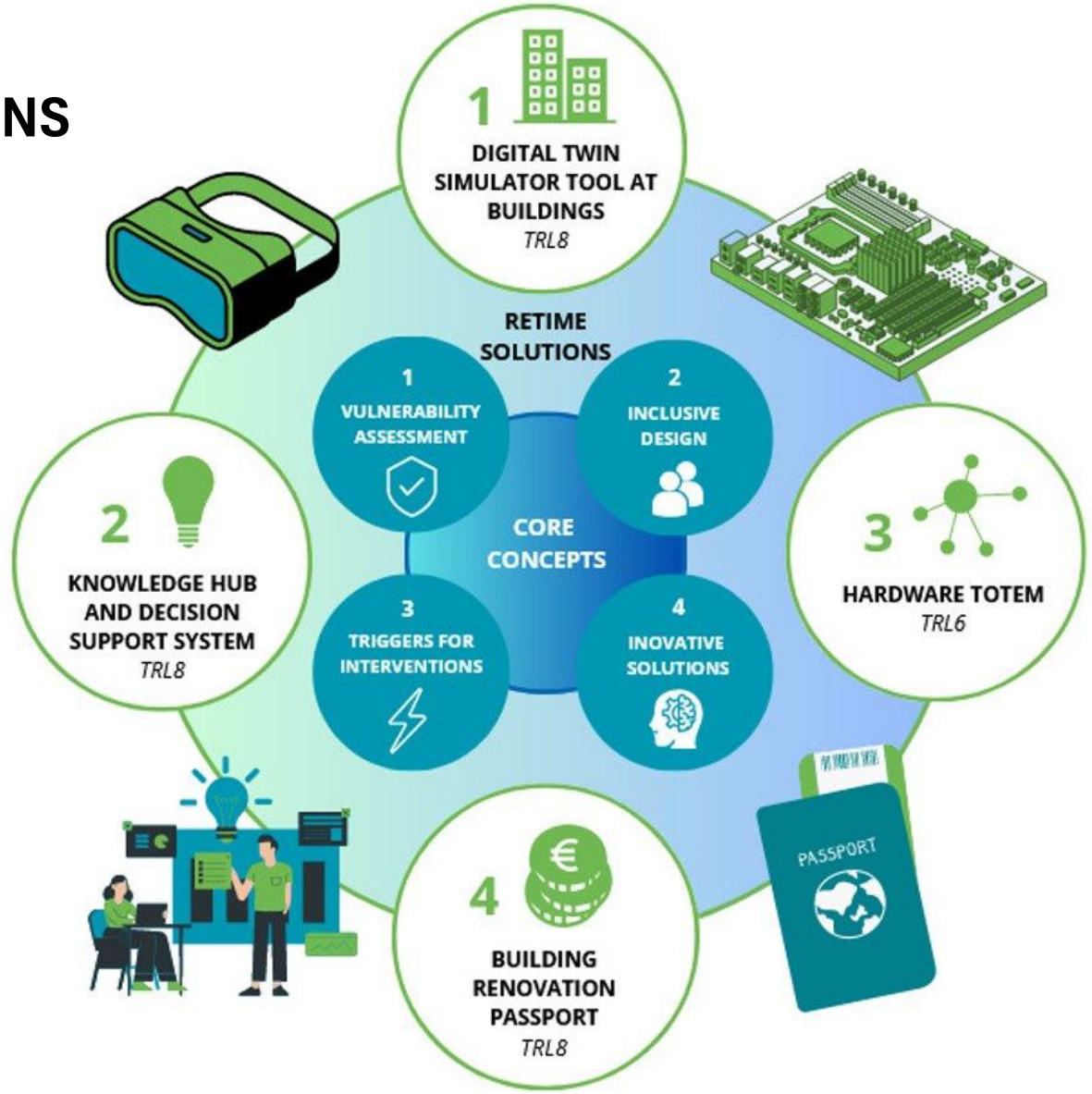
> RETIME ADAPTATION SOLUTIONS

RETIME will develop a suite of 4 innovative adaptation solutions for reducing risk in urban areas

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



RETIME solutions

Co-funded by the European Union

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> B4P SPECIFIC OBJECTIVES

SO-B: Demonstrate overall performance in the life-cycle perspective

- Designs and solutions to improve **resilience, preparedness & responsiveness** of the built environment to **disruptive events**
- Models and digital tools for **better-informed decision making**, using BIM, Digital Twins and digital Blockchain-based Building Renovation Passport, IoT, data analytics

SO-A: Develop holistic solutions with a systemic approach

- Resilience analysis to **risk and hazard exposure**
- **Energy efficiency and renewable** energy solutions
- Foster dynamic and participative urban planning for sustainable building, using digital systems to involve **stakeholders and citizens in participative urban planning & design**

SO-F: Demonstrate affordability and cost-effectiveness

- Business models to optimise the **costs of resilience**, considering asset management and life-cycle approaches

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> # B4P KPIS TO WHICH RETIME CONTRIBUTES TO

Contribution to the successful deployment of relevant EU instruments and frameworks

KPI 2. **4** innovative products/services/processes linked to sustainability that are catalysed by the partnership

KPI 4. **3** training programmes developed for the sustainable built environment

KPI 14. **4** demonstrated innovative solutions for the sustainability of the built environment value chain

KPI 15. **3** innovative services developed and demonstrated

KPI 17. **6 (Small), 8 (Medium), 18 (Large)** buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities

KPI 19. **6 (S), 14 (M), 20 (L)** building occupants and users involved in the partnership's projects demonstration activities

KPI 20. **50 (S), 75 (M), 100 (L)** people trained across the whole value chain in the deployment of innovative sustainable technologies, systems and methods

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> POTENTIAL SYNERGIES WITH OTHER PROJECTS

Photos @ shutterstock & Yuri Catalano @unsplash

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RETIME
Inclusive Urban Resilience

Thank you!

retime@iscte-iul.pt

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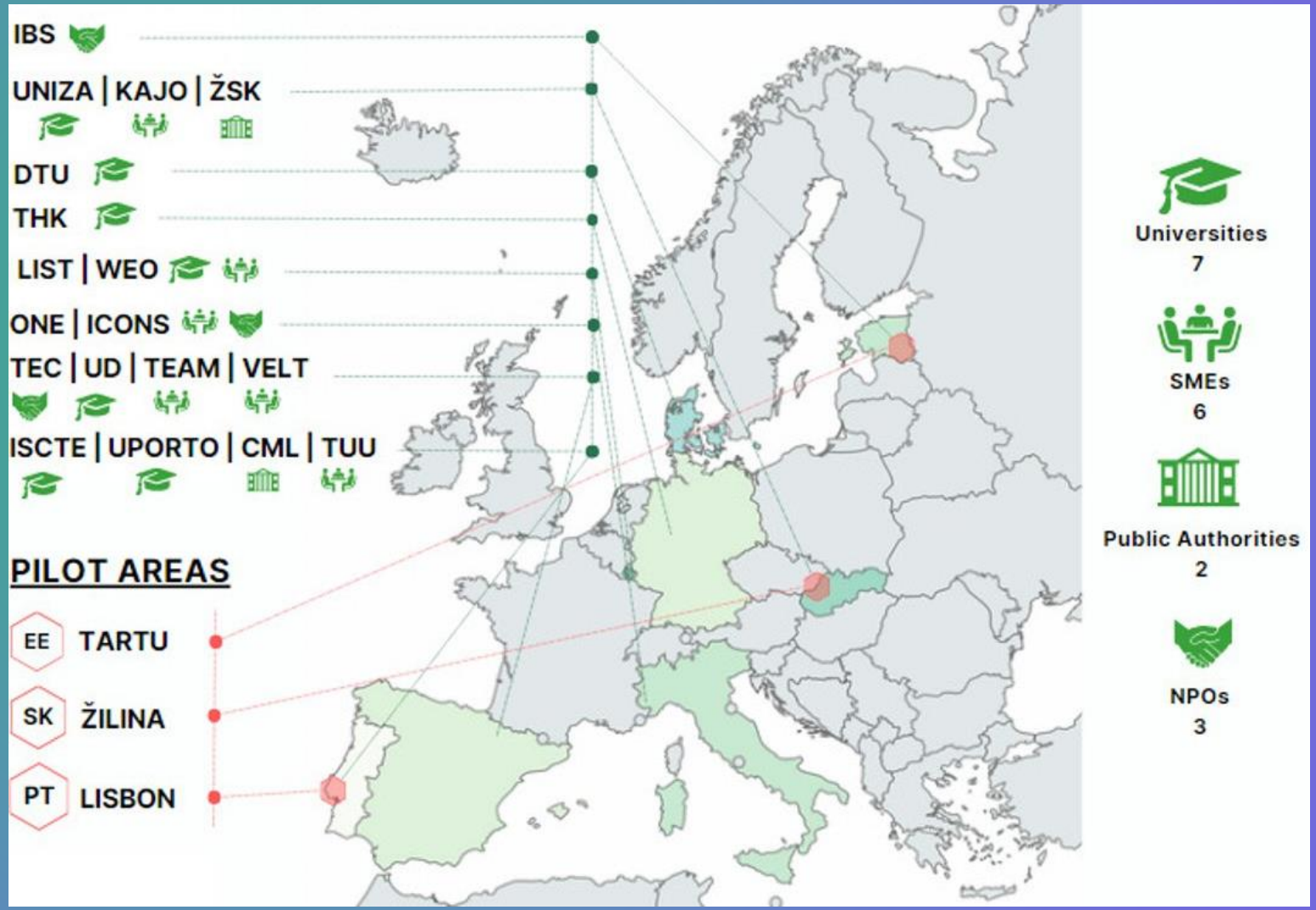


Enhancing Accessibility and Sustainability in Smart Cities and Smart Buildings: The Universal Accessibility Suite Initiative

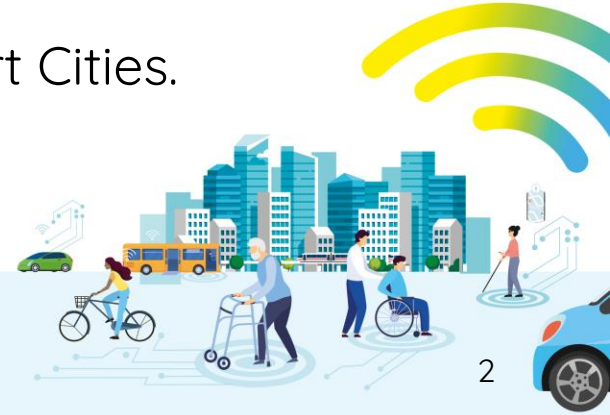
Panagiota Chatzipanagiotidou, CERTH

B4P clustering event, 19/11/2024

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement number 101147722.

AccesS Objectives

- Formulate the basis of a **user-centered design approach for social inclusion and accessibility** in Smart Cities and Smart Buildings.
- Deliver **digital innovations for the design of accessible, inclusive and sustainable Built Environments**.
- Promote **inclusive, adaptive and sustainable building operation and mobility management** under the Smart City context.
- **Standardized Framework** for Inclusive and Accessible Built Environments in the European Union.
- Fostering **Innovation, Public Awareness, and Industry Collaboration** for Accessible Built Environments.
- **Demonstrate and evaluate** the Universal Accessibility Initiative in Smart Cities.



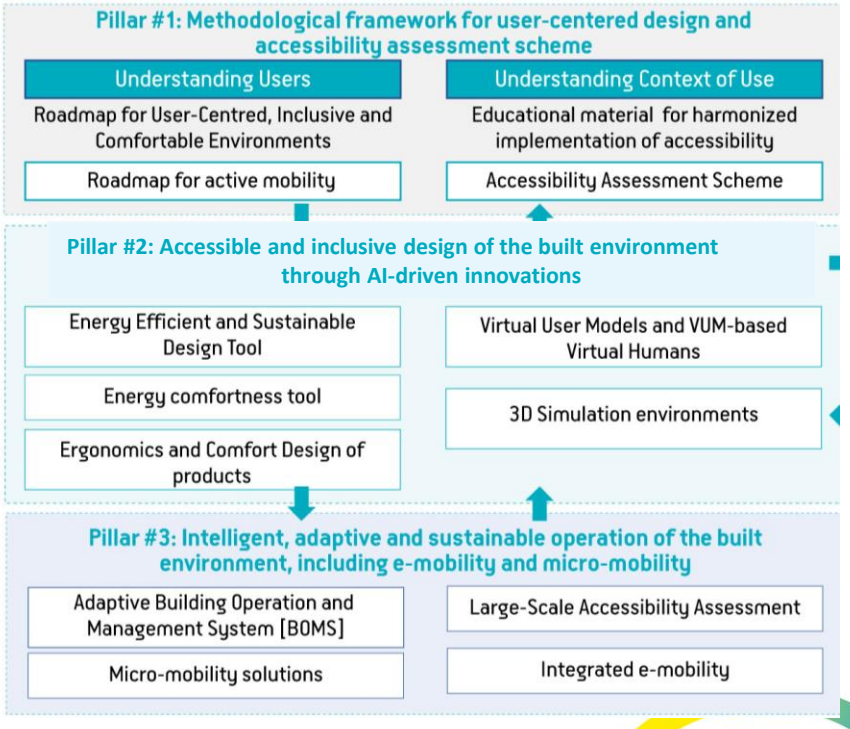
AccesS Key Results & Innovations

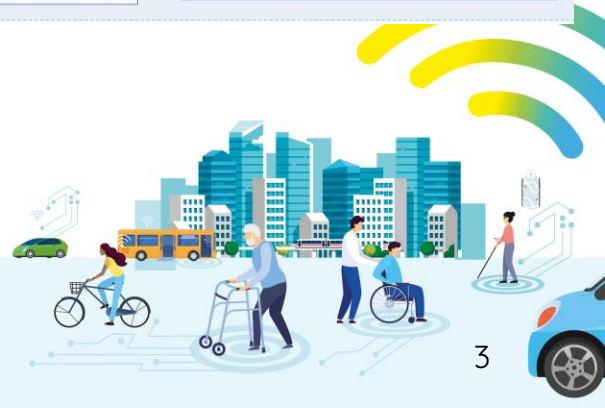
The novel elements of the AccesS concept are based on:

1. **A methodological framework formulating the basis of a user-centered design approach** that will enhance the capability of AccesS partners to effectively address and leverage social inclusion and accessibility.

2. **A comprehensive accessibility assessment scheme** for the built environment which will address physical accessibility, usability, safety, comfort, and social inclusion in the standards and define clear and measurable criteria, guidelines, and performance indicators for assessing accessibility.

3. **Digital innovations** supporting both accessible and inclusive design as well as adaptive and sustainable operation of the built environment, integrated all together under an inclusive toolbox, the Universal Accessibility Suite.





AccesS contribution to the B4P partnership

G. Demonstrate no trade-offs on economy, comfort, health, functions, cultural heritage

A. Develop holistic solutions in a systemic approach

B. Demonstrate overall performance in the life-cycle perspective

No	B4P Key Performance Indicators	#
15	Innovative services developed and demonstrated	23 use cases/ services identified
17	Total floor area and # buildings (residential or non-residential) directly involved in the partnership's projects demonstration activities	>20.000m2 6 buildings
18	Heritage buildings involved in/enhanced by the partnership's projects, in line with the safeguarding of the historical environment and architectural values of the building stock	4 cultural heritage/ historical buildings/ (Museum, Chapel, Municipal offices, Municipal Market)
19	Building occupants and users involved in the partnership's projects demonstration activities	>200 users

- A roadmap for each project pilot, fostering the creation of an accessible and inclusive built environment, including active mobility solutions.
- A comprehensive accessibility assessment scheme for the built environment to be realized by an Accessibility Assessment Tool.
- Simulations with Virtual Humans to evaluate several predefined scenarios and assess human interactions within the built environment.
- An Energy Efficient and Sustainable design tool based on multi-criteria analysis (energy consumption/ generation, smartification potential, average cost of procurement, etc).
- An Energy comfortness tool will allow exploring the relationship between comfort and energy consumption to promote sustainable practices.
- A dedicated tool for the Ergonomic and Comfort Design of products.
- A robust decision support tool geared towards the dynamic monitoring and optimization of building operations, forecasting of energy consumption and RES production.
- Integrated e-mobility and micromobility

AccesS Pilots

Case of Cultural Heritage Buildings

- **Demo site #1**: The Christo and Jeanne-Claude Center, Gabrovo, Bulgaria
- **Demo site #2**: The Brancacci Chapel, Florence, Italy

Case of People Care Facilities

- **Demo site #3**: Droom je Thuis Foundation, Naaldwijk, Netherlands
- **Demo site #4**: Casa Girasole, Massagno, Switzerland

Case of Public Services Buildings

- **Demo site #5**: The Palazzo di Città, Bari, Italy
- **Demo site #6**: Mercado de Veronicas, Murcia, Spain

Demo site 1: The Christo and Jeanne-Claude Center

Demo site 2: The Brancacci Chapel

Demo site 3: Droom je Thuis Foundation

Demo site 4: Casa Girasole

Demo site 5: The Palazzo di Città

Demo site 6: Mercado de Veronicas

Knowledge sharing - Challenges

- Effectively engaging end users of demo sites and disability advocacy groups to gather input on identifying user needs and barriers to built environments and active mobility solutions
- Balancing the needs and interests of diverse stakeholders, including building owners, technology providers, and public authorities, to foster support for accessible solutions.
- The varied national policies complicate harmonization of accessibility and sustainability standards across Europe.
- Difficulty in promoting market uptake for innovative accessible and sustainable building technologies due to cost and lack of awareness.
- Data Management and privacy concerns- ensuring compliance with privacy regulations.

Potential Synergies

- Pool resources with other projects to enhance public awareness and understanding of the critical concepts of accessibility and inclusiveness, to be used in public authorities, community initiatives, universities, architectural colleges, consulting companies etc.
- Partner with similar projects to host joint workshops and collaborate on engaging stakeholders.
- Work towards common accessibility and sustainability standards by sharing insights, methodologies, and best practices to support a cohesive regulatory framework across Europe .
- Investigate ways of a possible commitment to the B4PIC.

Thank you for your attention!

www.euproject-access.eu/en/

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InclusiveSpaces: Designs, tools & frameworks for creating an accessible & inclusive built environment for all, for now & for the future

Milica Zizic, ERTICO – ITS Europe

19 October 2024

Funded by the European Union

This project has received funding from the European Union's HORIZON EUROPE research and innovation programme under the grant agreement No 101147881.

Objectives

InclusiveSpaces realizes the **inclusive design, monitoring and evaluation of urban space**.

InclusiveSpaces introduces **co-design accessibility concepts, engaging people with disabilities and older people** to improve inclusiveness, social cohesion and climate change mitigation and adaptation.

It develops **socially innovative solutions** that:

- **foster universal design principles,**
- **empower diverse target-groups, and**
- **promote climate-friendly practices**.

> *If you do not see us during your everyday chores out there, it is not because our bodies have failed us, but because of the **false rationale upon which our built infrastructures are constructed.** That is what excludes us from social interaction.*

Antonis Pellas, EU citizen and wheelchair user (21 August 2023)

How InclusiveSpaces contributes to the B4P partnership

B4P Specific Objectives:

A. Develop **holistic solutions** in a systemic approach

C. Demonstrate **clean energy transition** potential

G. Demonstrate **no trade-offs** on economy, comfort, health, functions, cultural heritage

KPI's on general objectives

GO1: Generate holistic innovation in the built environment towards sustainability

2. # innovative products/services/processes linked to sustainability that are catalysed by the partnership and number of jobs created

KPI's on specific objectives

14. # demonstrated innovative solutions for the sustainability of the built environment value chain

16. # living labs established and involved in the partnership's projects

19. # building occupants involved in the partnership's projects demonstration activities

Demonstrations

- The InclusiveSpaces planning and design tools and the climate-friendly assistive technologies will be **demonstrated, assessed, and evaluated in real-world demonstrations in 6 European cities and countries**

1 LARGE INDUSTRY
SWARCO

3 TECH SMEs
TOBEA
MLAB
MPH

1 SSH SME
CMO

2 EU ASSOCIATIONS
ERTICO
EPF

3 UNIVERSITIES
TUM
NTUA
UoP

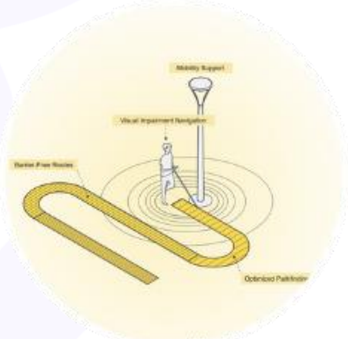
3 MUNICIPALITIES
PENTELI (ATHENS)
LARNAKA
FHH (HAMBURG)

3 ASSOCIATIONS FOR DISABLED / INCLUSIVE DESIGN
IIAPA
MBE
VIC

1 PUBLIC TRANSPORT OPERATOR
TPG

- We are in the process of **engaging people in vulnerable situations, authorities and practitioners:**
  - **Strategies related to recruitment** in 6 demosites (30 experts/demosite, 5 types of people in vulnerable situation in each demosite), **interviews transcription, qualitative data analysis**.
- **Initial versions of the tools** are being developed: **Feedback loop with the interviews**
- **Results available first trimester of 2025**

Key Innovations

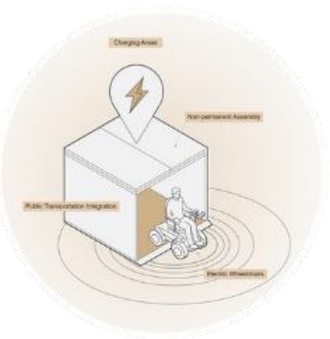


Accessibility Routing

Athens, Hamburg

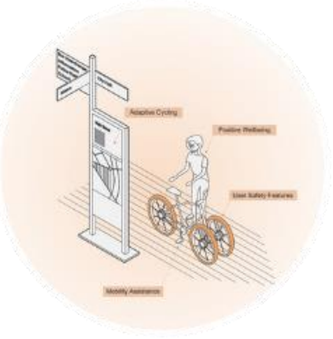
Accessibility Mapping

Athens, Hamburg



Mobility Station “Kiosk”

Athens, Larnaka, Hamburg

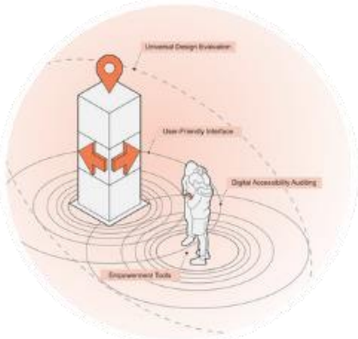


Inclusive Upright Trycicle

Hamburg, Budapest

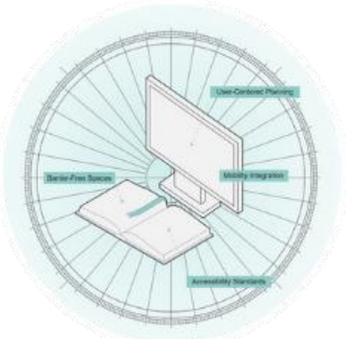
Travel demand data collection

Geneva, Larnaka, Budapest



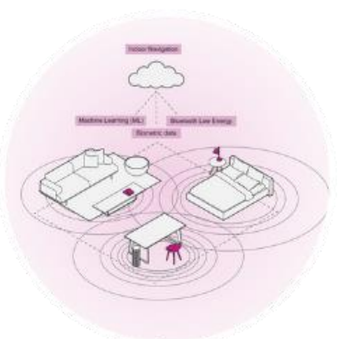
Accessibility Design Evaluation

Madrid, Larnaka



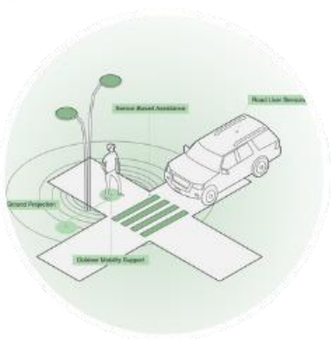
Universal design manual

Geneva, Madrid, Larnaka



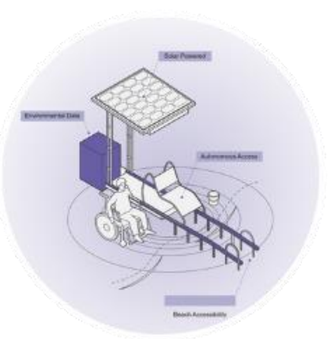
Indoor Assistive Technologies

Athens, Larnaka



Outdoor Assistive Technologies

Athens, Geneva



iSEATRAC

Larnaka, Hamburg

Preliminary Results & Challenges

- **In the process of engaging people in vulnerable situation, authorities and practitioners:**
- **Strategies related to recruitment in 6 demosites (30 experts/demosite, 5 types of people in vulnerable situation in each demosite), interviews transcription, qualitative data analysis.**
- **Initial versions of the tools are being developed**
  - **Input data results running in parallel with the interviews**
  - **Lack of Awareness Among Practitioners**: Many professionals don't recognize the value of involving people in vulnerable situations, potentially due to a lack of legal obligations to include accessibility in the design process.
  - **Potential Allies Among Accessibility-Focused Designers**: Designers with an interest in accessibility value user input and could support inclusion efforts.
  - **Challenges from Disabled People's Organizations (DPOs)**: While DPOs are included in design stages, compromises often limit their influence on final decisions.
  - **Diversity in Disability Representation**: Within the disability community, some groups have a platform to voice opinions, while others lack organization or confidence to advocate for their needs.
  - **Guiding Communities of Practice (CoPs)**: Strategies should address these issues, particularly focusing on understanding challenges faced by DPOs.

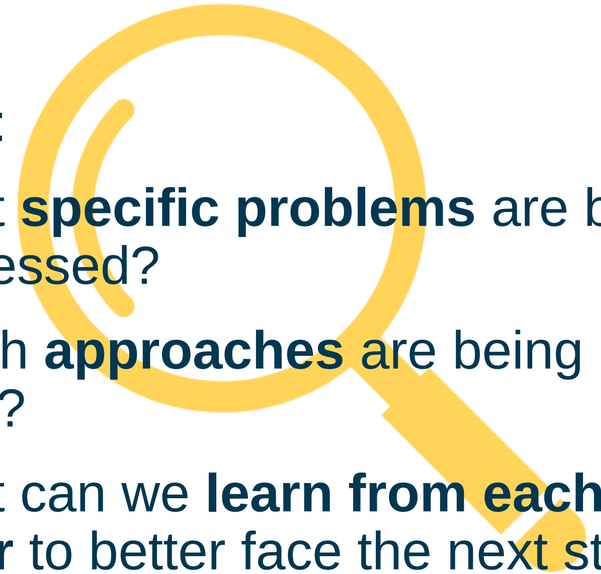
Good practices

- **Don't try to shake hands on arrival**
- **If you want to help, ask first**
- **Do not feel or express sorry**; treat the person concerned as an equal
- It's crucial to **use modern, respectful disability-related terminology**
- **Make eye contact and speak directly to the person**
- **Keep your mouth visible to allow lip reading**
- **Avoid shouting or speaking unnecessarily loudly**
- **Use simple language and short sentences**
- **Allow enough time to respond**
- **Never pretend to understand if you do not**. Instead, say what you understood so far and allow the interviewer to correct you if necessary

Synergies to exploit

- With **solutions being developed to make the built-environment more inclusive, accessible and resilient**, in particular with projects:

  - MULTICARE
  - MULTICLIMACT
  - GINNGER
  - REGEN
  - WeGenerate
  - CLIMRES
  - Minority Report
  - RETIME
  - AccesS



Topics:

- What **specific problems** are being addressed?
- Which **approaches** are being used?
- What can we **learn from each other** to better face the next stages of development?

Who we are

inclusive spaces

Coordinator

cambia changing MObility

National Technical University of Athens

MaaS Lab

Technical University of Munich

TOBEA Thinking Outside the Box Engineering Applications

MBE MOZGÁSSÉRÜLTEK BUDAPESTI EGYESÜLETE

European Passengers' Federation

VIC

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΛΟΠΟΝΝΗΣΟΥ UNIVERSITY of the PELOPONNESE

ERTICO

ΔΗΜΟΣ ΛΑΡΝΑΚΑΣ

iiAPA Instituto Internacional Académico y Profesional para Innovación Accesibilidad

swarco

ΔΗΜΟΣ ΠΕΝΤΕΛΗΣ

Hamburg

TRIPLE TREAD

tpg

THANK YOU FOR YOUR ATTENTION

Connect with us

inclusivespaces-heproject.eu

Inclusive Spaces

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Project coordinator:

Floridea Di Ciommo, cambiaMO

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