



URBREATH

What is the project about?





Overview

A groundbreaking initiative
co-funded by EU

Harness full potential of
Nature-based solutions
(NBS) across diverse climate
zones

Fostering community
engagement &
knowledge sharing



4 front runner cities

5 follower cities

Multidiscipline international
consortium

Co-creation based

Develop NBS
implementation assistance
tools

The project at a glance

Title

Systemic Integration of Transformative Technical and Nature-based Solutions to Improve Climate Neutrality of European Cities and Regions and tackle Climate Change: the URBreath Approach



Topic

Demonstration of climate mitigation and resilience solutions in support of the implementation of the Adaptation to Climate Change and Cities Missions

**HORIZON-
MISS-2023-
CLIMA-
CITIES-01-01**

Duration

48 months

Start Date
1/01/2024



Funding scheme

Horizon Europe



Budget

EUR 14,963,862

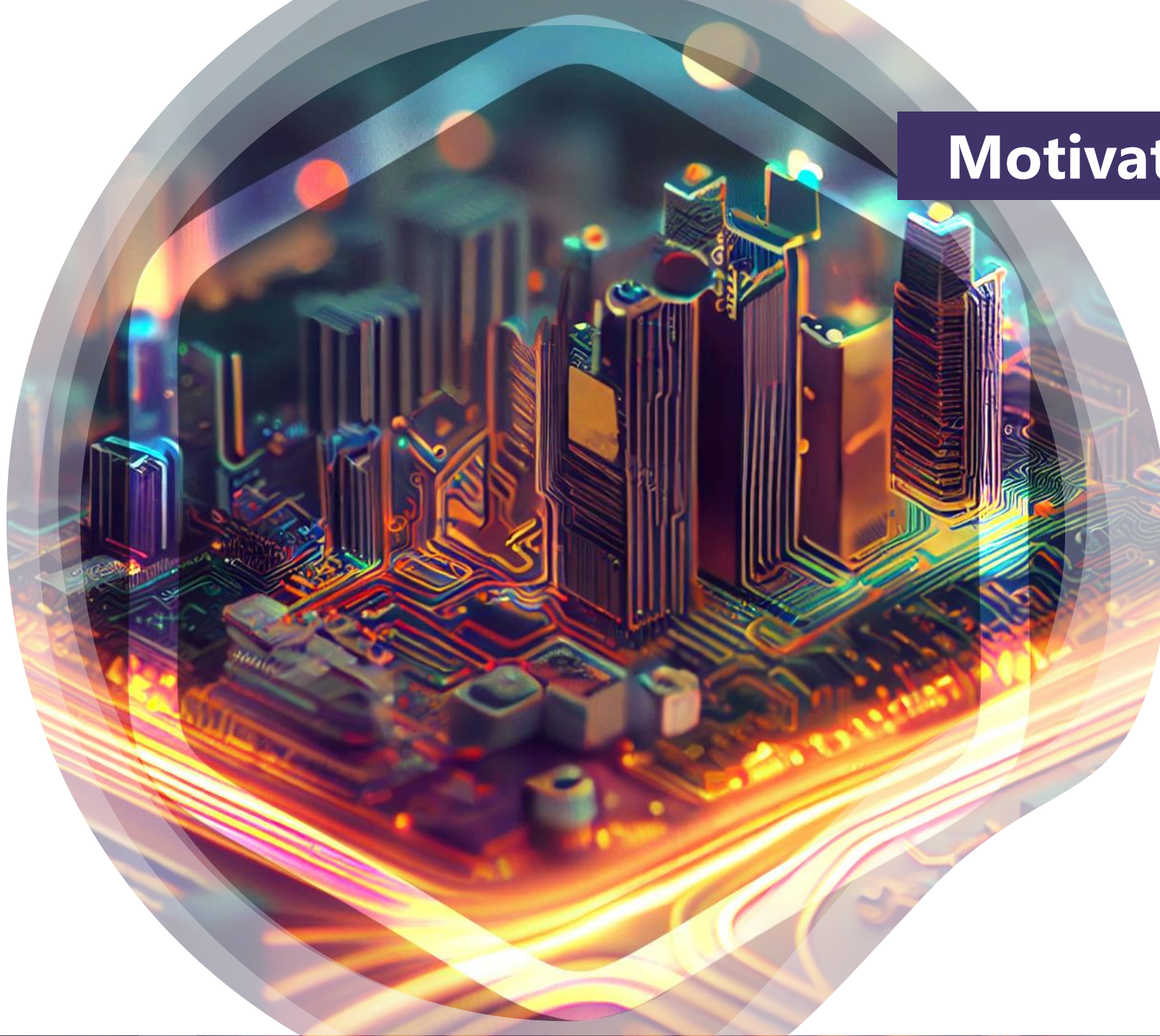


Consortium

37 partnering
organisations



Motivation



Challenges

Issues we need to address

1

Europe's Urbanisation

75% in 2021 and is projected to increase to 84% in 2050

2

Cities at the forefront of climate change

Frequent and extreme weather events

Urban areas particularly vulnerable

High need in energy supply

- ~75% of global primary energy consumption
- ~50-60% of total greenhouse gases emissions

3

NBS as climate adaptation measures

Conventional approaches on revitalization, regeneration, and greening planning tend to fail:

- They are focused mainly on cost/profit criteria with simple methodologies – where NBS do not deliver adequate Return of Investment (RoI)
- There's rarely any focus on local communities' needs, leading to low adoption rates

Objectives



Engage

Objectives

1

- Stakeholders are involved via Living Labs to identify end-users' needs & requirements, e.g. school children in Madrid
- Students in Tallinn and Cluj-Napoca are making the design of (parts of) the NBS

2

- Establish ICT tools, methods & participatory processes to support stakeholder & wider public decision making

3

- Introduce innovative cooperative organisational models to secure project's sustainability & systemic adoption of solutions for urban regeneration and climate neutrality

Assess

Objectives

1

- Quantitative impact assessment of the climate effects towards climate neutrality, regeneration & adaptation planning

2

- Enhance synergy effects of interventions towards improved urban/local climate neutrality, resilience and regeneration

3

- Develop assessment framework for evidence-based evaluation of NBS via extensive monitoring of deployed solutions in the four Front-Runner Cities

Replicate

Objectives

1

- Replication of the URBREATH methodology & tools in other cities after the project ends, to increase the impact of the project
- Mentoring and coaching for the Follower Cities

2

- Awareness & dissemination activities to support adoption of the sustainable URBREATH solutions

3

- Develop novel business models & strategies for regional climate resilience enhancement



Pilots



Mediterranean

Front runner: Madrid (SP)
Followers: Athens (GR), Parma (IT)



Boreal

Front runner: Tallinn (EE)
Follower: Kajaani (FI)



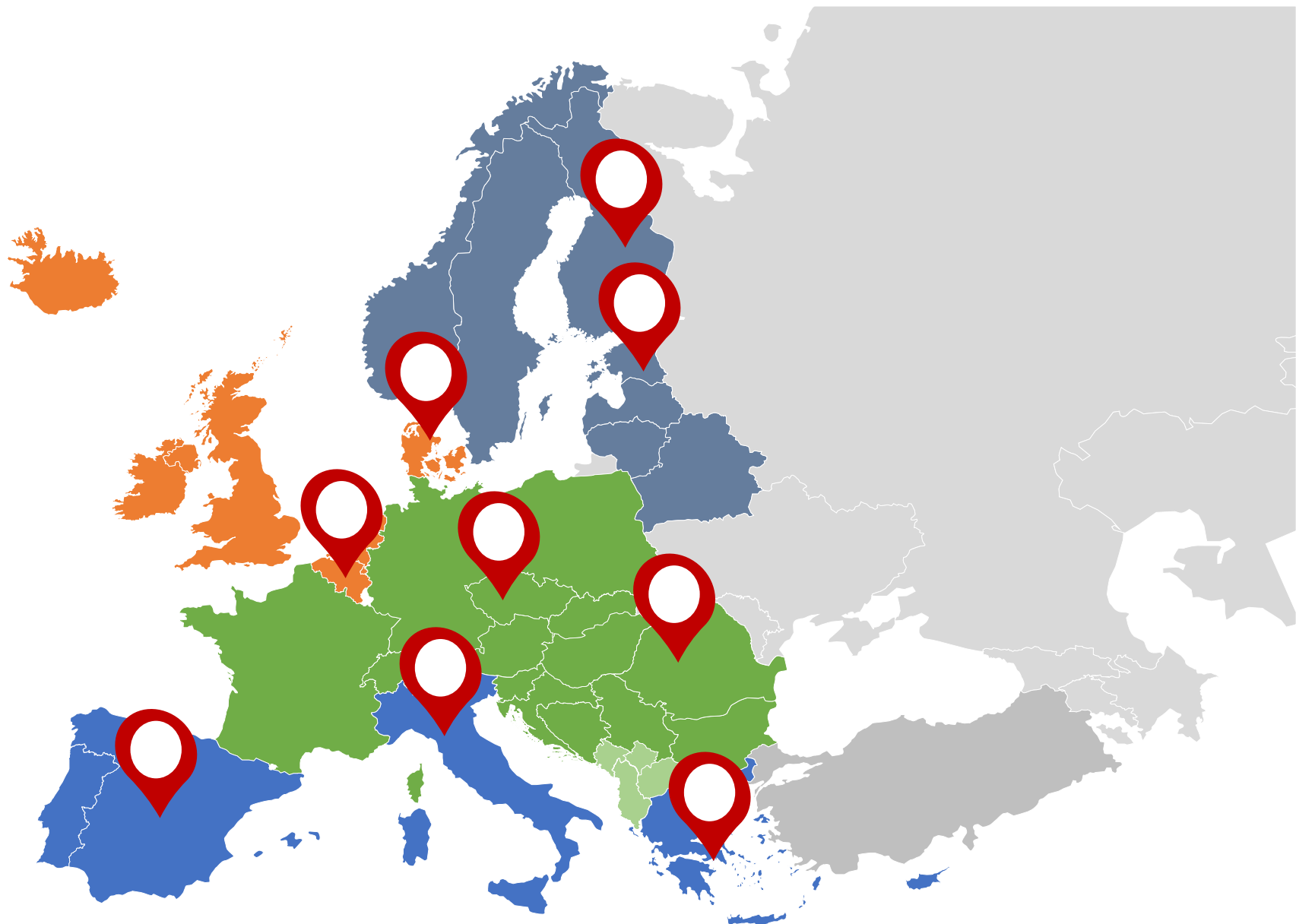
Atlantic

Front runner: Leuven (BE)
Follower: Aarhus (DK)



Continental

Front runner: Cluj-Napoca (RO)
Follower: Pilsen (CZ)



Vision





Outputs

ICT tools, methods and processes for **stakeholder engagement**

Innovative simulation models for urban regeneration and climate neutrality

Services, models and tools for climate effect **impact assessment**

NBS evidence-based **impact assessment and evaluation framework**



Ambition

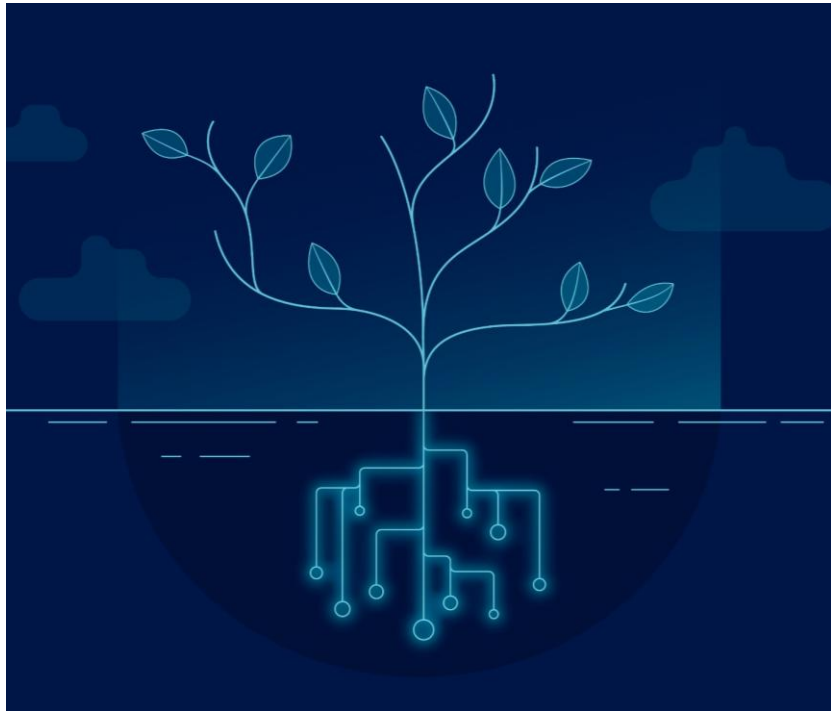
Extending capabilities in NBS impact monitoring and assessment

Management of Key Performance Indicators (KPIs) of the NBS; overcome measurement barriers

Holistic socio-economic **impact quantification** for urban communities

Deploy adaptable framework for exposure modeling & impact assessment

Expected Impact



Climate change mitigation and adaptation

Decrease the carbon footprint and pollution of the European urban areas

Boost resilience of the European urban areas towards climate change related hazards such as heat waves and flooding

Safeguard biodiversity and enhance public health and well-being

Trust and engagement

Increase trust in democratic institutions increasing the **involvement of citizens** in the decision-making processes.

The URBREATH Consortium

Coordinator: The Lisbon Council

- **Research institutes and Universities:** Polytechnic University of Milan, Fraunhofer Institute for Industrial Engineering IAO, University of Stuttgart, Tallinn University of Technology, Institute of Communication and Computer Systems, VITO, Universidad Politécnica de Madrid, Kajaani University of Applied Sciences
- **Public Agencies:** Digital Flanders
- **Large Enterprises:** Engineering, Municipia, Deda Next
- **Small and Medium Enterprises:** Athens Technology Center, Virtual City Systems, Urbasofia, Diadikasia Business Consultants, Latitudo 40, South Pole, Telesto, EXUS Software, Traza, Dark Matter Labs
- **Non-profit Organisations and Networks:** Open and Agile Smart Cities, Climate Alliance, Climate Research Foundation, Basurama, BLOXHUB
- **Frontrunner Cities:** Madrid, Leuven, Tallinn, Cluj-Napoca
- **Follower Cities:** Athens, Parma, Aarhus, Kajaani, Pilsen



Let's stay in touch!

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