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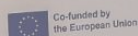


Co-funded by
the European Union

Integrating horizontal principles into urban development projects

EUI Capacity Building event
Celje, Slovenia
19-20 November 2025

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U R B A N
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Event report prepared by Klemen Strmšnik, Katarina Pogačnik, Nataša Beltran, Matjaž Harmel,
Rachela Škrinjar, Mirna Berberović, Petra Očkerl

Photos: Žiga Kolšek, Rachela Škrinjar, Petra Očkerl, Klemen Strmšnik, Nataša Beltran ©

[Link to the official gallery](#)



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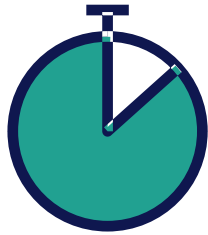
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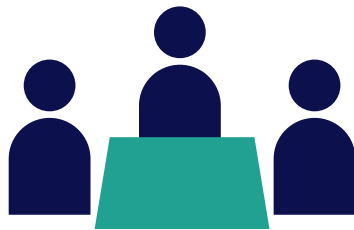
2 DAY
DURATION



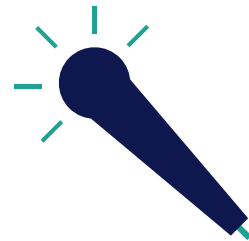
60
PARTICIPANTS



5
COUNTRIES
REPRESENTED



8
SESSIONS



15
SPEAKERS



5
FACILITATORS

SETTING THE SCENE

The Urban Contact Point for Slovenia hosted a two-day EUI capacity-building event, **Integrating Horizontal Principles into Urban Development Projects**, on **19–20 November 2025** at **Tehnopark Celje**.

The gathering brought together **60 representatives** of the European Commission, national ministries, urban municipalities, local authorities, regional development agencies, and a range of other stakeholders engaged in urban development.

Participants selected two of **three thematic sessions**, each built around practical examples related to DNSH and climate proofing, compliance with the EU Nature Restoration Law, or climate adaptation in areas with cultural-heritage protection regimes.

Set against the backdrop of **increasing environmental and climate obligations for cities** implementing ITIs and Regional Development Agreements, the event served as a timely forum for strengthening local capacity.

KEY LEARNINGS

Slovenian municipalities are operating in a rapidly evolving regulatory landscape where horizontal principles—spanning sustainability, nature restoration, resilience, and cultural-heritage considerations—must be fully integrated into project planning and delivery.

The training offered a **concise but rich learning environment, equipping participants with the tools** needed to navigate these requirements while also enabling exchange with peers and international guests.

The event highlighted that horizontal principles **are increasingly recognized as essential** for high-quality urban project planning, though timely integration, clear guidance, and ongoing support remain key challenges.

Discussions reflected ongoing reforms at European and national levels, while **local communities vary in their readiness** to implement new standards.

Participants were **highly motivated and engaged** throughout the workshops. A strong demand for more in-depth future trainings was expressed.



Nekaj napotkov *A few instructions*



Ne le pozornost in aktivno
poslušanje, želimo si
vašega aktivnega
odelovanja

01 Introduction

INTRODUCTION

NATIONAL CONTEXT

Slovenia's urban development landscape is shaped by a governance framework in which **Integrated Territorial Investments (ITIs)** and **Regional Development Agreements (RDAs/DRRs)** play a central role in delivering sustainable territorial and urban transformation. National policies are tightly aligned with EU cohesion policy requirements, particularly the obligation that all EU-funded projects contribute to sustainable development as outlined in Regulation (EU) 2021/1060.

This obligation **embeds environmental protection into all stages of planning and implementation** linking Slovenian urban policy directly with broader commitments such as the Paris Agreement and the UN Sustainable Development Goals. As a result, Slovenian cities must not only design projects that avoid significant environmental harm but also **contribute positively to long-term resilience, climate action, and socio-environmental well-being**.

In practice, municipalities—especially urban ones implementing ITIs—face significant challenges meeting these horizontal principles. DNSH assessments, climate proofing requirements, and the evolving obligations stemming from the EU Nature Restoration Regulation **often overlap with existing national legislation, creating administrative complexity and additional reporting burdens**. Many municipalities report insufficient internal capacity to navigate these technical demands, leading to delays in project preparation, reduced quality of project applications, and slower absorption of EU funds at the national level.

EVENT OBJECTIVES

This capacity building event addressed those challenges by:

- **Strengthening the capacity** of local authorities to **integrate horizontal principles into urban development projects** from the planning to the implementation phase.
- **Empowering officials** to take a more confident, informed, and proactive role in project preparation and delivery.
- Ensuring that projects are both **strategically aligned** with current environmental and regulatory standards and **practically feasible** for implementation by planners and project teams.



Plenary presentations and interactive workshops

The event was structured around an applied, participatory methodology designed to maximise peer learning, practical problem-solving, and cross-level dialogue.

The two days featured several session formats, plenaries and workshops. **Plenary sessions** set the strategic context, aligning participants around the importance of horizontal principles and providing a common knowledge baseline.

These were followed by **small-group interactive workshops** on DNSH and climate proofing, Nature Restoration Regulation compliance, and climate adaptation in heritage areas. **Good-practice cities and experts played a central role**, reinforcing the peer-to-peer character of the event and enabling participants to learn from relatable, real-world experiences. At the beginning of the training they presented the concrete challenges they had faced. **Participants analysed these concrete challenges, worked through exercises, and developed practical solutions** under the guidance of experts and good-practice city representatives. At the very end good-practice city representatives presented the solutions they had developed, offering participants a clear insight into how the challenges had been addressed in practice.

A site visit to Celje complemented the first day's programme by grounding discussions in a tangible example of Integrated Territorial Investments in practice.



WELCOME



*Marko Peterlin, IPoP –
Institute for Spatial Policies,
Urban contact point*



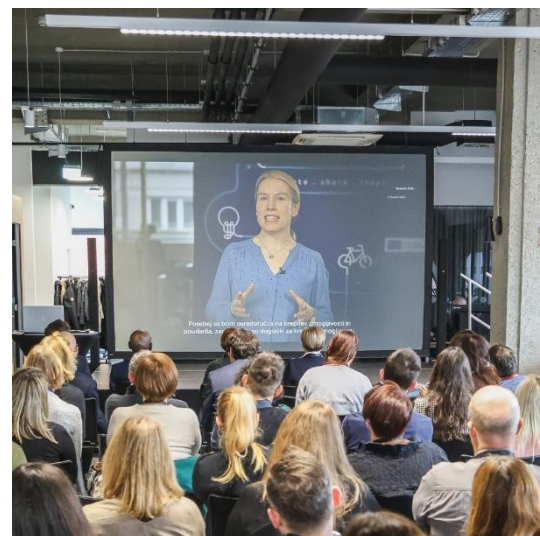
*Gabriel Mezang Nkodo,
Ministry of Cohesion and
Regional Development*

„The principles we are discussing today, from climate resilience to respect for human rights, are not obstacles but beacons. With their guidance, we build cities that are green, inclusive, open, and just.“

Gabriel Mezang Nkodo, Ministry of Cohesion and Regional Development



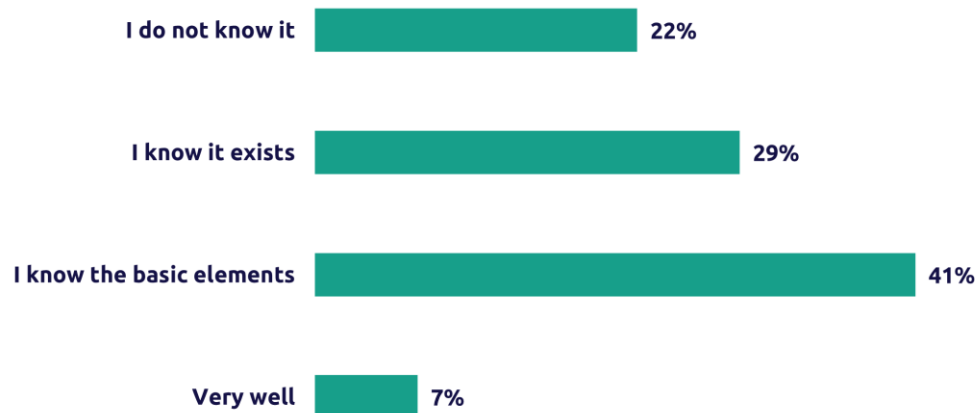
*Matija Kovač, Mayor of City
Municipality of Celje*



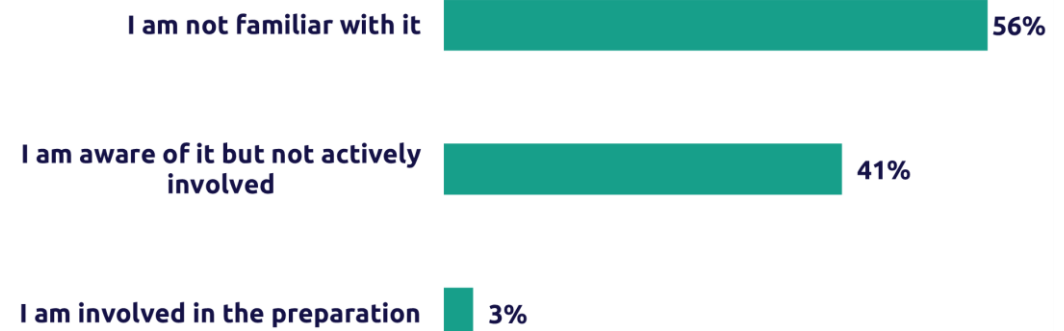
*Eilish O'Loughlin,
European Urban initiative*

INTERACTIVE MOMENT (Slido survey)

How well do you know Nature Restoration Regulation?



How familiar are you with the preparation process of the Nature Restoration Regulation in Slovenia?

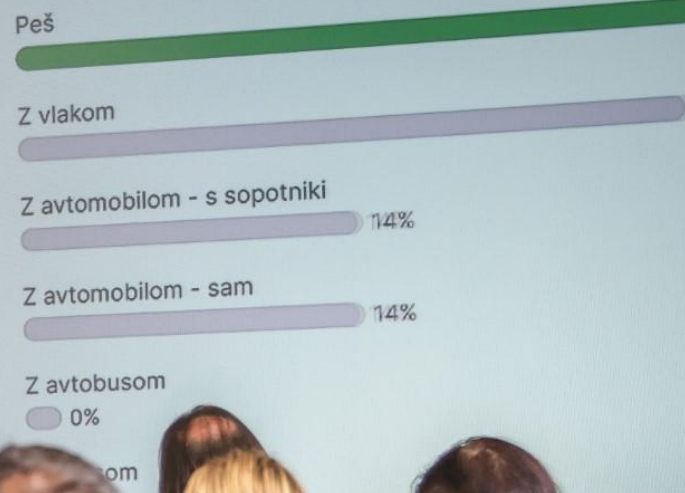




Active poll



Na kakšen način ste pripotovali do Tehnoparka v Celju?



Join at
slido.com
#3482 689

SUMMARY OF THE KEYNOTE PANEL

Urban development in the context of horizontal principles

The keynote panel underlined that horizontal principles have become a **foundational component of high-quality urban development**, yet their practical integration continues to pose challenges across governance levels.

Benjamin Rolles (Directorate-General of the European Commission for Environment) said that **biodiversity is rapidly declining** and that the EU's voluntary 2020 targets largely failed. He explained that the 2030 strategy introduces mandatory targets through the [Nature Restoration Regulation](#) and **recognizes cities as key biodiversity areas**. He highlighted that urban green spaces support biodiversity and provide important climate, environmental, and health benefits. He added that **cities must monitor green space and tree cover and prevent losses after 2030**, under rules implemented by member states.

Borut Cink (Joint Research Centre of the European Commission) explained that the [New European Bauhaus](#) was introduced to translate the European Green Deal into **tangible, people-centered change in everyday environments**. He emphasized that it is built on three horizontal values—sustainability, inclusion, and beauty—supported by horizontal principles of participation and co-creation, transdisciplinary collaboration, and multi-level governance. He noted that all NEB projects are expected to integrate these values and principles simultaneously, creating a shared framework that connects existing initiatives across policies, sectors, and territorial levels.



„Urban areas can and often are now havens for biodiversity, including a lot of pollinators and birds.“ Benjamin Rolles, Directorate-General of the European Commission for Environment

Gabriel Mezang Nkodo (*Ministry of Cohesion and Regional Development*) outlined how EU fund management integrates horizontal principles, legal frameworks, and climate resilience into project selection. He explained that **ministries have developed DNSH and climate-proofing tools**, working with the European Commission to **refine monitoring and indicators**. Future plans aim to unify DNSH guidance, apply proportional requirements, and **simplify procedures for stakeholders**.

Janez Berdavs (*Ministry of the Environment, Climate and Energy*) explained that **climate resilience is embedded in Slovenia's Climate Act** (Articles 73–74), **requiring interventions to be resilient and support mitigation goals**. Implementation is managed via cohesion funds, with reviewers checking climate-proofing reports. Initiatives like the Climate Office and LIFE for Adapt project build local capacity, awareness, and knowledge.

Lenča Humerca Šolar (*Ministry of Natural Resources and Spatial Planning*) highlighted that **nature restoration and management are key tools for climate adaptation**. She noted that Slovenia's 2023 Spatial Development Strategy supports green spaces, urban renewal, and cultural heritage, with **many municipalities already achieving high green coverage**. She emphasized developing spatial instruments, indicators, and education, and invited participants to a European Urban Network event to discuss these issues.



City-level perspectives were provided by **Saša Heath-Drugovič** (*City Municipality of Celje; Association of Urban Municipalities of Slovenia*). She highlighted that **cities are aware of climate change** and that horizontal principles are now formally named, emphasized, and monitored. She noted that **practical project implementation required concrete guidance, with efforts to unify approaches across intermediary bodies**, especially for DNSH compliance. Despite ongoing administrative burdens, projects like the Generator demonstrate municipal progress and alignment with DNSH principles.

Natalija Šimunović (*Ministry for Regional Development and EU Funds of Croatia*) noted that **Croatian cities are increasingly integrating horizontal principles, DNSH, and climate-proofing in 2021–2027 projects**, though early guidance gaps caused extra administrative work. **EU-level DNSH harmonization and stronger national climate-proofing capacity have standardized procedures**, while the Nature Restoration Directive will provide concrete indicators to simplify implementation. She also highlighted New European Bauhaus projects, emphasizing social inclusion, vulnerable groups, and fully integrated environmental, social, and infrastructural approaches.

Overall, the discussion demonstrated that while municipalities differ significantly in their levels of readiness, they share common needs: **timely guidance, streamlined procedures, and continuous capacity building**. The panel concluded that strengthening municipal competencies and ensuring the consistent and early application of horizontal principles are essential for achieving successful, resilient, and future-proof urban development.

The keynote panel was moderated by Klemen Strmšnik and Nataša Beltran.





Uvodni panel
Keynote panel



Uvodni panelisti / Keynote Panellists

- Benjamin Rolles / Generalni direktorat Evropske komisije
- Drut Cink / Skupno evropsko središče
- Gabriel Mezzangola / Komisija za kohezivno regionalno razvoje
- Berdavs / Mladinska komisija
- umerca Štefan / Komisija za naraščajočo tehnologijo
- th-Društvo / Komisija za digitalno gospodarstvo

02

Do No Significant Harm (DNSH) principle & Climate proofing in the context of infrastructure projects related to urban regeneration

Climate Proofing and DNSH principle implementation

Introduction of the topic and the challenge



Katarina Pogačnik, EUI expert



Theresa Fink, AIT, Vienna, Austria



Nataša Beltran, national expert



Climate Proofing and DNSH principle implementation

Katarina Pogačnik, EUI Expert
Nataša Beltran, National Expert

- **Climate Proofing (CP) of infrastructure** is integrated into the Slovenian Climate Act (2025). CP is obligatory within all projects that undergo Environmental Impact Assessment or Strategic Impact Assessment.
- Additionally, CP of infrastructure is obligatory for infrastructure projects funded by Cohesion funds.
- The **DNSH principle** is obligatory for all projects financed by Cohesion Funds and the Recovery and resilience programme.

Based on the expert knowledge and past implementation of both principles we estimate that:

- at the local level, **knowledge** about both horizontal principles is **insufficient** or **not present**.
- Outsourced private companies mostly perform both assessments for municipalities, and local administrators lack the capacity to evaluate the quality of the received documents, let alone understand the process.

This capacity building aimed at introducing the climate proofing and DNSH assessments to the participants and providing guidance on how to »read« and »evaluate« the quality of such documents.



Sessions & Contributors – Workshop methodology

Katarina Pogačnik, EUI Expert
Nataša Beltran, National Expert

The interactive Workshop covered two horizontal principles in urban development projects: **climate proofing of infrastructure** and the **DNSH principle**.

Both were addressed with a similar approach but were **implemented consecutively**.

Since the methodologies of addressing both horizontal topics overlap in some aspects (screening and detailed analysis) the methodology of the workshop was kept similar for both horizontal principles. In this way, participants could easily **build upon overlapping issues** from both horizontal principles, e.g. **climate mitigation and climate adaptation**.



The methodological approach to the implementation of the workshops included the following **steps**:

- a) **General introduction** of both horizontal topics at the plenary session.
- b) Introduction of a **case study from Slovenia**.
- c) Introduction to the **step-by-step methodology** for **Climate Proofing** and **DNSH principle** implementation.
- a) Review and **practical work** using case study examples from Slovenia.
- b) **Reporting** of the **workshop results** by participants and WS organizers.
- c) Introduction of the Case Study from Austria in a plenary session.



Workshop Summary – key highlights - 1

Katarina Pogačnik, EUI Expert, Nataša Beltran, National Expert, in collaboration with Theresa Fink, AIT Expert

- **Workshop Structure** was divided into two parts:
 - **Climate Proofing of Infrastructure**
 - **DNSH (Do No Significant Harm) Principle**

EU and national guidelines were introduced, along with main environmental goals.



- **Case study introduction**

EUI expert presented Slovenian cases on applying climate-change adaptation in infrastructure planning and DNSH principle.

- **Practical Exercise**
- Step-by-step walkthrough of climate proofing & DNSH implementation.
- Participants worked in **4 small groups (2–4 people)**.
- Task: Review the case study, check completeness, and assess compliance with guidelines.
- Worksheets were provided to guide the review.

Workshop Summary – key highlights - 2

Katarina Pogačnik, EUI Expert, Nataša Beltran, National Expert, in collaboration with Theresa Fink, AIT Expert

- **Group Presentations & Discussion**

- Each group shared findings → lively exchange of experiences btw. participants and all three experts.

- **Plenary Session**

- WS organizers presented results and method.
- Theresa Fink shared Austrian case studies on urban climate adaptation & mitigation.

- **Reflection**

- Participants identified key learnings, usefulness, and future needs regarding climate proofing and DNSH.



Key learnings from Theme 1 – Do's & Don'ts for trainees

Do's

✓ **Implement Climate Proofing and DNSH principle at the design phase of the project** and not when the design and location of the project have already been confirmed.

✓ **Consider the benefits of addressing all environmental goals.** Addressing all 6 environmental goals that are incorporated into Climate proofing of infrastructure and DNSH principle, ensures that municipalities invest in projects that support climate neutrality, that are climate resilient and sustainable. This in turn ensures high quality of life for the citizens through environmental protection and reduces the costs due to lower consumption of natural resources.

Don'ts

X **Start Climate Proofing and DNSH assessment when the project design and location have been approved-**

X **Accept every document of DNSH and Climate Proofing as „good“.** It is important to review each document and make sure it addresses all environmental goals adequately, that it includes the whole cycle of the project lifetime.

X **„Green projects“ automatically cause no significant harm to the environment.** Also projects that contribute to e.g. climate neutrality or protect waters or conserv biodiversity can have an impact on other environmental goals. They can produce waste that needs to be reused, recycled, etc. Or have an impact on soils that needs to be assessed.





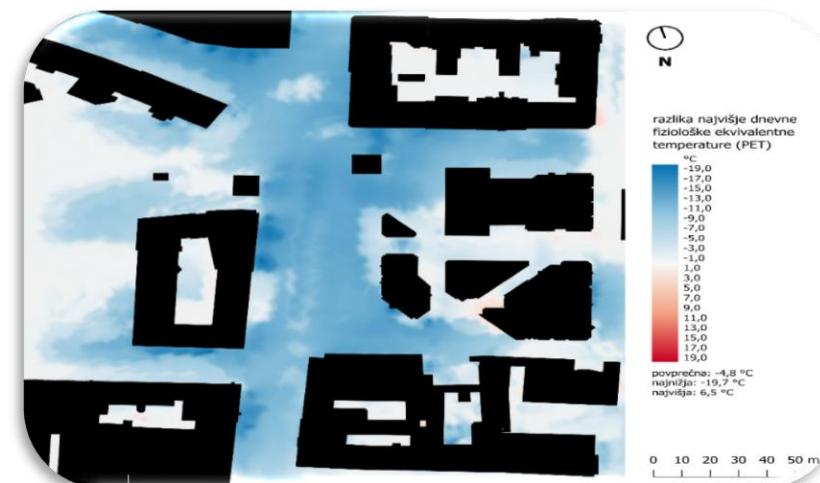
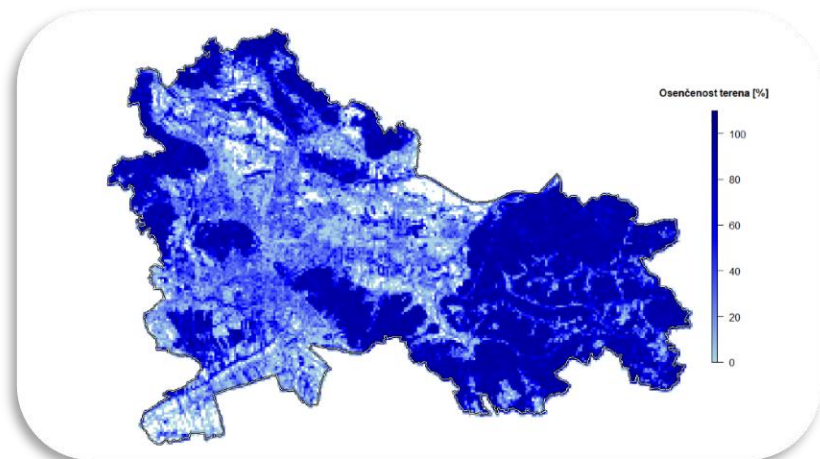
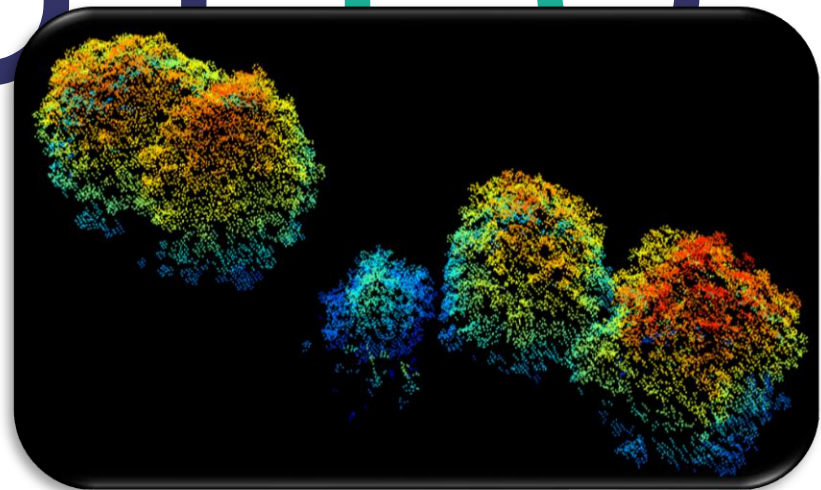
Key learnings for Theme 1 – feedback from participants and trainers

- 01 First introduction into the topics of Climate Proofing and DNSH principles:** participants expressed gratitude and satisfaction with the WS. Many got the first impressions of what Climate Proofing and DNSH principle are and how are they implemented.
- 02 A need for further Capacity building activities in the field of Climate Proofing and DNSH principle:** participants expressed need for further in-depth capacity building activities.
- 03 Integration of knowledge into daily operations of municipalities:** The knowledge of 6 environmental goals and ways to address and assess them should become part of the daily operations of municipality officials.

Learn more with Data-driven Advanced Solutions!

Data-driven Advanced solutions provide:

- Identification of the tree cadastre in the City of Ljubljana.
- Use of the ENVI-met simulation tool to simulate various greening scenarios for three settlements in Ljubljana (tree cover, depaving, green roofs, shading).
- Demonstration of two scenarios – with measures and without measures – evaluation of their impact on **urban heat islands**, perceived temperature, and shading conditions.



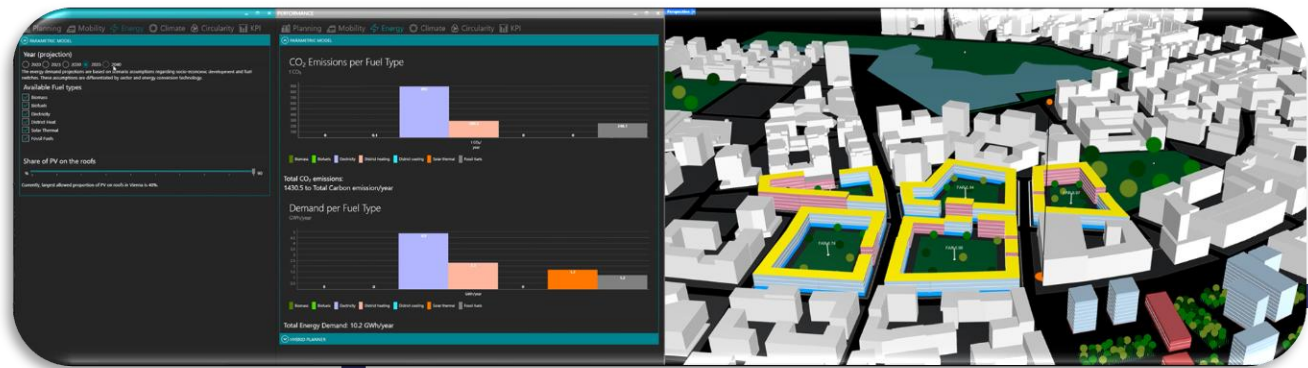
Learn more with Austrian Institute of Technology!

Theresa Fink, AIT Expert.

The Austrian Institute of Technology works within several projects that address climate resilience and climate mitigation of settlements. Through simulations used in planning phase of the settlements they can answer questions such as:

- how simulations can support the fact-based decision making and align with the climate proofing and DNSH principle?
- How comfortable is the city during heat waves?
- How to transform a neighbourhood to a positive energy district?
- How to quantify embodied carbon?

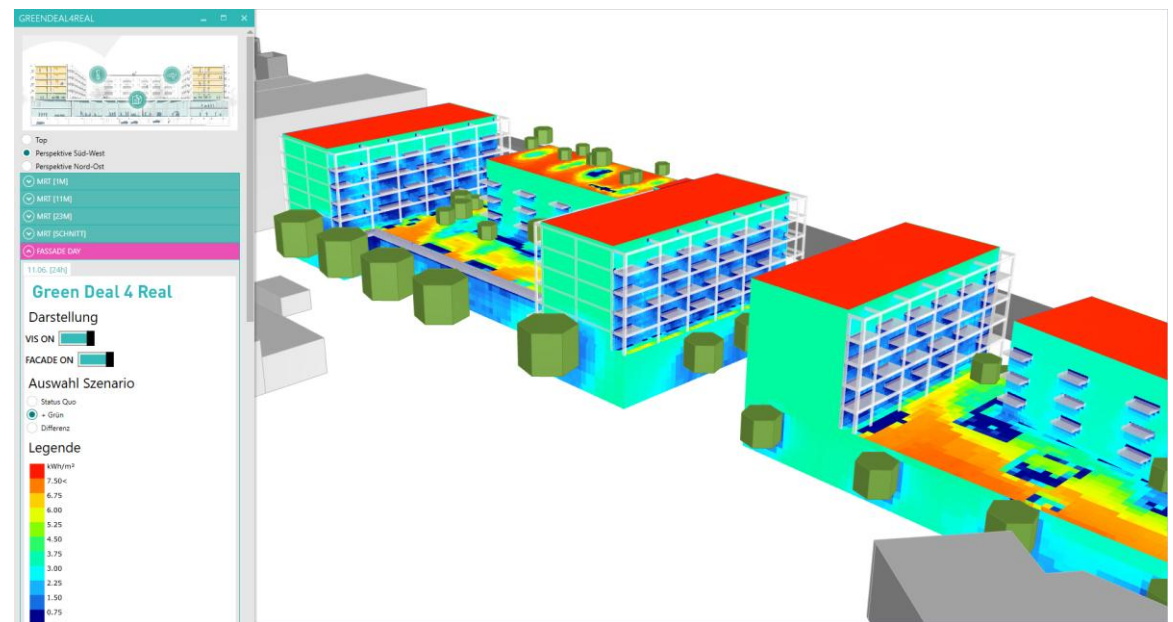
These simulations support decisions that are sustainable, support climate resilience and climate neutrality.



Learn more with GREENDEAL4REAL!

Theresa Fink, AIT Expert

GREENDEAL4REAL in which AIT and its partners - project developers, landscape architects, the City of Vienna, and greening companies - simulated the effects of different green structures in a real urban setting. The project developed practical, scientifically grounded guidance to consider microclimatic effects early in planning and mitigate negative impacts of additional sealed surfaces through targeted greening. The goal is to ensure that urban projects strengthen climate resilience without causing unintended harm.



Learn more with **TUNE OUR BLOCK!**

Theresa Fink, AIT Expert

The project [TUNE OUR BLOCK](#), funded through the JPI Urban Europe Urban Accessibility and Connectivity Programme with support from FFG, was led by TU Wien. In the project, AIT examined the impact of transformations of street spaces - specifically in Vienna's 9th district - together with citizens using interactive urban models. The insights gained through simulations allow effects to be assessed in early planning phases and support sustainable implementation.



03

Compliance with the
Nature Restoration
Regulation in urban
planning

Compliance with the Nature Restoration Regulation in urban planning

Introduction of the topic and the challenge



Matjaž Harmel, national expert



Goranka Grgić, The city of Varaždin, Croatia

Nature Restoration Regulation

The EU Nature Restoration Regulation **was adopted in June 2024**, and all Member States are required to prepare a **Nature Restoration Plan (NRP)** by September 2026, with the first drafts in Slovenia expected by the end of 2025.

Currently, stakeholders have **low awareness** of the regulation and of the specific processes for developing urban-focused restoration plans.

The regulation sets ecosystem-specific targets: **for pollinators**, it aims to reverse population declines by 2030 and ensure an increasing trend thereafter. **Agricultural land targets** include improving biodiversity, increasing the presence of butterflies and birds, enhancing soil organic carbon and landscape diversity, and restoring 30% of drained peatlands. **Forest ecosystems** are expected to see more dead wood, age diversity, connectivity, forest birds, and carbon storage, while contributing to the EU-wide goal of planting three billion additional trees by 2030. **Freshwater and floodplain ecosystems** should achieve at least 25,000 km of free-flowing rivers by 2030, and marine habitats, such as seagrass meadows and sediment beds, should be restored while protecting key species like dolphins, seabirds, and sharks.

For **urban areas**, Member States must ensure no net loss of urban green areas or tree canopy cover by 2030. Beyond this date, a continuous increase is required until satisfactory levels, defined in national NRPs, are reached.

Mapping and monitoring should be done using consistent indicators, and progress will be reviewed every five years by the European Commission.

Key challenges in urban areas include increasing green space, preventing the loss of tree canopy, encouraging residents to follow greening recommendations, and promoting the use of green areas.



Sessions & Contributors

The theme was discussed in three sessions – each designed with a specific purpose:

- **Introductory session** – The purpose was to inform participants about the selected challenges and provide them with basic information about the topics that were discussed in the next step of the workshop.;
- **Interactive workshop** (repeated twice in a „world cafe“ setting for different participants) – designed to address concrete issues (based on cases from Varaždin and Slovenian cities) in smaller working groups, motivate participants to jointly discuss issues and propose concrete solutions;
- **Reporting session** – designed to inform all participants about results in smaller working groups, present good practice examples from the City of Varaždin and allow for the plenary discussion.

All sessions were focused on discussions and search for solutions:

1. How to increase the surface of green areas in urban areas?
2. How to prevent the reduction of tree canopy cover in urban areas and how to encourage residents to follow the recommendations aimed at greeneng the urban areas?
3. How to inspire residents to use green areas near river Drava more?

Session were moderated by Goranka Grgić and Matjaž Harmel.





Let's learn from InterACT Green!

Goranka Grgić, City of Varaždin

Agglomeration of Varaždin and Ludbreg is implementing the [InterACT Green! Project](#). It aims to reinforce green infrastructure InterACTIVE management and regeneration, tested through River Drava Forest Park in Varaždin. The internationally renowned 95-hectare green area has multiple levels of environmental protection. This project facilitates the site's complex management with a digital platform to connect citizens, city decision-makers and experts. The platform is designed to support decision-making and stakeholder communication, and provide information on the park and its use. Together with infrastructure and forest regeneration, this will enable the smooth, sustainable development of high quality, inclusive, and safe public spaces.

We found this example very relevant for the theme of *“Compliance with the Nature Restoration Regulation in urban planning”* and found its approach, tools and proposed solutions eye-opening and useful!



Key learnings for Theme 2

How to attract more residents to the Drava Forest area in Varaždin?

Needs analysis

01 Based on surveys and focused interviews, it is necessary to find the reasons why residents do not use the green space of the Drava for recreational purposes.

Improving accessibility

02 Accessibility from the city to the Drava Forest should be improved by arranging paths, improving public transport and arranging the entry point.

Designing new programs in accordance with protection regimes

03 Based on the needs analysis, new programs should be designed that will attract more visitors to the area and keep them there for a longer period of time

Management and maintenance

04 Visitors will be more likely to visit the area if the areas and infrastructure are maintained, so effective management of the area should be organized.

Concrete proposals

- arrangement of paths, additional programs on the paths (educational trails, fitness trails, etc.)
- Lighting of part of the path so that they can also be used in winter
- Organizing events
- Presenting the tradition of the area



Key learnings for Theme 2

How to green cities and increase canopy cover?

01

Defining a network of green spaces – steps

1. within the framework of spatial planning, determining the „green“ standards for new projects as well as for reurbanization and greening the existing built areas
2. defining the maintenance of green spaces, trees
3. upgrading existing green areas and gradually arranging new green spaces, also through pilot projects
4. participatory approach involving professionals, local residents and politicians, who ultimately make decisions
5. 5. if necessary, adjusting legislation for more efficient implementation of renovations

02

Specific measures

- Greening facades and roofs
- Reducing driving areas by arranging one-way traffic and reducing street congestion
- Adding green belts/areas
- Tree plantings
- Herb gardens, rain gardens
- Pocket parks
- Community gardens
- Green islands
- Greening parking lots
- Reducing pavement



Key learnings for Theme 2

How to establish green system in the cities?

- 01 Situation analysis**
 - Review and assessment of the suitability of existing areas
 - Identification of areas lacking green spaces
 - Analysis of citizens' needs

- 02 Placement of green areas in spatial plans, proposed next categories of urban green spaces**
 - Forests - remnants of "nature" in urban ecosystems
 - Parks and green spaces - larger green oases in cities and corridors connecting the green system
 - Tree avenues - green corridors, connecting the green system
 - Orchards and flower gardens - integrating tradition and self-sufficiency in cities, important for pollinators
 - Waterfront areas - a combination of blue and green infrastructure
 - Establishment of ecosystems - areas that are subsequently left to predominantly natural development, with minimal maintenance, but with great potential for education and organizing learning content

- 03 Green space development strategy**
 - Preparation of an action plan for establishment
 - Definition of concrete activities for the establishment of new green spaces
 - Time and financial plan

- 04 Management and maintenance of the green system** - the task must be entrusted qualified institution and allocate enough financial resources from the budget



Key learnings from Theme 2

Do's

- ✓ **Professional baselines for green system establishment preparation** – designing a green system in cities is a demanding professional task, which requires the involvement of a multidisciplinary team of experts who prepare the design of the green system.
- ✓ **Participatory approach** – involving the local population in the analysis of needs and in the design of the green system is very important for the success of the implementation
- ✓ **Exchanging experiences and good practices from other cities** – cooperation and exchanging experiences can significantly help in the design or upgrading of the green system, as they open up thinking. Practices may not be directly transferable between cities, but they can be transferable, for example, approaches to designing green systems.
- ✓ **Incorporating climate scenarios into the planning of green systems is essential.** Green systems must also be adapted to climate change.
- ✓ **The management and maintenance of the green system** - it is very important for its effective operation. Cities must allocate sufficient financial resources to this, as green systems significantly contribute to the quality of life in cities.
- ✓ **Raising awareness and encouraging the local population to implement greening measures** - green private land can significantly contribute to increasing green areas and canopy cover in cities. Aware owners will take better care of the green spaces on their land
- ✓ **Spatial planning** – green systems and green standards should be defined within spatial plans, which should then be implemented in practice. Failure to meet standards cannot be an exception. In cases where green standards cannot be ensured due to the current situation, opportunities for establishing green areas in the immediate vicinity should be sought together with the local population.
- ✓ **Training and awareness raising** – despite the fact that we have been talking about climate change for decades, there is still a lack of awareness in society about the importance of climate change mitigation and adaptation. Therefore, efforts should be made at all levels to raise awareness and train personnel in companies and public administration on the importance of implementing measures to green cities.

Key learnings from Theme 2

Don'ts

- X Do not **underestimate the importance of green spaces** in cities
- X Do not **allow investors to dictate the design of the green system** in cities
- X Do not allow **exceptions** in achieving green standards
- X Do not **copy good practices directly** without understanding them, as they may not work in your city because the natural or social conditions are different.
- X Don't delay, but **take action as soon as possible** and start activities to establish and manage green systems in cities.



04

Adaptation to climate
change in urban areas
with cultural heritage
protection regimes

Adaptation to climate change in urban areas with cultural heritage protection regimes

Introduction of the topic and the challenge



Klemen Strmšnik, EUI expert



Arianna Guerrini, The City of Bologna, Italy

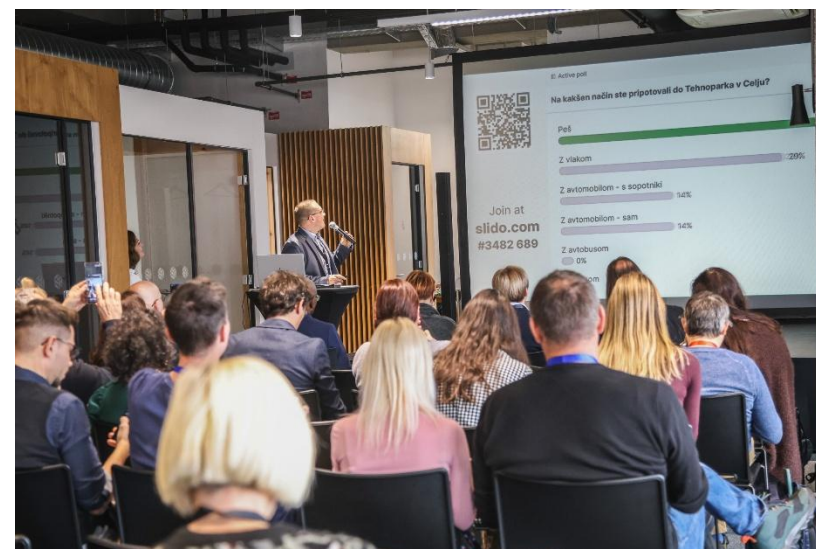
Adaptation to climate change in urban areas with cultural heritage protection regimes...

Today, **cultural heritage is an integral part of many European – and Slovenian – cities**. It plays an important role not only in terms of heritage preservation, but also because **heritage-rich urban spaces provide a unique environment in which we live out our identity, culture, and values**. These spaces support everyday routines and habits that enhance the quality of life for residents. Moreover, culture and cultural heritage foster diversity and act as important positive drivers of our economies and the evolution of our societies.

What we recognise as cultural heritage today has developed gradually over time. It has adapted to local conditions, spatial characteristics, and the availability of resources, supported by the active involvement of citizens and consistently aligned with their needs. In some cases, **cultural heritage has even emerged as a direct response to sudden or unexpected threats**, with the resulting solutions continuing to shape our cities to this day.

At present, **cities face a wide range of challenges linked to climate change**. Global warming and shifting climatic patterns are resulting in more frequent extreme weather events, intensified urban heat islands, and increased urban flooding – to name just a few. In their current form and condition, many cities are simply not equipped to cope. These are challenges to which, whether we wish it or not, **both our cities and their citizens will need to adapt**.

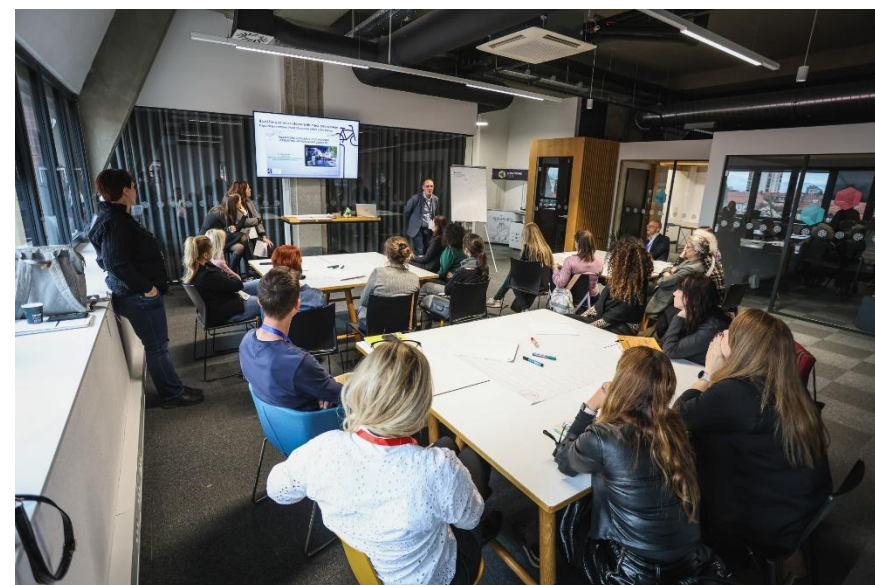
At this point, Slovenian cities encounter an additional difficulty that we are collectively striving to address: **How can we implement climate change adaptation measures in urban environments where potential solutions are further constrained by cultural heritage protection regimes?**



... and the connection to the New European Bauhaus

In this context, the principles of the New European Bauhaus offer a meaningful framework for guiding climate adaptation in culturally significant urban areas. **By emphasising sustainability, inclusiveness, and aesthetic quality, the New European Bauhaus encourages cities to develop solutions that respect heritage while embracing innovation.** It promotes a holistic approach in which climate resilience, cultural continuity, and high-quality design reinforce one another, enabling urban areas to evolve in ways that are both environmentally responsible and deeply rooted in Europe's diverse cultural identities.

For this reason, the theme was included as one of the three key pillars of the event, and considerable effort was invested by the organisers to engage all relevant stakeholders. **The sessions, presented in the following pages, were designed to create a safe and constructive environment that enabled participants to discuss the challenges and jointly explore solutions across three dimensions: strategic, technical and operational.** Together, these perspectives can help accelerate adaptation processes in our cities, improve the quality of proposed interventions and projects, and strengthen the commitment to work collaboratively.



Sessions & Contributors

The theme was discussed in three sessions – each designed with a specific purpose:

- **Introductory session** – designed to „level the playing field“ and ensure all participants enter discussions with the same level of pre-knowledge, as well as present key issues to be discussed in working groups;
- **Interactive workshop** (repeated twice in a „world cafe“ setting for different participants) – designed to address concrete issues (based on cases from Bologna and Slovenian cities) in smaller working groups, motivate participants to jointly discuss issues and propose concrete solutions;
- **Reporting session** – designed to inform all participants about results in smaller working groups, present good practice examples from the City of Bologna and allow for the plenary discussion.

As the theme title suggests, all sessions were focused on discussions and search for solutions **how can cities with significant cultural heritage protection regimes realistically address adaptation to climate change?** Presented examples and exercises encouraged lively search for concrete solutions focused on 3 dimensions: strategic solutions; technical solutions and operational solutions.

All sessions were implemented by Arianna Guerrini (City of Bologna) and Klemen Strmšnik (EUI Expert).

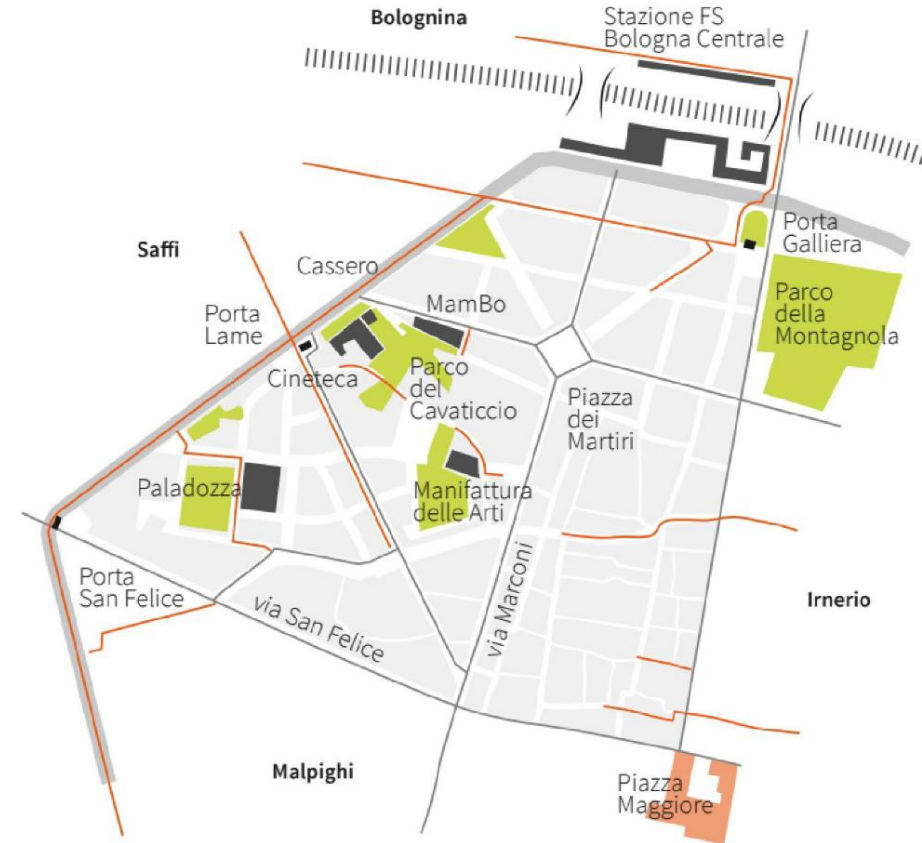


Let's learn from TALEA!

Arianna Guerinni, City of Bologna

City of Bologna is implementing the ["TALEA - Green cells leading the Green transition" project](#). It aims to reduce the heat island effect, improve the quality of soft mobility, and enhance the city's green structures. This involves creating five green cells, each covering an area of 100x100 metres, in the city's historic centre and a suburban district. Their development is based on natural solutions to provide climate shelters, connect existing green infrastructure, counter heating, and foster soft mobility. The overall process is data-driven and participative – working with residents and local stakeholders.

We found this example very relevant for the theme of *"Adaptation to climate change in urban areas with cultural heritage protection regimes"* and found its approach, tools and proposed solutions enlightning!



Let's learn from TALEA!

Klemen Strmšnik, TALEA's EUI Transfer Expert

With the support from Arianna Guerrini and the rest of the TALEA team, we implemented an exercise based on the **Geen Cell example from Bologna** (Via Boldrini – Amendola Garden – Via Fratelli Roselli). We put ourselves in the role of the TALEA team and started designing the green cell, with keeping all cultural heritage protection regimes in mind. As we were all from Slovenia, Slovenian legal and operational context was applied – creating a perfect mix to answer 3 key challenges:

- How can we improve strategic planning and decision making?
- Which concrete technical solutions would make sense to implement in a given case?
- How can we improve operational processes which lead to better, widely accepted and implementable solutions?

The exercise, which was implemented in a „world cafe“ setting with 2 groups of participants, succeeded in provoking lively discussions around all 3 challenges and produced some interesting results.



Depaving
Permeable materials, vegetal and mineral

It removes asphalt and concrete to make room for natural soil: this allows water to filter better and promotes greater biodiversity. Ideal for non-driveable areas of squares and streets.

- Asphalt breaker:** removes impermeable surfaces such as concrete or asphalt, to infiltrate naturally again.
- Sponge found:** the water starts to infiltrate naturally again.
- Green Shield:** promotes nature, freshness and biodiversity in the city.

Climbing green
Trees and green infrastructure

Climbing plants bring nature where there is a lack of space, they cool and shade squares, streets and seats.

- Vertical Oasis:** They add nature and shade where there is no space on the ground.
- Friendly shadow:** they cool and shade public spaces.
- Clean air:** they absorb pollutants and improve air quality.

Gardens and squares of
Water and blue infrastructure

Deep flowerbeds that intercept and retain rainwater, ideal for increasing urban resilience in the event of heavy rainfall, reducing runoff.

- Natural filter:** Through various drainage layers, it slows down the flow of rainwater, reducing the risk of flooding and lightening the load on sewers.
- Micro habitats:** improves the quality of public space and provides habitats for insects, plants and small animals.

Pergolas and coverings
Attractiveness of public spaces

Structures that provide shade and protection from the sun, improving thermal comfort in public spaces.

- Shadow:** It protects from the sun and lowers the temperature, creating cooler areas.
- Green fog:** The climbing greenery releases humidity into the air, improving the microclimate.
- Extra move:** combination with rainwater collection and management systems.

Key learnings for Theme 3

Strategic solutions:

- 01** **Develop an in-depth understanding of the situation in each city.** It is essential to have a high-quality, holistic and realistic overview of current conditions—not only from a climate change and cultural heritage perspective, but across all relevant urban systems. Only then can planning be informed, effective and future-proof.
- 02** **Recognise green and blue areas as functional components of the urban core.** These areas provide vital ecosystem services and must be valued accordingly. Strengthening our knowledge of these systems and establishing appropriate spatial databases are crucial steps towards informed management and protection.
- 03** **Deepen understanding of climate change impacts at multiple spatial scales.** City-wide data is often insufficient. In many cases, neighbourhood- or even street-level analyses are required to understand local vulnerabilities and plan targeted, effective adaptation measures.
- 04** **Strengthen spatial planning as a strategic tool for integrated solutions.** Spatial plans are key strategic documents that enable us to address both climate adaptation and cultural heritage protection. To improve their quality, we must jointly define and agree upon green spatial planning standards.
- 05** **Test, refine and operationalise green spatial planning standards.** Standards must be validated through real-life implementation. Pilot projects should be used to assess effectiveness, generate learning and inspire catalogues of solutions—following proven examples from Brussels, Vienna and Bologna.



Key learnings for Theme 3

06 Promote solutions and support their practical uptake. Once catalogues and standards are developed, cities must actively inform citizens, investors and developers, and insist on their consistent application.

07 Acknowledge the importance of privately owned land. Public authorities can only directly influence public land, while private property represents a significant share of the urban fabric. We need to explore diverse mechanisms—such as expert support, financial incentives and collaborative agreements—to motivate private owners to implement adaptation solutions.

08 Invest more high-quality time in joint learning and collaboration. Shared study visits, participation in international events, cross-city peer exchanges and joint EU projects all build trust, expose stakeholders to innovative practices and help close the existing knowledge and capacity gaps.

Technical solutions

01 We are facing similar challenges with similar solutions—just like the City of Bologna. We have realised that our situations are not as different as we once assumed. The key distinction is that Bologna began addressing these issues a decade earlier, and in a coherent and consistent manner. Today, however, we have the opportunity to monitor the TALEA project and benefit directly from its results—including the catalogue of potential solutions and the insights gained from their testing.

02 Despite the previous point, we need to continue learning from the experiences of other cities. By observing their pilot projects and testing processes, we can accelerate our own adaptation efforts and “regain” some of the time lost due to earlier inactivity.



Key learnings for Theme 3

03

A wide range of technical solutions from the **“TALEA - Green cells leading the Green transition” project** was discussed. These included pocket gardens/forests, reducing car traffic and expanding shared space, depaving, collecting and reusing rainwater for cooling and irrigation, using alternative materials, and applying low-albedo colours. There was broad agreement that all these solutions have potential; however, the final choice depends on what is feasible at each micro-location from a cultural heritage perspective.

04

Long-term management and maintenance must not be overlooked. Whatever solution is ultimately implemented, it will only deliver sustained benefits if it is supported by a long-term management plan and regular maintenance. Without this, even the highest-quality interventions will fail over time.

05

Apply nature-based solutions wherever possible. Green roofs, vertical greening, bioswales, permeable surfaces and urban tree canopies often offer climate benefits with minimal visual intrusion, making them more acceptable in culturally sensitive areas.

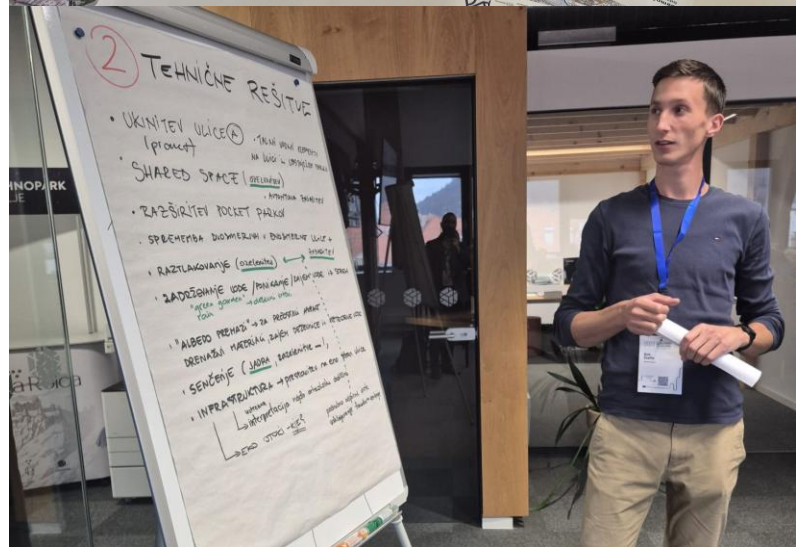
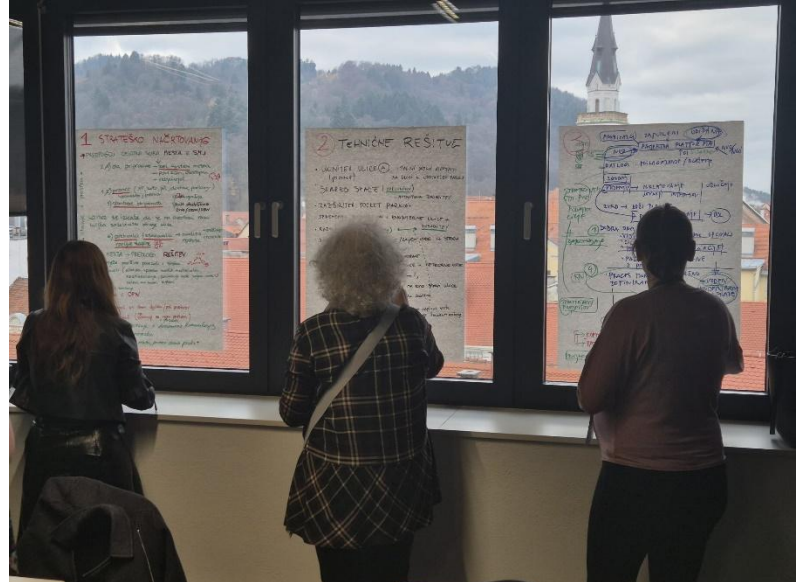
06

Integrate microclimate modelling into early technical design – both for new or refurbished buildings. Using detailed simulations (e.g., for shading, wind flow, humidity and heat distribution) can help select the most effective solutions and justify them to heritage authorities.

Operational solutions

01

Avoid the common mistake of beginning with the implementation project itself. Implementation is not the starting point. We must first engage in an internal discussion to form a clear and shared understanding of what we aim to achieve. Only then should we appoint the project design team and initiate the design and planning process, which must already involve key stakeholders.



Key learnings for Theme 3

02 Identify alternatives and transparently assess their suitability. The design process should consider multiple options and evaluate them openly. This may include small-scale pilot testing or, at minimum, a thorough review of pilot projects implemented by other cities. Only after gaining this understanding, we should prepare a high-quality and precise project concept and Terms of Reference for implementation – ensuring key stakeholders are involved throughout both stages.

03 Ensure high-quality management, communication and monitoring. From the initial discussions through to implementation, clear communication and strong project management are essential. Once solutions are implemented, systematic monitoring is required to understand their real-world performance.

04 Integrate heritage authorities into operational teams early and consistently. Rather than consulting them only at approval stages, involving them throughout the process reduces rejection risks, builds trust and fosters more creative shared solutions.

Introduce facilitation or mediation support for complex or high-conflict projects. A neutral facilitator can help bridge gaps between planners, conservators, communities and technical experts, keeping discussions productive and preventing escalation.

05 Document every project phase to build institutional memory and reflect on lessons learned and ensure they are reported back to the responsible authorities. Findings should inform updates to legislation, guidelines or strategic documents, and help improve operational and technical solutions. This continuous learning loop supports better replication, follow-up and scaling of successful approaches.



Key learnings from Theme 3

Do's

- ✓ **Continue with the Collaboratory approach and the early involvement of all key stakeholders.** Proactively creating a safe and constructive environment that enables stakeholders to openly discuss challenges and jointly explore solutions is essential for successful climate change adaptation in our cities.
- ✓ **Apply best-practice-informed expert and political pressure on stakeholders or decision-makers who are unwilling to engage constructively in adaptation processes.** Passive resistance or blocking necessary solutions is no longer an option. All actors must recognise their roles and responsibilities, and accept accountability in the joint search for viable solutions.
- ✓ **Introduce mediation or facilitation mechanisms for high-conflict cases.** Dedicated neutral facilitators can guide difficult discussions, ensure balanced representation, and help stakeholders shift from entrenched positions to mutually acceptable compromises.
- ✓ **Continue exploring best practices from across Europe and learning from peers at all governance levels.** The New European Bauhaus framework can be used to deepen exchange, introduce new knowledge, explore innovative solutions and adapt them to local contexts, ensuring smoother transferability and impact.
- ✓ **Ensure transparency and accountability for all agreements reached.** Once a solution is identified and endorsed, all parties must support its proper implementation, as only effective delivery on the ground can generate the desired climate adaptation outcomes.
- ✓ **Maintain a rhythm of annual events similar to this event.** Regular exchanges will allow stakeholders to update each other on new solutions, monitor progress, and combine efforts in the implementation of agreed adaptation measures.
- ✓ **Strengthen interdisciplinary capacity-building among all stakeholders.** Architects, heritage conservators, climatologists, urban planners, and engineers rarely receive training together. Joint training programmes improve mutual understanding and reduce conflict driven by divergent professional cultures.
- ✓ **Strengthen public services by retaining and supporting highly qualified experts.** We must reinforce institutional capacity, expand staffing where necessary, and ensure that experts receive the knowledge, support and recognition they need to remain committed and effective.

Key learnings from Theme 3

Don'ts

- X Do not frame heritage protection and climate adaptation as mutually exclusive goals.** Presenting them as opposing camps reinforces conflict. Instead, treat them as complementary objectives that require integration, not competition.
- X Do not reject adaptation or protection measures solely on the basis of tradition or precedent.** Many current heritage guidelines were developed under very different climate conditions. Dismissing new approaches without assessment can block necessary innovation and enable workable compromises. The pursuit of the “ideal” should not stop urgently needed action.
- X Do not cast blame or inflame conflicts between opposing viewpoints.** Such behaviour only deepens divisions and moves us further away from solutions that are broadly accepted and practically implementable.
- X Do not look for “creative workarounds” during the implementation of agreed solutions.** Bypassing or altering what was jointly decided undermines trust in the process and weakens commitment to future collaboration.
- X Do not withhold knowledge or relevant information from others.** Adaptation requires mutual support and proactive knowledge-sharing; siloed information only slows progress and weakens collective capacity.
- X Do not leave key stakeholders out of discussions until late in the process.** Late involvement often leads to vetoes, misunderstandings and unnecessary conflict. Early engagement prevents escalation.
- X Do not overlook the symbolic and emotional value of heritage during discussions.** Failing to acknowledge these dimensions can harden positions. Recognising intangible values helps to humanise the negotiation process.
- X Do not underestimate the public’s capacity to support adaptive changes in heritage areas.** Assuming that “people will oppose it” can become a self-fulfilling barrier. Transparent dialogue often shows that communities are more supportive than expected.



Learn more with Be Ready!

Aleksandra Ažman, City of Kranj

Implemented within the Interreg Danube – [Be Ready project](#) introduces the "green acupuncture" approach, enabling targeted, small-scale, yet powerful interventions to mitigate urban heat island (UHI) in critical urban areas. This involves:

- **Green Acupuncture:** Vegetation-based interventions.
- **White Acupuncture:** Innovative surfaces and materials.
- **Blue Acupuncture:** Novel uses of water resources.

The Climate Sandbox approach helps cities define and deploy climate-oriented innovations, both in technology and service (content) and in policy, administrative, and spatial planning (enabling conditions), using the innovative digital Climate Sandbox Technological and Societal Readiness Tool.

[Kranj's pilot project](#) serves as a model for cooling dense historic environments exposed to urban heat island (UHI) effects. It explores how blue acupuncture can respond to rising temperatures in compact medieval centres where permanent structural interventions are limited or not allowed.

Visit Kranj and experience it's "Rain Zone" solution in person!



Learn more with Kranj!

Klemen Strmšnik, EUI Expert

In 2023 the City of Kranj adopted its new [Environmental Protection Operational Program](#) and in it decided to prepare the first Green Spatial Plan for the City of Kranj – focusing on urban restoration, reinforced blue and green infrastructure, adaptation to climate change and improved quality of living.

When faced with the question: „How to actually do it in practice!“, the City of Kranj decided to benefit from knowledge and lessons learned from other cities, like Brussels and Vienna. A list of **Green Spatial Planning Standards** was compiled and modified to the needs and local context of the City of Kranj through a participatory process. Then they were tested on actual Detailed Spatial Plans, to prove that the concept works and can be effectively used in practice – thus, providing the first example how to actually do it.

In parallel, Kranj's **Green Infrastructure System & Database** were developed through a similar process within the [GIFT project](#) framework. Following national level Green System in Cities And Settlements development guidelines Kranj and GIFT project team were the first city in Slovenia to test and implement them in practice.



05 Site visit

Urban transformation through integrated territorial investments

Site visit

Monika Tominšek (*City Municipality of Celje*) presented one of the activities of EUI Innovative actions project [MAG-NET](#) – Kajuhov dom and interpreted it in the context of New European Bauhaus.

Saša Heath-Drugovič (*City Municipality of Celje*) presented the story and the building the capacity building event took place in – Tehnopark and afterwards guided participants through the city center, weaving together ITIs, municipal daily-grind anecdotes, history, and local stories. It was an opportunity to discuss ITIs as well as implementation of urban development projects through the perspective of horizontal principles from a very practical viewpoint.



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06 Conclusions

SUMMARY OF THE CLOSING PANEL

Integration of results into the New European Bauhaus

The panelists of the closing panel were **Borut Cink** (Joint Research Centre of the European Commission), **Ivana Štrkalj** (Ministry of cohesion and regional development), **Ines Lupše** (Ministry of natural resources and spatial planning) and **Saša Heath-Drugovič** (City municipality of Celje, Association of Urban municipalities of Slovenia).

The panelists highlighted that the **principles of the New European Bauhaus (NEB) are increasingly reflected in local and national practice**, yet their application remains uneven and often insufficiently embedded in formal procedures.

Speakers emphasized that the training provided a **valuable, real-time insight into the challenges faced by practitioners when translating NEB values—sustainability, beauty, and inclusion—into project design**. They stressed the need for clearer guidance, stronger institutional competencies, and better recognition of existing bottom-up efforts already aligned with NEB principles.

The discussion also underscored **the importance of skills such as communication, stakeholder engagement, and cross-sector coordination**, as well as improved use of data tools and visualisation techniques for planning and communicating spatial solutions.



SUMMARY OF THE CLOSING PANEL

Integration of results into the New European Bauhaus

In the panel discussion local representatives and international guests reinforced that **partnership, peer learning, and continuous exchange are essential for successful implementation**. Municipalities highlighted persistent gaps in understanding between different governance levels, which create administrative burdens and slow project delivery, especially when new requirements—such as climate proofing or nature-based solutions—are introduced in waves.

Participants agreed that **designers and planning professionals must be systematically included in future trainings to ensure that NEB principles are effectively integrated into project documentation**.

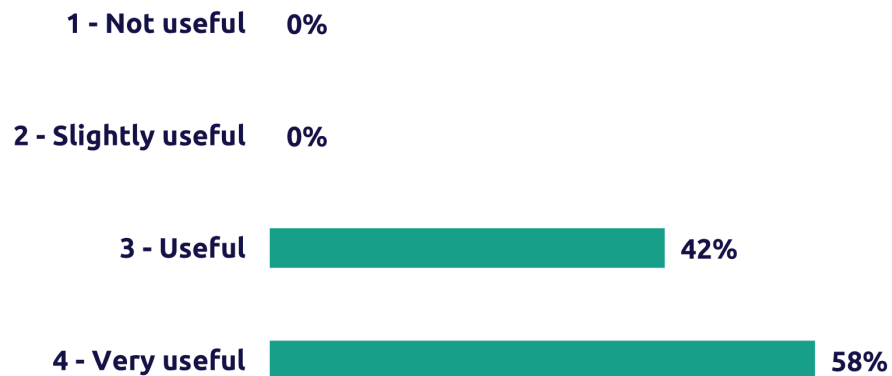
Looking ahead, panelists noted the role of European funding programmes in advancing NEB-aligned projects and stressed the importance of linking high-quality design with social accessibility, including the preservation of social mix in housing.

Overall, the panel concluded that more **coordinated, long-term collaboration across local, national, and European levels will be essential** for embedding NEB principles into everyday urban development practice.

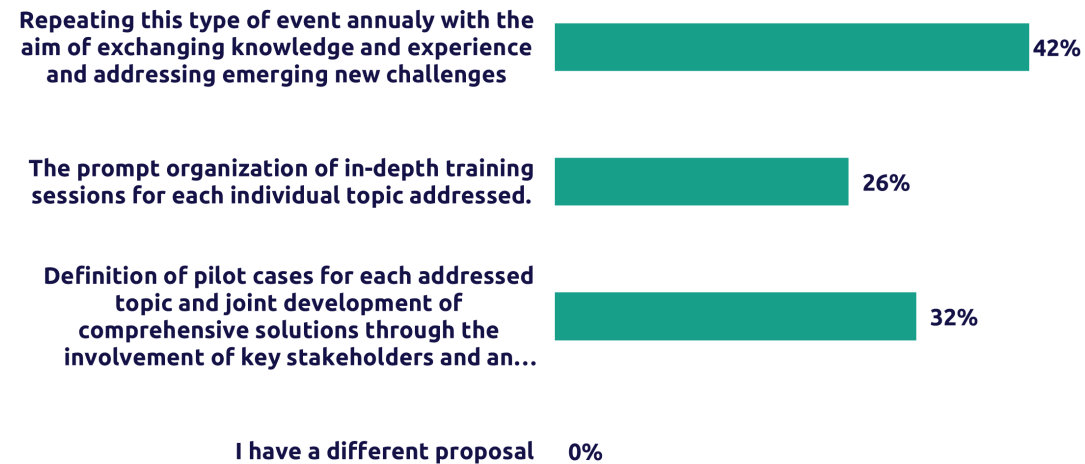


INTERACTIVE MOMENT (Slido survey)

How useful will the knowledge and solutions gained at this event be for your future work on climate change adaptation?



What are our next steps going forward?





KEY LESSONS LEARNED

1. **Early and systematic integration** of horizontal principles is crucial to prevent delays, redesigns, and extra costs in project development.
2. **Clear guidance and sustained technical support** are needed to help municipalities effectively apply DNSH, climate proofing, and Nature Restoration requirements.
3. **Capacity building and training** are essential, as municipal readiness varies, requiring accessible tools and ongoing skill development.
4. **Adapting to evolving EU and national standards** ensures projects meet higher expectations for sustainability, resilience, and spatial quality.
5. **Cross-sector coordination and stakeholder engagement** are critical for smooth implementation and alignment across governance levels.
6. **NEB principles and evidence-based planning** (including use of data, simulations, and visualisations) require stronger institutional understanding and involvement of designers and planners.
7. **Peer learning and social inclusivity** enhance project quality, foster partnerships, and ensure that high-quality urban development benefits diverse communities.



MAIN ACHIEVEMENTS

- The event **strengthened municipal capacity for sustainable urban development**.
- Participants learned that the municipalities they represent **face common challenges despite differing levels of readiness**.
- **Practical tools and real-life examples** helped translate EU requirements into practice.
- **Interactive workshops and peer exchange** were highly valued.
- The event **successfully bridged policy and practice** and built shared understanding.





NEEDS TO BE ADDRESSED IN THE FUTURE

- Municipalities need more opportunities to learn from **practical, real-life examples** and peer-to-peer exchanges.
- There is a need for more **in-depth and targeted training**, going beyond introductory guidance.
- Municipalities should **strengthen their knowledge of the Nature Restoration Law** and its practical implications.
- More **hands-on, practical guidance on DNSH** is required to support effective project implementation.
- In the context of **heritage protection, stronger alignment is needed between ministries responsible for culture and the environment.**
- Similar future events should actively **involve planners** who work with municipalities, to help bridge the gap between municipal needs, technical expertise, and regulatory expectations.



EUI OFFER

Invitation to other EUI activities

Petra Očkerl (*IPoP – Institute for Spatial Policies, Urban contact point*) presented the EUI offer that cities can take advantage of when building their capacities on horizontal principles or any other topic in connection to urban development or even find financial support for their innovations. [More](#)



EUI Capacity Building offer



Capacity building events

Capacity Building events comprise of a **wide range of formats**: workshops, seminars, etc. enabling cities to improve their capacity to design and implement Sustainable Urban Development (SUD) via **practical, replicable and inspirational** exercises and practices. They can be EU-wide, cluster or national (UCP-led).



Peer Reviews

Peer Reviews are designed to help European cities with the **design and implementation of their SUD strategies**, through a process of benchmarking and peer learning. This format involves two roles: 'cities under review', working with four to six cities each, acting as 'peer reviewers' to address concrete challenges in **developing, implementing or monitoring** effective SUD strategies. **Call-based.**



City-to-City Exchanges

A City-to-City Exchange brings together an urban authority facing a specific implementation challenge related to SUD and 1-2 other urban authorities from different EU Member States with expertise which could help tackle this challenge. The cities visit each other for in-depth face-to-face exchanges which are **quick to implement. Call for applications is continuously open!**



Portico is the urban knowledge platform developed by the EUI and funded by the European Union to support better urban policy and strategy design, implementation, and mainstreaming. The platform connects urban actors with the knowledge, people, and initiatives they need to implement sustainable urban strategies.

