

Building Together for Sustainability

The Power of Co-Creation

The BUILDSPACE Project actively involved potential end-users through co-creation sessions. These sessions aimed to collect their **insights and contributions, integrating diverse perspectives to shape the services offered by BUILDSPACE**. As a result, the use cases and service applications were developed collaboratively with external stakeholders.



The co-creation sessions were designed to foster **social engagement** within the BUILDSPACE community. These sessions brought together users from **various countries, market contexts, and cultural backgrounds**, promoting the development of meaningful **connections and collaborations**.



FIRST CO-CREATION SESSION

The first co-creation session served to define clear **technical use cases for each service**, to gather insights on **how to visualise the services** and to assist all service developers in creating their applications. At the same, it aimed to understand potential end-users'/stakeholders' challenges and needs.

First, the stakeholders identified the **main challenges** related to BUILDSPACE's ones and then reflected on the **steps** to address them:

Challenges

• SE1. and SE2. Digital Twins:



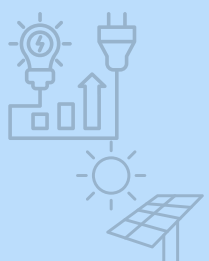
Monitor the groundwater levels; report building's green energy production; perform quality control of new and renovated buildings; report buildings's thermal bridges.



Steps

- Ensuring interoperability
- Defining formats and outputs
- Consulting architects
- Automating simulations
- Incorporating EU standards.

• SE3. Building Environment Climate Scenarios



Coupling building data with heat consumption to compare thermal performance; analyse energy and thermal performance of city's buildings for better energy efficiency and management.



- Obtaining building energy data
- Employing archetypes for energy demand calculations
- Involving professionals.

• SE4. Urban Heat Analysis and Resilience:



Monitoring impervious urban areas and monitoring blue-green infrastructure using NDVI; detecting flooding hotspots and analysing expected damage on buildings and urban assets.



- Problem definition
- Data gathering
- Vulnerability analysis
- Modeling
- Designing resilience measures with community involvement.

• SE5. Urban Flood Resilience:



Enabling urban heat analysis and calculation of social vulnerability to urban heat to support city's resilience against climate change (urban heat) as well as public health.



- City transport surveys
- Temperature monitoring
- Hotspot identification
- Implementing solutions

To showcase what BUILDSPACE can offer, the stakeholders were invited to join the service breakout rooms of their interest to get more information about the services and **add ideas or functionalities** they would like to gain from the services.



SECOND CO-CREATION SESSION

The second co-creation session aimed to socially engage stakeholders, particularly those involved in the **pilots**, to ensure their participation during the testing phase of pilot implementation and service development.

-  The **objectives** of the session were:
- To show the services **workflow, visualisation and functionalities** in order to obtain feedback.
 - To find synergies with other EU projects or initiatives in which the participants were involved or linked.

Participants joined the service breakout rooms, where they were asked for **feedback on the workflow of the services, their visualisation and the functionalities they would have changed or added.**

Positive feedback

More comments

• SE1. and SE2. Digital Twins:



The web application, the RGB, thermal envelope functions, the option to navigate and choose phase of construction.

Provide details on VR/AR use and define quality construction as service outcome. Add an option to select available dates when choosing the construction phase.

• SE3. Building Environment Climate Scenarios:



The coloured map visualisation and the section on climate change scenarios.

Request for the possibility of comparing different buildings at the same time for implementing retrofitting strategies.

• SE4. Urban Heat Analysis and Resilience:



The urban heat risk update, download of urban weather files, summary reported generated, and download of results as data.

Add options for results, defining risks based on urban and vulnerability factors. Include climate scenarios and metrics for socio-economic vulnerability.

• SE5. Urban Flood Resilience:



The definition of the area of interest and the visualisation and comparison of results.

Need to update current flood maps with climate change scenarios.

PROJECTS

Stakeholders shared insights on various projects and initiatives **potentially connected** to BUILDSPACE or specific services, aiming to foster **synergies and collaboration opportunities**.

RESULTS

- Sharing **experiences, perspectives and identifying the obstacles** related to BUILDSPACE's scope.
- The **use cases** were developed and further services' functionalities and design were defined.
- Gaining **invaluable insights** for the development of BUILDSPACE's services and solutions.
- Witnessing the **collaborative potential unfold**.
- Capturing and **consolidating input** from our diverse stakeholder community, providing **actionable insights** to inform the project's development and implementation.

