

## D.1.2.2 – Concept for Genius Loci Repository



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**Delivery Date:** 30.10. 2025



## BAUHALPS

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## EXECUTIVE SUMMARY

The project aims to systematically record and analyse traditional building knowledge, materials and techniques for the sustainable renovation and conversion of buildings and make them visible in an interactive, web-based GIS platform. This platform is aimed at professionals from the fields of craftsmanship, architecture, monument preservation, research, administration and tourism, and contributes to making the local architectural heritage digitally accessible and developing it in a future-oriented manner.

During the conception phase, the technical implementation process for a web-based GIS solution was worked out. Two potential cooperation partners were identified, and the choice ultimately fell on the Zukunftsagentur Bau (ZAB) in Salzburg. The decision was based on its geographical proximity to the Alpine region, the thematic fit and the possibility of permanently integrating the project results into an existing, established infrastructure.

The integration of the so-called 'treasure hunt' data and the pilot buildings into the ZAB map ensures a high degree of structural and visual consistency. In addition, filter functions, detailed views and specific labels such as 'New European Bauhaus (NEB)' and 'Genius Loci' have been implemented to enable targeted searches and thematic classification. Data collection was carried out in a structured and quality-assured manner using standardised digital forms, which ensures the reliability and comparability of the information. Accompanying images underscore the project work.

## 1. INTRODUCTION

The aim of Activity 1.2. and D.1.2.2 is to record and analyse traditional Alpine construction methods, techniques and materials and document them in a so-called 'Genius Loci' archive. This archive will serve as a digital collection of characteristic local features – including craftsmanship, problem-solving strategies, techniques, cultural traditions and typical materials – that can be used as a source of inspiration for the sustainable redesign of buildings.

Various activities are being carried out to implement this project. These include, first of all, the organisation of 'treasure hunts' in collaboration with the building ecosystem (LP01, PP03,



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PP04, PP07, PP08, PP09, PP11, PP12) to discover local building skills and traditions on site. The findings were analysed in workshops and through direct exchange and compiled into a comprehensive map (PP06 + all partners). Based on these results, the concept for the online archive was developed (PP06), which offers users free access to the information collected.

## 2.REPORT ON THE CONZEPTUALIZATION OF THE GENIUS LOCI ONLINE REPOSITORY

### 2.1 Description of the technical implementation process

During the concept development phase, the path to implementing a web-based GIS (Geographic Information System) platform was outlined. The aim was to create an interactive map for visualising relevant projects or locations.

**Technical considerations:**

A web-based GIS application from a third-party provider specialising in the circular economy in construction served as the technical basis. Two possible implementation options were identified – collaboration with:

- **Option 1: ZAB 'Zukunftsagentur Bau'** (Future Agency for Construction), Salzburg – <https://www.zukunft-bau.at/kreislaufwirtschaft?show=posts&posts-view=map>
- **Option 2: Construction21.org** – <https://www.construction21.org/>

**Data collection:**

In collaboration with the third-party provider, data was entered manually using structured forms. This ensured consistent, quality-assured content.

**Visualisation concept:**

The digital map was supplemented with relevant markings and detailed views related to Bauhalps. Filter functions were also integrated to enable targeted searches specifically for characteristic project features such as craftsmanship, problem-solving strategies, techniques, cultural traditions and typical materials, which were collected and analysed as part of the project work.



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**Definition of potential user groups:**

The target groups of potential users of the platform were identified and taken into account at an early stage in the process:

- Craft businesses, architects, monument conservators
- Research institutions and universities
- Institutions for regional development and cultural promotion
- Public administrations and actors from the tourism sector

## 2.2 Decision to collaborate with ZAB

The decision was made to collaborate **with Zukunftsagentur Bau (ZAB) in Salzburg** for the following reasons: the geographical proximity to the Alpine region and the integration of the Bauhalps buildings into an existing innovation map system ensure the sustainability of the project work.

The aim was to seamlessly integrate the required interactive map of the 'Treasure Hunts' and pilot buildings into the existing ZAB map. This integration not only enabled structural and visual consistency, but also the targeted labelling of Bauhalps' construction projects, for example by integrating additional functions such as programming the categories 'New European Bauhaus (NEB)' and 'Genius Loci' as long texts and as icons for keyword indexing. In addition, the project logo was published on the platform.

This integration significantly increases the visibility of sustainable construction projects – even beyond the actual project duration. The ZAB platform offers an established and publicly accessible infrastructure for this purpose. The collaboration thus makes an important contribution to the continuity and long-term impact of the content and results developed in the project.

Further information on the ZAB platform can be found at:

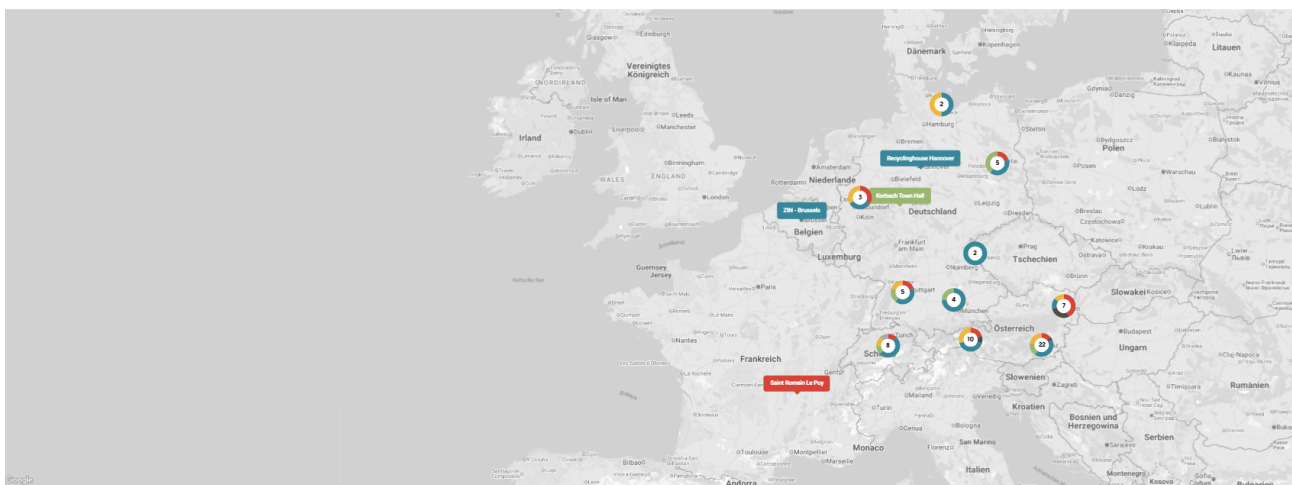
<https://www.zukunft-bau.at/en/innovation-map>

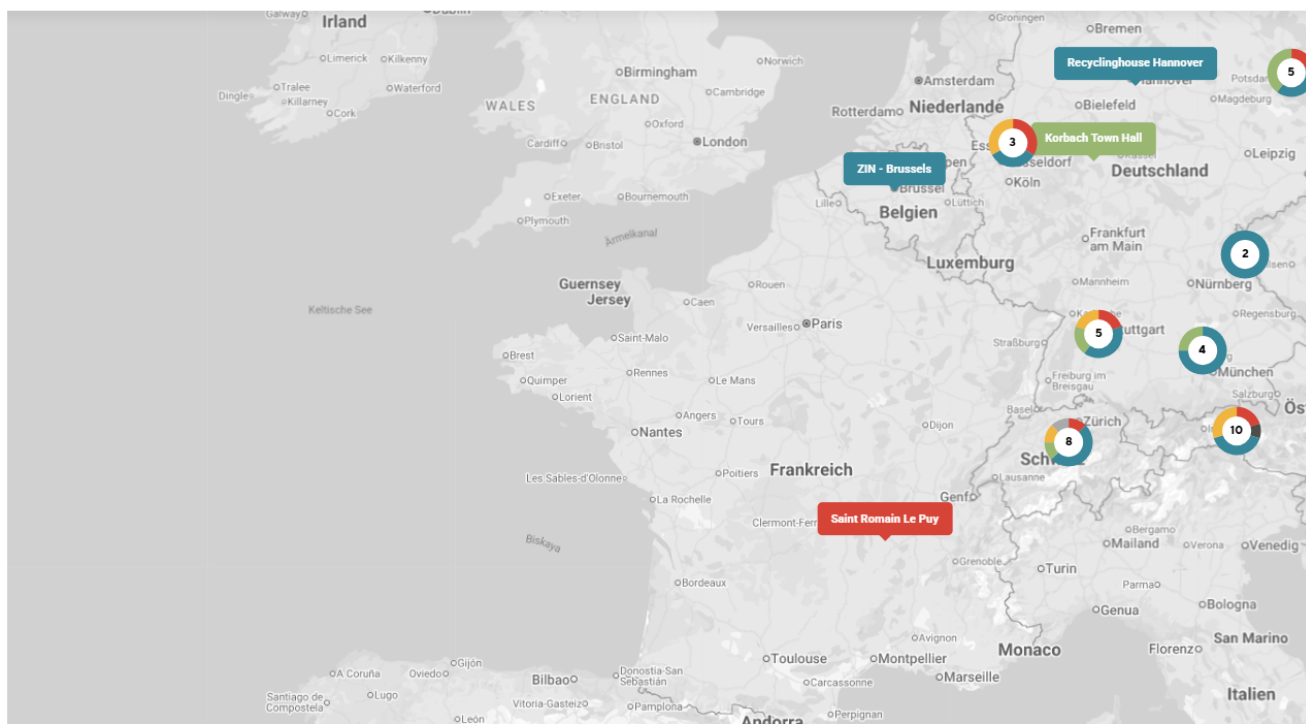


## CIRCULAR ECONOMY

The concept of the circular economy aims to reuse and recycle components and building materials in a closed cycle so that little waste is produced in the end. This approach begins with the planning of products and constructions and affects the entire life cycle of a building. The circular economy [innovation map](#) shows core projects in the areas of recycling, reuse and dismantling.

### Expert network







## BAUHALPS

## 2.3 Data Quality and Standardization

In order to ensure high data quality and standardisation, the previously collected data on the treasure hunt and the pilot buildings was systematically and structurally queried digitally. This ensured that all data was recorded in a uniform structure, resulting in clean, consistent data collection. This improves the reliability of the information and enables efficient further processing.

The following questionnaire to be sent to the pilot partners was created in collaboration with ZAB and PP06.



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**CIRCULAR ECONOMY INNOVATION MAP**

The Innovation map offers a collection of innovative construction projects, including on the topic of the circular economy at: <https://www.zukunftsbau.at/kreislaufwirtschaft>

as well as the circular economy expert network at <https://www.zukunftsbau.at/skill/kreislaufwirtschaft?show=posts&posts-view=map>

For each project there is an info box with the most important data, a short description and some photos, as well as the contact details of the experts involved - so please fill in the fields on the following pages.

Many thanks, your ZAB team



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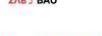
ZAB Zukunftsagentur Bau GmbH  
Forschung | Digitalisierung  
Moosstraße 197, 5020 Salzburg  
T +43 662 / 830 200 - 19  
E [office-sbg@zukunftsbau.at](mailto:office-sbg@zukunftsbau.at)  
[www.zukunftsbau.at](http://www.zukunftsbau.at)

Dear Bauhalps partners,

*Thank you for your support in correctly recording your construction project data. Please note that, in cooperation with the ZAB agency, we can only consider projects that are either already realised and completed buildings, or buildings that are already under construction. It must be ensured that the copyright for the rendering used has been clarified in advance. As soon as the respective project has been completed and finalised, the renderings should be replaced by current photos of the completed building.*

Thank you very much in advance.  
If you have any questions, please do not hesitate to contact us.

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**1) BUILDING** *(Fields marked with \* are mandatory)*

**PROJECT/BUILDING TITLE\***

**AREA \* select one**

- ☐ Housing
- ☐ Tourism / Leisure
- ☐ Office / Business
- ☐ Sport / Culture
- ☐ Education / Health

**NAME OF EXPERTS INVOLVED \***  
*(all relevant experts involved in relation to the circular building project)*

**ADDRESS BUILDING \***

Country:

Street:

Postcode:

City:

OR coordinates Longitude/Latitude:

**INTRODUCTION TEXT TO THE PROJECT \***  
*(500-1000 characters incl. Spaces; Copyright information (c))*



## BAUHALPS

## 2.4 The first pilot projects to be published on ZAB

<https://www.zukunft-bau.at/en/project/housing/saint-romain-le-puy>



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### SAINT ROMAIN LE PUY

#### Urban renewal in the historic centre of Saint Romain Le Puy

Revitalizing a town center means implementing a set of actions that renew its attractiveness and retain residents for the long term. These actions may concern the requalification of housing and buildings, the development of public spaces or services, the maintenance of local businesses, etc. By improving the living environment and strengthening social ties, these actions aim to restore the desire to visit/live in town centers. Embarking on a revitalization process leads the municipality to set strong ambitions relating to the care given to residents and the territory, particularly by ensuring their well-being and respect for the environment. New regulatory constraints also force communities to take measures for land sobriety and to encourage the renovation and redevelopment of old buildings. Energy prices rise and the scarcity of resources encourage municipalities to shift to renewable energies and to be more economical and resource-intensive in their resource management.

|                                                          |                                                                                                                                             |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Completion                                               | Expected in 2028                                                                                                                            |
| Project area                                             | 5,439 m <sup>2</sup><br>(including buildings and open spaces)                                                                               |
| Developer                                                | Commune de Saint Romain Le Puy                                                                                                              |
| Architecture                                             | EPORA - Établissement Public Foncier de l'Ouest Rhône-Alpes >                                                                               |
| Urban and transport planning, circular economy strategy  | Egis >                                                                                                                                      |
| Environmental consulting, deconstruction and remediation | SUEZ Groupe SA >                                                                                                                            |
| Circular economy consulting and knowledge transfer       | CIRIDD - Centre International de Ressources et d'Innovation pour le Développement Durable >                                                 |
| Additional project stakeholders                          | Local residents (participatory processes, school-based engagement)<br>Regional Directorate of Cultural Affairs - DRAC (heritage protection) |



 Dismantlability

 Genius Loci

 Grey energy

 New European Bauhaus

 Re-Use



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## CIRCULAR TIME LAB - LUCERNE SUMMER

Circular Time Lab is a three-year design-build project by the Lucerne University of Applied Sciences and regional timber SMEs. Following the principles of the New European Bauhaus, it brings together academic design knowledge and hands-on craftsmanship: architecture students and apprentices co-create and reconfigure temporary timber structures at urban sites in Lucerne - making circularity visible, tangible, and testable in real time.

|                                      |                                                                                                                        |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Project duration                     | 2025 - 2027                                                                                                            |
| Project development & implementation | Institute of Architecture (IAR)<br>Competence Center Typology & Planning in Architecture (CCTP)<br>Hochschule Luzern > |
| Contractor                           | Cooperation between Lucerne University and regional SMEs<br>Hochschule Luzern >                                        |
| Recycled materials                   | Timber, steel & fabrics                                                                                                |

CO2 reduced

Dismantibility

**Genius Loci**

New European Bauhaus

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## CIRCULAR TIME LAB - SHAPING CIRCULAR PRACTICES IN LUCERNE

Circular Time Lab is a three-year design-build project by the Competence Centre Typology & Planning in Architecture and the Bachelor's programme in Architecture at the Lucerne University of Applied Sciences and Arts. From 2025 to 2027, second-semester architecture students collaborate with apprentices from regional timber construction companies to plan, build, dismantle, and reconfigure experimental timber structures in public spaces across Lucerne. The city becomes a laboratory where circular construction practices are explored, tested, and made visible—right in the everyday urban context.

The project brings together two key drivers for a future-oriented circular economy: academic design thinking and hands-on craftsmanship. By enabling students and apprentices to work side by side, Circular Time Lab turns theoretical concepts into physical experiments, while also fostering interdisciplinary dialogue and mutual learning. The goal is to make circular construction tangible, practical, and dynamic—developed not in abstraction, but in action.

Each year of the project follows a complete cycle: structures are conceived and built in spring, dismantled in autumn, and then reassembled in altered form the following year. This time-lapse model intensifies the rhythms of building and unbuilding, allowing both users and designers to understand circularity as an iterative and adaptable process. With every cycle, construction and reuse strategies are refined, spatial solutions evolve, and material lifespans are extended. The first edition in 2025, titled Lucerne Summer, focused on creating three temporary timber structures that responded to specific microclimatic and urban conditions. Freely accessible and integrated into the public realm, they offered temporary value to Lucerne's residents while sparking conversations about sustainability, reuse, and the potential of timber in urban contexts. Future iterations in 2026 and 2027 will build on these insights, always adapting to new ideas, materials, and uses. Circular Time Lab is also a platform for regional collaboration. Involving local SMEs from the timber industry, the project showcases how education and practice can come together to drive innovation. From the very first week, students work with timber at full scale in joinery workshops, supported by skilled apprentices and trainers. Material testing, connection techniques, and fabrication are all integral to the design process—turning limitations into learning moments and construction into creativity.

At a broader level, the project serves as a living lab for applied research. As a pilot within the international cooperation project BAUHALPS – Building Circular in the Alps, it connects Lucerne to a larger Alpine discourse on sustainable architecture. Insights from past research projects, such as circularWOOD (in collaboration with TU Munich), are actively incorporated into the process, ensuring a strong feedback loop between practice and theory. As the project unfolds, key challenges and discoveries emerge: difficulties sourcing reclaimed materials, the dependency of reuse on disassembly methods, or surprising design breakthroughs—like borrowing fastening ideas from mountaineering. These moments reflect the power of circular thinking when paired with open experimentation and local knowledge.

In the end, Circular Time Lab is about enabling transformation through action. It empowers the next generation of builders and designers to rethink material cycles, collaborate across disciplines, and shape a more sustainable future from the ground up. Circularity begins not on paper, but in the act of building—together, here, and now.

### NEW EUROPEAN BAUHAUS (NEB)

- Sustainability: Embedded in the circular economy through the reuse of materials, sustainable timber construction, and low environmental impact.
- Aesthetics: Merges design quality with cultural and regional heritage, integrating aesthetic and technical elements within the Alpine context.
- Inclusion: Located in public spaces and involving students, apprentices, and local communities, the Lab fosters accessibility, knowledge sharing, and regional engagement.

### GENIUS LOCI

The Circular Time Lab draws deeply from the local context of Central Switzerland, where building culture, identity, and craftsmanship are closely interwoven. The project activates the Genius loci not only through material resources—namely locally sourced timber—but also by engaging a central human resource: the next generation of designers and builders. Rooted in the region's strong tradition of architectural individuality and craftsmanship, the project brings together architecture students and apprentices from local timber companies. This collaboration reflects the specific Swiss system of dual education, which values both theoretical knowledge and practical skill, and mirrors the structure of the local building economy—characterised by small and medium-sized enterprises that flexibly combine



### 3. CONCLUSION

The design and implementation of the Genius Loci online repository represents a key contribution to the digital recording, systematisation and dissemination of traditional building knowledge in the Alpine region. Through cooperation with the Zukunftsagentur Bau (ZAB), a sustainable and technically robust solution was developed that enables the integration of the data collected within the framework of the project into an existing, publicly accessible GIS infrastructure.

The structured data collection and processing ensures high quality and comparability of the information and forms the basis for consistent visualisation of the results. Integration into the ZAB platform also contributes significantly to the long-term visibility and reusability of the content generated in the project.

Overall, the Genius Loci repository strengthens the preservation and further development of the regional architectural heritage, promotes networking among relevant stakeholders from the trades, research and administration, and supports the implementation of sustainable, resource-efficient building practices in line with the circular economy.

