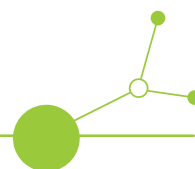


NEWSLETTER



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A. 5TH Coordination Meeting, Munich, Germany



The 5th consortium meeting of the ReBuilt project took place on 08.10.2024 and 9.10.2024 in Munich, Germany. The **first day** we focused on the implementation of activities, raising awareness and attractiveness of circular and digital construction among different target groups, improving, developing and testing new pilot, technical and digital solutions and measures.

The **second day** was dedicated to a tour of good practice examples.

RECYCLING PLANT

We had the opportunity to visit the recycling plant of our project partner Ettengruber in Pliening near Munich. There we were able to see how construction waste is recycled into building materials. We were able to learn about the whole construction waste management process - from selective demolition on site to sorting, crushing and screening. Each step in the process aims to recycle construction waste into recycled aggregate, which is then reused as a raw material for concrete and road construction. This hands-on experience demonstrated how sustainable practices can be implemented in the construction industry and how demolition material can be recycled and reused to contribute to a greener future.



PILOT PROJECT

During our visit to the pilot project of our project partner, the Munich University of Applied Sciences, at Campus Ost, a future school and sports campus in Munich, we were able to learn about the production of recycled concrete. The aim was to develop a concrete made from 100% recycled aggregates to be used in various building components such as foundations, interior walls and ceilings. The challenge was to design a recycled concrete with the same properties as conventional concrete. This 100% recycled concrete saves natural resources, reduces waste and CO2 emissions, and promotes circular construction. Our visit was an impressive demonstration of what sustainable construction can look like and the important role that recycling construction waste plays in it.



OUR GOAL: To create a greener building sector.



B. THE INNOVATION CAFÉS



The **Innovation Cafés** were organised by all project partners of the **ReBuilt** project, which focuses on **circular and digital solutions in construction**. The events **dismantled traditional silos**, fostering the **co-creation of ideas** to address **critical challenges** in the **construction industry**, particularly in **sustainability** and the **circular economy**. They focused on **reducing waste**, **enhancing resource efficiency**, and **promoting sustainable construction practices**. **International collaboration** enabled participants to **exchange knowledge**, **identify best practices** across borders, and **accelerate the scaling of innovations**.

1# Innovation Café, 4.3.2025

The first online **Innovation Café** was organised by **Slovak, Czech and Italian** partners.

Four innovations were presented:



➤ Benjamin Hague, Head of Think Tank at INCIEN (Slovakia)

The pilot projects being developed within the Danube regional project Circular DigiBuild was introduced. The pilot projects will focus on potential use cases (such as creation of a digital twin to inventory and certify building materials) for a digital materials management solution based on the UUProtocol, a universal digital framework for managing and tracking data on materials and components in buildings.



➤ Jiří Fiala, RED-BETON s.r.o (Czech Republic)

Presentation of the practical use of recycled brick in concrete mixtures, which are used in ready-mix concretes and for simple prefabrication followed. The current use of recycle aggregates in concretes in the Czech Republic, the classification of concretes by content of recycled material used according to strength and environmental class, and certification options were presented.



➤ Martin Pribila, Talpa House (Slovakia)

Introducing the first recycled concrete waste in waterproof concrete-achieving 55% recycled aggregate while eliminating PVC, asphalt and HDPE membranes. It showed a practical approach to using recycled concrete and reclaimed materials in construction, focusing on real-world applications, challenges, and regulatory barriers.



➤ Marcel Sedlak, HB Reavis (Slovakia)

The presentation spoke about a strategy to reduce and track upfront embodied carbon in buildings through design, procurement, and construction processes, ensuring real emission reductions before utilizing carbon offsetting.



2# Innovation Café, 6.3.2025

The second online **Innovation Café** was organised by **Austrian, Hungarian and Polish** partners.

Three innovations were presented:



Hempstatic GmbH, Alexander Ebert (Austria)

Development of fire-resistant insulation materials based on hemp. The company presented a hempcrete product that reduces CO₂ emissions and supports sustainable construction.



MAKrópa Kft., Krisztián Méhes (Hungary)

A waste-based concrete additive (WLC) that can replace up to 100% of gravel and sand. The technology provides a solution to reduce landfill waste while producing sustainable building materials.



Warsaw University of Technology, Leszek Majewski (Poland)

Thermal and acoustic insulation panels made from textile waste, providing an environmentally friendly alternative to traditional insulation materials.



3# Innovation Café, 14.3.2025

The third online **Innovation Café** was organised by **Slovenian, Croatian and German** partners.

Three innovations were presented:



Felix Wiese BETTER CONCRETE (Germany)

Software tool that enables cheaper and more sustainable concrete production for ready-mix concrete manufacturers, saving cement by optimising packing density in concrete plants and producing CO₂ reduced concrete.



Dr. Shivakumar Mani, CoGreen d.o.o. (Slovenia)

Development of a highway noise barrier made of hempcrete, which is environmentally friendly, recyclable and has a lower embodied energy for a longer service life.



➤ Dr. Majda Pavlin, ZAG (Slovenia)

The project aims to utilise waste materials that would otherwise be sent to landfill, develop innovative, environmentally friendly and durable pavements with improved performance characteristics, and reduce the carbon footprint through circular economy practices.

The Innovation Cafés highlighted both the **challenges** and **opportunities** in advancing **circular construction**. Key barriers include **regulatory gaps**, **low market demand** due to **high costs**, and **limited digitalization** within the sector. Additionally, while **material innovations** like **low-carbon recycled concrete** and **waste-based insulation** show **promise**, **commercialization** remains a **hurdle** due to **production inefficiencies**, **fire safety compliance**, and **cost competitiveness**. However, several **strategic actions** emerged to **accelerate adoption**. **Policy reforms** and **financial incentives** will be **crucial** in **overcoming cost barriers**. Increased investment in **research**, **production efficiency**, and **market acceptance strategies** can further **support scalability**. Lastly, **cross-sector collaboration**—engaging **policymakers**, **industry professionals**, and **researchers**—will play a **vital role** in driving adoption.



C. ReBuilt CIRCATHON: The Circular Economy Challenge



This March, the **ReBuilt Circathon** brought together **brilliant minds** ready to tackle the **challenges** of **circular construction**. Two **intense online competitions** put participants' **skills** to the **test**, pushing them to **rethink**, **redesign**, and **revolutionize** the way we **build sustainably**.

The **first challenge** (**March 20**) was all about "**Modification of CinderOSS**", where teams **explored** ways to **enhance** this **digital platform** for **circular construction**.

The **second challenge** (**March 27**), titled "**Can You Transform Circular Dreams into Realities?**", took things a **step further**—**challenging** teams to **create business models** that could turn **circular ideas** into **profitable ventures**.

Both events were hosted online via Confiva, allowing participants to connect, collaborate, and compete from anywhere.

And wow, did they deliver!

We saw **groundbreaking ideas**, **innovative perspectives**, and **solutions** with real-world potential, some so good they could be the **foundation for future businesses!**

And the winners are:

- CinderOSS Challenge: Swisscular.
- Business Model Challenge: ReConstructors.



A huge thank you to all participants for their passion, creativity, and hard work. The future of circular construction looks brighter (and more sustainable) thanks to you!



D. ReBuilt WORKSHOP (1st International Conference on Innovative Use of hemp in Construction sector)



On 13 and 14 November 2024, Cogreen, d. o. o., Zavod za gradbeništvo Slovenije - ZAG and the Faculty of Civil Engineering and Geodesy of the University of Ljubljana - UL FGG organised a conference entitled “First International Conference on Innovative Use of hemp in Construction sector”.



The main objective of the event was to present to professionals and the general public the **latest aspects of the use of hemp** as a **building material** and its **potential for more sustainable development** as part of the **transition to a bio-circular economy**. Practices in the use of natural materials for circular and sustainable construction varied across the region, but hemp as a building material, at least in the form of hempcrete, is ubiquitous. Through education and capacity building in the **ReBuilt education programme**, of which the workshop at the Slovenian Building Institute was a part, the partners educate different target groups - from industry, especially SMEs, investors, clients, architects and designers, to students and civil servants - on the state of the art in the field of circular and digital construction. The workshop included a practical part on the **preparation of hempcrete**, where participants could learn what **hempcrete** should look like for **isolation**, experience in the analysis of hemp and natural materials with **X-ray computed tomography**, and the analysis of the **CO2 sequestration capacity of mineral-based materials carbonisation** and **3D printing of cement composites**. The workshops were attended by 24 participants from industry, research institutes and universities.



E. IIC Showcases Innovation at Gaia-X Summit 2024 in Helsinki



On 14 and 15 November 2024, the **President of the Industry Innovation Cluster (IIC)** participated in the prestigious **Gaia-X Summit 2024 in Helsinki**. The event brought together thought leaders, policymakers, and industry experts to discuss the **future of data spaces, AI, and digital ecosystems in Europe**.

During the summit, **president (Martina Le Gall Maláková)** actively promoted the work of **Gaia-X Hub Slovakia**, highlighting its role in fostering innovation and collaboration in the region. She also presented key initiatives undertaken by the IIC, including the impactful **projects Interreg ReBuilt** and **Human-Centric Preference-based Optimization (HCP-bO)**.





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