



Dear changemaker,

In this sixth edition, we are excited to bring you the latest updates on our **journey towards a circular built environment,** with recent research publications, events, workshops, and updates on our innovative tools contributing to driving circular change in the construction industry. Our multi-faceted approach combines groundbreaking technology, strategic alliances, and active participation in scientific conferences to advance sustainability.

We invite you to explore these highlights and join us in shaping the future of construction.

Enjoy your reading!

PROJECT UPDATES



On October 10-11, 2024, the **Reincarnate team convened for its 5th General Assembly** at the Science Technology Park in Belgrade. Representatives from all 16 partners, including new member Huazhong University of Science and Technology (HUST), attended the gathering.

The first day focused on technical progress, project milestones, advancements in waste separation robotics, and strategies for impactful demonstration cases. On the second day, discussions shifted to long-term strategy, dissemination, and standardization, with a thorough review of communication efforts, commercial impact planning, and risk management strategies to ensure the project's success.

Read more!

Exploitation Workshop in Berlin



On September 4, 2024, Reincarnate organized an Exploitation Workshop at Technische Universität Berlin to evaluate the market potential of the project's Key Exploitable Assets (KEAs) and prepare them for industry adoption. Participants worked through sessions focused on defining value propositions, analyzing competitors, and identifying target customer personas for each KEA. The workshop used a "World Café" format for interactive discussions, and insights from external experts helped align the assets with market needs. Reincarnate will refine these KEAs based on feedback, conduct additional market research, and advance toward commercialization.

Find out more!

SCIENCE AND RESEARCH BEHIND REINCARNATE INNOVATIONS

Accelerating Circularity Systemically: Three Directions for Impactful Research

Published in NPJ Urban Sustainability, this research outlines three practical strategies to improve circularity across the construction sector.

Discover more!

An Adaptive Upscaling Approach for Assessing Materials' Circularity Potential with Non-Destructive Testing (NDT)

This paper presents an innovative approach for evaluating materials' circularity potential through non-destructive testing, offering sustainable methods to assess and reuse materials, reducing waste, and conserving resources.

Discover more!

Leveraging Large Language Models for Automated Knowledge Graphs Generation in Non-Destructive Testing Exploring the use of large language models to generate automated knowledge graphs, this publication examines AI's potential in material assessment for construction.

Discover more!

INNOVATIONS UPDATES

Podcast Release



In an engaging and forward-looking episode released this September, we presented an AI-generated podcast that serves as an anticipation of the upcoming project deliverable: *Parametric Design Tool for Reused Building Parts and Recycled Materials*. The episode explores the transformative potential of AI in sustainable construction, setting the stage for how parametric design tools can support innovative uses of recycled materials in future projects.

Listen to the podcast

Video Tutorial



In October, we published a comprehensive tutorial on SLAMD, our open-source tool for data-driven materials design in cementitious applications.

This tutorial guides users in optimizing material formulations to enhance both performance and sustainability, showcasing the benefits of AI-powered design in advancing construction material science.

Watch the video

REINCARNATE AROUND EUROPE







This fall, Reincarnate actively participated in several key European events to promote circular construction. At the <u>LIFE Networking Meeting</u> on October 15-16, Samaneh Rezvani from DEMO Consultants presented Reincarnate's strategies for extending the lifecycle of buildings and materials.

During the <u>Sustainable Places Conference 2024</u> in Luxembourg (September 23-25), Samaneh Rezvani introduced the CP-IM platform, while André van Delft from DEMO Consultants and Klaus Luig from 3L contributed to workshops on digital twins and biobased materials.

At <u>SEMANTICS 2024</u> in Amsterdam (September 17-19), Ghezal Ahmad Jan Zia from BAM presented the paper Leveraging Large Language Models for Automated Knowledge Graphs Generation in Non-Destructive Testing (NDT), introducing new methods for knowledge graph automation in materials science.

Finally, on September 24 Reincarnate attended the <u>Austrian Standards Expert Talks</u>, which focused on the role of standards in enabling circular economy practices across sectors.

What is our team members' opinion on hot topics?

Roundtables on Inspiring Circular Construction



In celebration of the **World Science Day for Peace and Development**celebrated on November 10th, we held a
roundtable discussion on how circular
construction and sustainable building
practices can transform our relationship
with building materials.

Experts from Reincarbate - Alicja Kuczera, André van Delft, Angela Greco, Dominik Czech, and Ilija Ilic - shared insights on two key questions:

1 how can Reincarnate inspire

how can Reincarnate inspire individuals and communities to embrace circular construction and rethink the value of building materials?

2 why do scientific projects like Reincarnate need to integrate social and environmental responsibility into their goals?

Check their perspectives



Construction industry stakeholders are voicing strategies to prepare for the **technological shift to artificial intelligence**, and we discussed this with the team #BehindReincarnate in a roundtable.

Academia Brian van Laar (Delft University of Technology), Benjamin Moreno Torres (Technische Universität Berlin), and João Gonçalves (Erasmus University Rotterdam), gave their perspectives focusing on actions to adopt AI, the cross-sector collaboration, and good-quality data required,

Read our full blog article

What other construction projects are working on



Meet Tech #4 – Unveiling BEEYONDERS' Innovations: Digital Twin

Contribute to Simplifying Circular Construction Language with RECONMATIC **BEEYONDERS'** digital twin uses realtime data to improve construction risk assessment and efficiency by integrating sensors, BIM models, and planning data.

This advanced digital twin optimises safety, resource use, and adapts to workforce needs.

Learn more!

The construction industry is rapidly changing driven by sustainability and circular economy principles. With these advancements come new terms and concepts that can be challenging to navigate.

To address this, the **RECONMATIC** project has launched a **Glossary for Circularity in Construction**, a vital resource defining over 240 key terms to streamline communication and collaboration in the industry.

Discover it!

Follow us and stay tuned!







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