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DIGITAL DECONSTRUCTION

'LEVEL UP CIRCULAR BUILDING'

REVIEW ON THE FINAL EVENT BY ELMA DURMISEVIC

"Looking back at the incredible and vibrant program of Digital Deconstruction's show case event 'Level Up Circular Building' featuring fantastic speakers, one realises that the Digital Deconstruction Consortium managed to move the boundaries of the digitalisation of construction and to showcase the added value of digital tools within a complex framework of circular buildings.

The Digital Deconstruction Platform managed to bring together digital tools which track down building materials using 3D scanning and fantastic work of BIM-Y, aid to dismantle buildings without losing valuable building materials and assess their reuse potential through an automated process of Reversible BIM, based on my own work. The Platform levels up these results into a circular building, product profiles and Circularity Index as defined by Durmisevic GTB Lab, and allows the user to produce a materials list with corresponding passports that are connected through BlockChain to a sales platform - thanks to great work by Simon Duindam and Erol Oztan of Block Materials.

The day kicked off with an inspiring lecture by Jan Jongert from Superuse Studios that reminded us that designing with reusable material is absolutely feasible. It finds its application in the work of Superuse and is presented in the Dutch pavilion at the Venice Biennale this year.

Read more about the final event 'Level Up Circular Building' by Elma.

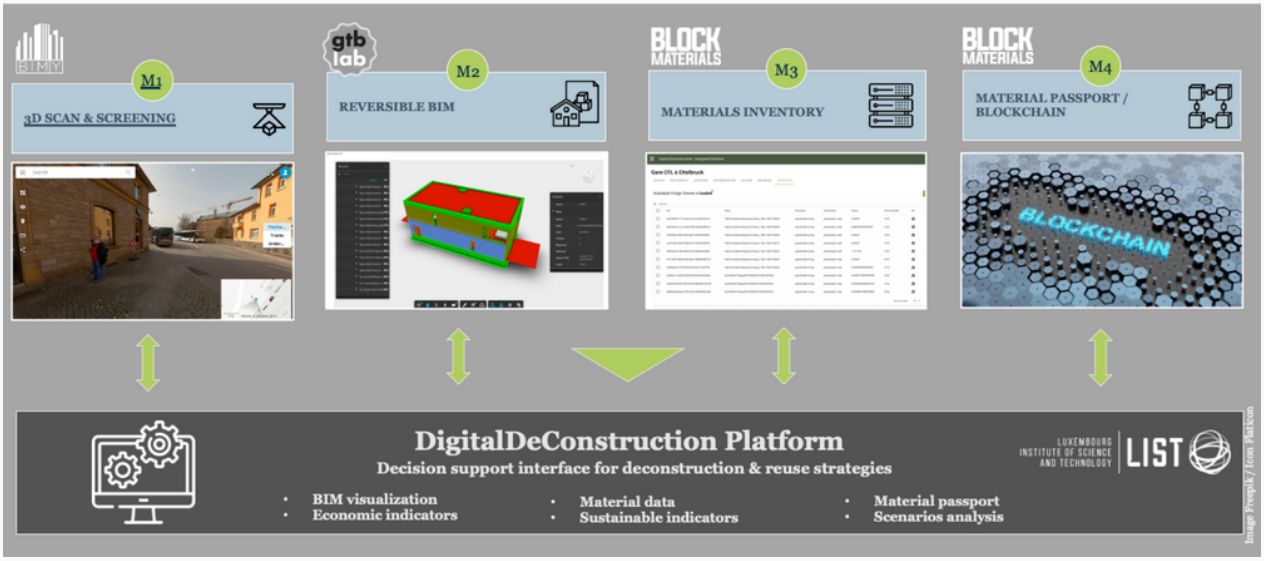
IN THIS EDITION

Discover the DDC navigator

The Navigator, developed by the Digital Deconstruction project, is a digital tool designed to serve as a gateway for the entire building sector's ecosystem of reuse of building materials. Its primary objective is to comprehensively gather all information related to the DDC program in an open-source logic. It serves therefore as a central reference, providing users with access to key data on the partners involved in the project, as well as the various pilot projects that were conducted.
The Navigator offers users a variety of content and resources. It provides access to deliverables, scientific publications, and other resources produced by the project's partners. Additionally, it allows users to connect with an existing community through the GTB-Lab knowledge platform, facilitating information exchange and collaboration among reuse stakeholders. This feature creates an environment conducive to knowledge sharing and the implementation of joint projects.

This project was initiated to address several essential needs. Firstly, it aims to provide easy and centralized access to all information related to the DDC program, enabling users to quickly find the data they require. Secondly, the Navigator offers detailed educational content on the functioning of digital modules and the DDC platform, empowering users to understand how to optimize tool utilization and continue developing their technical skills even after the project's conclusion. Thirdly, the Navigator raises critical questions regarding economic models and the financial/environmental balance of reuse projects, contributing to in-depth reflection on these significant challenges and the search for sustainable solutions in transitioning towards a circular economy.

Directly to the DDC Navigator (where also the videos of LIST are of the several stages of development of de DDC platform) or first take a look to the explaining presentation on the Navigator



MORE ABOUT INTERNATIONAL KNOWLEDGE PLATFORM FOR CIRCULAR BUILDING

On the International Knowledge Platform for Circular Building, developed by GTB-Lab in Heerlen, our project partner and EU Laboratory for Green Transformable Buildings, you will find the latest information on circular building. GTB-Lab works with academic institutes, policy makers and industry partners all over the world to generate and disseminate knowledge that enables the shift towards circular building. They also provide knowhow and support for circular building projects. You will find policies, tools, guidelines and experiences from exemplary projects, among other things. The Knowledge Platform also functions as a monitoring system of circular material flows through different regions by capturing the material consumption of construction projects. The circular map shows you where to find circular partners and how many tons of construction material are consumed and reused in your region. Avoiding waste starts with knowledge of circular building. The Circular Building Knowledge platform has been developed by GTB-Lab with the support of the Dutch Ministry of the Interior and Kingdom Relations, the Province of Limburg, the Parkstad Region, IBA Parkstad 2020 and the municipality of Heerlen. The platform provides a one stop circular building portal with a comprehensive overview of circular buildings, products, and materials as well as policies, guidelines and tools. The project Digital Deconstruction sees this platform as the best portal to lead users through the Navigator to the DDC digital decision support system where users can find the integrated digital tools to support high-quality reuse of building materials.
This Circular Building knowledge platform offers many advantages over conventional reuse methods:

- One portal with all necessary tools to support reuse strategies for buildings
- Reduce CO2 impact
- Increase financial value of asset
- Save time
- Limit use of experts
- Get current digital 3D library to be used in new projects
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Being part of circular building starts by using this knowledge platform, as it can help builders, decision makers, designers, stakeholders in their quest to avoid waste in the building industry.

LOOKING BACK ON THREE YEARS OF DIGITAL DECONSTRUCTION

BY HARALD VAN HOOREN, LEADPARTNER OF DDC PROJECT

Digital Deconstruction (DDC) started in January 2020 after Interreg Northwest Europe agreed to the Province of Limburg's project proposal to develop a digital software platform, in collaboration with 13 other European partners to reuse building materials and promote circular construction in Europe. The project will reach its final status in September 2023. Harald looks back on three years of cross-border cooperation to realize a "digital decision software platform" to serve the construction industry.

"The idea to enter into a European project came from the (private) partners Parkstad Limburg, Blockmaterials and GTB Lab. They were already working out a plan on a European scale, with professional and scientific partners from France, Luxembourg and Belgium joining in.

The Province of Limburg stepped in because the project fits perfectly within its Circular Economy policy framework and its goal to develop, stimulate and innovate ecosystems in the field of circular economy within its region. "Because of the good network and knowledge base of GTB Lab, Blockmaterials and Parkstad Limburg, we recognised that the project could be of added value for the province and the region. Parkstad Limburg is leading the way on circularity with its regional program and that is where the urgency in circular building is highest.

International interest in DDC

"During the project a lot of interest has been shown from other European countries, such as Ireland and Spain. Making this open source tool public is the next task. The integrated digital deconstruction software platform has reached the TRL7 standard through the input of its various tools (3D scanning, Building Information Modelling (BIM), materials and building database, blockchain technology), but will not be commercially mature until it reaches the TRL9 standard. Through a possible follow-on project, the developed platform can be taken to the next level. Everyone within the current project sees the added value.

Nice developments within transnational network

"Despite the fact that the pandemic paralyzed a lot of work, everyone is satisfied with the developed tools and the digital platform. We were finally able to test the tools at the pilot sites Ettelbrück Station (L), Romeins Museum Heerlen (NL), Hof ter Laken (B), Euroffice (L), Social Housing Vilogia (F), Gare Villeneuve St. George (F) and Gare du Nord (F).

An important asset are the outcomes from the regional innovation hubs and the transnational hubs.

Read the whole interview with Harald here.

CIRCULARITY A PRIORITY IN THE RENOVATION OF USQUARE.BRUSSELS

The Usquare.brussels project aims to transform the Fritz Toussaint barracks in Bruxelles into a dynamic new urban space. The project will be coordinated by SAU (Société d'Aménagement Urbain), which has set very high standards in terms of sustainability, while also adopting a circular demolition strategy.
In 2018, the Brussels-Capital Region bought back the 3.9 hectare site in Ixelles, previously owned by the federal state. The aim was to give a second life to these iconic buildings (covering approx. 56,000 m^2), by creating a unique fusion between history and the future. At least, this was the challenge set by the SAU coordinator. The project manager, Ann-Sophie Doesburg, and architect/urban planner Bruno Allardin explain their approach in the following terms:

> "We aim at giving a second life to the recovered materials in situ. When this is not possible, we look for another location where they can be reused or examine opportunities for high quality recycling."

The project manager, Ann-Sophie Doesburg, and architect/urban planner Bruno Allardin explain their approach in the following terms: "We wanted to create a project that would integrate the history of the site, which dates back over 100 years, while laying foundations for the next 100 years."

More about the case in the publication of Buildwise "Circularity, a priority in the renovation of Usquare.brussels'.

ENHANCING CIRCULAR DEMOLITION THROUGH DIGITALIZATION

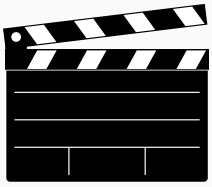
BY BUILDWISE

Significant progress is being made in the field of circularity. In late May, approximately 100 participants gathered at the headquarters of Buildwise, formerly CSTC-WTCB, to witness firsthand how they could more effectively commit to a circular demolition strategy. Clearly digital tools already exist, as evidenced by the Interreg Digital Deconstruction pilot projects. It's now imperative to gradually integrate these tools into our own way of working.

On our website you will find the publication of Buildwise's "Enhancing circular demolition through digitalization" in English, Dutch and French.

DDC French Interviews Videos
To view interviews of the French DDC pilot projects, please click on this balloon.

Video pilot project Ettelbrück, Luxemburg
To view the video click on the image



TO SUPPORT DIGITAL DECONSTRUCTION PROJECT

You have received this Digital Deconstruction newsletter as a valued contact in the field of construction, circular economy, circularity, construction and design industry and reuse of building materials.
If you have supported Digital Deconstruction during the last 3 years either by communicating on social media about DDC or coming to the many events we organized (Regional innovation Hubs, Mid-term event, Final event, etc.) and you want to communicate your support to be highlighted on our website, feel free to contact us: digitaldeconstruction@greenflex.com) so we will add your logo on the DDC Navigator website on the page 'They support us'.

THANK YOU FOR YOUR SUPPORT

"We paved the way for a roll-out throughout Europa, and the world."

This is the last newsletter about Digital Deconstruction, which helped us to communicate to you the achievements within the project from the start until now. We wish you lots of success in your field of expertise and in setting your goals to a more sustainable society. We have worked on this open-source digital decision software system so engineers can reuse materials released from the dismantling of renovation and demolition projects in the construction industry and create a more sustainable future. With these achievements we focused on regions having set sustainable materials management, ecotechnologies, ICT and digitization in industry as their RIS3 priorities in The Netherlands, Belgium, Luxembourg and France.

During this month (September) the partners will complete their tasks within the project. If you want to follow the processes on sustainable building navigate to the Knowledge Platform of GTB-Lab where all information about the project will be archieved for future use and where you can gain more knowledge about the digital decision software system. And of course, don't forget to send your logo to digitaldeconstruction@greenflex.com, for your support and commitment to the project in the three years of the project. All project partners wish you lots of success. Let's level up circular building by reuse of building materials.