



Welcome to DeCO2 1st Newsletter!

The DeCO2 Newsletter will keep you updated about all the recent news, highlights, and results of the project.

Meet our coordinator



The Institute for European Energy and Climate Policy (IEECP) is proud to coordinate the DeCO2 project, bringing its extensive expertise in climate change mitigation, energy efficiency, and renewable energy policy to the

forefront of innovation. Since 2015, IEECP has been at the heart of science-based research and collaboration, forging partnerships with EU institutions, governments, NGOs, and the business world to drive the energy transition.

With DeCO2, IEECP leverages its experience to tackle one of Europe's most pressing challenges: the building sector's high energy consumption and CO2 emissions. IEECP's coordination and experience ensures DeCO2 addresses the entire building lifecycle, from design to renovation, by focusing on innovative technologies, materials, and solutions.

Filippos Anagnostopoulos, IEECP's Senior Expert and DeCO2's coordinator, ensures its successful delivery along with a project management team at IEECP, who together provide expertise in energy efficiency policy and supporting the project's success in shaping a more resilient and circular built environment.

About the project



The building sector is a significant energy consumer (40%) and a major CO2 emissions contributor (36%) within the European Union. Moreover, current construction and renovation practices heavily rely on raw material and generate substantial waste. Despite the efforts, on an EU scale, renovation rates are far below the minimum required, while the necessity to address material extraction and improve circularity is crucial.

To facilitate closing this performance and design-to-market gap in the built environment, DeCO2 aims to address the need for advancing innovative technological applications and solutions on the built environment, focusing on building elements, materials, products, and technologies. DeCO2 further

prioritizes solid and long-lasting partnerships across the value chain for socio-economic innovation. A well-segmented audience targeting developers, policymakers, and the construction industry ensures effective market penetration. Through collaboration, tangible benefits, and digital outreach, DeCO2 embraces the entire building-life cycle, and all the relevant stakeholders involved in each innovation action stage of renovation projects, materials, and techniques (targeting TRL 8).

[Visit our website](#)

DeCO2 Kick-off Meeting in Brussels



The Kick-Off Meeting of DeCO2 was successfully held in Brussels last June, hosted by the project coordinator, the Institute for European Energy and Climate Policy (IEECP). For two days, participants from the DeCO2 partnership across Europe came together in order to discuss key insights and explore the DeCO2 work packages and their main objectives. This first event marked an exciting beginning for the DeCO2 project and set the framework for a fruitful collaboration among all partners, allowing participants to connect, elaborate on strategies and brainstorm on future steps to decarbonise the

Demo Sites Updates

The DeCO2 Demo Cases

DeCO2 aims to address the compelling need for advancing innovative technological applications and solutions in the built environment, focusing on building elements, materials, products, and technologies. The project also aims to set up solid and long-lasting partnerships within the legal and regulatory framework and other stakeholders addressing the whole value chain for socio-economic innovation, facilitating the closing of the performance and design-to-market gap, including for historical and cultural heritage buildings. The development, evaluation, and validation of the expected innovations will be demonstrated at three real living labs and additional virtual testbeds in various surroundings and geo-clusters, representing transferable ideas for all EU countries and beyond. The living labs are situated in Ireland, Spain, and Austria representing public buildings and large-scale housing.

The recent drive to decarbonize buildings in Ireland, including retrofitting of existing buildings, is high on the Irish Policy agenda Climate Action Plan 2023. The Irish demo case intends to prepare guidelines and tested case studies to ensure a circular decarbonized retrofit approach. The demo site will test bio-based materials, using Mycelium and breathable adhesives to sequester carbon, as well as green roof testing with different waste products and green vegetation.

The construction sector in Spain currently operates within a linear materials life cycle, leading to significant resource wastage and environmental degradation. The Spanish demo case is taking proactive measures to address this issue by establishing a circular ecosystem, by rethinking the flow of construction materials. As the building owner, the Castellón City Council is collaborating to renovate a municipal library, and the dismantling process for the library will be meticulously managed to extract maximum value from

Construction and Demolition Waste (CDW) and other materials suitable for reusability.

The Austrian demonstrator, the Terrassenhaussiedlung (THS) in Graz, represents an internationally well-known icon of brutalist, structuralist, and participatory residential architecture of post-war modernism. Planned by the Werkgruppe Graz in 1965 and built from 1972 to 1978, it was realized by the emerging idea of participatory planning. The buildings consist of a multifaceted system with roof gardens and terraces, providing 530 privately owned apartments within four buildings situated around a car-free courtyard. At the same time, it is the largest owner-administrative unit in Austria with more than 1500 inhabitants. The settlement offers a wide range of challenges to develop social innovations.

DeCO2 visit at the Irish Demo site



Project partners TUS and LCETB met at the Demo building in Limerick in November to establish a timeline of works and identify test areas for the installation of insulation panels. LCETB organised the drilling of boreholes on this day to identify the building typology. It was confirmed that the building is made from mass concrete and has reinforced beams in the ceiling. This timeline of works is now being closely monitored during fortnightly meetings between project partners TUS and LCETB.

[Read more](#)

DeCO2 visits the Spanish Demo site and plans next steps



On October 17th, 2024, a key meeting took place in Castellón, Spain, as part of the European research project DeCO2. The event brought together project partners from Castellón City Council, CoCircular, AIDIMME, IAAC and IVE for a day of strategic discussions and site visits in both Castellón and Valencia.

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DeCO2 workshops at the Austrian Demo site



The development of the Living Lab in Terrassenhaussiedlung (THS) in Graz, Austria, has made a wonderful start through an engaging series of workshops held from September to November. These workshops have gathered valuable insights and ideas, advancing the estate's decarbonization efforts. Focused on strategy, organization, and stakeholder involvement, the workshops ensured collaborative and structured input, organized by the University of Graz and hosted at the estate's Community Center with a core team of residents.

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DeCO2 News

Participation at the Sustainable Places 2024



On September 25th, we joined the “Circular and Bio-based Building Solutions” workshop organised by 3L Architects during the Sustainable Places 2024 conference hosted at the Luxembourg European Convention Center.

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Participation at the Built4People 2nd Clustering Event



On November 19th, DeCO2 was represented at the 2nd Build4People Clustering Event by the coordinator Filippos Anagnostopoulos from IEECP. The event brought together representatives of the 30 projects funded to date as part of the Built4People (B4P) Co-programmed Public Private Partnership under the “Efficient, sustainable and inclusive energy use”, part of the Horizon Europe Work Programmes for Climate, Energy and Mobility.

[Read more](#)

Participation at the 2nd International Congress on Construction and Demolition Waste Recycling (C&DW)



In November, Zaragoza hosted the 2nd International Congress on Construction and Demolition Waste Recycling (C&DW), a key event for construction and demolition waste management. During the congress, Sergio López, from Cocircular, presented the DeCo2 project.

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Participation at the 10th International Euro-Mediterranean Conference (EuroMed) 2024



From the 2nd-4th of December 2024, Giulia Viero from the Institute of European Energy and Climate Policy attended the EuroMed Conference 2024, presenting the highlights from the Spanish DeCO2 demonstrator in Castelló, Spain.

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