



4<sup>th</sup> INTERNATIONAL  
CONFERENCE

# PRE-FREE UP-DOWN RE-CYCLE

Traditional solutions and  
innovative technologies  
for the end of waste

ROME, 28<sup>th</sup> may 2021  
Department of Architecture  
Roma Tre University  
Via Madonna dei Monti, 40

The impact of the construction sector on waste production and resource consumption is well known. The European Community has, therefore, identified this sector as one of the priority ones on which to intervene to ensure sustainable urban development. This sector has been declined on the actions for energy efficiency of the built heritage, use of environmentally friendly building materials and strengthening of the conscious management of waste through the use of recycled materials and of selective demolition practices.

Despite these actions, unlike other European countries such as the Netherlands and Germany, in Italy the waste produced by the construction sector exceeds 40% of the total waste produced and almost everything is disposed of in landfills. It therefore appears of fundamental importance to propose and endorse the introduction of technical-regulatory tools that simplify the procedural and economic complexities. These complexities hinder the reduction of waste production and its recovery in the construction sector. Furthermore, it is necessary to intervene in all phases of the building process, from planning to design, from construction to the end of its useful life to manage waste as by-products. In fact, the waste management allow to allocate waste and to valorise and reintroduce it into the production cycle even in sectors that are alien to that of construction.

The circular economy is no longer a purely theoretical model of economic development. The political actions of the European Community and, in general, of most industrialized countries are aimed at reducing the waste production and decreasing the resources consumption: "The Cradle to Cradle" approach is now used in industrial processes to create products or services with a positive impact on humans and the environment. Furthermore, recycling practices and the conscious management of waste and scraps constitute an active economic sector with a high added value [Baratta, A. (2019) (ed.). *Recycling of scraps and waste in construction. From down-cycling to upcycling towards the objectives of circular economy*, Timia publisher, Rome]: the penetration of the circular economy is a fact in every product sector, from agro-food to transport. In Italy, between 2006 and 2015 the number of "green" patents increased by 22%, reaching 10% of European applications and placing themselves just off the podium after Germany, France and the Netherlands. The patents represent the introduction of innovations with low environmental impact both in the processes used and in the products made [Unioncamere (2017). "Italy believes in the green economy", [www.unioncamere.gov.it/download/6955.html](http://www.unioncamere.gov.it/download/6955.html)]. Even if the circular economy is oriented on the medium and long term, the implication is also determined in terms of social sustainability, acting on global levers and indicators such as the reduction of poverty, the creation of new jobs and the conscious use of natural resources.

Since the circular economy is now a solid reality, the real challenge for the future lies in the connection between it and Industry 4.0. In this sense, the construction sector can carry out an intrinsic transformation, changing its character from traditional and partially industrialized to advanced and completely innovative. Operators in the construction sector would not limit themselves to favouring the recycling of waste but would aim for integration of processes with digital and computerized tools and methodologies. Those would help them to manage in adequate terms the connections between environmental socio-cultural and economic-financial sustainability, with the main aim of eliminating waste. On the fertilized land of the circular economy, it is determined the concept of end of waste as the cessation of the qualification of waste.

Promoted by the Department of Architecture of the Roma Tre University and the Department of Humanities, Social Sciences and Education of the University of Molise, the IV International Conference "Pre-Free-Up-Down-Re-Cycle. Traditional solutions and innovative technologies for end



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of waste" intends to collect and share research and experimentation experiences aimed at introducing innovative solutions within the extended building process, including governance procedures in this field.

The conference is proposed as a moment of reflection and discussion on the issue of zeroing waste in the field of building production, but also within the industrial processes related to product design. The conference aim to collect the most solid and traditional experiences for compare them with the more prefigurative and innovative ones, both linked to the different declinations of valorisation of the waste with the aim of zeroing the production.

This call for paper is published to select contributions from different disciplinary sectors, and with the aim of returning a structured and complex framework on the conference topic capable of generating an interdisciplinary proposal with a high innovation content.

## OFFICIAL LANGUAGES

The official languages of the International Conference are Italian, Spanish and English. According to the template attached to this call for paper, each contribution will be provided with a summary in English and an extended text written in one of the three official languages.

## PAPER SUBMISSION

The authors are invited to send their contribution, in word format (\*.doc or \*.docx), strictly adhering to the attached template, at [info@conferencerecycling.com](mailto:info@conferencerecycling.com) in compliance with the deadlines indicated in the calendar reported below and, on the website, [www.conferencerecycling.com](http://www.conferencerecycling.com). The paper will be subjected to a double blind peer review by experts.

## PUBBLICATION

The selected papers will be published into an instant book, with ISBN, which will be distributed at the opening of the 4<sup>th</sup> International Conference.

## REGISTRATION

Registration must be done by sending an email to [info@conferencerecycling.com](mailto:info@conferencerecycling.com) in the terms provided by the calendar. The registration form must be attached to the registration email, which can be downloaded from [www.conferencerecycling.com](http://www.conferencerecycling.com), together with the confirmation of payment of the registration fee, according to the methods indicated below. The registration form must be filled in by the Corresponding Author only.

## REGISTRATION FEES

The registration fee, which entitles you to participate in the 4<sup>th</sup> International Conference, to the publication of the paper, if selected, and to a copy of the Proceedings, is € 100 for the first author, to be added € 60 for each other author. PhD students and under 40s pay a reduced fee of € 60, also as first author.



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## CALENDAR

21.12.2020 Call for paper  
01.03.2021 Submission full paper  
15.03.2021 Accettazione full paper  
22.03.2021 Consegna definitiva full paper  
14.05.2021 Registrazione e pagamento quote di partecipazione  
28.05.2021 IV Convegno Internazionale

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