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Editorial

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Editorial

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We would like to welcome all readers to the last issue of *Management, Procurement and Law* for 2023, a themed issue conceived to explore the challenges of Circular Construction.

Before addressing the motivations and considerations on the topic, Pedro Mêda at Porto University, in collaboration with Professor Hipólito Sousa, Professor Diego Calvetti, and Professor Eilif Hjelseth at the Norwegian University of Science and Technology, would like to take the opportunity to extend a big thank you to all editorial panel colleagues for the fruitful cooperation and lessons learned. This acknowledgement becomes even more relevant as our editor-in-chief, Professor Simon Smith will formally leave the role, with this being the last issue he oversees. There are not enough words to express our gratitude for his contributions and strategic vision in leading this journal. I would like also to say a warm welcome to the forthcoming editor-in-chief, Professor Fidelis Emuze.

When this issue's topic was first discussed among the champions, the proposal was centred on defocusing from the circular economy visions associated purely with the reuse and recycling of materials. The objective was to dare authors, or provide them with the proper space to present research work and experiences aiming at the circular economy goals, but focusing on the problems associated with management, procurement, regulations, and digitalisation. One of the main drivers of this choice of theme was the desire to see how the digitalisation of actions in construction could be used to enable, support and boost the meeting of sustainability requirements. This motivation had to do with research under development which has sought to demonstrate how circular data was a basic need to enable a circular economy (Instituto da Construção and NTNU, 2020). The call for papers was launched as 'Circular Construction' to emphasise the dimensions of green procurement, technological innovations, case studies and stakeholders' challenges in implementing such visions (European Parliament and European Union Council, 2015) (European Construction Sector Observatory, 2019). When focusing on the product level, the objective was to identify bottlenecks to circularity more so than to research potential uses and recycling rates. The five papers that compose this issue touch most on these aspects and, perhaps even more relevant, open the way for future research and utilise cases that I'm sure will be worth taking a closer look at in future special issues.

Since 2021, many things have occurred to strengthen the management processes that underpin circular economy and that

define new targets and requirements, evidencing the opportunities derived from twining the digital and green transitions (Cambridge, no date; Infrastructure and Projects Authority (IPA), 2021; Papadaki *et al.*, 2023). Circularity objectives are breaking industries' boundaries, with the vision not just to extend the life cycle of products, elements and systems inside the construction value chain, but also across value chains. Associated with the stream's definition, there are management and regulatory processes supporting them (European Parliament and European Union Council, 2022). One example that I like to use is the situation where an insulation board is manufactured with the intended use of becoming part of a building façade. After being placed on site, it suits that purpose for 50 years, and it is removed and reused, becoming the insulation material inside a refrigerator, where it lasts for 25 years more. This is just one simple, but relevant example of the objectives, which might help some understand the processes and information management requirements associated with this becoming a reality.

This issue provides a rich selection of papers demonstrating how vast the topic is, as well as its associated challenges. From an overall picture of key aspects boosting the circular economy, to green public procurement specifications and digital tools improving sustainability and productivity, or sustainable solutions at building and product scales seeking to improve the reuse and recycling rates, everything herein has been framed, conceptualised and demonstrated.

In the first paper, Anastasiades *et al.* (2023) focus on resource efficiency and the reuse and recycling of products, investigating the barriers and bottlenecks associated with one of the most relevant materials used in construction: steel. Framed in the reality of the Belgian construction sector and using semi-structured interviews and a case study as part of the research methodology, this manuscript provides theoretical and real practice insights regarding the aspects blocking circularity accomplishment for this specific product. Although limited to Belgian practices, most aspects also apply to other realities and cover a wide range of processes, from existing knowledge on the elements to be deconstructed (legacy data), to design and deconstruction practices' safety issues, among many others.

Following second is an article presented by Johansen *et al.* (2023) where Green Public Procurement is at the core. Based on a case study located in Norway, the objective was to elucidate the relevant decision-making processes and mechanisms in smart and

sustainable urban development, as well as the identification of green procurement processes and mechanisms to move from a brownfield area into a green neighbourhood. Part of the findings rely on the understanding that green procurement is not just about purchasing greener products, but rather has mainly to do with the establishment and proper management of green supply chains. Similar to the first paper, some of the processes, challenges and solutions within are common and applicable to other projects around the world.

The third paper (Kanagaraj *et al.*, 2023) provides a review of circular economy actions in the construction industry around the world, developing an evaluation of the situation in India, specifically. More than an extensive literature review, this research focuses on identifying circular economy components or dimensions that can contribute most significantly, as well as on aspects that can become part of a short-term roadmap. Construction and demolition waste (CDW) and building information modelling (BIM) are highlighted in the explored dimensions. This proves the breadth of the topic at hand, which ranges from waste to digitalization, and mentions where other factors could fit were the case in another country.

After the previous wide-scope paper, Geoghegan *et al.* (2023) utilise digitalisation and BIM to explore in depth the state of Dutch small architectural firm practices. At the very beginning of this paper, there is a statement that goes straight to the point of the initial discussions for this special issue: ‘With intertwined agendas, digitalisation enables the achievement of sustainable outcomes’. This paper provides a literature review of academic articles and grey literature, setting out a background body of knowledge from which the importance of project information requirements and the multifaceted digitalisation challenges are tackled. Again, although focused on Dutch small-to-medium size architecture firms, the findings can be applied to other situations and provide insights on future research areas focusing on innovation realisation.

Last but not least, Booth *et al.* (2023) takes on a different dimension: waste. This paper presents a case study on Earthship buildings, considering them to be the epitome of sustainable alternative housing in the UK. For this research, Booth collected opinions from 50 persons interested in sustainability-related matters using a questionnaire designed to capture the participants’ personal details, seeking to understand their visions of the benefits and barriers regarding this specific type of building. The results are very interesting, and the analysis within can also be applied widely. Most countries in Europe are dealing with housing scarcity, and with the construction sector struggling to maintain the human resources necessary, there is a need to build in faster, cheaper and more sustainable ways, with higher sustainability targets. This article provides relevant insights for a very specific situation, but can be used as background particularly regarding the widespread housing issue.

Circular economy in construction is now a key goal of the industry. There is a consensus that the efforts towards circularity must be driven with the same level of force as those efforts for improved

health and safety on construction sites were in the past. The industry can do better and should be able to accomplish circularity, both for its own sake as well as for the world’s sustainable development (United Nations, no date).

It is interesting to observe the role *Management, Procurement and Law* can play in addressing circularity and suitability-related challenges at both detailed levels related to the content of information in single products in BIM, as well as scaled up to increase the reuse of resources at the building, city and country level.

Without awareness of management processes, the procurement of circular products and assets will not be achieved. Additionally, real circularity and sustainability relies on how much we as people can understand and thus without such understanding in legal requirements, these things will not be achieved.

We hope all readers enjoy this final issue of 2023. As ever, the journal welcomes feedback and discussions on its content. We look forward to seeing 2024’s developments on circular construction, and the editorial panel encourage readers to contribute to the journal—either through article submission or by joining the editorial panel—get in touch!

All contributions were reviewed by international experts in accordance with the journal guidelines.

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