Special Issue

Frameworks, Tools, Methods, Indicators, and Considerations for Evaluating Circular Economy in Buildings

Message from the Guest Editors

The circular economy (CE) is considered a key enabler for enhancing sustainability and resource efficiency and mitigating climate change, which are priority concerns in the building sector. Circular strategies can help achieve such objectives, as this eliminates waste and considers the existing commodity as a resource to be kept in the loop for the longest possible time. This Special Issue is interested in, among others, the following topics:

- Principles and frameworks for adopting CE into buildings;
- Material passport and CE;
- Design for circularity: materials and buildings;
- Bio-based design/materials and CE;
- Sourcing sustainable and alternative materials, local materials, and waste materials;
- Materials flow analysis and circularity;
- Materials efficiency and circularity;
- Tools, methods, and indicators for evaluating the CE of buildings;
- LCA and CE of materials and buildings;
- Circularity metrics, measurement, and approach;
- Key considerations in measuring circularity;
- Benchmarks, standards, and key performance indicators;
- CE, logistics, and the Internet of Things (IoTs).

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Deadline for manuscript submissions

closed (20 June 2025)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/201038

Buildings
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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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