



Integration of LCA and BIM for Sustainable Construction

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Deadline for manuscript
submissions:

closed (30 June 2020)

Message from the Guest Editors

Dear Colleagues,

Digitalisation can facilitate collaborative design and could provide new opportunities for planning sustainable buildings. Especially the integration of Life Cycle Assessment (LCA) into the design by means of Building Information Modelling (BIM) has the potential to facilitate environmental performance assessment. By linking material properties with the geometry, material-related environmental impacts such as embodied energy and greenhouse gas emissions can be calculated based on the digital model. In addition, BIM can provide the basis for building performance simulation and therefore the environmental evaluation of the use phase of the building. Furthermore, the recycling potentials of components and their materials can be directly derived from BIM and will provide information for circular material flows. The costs of the construction throughout the life cycle can also be easily calculated based on BIM.

For further reading, please visit the [Special Issue Website](#).





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Journal Rank: JCR - Q2 (*Environmental Studies*) / CiteScore - Q1 (*Geography, Planning and Development*)

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