Special Issue

Decision Support Systems for the Digital Built Environment

Message from the Guest Editors

The digitalization of the construction industry is accelerating the development of several digital tools to support decision making in the built environment, spanning all phases of construction projects, from the bidding, design, and planning stages, to construction and maintenance stages. These digital tools, based on improving technologies, enable more integrated and intelligent approaches to decision making, both promoting and supporting a more efficient and sustainable built environment. Recent technologies such as BIM, IoT, digital twins, and artificial intelligence are progressively applied in construction, promoting interconnected and knowledge-based decisions. This Special Issue aims to gather new research and development regarding innovative decision support systems for the built environment, which are strongly supported by recent digital technologies.

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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.

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