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# Editorial: Construction project delivery: Practices, challenges, and opportunities

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## Editorial on the Research Topic

**Construction project delivery: Practices, challenges, and opportunities**

Construction activities shape the built environment and impact the sustainability of cities. Construction projects are developed to benefit the communities and the environmental aspects therein. In recent times, there is an ever-growing demand from construction project stakeholders for more intelligent, sustainable, and resilient approaches to be adopted. Construction projects ought to be thought of in a multifaceted approach so that challenges presented to humanity such as climate change or pandemics, are handled in a complex and careful management process. In this ever-changing environment, traditional management approaches, while still necessary, have lacked agility and innovation. This Research Topic aims to collate studies and address various challenges by providing a platform to explore new approaches and practices in construction project delivery.

In the first article, in a context where the increasingly intensive use of modern technologies by the construction industry demands the management of large volumes of heterogeneous data, [Yousif et al.](#) present a comprehensive study of the literature, investigating the potential application of Big Data integration in the construction industry. The authors analyzed the range to which the industry has utilized this technology by reviewing the latest research that has been published in which the new techniques have been established in many fields of application. They also explored the fundamentals of Big Data integration technologies and significant, previous applications of the adoption of such technologies by many divisions of the industry. The authors conclude that construction data integration and up-to-date monitoring integrated with the project construction process contribute to improved efficiency and decision-making.

In the second article, [Al-Fadly](#) applied multivariate analysis to develop a conceptual model that allows suppliers to establish a marketing mix based on customer expectations. This study provides a new approach to the empirical determination of differences between

variables by the two types of project stakeholders. It contributes to deepening the understanding of customer experience in the construction industry by establishing a causal effect between the elements of the marketing mix and customer experience. The study presents an important progression to the body of knowledge on the theory and practice of examining the differences in perception between suppliers and customers in the marketing mix. It also contributes to construction companies to gauge the effectiveness of their marketing strategies and minimize the differences that exist between the expected and actual practices of the marketing mix within either the supplier or customer perceptions.

In the third article, [Dixit et al.](#) applied the Delphi Method to determine, verify and classify factors related to site logistics that can affect the number of resources used in construction projects. The authors' main focus was to improve existing methods of site logistics planning from an embodied energy perspective and to collaborate toward reducing the energy and carbon footprint of construction projects. The authors highlight that the installer's skill, technology/equipment, prefabrication, planning and forecasting, and material movement are among the top influential factors related to site logistics plan that may help reduce construction waste. The knowledge provided by this work helps construction professionals develop a more comprehensive logistics site plan that would play a crucial role in a project's success in terms of environmental and business benefits.

In the fourth article, [Subramanya et al.](#) researched the potential barriers to implementing E-ticketing, the adoption rate of state agencies/departments, and the benefits of employing an E-ticketing platform. They also applied meta-synthesis and interpretive analytical techniques to analyze the changes in technological trends in highway construction that are related to material

tracking, inspection, and digitization. Another important contribution is the discussion of the main technologies that have the potential to be integrated into the E-ticketing platform. This work contributes to improving the effectiveness of the process of developing a common E-ticketing platform and the adoption of policies and guidelines by decision-makers and engineers.

## Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

## Conflict of interest

AN was employed by the Boral Limited.

The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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