

## **Decision Support Systems to Improve Project Sustainability in the Construction Sector**

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### **ABSTRACT**

Project sustainability in the construction sector has its own unique challenges that come from the very nature of this industry. This relates to the difficulty in collecting data and effectively analysing them to generate valuable insight. To assist with project management, decision support systems (DSSs) have become a useful tool to help manage and improve sustainability. The aim of this paper is to present the current state of research into DSSs in the construction sector and to define potential avenues for future research in the field. This paper examines the application of artificial intelligence (AI) and data analytics (DA) in developing DSSs with a focus on project sustainability. While most studies emphasise the two dimensions, economic and environmental, future opportunities on the social sustainability are highlighted. These include research about the use of AI for improving workplace safety and personnel management.

**Keywords:** Decision Support System, Data Analytics, Artificial Intelligence, Construction, Sustainability