

# Construction industry needs to adopt sustainable alternatives - study

According to the findings of a recent study from the Department of Industrial Engineering at Stellenbosch University, improving the sustainability of activities in the construction industry is key to mitigating the negative impact of the industry on the environment. But for this to happen, industry stakeholders should be more enthusiastic about adopting and implementing sustainable practices in their projects.



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Ralmar Marsh and Profs Alan Brent and Imke de Kock conducted the study looking at the barriers to and drivers of sustainable construction practices by construction industry stakeholders. They asked industry professionals to complete questionnaires about the need to improve their capability, opportunity, and motivation to facilitate the adoption of sustainable construction practices.

The researchers say there is a need to change the current behaviour of stakeholders in the construction industry to ensure the sustainability of the industry by adopting sustainable alternatives throughout the life cycle of construction projects.

“The construction industry is in a unique position to create value by improving the quality of life of society and thereby positively contributing to sustainable development. In order to improve the adoption and implementation of sustainable practices within the construction industry, the change in stakeholders’ behaviour and the processes that support this change need to be considered.”

## Motivation plays a determining role

According to the researchers, the survey results indicated that motivation plays a role in determining the likelihood of participants engaging with sustainable construction.

“Participants felt that stakeholders in the construction industry need to change their current behaviour and adopt sustainable alternatives to design and construction methods and processes.

They indicated that sustainable construction was beneficial to the development of their careers and that it could have a positive long-term impact on the economy, the environment, and society.

Participants also agreed that they would adopt sustainable construction if they had the skills to do so. They had strong intentions to develop their knowledge of and skills regarding sustainable construction and encourage the education and training thereof.

“They also wanted government to support and encourage sustainable construction through incentives, tax relief, subsidies and access to funding for projects that incorporate sustainable principles and practices.”

The researchers point out that the major barriers to and drivers of sustainable construction practices include awareness and knowledge of and information about sustainable construction; interest in it and demand for its adoption; the availability of training and access to education on social construction; behavioural change towards it; industry peer influences; confidence in its implementation; economic factors; perceptions of it; and social benefits of adopting social construction.



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## Recommendations

In their study, the researchers also make a few recommendations that could help facilitate the adoption and implementation of sustainable construction.

“Organisations should provide stakeholders with access to education, training, and upskilling through continuing professional development courses to improve their awareness, knowledge and skills, influence their behaviour, and boost their confidence in implementing sustainable construction practices. Sustainable development strategies and internal policies should be developed to further enhance the organisation’s offering within the industry.

“Furthermore, policies and legislation which govern the adoption and implementation of social construction should be developed and regulated by government to emphasise the need to change the current trajectory of the construction industry.

“Financial and market-based incentives will further encourage organisations to adopt best practices within the industry in relation to sustainable construction.”

The researchers say tertiary institutions also have a role to play in achieving the goals of sustainable development within the construction industry. “Integrating sustainability as part of the undergraduate curriculum and postgraduate studies in higher

education is necessary to promote sustainable development in the built environment. This will ensure that graduates are aware of their ethical and social responsibility towards the environment and the welfare of society.”

The findings of their study were published recently in the *Journal of the South African Institution of Civil Engineering*.

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