



Universität Stuttgart

Institut für Baubetriebslehre

Prof. Dr.-Ing. Hans Christian Jünger

Pfaffenwaldring 7

70569 Stuttgart

Telefon: +49 (0)711 685-66145

E-Mail: ibl@ibl.uni-stuttgart.de

2024, Stuttgart; Kurzfassung der Masterarbeit:

Redefining BIM roles and their cost-benefit analysis in construction companies. [MA 241]

BIM has developed as an innovative tool that has transformed traditional methodology in the construction sector. This research analyses how redefining the roles of BIM stakeholders will optimise the implementation of BIM in construction companies. The research further explores the previous structure that has been established by standards like ISO 19650, VDI 2552, and PAS 1192, further identifying major gaps in present job descriptions. It also addresses the obstacles that are preventing the implementation, including organisational and economic reasons. In addition, a full CBA of BIM roles is discussed, highlighting both tangible and intangible benefits. The research examines the human aspects of stakeholders and their costs, giving a framework for construction companies to plan resources efficiently. Key results include the ability of cost saving of BIM through enhanced cooperation and decreased rework. Through a mixed-method approach combining literature analysis and questionnaires, this study presents an improved framework for BIM adoption. The framework gives structure for construction companies to prioritise BIM roles depending on project type, ensuring efficient resource allocation. It also discusses the long-term benefits of BIM, such as better facilities management and greater environmental practices. Ultimately, this study offers a systematic way for construction organisations to make educated choices about BIM investments, increasing long-term profitability and project success.