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Malaysia is pursuing the status of a high-income nation by the year 2020. In tight economic conditions, the government has to improve the value of public spending through increasing its sustainability with the lowest possible investment. Although construction projects contribute to the country’s economic growth and fulfill social needs, they also contribute to environmental deterioration. Besides that, construction projects in Malaysia are criticised for low productivity and failure to achieve client satisfaction. Due to these reasons, the government has introduced the Green Growth concept to promote sustainable development for public projects and Value Management (VM) to improve the projects’ value for money. Value Planning (VP) is the front end of VM, conducted during the early project planning stage. Due to various advantages of integrating sustainability considerations during the early stages, VP is the best platform to achieve value for money and project sustainability at the same time. Sustainable Value Planning (SVP) is a concept that integrates both value for money and sustainability targets in a single mechanism. Effective knowledge sharing is the key driver for SVP. Despite the recognition of the importance of effective knowledge sharing within VP, its contribution in nurturing sustainability integration into the practice remains unclear. Thus, this study is conducted with the aim of developing the Knowledge Sharing Framework For Sustainable Value Planning. This framework explains the constructs involved and their relationships during the SVP in the context of knowledge sharing for Malaysian public construction projects. This study was conducted based on the philosophy of pragmatism and adopted the abductive approach. A two-phase Exploratory-Explanatory research was conducted employing the Mixed-Method Research design. Both quantitative and qualitative data were collected and analysed using various data analysis techniques such as Template Analysis and Partial Least Square of Structured Equation Modelling. This study arrived at a few findings, including: (1) the sustainability themes to be used during SVP; (2) factors that influence knowledge sharing effectiveness during VP; (3) relationship between perceived project sustainability performance and knowledge sharing effectiveness; and (4) The Knowledge Sharing Framework for SVP. Seven constructs were identified that explain the knowledge sharing phenomenon during SVP: (1) individual attitudes towards knowledge sharing; (2) perceived complexity of the knowledge domains; (3) subjective norms of sharing knowledge; (4) dependency on online repositories; (5) knowledge sharing effectiveness; (6) team synergy; and (7) perceived project sustainability performance. Using questionnaire survey involving the Value Assessment Laboratory participants, the relationships amongst the constructs were tested. The response rate of the survey is 84% and 280 observations were finally analysed. Eight direct relationships and two mediating effects were identified that explain the relationships between these constructs. Based on the findings of this study, effective knowledge sharing significantly influences the sustainability considerations during VP. It also partially mediates the relationship between team synergy and the perceived project sustainability performance.

Industrialised Building System (IBS) has been introduced to promote a systematic construction process. The application of IBS offers numerous benefits such as cost and time reduction and enhancing construction quality and safety. In the Malaysian construction industry, IBS application was also expected to minimise the dependency on unskilled foreign labour. There are various issues associated with IBS construction projects such as poor quality building and construction delay, and thus, a qualified and experienced organisation led by a competent project manager is required to overcome the issues. The project manager who possesses the necessary competencies may lead the project to success and achieve its objectives. The objectives of this research are to investigate the competencies required for a project manager in managing IBS construction project; to determine the competencies required within the project management phases; to analyse the most significant competencies within the project management phases and to develop a competency framework for a project manager in managing the IBS construction project. This research is adopting a mixed method approach. A qualitative approach of semistructured interviews was carried out to fourteen interviewees consisting of project managers of construction organisations, managers of installer companies and managers of manufacturing companies. Fifty competencies have been identified during the semi-structured interviews and categorised into project management phases. The identified competencies were then re-evaluated through a quantitative approach to determine the most significant competencies for a project manager. A questionnaire survey was used to measure the significant level of competencies for the project manager. SPSS version 20 was used to analyse the data from the questionnaire survey. The competencies were ranked by using Mean Analysis and Relative Importance Index (RII). Pareto Analysis was then used to cut-off the most significant competencies. Thirty-five competencies out of fifty listed competencies were identified as the most significant competencies formed the primary competencies section; meanwhile, another fifteen competencies established the secondary competencies section in the framework. The framework of project manager’s competency in managing IBS construction project (PM-IBS Competency Framework) were validated by panels represented from the construction organisation, Association of Construction Project Manager (ACPJM), Public Work Department (PWD), Malaysian Asset and Project Management Association (MAPMA), Construction Industry Development Board (CIDB) and project management trainer.