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Building Information Modelling Based Value for Money Assessment in Public-Private Partnership

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Abstract : Over the past 40 years, urban development has undergone large-scale, high-speed expansion, beyond what was previously considered normal and in a manner not proportionally related to population growth or physical considerations. With more scientific and refined decision-making in the urban construction process, new urbanization approaches, aligned with public-private partnerships (PPPs) which evolved in the early 1990s, have become acceptable and, in some situations, even better solutions to outstanding urban municipal construction projects, especially in developing countries. However, as the main driving force to deal with urban public services, PPPs are still problematic regarding value for money (VFM) process in most large-scale construction projects. This paper therefore reviews recent PPP articles in popular project management journals and relevant toolkits, published in the last 10 years, to identify the indicators that influence VFM within PPPs across regions. With increasing concerns about profitability and environmental and social impacts, the current PPP structure requires a more integrated platform to manage multi-performance project life cycles. Building information modelling (BIM), a popular approach to the procurement process in AEC sectors, provides the potential to ensure VFM while also working in tandem with the semantic approach to holistically measure life cycle costs (LCC) and achieve better sustainability. This paper suggests that BIM applied to the entire PPP life cycle could support holistic decision-making regarding VFM processes and thus meet service targets.

Keywords: public-private partnership, value for money, building information modelling, semantic approach

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