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Closing the Loop between Building Sustainability and Stakeholder Engagement: Case Study of an Australian University

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Abstract : Rapid population growth and urbanization is creating pressure throughout the world. This has a dramatic effect on a lot of elements which include water, food, transportation, energy, infrastructure etc. as few of the key services. Built environment sector is growing concurrently to meet the needs of urbanization. Due to such large scale development of buildings, there is a need for them to be monitored and managed efficiently. Along with appropriate management, climate adaptation is highly crucial as well because buildings are one of the major sources of greenhouse gas emission in their operation phase. Buildings to be adaptive need to provide a triple bottom approach to sustainability i.e., being socially, environmentally and economically sustainable. Hence, in order to deliver these sustainability outcomes, there is a growing understanding and thrive towards switching to green buildings or renovating new ones as per green standards wherever possible. Academic institutions in particular have been following this trend globally. This is highly significant as universities usually have high occupancy rates because they manage a large building portfolio. Also, as universities accommodate the future generation of architects, policy makers etc., they have the potential of setting themselves as a best industry practice model for research and innovation for the rest to follow. Hence their climate adaptation, sustainable growth and performance management becomes highly crucial in order to provide the best services to users. With the objective of evaluating appropriate management mechanisms within academic institutions, a feasibility study was carried out in a recent 5-Star Green Star rated university building (housing the School of Construction) in Victoria (south-eastern state of Australia). The key aim was to understand the behavioral and social aspect of the building users, management and the impact of their relationship on overall building sustainability. A survey was used to understand the building occupant’s response and reactions in terms of their work environment and management. A report was generated based on the survey results complemented with utility and performance data which were then used to evaluate the management structure of the university. Followed by the report, interviews were scheduled with the facility and asset managers in order to understand the approach they use to manage the different buildings in their university campuses (old, new, refurbished), respective building and parameters incorporated in maintaining the Green Star performance. The results aimed at closing the communication and feedback loop within the respective institutions and assist the facility managers to deliver appropriate stakeholder engagement. For the wider design community, analysis of the data highlights the applicability and significance of prioritizing key stakeholders, integrating desired engagement policies within an institution’s management structures and frameworks and their effect on building performance

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