

Facility Asset Management (FAM) Business Function from the Context of Smart Buildings (SBs)

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Abstract:

In recent years, the building industry has seen a fundamental transition due to Digitalization Transformation (DX), with the aim of improving efficiency, productivity, sustainability, and cost-effectiveness. In particular, literature has significantly emphasized Smart Buildings (SBs), which are expected to grow in the global marketplace in the coming years. The most noticeable benefits include energy efficiency, increased occupant comfort and productivity, and a reduction in the building's impact on the environment.

Most importantly, the shift to SBs has resulted in major changes to how traditional business practices are carried out. The Facility Asset Management (FAM) domain is one key area undergoing considerable changes to meet the needs of managing functional SBs. Despite this shifting landscape, the changes and prospective extensions to the business areas of FAM in the context of SBs remain largely unexplored.

Thus, to address this limitation, this paper aims to investigate the potential changes (i.e., either the addition of a new function or the expansion of an existing function) of the FAM domain from the context of SBs. To achieve this objective,

- First, based on a generic model of FAM proposed by Jin et al. (2024), a three-level hierarchical classification of FAM business functions for a conventional building is proposed.
- Second, the concept of SBs is thoroughly discussed, including its drivers, features, enablers, and improvement areas.
- Finally, a new FAM business function for SB is proposed, aligning with the distinct characteristics of SBs.

As there are no established functional taxonomies of FAM, the comprehensive breakdown of FAM business functions presented in this study can be used as a standardized functional breakdown of the FAM domain. Moreover, it can also be used to facilitate robust and integrated information management practices throughout the whole lifecycle of SB facilities.

Keywords: Smart Buildings (SBs), Facility Asset Management (FAM), Business Function

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