

Unified Breakdown Structures for Standard Information Exchange in Building and Plant Industry: Variables for Theory and Implementation

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ABSTRACT

The need for efficient information exchange (IE) has been critical more than ever due to the paradigm shift in information technologies of the built environment. Breakdown structures are a driving tool that can result in automated IE among different participating entities. Many authors have acknowledged the strategic benefit of a comprehensive structure for a seamless IE. Nevertheless, existing breakdown structures have not been popular enough to maximize IE's efficiency due to several limitations. In this context, this paper introduces a promising concept named unified breakdown structures (UBS) that facilitate an effective IE in a comprehensive and shared manner. Firstly, an overview of existing breakdown structures was summarized, and the UBS concept is introduced. Secondly, key variables to examine the feasibility of the proposed concept were identified. Finally, the viability of UBS was examined by investigating hierarchal elements of different literatures. Findings and suggestions for future directions were also outlined.