

A taxonomy for Whole Building Life Cycle Assessment (WBLCA)

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Purpose: The purpose of this paper is to present an analysis of common parameters in existing tools that provide guidance to carry out Whole Building Life Cycle Assessment (WBLCA) and proposes a new taxonomy, a catalogue of parameters, for the definition of the goal and scope (G&S) in WBLCA.

Design/methodology/approach: A content analysis approach is used to identify, code and analyze parameters in existing WBLCA tools. Finally, a catalogue of parameters is organized into a new taxonomy.

Findings: In total, 650 distinct parameter names related to the definition of G&S from 16 WBLCA tools available in North America, Europe and Australia are identified. Building on the analysis of existing taxonomies, a new taxonomy of 54 parameters is proposed in order to describe the G&S of WBLCA. **Research limitations/implications:** The analysis of parameters in WBLCA tools does not include Green Building Rating Systems and is only limited to tools available in English.

Practical implications: This research is crucial in life cycle assessment (LCA) method harmonization and to serve as a stepping stone to the identification and categorization of parameters that could contribute to WBLCA comparison necessary to meet current global carbon goals. **Social**

implications: The proposed taxonomy enables architecture, engineering and construction

practitioners to contribute to current WBLCA practice. **Originality/value:** A study of common

parameters in existing tools contributes to identifying the type of data that is required to describe

buildings and contribute to build a standardized framework for LCA reporting, which would facilitate

consistency across future studies and can serve as a checklist for practitioners when conducting the

G&S stage of WBLCA.