Papajohn, Dean, Brinker, Chris, and El Asmar, Mounir (2015). Metaframework for assessment of sustainability ratings for buildings and infrastructure (Submitted).

Abstract:

Many sustainability rating systems have been developed to assess the sustainable development of the built environment. Most rating systems rely on indicators to measure specific project features. However, there is no widely accepted framework to help evaluate sustainability rating systems. This paper contributes to the body of knowledge by developing a Metaframework for Assessing Ratings of Sustainability (MARS). Instead of assessing specific projects, MARS provides a higher-level view by analyzing the sustainability rating systems themselves. Through an analysis of the literature encompassing 95 peer-reviewed publications from multiple disciplines, the authors identified 19 key criteria and organized them into a metaframework that can be used to assess, improve, and compare existing rating systems, and may also serve as a basis to create new rating systems in the future. A MARS scorecard is presented and example applications are provided. Future research will use MARS to evaluate existing rating systems such as LEED and Envision.