

Characterizing Perceived Data Sharing Barriers and Promotion Strategies in Civil Engineering

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ABSTRACT

Despite the proven benefits of data sharing between different stakeholders participating in civil engineering projects, a systematic classification of data sharing barriers and strategies for promoting data sharing in the civil engineering domain is missing. The Data Sensing and Analysis Committee of the American Society of Civil Engineers (ASCE DSA Committee) initiated an investigation to explore the current practices, barriers, and future vision in civil engineering data sharing. The approach is to conduct a literature review and interviews with domain experts to identify and classify data sharing barriers and strategies for promoting data sharing in the civil engineering domain. An online survey then follows, asking the participants having different job functions in various organizations (e.g., for-profit corporations, academic institutions) to prioritize five categories of barriers and three categories of promotion strategies summarized by the authors. The survey results show that: (1) most responders regard data sharing policy and data standard regulation as urgent needs; (2) different stakeholders prefer different promotion strategies due to they face different aspects of the data-sharing problem