

Leveraging an Integrated Information Lifecycle Management Framework – Building and Infrastructure Sectors

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Digital engineering in the built environment has been the subject of changing practice and research for years and is often complicated by inconsistency in data standards from various stakeholders. This project seeks to examine the industry best practices and international standards related to structured and integrated data and develop a practical approach that can efficiently guide industry people to structure their data by leveraging the existing well-established data standards. This will aid the wider adoption and consistent curation of digital information for maintaining and operating assets across the construction supply chain, improving the efficiency of managing community assets, improving the return on investment and ensuring sustainability, resilience and safety.

Objectives

This project will respond to the previously identified needs of industry for a shared and consistent approach and most importantly, its implementation to transfer BIM/DE data from one solution to another without the need to map every model and tool, which may differ from stakeholder to stakeholder.

The specific objectives are to:

1. Address the industry challenge of structuring and integrating quality data for key decision making to create a centralised view of data requirements and how they will be used in project lifecycle, including housing portfolio asset management and road maintenance;
2. Investigate how data (digital or non-digital) can be used to better understand the impacts of decisions by developing a data-driven decision making framework; and
3. Facilitate education for industry and the broader community on the needs and methods of structured data in project lifecycle to achieve efficiency and resilience. This will help to prepare for the wide adoption of building information modelling and digital engineering in the housing, building and transport sectors.

Industry Outcomes

The costs of operating and maintaining an asset in any sector can ultimately be many times the initial capital cost. This project will enable better provision of asset information in a structured, non-proprietary and computable fashion, whilst identifying opportunities across industry for adding value to assets by enhancing the quality and use of such digital asset data. This in turn will support identifying ways of decreasing the cost of operation and maintenance, and of improving the return on investment of asset management, whilst concurrently improving sustainability, resilience and safety.



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