

Unlocking Facility Value through Lifecycle Thinking

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Lifecycle thinking has significant potential for improving the delivery, maintenance and operation of facilities. Industry disaggregation, poor marketing of the value and disparate market drivers have limited the potential for greater uptake along the supply chain. This project will develop a framework that digitally links key decisions in facility design, construction, operation and maintenance to novel decision support platforms. The framework will consider requirements of private and public sectors, providing an agenda that demonstrates the value of digital lifecycle thinking and evidence-based decision making in facility asset management. The framework will also be translated into an education component to broaden the perspective on the role of lifecycle asset management.

Objectives

The aim of this SBEnrc project is to use smart digital frameworks to appropriately capture the information required for key decisions made across the lifecycle of facilities in the housing, buildings, transport, utilities and airport sectors, through developing an automated integrated system for asset management.

The specific objectives are to:

1. Address the industry challenge of integrating different digital platforms for making decisions that suit the overall duration of the facility lifecycle.
2. Identify the role of artificial intelligence in models through the various lifecycle phases of planning, design, construction and asset management to better understand and visualise the impacts of decisions.
3. Facilitate education for industry and the broader community on the needs and methods of lifecycle thinking, not only for the purpose of a project's planning and delivery, but also for the operation and maintenance phases of facilities, unlocking their long-term value.

Industry Outcomes

The project will:

1. Improve understanding of the requirements and challenges faced by industry in relation to key decisions made in managing assets through long-term lifecycle thinking.
2. Develop smart integrated digital models for capturing key decisions during the planning, design, construction, operation and maintenance of facilities and enable visualisation of the implications of decisions made.
3. Help clients/agencies/operators build capacity related to the adoption of structured digital data, to enhance data integration and make better informed decisions.
4. Increase awareness of lifecycle thinking, not only during the construction of a project, but also for the operation and maintenance of facilities, through better education and training and by involving asset managers and operators in the lifecycle strategies developed.
5. Improve the industry's ability to make strategic and sustainable investments throughout the lifecycle of the assets considered, thereby enhancing their value.



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