



The Future of the Built Environment

Final Report 360



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The Future of the Built Environment

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Construction Industry Institute

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Executive Summary

The Construction Industry Institute (CII) sought to expand its portfolio of research topics by identifying and proactively studying potentially disruptive strategic issues. CII challenged Research Team 360 (RT-360) to use scenario planning to map potential futures of the built environment. The researchers analyzed scenarios to identify potentially disruptive strategic issues and thus craft a portfolio of future-based research topics.

This project was framed by a question:

***What potentially major disruptions
await the built environment
in the next 10 years?***

This project used the 2x2 uncertainty scenario planning approach, a tool that frames scenarios around the two elements that are most important and uncertain for the future of a topic. The idea is to spend time thinking about which factors are crucial to the future – especially those with least clarity or vision of how they might play out. The resulting scenarios create a landscape of plausible future developments or outcomes. The possible futures surfaced by this investigation give CII the ability to anticipate potentially disruptive strategic emerging issues, whether they be threats or opportunities.

The results of this project fed the development of overarching programs by the CII Funded Studies Committee (FSC), and the FSC proposed these programs to the CII Board of Advisors in April 2019. Although the programs proposed by the FSC incorporated the findings of this project to a great extent, they did not necessarily match the scenarios and topics described in this report.

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Chapter 1

Mapping the Built Environment

The domain map is a visual representation of the built environment topic organized by categories and sub-categories. It provides a guide for research to ensure that the key aspects of a topic are adequately covered.

This project examined the following seven primary domain categories:

- **Planning** focuses on factors relating to business and project planning.
- **Designing** focuses design-related factors such as BIM, materials choice, landscaping, architecture, safety and integration with surroundings.
- **Staffing** focuses on workers, automation, and related factors such as training, unions, safety.
- **Procurement** focuses on the acquisition of equipment, materials, logistics, and transport.
- **Customers** focuses on needs related to commercial, government, and residential clients.
- **Constructing** focuses on the approaches and techniques for making structures, including factory-built, site-built, modular, and 3D printing.
- **Operating** focuses on factors important to operations, such as power, maintenance, waste management, “smartness,” and landscaping.

