

ABSTRACT

Rethinking Mega-Project Development Strategies: A Case Study of the Central Artery/Tunnel Project

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For the majority of the last century, infrastructure development and management has focused primarily upon capital construction. In addition, a substantial amount of the financing for infrastructure, particularly within the US, has come from federal sources as evidenced by the Interstate Highway System Program and the EPA Construction Grants Program. The proclivity to focus upon the capital development cycle and the reliance upon federal funding have generally limited innovation in approaches to infrastructure development and minimized the importance of lifecycle management. However, new methods for both delivering and financing infrastructure have experienced a rebirth over roughly the last two decades. Integrated delivery strategies such as design-build-operate have increased the emphasis upon viewing constructed facilities as systems and have forced the recognition that sustaining these facilities requires more than just the initial capital investment. Unfortunately, new delivery and financing techniques were not employed in Boston's Central Artery/Tunnel Project, one of the largest infrastructure projects in US history and one that has become notorious for its financial burden. A retrospective analysis demonstrates how 'systems thinking' and delivery innovation could have changed this mega-project's financial situation and system configuration. Most notably, the analysis indicates that the project failed to tap into millions of potential financing dollars from such sources as new property tax revenue. Clearly, the lessons learned from this mega-project can help improve other infrastructure modernization efforts within urban environments.

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