

# A STRUCTURED APPROACH TO CAPABILITY DEVELOPMENT

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**ACCORDING TO THE RAUTAKI HANGANGA O AOTEAROA NEW ZEALAND INFRASTRUCTURE STRATEGY FROM TE WAIHANGA (THE NEW ZEALAND INFRASTRUCTURE COMMISSION), A SIGNIFICANT INFRASTRUCTURE DEFICIT EXISTS, WHICH WOULD REQUIRE SPENDING OF APPROXIMATELY \$31 BILLION PER YEAR TO ADDRESS – DOUBLE WHAT IS CURRENTLY SPENT.**

The New Zealand infrastructure sector is constrained by delivery capacity and a range of complicating factors that may hinder attempts to successfully address this deficit. These include inflationary conditions in the current market and the scrutiny that is being placed on government spending, the constrained fiscal positions of some local government entities, and the increasing complexity and scale of projects and programs.

Importantly, Te Waihanganga has highlighted the delivery efficiency challenges the New Zealand infrastructure sector faces, and has proposed streamlining delivery as a key pillar of the response. Improvements in productivity in the construction sector have lagged those of the economy since 2000, with labour productivity actually decreasing at several points during the past 20 years. To address our infrastructure deficit, we will need to maximise the benefits from every dollar spent. Part of this puzzle is improving our ability to deliver within agreed budgets and timelines – a challenge that is not unique to New Zealand.

We have seen high-profile examples of delays and cost overruns here in New Zealand. Transmission Gully was impacted by COVID-19, but other factors also contributed significantly to the additional \$400 million and extra year of construction required to complete the new motorway. We are not alone, however, as an independent global



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benchmarking report identified that more than two thirds of mega and major projects fail to meet owners' expectations in terms of cost, schedule or desired outcomes.

So, what can we do to improve delivery efficiency and effectiveness?

Rautaki Hanganga o Aotearoa touches on a number of important opportunities in this area, including encouraging greater use of prefabrication; improving the use and uptake of technology in the infrastructure sector; and, importantly, improving our capability to plan, design and deliver projects.

It is useful to think about programs through their three parallel life cycles: funding and financing, capital program, and organisation (focusing on capability). The organisational life cycle is often not given the same attention in the delivery of major programs, and this can create significant challenges down the track. A deliberate approach is needed to put in place the capabilities required to deliver these programs and transition them into operations – whether that be as part of an existing agency, or through special-purpose delivery entities. Without a deliberate approach, there is a risk that capabilities are implemented in an ad hoc manner, resulting in critical gaps.

Capability improvement needs to be implemented in a holistic way that looks at the people, processes, systems, data, governance structures and reporting that is required to be successful. As the scale and complexity of our investment grows, this will become even more critical – not only is there more at stake, but it becomes harder to execute successfully. Projects like the Three Waters Reform Programme, various health reforms, Auckland Light Rail, Additional Waitemata Harbour Connections, Let's Get Wellington Moving, and the Lake Onslow battery project all represent complex and large-scale initiatives that have been identified to help address New Zealand's future infrastructure requirements.

They will, however, require careful program design and implementation to deliver desired outcomes.

As the sector looks to identify and address the capability improvements discussed in Rautaki Hanganga o Aotearoa, adopting the approach set out in this article could help.

Although a structured approach is required, it is important to acknowledge that major programs, and the capability required to deliver them, should be agile. Static capability on a major program could suggest that either the capability has been established too early or that insufficient thought is being put into the upcoming project phases, which may require a different approach. Capability should evolve over the course of a program. For example, a client team or delivery entity may initially require mature Resource Management Act capabilities; but, over time, this requirement will fade, as operations and maintenance capability may ramp-up later in the program as handover approaches.

Crossrail, or the Elizabeth line, has recently opened in London with much fanfare; however, this project was plagued by several rounds of cost increases and delays. A recent report by the Institute of Civil Engineers (ICE) that looked at five significant case studies, combined with Deloitte's experience working with the Crossrail leadership team, gives insight into relevant lessons for our increasingly large and complex projects and programs here in New Zealand.

### AGILITY

Agility needs to be baked into the design of the program from the outset. Establishing a flexible architecture will allow leaders to respond to changing conditions, whether they be internal or external to the program. For Crossrail, a lack of central control across 30-plus major contractors, each with their own degree of latitude to make changes, meant that Crossrail leadership did not have the capability



The new Canary Wharf Station on the Elizabeth line in London, United Kingdom

to assess, manage and respond in an agile way to alterations being undertaken. Having clarity around all internal and external interfaces, and how these will be designed for and managed, is critical.

**EVOLUTION OVER TIME**

The ICE report also notes the importance of transitioning program leadership – emphasising that people with the right skills must be leading at the right time. In 2019, the UK Department for Transport, and the Infrastructure and Projects Authority, also noted the importance of evolving governance, reporting and oversight as programs progress. Understanding key program transition points, and the changes in required capability that come with them, is critical to successful delivery. For Crossrail, insufficient planning around these transition points meant that significant effort was required to establish an entirely new function to manage the critical handover from delivery teams to operations teams late in the program’s life, when delays and cost increases had already occurred.

**KEEPING THE END IN MIND**

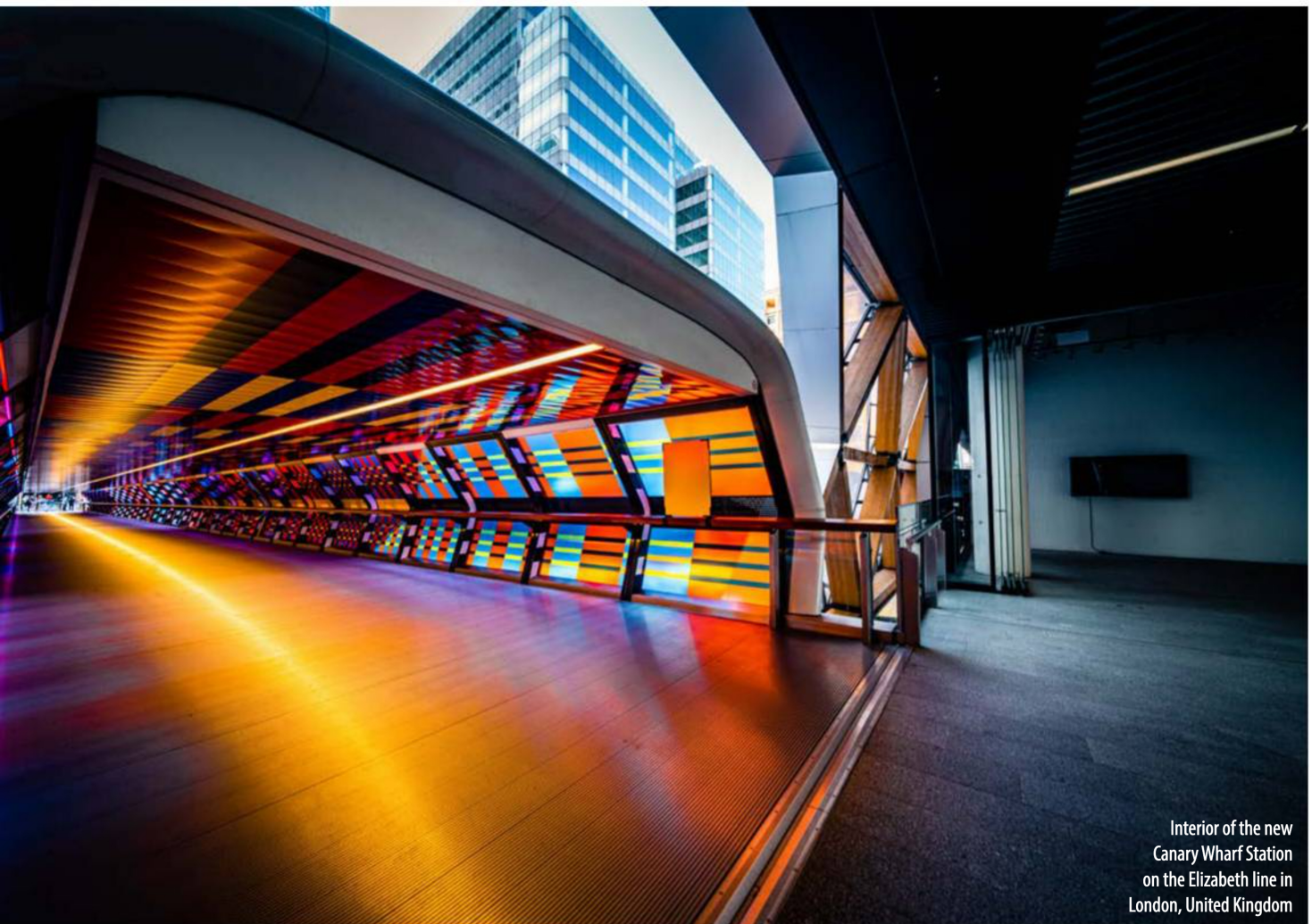
ICE notes that for a program to be successful, the final desired outcome needs to be considered throughout its life. From a capability perspective, this means making sure that the necessary capabilities are sufficiently developed and represented at all points in time. One Crossrail manager

observed that in the case of Crossrail, thinking of civil and systems activities as two parallel projects that needed to be integrated at all times could have helped to facilitate the appropriate rise and fall in prominence of the respective capabilities across the life of the program, while ensuring all were represented throughout.

To help address a capability challenge, the United Kingdom established a ‘government project delivery profession’ to lift skills in government, and provide career pathways and professional development for people involved in both government project planning and delivery – alongside a ‘government property profession’ to support and develop those involved in the ongoing management of property and physical asset portfolios.

As New Zealand looks to tackle its infrastructure deficit and streamline delivery, it will be important for the sector to:

- › take a structured approach to determining and building capability so that the right level of capability exists at the right points in time, including investing in the capability of people delivering the projects
- › ensure that organisational capability and delivery models are designed in a way that permits agility in response to changing conditions
- › develop an early understanding of the key inflection points in program life cycles by keeping the end goal in mind and recognising the steps that need to be taken successfully to achieve this ultimate goal. //



Interior of the new Canary Wharf Station on the Elizabeth line in London, United Kingdom