Innovation in Infrastructure Delivery Models

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DEADLINE FOR FULL PAPER SUBMISSIONS:
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BACKGROUND
Large infrastructure projects create the assets, systems, and networks—such as transport, energy, water, waste, ICT, hospitals, and schools—that underpin and enable a nation’s social and economic development. The cost of creating, upgrading, and maintaining global infrastructure is expected to require US$57 trillion of new investment between 2007 and 2030 (McKinsey Global Institute, 2013). Although infrastructure projects are transformative, they are also notorious for cost and time overruns, and many fail to achieve their original specifications.

Infrastructure delivery starts with a “front-end” planning stage when the sponsor and client engage with multiple stakeholders and define how the project will meet their overall strategic objectives. It extends into an execution stage when clients, delivery partners, and contractors design, construct, integrate, commission, test, and hand over the asset to an operator. Infrastructure projects are often organized as a program of interrelated projects, and portfolio techniques may help organizations, clients, and governments make better choices about how to select projects and how to sequence them over time to achieve strategic long-term objectives.

Delivering infrastructure projects is challenging because of the enormous degrees of uncertainty, complexity, and urgency often associated with them. There has been a growing recognition over the past decade that infrastructure projects cannot be successfully defined and executed using traditional models of project delivery, often based on lowest-price competitive tendering, fixed-price contracting, risk transfer, and inflexible project management processes. Project sponsors (owners and operators of the assets), clients, and their delivery partners (prime contractors and joint venture entities) are exploring innovative new ways of managing large infrastructure projects to achieve successful outcomes and add value over the whole life cycle, from design through project execution to operations. Over the past decade or so, these developments in the world of infrastructure delivery have been:

- **Changing the identity** of organizations involved in infrastructure provision with a shift from public to private provisions across design, construction, delivery, financing, and operation, or new hybrid forms of public–private collaboration.

- **Creating new organizational forms** such as delivery partners, public private partnerships (PPP) and special purpose vehicles (“pop-up clients”) to manage delivery risk and listed infrastructure funds to finance the development and operation of assets.
Establishing new forms of cooperation and coordination to deliver infrastructure projects, such as integrated projects teams, relational contracts, and partnering arrangements.

Scholars have only recently begun to identify how these changes are shaping the ecosystem of public and private organizations involved in the delivery of infrastructure projects (Gil & Beckman, 2009). This knowledge is critical for the field of project management—if it is to produce rigorous and relevant research and be able to address the manifold conditions involved in the delivery of infrastructure projects. This special issue invites papers that address different aspects of the new infrastructure project delivery models, including but not restricted to:

- **Delineating the strategies, structures, and capabilities of new forms of organizations** involved in project delivery such as systems integrators, owner/operators, delivery partners, “pop-up clients,” joint ventures, and PPPs (e.g., Davies, Gann, & Douglas, 2009; Kwak, Chih, & Ibbs, 2009; Kent & Becerik-Gerber, 2010; Davies & Mackenzie, 2014; Winch & Leiringer, 2016).

- **Defining and managing the risks, uncertainties, stakeholders, and complexities encountered in infrastructure delivery**, from front-end planning to project execution and handover (e.g., Miller & Lessard, 2001; Gil & Tether, 2011; Henisz, Levitt, & Scott, 2012; Flyvbjerg, 2014, 2016; Brady & Davies, 2014).

- **Elaborating the transformational potential of digital technologies** (e.g., Whyte & Lobo, 2010; Whyte, Stasis, & Lindkvist, 2016).

- **Exploring the dynamics of value creation and capture in infrastructure delivery** (e.g., Davies, 2004; Brady, Davies, & Gann, 2005; Mathur & Smith, 2013).

- **Creating a learning environment, building capabilities, and generating innovation** to improve infrastructure delivery models (e.g., Gil, 2007; Davies, MacAulay, DeBarro, & Thurston, 2014; Dodgson, Gann, MacAulay, & Davies, 2015).

- **Managing across organizational boundaries** in projects involving multiple parties as well as in programs, portfolios, and the handover from project to operations (e.g., Brady & Davies, 2010; Whyte, Lindkvist, & Ibrahim, 2012; Morris, 2013).

- **Managing and leading new forms of collaborative teams** (Edmondson, 2012).

- **Comparative studies of international infrastructure project delivery models**, including the different institutional structure and stakeholders involved in global projects (Henisz, 2002; Scott, Levitt, & Orr, 2011).

We invite empirical and conceptual contributions, and are open to the full range of social scientific methods.

**SUBMISSIONS**

Please submit papers at [PMI.org/PMJ](PMI.org/PMJ) and specify the name of the special issue: **Innovation in Infrastructure Delivery Models**.

For further information please contact Sam MacAulay, one of the guest editors for this special issue: [s.macaulay@business.uq.edu.au](mailto:s.macaulay@business.uq.edu.au)
AUTHOR AND REVIEWER GUIDELINES

Special issues follow the same guidelines as those for regular articles; however, we expect the authors and reviewers to react promptly with their revisions and reviews. A special issue is a project with a scheduled deadline. While some variance may arise, timeliness still matters more than in a regular submission.

REFERENCES


