



National Infrastructure Commission Studies – Call for ideas response form

Name/Organisation: This response builds on established International Centre for Infrastructure Futures (ICIF) research, ICIF policy briefings and ICIF responses to earlier NIC consultations and was prepared by Dr Tom Dolan (with input from Dr Neil Carhart, Dr Ralitsa Hiteva, Dr Vedran Zerjav, Dr Nazmiye Balta-Ozkan, Dr Simon Jude, Dr Andrew Edkins) on behalf of the ICIF team.

*You have **up to 500 words** to outline the problem for a NIC study to focus on, and if you wish, to explain why this should be a priority. You must demonstrate how your suggestions fulfil the criteria outlined in this 'Call for Ideas'.*

Suggestion:

Connected to the NIC objective 'serve the well-being of UK citizens', undertake a special study to identify and understand the desired outcomes^{1,2} citizens, government and industry actually expect infrastructure to play a role in enabling and to what extent aligning infrastructure decision making with these desired outcomes will enable long term sustainable economic growth to emerge as a secondary outcome.

Rationale:

¹ Dolan, T. and Cosgrave, E. (2016). Aligning systemic infrastructure decisions with social outcomes *Civil Engineering*, 169 (4), 147. doi: 10.1680/jcien.2016.169.4.147

² Dolan, T., Walsh, C. L., Bouch, C. and Carhart, N. (In press 2016) **Infrastructure Strategic Performance Indicators – A New Approach?** *ICE Asset Management Journal*
defines

Desired outcome(s) - A forward-looking statement (or set of statements) of what it is that infrastructure is expected to enable. 'Desired outcomes' provide infrastructure with purpose, infrastructure performance cannot be meaningfully measured without them.

Outcome-oriented performance indicator - A strategic performance indicator directly aligned with one or more 'desired outcome(s)' that infrastructure is expected to enable

1. Does the suggestion deal with a nationally significant issue?

YES – it is widely recognised that the purpose of infrastructure is to enable desired outcomes, one of which is economic growth. However, there is no formal or regular process through which the public are engaged with strategic infrastructure planning. And current approaches to infrastructure planning give primacy to economic growth over other objectives. In a context where the creation of economic growth is the dominant decision-making criterion, and the correlation between infrastructure investment and economic growth is recognised but the causation not fully understood, infrastructure decision making will often focus on responding to short-term challenges.

However, in light of the objectives the Government has given the National Infrastructure Commission:

- foster long-term and sustainable economic growth across all regions of the UK
- improve the UK's international competitiveness
- improve the quality of life for those living in the UK

It is clear that the decision criterion for making infrastructure need to be broadened from solely economic growth to include desired outcomes and managing infrastructure as an interdependent system. A specific study focused on engaging with the public, government and industry to gain greater understanding of what these desired outcomes are is an essential first step in broadening the criterion against which decisions are made.

Gathering knowledge of expectations in this way to identify a set of cross sectoral desired outcomes framed at the system of systems level place citizen engagement, collaborative cross-sectoral engagement, and systemic principles (e.g. system resilience and carbon mitigation) at the heart of infrastructure and engineering decision making processes.

Furthermore, if these outcomes are framed in 'sector, technology and solution neutral' terms, outcomes can create an opportunity to decouple the process of identifying infrastructure need from the process of identifying possible options to resolve that need and play a role in enabling : (i) the identification of common needs that span multiple sectors; (ii) the opportunity for innovative solutions to be considered

In doing so it is possible that decision making aligned with enabling desired outcomes, may indirectly create the foundation for social and business activity that enables economic growth as a secondary outcome. Therefore, the study as well as identifying desired outcomes should focus on improving understanding of the relationship between infrastructure investment and economic growth, and how multipliers from infrastructure investment can most effectively be enabled.

2. Does the suggestion need to be considered now?

Yes – establishing these desired outcomes can provide a guiding framework for infrastructure decision making and enable a clear transparent narrative of the need for infrastructure and justification for infrastructure decisions. This in turn may have the potential to increase public support for infrastructure investments

3. Does the study deal with a challenging issue?

Yes- It addresses a gap in current knowledge and seeks to align infrastructure decision making with

actual expectations, rather than a perception of what these expectations are/should be.

4. Would any potential recommendations be realistic in terms of cost?

Yes

5. Would the NIC add value by considering this issue?

Yes - NIC leadership in engaging the public with infrastructure systems in this way and using this engagement to inform future infrastructure decision making would be very valuable.

Please e-mail this form to: NationalInfrastructureCommissionSpecificStudy@HMTreasury.gsi.gov.uk