

the professional body for  
whole life management of physical assets



National Infrastructure Commission

12 January 2018

To Whom It May Concern,

## **Congestion, Capacity, Carbon: Priorities for National Infrastructure**

The Institute of Asset Management is pleased to respond to the National Infrastructure Commission consultation on Congestion, Capacity, Carbon, Priorities for National Infrastructure.

### **Who Are We?**

The Institute of Asset Management (the IAM) is the international, professional body for asset management, especially physical assets and infrastructure. The IAM develops asset management knowledge and good practice for governments, organisations, individuals and society generally and generates awareness of the benefits of the asset management. Our standards and approach have been acknowledged and adopted by UK Regulators and their regulated utilities since 2004.

The IAM initiated the creation of the international suite of standards for Asset Management (ISO 55000<sup>1</sup> / 55001 / 55002), which are based on BSI PAS 55:2008, which the IAM first released in 2003. Our introductory document, the Anatomy of Asset Management<sup>2</sup> is used worldwide by asset owners, stewards and consultants – and is made freely available from our website. We publish supporting Subject Specific Guidelines and a wealth of other material and guidance, including outputs from international workshops and conferences. (see [www.theIAM.org](http://www.theIAM.org) and What is asset management<sup>3</sup>)

Established in 1994, the IAM has over 22,000 members in over 110 different countries. The IAM seeks to ensure the widespread understanding of asset management and the value of good practice for society. Our knowledge projects, publications and services promote a considered approach to achieving long-term value from physical assets in every organisation, whether large or small, private, public, governmental or not-for-profit. We often collaborate with other organisations and professional bodies. We support individuals and organisations with professional development to foster and demonstrate capability in asset management.

### **Introduction**

The NIC consultation document is wide ranging. Our response addresses specific issues of Asset Management, relevant to the National Infrastructure. The issues relate to many of the sector specific questions.

### **Existing Assets**

The Commission has done a significant amount of work and extensive research to identify national infrastructure needs until 2050; and has defined 7 priority areas where targeted action is needed. While the priorities understandably focus on creating new infrastructure capacity (and mitigating carbon impact), it should be noted that new infrastructure typically adds < 5% additional capacity each year.

<sup>1</sup> ISO 55000 was published in UK and is mandated by BSI – BSI ISO 55000:2014

<sup>2</sup> Asset Management – an anatomy Version 3, December 2015 (first published by the IAM in 2011)

<sup>3</sup> What is Asset Management? <https://theiam.org/knowledge/introduction/what-is-asset-management/>

If existing infrastructure (and the new!) is not maintained and renewed in a timely manner, a significant proportion of the remaining 95% capacity and value could be lost. If the existing infrastructure asset base is left to decline through prolonged underinvestment, it requires a lot more money to bring it back to a serviceable level; and there are examples of this which have been highlighted in the UK press over recent decades, in such diverse sectors as railways or housing. In the USA, for example the American Society of Civil Engineers report provides well-researched evidence that demonstrates this; and the same applies in many other countries, if not all.

This short-term approach does not represent best use of scarce public funds and is not sustainable in the long term. Several studies (e.g. by OECD, WEF and McKinsey) have quantified the level of infrastructure deficit, which runs into several trillions of dollars worldwide, and have referred to this as a 'global crisis'. We must avoid a similar situation developing in the UK.

It is therefore important that the next step of developing a National Infrastructure Plan takes a holistic and balanced approach that combines:

- sustaining existing infrastructure capacity through risk-based maintenance and timely renewals/modernisation;
- targeted enhancements to remove pinch-points and maximise capacity utilisation;
- transformational mega projects to create new capacity where vitally needed; and
- managing demand through a combination of regulation, pricing and social awareness initiatives.

### **Value from National Infrastructure**

Infrastructure is vital to the country's prosperity and quality of life. Infrastructure often acts as a catalyst for renewal/regeneration of cities and regions, connecting jobs and homes, addressing regional and social imbalances and promoting sustainable communities. Government has an opportunity to view all National Infrastructure as an Asset from which the nation obtains value over the long term. This requires a change in mind-set from a focus on the initial, capital cost and provision of infrastructure to the purpose and need for infrastructure, how this is provided and the value it provides to the nation. The UK National Audit Office is considering a value based approach to its assessments rather than a purely cost based one. There are similar high-profile examples in North America, Australia and New Zealand.

There is inevitably a limit to available funding, as indeed there is a limit to the capacity of industry to carry out works or to the disruption that can be tolerated during the implementation of infrastructure work. That naturally leads to a need to prioritise across the whole asset base to balance the competing aspects of asset performance (value generation), costs and risk. This prioritisation must align with stakeholders' (customer/shareholders) priorities.

It is also important that investment in infrastructure is targeted towards achieving specific socio-economic-environmental outcomes on a long term, sustainable basis. This will ensure that the right mix of infrastructure systems (e.g. housing, transport, utilities) are selected to deliver the required outcomes. The conventional silo-approach of creating infrastructure on a piecemeal basis, with business cases for identified schemes/projects, has failed to deliver the predicted business case benefits. Manchester is recognising the value provided by its new trams not only in the narrow context of transport but also the tangible benefits to health and welfare of the affected population.

The 'Rail Value-for-Money Review' commissioned by DfT, led by Sir Roy McNulty in 2011, found that a clear set of aligned objectives for GB rail were lacking, that would allow optimised decision making for GB rail as a whole, across the vehicle / infrastructure divide. Similarly, a robust process or structure was not in place to allow consistent objectives and decision criteria to be applied. The McNulty Review recommendations resulted in the setting-up of the Rail Development Group, which has provided a level of coordination in rail investment planning and development for the industry.

Therein lies part of the challenge for Government. With a relatively short-period in office for each elected Government (compared to the life of the National Infrastructure), there is a risk of short term delivery targets. This is understandable but is not the most appropriate way to achieve the desired outcome: long term value creation. If we are to obtain a proper increase in the value provided by National Infrastructure, prioritisation must be developed using a common approach, developed independently of Government and clearly promote priorities for value generation. This national prioritisation needs to cut across silos within and across the various industries that make up the National Infrastructure provision. We applaud the creation of the NIC and advocate the adoption of a whole-of-life approach.

### **Asset Management Competence**

Achieving this long-term, risk-based approach, requires a change in the level of understanding of asset management in the leadership of many organisations and Government, both national and local. Good practice is emerging globally, a recent example of which is the legally enforceable requirements for an asset management approach published by Ontario<sup>4</sup> in 2017.

The focus on long term value, and how the asset base contributes to this value is central to effective decisions about National Infrastructure. Understanding the risk of failing to meet objectives, understanding how to capitalise on opportunities to generate additional value over the long term and prioritising the allocation of resources accordingly is not only desirable - it is essential if we are to meet the needs of the nation now and over the next fifty years. We need a change in the way organisations think about the management of infrastructure to ensure the country gets most value from the investment being proposed.

This requires both responsible individuals, and organisations, to develop appropriate knowledge and understanding of how value can be achieved in a structured and evidence-based way.

### **An Asset is for Life**

There is often a focus on reducing the cost of construction of a new asset to meet short term spending targets. While Value Engineering aims to reduce the costs of delivery of an appropriate asset, it also often results in assets with capabilities stripped out and/or little opportunity for capacity growth - and which face longer term costs due to additional maintenance and necessary asset improvements as the needs of society / government or businesses change. The IAM clearly supports the principle of achieving the right balance between costs, outcomes and risk in major projects but this must consider the costs through the lifetime of the asset not just the project phase.

The key point in asset management is that value is generated over the full life of the asset and consequently the costs associated with the asset must consider the whole lifetime at the outset. This leads to the use of "whole life value for money" – reflecting the whole life value and the whole life costs to generate that value. This approach quite often leads to different decisions in the construction phase - and indeed may change the nature of the asset constructed.

### **Being in Control**

Organisations internationally have recognised the value of effective asset management and implemented formal approaches to ensure control of their activities and consistency of outcome. As a result, risk is better understood and managed, resources are targeted to where they are most effective and performance improves as a result. It moves organisations to a position where they do not simply follow the minimum legal requirements, but actively consider the wider risks and the consequences for the organisation – should those risks materialise.

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<sup>4</sup> Ontario Regulation 588/17 Infrastructure for Jobs and Prosperity Act, 2015 - Asset Management Planning for Municipal Infrastructure 13 December 2017

Many organisations choose to align their practices with the requirements set out in ISO 55001 which specifies the requirements for the establishment, implementation, maintenance and improvement of an asset management system. The fact that organisations as diverse as Heathrow Airport, National Grid, The Environment Agency, NATS, and London Underground have implemented such approaches underlines the value and relevance of structured asset management to assets in both public and private ownership.

In developing the National Infrastructure, and improving the stewardship of our Infrastructure, the NIC should mandate specific asset management requirements, including those set out in ISO 55001 where these are not already in place.

## Summary

The IAM proposes that the NIC considers the following recommendations as it reviews the consultation responses:

- All organisations involved at any stage of the provision or management of National Infrastructure Assets should adopt the principles set out in ISO 55000/1/2 and be prepared to demonstrate their implementation;
- Government should require all organisations concerned with National Infrastructure (whether public or privately owned) to demonstrate how, and how much, value is to be generated over the specified lifetime of the asset and at what cost, with a focus not just on the organisation's goals but the wider benefits to the nation;
- Government should seek assurance (potentially through regulation for national infrastructure) that value for money is obtained over the whole lifetime of the asset, including the interventions.

For further information or to discuss the recommendations in this Paper, please contact:

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