

Annex B: Note of roundtable hosted jointly by the National Infrastructure Commission and Boston Consulting Group on cost effective delivery of UK infrastructure

The National Infrastructure Commission and Boston Consulting Group (BCG) undertook a joint session with senior leaders from the infrastructure sector on 13 March 2024, with the objective of investigating ways in which UK infrastructure delivery could be improved. There are many examples of excellence in infrastructure delivery. However, there is a perception that the UK generally performs poorly when compared to other countries in the OECD in terms of constructing infrastructure in a timely and cost effective way. Both the Commission and BCG have undertaken in depth analysis to investigate this problem, with BCG publishing a report ([Reshaping British Infrastructure](#)) in February 2024 which identified that in certain sectors of economic infrastructure the UK may have a higher cost base than other comparable countries. The Commission has been examining this issue by undertaking a range of stakeholder interviews to triangulate outturn cost (final project cost upon completion) data against the real world experience of infrastructure leaders. This joint session was set up as part of that engagement, with the objective of defining the extent of the problem, themes which may be exacerbating this problem in the UK context and potential solutions which could be leveraged by government to try and improve the speed and cost effectiveness of UK infrastructure delivery. The session was conducted under the Chatham House Rule.

Part 1: Defining the problem

The first part of the session involved a definition of the problem, to understand what factor(s) are driving anomalies in UK infrastructure delivery, and at what scale. UK infrastructure has a mixed picture of delivery – some highly complex projects have been delivered on time and to budget and could be regarded as being examples of international best practice – others benchmark poorly by international standards, on cost and other metrics.

Participants discussed that the six problems identified in the BCG report as driving up costs in UK projects were broadly right. These were: government setting multiple conflicting objectives for projects; risk aversion, meaning designs are changed and overly elaborate, rather than using a minimum viable product; the planning system, adding multiple opportunities for stakeholders to feed in; contracting which passes risk down the supply chain rather than managing it directly, creating perverse incentives; external pressure to move forward projects before they're ready, which leads to design changes and engineering risks crystallising; fragmentation in the UK infrastructure sector, with a long tail and a lack of capital invested in skills and technology.

The discussion expanded on these themes. In particular, participants reflected on the behaviour of clients as crucial to the successful delivery of infrastructure projects, with many client focussed challenges crystallising at the front end of projects. It was discussed that in the public sector, there has been a lack of discipline by clients when it comes to managing budgets, maintaining a unified scope and delivering to agreed timelines. Many of these problems reflect the lack of capacity in public sector clients to adequately manage projects, including a lack of specialist skills in engineering and procurement, as well as project leadership. This leads to poor outcomes in numerous areas. For example, a theme which emerged from several participants was that the public sector often has a lack of clarity over what it wants. This can be exacerbated by political interference, and the end result is typically projects with multiple unclear (and sometimes contradictory objectives) or choosing high profile 'grands projets' when a minimum viable product approach would be sufficient. It was raised that poor outcome specification can occur despite the high degree of scrutiny that public sector clients face, and this level of scrutiny (which is not typically experienced in the private sector) can further slow decision making and add to uncertainty.

A further theme which emerged from the discussion was the importance of strategic coordination by government, including through long term certainty of funding, clear pipeline(s) of projects in individual

sectors and the positive downstream impacts these measures can have on the construction supply chain. Contrasting examples were provided of both good and bad UK practice. On the one hand, recurrent (and sometimes unrealistic) government strategies, which are not followed up by consistent funding, have created uncertainty and precluded cost effective delivery. It was raised that this contrasts with practice overseas, where clear and consistent strategies – such as Deutsche Bahn electrifying around 200km of track every year – have facilitated long term planning to the benefit of lowering lifecycle costs. On the other hand, long term settlements – in rolling funding cycles – for agencies such as National Highways and the Environment Agency, have helped deliver efficiencies and provided certainty which has allowed the supply chain to invest. In sectors such as nuclear, government has set a strategic ambition which has allowed for greater forward planning. But strategic coordination by government is important even between sectors – the proliferation of multiple large scale infrastructure projects (such as Hinkley Point C, and HS2) has led to a pull on resources in certain areas, increasing labour costs and localised competition for specialist skills and resources. Participants discussed that this demonstrates how a lack of join up by government can have a detrimental (and unforeseen) downstream impact on cost effective delivery.

A further theme which was raised was how the characteristics of different types of projects themselves can have an important bearing on costs. Many recent UK projects – including Hinkley Point C, HS2, Crossrail, and Sizewell C – are megaprojects. Scale brings complexity, which together with programme cost can increase exponentially as projects grow larger. There is a ‘sweet spot’ of what the system is available to deliver. Furthermore, issues such as planning, community engagement, and communicating the benefits of infrastructure to users, may increase with the size and complexity of projects. This is particularly the case with planning, where the cost of development consent orders for megaprojects is significant, although issues with the planning process were raised by stakeholders across all projects.

Finally, there was a perception from participants that lessons from projects are not sufficiently learned, and clients do not share best practice and data. A lot of things relating to infrastructure construction are basic principles which are well known, yet still these can be forgotten when new projects are developed.

Part 2: Solutions

The second part of the session focussed on how to address some of the solutions identified in part one.

A recurrent theme in the discussion was the importance of government setting clear strategic direction. Evidence was cited of the impact of longer term settlements in sectors such as in roads, where National Highways have been able to drive efficiencies in their supply chain and reduce costs by having five year funding settlements and a consequent pipeline of work. This also has an important impact on the development and maintenance of specialist skills, where a continuous pipeline can act to keep these skills in the UK labour market. Finally, having a clear national strategy was discussed as a pre requisite for improving public engagement on infrastructure – clarifying the benefits of projects to the public is vital, as it is the public who ultimately pays for the bulk of economic infrastructure.

The way in which public sector clients manage programmes was discussed. It was observed by some that private sector clients tend to be more disciplined than those in the public sector and that public sector clients should adopt this discipline, particularly when specifying outcomes and budgets on projects, including by using a fixed budget which contractors are not permitted to exceed. This already happens in many international projects, where designers are required to demonstrate how they can meet the target budget prior to receiving approval. This would require closer collaboration between contractors and clients on projects. It also requires a more realistic set of requirements being specified at the front end of projects by the client.

A further area of discussion regarding solutions focussed on regulation. Recently, both consenting and regulatory frameworks have acted as major barriers to cost effective delivery. For example, it was raised that for HS2, even with the hybrid bill process, huge numbers of consents (over 4,000 in one section) from planning authorities, public bodies and water companies were required to proceed with construction, slowing down the pace of delivery. In the nuclear sector, the culture of ‘continuous improvement’ was regarded as an impediment to controlling costs on major projects; however, close cooperation between clients and regulators – which has occurred recently in the nuclear sector – was seen as a possible solution

to the impact on costs not being considered in the evolution of regulatory frameworks. It was also raised that on environmental regulations, the relationship between regulation and cost was highly complex in the context of the 'cost of inaction' on climate change. Less stringent regulation may not always lead to a reduction in lifecycle infrastructure costs when environmental impacts are considered. Nonetheless, there is a need for the impact of costs to be considered when new regulations are designed.

Summary of solutions proposed by the group:

- Government strategy – government should set much clearer strategic direction in infrastructure sectors, including by providing longer term funding settlements and a pipeline of projects in sectors where appropriate.
- Client capability – there needs to be a clearer focus on what the public sector wants from projects, including better outcome specification. Clients should provide contractors with a fixed budget and ensure that these are not routinely exceeded, and that risk sharing is more effectively managed. Public sector clients should learn best practice from the private sector in terms of cost discipline.
- Regulation – the impact on cost effective delivery needs to be more actively considered by public bodies in the evolution and future design of regulatory frameworks, including in the planning / consenting system.

Annex: Agenda and list of organisations represented

Agenda

5.30pm

Welcome and introductions

Patrick Roche, Senior Partner and Managing Director, Boston Consulting Group followed by opening remarks from Sir John Armitt, Chair, National Infrastructure Commission

Part 1: defining the challenge

Raoul Ruparel, Director, Centre for Growth, presented analysis from 'Reshaping British Infrastructure: Global Lessons to Improve Product Delivery' on how the UK performs on the cost and speed of infrastructure delivery relative to comparable countries.

James Heath, Chief Executive, National Infrastructure Commission and Tim Chapman, Partner & Director, BCG chaired group discussion covering the drivers of cost in UK economic infrastructure projects, covering project scope and specification; design, delivery and construction; and policy and regulatory environment.

Part 2: how to overcome the challenge

Julia Prescott, Deputy Chair, and Michele Dix, Commissioner, National Infrastructure Commission reflected on the discussion in Part 1.

James Heath and Tim Chapman chaired a group discussion on how to overcome the barriers identified.

8.30pm

Formal discussion close

Organisations represented

National Infrastructure Commission
Boston Consulting Group
Transport for London
Infrastructure and Projects Authority
Arup
Skanska UK
Pinsent Masons
National Highways
Major Projects Association
Severn Trent
Network Rail
Institution of Civil Engineers
Sizewell C
National Audit Office
Mace
East West Rail Ltd.