

WHY DOES RADICAL UNCERTAINTY MATTER FOR MAJOR PROJECTS?

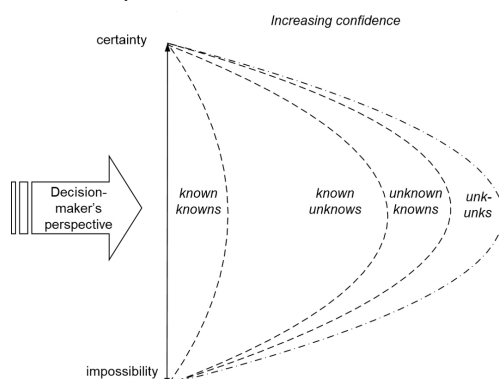


Highlights from the Major Projects Association event held on 21st October 2020

'The fundamental point about radical uncertainty is the unknowability of the future.'

Prof Graham Winch, Professor of Project Management, Alliance Manchester Business School

Sir Mervyn King and John Kay's recent book *Radical Uncertainty* has cast light on important challenges faced by major projects. It highlights different categories of risk and uncertainty that decision makers must deal with.



(Winch, G.M. (2010) *Managing Construction Projects* (2nd ed). Oxford, Wiley-Blackwell, 2010. Figure 13.2)

The challenge goes beyond the 'known knowns'. Projects face many situations where the possibility of something occurring is known, but there is no accurate way of assessing its probability or impact. Conventional estimating models do not work in such cases. The Covid-19 crisis is an example of the scale of the potential impact of these 'known unknowns'. Also important are 'unknown knowns', i.e. factors which projects could and should have known about. The final category, 'unknown unknowns', (unk-unks) are totally unforeseeable events. They are extremely rare.

This Major Projects Association seminar explored how projects can cope with the radical uncertainty around known unknowns and unk-unks, and the implications for project practices.

THE USES AND ABUSES OF NARRATIVES

'In a highly uncertain project environment, spanning many years, a compelling narrative to act as a North Star is critical.'

David Hughes, Strategy and Programme Director, Transport for the North

A clear narrative is a helpful way of stabilising an uncertain environment, particularly for large, complex projects. The narrative has a key role in explaining why a project should be carried out and persuading external stakeholders to get behind it.

Crossrail is a good example of this type of shaping narrative. The concept of linking four engines of growth in South East England (Heathrow, West End, City, Canary Wharf) has not been seriously challenged during the project's long lifespan.

The difficulties that Crossrail has faced over the last two to three years do however highlight the importance of the multiple narratives at play within major projects. Several contributors acknowledged that a delivery narrative about civil engineering excellence took hold rapidly at Crossrail, which almost certainly contributed to insufficient attention being given to risk and uncertainty associated with systems integration.

The problems that came as a surprise to Crossrail were often unknown knowns, that for cultural reasons do not come to the surface. King and Kaye stress in their book that the narrative is not just a story that explains why a project should be carried out, it is also a reference narrative which needs to be tested and retested to ensure it is robust.

In a further use of narratives, Lisa Kelvey of KPMG argued that decision makers faced with complex, uncertain situations can become stuck. Uncertainty causes fear, leading to decisions being repeatedly postponed, which in turn can add further complexity due to changing context and new requirements.

Breaking decisions down into a series of narratives, that also demonstrate their linkages and interdependencies, has proven to be a way of breaking the decision-making logjam on projects across a range of sectors, including infrastructure and defence.

BENEFIT-COST RATIO (BCR) AND THE GREEN BOOK

'We want to put the Green Book in its place – it doesn't make decisions, Ministers make decisions.'

Tom Aldred, Green Book Review Team, HM Treasury

Tom Aldred of HM Treasury said the Green Book should be seen as a way to illuminate the best means of achieving strategic objectives and bring to the surface key uncertainties and assumptions. Unfortunately, a perception has grown that mastering the Green Book is 'the dark art' that must be perfected to get a project approved.

This creates a risk of effort being expended on 'BCR-jacking' and achieving a spurious accuracy, when the Green Book is better seen as a set of thinking tools for improving the quality of proposals aligned to the strategic and political priorities of Government.

Paul Hammond of Mott MacDonald expanded on this theme, arguing that the way the Green Book is used is symptomatic of an infrastructure industry that has too much invested in practices that are closer to advocacy and appraisal. Appraisal tools are used to be 'precisely wrong' about a future that never aligns to our models. Hammond suggested that we should switch from a 'predict and provide' to a 'decide and provide' approach, backed by the use of robust scenarios that will help projects understand the uncertainties they face on the path to their objectives and the levers available to manage them.

UNCERTAINTY AT THE PROGRAMME LEVEL

The tools used to deal with uncertainty and risk at the major project level can give the wrong answer at the programme scale. Alan Couzens of Highways England observed that individual projects, appraised in isolation, can be rejected even though the tools available at portfolio level (strategic alignment, rescheduling, reprioritising, contingency etc.) mean that the overall level of risk and uncertainty is acceptable for the predicted benefits.

DEALING WITH UNCERTAINTY THROUGH THE LIFE CYCLE

'How much do we think about which requirements need to be understood in terms of their uncertainty and interdependency?'

Isabel Coman, Managing Director of In House Services and Estates, House of Commons

Isabel Coman of the House of Commons Estate reminded us that projects need to analyse the uncertainty around individual requirements, their interdependency and the impact this has on the project's overall predictability and resilience. As projects move through the life cycle, requirements management

can become siloed in specialist teams while the rest of the project focuses on delivering the solution. If leadership in all parts of the supply chain dedicated more time to continuous review and reappraisal around requirements, could this unlock greater resilience and efficiency in the delivery phase?

Tim Chapman of Arup added that if we want to prevent uncertainties crystallising into risk, trust and transparency are vital. Project leaders can have positive dashboards when people inside the project know things are going seriously wrong. Culture, organisation and incentivisation need to ensure problems are spotted and communicated. More attention and management time should be dedicated to the complex, messy, uncertainties that only become apparent as the project plays out. Lee Hillyard of Turner & Townsend urged projects to use any headroom created to improve the quality of horizon scanning.

Ex Transport Minister Andrew Jones MP expressed frustration at the length of time it can take projects to move from planning into delivery, noting that this delay is itself a great driver of uncertainty. This chimes with the Infrastructure and Projects Authority's recent advice to commit more resources to project initiation – investing in the right studies, investigations and modelling that are needed to drive effective delivery.

POINTS FOR FURTHER DISCUSSION

- Are scenarios really a better way of dealing with uncertainty in major projects than standard risk management processes?
- Could we identify an objective standard of project readiness that would give confidence that known unknowns have been identified? How do we unlock the resources need to carry out this depth of project initiation?

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Chair: Professor Graham Winch, Professor of Project Management, Alliance Manchester Business School

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Balfour Beatty plc
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