Infrastructure and Projects Authority and Infrastructure Client Group

Infrastructure shapes the way we live and is the foundation on which a successful economy is built. Transport links get us where we need to be, energy systems power our homes and businesses, and digital networks allow us to communicate. It is vital to improving our quality of life and integral to the creation of a vibrant economy.

The government is committed to delivering the high-quality infrastructure that the UK needs to build and sustain a more productive economy. To achieve this the government has committed to spend £100 billion on infrastructure this Parliament. This investment will create jobs and raise productivity.

To help realise the benefits from this investment the government created the Infrastructure and Projects Authority (IPA) as the government’s centre of expertise for project development and delivery. The IPA’s Cost Review and the NAO report on delivering major government projects identified the early stages of projects as a common source of failure on infrastructure projects. The original Project Initiation Routemap (Routemap) helped address these challenges and this update, which expands to include all construction projects and adds new modules, will enhance that work, helping provide the UK with the infrastructure it needs to thrive.

The Infrastructure Client Group demonstrates the value of effective collaboration between government and industry to support the development and exchange of best practice to improve delivery. Initially brought together by government to support the work of the Infrastructure Cost Review, the membership of this group is representative of the major infrastructure clients. It has been instrumental in setting a common agenda for change and supports a programme of activities and applied knowledge transfer across the public and private sectors. The success of this initiative has been made possible by the continued and valuable support from industry and academic partners.

Preface

Since the launch of the Routemap over 20 major projects across the transport, water, flood defence and energy sectors have undergone a Routemap assessment, helping to drive their successful delivery. Yet there is still work to do as projects continue to face challenges.

The recent NAO report on Delivering Major Projects in Government (2016) and the Infrastructure UK Cost Review (2010) both noted that projects continued to encounter problems in their early stages - and, particularly, that projects often publicly announced timelines and costs before plans have been properly tested. The report also identified a lack of project capability especially at portfolio level. The Routemap will help address these challenges by offering support on strategic decision making during project initiation based on the latest thinking and knowledge acquired from delivery of Major Projects applied in a series of structured exercises. It enables sponsors and those responsible for project delivery to properly align complexity with the necessary capabilities and other enhancements to ensure a more successful outcome.

The Project Initiation Routemap is a product of government working collaboratively with industry and the University of Leeds, through the Infrastructure Client Group.

Building on its success with economic infrastructure, the Routemap is being expanded to cover all construction projects and longer-term transformation projects as well. As part of this expansion two new modules are being added, for Risk Management and Asset Management alongside the existing topics on Requirements, Governance, Procurement, Execution Strategy and Organisational Design & Development. The new Risk Management Module covers the best practice in how to develop the project’s approach to risk management during the initiation phase. The Asset Management Module provides advice on how to structure and manage the interaction between the project team and the corporate asset management function to successfully deliver project outcomes.

Tony Meggs
Chief Executive of the Infrastructure & Projects Authority

Andy Mitchell
Chair of the Infrastructure Client Group

June 2016
**Introduction: Align for Success - Execution Strategy**

The Project Initiation Routemap (Routemap) is an aid to strategic decision-making. It supports the alignment of the sponsor and client capability to meet the degree of challenge during initiation and delivery of a project*. It provides an objective and structured approach to project initiation founded on a set of assessment tools.

The assessment tools help determine:
- The context and complexity of the delivery environment;
- The current and required sponsor, client, asset manager and market capability;
- Key considerations to enhance capability where complexity-capability gaps are identified.

The Routemap provides further diagnostics on addressing common capability gaps that typically need to be enhanced, such as blurred governance structures, or lack of alignment between benefits and requirements. These areas are explored in more depth in a number of Align for Success modules.

The purpose of each Align for Success module is to help:
- Gain a greater understanding of the complexity-capability results;
- Identify and analyse options to better align complexity-capability;
- Plan for successful achievement of desired outcomes;
- Assure enhancement plans during implementation.

Application of the Execution Strategy module helps to optimise the way in which the project is organised to fulfil the requirements, adhere to the governance needs, manage risk, and identify the delivery strategy from which other strategies can be cascaded (or formulated).

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*Throughout this guide the term project is used to mean both project or programme.*
Introduction: Whether to use the Execution Strategy Module

Whilst the table below only shows those modules where Execution Strategy is the primary module, it should be noted that the majority of key findings identified in the Routemap are strongly related to the Execution Strategy.

Typical findings relating to Execution Strategy

If the findings from your complexity-capability assessment identify any of the following issues (or similar ones) then this Align for Success module on Execution Strategy may help. Use the Considerations tables that follow to diagnose enhancements that may be required.

- Project team forecasts for time, cost and benefits are not supported by realistic plans and controls resulting in low confidence of them being met.
- The delivery team is over-focusing on single element of execution (e.g. just on implementation and not enough on operational support).
- The delivery team has not established any continuous improvement capabilities therefore there are likely to be missed opportunities to apply efficiencies or lessons learned.
- Through the life of the project there is little provision for or anticipation of potential scope changes caused by changes to external factors.
- It will be difficult to prove success because the benefits are not defined in tangible or measurable terms.
- It is not clear how the deliverables align with or contribute to expected benefits, therefore it is unclear whether the totality of the benefits will be realised by the project.
- A Delivery Model (e.g. Public-Private Partnership) is being proposed that the sponsor/client organisations do not have previous experience of applying successfully, therefore may need capabilities they currently do not have.
- Slow decision-making is likely to absorb management time and if left unresolved will lead to project delays.
- There are too many layers, or unclear decision-routes may result in unnecessary effort and duration to gain approvals.
- Lack of accountability, as people (or organisations) are able to make decisions for which they are not fully accountable.
- The accountability for risk does not match the organisation’s capability or appetite to manage the risk.
- There is a disjointed relationship between sponsor, client, asset manager and supply chain.

<table>
<thead>
<tr>
<th>Modules that help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
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</table>

Tip: This module should not be used in isolation. It is assumed you have already completed the Complexity - Capability Gap Analysis in the Project Initiation Routemap Handbook and have identified issues with Execution Strategy.
**Introduction:** Whether to use the Execution Strategy Module

**Typical findings relating to Execution Strategy**

If the findings from your complexity-capability assessment identify any of the following issues (or similar ones) then this Align for Success module on Execution Strategy may help. Use the Considerations tables that follow to diagnose enhancements that may be required.

- There is a lack of understanding of the extent of new capability required by the client to deliver the project.
- The approach for implementing the capability enhancement is inappropriate, or the scale of change is underestimated.
- Changes to capability requirements at transition points are not identified, anticipated or prepared for (e.g., transitioning from design phase to build phase).
- A Client Model (e.g., alliancing) is being proposed that the client/supply chain organisations do not have previous experience of applying successfully, therefore may need capabilities they currently do not have.
- Contract incentives appear to be misaligned to sponsor’s requirements or Client Model, which may mean the supply chain performs contrary to expectations.
- A procurement model is being proposed that the client/supply chain organisations do not have previous experience of applying successfully, therefore may need capabilities they currently do not have.
- The client over-prescribes how work should be done thus may miss out on innovation and value-add from the supply chain.
- The market appetite to support the project is unproven.
- There is a lack of understanding of the extent of capability development required by the market to deliver the project.
- The current supply chain structure for the market is convoluted resulting in inefficiencies and failure to integrate.
- The project initiation and delivery focuses on processes to the detriment of outcomes and associated asset management goals.
- There is no strategic engagement with the operators and/or supply chain to ensure that the project solution is defined, developed, constructed and handed over appropriately.

**Modules that help**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Governance</th>
<th>Execution Strategy</th>
<th>Organisation</th>
<th>Procurement</th>
<th>Risk Management</th>
<th>Asset Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary module for help</td>
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<tr>
<td>Related module for help</td>
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</table>
**Introduction:** Whether to use the Execution Strategy Module

**Typical findings relating to Execution Strategy**

If the findings from your complexity-capability assessment identify any of the following issues (or similar ones) then this Align for Success module on **Execution Strategy** may help. Use the **Considerations** tables that follow to diagnose enhancements that may be required.

| Poor decision-making, governance structures and processes undermine the integrated asset strategy |
| Poor development and retention of Asset Management capability leads to inadequate asset management and, in turn, to less than optimum whole life value |

**Modules that help**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Governance</th>
<th>Execution Strategy</th>
<th>Organisation</th>
<th>Procurement</th>
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<th>Asset Management</th>
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</tbody>
</table>

**Tip:**

This module should not be used in isolation. It is assumed you have already completed the Complexity - Capability Gap Analysis in the Project Initiation Routemap Handbook and have identified issues with Execution Strategy.
Why Execution Strategy Matters
**Why Execution Strategy Matters: What is Execution Strategy?**

Execution Strategy is focussed on providing a common purpose and clear direction to all parts of the organisation including partners and suppliers.

An execution strategy enables the Sponsor and Client to gain an explicit common understanding of how the project will be delivered and the corresponding responsibilities of each party. It answers the question, “How will the client deliver the sponsor’s requirements?”

An execution strategy should be updated and maintained throughout the project’s lifecycle.

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**Why is an execution strategy needed?**

Four of Cabinet Office’s common causes of failure relate to how a project is set up to be delivered. Once decisions are made on what the project needs to deliver, who will deliver it and how it will be funded and governed, the remaining decisions centre on how it will be managed through to completion.

In many instances trials of the Routemap found that the execution strategy did not meet the unique needs of the project in terms of setting out how the project would address the challenges it faced.

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**Characteristics of a good execution strategy**

A good execution strategy will:

- Clarify interfaces between the sponsor and the client;
- Clarify interfaces between the client and the supply chain;
- Identify key transition points and hand-offs in the project’s life;
- Define the delivery approach;
- Ensure the delivery approach remains flexible;
- Enable continuous improvement through the project life;
- Help maintain focus on the full project lifecycle and the end point in particular.
Considerations
Considerations

Execution Strategy is structured around and therefore has a strong relationship with all of the Align for Success modules within the Routemap.

The client’s execution strategy should be based on the headings in the considerations table in this section. In addition to these areas, the strategy will also need to take account of governance, organisational design and development strategies, stakeholder management and communications, and capacity and resource plans. Information on each of these areas is to be found within other modules in the Align for Success series.

The following tables outline some of the key considerations under each heading. These headings could be used to support and facilitate stakeholder working, which will help develop the right execution strategy.

Tip:
It may be helpful to review the examples given in the supporting material prior to using the following considerations tables.
### Considerations: Alignment

<table>
<thead>
<tr>
<th>Key prompts</th>
<th>Considerations</th>
<th>What may help</th>
</tr>
</thead>
</table>
| **Understanding of vision, requirements and context** | - Is there a clear and concise description of the requirements and outcomes that are to be delivered? Are they understood by the delivery team? Have they been signed off and documented?  
- Are the whole-life financial and cost models aligned with the requirements?  
- Do the requirements distinguish between the sponsor’s requirements (e.g. benefits/outcomes) and the client’s response to the sponsor’s requirements (e.g. outputs)? | Requirements module  
Ref [11] |
| **Governance alignment** | - Are the governance arrangements clearly defined throughout the life of the project?  
- Does the execution strategy define the project governance arrangements and how they align with corporate arrangements?  
- Is the scheme of delegation under which the project will be delivered clear, and does it cover the types of decisions the project may need to make or request?  
- Are the governance arrangements reflected in commercial and procurement strategies?  
- Are there defined review and approval processes for time, cost, benefits?  
- Does the governance arrangements exert sufficient control without introducing unnecessary bureaucracy (from sponsor through to supply chain) | Governance module  
Ref [12] |
| **Risk & challenges** | - Has a SWOT assessment (or equivalent consolidation of prior learning) been completed prior to setting the project organisation and delivery strategies?  
- Has a formal risk assessment been undertaken and factored into the delivery strategies?  
- Are the strategic risks that could affect the project understood by the sponsor, the delivery team, partners and the supply chain?  
- Are the defined risk policies and processes reflected in the commercial and procurement strategies?  
- Does the commercial structure determine how risk will be allocated through the supply chain?  
- Is the approach to risk management integrated into the cost estimating and forecasting process? | Ref [3], [8], [13] |

#### Tip
It may be helpful to review the following documents:  
- Project development agreement  
- Sponsor’s requirements  
- Governance framework  
- Project execution strategy (if available)

Note: Further Guidance contains details and links for each document reference - Ref [ ]
### Considerations: Performance

<table>
<thead>
<tr>
<th>Key prompts</th>
<th>Considerations</th>
<th>What may help</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project objectives &amp; performance targets</strong></td>
<td><a href="#">Are there defined objectives and performance targets for the project that are directly aligned with the sponsor’s requirements and governance arrangements?</a></td>
<td>Ref [1], [2], [9]</td>
</tr>
<tr>
<td></td>
<td><a href="#">Have the assumptions that have been made in setting objectives and performance targets been captured and challenged? Is there a mechanism to continually review the on-going validity of the assumptions?</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="#">Is the cost base to be used in initial estimating and project forecasting documented and agreed (source data, price time base, cost structure)?</a></td>
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<tr>
<td></td>
<td><a href="#">Have the measures for the performance targets been established (type, frequency, method of measurement)?</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="#">Does the performance model align objectives throughout the team and the supply chain? Does the commercial strategy align with the performance model?</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="#">Have the appropriate operating criteria been defined and reflected in the project objectives?</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="#">Are the critical success factors agreed and documented?</a></td>
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<tr>
<td></td>
<td><a href="#">Is there a clear approach to continuous improvement. Is this enabled by improvement targets for all project deliverables, including efficiency?</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Controls strategy</th>
<th></th>
<th>Ref [1], [2], [7]</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="#">Is the responsibility for management of project controls clearly identified?</a></td>
<td></td>
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<tr>
<td><a href="#">Are there defined review points to assess whether the project approach is still delivering what is required?</a></td>
<td></td>
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</tr>
<tr>
<td><a href="#">Have critical decision points and project milestones been identified and documented?</a></td>
<td></td>
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</tr>
<tr>
<td><a href="#">Has the basis for control of time, cost, scope, risk, benefits and quality been agreed and documented, including change control?</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="#">Are project control processes aligned throughout the supply chain?</a></td>
<td></td>
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</tr>
<tr>
<td><a href="#">Are the balance of controls for time, cost scope, risk, benefits and quality aligned to the needs of the project?</a></td>
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</tbody>
</table>

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**Tip**

It may be helpful to review the following documents:
- Project development agreement
- Sponsor’s requirements
- Governance framework
- Project execution strategy (if available)

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Note: Further Guidance contains details and links for each document reference - Ref [ ]
## Considerations: Delivery

<table>
<thead>
<tr>
<th>Key Prompts</th>
<th>Considerations</th>
<th>What May Help</th>
</tr>
</thead>
</table>
| **Organisation** | - Are the key roles understood and documented, e.g. sponsor, client, customer, strategic partner, supplier?  
- Is there a coherent strategy for utilisation of in-house capability alongside supply chain capability?  
- Have the current and future capabilities required to deliver the project requirements been identified, are they reflected in development plans, for both in house and supply chain capabilities?  
- Are the required values and behaviours defined? Has the means for them to be embedded in the delivery team been identified or established? Has the means for them to be used as part of partner selection and engagement been identified or established? | Organisational Design 
& Development module  
RACI  
Ref [10], [14] |
| **Delivery strategies** | - Has the content, ownership and structure of the project execution strategy been defined and documented? Does the structure enable outcomes to be aligned and cascaded throughout the life of the project?  
- Does the project approach allow for flexibility through the project to cater for changes to requirements or to the delivery environment? | Procurement module  
Organisational Design 
& Development module  
Ref [1], [2], [4], [5], [6], [7], [8], [9], [13] |
| **Project structure and approach** | - Does the project approach allow for flexibility throughout the life of the project to cater for changes to requirements or to the delivery environment?  
- Has the project structure and approach been assessed for whether it is best managed as a portfolio, programme or project?  
- Have the key transition points been identified, and is there a defined approach as to how they will be managed? | Supporting Material pg 16  
Ref [1], [2], [7] |

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**Tip:** It may be helpful to review the following documents:  
- Project execution strategy and subsidiary documents (if available)  
- Organisation chart

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*Note: Further Guidance contains details and links for each document reference - Ref [ ]*
Supporting Material
Using the wrong delivery approach is one of the common causes of programme failure identified by the Cabinet Office, e.g. using project management to manage a programme or programme management to manage a project. Rather than getting drawn into a debate over definitions of what is a project or what is a programme it is more useful for organisations to consider the characteristics of the work and then select the delivery approach that best manages those characteristics. The table below highlights some of the key characteristics that distinguish projects from programmes.

<table>
<thead>
<tr>
<th>Simple</th>
<th>Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristics of the work</strong></td>
<td><strong>Note: major projects and programmes can have similar characteristics and both benefit from applying a programmatic approach</strong></td>
</tr>
<tr>
<td>Delivering incremental change</td>
<td>Delivering step-change in capability / business transformation</td>
</tr>
<tr>
<td>Driven by specification of products to handover</td>
<td>Driven by vision of “end state” to be achieved</td>
</tr>
<tr>
<td>Scoped and bounded by outputs</td>
<td>Scoped and bounded by benefits</td>
</tr>
<tr>
<td>Predefined path</td>
<td>Perhaps no pre-defined path</td>
</tr>
<tr>
<td>Benefits usually realised after project closure</td>
<td>Benefits realised during and after the programme</td>
</tr>
<tr>
<td>Finite lifespan</td>
<td>Perhaps undetermined lifespan</td>
</tr>
<tr>
<td>Mostly ‘1’s’ (Low) in the DECA</td>
<td>Mostly 2s and 3s (Med/High) in the DECA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Management focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control of activities to deliver outputs to time, cost, quality targets</td>
</tr>
<tr>
<td>Managing dependencies between products</td>
</tr>
<tr>
<td>Product integration</td>
</tr>
<tr>
<td>Managing product handover</td>
</tr>
<tr>
<td>Removing ambiguity</td>
</tr>
<tr>
<td>Delivering outcomes to achieve benefits targets</td>
</tr>
<tr>
<td>Managing dependencies between projects</td>
</tr>
<tr>
<td>Integration of people/systems/organisation (‘Blueprints’)</td>
</tr>
<tr>
<td>Managing transition/change</td>
</tr>
<tr>
<td>Managing ambiguity/Adapting to change</td>
</tr>
<tr>
<td>Intelligent clienting, Ref [14]</td>
</tr>
</tbody>
</table>
Supporting Material: Execution Strategy & the Project Lifecycle

This “V Diagram” shows a project in both a time dimension (left to right) and an organisational dimension (top to bottom).

It illustrates the pivotal role that execution strategy plays in aligning the activities of the client delivery team with the sponsor’s requirements and the governance arrangements. It also illustrates how it pulls together the strategies for organisational design, organisational development, procurement and scope management.
Supporting Material: Example Execution Strategy

Extract from Crossrail’s Execution Strategy

“The purpose of the Execution Strategy is to describe how Crossrail Limited (CRL) intends to deliver Crossrail. It is intended to provide a common purpose and clear direction for everyone and every organisation, particularly CRL’s staff and its partners, involved in the delivery of Crossrail.

It should provide confidence that CRL understands the objectives for Crossrail and what has to be achieved, the main risks to those objectives, and has in place the organisation, strategies and resources to manage the supply chain and successfully complete the project and handover the railway to the operators.

As the successful delivery of Crossrail is reliant on the significant contribution of Industry Partners, their contribution and endorsement is vital to the development of the Execution Strategy. Crossrail will be delivered by a single unified and integrated organisation which brings together the very best people from the Delivery Partners in a matrix organisation. This will facilitate effective value for money decision making without commercial barriers and clear role accountabilities regardless of affiliation.”

Crossrail’s execution strategy included details on:
- Vision & objectives
- Definition of the Crossrail project
- Programme governance
- Programme structure and organisation
- Delivery strategies (e.g. Land acquisition, procurement, organisational development, HSE, construction, testing, controls etc)

Hierarchy of documents

Crossrail’s execution strategy was part of a hierarchy of documents that demonstrated at high level how the project would deliver the sponsor’s requirements in line with the project development agreement (governance arrangements) and set the approach for the management plan and its subsidiary documents.
Final Check
Final Check

Will the proposed execution strategy:

1. Cover the concerns identified by the core complexity-capability gaps?

2. Cover gaps identified by answering the considerations in this module?

3. Clarify the interfaces between the sponsor and the client?

4. Clarify the interfaces between the client and the supply chain?

5. Identify the key transition points and hand-offs in the project’s lifecycle?

6. Define the delivery approach?

7. Ensure the delivery approach remains flexible?

8. Enable continuous improvement through the project lifecycle?

9. Help maintain focus on the full project lifecycle and the end point in particular?
Further Guidance
Further Guidance

Guidance

http://www.prince-officialsite.com

http://www.msp-officialsite.com

[3] HMT Orange Book

[4] Building Information Modelling (BIM)

https://theiam.org/what-is-asset-management/anatomy-asset-management

[6] ISO 14000
http://www.iso.org/iso/home/standards/management-standards/iso14000.htm

http://www.mop-officialsite.com

[8] Management of Risk (M_o_R)
http://www.mor-officialsite.com

[9] HMT Green Book: The 5 Case Model

[10] Portfolio, Programme and Project Management Maturity Model P3M3
http://www.p3m3-officialsite.com


[14] HMEP Cultural Toolkit
http://www.highwayefficiency.org.uk/efficiency-resources/collaboration-change/creating-the-culture-to-deliver-toolkit.html

[15] Institution of Civil Engineers Client Best Practice Guide

Usage

Provides a framework for setting up and delivering a project.

Provides a framework for setting up and delivering a programme.

Government guidance on risk management – for risk management strategy.

Data standards for designs – for design management strategy.

Guidance for asset management – for asset management strategy.

Standard for Environmental Management system – for QHSE strategy.

Provides a framework for setting up and delivering a portfolio.

Guidance on risk management – for risk management strategy.

Aligning project objectives to the 5 Case Model.

Maturity model used for assessing and developing organisational capability.

Guidance on aligning project execution to requirements.

Development of integrated assurance and approval plans.

Helps with analysis to ensure risk is only allocated to organisations that have the capability and appetite to manage them.

Practical tools for assessing cultural alignment for partner selection.

Guidance on the role of the intelligent client
Glossary
Glossary

**Asset Manager**
The asset manager is the organisation (or parts of) that is responsible for day-to-day operations and maintenance of the asset. The asset manager may be a part of the sponsor or client organisations or a separate entity. Similarly the operator and maintainer of the assets might be separate entities.

Asset management is the coordinated activity of organisations to realise value from their assets.

**Capability**
The Routemap uses capability to describe the ability of the sponsor, client, asset manager and market to organise for effective and efficient delivery. It refers to a part of the business and not the individual as most barriers to effective practice are rooted in systemic issues and not individual action.

**Client**
The client is the organisation that is responsible for fulfilling the requirements and delivering the benefits. The client translates the requirements from the sponsor and manages the delivery outcomes. The client selects the most appropriate supplier/s to meet project objectives.

**Complexity**
Project complexity is a measure of the inherent difficulty of delivering a project based on factors such as: stakeholder alignment; interconnectedness of projects; systems & organisations and the level of innovation required etc. The Routemap uses the Delivery Environment Complexity Assessment (DECA) published by the NAO for complexity assessment.

**Client Model**
The Client Model refers to how the client organisation will structure and resource the responsibilities for project execution between the client, advisors/partners and supply chain (e.g. thin/fat client). This is a key consideration in determining organisational design and procurement strategy.

**Delivery Model**
The Delivery Model refers to the organisational entity that will be appointed to deliver the project (e.g. establishment of a special purpose vehicle). This is a key consideration in determining governance arrangements.

**Infrastructure**
Infrastructure includes the networks and systems that supply and support reliable and effective domestic and international transport, digital communications, energy, flood protection, water and waste management.

**Market**
A market is a group of organisations that integrates and competes to provide goods or services to one or more clients. The construction and infrastructure market is often characterised by a large number of suppliers and SMEs.

**Procurement Model**
The approach taken and the contracting model used to procure the supply chain.

**Project**
Throughout this guide the term project is used to mean both project or programme.

**Sponsor**
The sponsor organisation secures the funding, owns the business case and is responsible for specifying the requirements to the client. The Sponsor ensures that the project remains strategically aligned and viable, and that benefits are on track to be realised. In some contexts the Sponsor and Client could be from the same organisation.

**Target Operating Model**
The end state of how the asset will be: used; funded; owned; operated and maintained.
IPA would like to thank the following organisations that contributed time and expertise to the development of the Routemap.

### Infrastructure Client Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andy Mitchell (Chair)</td>
<td>Thames Tideway</td>
</tr>
<tr>
<td>Adam Green</td>
<td>Carillion</td>
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<tr>
<td>Nick Baveystock</td>
<td>ICE</td>
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<tr>
<td>Beth West</td>
<td>HS2</td>
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<tr>
<td>Denise Bower</td>
<td>University of Leeds and Major Projects Association</td>
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<tr>
<td>Dale Evans</td>
<td>Anglian Water</td>
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<tr>
<td>David Rooke</td>
<td>Environment Agency</td>
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<tr>
<td>Mark Worsfold</td>
<td>South West Water</td>
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<tr>
<td>Martin Buck</td>
<td>Crossrail</td>
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<tr>
<td>Miles Ashley</td>
<td>Transport for London</td>
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<tr>
<td>Nirmal Kotecha</td>
<td>UK Power Networks</td>
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<tr>
<td>Peter Adams</td>
<td>Highways England</td>
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<tr>
<td>Phil Wilbraham</td>
<td>Heathrow Airport Holdings</td>
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<tr>
<td>Simon Murray</td>
<td>Consultant</td>
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<tr>
<td>Alan Couzens</td>
<td>Infrastructure &amp; Projects Authority</td>
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<tr>
<td>David Hancock</td>
<td>Cabinet Office</td>
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<tr>
<td>Martin Arter</td>
<td>Network Rail</td>
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<tr>
<td>Kenna Kintrea</td>
<td>NDA</td>
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<tr>
<td>Alasdair Reisner</td>
<td>CECA</td>
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<tr>
<td>Ian Cartwright</td>
<td>National Grid</td>
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<tr>
<td>Jonathan Cole</td>
<td>Scottish Power</td>
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</tbody>
</table>

### Steering Group & Contributors

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- [Cabinet Office](http://cabinetoffice.gov.uk)
- [CONSTRUCTING EXCELLENCE](http://constructingexcellence.org)
- [HM Treasury](http://hm-treasury.gov.uk)
- [Engine for Growth](http://engine forgrowth.org)
- [ice](http://ice.org)
- [Infrastructure and Projects Authority](http://iap.org)
- [Major Projects Association](http://mpa.org)
- [Outperform](http://outperform.org)
- [Pinsent Masons](http://pinsentmasons.com)
- [SURREY](http://surrey.gov.uk)
- [Transport for London](http://tfl.gov.uk)
- [Turner & Townsend](http://turnerandtownsend.com)
- [UNIVERSITY OF LEEDS](http://unileeds.ac.uk)
- [Scottish Power](http://scottishpower.com)
- [Environment Agency](http://environment-agency.gov.uk)
- [The Institute of Asset Management](http://aami.org.uk)
- [+amcl](http://amcl.com)
- [Risk. Governance. Value](http://risk.govvalue.com)