



Infrastructure  
and Projects  
Authority

# Project Routemap

Setting up projects for success

## Organisational Design & Development

UK Module



Interactive  
document



# Contents

## Cover image

High Speed 2 will construct a new high speed rail network in the UK. As part of the enabling works, archaeologists have begun unlocking almost 900 years of history at St Mary's Church in Buckinghamshire providing a rare opportunity to excavate and understand the history of the building and what it meant to its community.

## Acknowledgements

High Speed 2



# Preface

**Project Routemap is the Infrastructure and Projects Authority's (IPA) support tool for novel or complex major projects. It helps sponsors and clients understand the capabilities needed to set projects up for success, incorporating learning from other major projects and programmes.**

**The IPA is the centre of expertise for infrastructure and major projects, sitting at the heart of government and reporting to the Cabinet Office and HM Treasury in the UK.**

Over the coming years there will be more investment in infrastructure and major projects than ever before, backed by both public and private sectors. This investment will be a catalyst to building back better and stronger. Infrastructure and major projects will play a critical role in fuelling economic growth and improving the lives of people right across the country.

With greater investment comes greater responsibility and we must ensure we have a strong delivery record that demonstrates real value. This means setting projects up for success from the very start, so that they come in on time and budget, and deliver on their promises - to the benefit of the citizens of the UK.

Although setting up projects for success can take more time at the start, this will be repaid many times over in the delivery phase. Projects that focus enough attention on the early stages are much more likely to achieve their intended outcomes later on and display world-class delivery standards.

That's why the IPA developed the Project Routemap ("Routemap") - a support tool that provides practical advice based on learning from other major projects and programmes.

There is no doubt that complex projects can test the limits of organisational capability, but if applied in the most crucial early stages of project development, Routemap will ensure that best practice and learning about the most common causes of project failure and principles for project success are incorporated. This will result in benefits ranging from selection of the most appropriate delivery model, to clearer governance arrangements, proper risk allocation and accelerated decision-making.

Routemap has been used by many of the UK's biggest, most complex and high-profile projects since its first publication in 2014 and more recently it has also been applied to projects internationally. However, the project delivery system and the way projects are delivered has evolved. That is why the UK Routemap handbook and accompanying modules have been updated to incorporate new and emerging best practice in project delivery and to align with standards, including the Government Functional Standard for Project Delivery and the UN Sustainable Development Goals.

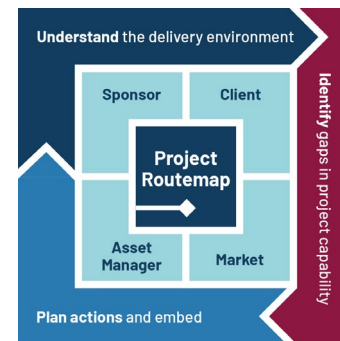
Building on its success with economic infrastructure, Routemap has also been expanded to cover social and defence-related infrastructure projects and includes guidance for application to other types of projects.

Applying Routemap to more of our projects will be another step towards realising our ambition of world-class delivery standards. Whatever the project, applying Routemap will give confidence to the people delivering them, those approving them, and those investing in them.

The IPA would like to thank all those organisations and individuals who have contributed to the development, of both the original, and the updated UK Routemap handbook and accompanying modules.

## Nick Smallwood

Chief Executive Officer of the Infrastructure and Projects Authority and Head of Government's Project Delivery Function

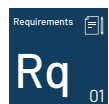


# Introduction: What are the Routemap modules?

The Routemap modules provide practical advice to help set up projects for success. The modules have been developed by the UK government in collaboration with industry and academia. They capture best practice and learning from common causes of project failure and success over the past decade from £300bn of capital programmes.

These modules sit alongside the Routemap handbook. The handbook explains how Routemap can be applied to identify gaps in project capability and build an action plan to close those gaps.

There are eight modules, one covering each of the following areas:



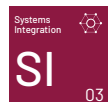
## Requirements

Delivering strategic project outcomes and realising the benefits.



## Governance

Establishing clear accountability and empowering effective decision-making.



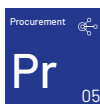
## Systems Integration

Making multiple systems work as one.



## Organisational Design & Development

Organising the project team to deliver successfully.



## Procurement

Understanding how the project will buy goods and services.



## Risk Management

Managing uncertainties and opportunities.



## Asset Management

Balancing costs and risks to maximise whole life benefits.



## Delivery Planning

Readying the project for transition into delivery.

The best practice and learning contained in the modules reflect the collective experience of public and privately funded projects from the infrastructure and defence sectors. However, most of the principles apply to all projects, including digital and transformation projects.

These modules are aligned with the government's Project Delivery Capability Framework and help projects comply with the Government Functional Standard for Project Delivery. They also help projects to align with other recognised standards and guidance, including the United Nations Sustainable Development Goals.



They are useful whether you are using the Routemap to undertake a Full Project Review or a Modular Deep Dive, as detailed in the Routemap handbook. They can also be a useful standalone reference to identify potential risks and improvements in project capability development, and relevant good practice from other projects.

The modules are not a complete guide to project development, nor a substitute for business case development. Instead, they provide considerations to challenge your thinking and to launch your project on the path to success. The project team will need to consider their project's individual characteristics and context and identify what will be most helpful to them.

# Introduction: How do you use the Routemap modules?

This table summarises how different module sections support the three key stages of the Routemap methodology.

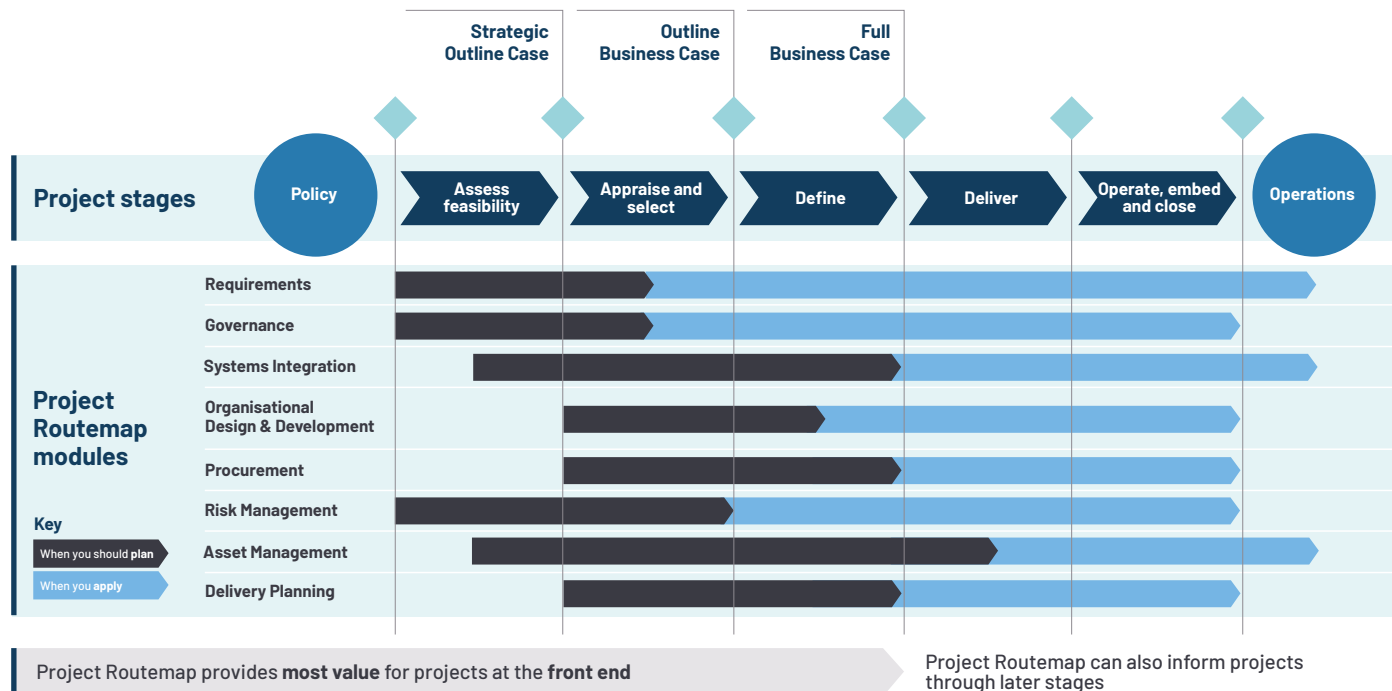
The modules are useful when applying the Full Project Review and Modular Deep Dive approaches, which are described in the Routemap handbook.

Routemap approach	<b>Setup</b> Determine the scope and timing of the Routemap, which can be project-wide or targeted to specific areas of capability	<b>Diagnosis</b> Gather information and identify where capabilities need to be enhanced	<b>Action planning</b> Collaborative development of practical solutions to enhance capability
 <b>Full Project Review</b>	Determine if there is value in using Routemap to support project-wide capability development.	Determine which modules may help.	Apply best practice and learning from the modules and any other major project examples.
 <b>Modular Deep Dive</b>	Determine if there is value in using specific Routemap modules to support development of a specific area of capability.	There is likely to be one module in particular that focusses on your selected area of capability. However, there may be value in consulting other interfacing modules too.	Apply best practice and learning from the modules and any other major project examples in the selected area of capability.
Module section	You may find it helpful to review these types of project documents, to define the areas of interest in the Routemap scope.	Cross-checking this document list against existing project documents may also help you to identify capability gaps.	You may find that developing or enhancing these types of documents will help to close capability gaps.
<b>Key project documents</b> Documents that will help you understand the organisational design & development arrangements for your project.	If these indicators are apparent even before you start applying Routemap, this should inform the areas of interest in the Routemap scope.	You may find it helpful to review these when identifying issues and articulating your findings.	If your findings contain statements like these, this module could help strengthen capability.
<b>Typical findings</b> Indicators that issues might arise during delivery.	Comparing your project with these characteristics of good practice may help you to identify areas of interest in the Routemap scope.	<i>Not applicable to this stage</i>	Comparing your project with these characteristics of good practice may help you set goals for your action plan.
<b>Pillars of effective organisational design &amp; development</b> Hallmarks of successful project set up.	<i>Not applicable to this stage</i>	This section lists a series of questions that can help you to test the effectiveness of existing arrangements.	Working through these questions can help you understand the root causes of the findings and develop solutions.
<b>Considerations</b> Detailed list of questions to understand root causes and suggest improvements.	<i>Not applicable to this stage</i>	<i>Not applicable to this stage</i>	You may find these good practice examples and suggested reading useful in developing actions to address capability gaps.
<b>Good practice examples and suggested reading</b> Context to support your wider understanding.			

# Introduction: How do the modules map to the project life cycle?

This diagram maps the Routemap modules to the stages of a project life cycle.

It shows when each of the modules should be used to support planning during project set up. It also suggests the stages when the modules' principles are expected to have been applied.



# Cross-cutting themes projects can't ignore

Six cross-cutting themes emerged from our engagement with major projects and industry, which have informed the updated Routemap modules. These place complex demands on project teams, and if overlooked during set up, can create issues during the later stages of the project life cycle.

These themes include the need for focus on behaviours and culture, consideration of wider economic, environmental, and social value and the increasing use of digital systems and tools to enable a systems-focused approach.

Planning ahead for the right skills, experience and capacity to address these themes is key to success.

To help you navigate these themes, we have developed a series of prompts. You can use these prompts to check whether your project is set up to meet the challenges ahead.



## Benefits and outcomes focus

adopting a whole life perspective whilst managing the project

- Have you got a clear vision of the target outcomes, which is aligned across the sponsor, client, asset manager and market?
- Have the project outcomes been effectively communicated to key stakeholders and the supply chain?
- Has the project set realistic and transparent targets?
- Are you able to measure the realisation of benefits throughout the whole life cycle? Including any potential early releases?
- Have you considered the disbenefits and how to minimise them?



## Economic, environmental and social value

taking in a wider view of the project's impact

- Have you considered how the project will generate economic, environmental, and social value, both through its intended outcomes and/or as a by-product of delivery? Has this been hardwired into the business case, with a clear link to the UN Sustainable Development Goals?
- Is your project aspiring to leave a "net positive" and climate resilient impact on the natural environment?
- How are you maximising benefits and minimising risk and disbenefits for project affected communities and contributing to levelling up?
- Is there clear accountability for the economic, environmental, and social benefits and outcomes?



## People and skills

planning ahead for the right skills, experience and capacity to deliver the project

- Have you undertaken activity-based resource planning to ensure you have the people with the right skills, knowledge, experience and behaviours at the right time to deliver the project?
- Are these plans reviewed on an ongoing basis? And do they incorporate skills development and succession planning to ensure continuity in key roles and to meet evolving needs?
- Have you considered the time commitment of your project leaders to ensure they have the right capacity to deliver the project?
- If using delivery partners or third parties, do they have the capacity and expertise to support the project as required?



## Digital and technology

embedding systems and approaches at the front end to maximise project productivity

- Have digital and modern methods been considered at the earliest point in the life cycle to maximise their impact on benefits?
- How has the project assessed and addressed digital capability within the sponsor, client, asset manager and market?
- Has the project considered how information, data and knowledge will be shared across the project, including with the supply chain?
- What consideration has been given to potential changes in technology that may influence benefits realisation?



## Behaviour and culture

realising project success with a capable, diverse and integrated team

- Is there a plan for how desired behaviours and values will be cascaded and embedded through the sponsor, client, asset manager organisations and the supply chain?
- How are the desired behaviours and culture promoted in the project?
- Does the project have a culture that empowers constructive challenge and diversity of thought?
- How is the project planning to build relationships and invest in creating the right environment to realise project outcomes?



## Transitions

planning for change and developing the required capability before progressing to the next life cycle stage

- Does the project have a clear plan for how they will transition from one life cycle stage to the next?
- Does the plan set out the changes needed to organisational and governance arrangements?
- Does the project have the necessary capability to transition to the new organisational and governance arrangements for the next life cycle stage? Including the change management capability required to embed the changes?
- Is the project clear on how the relevant documents and people will carry knowledge and learning across life cycle stage boundaries?

# Organisational Design & Development, and why it's important

*"Plan ahead for the diversity of people, skills and experience needed to deliver the project and build a strong, properly resourced and competent team, evolving as necessary through the project lifecycle."*

Principles for project success – Infrastructure and Projects Authority 2020

## Why organisational design & development matters

Projects are delivered by people working together in temporary teams. The diversity, skills, performance and interactions of these people will determine the project's effectiveness. It is critical to think ahead about how to organise and develop them in the context of the specific project they are delivering.

Organisational design & organisational development are two distinct but interrelated aspects of successful project set up and delivery.

- Organisational design is more than just an organisation chart. It concerns the structure of the project team, the resources, working practices, behaviours and culture required to enable project delivery.
- Organisational development concerns the changes needed to implement the organisational design as a successful high performing team. It also covers the changes to develop the necessary organisational capabilities ahead of key transition points in a project's life cycle. For example, when moving from definition to delivery, you may need to increase capability in construction management or health and safety performance monitoring.

The good practice in this module will help you establish the appropriate organisational design for your project through robust capability planning. It explores the challenges of bringing together multiple organisations to deliver a project; how to use resource planning tools to determine the optimal blend of in-house and external resource; and how they will work together as an integrated team. Building this team brings both the opportunity and responsibility to increase social value. A diverse and inclusive workforce can have a positive impact not only on society, but also the project's performance (see good practice example 3). This module also gives guidance on change management approaches to help build and embed the required organisational capability, and to ensure it remains fit for purpose as the project moves through its life cycle.

There is a strong link between this module and the governance module. The selection of an appropriate delivery model is a key enabler of empowered decision-making, which is central to effective governance. If you would like more information, please refer to the governance module.

This module can help to assess whether existing or proposed organisation arrangements are suitable for the scale and the complexity of your project.

## What are the key project documents?

If you are seeking to find out more or to review the existing organisational design & development arrangements on your project, the typical documents and reports set out below may contain information that will help.

- Target operating model
- Business case, in particular the commercial and management cases
- Sponsor's requirements (Brief)
- Project delivery plan
- Organisational design strategy
- Organisation chart
- Resourcing plan
- Succession plan
- Corporate policies, including the equality, diversity and inclusion policy.
- Capability enhancement plan
- Change management plan
- Corporate charters or codes of conduct
- Stakeholder map and engagement plan
- Terms of reference for decision bodies, including role descriptions
- Strengths, weaknesses, opportunities, threats (SWOT) analysis
- Procurement strategy
- Recruitment processes
- Health, safety and well-being strategy

Not all projects will have all of these documents, particularly in the earliest stages of development.



# Typical findings

● Primary module  
● Other relevant modules

## Typical findings relating to organisational design & development

This list describes situations that might arise and would indicate that the approach to organisational design & development needs improvement. Other relevant modules may also help you close identified capability gaps.

The extent of new capability required to deliver the project is not clearly understood and/or the scale of change is underestimated.

A new client model (for example, establishing a fully integrated team) is proposed that the client/supply chain organisations do not have previous experience of applying successfully, and so they may need capabilities they currently do not have.

A new delivery model (for example, setting up a new standalone delivery body) is proposed that the sponsor/client organisations have not used before, and so they may need capabilities they currently do not have.

Each organisation is considering its resource requirements separately rather than taking a project-wide view, across the sponsor, client, asset manager and market.

Inadequate time is factored in for new resources to become capable, whether the capability is being developed in-house or procured.

Changes to capability requirements at key transition points are not identified, anticipated or prepared for.

The project organisation design and culture are not evolving to reflect the changing needs of the project. For example, as new project partners join or as the project progresses from one life cycle stage to the next and to operation.

There are too many layers, or unclear decision routes. This can make it difficult and time consuming to gain approvals.

There is a tendency towards groupthink and optimism bias. This could cause unrealistic expectations for project design and delivery.

The desired project culture is not being role-modelled in leaders' behaviours. For example, within governance forums.

## Relevant modules

Requirements	Governance	Systems Integration	Organisational Design & Development	Procurement	Risk Management	Asset Management	Delivery Planning
●			●				●
			●	●	●		●
	●	●	●				●
	●		●	●			
			●	●			
	●	●	●				●
	●	●	●	●		●	●
	●		●				●
	●		●		●		●
	●		●		●		●

# Pillars of effective organisational design & development

The four pillars below summarise the characteristics of effective organisational design & development.

## Pillar 1: Understanding the organisational context

1

- The project may exist within a wider organisational context, for example corporate or portfolio, and brings together multiple organisations.
- In particular, it's important to consider the relevant organisations:
  - strengths, weaknesses, opportunities and threats
  - risk appetite and approach to risk/reward
  - constraints, for example limited funding or caps on headcount
  - existing behaviours, leadership styles, culture and values
- Understanding the differences between the organisations, factoring these into the design and aligning where necessary is critical.

## Pillar 2: Designing the organisation

2

- The organisational design will need to consider:
  - the capabilities required
  - any particular working practices, for example off-site manufacturing
  - the blend of in-house versus outsourced resources and the extent to which they will be integrated
  - the size of the organisation required
  - the type of organisational structure
  - the implications of the desired culture and leadership behaviours for the selection of partners and suppliers

## Pillar 3: Developing the organisation

3

- It is important to understand the capability gap, including where new capabilities and enhancements to existing capabilities are required.
- A plan to bridge this gap and build the required capability is necessary. Whether capability is developed in-house, sourced externally or a blend of the two, it will take time to become fully capable and form as a high performing team. This lead time needs to be factored into the plan.
- Developing the organisation will not only have implications for its people but also processes, policies and systems.

## Pillar 4: Managing ongoing change

4

- It is essential to understand the key transition points through the project life cycle when the organisation design will need to change to remain fit for purpose.
- Preparatory work is required to establish a robust change process in advance of changing the organisation.
- Efficient delivery of the change is enhanced by transparent and timely communication, with a focus on the desired outcomes of the change.
- Making sure that any changes to the organisation of the project are properly embedded is critical.

These four pillars underpin effective organisational design & development for projects. If one pillar is missing or out of balance, the project organisation will likely be ineffective or inefficient. The pillars are expanded in the considerations section of this module.

The organisational design might need to evolve during the project, so you should revisit the considerations at major transition points or approval points, or as plans change.

Organisational design & development arrangements should evolve as:

- more information becomes available to inform the capabilities required to deliver the project
- the project team and their processes develop and embed
- the project progresses through its life cycle, from design and planning, through implementation to operation

# Considerations

## Module Pillars

- 12 **Pillar 1 Understanding the organisational context**  
Corporate context  
Strengths, weaknesses, opportunities and threats  
Risk and reward  
Culture
- 14 **Pillar 2 Designing the organisation**  
Delivery model  
Structure  
Resourcing  
Ways of working  
Supply chain  
Procurement process  
Efficiencies
- 17 **Pillar 3 Developing the organisation**  
Capability gap  
Capability enhancement planning  
Evaluating capability outcomes  
Impact of change  
Developing people  
Developing team performance
- 20 **Pillar 4 Managing ongoing change**  
Planning for change  
Communicating the change  
Embedding the change

The considerations questions help you understand the root causes of the capability gaps and suggest improvements. You may not need to review all the considerations, just use the most relevant ones for your project.

Project Routemap: Name of module	
Considerations:	
Pillar 1 title here	
Considerations	What may help
<p><b>Sub-Heading 1</b></p> <ul style="list-style-type: none"> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis esul hi, adhulta maciescil tantrisque con vit.</li> <li>■ Vilissu morte caec malo, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo.</li> </ul> <p><b>Sub-Heading 2</b></p> <ul style="list-style-type: none"> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis esul hi, adhulta maciescil tantrisque con vit.</li> <li>■ Vilissu morte caec malo, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo. o, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo.</li> </ul> <p><b>Sub-Heading 3</b></p> <ul style="list-style-type: none"> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis esul hi, adhulta maciescil tantrisque con vit.</li> <li>■ Vilissu morte caec malo, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo. o, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo.</li> </ul> <p><b>Sub-Heading 4</b></p> <ul style="list-style-type: none"> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis esul hi, adhulta maciescil tantrisque con vit.</li> <li>■ Vilissu morte caec malo, conetela vides Caste meris conesim isallic upecont, consulem ium imanum actursu piententilin sultius pimiliq uonostimum opos, quo alicia rem auctantemque poris.</li> <li>■ Oppono culer essilin in vis hus imultusus consule rimius acrelis enterit. Catum averum artis torurb itabem. Ahabis cul hos et culentemum destior besillam ia? Aperibu stius, vivillisu morte caec malo.</li> </ul>	

### Considerations

Each pillar is expanded into a number of consideration questions. These questions will help you:

- to review and validate existing organisational design & development arrangements
- to target areas for improvement
- to test the design of new organisational design & development arrangements

### What may help

Signposts other related material which you might find helpful. These include other relevant modules with related content, key project documents, good practice examples and suggested further reading.

Routemap uses four primary roles to describe the key areas of responsibility in the early stages of project development. These are sponsor, client, asset manager and market. Before reading through the detailed considerations, you should familiarise yourself with these definitions in the glossary and consider which organisation is fulfilling which role for your project. Sometimes an organisation can fulfil more than one of these roles, for example both the sponsor and client roles. Also, where a project is still at an early stage, a role might not yet be filled by any organisation, for example the market role.

# Considerations:

## Pillar 1 Understanding the organisational context

### Considerations

#### Corporate context

- Is it clear who has overall accountability and responsibility for the project? And who owns the business case?
- Is there more than one sponsoring organisation? Are their objectives aligned? Is the co-sponsorship formalised?
- Is the project aligned with the sponsor and client organisations' corporate business plans and strategic objectives? How?
- Is there a common definition of success agreed by all stakeholders?
- Is there strong corporate oversight? Does the project team allocate resource to manage and respond to this?
- How will the organisational design be assured by the corporate organisation?
- Are there policies or requirements (corporate or statutory) that will affect organisational decision-making or people development practices? For example, safety critical obligations, trade union agreements, the Public Sector Equality Duty, safeguarding, pay and reward or travel policies. If not, are these required by the project?
- Are there any upcoming changes to the corporate organisation that could have implications for the project organisation design? For example, corporate restructuring or an upcoming recruitment freeze.
- Are there corporate monitoring and escalation arrangements for matters relating to inappropriate behaviour or other serious concerns, for example health and safety, discrimination, harassment and bullying, bribery, corruption, or modern slavery? Are there appropriate grievance and whistleblowing mechanisms in place?
- Are these arrangements embedded across the project, including the supply chain and project affected communities?

#### Strengths, weaknesses, opportunities and threats

- Do the governance bodies have the technical capability and understanding to make informed decisions? Do they have the capability to effectively challenge?
- Are there other projects in the organisations (or externally) that will be competing for the same people and the same skills as the project? Are there projects that will be releasing people with the skills that the project needs?
- What is the client's level of confidence and track record in attracting and retaining high performing staff and suppliers?
- What is the client's track record in delivering organisational change?
- What is the client's track record in collaborative working?

### What may help



Business case (strategic and management) and corporate policies

Examples 1, 2 and 3

Suggested reading 16 and 17



SWOT analysis, resourcing plan and succession plan

Suggested reading 1

# Considerations:

## Pillar 1 Understanding the organisational context

### Considerations

#### Risk and reward

- Are the sponsor and client organisations' attitudes to risk and reward aligned?
- Are risks allocated to the organisation most capable of managing them?
- Does the allocation of risk and reward inform the organisation design?
- Does the culture of both the sponsor and client organisations foster the appropriate escalation of issues and sharing of bad news?
- Do corporate mechanisms for monitoring and rewarding performance help to motivate teams to deliver the project's objectives?

#### Culture

- Will delivery of the project's outcomes and benefits depend on creating enabling behaviours and values? For example, collaboration, challenge and ownership. If so, have these behaviours been explicitly covered in the organisational design strategy?
- Is the culture of the corporate organisations or wider portfolio understood? Is the required project culture different to that of the corporate organisations or wider portfolio? If so, are these differences understood, accepted and managed?
- Are multiple organisations coming together to deliver the project? If so, are their respective cultures compatible? How will the desired values be agreed and embedded?
- Is there an existing corporate code of conduct setting out the standards of behaviour that all those involved in the project must comply with? If not, should a code of conduct be developed for the project?
  - Is the code of conduct communicated to all employees?
  - Is there evidence of acknowledgement of the code of conduct? For example, by collecting signatures.
  - Is there training in place to ensure that all parties understand and comply with the code of conduct?
- Are the leadership styles of the sponsor and client organisations understood and aligned? Do they align with the culture and behaviours required for delivery of the project? Do they align with the approach to risk and reward so that people are motivated to perform?
- Have the commercial and procurement models been designed to encourage the behaviours required for success?

### What may help



Business case (commercial)  
Suggested reading 2



Organisational design strategy, corporate charters or codes of conduct and project delivery plan, equality, diversity & inclusion policy and health, safety & wellbeing strategy.

Example 1

Suggested reading 3 and 4

# Considerations:

## Pillar 2 Designing the organisation

### Considerations

#### Delivery model

- Does the organisational design take into account the interactions and interfaces between the sponsor, client, asset manager and market (as opposed to considering each organisation on a standalone basis)?
- Has a functional analysis been carried out (current and future state)?
- Have the functions which should be retained in-house been identified? And those which should be procured? Does this take into account the pros and cons of the alternative approaches?
- Has the extent to which in-house and outsourced resources should be integrated been considered? Does this take into account the pros and cons of the alternative approaches?
- If an integrated team is established, is it clear how risks will be owned and managed across the team? For example, 'best athlete' principle (the best person for the role irrespective of which organisation he/she comes from) versus functional accountability.
- Does the organisational design align with corporate policies on insourcing and outsourcing?
- Where outsourcing is an option, has the extent of market appetite been established?

#### Structure

- What is the optimal organisational structure for success? For example, collaborative enterprise models such as Project 13.
- Does this structure make best use of the resources available?
- How will existing organisational hierarchies impact the project team structure?
- Are there any existing or emergent informal networks? For example, communities of practice or innovation forums? If so, how will these be exploited to best effect for the project?
- Are the accountabilities and responsibilities clear?
- Do the client and any third parties who will form an integral part of the structure (for example, a delivery partner), agree to the organisational design and how it will work?
- What is the impact of the structure required for the project on the existing corporate organisation and interfaces?
- Does the structure align to corporate governance requirements?
- How does the structure align to corporate sustainability targets? For example, diversity and inclusion targets?
- Is the investment managed better as a project or as a programme?

### What may help



Target operating model, project delivery plan and procurement strategy

Examples 4,5 and 6

Suggested reading 2 and 5



Target operating model and organisation chart

Examples 2 and 8

Suggested reading 5 and 6

# Considerations:

## Pillar 2 Designing the organisation

### Considerations

#### Resourcing

- Is there a work breakdown structure that identifies the types of resources that will be required? Including the resources to manage economic, social and environmental risks?
- Is the resourcing strategy appropriate for the importance, complexity and scale of the project?
- Has the project benchmarked its organisational design and size against other comparable projects?
- Does the resourcing strategy balance the need for experience with the need to build a diverse workforce? Is this reflected in the way role descriptions and selection criteria are developed?
- Has recruitment explored different industry sectors to bring new knowledge and experience into the project? For example, targeting the aviation or automotive sectors.
- Are alternative options considered to build in-house capability, including redeployment of existing staff from elsewhere in the organisation or bringing in staff on fixed term contracts?
- Is there a pipeline of subsequent projects that this project's staff can move onto once this project comes to an end? Is this taken into account in the resourcing plan?
- Is there a succession plan in place? Does it consider how the project will manage planned (for example, major transition points) and unplanned (for example, sudden illness) changes in key roles?
- What are the organisations' requirements for efficient demobilisation of resources as the project comes to an end?
- How will the transition to operations be managed and what impact will it have on operational resources?

#### Ways of working

- Does the project require specific ways of working? How will these practices affect organisational design? For example, co-location, remote working, use of artificial intelligence or off-site manufacturing?
- If relevant, how will the benefits of co-location and remote working be balanced?
- If there are multiple organisations involved in delivery, are their ways of working compatible?
- Has economic, environmental and social sustainability been considered in the development of ways of working? For example, only printing when necessary and conducting outreach activities as part of business as usual.
- Are there clear and documented procedures for handling sensitive information? Do these meet legislative or regulatory requirements? For example, the Data Protection Act.

### What may help

Organisational design strategy, organisation chart, resourcing plan and succession plan, recruitment process

Examples 3, 6, 7 and 8

Suggested reading 2



Organisational design strategy and project delivery plan

Example 8

Suggested reading 7

# Considerations:

## Pillar 2 Designing the organisation

### Considerations

#### Supply chain

- Does the project team have a clear understanding of the current supply chain environment including capability, capacity and collaboration practices? Do they understand how this aligns with the proposed client model?
- Will the project require the supply chain to develop capability? For example, changing its current practices. If so, is there sufficient time to make such changes?
- Are there processes in place to ensure the supply chain has sufficient knowledge and capability to address the project's specific economic, environmental and social requirements?
- Are there mechanisms in place to maximise productivity? For example, appropriate incentivisation and key performance indicators?
- Are the client and market commercially incentivised to comply with or outperform environmental and social standards?

#### Procurement process

- Will the procurement process test suppliers' leadership, behaviours and culture that will be required during implementation?
- Are the evaluation criteria, used in the procurement process, aligned with the behaviours set out in the organisational design & development plans? For example, setting targets on the use of local labour or creation of apprenticeships.
- Do the evaluation criteria consider organisations and individuals with successful track records of compliance with economic, environmental and social standards?

#### Efficiencies

- Is there a need for efficiency savings targets through the project's life cycle?
- Does the design include continuous improvement and development of the organisational structure for future growth and change in line with the strategic objectives?

### What may help



Business case (commercial) and procurement strategy

Suggested reading 2



Business case (commercial) and procurement strategy

Suggested reading 2



Target operating model and project delivery plan



# Considerations:

## Pillar 3 Developing the organisation

### Considerations

#### Capability gap

- Is there an understanding of the capability requirements of the project?
- Are the changes to required capability and capacity through the project's life cycle understood? Particularly as the project moves from one stage of the life cycle to the next?
- Have current best practices, lessons learned from other projects (internal and external) and pilot projects been considered in understanding the capabilities required?
- Do any of the project stages require specific changes to behaviours, cultures or ways of working? Are these understood?
- Is there an understanding of the type and level of specialist skills required? Is there access to them or a plan to source them?
- Where capability gaps have been identified, is the size and type of capability enhancement required understood?
- How will organisational capability be measured and monitored (actual capability versus required capability)?

#### Capability enhancement planning

- Is there an agreed plan to build the required capability?
- Is it clear how this plan will be managed?
- Is there enough time to deliver the scale of capability enhancement (change) required?
- Does this take into account the time needed for in-house resources to be developed and for procured resources to be mobilised?
- Where appropriate, does the plan drive continuous knowledge transfer and sharing between in-house and procured resources?
- Is the change management capability of the organisation understood? Is it adequate to deliver the level of change required?
- How much change is already occurring across people, processes and systems? Is there a danger of change fatigue?
- Is there a process to allow capability enhancement plans to be altered to reflect changes in the project's environment?
- Has there been appropriate stakeholder engagement during creation of the enhancement plan? For example, senior leaders, specialist advisors and existing team members.
- Is there an appetite to include key individuals from partners and/or suppliers in organisational development activities?
- Is a business case required for the capability enhancement plan?
- Is there enough budget allocated for the enhancement plan? Are there appropriate resources to deliver the capability enhancement actions or are arrangements in place to procure any additional supporting resources?

### What may help



Organisational design strategy, business case (management) and resourcing plan

Examples 4 and 9

Capability enhancement plan, change management plan and stakeholder map and engagement plan

Examples 3, 9, 10 and 11

Suggested reading 9

# Considerations:

## Pillar 3 Developing the organisation

### Considerations

#### Evaluating capability outcomes

- Is there agreement of what constitutes success? Are measures in place to manage delivery of the capability enhancement plan?
- How will the achievement of the changes in capability be monitored? Will they be reviewed regularly by leadership?
- Are capability enhancement plans updated to reflect any changes arising from the performance data?

#### Impact of change

- What is the impact of change driven from capability enhancement plans on:
  - processes, for example, will procedures need to be rewritten to reflect the organisational changes?
  - policies, for example, will existing policies be adapted or aligned?
  - people, for example, will people require training to operate a new process?
  - systems, for example, will information systems have to be upgraded due to changes undertaken?
  - relationships or agreements with external stakeholders to the project? Including a process for how these changes will be managed?

#### Developing people

- What are the organisation's approaches to developing people to meet the capability needs of the project? This includes training and preparing people for new roles or promotion and planning so all roles within the organisation are filled by appropriately skilled people.
- Is the approach to people development inclusive? Is it based on principles of non-discrimination and equal opportunity, particularly for groups with protected characteristics?
- Do the organisations proactively support the progression, retention and promotion of a diverse workforce? For example, through flexible working policies and support for carers.
- Is there a requirement for the proposed organisational design to be sustained after this particular project has been completed, or repeated for another similar project? Is this considered in people development plans?
- Does the organisation seek to build awareness of economic, environmental and social issues? Do they provide appropriate training? For example, unconscious bias training and mental health awareness.
- Is there a defined approach for evaluating and monitoring competence and performance?

### What may help

Capability enhancement plan and change management plan

Example 9

Capability enhancement plan

Example 10

Suggested reading 10

Organisational design strategy, succession plan and corporate charters or codes of conduct

Suggested reading 8

# Considerations:

## Pillar 3 Developing the organisation

### Considerations

#### Developing team performance

- Are the organisational behaviours required for success reflected in the approach to developing teams?
- Have the characteristics of high-performing teams been identified and included in the organisational development strategy?
- How will complementary and conflicting behaviours, culture and skillsets of different teams be aligned to optimise team performance?
- Is there a process for developing teams that aligns with the sponsor's requirements to be delivered? Does it align with the commercial strategy and procurement models? For example, enhancing the team's digital capability.

### What may help

[Example 1](#)

[Suggested reading 3 and 11](#)

# Considerations:

## Pillar 4 Managing ongoing change

### Considerations

#### Planning for change

- Has clear accountability and sponsorship of the required organisational change been established?
- Are the governance arrangements for the organisational change clear?
- Is a change management office required? If so, is it set up?
- Has a change readiness assessment been carried out for the required shift in organisational design?
- Have change lead roles been defined and assigned within the organisation with responsibility for championing and embedding the change into business-as-usual activity?
- Will the organisational change create an environment to enable continuous improvement?
- Is there a clear and adequately resourced plan for the organisational change?
- Is there a clear blueprint for the change encompassing process, systems and people? Has an impact assessment been undertaken to determine the interventions required to embed the changes? For example, any training required.
- Is there a process to adapt the approach to organisational change based on feedback received or emerging requirements? For example, taking an Agile approach to delivery of the changes?
- Is there a process for tracking change activities against the desired outcomes and benefits of the change? Is it being used?
- Is sequencing of the transition plans logical? Does it take into account dependencies from a people, process and systemic perspective? For example, identification of new capabilities required, market engagement and procurement.

#### Communicating the change

- Is there a plan for communicating the benefits of the change? Including the impacts, benefits and desired outcomes.
- Have the channels for communicating change been agreed?
- Will key messages be tailored to meet the needs of each stakeholder group? For example, using personas to describe how the change will impact each group. Does the approach check that key messages have been understood?
- Is collective consultation required? If so, are there existing mechanisms for this? For example, trade unions or a staff forum.
- How will the change be championed to promote active engagement?

### What may help



[Change management plan](#)

[Examples 9 and 10](#)

[Suggested reading 10 and 13](#)

[Change management plan](#)

[Example 11](#)

# Considerations:

## Pillar 4 Managing ongoing change

### Considerations

#### Embedding the change

- Is there a process to review whether the transition has been effective and the required change outcomes and benefits have been realised? For example, more efficient decision-making and clarity in delegation and authorities.
- How will success be celebrated?
- If the change has not been sufficient, how will further action be agreed and implemented?
- Are there processes in place to allow continuous promotion of the required behaviours after the organisational change is complete?
- How will the change be managed to make sure knowledge and skills transfer occurs?
- How will the organisation communicate what lessons came from the change?

### What may help



Target operating model

Example 11

# Good practice examples

## Good practice examples

It is important to assess how applicable each example is to your specific project, and tailor it as appropriate. This table shows which of the four pillars of good practice are characterised by each example.

### Example 1

Aligning behaviours of programme partners: A Sellafield Ltd case study

### Example 2

Projects delivering through multiple organisations

### Example 3

Embedding equality, diversity & inclusion into organisational design and development

### Example 4

The role of the sponsor, client, market and asset manager through the project life cycle

### Example 5

Delivery model assessment

### Example 6

Deciding on the blend of in-house and third party resources

### Example 7

Allocation of key functions between the client and supply chain

### Example 8

Project 13: An alternative organisational design for major projects

### Example 9

Measuring and enhancing organisational capability: A High Speed 2 case study

### Example 10

Identifying the scale of change

### Example 11

Communication and engagement strategies

## Pillar

Pillar 1: Understanding the organisational context 1	Pillar 2: Designing the organisation 2	Pillar 3: Developing the organisation 3	Pillar 4: Managing ongoing change 4
●		●	
●	●		
●	●	●	●
	●	●	
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# Good practice examples

## Example 1

### Aligning behaviours of programme partners: A Sellafield Ltd case study

In pursuit of its mission to create a clean and safe environment for future generations, the Sellafield Ltd nuclear site is home to one of the most complex portfolios of construction projects in the world, stretching over many decades. The Programme and Project Partner model created an opportunity to achieve a step change in project delivery by bringing together the best of industry in a collaborative approach. Four partner organisations (KBR, Jacobs, Morgan Sindall Infrastructure Ltd and Doosan Babcock) were procured to work alongside Sellafield Ltd to deliver £7bn worth of projects over a 20-year period.

During mobilisation work, Sellafield Ltd and its partners co-created a relationship management plan, which included the five core principles set out to the right. The plan also included aligned behavioural targets and measurement arrangements, which have been reflected in the partners' annual behavioural key performance indicators. A dedicated team is resourced to measure and support behaviours using a staff pulse check and results from an independent annual cultural maturity assessment. The team also supports the incorporation of behavioural competencies in the attraction, recruitment, on-boarding and performance management of new staff, as well as cascading the desired behaviours throughout the Programme and Project Partner model.

This joint commitment and efforts to enable collaborative behaviours have been recognised by industry as best practice. In 2019, Sellafield Ltd, with the support of its partners, gained accreditation in ISO44001 Collaborative Business Relationship Management systems (Suggested Reading 7). The Institute for Collaborative Working also presented Sellafield Ltd with the Collaborative Award for the Supply Chain category in 2020.

#### The Programme and Project Partner culture will enable us to



Establish a bedrock of **safety**.



Build an **ambitious** workforce.



Create the **diverse and inclusive** environment in which our people can thrive.



**Empower and energise** our teams.



Build **trusting and respectful relationships**.

Pillar 1:  
Understanding  
the organisational  
context

1

Pillar 2: Designing  
the organisation

2

Pillar 3:  
Developing the  
organisation

3

Pillar 4: Managing  
ongoing change

4

# Good practice examples

## Example 2 Projects delivering through multiple organisations

The table below shows the relationships between the sponsor, client, market and asset manager roles for some well-known UK projects, programmes and portfolios:

	Sponsor	Client	Market	Asset manager	Description
<b>Crossrail</b>	Jointly sponsored by <b>Department for Transport</b> (government department) and <b>Transport for London</b> (a local government organisation responsible for most aspects of London's transport system)	<b>Crossrail Ltd</b> (a wholly owned subsidiary of Transport for London)	<b>Private sector organisations</b>	<b>Network Rail</b> (a government owned arm's length body), <b>London Underground Ltd</b> and <b>Rail for London Ltd</b> (Transport for London subsidiaries) – for different parts of the line.  The Crossrail service is operated by <b>Rail for London Ltd</b> via a concession let to MTR Corporation (Crossrail) Ltd.	The Elizabeth line (Crossrail) will stretch more than 60 miles from Reading and Heathrow in the west through central tunnels across to Shenfield and Abbey Wood in the east.
<b>London Olympics – Venues and Infrastructure</b>	<b>Department for Culture, Media and Sport</b> (government department) <b>Greater London Authority</b>	<b>Olympic Delivery Authority (ODA)</b> (non-departmental public body of Department for Culture, Media and Sport established in 2006 by an Act of Parliament)	<b>CLM</b> , a consortium of CH2M Hill, Laing O'Rourke and Mace appointed as delivery partner by the ODA. Many organisations in the supply chain.	<b>London Legacy Development Corporation</b> (a mayoral development corporation) is responsible for the future development of the Olympic Park.	The London 2012 Games were centred around the Olympic Park in east London, which is the site of a number of new sports venues. Up to 180,000 spectators a day entered the Park to enjoy the Games, making it the principal focus of Olympic activity.
<b>Highways England – 5 Year Roads Investment Strategy</b>	Department for Transport	<b>Highways England</b> (non-departmental public body, established by statute, in the form of a government owned company)	<b>Private sector organisations</b>	<b>Highways England</b>	5-year funding settlement which allows Highways England and its supply chain to plan their work efficiently and provide the confidence needed for them both to invest in people and equipment.
<b>High Speed 2</b>	Department for Transport	<b>High Speed 2 Ltd</b> (non-departmental public body, sponsored by the Department for Transport)	<b>Private sector organisations</b>	The High Speed 2 line will be operated by the <b>West Coast operator</b> , currently the West Coast Partnership.	High Speed 2 is a major programme to deliver a new high speed rail network across the UK. It comprises multiple phases (1, 2a and 2b), with a new railway running from London, Birmingham and Manchester, including construction of new stations and refurbishment of existing assets.
<b>Thames Estuary Asset Management 2100 (TEAM 2100) Programme</b>	Department for Environment, Food and Rural Affairs (government department)	<b>Environment Agency</b> (non-departmental public body, sponsored by the Department for Environment, Food and Rural Affairs)	<b>Jacobs and Balfour Beatty</b> (private sector organisations) contracted partners to provide programme management, engineering and construction services. Other organisations in the wider supply chain.	<b>Environment Agency</b>	Climate change, an ageing asset base and population growth mean that tidal flood risk is increasing, the TEAM2100 programme aims to protect 1.3 million people and £275 billion worth of property and infrastructure from this increasing risk.



In UK public sector terms, the sponsor is nearly always the relevant government department (except for a small number of cases where a separate standalone body is set up to take on the sponsor role).



# Good practice examples

## Example 3

### Embedding Equality, Diversity & Inclusion into Organisational Development

Organisations with a diverse workforce are more innovative, resilient, and productive. Diversity takes many forms, including balanced gender representation, minority groups representation (such as those from ethnic minorities or with disabilities), and a wide range of ages, educational backgrounds, personalities, and beliefs. There are several reasons why there is a positive correlation between diversity and performance:

- Diversity of skills, thought and experiences leads to innovation
- An inclusive workplace is better for everyone: likelihood of employee sickness and burnout is lower and therefore productivity higher
- Important perspectives are not missed: across any industries, many projects, products or services fail to deliver good outcomes for everyone because the people that design them do not reflect the users adequately.
- Talent is drawn from a wider pool: if you place unnecessary exclusions on who can work for you, you miss out on a huge pool of talent. Organisations are more likely to find the right person for the job if they draw from the biggest pool possible.

As well as driving benefits for organisational performance and ensuring that projects deliver on their goals and outcomes, having a diverse and inclusive workforce directly impacts society and economy for the better, helping to drive forward many of the UN Sustainable Development Goals. For example:

- Goal 3: Good Health and Well-being
- Goal 5: Gender Equality
- Goal 8: Decent Work and Economic Growth
- Goal 10: Reduced Inequalities

The model opposite shows how building a diverse workforce has to be centred on valuing diversity itself. This then flows through recruitment, onboarding, working environment and performance management & career progress. Workforce diversity has an impact on the surrounding community, as it becomes more reflective of it, and makes it a healthier, inclusive and economically resilient place.



# Good practice examples

## Example 4

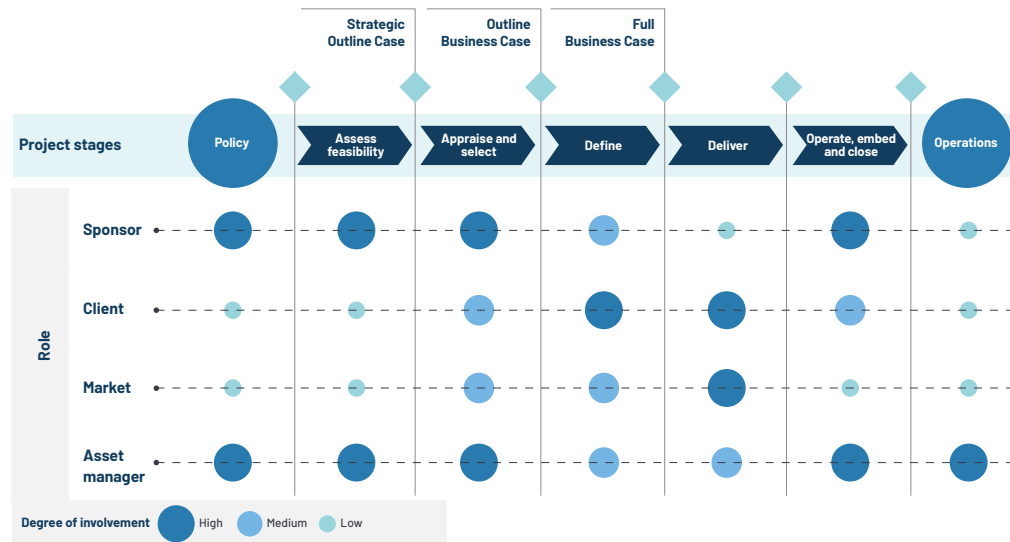
### The role of the sponsor, client, market and asset manager through the project life cycle

Organisational design aligns the capability of the project organisation with its objectives over time. Whilst aligning project complexity and organisational capabilities during the early stages of your project will set you up for success, the level of capability required by the project will vary through its life cycle.

This example demonstrates how you could structure thinking around who needs to be involved at each stage of your project's life cycle. As shown here, all roles are active throughout each stage of the project life cycle up to project close. At this point, the client role finishes but that of the sponsor and asset manager continue into operations to oversee benefits realisation.

The asset manager should be an integral part of the project team throughout the life cycle of the project. The availability of their specific capability is key to ensuring that operational requirements are properly included at the start. The asset manager should have a continual relationship with project delivery, especially at key points such as:

- development of the end-state target operating model, identifying where capability needs to be developed, for example through training
- design and implementation of the procurement strategy . This will ensure that operational needs are conveyed accurately within contract specifications, and incentivisation mechanisms are appropriate
- supporting the development of life cycle plans. For example, operations and maintenance plan.
- providing input on inspection and testing regimes
- engaging in progressive assurance of digital and physical project outputs as they are produced
- acceptance of the new asset upon completion



Pillar 1: Understanding the organisational context

1

Pillar 2: Designing the organisation

2

Pillar 3: Developing the organisation

3

Pillar 4: Managing ongoing change

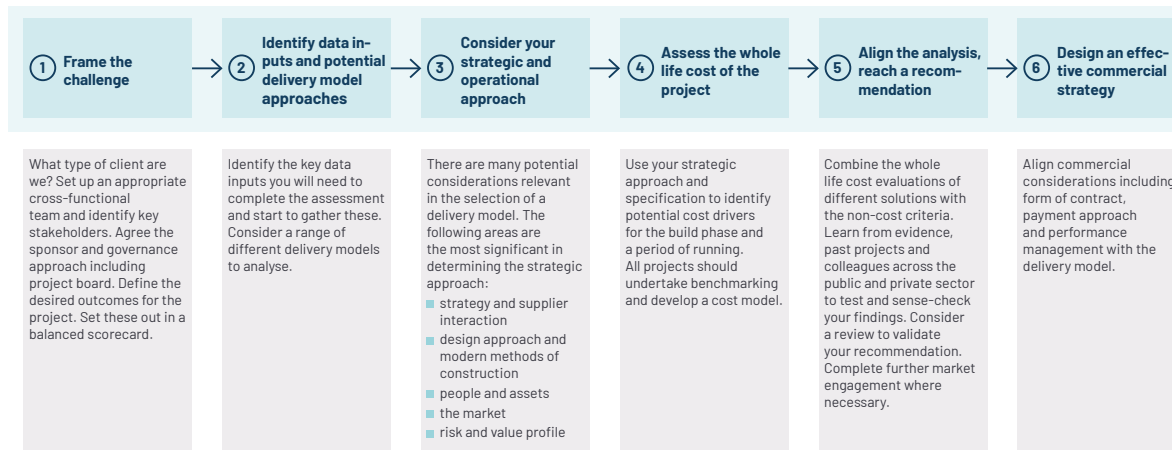
4

# Good practice examples

## Example 5 Delivery model assessment

The delivery model assessment presented in the Construction Playbook (Suggested Reading 2) is an analytical, evidence-based approach to reach a recommendation on how the delivery of a project or programme should be structured. It is a strategic decision that should be given consideration with an appropriate level of analysis and attention applied. This should take place early enough to inform the first business case stage (strategic outline case).

To determine which delivery model offers the best value, an analysis of the value profile, strategic risks, client and market factors is required and should inform the split of roles and responsibilities across the client and market. The structured approach, set out in the diagram, provides a high-level framework consistent with the options appraisal approach prescribed in the Green Book (Suggested Reading 13). Projects should consider a wide range of potential delivery models and how each model would support a value-based approach across the whole life cycle.



### Potential delivery model approaches

#### Transactional

"I know my requirement, who can best deliver it?"

#### Hands-on leadership

"Given the complexity I'll need to watch over this closely."

#### Product mindset

"I need lots of these and need them to get better, greener and faster."

#### Hands-off design

"I need to solve this problem, and I am willing to allow significant flexibility as to the solution."

#### Trusted helper

"I need help, come and perform for me without me having to tell you that needs to be done."

### Common features

Traditional approach in which the industry is engaged to provide a standard service, with competition at procurement.

Complexity of work and stakeholder environment in which the client needs greater control. Certainty of outcome and stakeholder management are more important than lowest cost.

Learning the lessons of repeatability from manufacturing, often with extensive use of digital design and design for manufacture and assembly. Should lead to progressive improvement and efficiency. Viability depends on a visible pipeline of repeatable products.

The client is clear on the outcome and agnostic as to the solution (which may not even require a physical structure). Open to innovation and amenable to using technology to solve the problem instead.

The client is focused on its core business and requires competent suppliers (often in a safety critical environment) that may know the client's operating procedures or technical challenges better than the client. There is close proximity between client and market, and workloads may fluctuate.

# Good practice examples

## Example 6

### Deciding on the blend of in-house and third party resources

This example provides a tool to determine the appropriate balance between in-house and third-party resources during the development of the organisational design strategy.

This tool can be applied across the entire organisation or to specific functions. The factors are not exhaustive and there are likely to be additional factors specific to each organisation that should be considered.

It should also be noted that the weighting of the different factors, and therefore the best approach, may change across the life of the project (see Example 6). For example, in the early stages of a project external support may be procured to acquire capability in a short timeframe, whilst in the long term there is an appetite to grow in-house capability due to the length or repeatability of the project.

Another consideration is the extent to which the in-house and third-party resources should be blended as an integrated team. For integrated teams, alternative approaches include 'best athlete' (the best person for the role regardless of whether they are in-house or third party) or functional accountability for specific services, such as information technology. This may be particularly relevant for new arm's-length bodies or where the new project far exceeds existing capability.



# Good practice examples

## Example 6

### Deciding on the blend of in-house and third party resources

Project factors	In-house (Permanent, fixed and interim)	Third party (Development or delivery partners and suppliers)
<b>1. Expertise</b> Is the shortage specialist or readily available?	<ul style="list-style-type: none"> <li>■ We have the expertise that can be drawn into the project from other areas.</li> <li>■ This is a repeatable project and therefore we want to develop our own capability.</li> </ul>	<ul style="list-style-type: none"> <li>■ We have limited capability, there is a lack of specialist capability in the market or we need a partner to support the upskilling of our existing team.</li> </ul>
<b>2. Decision-making</b> Are there certain types of decision that can only be taken by in-house staff?	<ul style="list-style-type: none"> <li>■ This is a function that must remain in-house to avoid conflicts of interest with supply chain partners. For example, components of the procurement function.</li> <li>■ This service or role has a high decision-making accountability, for example as budget holder.</li> </ul>	<ul style="list-style-type: none"> <li>■ There is limited decision-making authority on behalf of the client needed for the scope of service required.</li> <li>■ Services will be delivered as part of an integrated function with embedded client budget holders.</li> </ul>
<b>3. Lead in times</b> How quickly do you need to bring people in? Will a procurement exercise be quicker than a recruitment activity?	<ul style="list-style-type: none"> <li>■ There are available resources that can be drawn from other projects/corporate/department.</li> <li>■ There is time in the schedule to recruit and develop in-house capability or to hire an interim resource.</li> </ul>	<ul style="list-style-type: none"> <li>■ There are no/limited resources that can be drawn from other projects/corporate/department.</li> <li>■ Limited time to grow in-house capability and an ability to procure additional support.</li> </ul>
<b>4. Duration and predictability</b> How long is the capability required for?	<ul style="list-style-type: none"> <li>■ The capability is required for a significant period of the project which makes recruiting and developing capability more worthwhile. For example, finance or legal functions.</li> </ul>	<ul style="list-style-type: none"> <li>■ The focus of the work is likely to vary over the life of the project. For example, different design skills will be required as the project progresses. Access to a wider/diverse pool of resource might be best achieved through the engagement of a design consultancy.</li> </ul>
<b>5. Maturity of scope of service</b> How confident are you in the risks you are/aren't prepared to take?	<ul style="list-style-type: none"> <li>■ There is not a clear definition and scope for the service or output required. This may result in additional management layers or overlap between in-house and outsourced resource scope of service.</li> <li>■ We want to retain the risk ownership for key services or functions where we are best placed to manage them.</li> </ul>	<ul style="list-style-type: none"> <li>■ We have a clearly defined scope of service, output or type of capability needed.</li> <li>■ We are content to transfer the risk ownership for this service or functions where external organisations are best placed to manage them.</li> </ul>
<b>6. Reliance</b> Do you have the capability to manage a supply chain or integrated team?	<ul style="list-style-type: none"> <li>■ There is a risk that we could become over reliant on a particular supplier. This would make it challenging to extract ourselves from the commercial arrangement, even if the performance or relationship was not going well.</li> </ul>	<ul style="list-style-type: none"> <li>■ There is limited risk of becoming over reliant due to the nature of skills being procured.</li> </ul>
<b>7. Compliance with corporate pay structures</b> Does the required pay fit your structure?	<ul style="list-style-type: none"> <li>■ The skill or capability needed can be secured at salary levels within our pay structure and/or there are adequate flexibilities to pay interim rates.</li> </ul>	<ul style="list-style-type: none"> <li>■ The skill or capability needed cannot be secured at salary levels within our pay structure nor is there adequate flexibility to pay interim rates.</li> </ul>
<b>8. Cost of service of function</b> Who can carry out the function most cost effectively?	<ul style="list-style-type: none"> <li>■ Third party resources do not have the economies of scale nor innovative working practices to provide better value for money over in-house solutions.</li> </ul>	<ul style="list-style-type: none"> <li>■ Third party resources have the economies of scale or innovative working practices to provide better value for money over in-house solutions.</li> </ul>
<b>9. Location</b> Are you in a remote or accessible location?	<ul style="list-style-type: none"> <li>■ The work is close to a major hub or town with the ability to attract new capability to the programme or hybrid/remote working is possible.</li> </ul>	<ul style="list-style-type: none"> <li>■ There are limited skills in the local area to develop in-house capability and hybrid/remote working is not possible.</li> </ul>

# Good practice examples

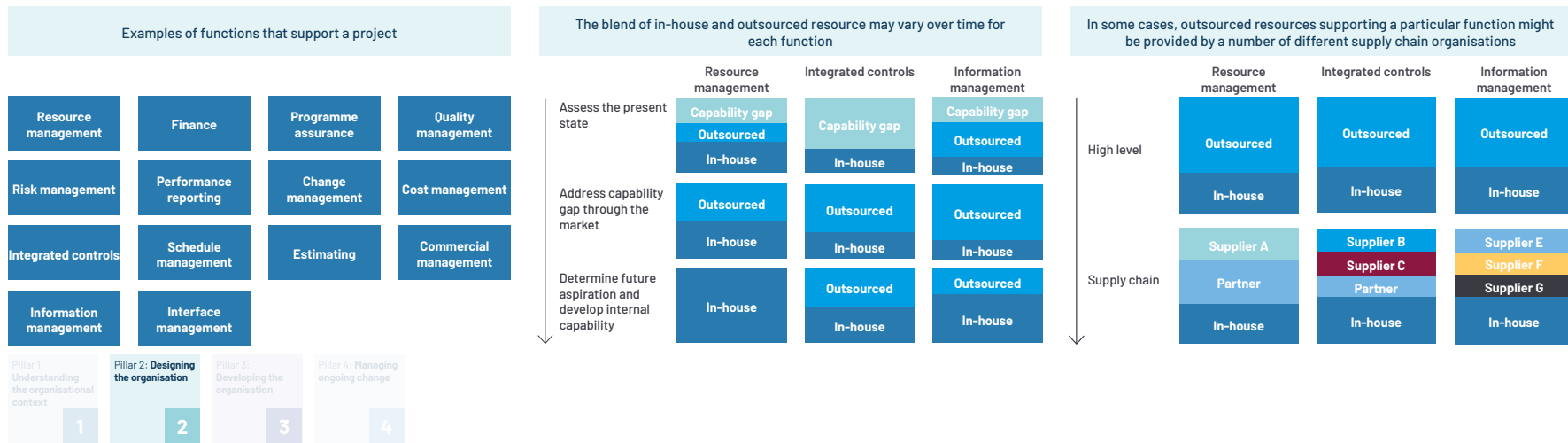
## Example 7

### Allocation of key functions between the client and supply chain

This example shows how the optimal blend of in-house and outsourced resources for each project function may vary over time. A client should establish whether delivery, transition and operational activities will be:

- retained in house, making use of existing corporate capability and/or developing it over time
- outsourced, specified by the client and procured from the market to provide a solution

To determine the optimum balance, a client should develop an understanding of the functions required, the current maturity level of each function, the maturity level that needs to be achieved, the investment required and any time constraints. Together, these factors will inform the most appropriate balance of in-house staff and external support required. It is inevitable that the need will vary, and an organisation is unlikely to meet the peaks of demand with entirely permanent resources. Where external support for some of the functions may be required, the client should develop a plan for how services will be scoped, procured and aligned with the existing in-house capabilities, behaviours and cultures of the organisation.



# Good practice examples

## Example 8

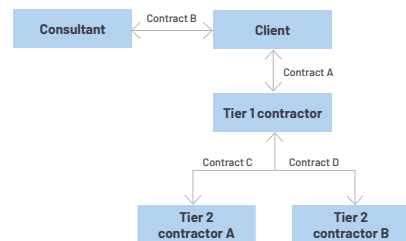
### Project 13: An alternative organisational design for major projects

This example presents Project 13, which is an alternative organisational design for major projects. Its development was sponsored by the Infrastructure Client Group and it is a partnership initiative of the Institution of Civil Engineers and World Economic Forum (Suggested Reading 6).

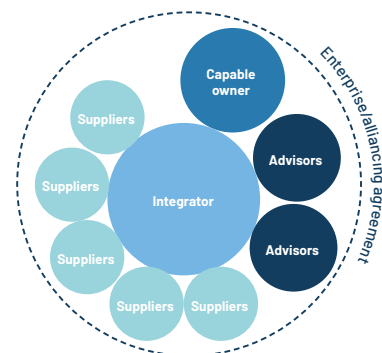
The framework builds on existing best practice from across the industry brought together in one model. It promotes the movement from transactional business models to collaborative enterprise delivery models to ensure infrastructure improvement is focused on delivering better customer outcomes. The model is underpinned by five pillars: capable owner, governance, organisation, integration and digital transformation.

You should consider the scale and complexity of your programme and if an enterprise model, such as Project 13 and the associated organisational design is suitable for your project.

#### Traditional transactional organisational design



#### Project 13 enterprise organisational design



The most significant benefits of using an enterprise model are:

- ✓ The capable owner is central to the change and establishing the enterprise
- ✓ Enterprises are brought together to deliver outcomes for the ultimate customer
- ✓ Enterprises are made up of integrated and collaborative delivery teams, drawing on the capability of participating organisations
- ✓ Enterprises include an ecosystem of partners and suppliers, with more integrated relationships providing the opportunity for early engagement
- ✓ Reward in an enterprise is based on value added to the overall outcomes, not on time or volume
- ✓ Risk allocation is aligned with capability, it is not transferred through tiers of the supply chain

#### The five pillars of Project 13

Five pillars	Principles
<b>Capable owner</b>	<ul style="list-style-type: none"> <li>■ The <b>capable owner</b> develops enterprises built on long term business to business (b2b) relationships</li> <li>■ An enterprise is set up to deliver:                             <ul style="list-style-type: none"> <li>- Clearly articulated customer outcomes</li> <li>- Long term asset performance</li> </ul> </li> </ul>
<b>Governance</b>	<ul style="list-style-type: none"> <li>■ Value is defined at outcome level (through baselines, benchmarks or affordability)</li> <li>■ The enterprise is rewarded for outcome performance</li> <li>■ Risk allocation is aligned with capability and where possible jointly owned</li> <li>■ The commercial arrangements provide the potential for sustainable returns</li> <li>■ There are clear incentives and opportunities for investment</li> </ul>
<b>Integration</b>	<ul style="list-style-type: none"> <li>■ The <b>integrator</b> brings together capabilities that deliver effective solutions through production systems</li> <li>■ The <b>integrator</b> enables a platform approach to delivery</li> <li>■ Supply systems are organisationally and commercially aligned with the outcomes to be delivered</li> <li>■ The enterprise has a common and committed approach to health, safety and wellbeing</li> </ul>
<b>Organisation</b>	<ul style="list-style-type: none"> <li>■ The integrated enterprise is aligned with the outcomes to be delivered</li> <li>■ <b>Supplier and advisor</b> capabilities are engaged early in developing solutions</li> <li>■ The enterprise integrates the required capability in high performing, collaborative teams</li> </ul>
<b>Digital transformation</b>	<ul style="list-style-type: none"> <li>■ The enterprise digital transformation strategy enables an integrated digital approach to asset management and delivery.</li> <li>■ The enterprise effectively integrates engineering and digital technology to deliver intelligent solutions</li> <li>■ Data and information are recognised and treated as digital assets that enable customer outcomes</li> </ul>

# Good practice examples

## Example 9

### Measuring and enhancing organisational capability: A High Speed 2 case study

This example shows how High Speed 2 developed its own capabilities and provided robust assurance that it had the necessary maturity to deliver a complex infrastructure project.

Owing to the complexity of the project, High Speed 2 required a bespoke approach to defining and measuring its current and required capability levels and to address any gaps. High Speed 2 had to demonstrate sufficient capability to the Department for Transport in order to gain Notice to Proceed, the formal approval for detailed design and construction works to commence on Phase One of the scheme.

High Speed 2 partnered with a consulting organisation to design a bespoke enterprise capability framework, informed by leading industry practice and the experiences of other major, global infrastructure projects. A key enabler to driving success was executive level sponsorship from a Capability Improvement Programme Steering Group which was chaired by the Chief Executive Office and reported to the board on a regular basis. The approach adopted was successful, achieved industry recognition from an independent assurance panel, and allowed High Speed 2 to award Notice to Proceed in April 2020.

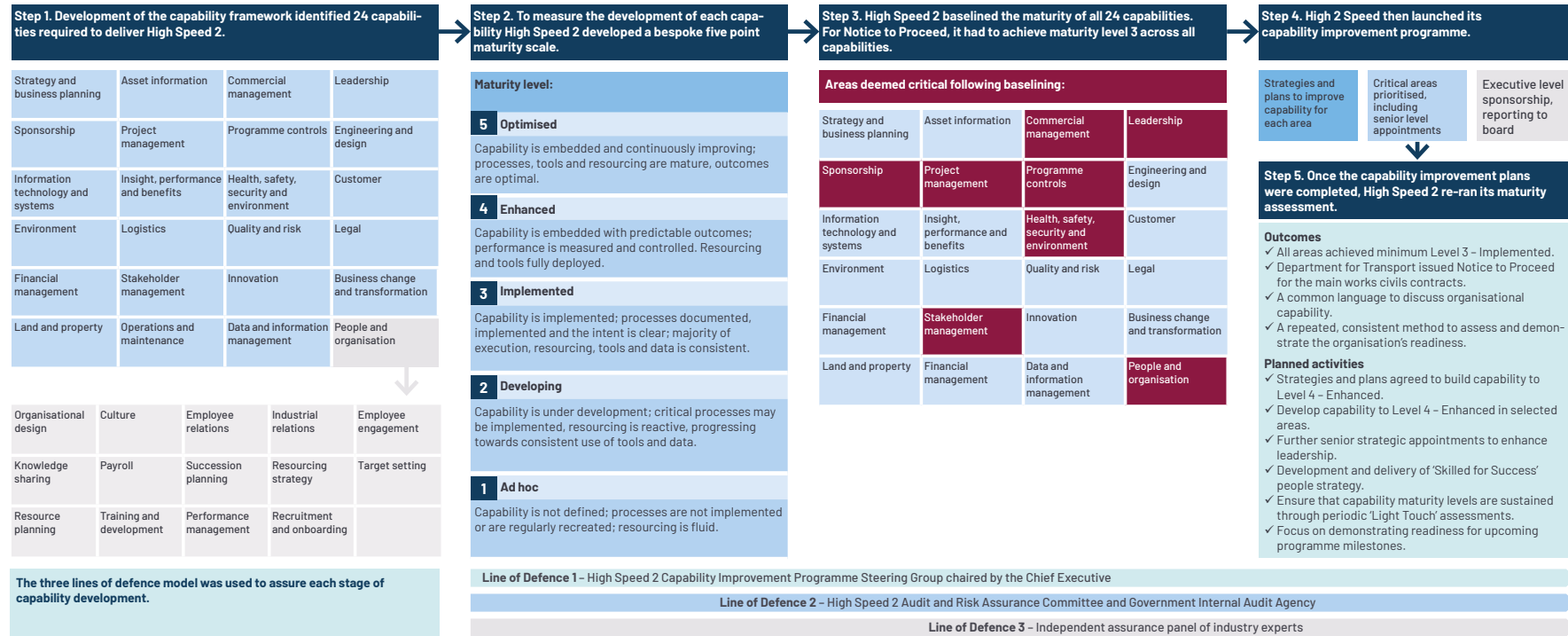




# Good practice examples

## Example 9

### Measuring and enhancing organisational capability: A High Speed 2 case study



# Good practice examples

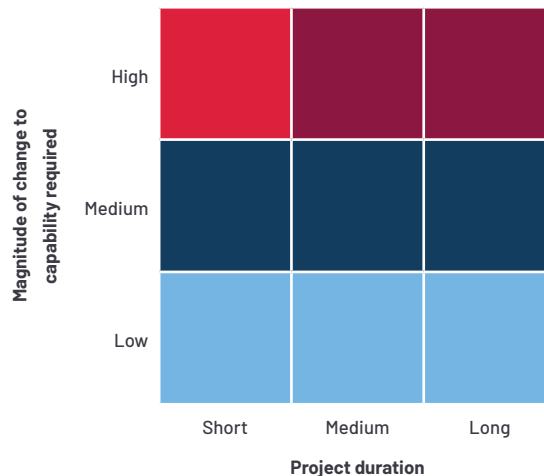
## Example 10 Identifying the scale of change

Capability requirements will change throughout the project's life cycle, in particular:

- where there is a gap between current organisational capability and the required capability defined in the organisational design.
- prior to transition points in the investment life cycle, for example moving from design to build or from build to operate.

Enhancing capability is not just about procuring new or additional resources, but also requires robust change management.

In order to determine the type of change journey (for example, incremental, step change etc), consideration needs to be given to both the duration and the scale of change required.



**Rethink the project!** It is not considered good practice to attempt to deliver a significant amount of change in a short period of time. In such cases the viability of the project should be questioned.

**Transformational change:** If the magnitude of the change is significant, it will need to be managed as a transformational change programme, thus providing progressive development and delivery of the enhanced capability through a series of tranches. This supports sustainable change and is particularly important if there are challenges relating to the appetite and/or capacity for change.

On some occasions the strategic objectives for large projects include a legacy requirement to provide a lasting improvement in project delivery that will endure beyond the delivery of the project. It is good practice to manage the delivery of such strategic objectives using a transformational change programme.

**Step change:** If the magnitude of change is proportional to the appetite, capacity and available time for change, it can be achieved by establishing a business change project.

**Incremental change:** Change can be achieved incrementally through traditional line management arrangements. The actions should be allocated owners and incorporated into objectives. Review and progress monitoring of these actions should be addressed as part of routine line management. This applies equally to the members of the team responsible for developing and delivering the enhanced capability as it does to members of the team for whom the capability has been provided. Overall evaluation will involve re-assessment of capability and this should be contrasted against the expected improvements in delivery performance, evidenced by periodic project performance data.



# Good practice examples

## Example 11

### Communication and engagement strategies

This example sets out a phased approach to a communications and engagement strategy. Effective communication and engagement strategies are critical so that all of the stakeholders involved understand the need for change and actively engage in its implementation. A communication and engagement strategy should:

- be proportionate to the scale of change
- communicate the change up, down and across the organisation
- enable people to provide progressive feedback
- be specific, as early as possible and frequent
- utilise the most appropriate engagement channels best suited to the different stakeholder groups and reflect the diversity of people to be engaged

This will ensure that the impact on people is considered throughout the transition. Any issues or concerns relating to the change must be identified and addressed as soon as possible. The process of communicating change should aim to inform key stakeholders of the new ways of working and the value added to them.

Taking this approach results in the following benefits:

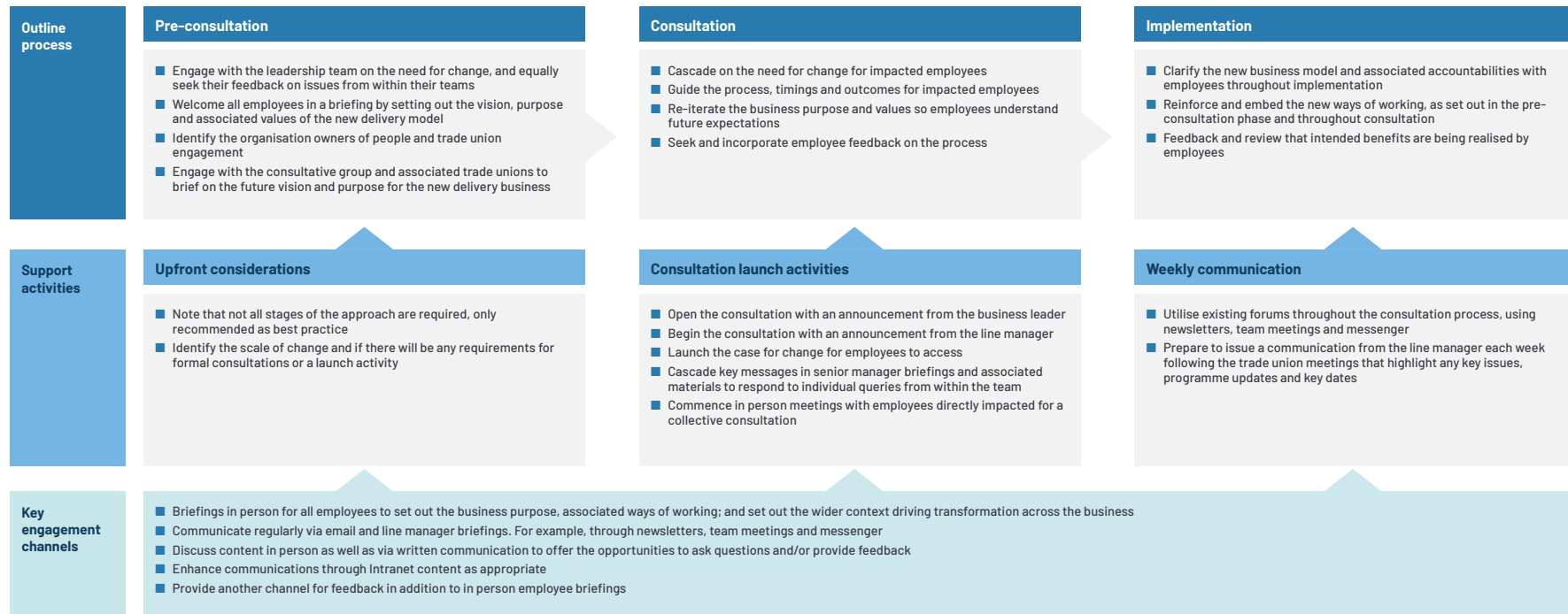
- ✓ employee enthusiasm for change is improved
- ✓ risk of uncertainty amongst employees is reduced
- ✓ employee buy-in increased as changes are better understood and communicated in advance
- ✓ management buy-in for large scale change more likely as they understand their people better



# Good practice examples

## Example 11

### Communication and engagement strategies



# Suggested further reading

Reference	Use
<p>1 <b>Report</b>  <a href="#">Lessons learned from major programmes - National Audit Office 2020</a></p>	<p>An insight to the most recent National Audit Office reports on major programmes, including Crossrail, Carrier Strike and Universal Credit.</p>
<p>2 <b>Policy</b>  <a href="#">The construction playbook - Cabinet Office 2020</a></p>	<p>Sets out key policies and guidance for how public works projects and programmes are assessed, procured and delivered.</p>
<p>3 <b>Guidance</b>  <a href="#">Crossrail equality and diversity strategy - Crossrail 2016</a></p>	<p>This document is presented as best practice defining an overarching equality and diversity strategy at a programme level.</p>
<p>4 <b>Guidance</b>  <a href="#">The art of brilliance: a handbook for leaders of transformation programmes - Infrastructure and Projects Authority 2019</a></p>	<p>This guidance explains the behavioural characteristics of highly successful leaders of transformation programmes.</p>
<p>5 <b>Research paper</b>            The organisational architecture of megaprojects - International Journal of Project Management 2021</p>	<p>Research exploring the formation and evolution of the organisational architecture in megaprojects.</p>
<p>6 <b>Guidance</b>            Project 13 framework - Infrastructure Client Group and Institution of Civil Engineers 2020</p>	<p>The principles of a commercial approach that defines the roles, capabilities, and responsibilities of the key stakeholders in Project 13's new enterprise model.</p>
<p>7 <b>Standard</b>            ISO 44001 Collaborative business relationships management system - International Organization for Standardization 2017</p>	<p>Identifies requirements for the effective identification, development and management of collaborative business relationships within or between organisations.</p>
<p>8 <b>Framework</b>  <a href="#">Project delivery capability framework - Government Project Delivery Profession 2018</a></p>	<p>This framework describes the job roles, capabilities and learning for all Government Project Delivery Professionals.</p>
<p>9 <b>Guidance</b>  <a href="#">The sourcing and consultancy playbooks - HM Treasury 2021</a></p>	<p>Key policies and guidance for making sourcing decisions for the delivery of public services, including specific guidance on sourcing consultancy services.</p>
<p>10 <b>Guidance</b>            Change management factsheets - Chartered Institute of Personnel and Development 2021</p>	<p>An overview of change management from the Chartered Institute of Personnel and Development.</p>

# Suggested further reading

Reference	Use
11 <b>Guidance</b> <a href="#">Improving operational delivery in government - National Audit Office 2021</a>	A guide for senior leaders in government departments and wider public services to effectively manage and improve the way services are delivered.
12 <b>Report</b> The successful delivery of change within the public sector: getting it right - Association of Project Management – 2017	A report for individuals and organisations involved in or with an interest in the delivery of change within the public sector.
13 <b>Guidance</b> <a href="#">The green book: appraisal and evaluation in central government - HM Treasury 2020</a>	This guidance issued by HM Treasury outlines how to appraise policies, programmes and projects. It also provides advice on the design and use of monitoring and evaluation before, during and after implementation.
14 <b>Guidance</b> <a href="#">Principles for project success – Infrastructure and Projects Authority 2020</a>	A quick guide for practitioners on things to get right for any project to succeed.
15 <b>Research paper</b> What are the causes and cures of poor megaproject performance? - Project Management Journal 2020	A research paper that systematically reviews the academic literature, exploring more than 6000 academic summaries and 86 papers in full. It identifies six themes, which reveal 18 causes of poor performance and 54 solutions.
16 <b>Policy</b> Public Sector Equality Duty - Ministry of Justice 2012	Guidance on the Public Sector Equality Duty, part of the Equality Act 2010.
17 <b>Policy</b> 2010 Equality Act - UK Government - 2010	The 2010 Equality Act sets out the law which organisations must follow to reduce discrimination in the workforce.
18 <b>Website</b> <a href="#">Gangmasters &amp; Labour Abuse Authority</a>	Collection of guidance and publications on how to protect workers and the GLAA licensing scheme

# Glossary

## Accountability

The accountable person is the individual who is ultimately answerable for an activity or decision. This includes 'yes' or 'no' authority and veto power. Only one accountable person can be held to account. An accountable person has to be accountable to someone for something. Accountability cannot be delegated or shared.

The responsible person is the individual who actually undertakes the task: in other words, they manage the action/implementation. Responsibility can be shared. The degree of responsibility is determined by the individual with the accountability.

## Asset

Anything tangible or intangible that is owned or controlled with the expectation of present or future benefit.

## Asset manager

In the context of Routemap, the asset manager is the organisation (or parts of) 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 may be separate entities.

## Assurance

A general term for the confidence that can be derived from objective information over the successful conduct of activities, the efficient and effective design and operation of internal control, compliance with internal and external requirements, and the production of insightful and credible information to support decision-making.

## Benefits

In the context of project delivery, benefit is the measurable value or other positive impact resulting from an outcome perceived as an advantage by one or more stakeholders, and which contributes towards one or more objectives.

## Capability

In the context of Routemap, capability describes the ability of the sponsor, client, asset manager and market to organise for effective and efficient delivery. It refers to all or part of an organisation, and not the individual.

## Client

In the context of Routemap, the client is the organisation that is responsible for undertaking the work to fulfil the sponsor's requirements. The client translates the requirements from the sponsor and manages the delivery. The client selects the most appropriate suppliers. In some contexts, the sponsor and client could be from the same organisation.

## Client model

The client model refers to how the client structures and resources the project. The model will set out how delivery, transition and operational activities will be split between the client, advisors/partners and supply chain (in-house versus external) to ensure a successful outcome and realisation of the sponsor's goals.

## Complexity

In the context of Routemap, project complexity is a measure of the inherent difficulty of delivering a project. This is assessed on factors such as the stability of the wider delivery environment, the level of innovation required, and the number of stakeholders involved.

## Delivery model

The delivery model is the form of structural and commercial arrangements to be deployed to meet the sponsor's requirements. The selected model should be the best option from those available, taking into account the capabilities and constraints of the project. For example, the creation of an arm's-length body like High Speed 2 or the formation of a special purpose vehicle as has been used to deliver Thames Tideway Tunnel.

## Delivery strategy

The delivery strategy describes how the selected delivery model will be implemented and how it will need to change over time.

## Environmental, economic and social value

The impact a project has on the environment, economy, and society. This may be global or localised, and may result both from meeting the project's objectives (for example, improved transport links) and from by-products of delivery (for example, job creation). It relates to reducing negative impacts as well as increasing positive impacts, and it is important that value delivered against one category is not at the expense of another (for example, delivering economic development but at significant cost to local biodiversity).

# Glossary

## Environmental, social and governance (ESG) criteria

These are key criteria for sustainability reporting, in response to widespread investor and consumer demand. They are also increasingly used to inform investment decision making.

## Governance

Governance defines relationships and the distribution of rights and responsibilities among those who work with and in the organisation. It determines the rules and procedures through which the organisation's objectives are set and provides the means of attaining those objectives and monitoring performance.

## Market

In the context of Routemap, the market comprises organisations which integrate and compete to deliver goods or services to one or more clients. This includes:

- the players, for example, sellers/buyers/partner
- the rules, for example, regulation, legislation
- processes, for example, procurement, delivery
- structure, for example, relationships between buyers, sellers, partners

## Optimism bias

The demonstrated and systematic tendency to overemphasise positive benefits and opportunities and undervalue the costs and negative risks of projects. This bias should be quantified when developing cost plans and schedules.

## Outcomes

The result of change, normally affecting real-world behaviour or circumstances. Outcomes are desired when a change is conceived. Outcomes are achieved as a result of the activities undertaken to effect the change; they are the manifestation of part or all of the new state conceived in the target operating model.

## Outputs

A specialist product (the tangible or intangible artefact) that is produced, constructed or created as a result of a planned activity and handed over to users.

## Requirements

Requirements are the project stakeholders' wants and needs, clearly defined and with acceptance criteria.

## Risk

The effect of uncertainty on objectives. Risk is usually expressed in terms of causes, potential events, and their consequences.

- a cause is an element which alone or in combination has the potential to give rise to risk
- an event is an occurrence or change of a set of circumstances and can be something that is expected which does not happen or something that is not expected which does happen.
- the consequences are the outcomes of an event affecting objectives, which can be certain or uncertain, can have positive or negative direct or indirect effects on objectives, can be expressed qualitatively or quantitatively.

## Risk appetite

The nature and extent of risks that an organisation is willing to take.

## Senior Responsible Owner (SRO)

All UK government projects will have a senior responsible owner. They are accountable to the sponsor organisation for a programme or project meeting its objectives, delivering the projected outcomes and realising the required benefits. The senior responsible owner is the owner of the business case and accountable for governance. The senior responsible owner of a government major project is ultimately accountable to Parliament.

## Sponsor

In the context of Routemap, the sponsor is an organisation that secures the funding, oversees the business case and is responsible for specifying the requirements to the client. In some contexts, the sponsor and client could be the same organisations.

## Stakeholders

Any individual, group or organisation that can affect or be affected by or perceive itself to be affected by an initiative (programme, project, activity or risk).

## Target operating model

The target operating model refers to how the asset or change will be funded, owned, operated and maintained once the project has closed.



# Glossary

## **Transition points**

Points at which a project moves from one stage to another. For example, delivery to operations.

## **Sustainability**

This means making the necessary decisions now to stimulate economic growth, maximise wellbeing and protect the environment, without affecting the ability of future generations to do the same.

## **UN Sustainable Development Goals (SDGs):**

Adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs are integrated and recognise that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.

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---

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Crossrail 2

Crossrail International

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Heathrow Airport Ltd

High Speed 2

Mott MacDonald

Highways England

Office of Government Property

Imperial College

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Sellafield Ltd

Systra Group

Thames Water

Transport for London

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