



Infrastructure
and Projects
Authority



Improving Infrastructure Delivery: Project Initiation Routemap

Procurement Module



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Rev 1

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Infrastructure and Projects Authority and Infrastructure Client Group

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

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

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

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

Tony Meggs
Chief Executive of the Infrastructure & Projects Authority

Andy Mitchell
Chair of the Infrastructure Client Group

Preface

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

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

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

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



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

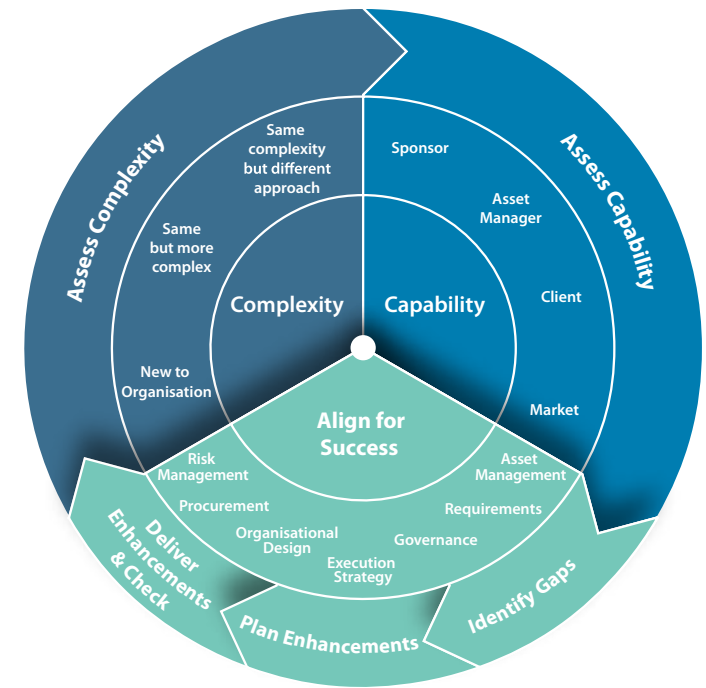
The assessment tools help determine:

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

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

The purpose of each Align for Success module is to help:

- Gain a greater understanding of the complexity-capability results;
- Identify and analyse options to better align complexity-capability;
- Plan for successful achievement of desired outcomes;
- Assure enhancement plans during implementation.



Application of the Procurement module helps the client engage with the market, determine optimum allocation of risk between the client organisation and the supply chain, package the work to be procured and identify the most appropriate procurement model.



Introduction: Whether to use the Procurement Module

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Tip:

This module should not be used in isolation. It is assumed you have already completed the Complexity - Capability Gap Analysis in the Project Initiation Routemap Handbook and have identified issues with Procurement.

Typical findings relating to procurement

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

Contract incentives appear to be misaligned to sponsor's requirements or Client Model, which may mean the supply chain performs contrary to expectations.

A procurement model is being proposed that the client/supply chain organisations do not have previous experience of applying successfully, therefore may need capabilities they currently do not have.

The client over-prescribes how work should be done and thus may miss out on innovation and value-add from the supply chain.

The market appetite to support the project is unproven.

There is a lack of understanding of the extent of capability development required by the market to deliver the project.

The current supply chain structure for the market is convoluted resulting in inefficiencies and failure to integrate.

The accountability for risk does not match the organisation's capability or appetite to manage the risk.

There is a disjointed relationship between sponsor, client, asset manager and supply chain.

Through the life of the project there is little provision for or anticipation of potential scope changes caused by changes to external factors.

A Client Model (e.g. alliancing) is being proposed that the client/supply chain organisations do not have previous experience of applying successfully, therefore may need capabilities they currently do not have.

There are no or inadequate lifecycle parameters – such as asset reliability, availability, cost of maintenance, or operability – defined in the requirements

Modules that help

Requirements	Governance	Execution Strategy	Organisation	Procurement	Risk Management	Asset Management
●	●	●	●	●		
		●	●	●		
		●		●		
		●	●	●		
		●		●		
	●	●	●	●		
	●	●	●	●		
●	●	●	●	●		
		●	●	●		
●	●		●	●	●	●

● Primary module for help

● Related module for help



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Typical findings relating to procurement

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There is no clear role/dedicated resource on the project specifically tasked with providing the whole life asset knowledge and articulating the asset vision so as to optimise achievement of the organisational goals

There is no strategic engagement with the operators and/or supply chain to ensure that the project solution is defined, developed, constructed and handed over appropriately

There is limited use of Asset Information in developing project requirements and BIM is not built into project development activity.

Poor decision-making, governance structures and processes undermine the integrated asset strategy

Modules that help

Requirements	Governance	Execution Strategy	Organisation	Procurement	Risk Management	Asset Management
●	●		●	●		●
●	●	●	●	●		●
●				●		●
●	●	●	●	●		●

Tip:

This module should not be used in isolation. It is assumed you have already completed the Complexity - Capability Gap Analysis in the Project Initiation Routemap Handbook and have identified issues with Procurement.

● Primary module for help

● Related module for help



Why Procurement Matters





Why Procurement Matters: What is Procurement?

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Procurement is a dynamic process that sources the best value solution to a requirement through the sustainable allocation of risk between a client organisation and its supply chain. Procurement exists to explore the market opportunities and to implement strategies that deliver the best possible outcome to the organisation, its stakeholders and its customers.

Procurement can be defined as:

“...the business management function that ensures identification, sourcing, access and management of the external resources that an organisation needs or may need to fulfil its strategic objectives”.

The Chartered Institute of Purchase and Supply

Why is good procurement important?

Four of the Cabinet Office's Common causes of programme/project failure (2012) relate to how a project is set up to be delivered and two causes specifically relate to procurement:

- Lack of understanding of and contact with the supply industry at senior levels in the organisation;
- Lack of effective project team integration between clients, the supplier team and the supply chain.

In addition, the early adoption of the Routemap has identified the importance of aligning the procurement strategy with the specific requirements and objectives of the project as shown by the quotes below;

- “need to be able to explain why the relationship is strategically important to existing and future partners and suppliers”;
- “ensure the approach to incentivisation and reward drives effective collaborative working to maximise productivity”.

This is especially relevant where behavioural and cultural alignment is critical to success.

Finally, it's important to ensure compliance with procurement regulation and process to avoid unnecessary challenges and wasted effort during the award process.

Characteristics of good procurement

Good procurement:

- fosters and supports strategic ongoing or early engagement to encourage market capability development;
- enables a client and the supply chain to fully appreciate the risks related to the delivery of the requirements;
- is based on understanding of the shared drivers. This will enable client and the supply chain to work towards better alignment and thus engender a truly collaborative relationship;
- recognises that there is always likely to be shared reputation benefits, risk and reward;
- adopts and complies with a clear and transparent process;
- supports the overall execution strategy and client model.

Considerations





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This section lists a series of questions that might be considered when validating an existing procurement strategy or testing the design of a new one. Considering these questions helps the project team to form an effective procurement strategy and target areas for enhancement. It is beneficial to review the considerations with key stakeholders or use them as prompts to facilitate a dialogue.

Prior to asking these questions the output from the Routemap capability and complexity assessments should be reviewed for any factors relating to procurement, and specifically the output from the market capability assessment.

It is important to note that the procurement strategy will need to develop and evolve in line with the requirements and execution strategy. It is useful to revisit the considerations at major decision points.

Pillars of procurement

Good procurement optimises both the delivery of requirements and the clear articulation and allocation of risk for the client and the supply chain.

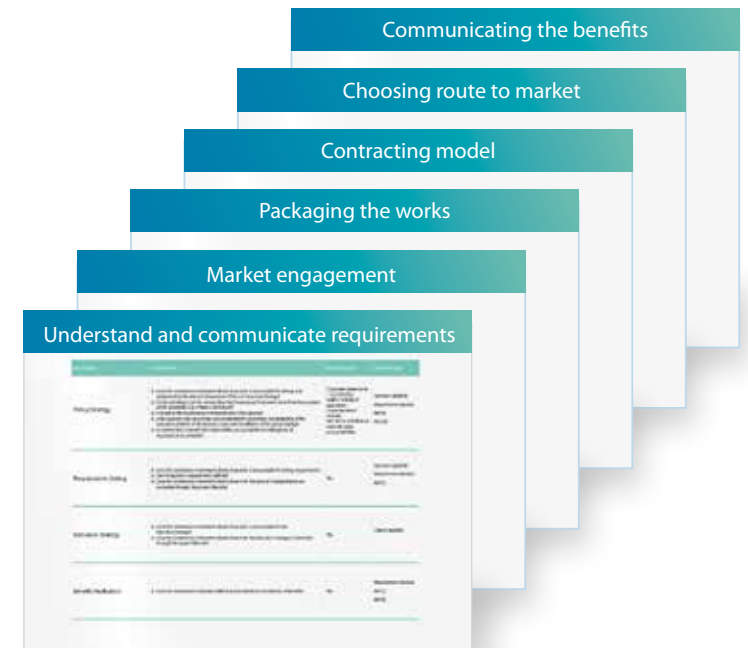
To engage in good procurement, the client needs to know:

- What the requirements of the project are and the outcomes and benefits expected;
- The market appetite capability and capacity to provide the services required and engage in a longer term strategic relationship;
- Which risks are best managed in-house, based on the organisation's risk appetite, and which risks are best placed with and managed by the supply chain;
- The key business drivers for the suppliers, both reputational and remunerative, within the various markets that will deliver the requirements;
- How the procurement will support the proposed target operating model and client model being adopted.

Good procurement has six primary sets of activities:

1. Understand & communicate requirements
2. Engage the market
3. Package the works
4. Choose the risk allocation model – Contracting Model
5. Choose the route to market
6. Communicate the benefits

It is important that these six pillars link together to form an effective procurement approach. If one of the pillars is missing or out of balance the procurement will be inefficient and likely to lead to heightened risk or loss of value. The relationship between the pillars is shown in the Supporting Material on page 19.



Tip:
It may be helpful to review the procurement model diagram contained in the supporting material page 20 prior to using the following consideration tables.



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Tip:

It may be helpful to review the following documents:

- Governance Module and reflect on the Target Operating Model
- Sponsor Requirements
- Business case
- Execution Strategy.

<i>Key prompts</i>	<i>Considerations</i>	<i>What may help</i>
Requirements and benefits	<ul style="list-style-type: none"> ■ What is the status of the business case? ■ Are the requirements well articulated and understood? ■ Is the client fit to deliver the requirements in terms of its structure? ■ Has the client undertaken a capability assessment to inform the procurement strategy and scope? ■ Has a clear timeline for actions been established? ■ Has a policy document been prepared to govern procurement activities? ■ Is there a balanced scorecard to enable requirements to be prioritised, evaluated and communicated? ■ Have the risks been identified that may impact the delivery of the requirements? ■ Would an expert panel be useful to act as advisor or as compliance unit? ■ Are 3rd party obligations understood (including funders / regulators / assurance bodies)? ■ Is the interface with the asset management and operational strategy understood? ■ Have impacts on operations been assessed and what is the responsibility and liability for the supply chain in respect of continuation of operations? ■ Is the corporate risk strategy understood, and how will this influence procurement activity? ■ Has consideration been given to the impact of the project funding and financing of the procurement options? 	<p>Execution Module</p> <p>Requirements Module</p> <p>Supporting material pg 18 and 19</p> <p>Ref [2], [6], [7]</p>

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Tip:

It may be helpful to review the following documents:

- Corporate Procurement Policies
- Existing Framework Agreements.

Key prompts	Considerations	What may help
Market relationship	<ul style="list-style-type: none"> ■ Does the client understand the marketplace for the goods and services required? ■ Has the client's position been analysed in relation to its own demand and the market's capacity to supply? ■ What is the client's experience of the market and its ability to deliver what is needed? ■ Is there an understanding of the market perception of the client, and of the client's maturity level? ■ Is there a long-term strategic relationship with the supply chain? ■ Is there a programme and/or pipeline that supports a strategic relationship? ■ Does the client understand how and where the market can most add value to the project? ■ Does the market offer a service approach not previously considered? ■ Have the key factors required been identified to facilitate a strategic relationship with the market? 	<p>Supporting material pg 18 and 21</p> <p>Ref [1], [2], [3]</p>
Market engagement	<ul style="list-style-type: none"> ■ Has a target supply chain been identified? Are their capabilities and capacity suitable? ■ What are the areas where improvement is required? ■ What approaches have other clients successfully adopted? ■ Has an initial proposition of the demand to be created been scoped and the client's preferred risk allocation been established? ■ Has a variety of market engagement methods been considered? Has use been made of pre-established supplier networks (e.g. Trade Associations, business networks, etc)? ■ Has the outline packaging and contracting strategy been drafted for testing in the market place, and sufficient time allowed for in the schedule to enable meaningful engagement? ■ Do the market engagement test results give the client confidence in the market response to its procurement opportunities? ■ Are there legislative or statutory provisions that need to be adhered to prior to market engagement ie OJEU? ■ Have you considered how market engagement activity may affect existing, incumbent relationships? ■ Has due consideration been given to the engagement of the sub-tier supply chain – has the strategy been market tested with them? 	<p>Supporting material pg 18, 21 and 22</p> <p>Ref [3], [4], [7]</p>
Market Appetite	<ul style="list-style-type: none"> ■ Does the client understand the appetite of the market to meet its demand? ■ If market appetite is lower than expected, are the reasons for this understood? ■ Are there any steps identified to encourage and increase market appetite? ■ Is there awareness of procurement activity by other clients who may seek to use an identical supply chain? ■ Is there recognition of 2nd tier/sub-tier supply chain members and understanding of how they can be engaged through the procurement? ■ Does the commercial model reflect the alignment of corporate risk and rewards that will result from the investment? ■ Do the market appetite results give the client confidence in the market response to its procurement opportunities? ■ Does the procurement process allow the client to avoid surprises by tracking appetite and gain understanding of the underlying reasons to any changes? ■ Have the outline commercial models been tested within the marketplace? ■ Has the relationship between asset creation, operation and market appetite been understood to bring these together? 	<p>Supporting material pg 18, 21 and 26</p> <p>Ref [1], [3]</p>

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Tip:

It may be helpful to review the following documents:

- Risk management Strategy
- Organisational Design and Development Strategy.

Key prompts	Considerations	What may help
Risk approach	<ul style="list-style-type: none"> ■ Are the risks clearly understood, evaluated and articulated? ■ How much risk should be retained in-house and how much can be placed with the supply chain, and in what form? ■ Is the risk allocation aligned with the balanced scorecard measures? ■ Is the risk allocation aligned with the cost certainty and schedule requirements? ■ Is risk allocation clear and sustainable? ■ Is risk and reward transfer equitably balanced? ■ Has the proposed risk transfer been tested with the market? ■ Does the risk transfer strategy align with the corporate risk approach, including 3rd party requirements? ■ Does the risk allocation and management strategy reflect the capability and complexity assessments? 	<p>Execution Module</p> <p>Governance Module</p> <p>Supporting material pg 26</p> <p>Ref [3], [6], [7]</p>
Interfaces	<ul style="list-style-type: none"> ■ What soft (non-contractual) and hard (contractual) interfaces have been considered in the formulation of the packaging strategy? ■ Is the client organisation structured to manage the technical /commercial /operational interfaces that the packaging strategy will create? ■ What approaches, such as alliancing or partnering arrangements, would help soften contractual interfaces and encourage collaboration? ■ Has the management of the scope boundaries between packages been considered? ■ Have the packages been appropriately sized and scoped to enable the client to manage the interfaces? 	<p>Execution Module</p> <p>Organisational Design & Development Module</p> <p>Supporting material pg 24 and 25</p> <p>Ref [1], [2], [5], [9]</p>
Packaging strategy	<ul style="list-style-type: none"> ■ Does the packaging strategy encompass the entire scope? ■ Has the feedback from the market engagement been used to inform and develop the packaging strategy? If changes have occurred, have these been tested by going back to the market for input (to test appetite for packaging)? ■ Has the use of categories and/or clusters been properly considered? ■ Has the timing and availability of funding been considered when developing the packaging? ■ Is there an open dialogue with the suppliers throughout development and delivery? NB. This communication should be two way to take advantage of suppliers expertise. ■ Have suppliers been selected to match the skills and capabilities required for different works and thus achieve improved confidence in their performance and more competitive pricing? ■ Have packages of work been arranged so they can be commissioned and handed over to enable the commencement of operation? ■ Has the packaging size been tested against the corporate risk philosophy? ■ Do the economic conditions have an impact on the packaging strategy ? ■ Has the benefit of early transfer of assets into operation been assessed in terms of revenue? 	<p>Execution Module</p> <p>Supporting material pg 24 and 25</p> <p>Ref [2], [3]</p>



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Tip:

Wherever possible use unamended standard forms of contract.

It may be helpful to review the following documents:

- Execution Strategy
- Existing Frameworks

Key prompts	Considerations	What may help
Contracting approaches	<ul style="list-style-type: none"> ■ Is a suitable mix of contracting solutions proposed in order to realise the benefits? ■ Is the form of contract understood by the market place and is it as close to industry standard as possible? This will help clarify client and supply chain obligations and risks. ■ Do contracts incorporate a balanced scorecard with clear and measurable parameters and are there appropriate key performance indicators (KPI's)? ■ Are the required levels of control established in the contracts? ■ Have incentivisation and collaboration tools been considered in order to encourage the type of behaviour needed to realise the benefits? ■ Is the desired relationship with the market transactional or relational ? ■ Is there a clear commercial strategy that underpins and enables the commercial drivers of all parties to be realised? ■ What is the proposed extent/duration of the desired relationship? ■ Has ownership of design been considered? ■ What opportunity/benefit there is for supply chain to contribute to design? 	<p>Execution Module</p> <p>Governance Module</p> <p>Supporting material pg 20, 27 and 28</p> <p>Ref [2], [4], [5], [8], [9]</p>
Testing the contracting strategy	<ul style="list-style-type: none"> ■ Has the Client adopted this approach before? If so, what were the lessons learnt? ■ Were the client's and supply chain's attitudes to risk established before finalising the contracting strategy? ■ Does the contracting strategy complement the packaging strategy? ■ Does the contracting strategy cover all physical and contractual interfaces ? ■ Is the client's organisation structure sufficient to effectively administer the proposed contract strategy? ■ Does the strategy correspond with the sponsor and client priorities as defined in the balanced scorecard? ■ Is the strategy deliverable within the organisations' budget constraints? 	<p>Organisational Design & Development Module</p> <p>Supporting material pg 25</p> <p>Ref [3], [6]</p>
Managing delivery	<ul style="list-style-type: none"> ■ Is there clarity on the management of the project during the contract period to control costs and avoid disputes? ■ Is there clarity on requirement for regular monitoring and reporting to analyse all aspects of the project as construction progresses? ■ Has there been consideration of fair payment practices throughout the supply chain? ■ Has consideration been given to oversight of testing and commissioning procedures, production of operation/ maintenance manuals and as-built records? ■ Have the exit strategies been considered? 	<p>Execution Strategy</p> <p>Organisational Design & Development Module</p> <p>Supporting material pg 30</p>

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Tip:

Do not assume one route fits all circumstances, as with the Contract Model multiple routes can be used for the project if its procured in separate packages.

It may be helpful to review the following documents:

- Execution Strategy
- Existing Frameworks

Key prompts	Considerations	What may help
Route(s) to market	<ul style="list-style-type: none"> ■ Have design considerations and ownership been evaluated? ■ Is it clear that all requirements have been considered and that the proposed route(s) will support their achievement? ■ Is it accepted that all three routes (single stage, multi-stage and framework) may be needed to realise the benefits, especially for major programmes of work? ■ Do the proposed route(s) enable the client to best allocate the risks with the market? ■ Do all proposed routes factor in the feedback from the market, and the decisions made when considering packaging and contracting? ■ Have effort, efficiency and effectiveness all been considered in the selection of the route? ■ Has sufficient time been allocated to secure the optimal route versus desire to allocate risk? ■ Have all procurement regulations that the project is legally and corporately obliged to follow been addressed? ■ Does the chosen route provide the most effective basis for identifying/managing risk, and enabling innovation to be identified from the supply chain? ■ Does the client understand the European Directives and Regulations that apply to the procurement of the Requirement? 	<p>Requirements Module</p> <p>Supporting material pg 29</p> <p>Ref [4], [5], [7], [8], [9]</p>
Evaluation process	<ul style="list-style-type: none"> ■ Does the evaluation criteria reflect the business case and the balanced scorecard? ■ Has the process been clearly described to the market? ■ Does the process comply with legislative criteria? ■ Does the process comply with internal governance procedures? ■ Has the evaluation model been tested to ensure that it is appropriate and clearly understood? ■ Is the length of process commensurate with the risk/reward associated with the procurement? ■ Has the evaluation model been tested to ensure that it is appropriate and clearly understood? ■ Has adequate feedback been given to the unsuccessful parties? 	<p>Supporting material pg 21 and 26</p> <p>Ref [2], [7]</p>

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Considerations: Communicating the Benefits

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<i>Key prompts</i>	<i>Considerations</i>	<i>What may help</i>
Measuring the benefits	<ul style="list-style-type: none"> ■ Has a mechanism been established to measure the benefits of the procurement exercise? ■ How will the supply chain's performance be measured, assured and fed back? ■ What is the approach to on-going relationship management including governance? ■ Is there a mechanism to obtain external data to benchmark performance/benefits delivered? 	<p>Supporting material pg 21 and 30</p> <p>Ref [6]</p>
Lessons learned and feedback	<ul style="list-style-type: none"> ■ How will lessons learnt be identified/captured and fed back during the delivery phase? ■ Is time built into the back end of the project to allow a period of reflection? ■ How will the lessons learned be communicated to the supply chain/broader industry and within the client organisation? 	<p>Ref [1]</p>



Supporting Material





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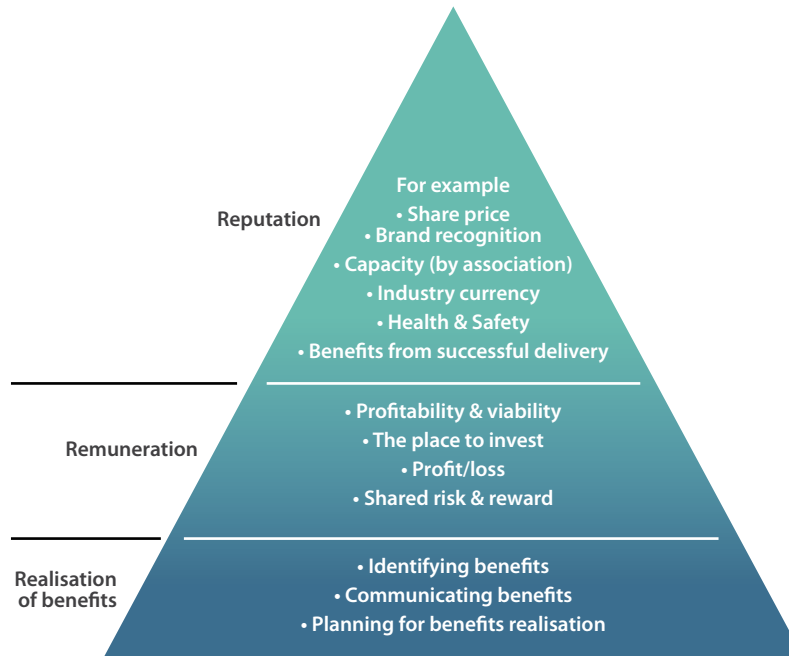
Performance management

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In order to understand and communicate the requirements, it is essential to understand and align the key drivers for both the client and the supply chain.



Remuneration, often the most overt driver of client and supplier behaviour, is critical to the viability of the project, and the viability of the supply chain within the market. Lack of supplier profitability can see investment withdrawn and market appetite diminish to the detriment of all stakeholders.

Once the key drivers of reputation and remuneration risk have been considered and understood by the client and the supply chain, the realisation of benefits will then be effectively pursued.

In the most effective relationships the alignment of reputation and remuneration will lead to consistent delivery of the benefits. Building a longer term strategic relationship with the market provides greater potential to unlock value. This is particularly relevant to serial procurers and where asset maintenance and support are part of the service being procured. For example, the Rolls Royce 'Power by the hour' approach. Activities that would support this are:

- Regular, consistent and strategic engagement with the market;
- Sustainable allocation of risk;
- Commitment to programmes and pipelines of work;
- Commitment to innovation;
- Collaborative working;
- Alignment of objectives.

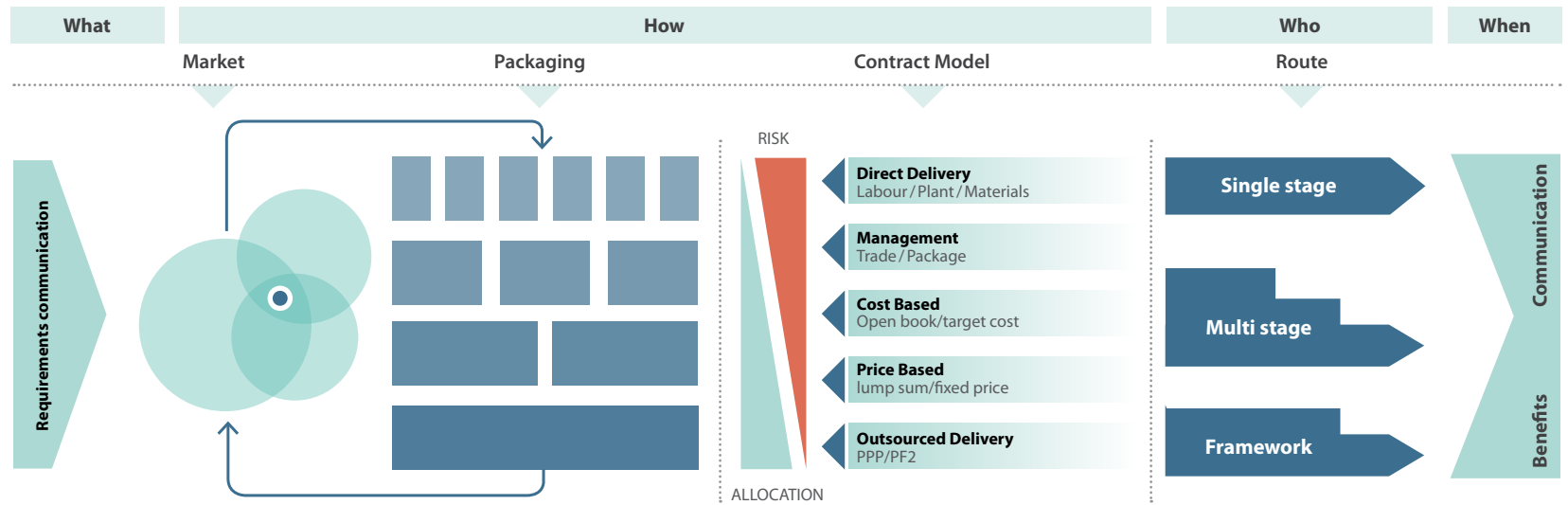
Reputation is an overarching driver for both the client and the supply chain. High profile examples of how badly reputations can be damaged by failures can be seen in the aftermaths of Enron and the collapse of auditors Arthur Anderson, or the Blackwater Horizon disaster and the impact upon BP (particularly shareholder damage).

Example: Aligning the interests of all parties from a strategic and whole life perspective is key to maximising value from contracted relationships. Rolls Royce pioneered their customer focused, maintenance programme 'power-by-the-hour'; an approach to aligning the manufacturer and operator through the provision of a fixed cost for maintenance that allowed them to achieve the required level of service with accurate cost forecasts from their assets.



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The above diagram illustrates the stages of procurement, with the starting point being an understanding of both the project requirements, the client's understanding of its position within the market and the market's appetite to transact.

The model shows how the client and the market work together to determine the best packaging and contract model based on risk, complexity, capability and technical interfaces. It is an iterative process to define what, how, who and when. The approach balances risk and value outcomes to inform decisions on the packaging strategy, approach to risk, and the market's ability to deliver the requirements.

There are many labels used to describe different procurement models ('design/build', 'alliances', 'ECI', 'two stage', etc) - more often than not these just serve to characterise different bundled approaches to such areas as contracting, payment type, incentivisation, design responsibility and risk transfer. The categorisation under Contract Model above shows the generic range based on indicative risk allocation from Client to Supplier. This is also indicative of the range from an input specification approach to an output specification approach.

Example: A cost-based Contract Model can combine early market engagement and packaging with development of the risk profile through multi-stage procurement. Surrey County Council on Project Horizon achieved savings of 15% and other economic and social benefits through cost-based Two Stage Open Book procurement, including engagement with sub-tier supply chain members. <https://www.gov.uk/government/publications/government-construction-strategy-trial-projects>



Supporting Material: Balanced Scorecard

The balanced scorecard is a tool that supports a client in identifying and communicating its priority themes and the underlying critical success factors that will support delivery of the Requirements. Underpinning each critical success factor, there is a set of key performance indicators which are measured and which enable the client to manage performance during the delivery phase.

In terms of how this affects the procurement module, the balanced scorecard (as shown in the example below) can be divided into specific areas to enable testing during the procurement process, each priority theme and critical success factor weighted according to their value to the client. Each tenderer would be assessed against the scorecard during the procurement process and their strength or deficiency against each item would contribute to their overall score.

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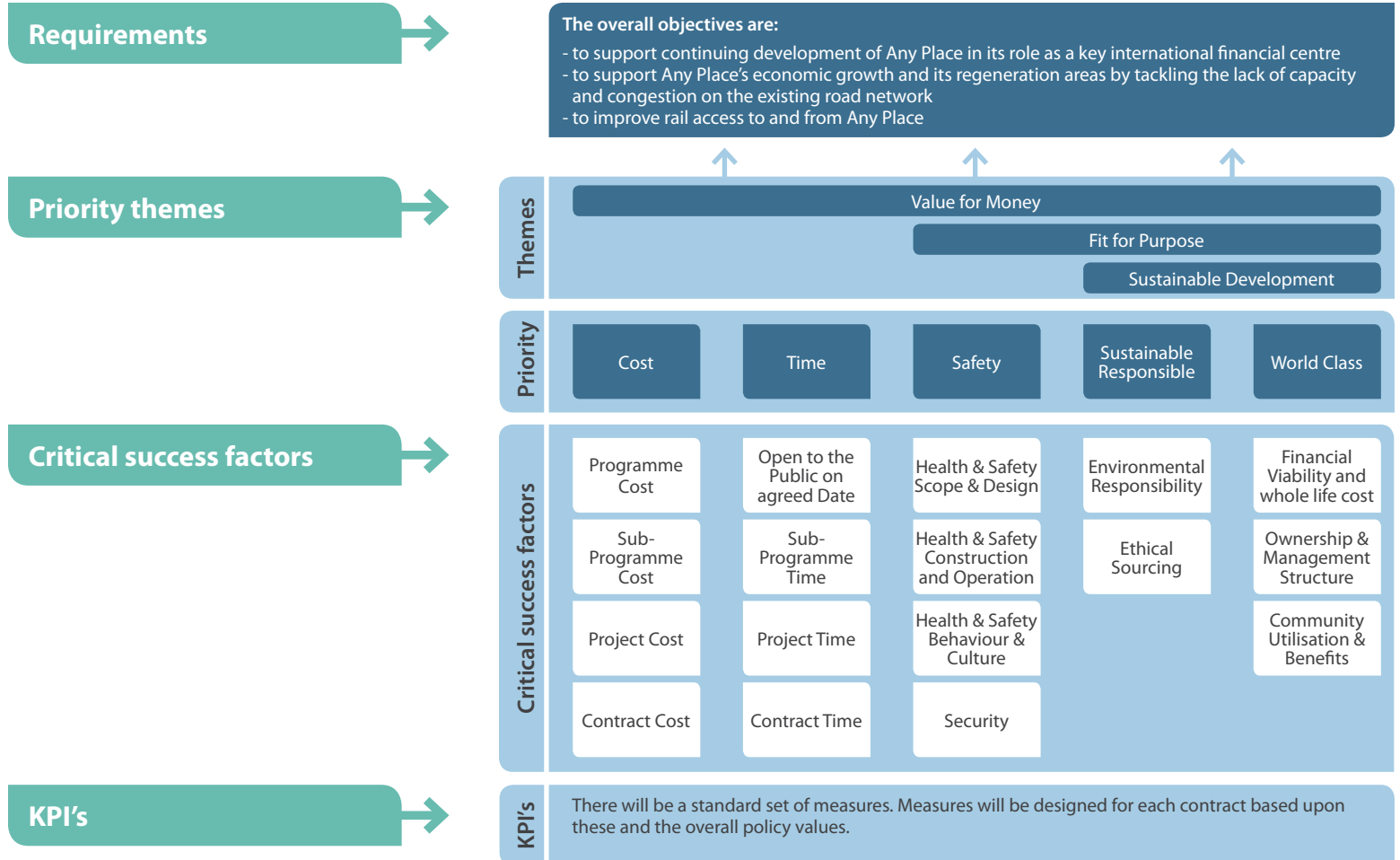
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Tip:

The balanced scorecard approach can be used to drive the client priorities deeper into the supply chain, thus smaller firms (including SMEs) gain direct exposure to client-led initiatives.





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Engagement with the market has a dual benefit:

- to the client - understanding what the market can or cannot do (capability), and what the market will or will not bear (capacity) in pursuit of an opportunity;
- to the suppliers - insight into future opportunities, as well as the risks and rewards associated with that opportunity.

Successful market engagement allows the supply chain to begin planning their tender resources in anticipation, i.e. get themselves ready to supply. More importantly, it enables the client to identify potential risks in its packaging strategy.

The market capability assessment in the Routemap Handbook will provide a good characterisation of the wider marketplace and the supplier capability table contained within this supporting material can be used to assess specific supplier capability.

Once a client organisation has considered and reflected on the market environment it operates within, and the maturity of its strategic relationship, the client can test the market on various options, or more specifically, gauge the market's reaction to risk transference, technical solutions, funding, interfaces, methodology.

The greater the maturity level of strategic market relationships, the greater the possibility of achieving an enhanced offering and of nurturing market appetite over the longer term.

Appetite in the market is key to successfully procuring and delivering a project. Mead et al (2013) state that the 'level of competition is a function of the appetite of firms to enter into the procurement process, based upon their view of the risks associated with the tender, the chances of success and their capacity to meet the level of demand.' In effect, the greater the appetite for an opportunity, the higher the competition is likely to be, which will lead to the client achieving better value.

Fact: It is not against EU procurement law to talk to potential suppliers before starting the formal procurement process

Pre-procurement engagement with the market (including talking to potential suppliers) is not prohibited by EU procurement law, nor is it subject to any detailed procedures provided that it does not prevent an effective competition taking place once the procurement has started. In fact, engaging with the market before starting the formal procurement process is best practice and helps to maximise value for money from the resulting procurement.

Source: Procurement policy note 04/12: procurement supporting growth, supporting material for departments 9th May 2012



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What is the Supplier capability assessment?

Consistent with the capability assessments in the Routemap Handbook, this assessment examines the wider project-related capabilities of suppliers to organise for effective and efficient delivery of a project. The importance of assessing capability, and aligning this with project complexity, is set out in Section 3 of the Routemap Handbook, together with the assessments for sponsor, asset manager, client and market capability.

Purpose

To assess the capability of suppliers to effectively deliver the project within the chosen Client Model and procurement model. Capability assessment will support alignment with client organisation capability and will inform organisational design and development for the client. This will be particularly relevant where an integrated client/supply chain approach is being adopted i.e. alliancing. See also the market capability assessment in the Routemap Handbook .

How to assess supplier capability

The client carries out this assessment. Consideration should be given as to whether to include prospective suppliers in interviews and workshops regarding supplier capability.

Review the characteristics in the table on the next page and tick those that you consider are currently present in the supplier and those that should be in place, to successfully deliver the project.

The groups of characteristics in the table are seen in organisations that demonstrate the following:

- **Red:** minimal capability to integrate engineering design with other designers and suppliers, and holds the minimum standards of accreditation and quality control. Investment in people is not a priority and relationships with the extended supply chain are transactional in nature rather than relational;
- **Green:** organised and coherent with a track record of integration with clients and supply chain. Repeatable control methodology and evidence of acceptable performance in the applicable sector;
- **Blue** able to integrate design information with other designers and suppliers. Surpassing quality accreditation and standards is a priority, as is investment in the organisation, production equipment, people and skills. Has extensive experience and a track record of successful and efficient delivery in a diverse range of projects and environments.

Note: These three sets of characteristics should not be seen as a progressive scale. An organisation can demonstrate a mix of all three at any one time. The important thing is to understand which capabilities are important to projects success.



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Level	Current	Needed	What supplier characteristics do you recognise?
Red	<input type="checkbox"/>	N/A	Informal governance with undefined links to projects and control
	<input type="checkbox"/>		Highly reactive managerial approach
	<input type="checkbox"/>		Lack of standard roles and defined responsibilities
	<input type="checkbox"/>		Stakeholder engagement and communication rarely used
	<input type="checkbox"/>		Benefits defined in terms of fixed outputs rather than performance improvement
	<input type="checkbox"/>		One size fits all approach to project delivery. Little flexibility
	<input type="checkbox"/>		Approach to sub-supplier relationships is traditional and transactional in nature
	<input type="checkbox"/>		Seeks to transfer risk down the extended supply chain regardless of circumstances
	<input type="checkbox"/>		Does not create back-to-back incentive or reward arrangements
Green	<input type="checkbox"/>	<input type="checkbox"/>	Work winning approach based on lowest cost. Value of proposition given little consideration
	<input type="checkbox"/>	<input type="checkbox"/>	Contractual commercial approach post contract to mitigate lowest cost tendering. Seeks to exploit uncertainty to maximum advantage
	<input type="checkbox"/>	<input type="checkbox"/>	Creative open decision-making guided by well developed management systems
	<input type="checkbox"/>	<input type="checkbox"/>	Takes strategic decision to employ and develop business to business partnering approach
	<input type="checkbox"/>	<input type="checkbox"/>	Independent reviews take place to verify systems and processes are operating and fit for purpose
	<input type="checkbox"/>	<input type="checkbox"/>	Centrally managed and consistent framework for defining and managing business objectives
	<input type="checkbox"/>	<input type="checkbox"/>	Risk management embedded in culture
	<input type="checkbox"/>	<input type="checkbox"/>	Managerial approach and interventions are based on reliable data and intelligence
	<input type="checkbox"/>	<input type="checkbox"/>	Roles and responsibilities are clearly defined. People have a career path and scope for professional advancement
Blue	<input type="checkbox"/>	<input type="checkbox"/>	Flexible and able to adapt to alternative client strategies and delivery environments
	<input type="checkbox"/>	<input type="checkbox"/>	Demonstrable high business performance across multiple sectors and clients
	<input type="checkbox"/>	<input type="checkbox"/>	Demonstrates successful alignment of business goals with those of clients in differing environments and strategies
	<input type="checkbox"/>	<input type="checkbox"/>	Process is embedded in the organisation and based on reliable performance data.
	<input type="checkbox"/>	<input type="checkbox"/>	Maintains a competitive supply chain and has a clear strategy for appointing suppliers
	<input type="checkbox"/>	<input type="checkbox"/>	Utilises best practice in framework agreements for critical resources
	<input type="checkbox"/>	<input type="checkbox"/>	Creates back to back incentives for the supply chain
	<input type="checkbox"/>	<input type="checkbox"/>	Demonstrable evidence of timely management interventions based on high quality performance data
	<input type="checkbox"/>	<input type="checkbox"/>	Demonstrable evidence of investment in business, people and skills
	<input type="checkbox"/>	<input type="checkbox"/>	People within the organisation are "expert" in their fields and are able to provide people for client level roles or to enhance client capability
	<input type="checkbox"/>	<input type="checkbox"/>	Long standing track record in industry for high performance in complex and uncertain environments
	<input type="checkbox"/>	<input type="checkbox"/>	People lead industry thinking in areas of specialism
	<input type="checkbox"/>	<input type="checkbox"/>	Business and management processes are optimised, making use of latest tools, process and technology
	<input type="checkbox"/>	<input type="checkbox"/>	Actively utilises the supply chain to deliver greater efficiency for its clients
	<input type="checkbox"/>	<input type="checkbox"/>	Seeks to exceed or set new standards for accreditation
<input type="checkbox"/>	<input type="checkbox"/>	Senior Management are incentivised to deliver greater value to clients as well as the business	
<input type="checkbox"/>	<input type="checkbox"/>	Long-standing commitment to investment in business, people and skills	
<input type="checkbox"/>	<input type="checkbox"/>	Considers interdependencies between projects and optimises the businesses approach	
<input type="checkbox"/>	<input type="checkbox"/>	Feedback and lessons learnt captured across all projects and made available for the future	



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Tip:

The matrix on page 24 will help with these considerations.

The technical aspects of the scope need to be fully considered and prioritised when packaging the requirements. This will include the specific trade requirements and skill sets, size and of scope, methodology and timing.

If the packaging strategy leans towards multiple scope packaging then the client may want to consider using a clustering model to enable efficiencies in the procurement process.

Clustering

The use of clustering or categories enables the production of standard sets of contract solutions (see Contracting Model). Clustering or categorisation can provide consistency in the tendering process, allowing bidders to become familiar with documents, risk allocation, pricing requirements and the criteria used in assessing capacity and capability.

It is important to cluster or categorise similar elements of work, design or service at a high enough level to allow effective communication with the target market(s).

The key themes which need to be considered when grouping scope into clusters or categories are:

- The technical aspects of delivery including methodology and technologies;
- Timing of the delivery;
- Physical location of the work or service, in relation to others e.g. interfaces;
- The economic benefits;
- That the market exists, is recognisable and able to provide healthy competition;
- The capacity and resource is available in the supply chain to deliver the required quantity and quality.

Common components

There are economic and delivery advantages to considering common components and commodities. It is important that this standardisation is considered early in the development of the procurement strategy.

Some of the benefits of a common component strategy, as a sub-set of the overall packaging strategy, include:

- having a co-ordinated approach to certain components;
- a potential for consistent design;
- improved quality;
- reduced cost;
- controlled capacity and delivery;
- a reduced need for testing.

Example: Component approaches include, the joint Lift and Escalator procurement between TfL and Crossrail and the successful provision of bulk concrete supply at London 2012 (reducing a significant number of lorry movements and all the benefits that went with it, both social and economic).



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Tip:

A facilitated workshop with commercial and technical stakeholders, using a discussion tool like this, may be an effective way to develop an optimised strategy that balances construction and commercial considerations.

For many infrastructure projects the decision as to how the works are packaged is complex. Typically the optimum packaging (or contract bundling) approach needs to balance potentially conflicting construction, commercial and market issues.

Mapping these competing objectives in a simple matrix (see example below) can be a useful way of ensuring the procurement strategy takes into account some of these broader objectives that can often get lost in the drive to optimise commercial considerations.

Work Breakdown Structure (WBS) ...or similar functional breakdown of activities	Construction/engineering							Commercial			Market			Issues
	Geography or asset types?	Scope for building off-site?	Interdependency/complexity?	Whole life impact?	Safety impact?	Optimum design transfer?	Outcome based specification?	Procurement model?	Contract value?	Impacts on risk allocation?	Impacts on market appetite?	Market maturity / capability?	Depth of supply chain?	
Employers design
Surveys & investigations
Civil engineering
Structures
M&E systems	Asset	High >10%	High	High	None	RIBA B	Yes	D&B	£100k	High	none	High	1st and 2nd tier	Standard components may be better VfM if procured as a separate contract
Systems integration
Maintenance services
etc...

NOTES:

Geography vs asset classes	Would this package be business wide, regional or based on asset type?
Scope for build off-site (DFMA potential)	Does the package present a low, med or high design for manufacture assembly. i.e. offsite?
Interdependency/Integration/Complexity	Does this package have a low, med or high integration requirement with other packages and as such what is the level of complexity?
Whole life consideration	What is the impact on whole life outcomes?
Safety specific considerations	In delivery of the package are there any unusual safety considerations?
Design ownership and transfer	Who will own the design and will there be a transfer - if so when will this happen?
Outcome based specification	As a discrete package could it be specified in output terms (e.g. "power by the hour" approach)?
Optimum procurement model	Notwithstanding package size and integration what would the optimum procurement strategy be?
Size / Volume (£m)	Package value - what would be the optimum size for the market based on risk and capacity?
Risk allocation	Is sponsor/client risk best managed through large or small packages - impact on client resourcing?
Likely market appetite	Is there likely to be market interest and sufficient competition?
Market capacity	Is there good capacity in the market to deliver the scope or very few suppliers / organisations with the capability?
Sub-tier model	Will sub-tier suppliers be procured directly by the client or through a 1st tier?





Supporting Material: Risk Allocation

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Tip:

A more comprehensive list of risk categories can be found in Annex 4 of the 'Green Book' and the Infrastructure Client Group report on Managing Cost Risk and Uncertainty in Infrastructure Projects [ref 12] provide additional supporting material.

Considering the allocation of risk is a pre-requisite to considering the optimum procurement approach and contracting model. For example, "price certainty" is bought by paying the contractor to accept the risk of fixing a price in a commercial, changing market. The degree of risk involved in key aspects of the delivery must therefore be assessed to consider whether it is more economic for the sponsor, client or the contractor to manage these risks. This should be considered in relation to the capability to manage risk and the client model adopted for delivery.

It is often common practice to construct a risk allocation matrix to help inform these decisions, as set out in the example below.

Example risk allocation table	Potential allocations			Key issues
	Sponsor/Asset Mngr	Client	Supply Chain	
Policy risk	✓			
Sponsor requirements	✓			
Planning and consents		✓		
Design		✓		
Construction (to cost and time)			✓	
Availability and performance	✓			
Commissioning			✓	
Procurement risks		✓		
Technology and obsolescence risks	✓			Low level technology...
Funding (or financing)	✓			
Legislative and regulations	✓	✓	✓	
Other risks				

The preferred risk allocation will then need to be considered in relation to other criteria to determine the preferred Contract Model and ensure the risk allocation is appropriately reflected.

Other criteria are reflected in the tables on the following pages and may be used in a format as shown in the illustration below.

Contract Model Option 1, 2, 3 etc

Selection criteria	Speed - design and construction	Cost certainty	Dealing with complexity	Supply Chain Innovation	Capacity for variations	Incentivised performance	Separation of design and management
	High						
Low							

"Risk allocation in infrastructure projects is often ill-structured and can be the main reason for cost overruns or even failure."

Infrastructure Risk Group



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The different contracting models illustrated in the table below represent a spectrum of risk allocation.

The table gives some basic advice about contract choice.

<i>Model & features</i>	<i>Pro</i>	<i>Con</i>	<i>Considerations</i>
<p>Direct Delivery The works are constructed by directly employed in-house management and labour using owned or hired plant and materials purchased on a supply only basis.</p> <ul style="list-style-type: none"> ■ Expertise in-house ■ Clear Requirements ■ Limited complexity and innovation ■ Majority of risk held internally ■ Confidence in budget 	<ul style="list-style-type: none"> ■ Subject matter expertise ■ Prior experience ■ Prior cost, quality and schedule indicators and learning 	<ul style="list-style-type: none"> ■ Sufficient internal resource (labour, plant, materials) for delivery ■ Business continuity as majority of risk resides internally ■ Reputational considerations 	<ul style="list-style-type: none"> ■ Capacity ■ Learning from prior projects is available and utilised
<p>Management A management contractor is engaged by the client to manage the construction process. The management contractor has direct contractual links with all the works contractors and is responsible for all the construction works. The management contractor is paid a fee on top of the construction costs for the services provided.</p> <ul style="list-style-type: none"> ■ Need specialist expertise ■ Need support defining Requirements ■ Project lends itself to clear packages ■ Risk split across trades but ultimate integration and management with client ■ Budget may be released in gateways 	<ul style="list-style-type: none"> ■ Schedule advantage if no complexity ■ Market availability ■ Enables performance of supply chain to core strengths so reduces "learning curve" risks 	<ul style="list-style-type: none"> ■ Relationship between Management Contractor/Consultant lacks definition so risk transfer does not occur as intended ■ Trade contracts exploit interfaces/dependencies ■ Risk transfer does not occur as intended ■ Budgets and programme/s are not fixed 	<ul style="list-style-type: none"> ■ Scope any management appointments clearly and define responsibilities of Construction Manager if external appointment ■ Plan interfaces and dependencies ■ Share internal data with construction manager
<p>Cost Based The works are designed and/or constructed by a main contractor that is reimbursed for all of its allowed costs plus additional payment to allow for a profit. The arrangement can be incentivised via a target price.</p> <ul style="list-style-type: none"> ■ Performance on quality and schedule to be enhanced through commercial incentives ■ Reliant on Market knowledge for complex elements ■ Shared risk profile 	<ul style="list-style-type: none"> ■ Can support collaborative initiatives if correctly implemented ■ Clear visibility of actual costs to support benchmarking and efficiency challenges ■ Proactive management of risk if correctly managed 	<ul style="list-style-type: none"> ■ Inadequate client understanding of risk transfer erodes incentive scheme ■ Incorrect or inflexible performance or commercial measures ■ Collaborative in letter not in spirit ■ Reactive management of risk 	<ul style="list-style-type: none"> ■ Does the client have cost data to make informed decisions, if not then seek this out or seek advice ■ KPIs/commercial incentive needs validation against balanced scorecard ■ Informed understanding of optimal level of risk transfer ■ Requires engagement of client

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<i>Model & features</i>	<i>Pro</i>	<i>Con</i>	<i>Considerations</i>
<p>Price Based The works are designed and/or constructed by a main contractor that is paid based on tendered prices.</p> <ul style="list-style-type: none"> ■ Price key driver ■ Commodity or prior category delivery ■ Limited complexity ■ Risk allocated and included in price 	<ul style="list-style-type: none"> ■ Client familiarity with subject matter ■ Simple procurement process ■ Speed to market, reduced negotiation time ■ Price certainty if scope is locked down 	<ul style="list-style-type: none"> ■ Least likely to consider balanced scorecard although not irrelevant ■ Quality considerations not captured in tender ■ Price risk entirely with contractor (subject of course to client change) 	<ul style="list-style-type: none"> ■ If used for complex/innovative projects then change erodes price risk transfer ■ No regard to benchmarks ■ Has to be clear scope and known or limited variations
<p>Outsourced The client transfers ownership of an asset for an extended period of time, such as under a PFI arrangement. An organisation with design, construction, maintenance and operational expertise and financing capability is appointed under a single contract to design, build, operate and maintain the asset.</p> <ul style="list-style-type: none"> ■ Complexity or frontier in scale and in scope ■ Client unable to manage and/or carry delivery risk 	<ul style="list-style-type: none"> ■ Full transfer of delivery and operational risks ■ Life of project considered in detail at outset as contract needs to cover extended period ■ Temporary transfer of financial risk to private sector 	<ul style="list-style-type: none"> ■ Deal complexity ■ Time to market and costs of preparation/negotiation ■ Obtaining opex value for money ■ Sustainability of contractor delivery entity 	<ul style="list-style-type: none"> ■ Whole-life considerations to be consistent in both design & operations phase to get an availability regime and opex costs that deliver ■ Client to consider where it can support process and generate value e.g. planning and regulatory. Risk transfer should not engender "sit on hands" approach ■ Client carries reputational risk ■ Client underestimates resource to manage contract

Whenever possible the contracting model should be kept as simple as possible and have a consistent, logical approach.

As described earlier it is important for the Client to have worked through in some detail its desired risk allocation so that it is clear who is best placed to manage the appropriate risks. This risk allocation exercise will have led to clarity on which interface risks are best managed by each of the parties.

The contract models represented in the table above have different risk profiles which in turn are applicable to different programmes of different complexity. In order to give some guidance on the relative 'uses' of each of the contract models the diagram on the next page has been developed.

Tip:

Table 1 of BS 8534 outlines a number of areas to consider when choosing a contract model. These are; Source of funding, selection method, price basis, responsibility for design and then construction and supply chain integration.



Supporting Material: Contract Models

The selection of an appropriate contract model will be informed by consideration of: requirement; market; packaging; risk appetite; etc, as set out in this module. It should also take into account wider assessment of complexity / capability, target operating model and delivery model considerations (see also Governance module). The matrix below illustrates how two of these elements (risk and complexity of requirement) relate to alternative contract models.

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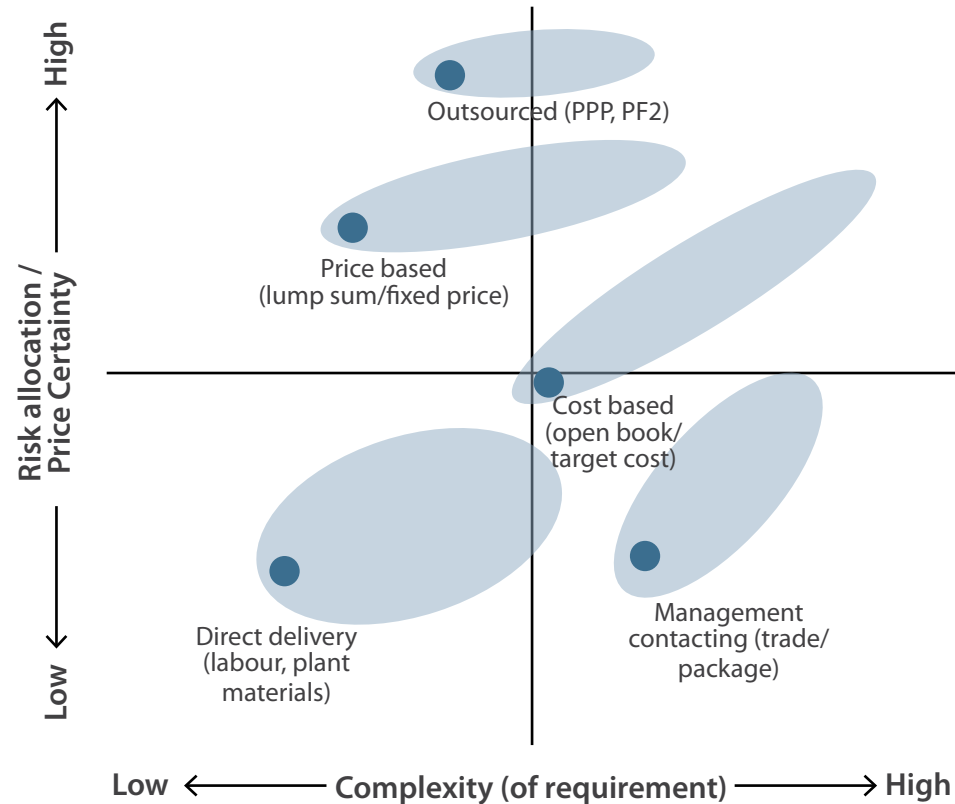
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NOTE: In different delivery environments these 'basic' models may be more or less appropriate. The 'light blue' areas in the diagram above illustrate how extensively the base models can be adapted in the right circumstances to deliver improved outcomes e.g. PF2 can be applied to deliver more complex projects but this can result in higher financing costs as a result and greater certainty on cost based model can be achieved by introducing a target cost approach.



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Tip:

Ensure you understand which Procurement regulations apply to your procurement. Frameworks should not be used as a convenient way to delay the finalisation of project requirements.

The term Route is used in this module to describe the selection process adopted by the Client to determine the Supplier. There are a variety of routes to market available which can be broadly characterised as:

■ Single stage

A more traditional route. To be effective, the client needs to have absolute clarity on requirements. This is suitable for less complex procurements or ones with unique attributes. The leverage risk position is understood by the client in a one step process;

■ Multi Stage

Suitable where there is a lack of definition on what is required. An initial filtering stage is needed to determine whether the entity is fit to supply. A subsequent stage/s determines the delivery and price elements. Unless carefully structured this route may increase the cost of bidding for both the supply chain and the client. This approach provides the opportunity for the client to work with the supply chain on requirements and scope definition;

■ Framework

Suitable where there is a lack of definition on what is required. An initial filtering stage is needed to determine whether the entity is fit to supply. A subsequent stage/s determines the delivery and price elements. Unless carefully structured this route may increase the cost of bidding for both the supply chain and the client. This approach facilitates engagement with and contribution from the supply chain in the development of project scope and detail. This approach lends itself to long term relationships where repeat work is required but actual composition of projects is as yet unknown. i.e. AMP6 water frameworks.

The single and multi stage routes can be defined by the number of formal or informal supplier down selection steps that are taken. The Framework route can be subject to down selections but, most commonly, results in multiple contract awards being made to provide the facility.

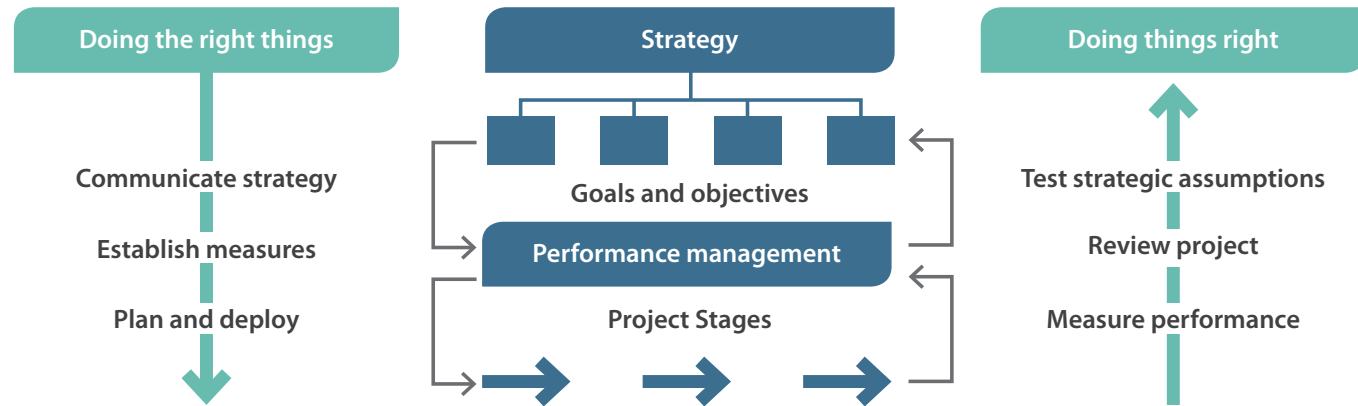
The selection of the route to market is essentially a balance of 'Effective plays Efficient'. The thinking being that a multi down selection approach can be the most effective in its outcome and have the ability to drive a better solution and reduce risks, but it may be inefficient from both the market(s)' and the client organisation's perspective with regard to the resource and time involved. This is opposed to a single stage approach which can be very efficient but it might lack the required effectiveness to drive out all the risks and realise opportunities.

It is therefore important to determine the resource requirement that will be necessary to undertake the down selects on both the client organisation and the supply chain side, together with the elapsed time for the process. This should then be balanced against the risk reduction and the benefits created.



Supporting Material: Performance Management

In order to ensure alignment with the project's priority themes and critical success factors, as set out in the balanced scorecard (page 18 refers), the cascade of performance KPI's into supply chain contracts is advisable. This provides the framework for a performance management system to support project delivery and is illustrated below.



Things to consider in support of the balanced scorecard approach include:

- accountability for deliverables;
- quantification of success;
- contribution to overall project deliverables and outcomes;
- defined KPI's in a consistent manner so that performance can be reviewed across packages;
- targets to promote continuous improvement;
- linking performance to incentivisation;
- cultural and behavioural measures;
- benchmarks.

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Will the proposed procurement strategy:

1. Cover the concerns identified by the core complexity-capability gaps?
2. Cover gaps identified by answering the considerations in this module?
3. Provide confidence that requirements are clearly understood and communicated?
4. Enable a structured engagement with the market, and allow assessment of the appetite for the project?
5. Enable full consideration of the scope when packaging the requirements, which has been tested with the market?
6. Ensure a full assessment and sustainable allocation of the risk between the client and the supply chain in order to ensure value for all parties involved?
7. Enable a fair and appropriate consideration of all possible routes to market?
8. Provide a clear plan to communicate the benefits of the project?

Further Guidance





Further Guidance

Introduction

Why Procurement Matters

Considerations

Supporting Material

Final Check

Further Guidance

Glossary

Guidance

- [1] Armitt, Sir John, (2012), London 2012: A global showcase for UK plc, Department for Culture, Media and Sport, (July 2012)

<https://www.gov.uk/government/publications/london-2012-a-global-showcase-for-uk-plc-a-report-by-sir-john-armitt>

- [2] Baldry, Sir Tony et al (2012), A Better Deal for Public Building, All Party Parliamentary Group for Excellence in the Built Environment, (September 2012)

<http://cic.org.uk/admin/resources/appg-for-ebe-report-.pdf>

- [3] Mead, J et al (2013), Programme Procurement in Construction. Learning from London 2012

- [4] NEC 3 Procurement and Contract Strategies (April 2013), Institution of Civil Engineers

- [5] British Standard - BS 8534:2011, Construction Procurement Policies strategies and procedures – Code of practice

- [6] ODA – Learning Legacy Balanced Scorecard - Champion Products

<http://learninglegacy.independent.gov.uk/publications/balanced-scorecard.php>

- [7] NAO, Achieving Excellence in Construction Series (2009)

- [8] The Joint Contracts Tribunal Limited (2012) – Practice Note 6

- [9] Cabinet Office 'New Models of Construction Procurement' July 2014

<https://www.gov.uk/government/publications/new-models-of-construction-procurement-introduction>

Usage

- Demonstration of 'major programme' added supply chain value
- Ingredients for future major programme success

- A thirteen-point plan for a better deal in public building
- Understanding how to set up an approach to public sector procurement
- Establishing team systems, processes and scorecards
- Processes and systems for effective public sector procurement

- Establishing an effective supply chain management strategy
- Major programme procurement gateways for success

- An overview of NEC3 procurement and contract strategies to help establish the most appropriate procurement and commercial model

Note: There are other contract forms available for use with different procurement and contracting strategies e.g. see item [9] below.

- Guidance on codes of practice and British Standards

- Guidance on the ODA London 2012 approach to creating, implementing and managing a balanced scorecard

- The document provides a brief overview of procurement for construction projects. It explains the key considerations for projects and outlines the main project stages aligned to the Gateway process.

- A practice note on tendering, including the preliminary enquiry, invitation to tender (ITT) and assessment and award stages

Note: There are other contract forms available for use with different procurement and contracting strategies e.g. see item [9] below.

- Contains three documented procurement models that support the principles of collaborative working between the client and the supply chain; Cost Led , Two-stage open book and Integrated Project Insurance'



Glossary





Glossary

- Introduction
- Why Procurement Matters
- Considerations
- Supporting Material
- Final Check
- Further Guidance

Glossary

Asset Manager

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

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

Capability

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

Client

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

Complexity

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

Client Model

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

Delivery Model

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

Infrastructure

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

Market

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

Procurement Model

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

Project

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

Sponsor

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

Target Operating Model

The end state of how the asset will be: used; funded; owned; operated and maintained.



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Steering Group & Contributors



Other Contributors

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