Planning Construction Procurement

A guide to developing your procurement strategy
About this guide

Purpose
This guide is intended to provide New Zealand Public Sector Agencies (‘agencies’), who may be less familiar with procurement in the construction sector, with a useful reference point for some key considerations around developing a procurement strategy for a construction project. It has a particular focus on how to select an appropriate delivery model.

This guide assumes that an agency has developed a business case that indicates either new construction work is needed, or construction work involving refurbishment of an existing facility.

This guide describes what the New Zealand Ministry of Business, Innovation and Employment (MBIE) considers good practice, when the agency approaches development of a procurement strategy for a construction project. It provides basic guidelines on the types of delivery models available, how to go about assessing which model may be the best fit for your project, and the issues to be considered when planning your approach to market.

This guide does not substitute for professional advice. Rather, it is intended to help inform agencies of some of the key issues to address in developing a procurement strategy for a construction project. If an agency requires further information on procurement of construction projects, further advice can be obtained from MBIE by contacting procurement@mbie.govt.nz

Related documentation
This document supplements the MBIE Guide to Mastering Procurement, which provides guidance around the eight stage procurement lifecycle.

This guide, Planning Construction Procurement - A guide to developing your procurement strategy, is part of a series developed by MBIE to support agencies in using good practice when planning construction procurement. This guide can help to support the planning phase of a project.

See the guide Planning Construction Procurement – An overview to the guides, for details of the current suite of guides, how they relate to the eight stage procurement lifecycle and links to relevant government policy.

How this guide was developed
MBIE developed this guide, Planning Construction Procurement – A guide to developing a procurement strategy, in consultation with agency and industry users. It is published on the website www.procurement.govt.nz
How this guide is structured

This guide is structured as follows:

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<thead>
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<th>Section</th>
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</tr>
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<tr>
<td>1</td>
<td>An introduction to developing a procurement strategy, defining what constitutes a good procurement strategy</td>
</tr>
</tbody>
</table>
| 2 – 4   | The three stages of developing a procurement strategy:  
  • Gather and analyse project data.  
  • Determine the preferred delivery model (traditional, design and build, packaged, directly managed, alliance).  
  • Plan your approach to market (tender process, pricing mechanisms and form of contract). |
| 5       | Detailed construction related reference material that you may need to refer to when developing your procurement strategy:  
  • Types of delivery models  
  • Pricing mechanisms  
  • Standard contracts. |
| 6       | Specific Excel tools to help with developing your procurement strategy:  
  **Use the…**  
  **To identify…**  
  Client capability assessment tool | If the client has the capability to navigate the range of potential delivery models and make an appropriate recommendation that matches the project complexity.  
  Market capability assessment tool | If the market has the capacity and appetite to deliver the project.  
  Procurement delivery model evaluation tool | And capture the assessment criteria and weightings to score the delivery models against. |
| 7       | Links to the documents used in developing this guide which are considered to represent good practice in construction procurement |
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1. Getting started

Overview
A robust, documented procurement strategy, based on facts and analysis, is an important part of planning successful delivery of a major capital project. One of the key objectives of a procurement strategy is to assess a range of delivery options and identify a recommended delivery model. By assessing a range of options, agencies can maximise opportunities for achieving value for money and optimal project outcomes.

A procurement strategy presents the findings of this assessment based on the individual project’s characteristics, risks and circumstances.

A procurement strategy is developed during the planning phase of the procurement lifecycle. It focuses very much on assessing options to select an approach to market that is appropriate for the particular project. The procurement plan follows on from the procurement strategy document, by providing the methodology and approach, process and project management structure for sourcing and managing suppliers (for which there may be multiple transactions, depending on the procurement strategy chosen).

DEFINITIONS
Within this guide, client means generally the public sector agency that procures and delivers the project.

Procurement strategy relates to the process for considering and deciding the most appropriate delivery model and approach to market for a specific project. The procurement strategy should be documented to clearly demonstrate how an agency has evaluated the available options, and arrived at a best fit solution for a particular project.

Procurement plan is the execution plan for delivering the procurement strategy during the sourcing phase of the procurement lifecycle. It should address matters such as:

• governance
• key stakeholders and their responsibilities
• budget management
• tender deliverables
• timelines and milestones
• probity requirements, and
• tender evaluation requirements.

There is no universal template for use; however, a good procurement strategy should contain a summary of components as highlighted below in ‘Components of a good procurement strategy’. 
Steps to developing your procurement strategy

The process of developing a procurement strategy can be broken into three steps:

1. Gather and analyse project data.
2. Determine preferred delivery model.
3. Plan approach to market.

Although this process is shown as sequential, it may be achieved iteratively and in parallel with developing a business case.

**COMPONENTS OF A GOOD PROCUREMENT STRATEGY**

- Statement of objectives
- Summary and analysis of:
  - project objectives
  - requirements
  - characteristics
  - risks
- Review of client and market capabilities
- An analysis of delivery model options and identification of a recommended delivery model
- Analysis of potential procurement methods and identification of a recommended method
- A project plan showing timing and sequence
- Agency contract management requirements
- Opportunities for bundling or unbundling work and contracts, for example:
  - bundling projects of a similar nature to increase economy of scale, or
  - splitting contracts where speed is a high priority, such as enabling, groundworks and main contract
- Opportunities for use of collaborative methods including ICT based project techniques.

**Note**: The level of detail for each can be tailored as appropriate for the scale and complexity of the project. Procurement strategies for projects that are low risk and low value may not require all of these elements.

**KEY SUCCESS FACTORS WHEN DEVELOPING AN EFFECTIVE PROCUREMENT STRATEGY**

- Fully understand the project characteristics including key drivers, constraints and risks.
- Assess client and market, capabilities and capacity.
- Evaluate potential delivery models and approach to market for suitability.
- Involve key stakeholders and experts early in the planning and development process.
- Challenge assumptions in order to better achieve desired outcomes.
- Use practical analytical techniques to support the decision-making process.
2. Gather and analyse project data

**Purpose**

To gather data and determine the project characteristics, i.e.:

- requirements
- constraints
- risks
- client capability
- market position.

Data gathering involves collecting and analysing the unique project characteristics and understanding the implication of these characteristics on potential delivery options.

Information gained in data gathering will be used to:

- determine your delivery model assessment criteria and weighting. These criteria are used to screen the range of delivery models and inform possible procurement approaches
- develop key documents that will form part of the information released to market including the project brief and specification.

**References and tools**

- [Client capability assessment tool](#)
- [Market capability assessment tool](#)

**Guidance**

Outlined below is guidance to assist with identifying the following project:

- requirements
- constraints
- risks
- client capability
- market position.

This list is not intended to be exhaustive. You may want to add further factors.
Requirements

Use the following table to identify project requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Factors to consider...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme and phasing</td>
<td>• What are the desired key milestone dates?</td>
</tr>
<tr>
<td></td>
<td>• What is the target date that the facility should be operational?</td>
</tr>
<tr>
<td>Service</td>
<td>• What are the future operational requirements?</td>
</tr>
<tr>
<td></td>
<td>• What are the future maintenance requirements?</td>
</tr>
<tr>
<td></td>
<td>• Would this be suitable for delivery by the private sector?</td>
</tr>
<tr>
<td>Design criteria</td>
<td>• Is a whole life cycle solution required?</td>
</tr>
<tr>
<td></td>
<td>• What functionality is to be delivered by the project?</td>
</tr>
<tr>
<td></td>
<td>• What are the required quality standards?</td>
</tr>
<tr>
<td></td>
<td>• What are the drivers for design? e.g. new technology</td>
</tr>
<tr>
<td></td>
<td>• Is an attractive architectural statement required, reflecting the facility’s status in</td>
</tr>
<tr>
<td></td>
<td>the community?</td>
</tr>
<tr>
<td></td>
<td>• Is there sufficient space to meet the client’s immediate and possible future space</td>
</tr>
<tr>
<td></td>
<td>requirements?</td>
</tr>
<tr>
<td></td>
<td>• Is the site potential being maximised?</td>
</tr>
<tr>
<td>Cost certainty</td>
<td>• Has the budget for the project been finalised?</td>
</tr>
<tr>
<td></td>
<td>• Would the final cost of the project be expected to vary from the budget cost?</td>
</tr>
<tr>
<td>Other objectives</td>
<td>• Are there objectives around aspects of sustainability?</td>
</tr>
<tr>
<td></td>
<td>• Are there objectives around iwi engagement?</td>
</tr>
</tbody>
</table>

Constraints

Use the following table to identify project constraints.

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Factors to consider...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site status</td>
<td>• Where is the location?</td>
</tr>
<tr>
<td></td>
<td>• What are possible future developments on or around the site?</td>
</tr>
<tr>
<td></td>
<td>• What is the land ownership?</td>
</tr>
<tr>
<td></td>
<td>• What are the geotechnical conditions?</td>
</tr>
<tr>
<td></td>
<td>• Does the site need remediation due to contamination?</td>
</tr>
<tr>
<td></td>
<td>• Are there demolition and disposal needs?</td>
</tr>
<tr>
<td></td>
<td>• Are there environmental considerations?</td>
</tr>
<tr>
<td></td>
<td>• Are there cultural heritage considerations?</td>
</tr>
<tr>
<td>Site condition</td>
<td>• What type of site?</td>
</tr>
<tr>
<td></td>
<td>• How will contractors price for any risks associated with the site conditions?</td>
</tr>
<tr>
<td></td>
<td>• Have extensive reviews of the site been undertaken as part of the design development</td>
</tr>
<tr>
<td></td>
<td>process?</td>
</tr>
<tr>
<td></td>
<td>• Is the client willing to retain full control of the design and accept the risk of</td>
</tr>
<tr>
<td></td>
<td>potential unknown risks?</td>
</tr>
<tr>
<td>Planning</td>
<td>Is the design sympathetic to the needs of the planning authority and local stakeholders?</td>
</tr>
<tr>
<td>Risk allocation</td>
<td>• Is the client risk averse?</td>
</tr>
<tr>
<td></td>
<td>• What degree of risk is the client prepared to accept?</td>
</tr>
<tr>
<td>Degree of client involvement</td>
<td>What degree of involvement would the client like to have?</td>
</tr>
<tr>
<td>Flexibility for change during</td>
<td>• Is cost certainty required?</td>
</tr>
<tr>
<td>design and construction</td>
<td>• How early in the project will cost certainty need to be fixed?</td>
</tr>
<tr>
<td></td>
<td>• Do the design and construction processes need to be flexible, to allow incorporation</td>
</tr>
<tr>
<td></td>
<td>of future changes, e.g. development in technology?</td>
</tr>
<tr>
<td>Market interest</td>
<td>Will the procurement method solicit a good response from contractors?</td>
</tr>
<tr>
<td>Design and construction complexity</td>
<td>• Is the project pushing the boundaries of technology?</td>
</tr>
<tr>
<td></td>
<td>• Is the project technologically complex in terms of services?</td>
</tr>
<tr>
<td></td>
<td>• Does it need specialised or custom-built plant or equipment?</td>
</tr>
</tbody>
</table>
Constraint Factors to consider…

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Are there opportunities to bundle or unbundle the project with to maximise value for example where the project is part of a wider programme?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other constraints</td>
<td>Are there other constraints specific to this project e.g. the remote location of site?</td>
</tr>
</tbody>
</table>

Risks

Identify the project risks, including all major risks and opportunities outlined in the project’s ‘Risk Management Plan’. The following topic may be a useful checklist:

- site issues
- permits
- design
- materials
- constructability
- client risk culture
- market maturity
- market capability
- political opportunities and risks
- stakeholder management.

Client capability

Use the Client capability assessment tool and the following table to review the client’s capability:

<table>
<thead>
<tr>
<th>Capability…</th>
<th>Consider…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client capability</td>
<td>Different delivery methods and project sizes require specific levels of knowledge, skill, experience and resource requirements. Clients therefore need to consider the capability and availability of potential team members.</td>
</tr>
<tr>
<td></td>
<td>• Is there adequate resource within the client to manage the preferred delivery model?</td>
</tr>
<tr>
<td></td>
<td>• What is the level of oversight that the client is able to provide?</td>
</tr>
<tr>
<td></td>
<td>• What is the client’s ability to manage a particular delivery model?</td>
</tr>
<tr>
<td></td>
<td>• What is the client’s ability to develop or administer a new form of contract that has not been used previously?</td>
</tr>
<tr>
<td></td>
<td>• Does the client have experience in delivering the type of project envisaged?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder input</th>
<th>Consider…</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Is there potential for community disruption and opposition?</td>
</tr>
<tr>
<td></td>
<td>• What are the interfaces with adjacent assets, operation, works or supply contracts?</td>
</tr>
<tr>
<td></td>
<td>• Are there any existing commitments made to stakeholders and the public?</td>
</tr>
</tbody>
</table>

If additional capability is required, consider sourcing the required capability externally from either other government agencies or the private sector. For further advice, you can contact MBIE via procurement@mbie.govt.nz

Market position

Use the Market capability assessment tool to help determine the market position. Undertake an initial market sounding and/or briefing to determine the following, for possible supplier(s):

- risk appetite
- views on different potential delivery models
- capability with respect to different delivery models.
3. Determine preferred delivery model

Purpose
To undertake an assessment of the range of delivery models against the project characteristics to determine and recommend a preferred option.

Selection of an appropriate delivery model is one of the most important decisions to be made during the construction procurement process. An inappropriate delivery model can increase project risk and negatively impact value for money, quality and timing. Undertaking a delivery model options analysis aims to reduce this risk. It is therefore essential that a robust analysis is undertaken to ensure that the right model is chosen.

There are many types (and hybrids) of delivery model to choose from:

- Traditional (conventional client led design)
- Design and build
- Package based
- Direct managed
- Alliance
- Public Private Partnerships (PPP)
- Early contractor involvement
- Panel of suppliers.

These are discussed in greater detail in Section 5 – Useful reference information.

PUBLIC PRIVATE PARTNERSHIPS
All capital expenditure proposals with a whole-of-life cost in excess of $25 million must include an evaluation of alternative procurement options, and one of these options may be a Public Private Partnership option.

Treasury has developed detailed guidance around the evaluation of Public Private Partnerships as part of the Better Business Case process [www.infrastructure.govt.nz/publications/pppguidance](http://www.infrastructure.govt.nz/publications/pppguidance)

Experienced judgement is required to facilitate discussion and to help identify a recommended delivery model to suit the unique project characteristics. This process requires specialist expertise from practitioners fully conversant with the range of delivery models being considered.
Guidance

The following steps are recommended, to assist with identifying a preferred delivery model:

• evaluation criteria
• evaluation weighting and scoring
• recommendation.

Evaluation criteria

Using previously gathered project characteristic data, analyse and identify key evaluation criteria. Consider any unique project conditions or risks, taking into account lessons learned from previous projects. It can be helpful to consult with other organisations who have experienced delivering similar projects, to take on board lessons learned. You can contact MBIE to help you identify other organisations that may be able to help, via procurement@mbie.govt.nz

The following are examples of typical factors that can be used to identify evaluation criteria for your project:

• **Time**: Is early completion required?
• **Certainty of time**: Is project completion on time critical to operations?
• **Certainty of cost**: Is a firm price needed before any commitment to construction given?
• **Price competition**: What is the relative importance of price versus quality in determining the degree of price competition?
• **Flexibility**: Are variations necessary or possible after work has begun on-site?
• **Complexity**: Does the building need to be highly specialised, technologically advanced or highly serviced?
• **Quality**: Is high quality of the product, in terms of material and workmanship and design concept, important?
• **Responsibility**: Is the client willing to take design risk, or does the single point of responsibility for design and construction need to be with the contractor?
• **Risk**: What is the project risk profile, and how are these risks to be allocated and managed?
  ○ Time
  ○ Cost
  ○ Quality
  ○ Health and safety.

The above list is not exhaustive and will need to be tailored to suit the specific project.

For example, risk transfer may be a desirable client criteria, but market sounding, done at the data gathering stage, may suggest a more considered approach to risk transfer is required to secure adequate market competition and value for money.
Evaluation weighting and scoring

- Weight criteria based on relative importance to the client. You may choose to use the Procurement delivery model evaluation tool as a template to enter the criteria and weightings. It is a good idea to agree the criteria and relative importance of each with interested stakeholders.
- Score each potential delivery model option against the evaluation criteria and identify the optimal scoring option(s).
- Agree upon your recommended option(s). Capture both qualitative and quantitative commentary to support your recommendation.
- Discuss and challenge scoring. Consider which delivery models may match requirements, objectives and reduce risks. It should be noted that although there are some universal views within the construction industry on what the various delivery models can offer, these can be tailored to accommodate the project requirements and risk profile. For example, a design and build delivery model can be adjusted to include additional scope for maintenance which can encourage better whole of life outcomes.

We recommend that the evaluation weighting and scoring of options is conducted with workshops and/or interviews with an appropriate selection of key stakeholders. All options and weightings need to be rigorously debated and a consensus reached. It should be noted that this process is not an exact science, but is a tool to facilitate structured discussions among stakeholders to arrive at an optimal solution that can then be sense checked with the market.

- Test your recommended delivery model(s). Once a recommended delivery model has been identified it is a good idea to sense check the proposed delivery model through further market soundings. The MBIE Guide Constructive Market Engagement provides guidance on how to undertake market engagement.

It may be useful to share the rationale for selection of the preferred delivery model with the market. This can help prospective tenderers understand and respond to the client’s needs with innovative solutions.

- Based on new information, update the criteria and weightings in the Procurement delivery model evaluation tool as appropriate.
4. Plan approach to market

Purpose

To determine the approach to market, i.e. the:

• appropriate tender process
• pricing mechanism
• form of contract for each package of work.

Once the recommended delivery model is chosen, the client needs to plan an approach to market. The MBIE Guide to Mastering Procurement gives detailed guidance regarding this stage. The following information complements this guide by providing guidance on specific aspects to be considered for construction.

The following guidance has been developed in accordance with the five principles in the Government Rules of Sourcing. Agencies following these guidelines will be providing greater certainty within the tendering process for themselves, tenderers and contractors

References and tools

Ministry of Business Innovation and Employment (MBIE) Guide: Guide to Mastering Procurement -

Tendering quick reference guide -

Government Rules of Sourcing
Rules: 14, 31, 32, 33, 34, 35, 36

Contract clause quick reference guide -
Guidance

Outlined following is guidance to assist with identifying the most appropriate:

- tender process
- pricing mechanism
- form of contract for each package of work.

Tender process

- Determine the most appropriate tender process and type. Refer to the Government Rules of Sourcing, and the MBIE Guide to Mastering Procurement.
- Use the Tendering quick reference guide to provide greater certainty to agencies and contractors in the tender process.

INTERACTIVE AND COLLABORATIVE TENDER PROCESSES

There is a growing trend in construction procurement to use an interactive tender process. Agencies that are involved in relationship based models, including PPP, are typically adopting this approach.

Structured interviews and/or workshops conducted throughout the tender period are used to clarify the contract scope and to assess tender performance. Tenderers are able to query clients regarding their requirements, and obtain feedback on how their proposed approaches may meet the client’s requirements.

Benefits of this approach include:

- minimising misunderstanding arising from the client’s written documentation
- improving documentation (where necessary) prior to finalising contract documents
- fostering an open, transparent and collaborative project culture
- improving time and cost outcomes
- minimising risk contingency amounts in the tender price to cover unknown factors and risk.

TENDERING QUICK REFERENCE GUIDE

Prequalification

Prequalify tenderers to ensure that prospective tenderers have the capability to carry out the required works or services. Pre-qualified tenderers should inform the relevant agency of any material changes to the information they provided as part of the prequalification process.

Client commitment

- Call for tenders only after making a firm commitment to proceed with the project (e.g. agreed scope and approved funding).
- Do not discriminate against a prequalified contractor or prospective tenderer that declines an invitation to tender.

Cost of tendering

- Recognise that the cost of tendering is a significant industry and client overhead.
- Do not engage in multiple rounds of tendering without industry support.
- Be mindful of the potential number of tenderers. In particular, for high-value and/or complex contracts, use the Registration of Interest (ROI) process, or similar, to short-list prospective tenderers and limit the number of short-listed tenderers.
### Tender documents
- Look to adopt the set of templates for tenders called ‘Government Model RFx templates’ (GM-RFx). These are designed for use across all government agencies, and are mandatory from 2016. See [http://www.business.govt.nz/procurement/for-agencies/government-model-rfx-templates](http://www.business.govt.nz/procurement/for-agencies/government-model-rfx-templates)
- Ensure the tender documents are the same for each tenderer.
- Include all critical and relevant information, including information relating to the project and the proposed contract.
- Ensure the scope of work or services included in the tender documents contains sufficient detail to support proper evaluation and pricing.
- Peer review tender documents before issuing to address any conflict or ambiguity and to minimise the need to issue supplementary documentation.
- Where amendments to tender documents are required, provide these to all prospective tenderers as an addendum (except to the extent that they are commercially sensitive to an individual tenderer).
- Extend the tender period where an addendum materially affects the issued tender noting all prospective tenderers are to be given equal time to review and update their tenders.

### Innovation
- Encourage innovation in tenders through submission of an alternative tender in addition to a conforming tender.
- Ensure that the evaluation criteria and weightings used for assessing alternative tenders are clearly defined against the evaluation criteria and weightings used for evaluating a conforming tender.
- Ensure that any tender conformance requirements, evaluation criteria and timeframes do not act as a barrier to innovation.

### Timeframes
- Allow sufficient time for tenderers to evaluate the project and prepare their response.
- Clearly specify tender validity periods in the tender documents.

### Tender process
- Enable site inspections to be undertaken by each tenderer, where appropriate.
- Offer interactive or collaborative tender briefings (within appropriate probity frameworks) for complex and high-value contracts.
- Clearly specify the method and timeframe for lodgement of tenders.

### Requirements for tenderers
- No tenderer should seek or expect to be given any information that is not provided to all other tenderers.
- Tenderers must not engage in anti-competitive practices.
- Tenderers should only submit bids when they have the competence and capacity at the time to complete the works.
- If the tender is submitted by a joint venture or consortia of tenderers, this should be specified in the tender response, with all tendering parties clearly identified.
Pricing mechanism

Identify the most appropriate pricing mechanism. Section 5 provides more details on these pricing mechanisms:

- Lump sum
- Guaranteed maximum price
- Cost reimbursable contract
- Target cost
- Measurement contract.

The pricing mechanism will determine the level of cost certainty that the client can achieve at the time of contract award, thereby determining how much financial risk is to be allocated between the parties to the contract. It will also influence how quickly a project can go to market. In general, the greater the cost certainty required at award of contract, the more time is needed to develop the design to a sufficient level of detail for pricing.

Contract type

A contract formalises arrangements between the client and contractor to deliver a particular project. An appropriate form of contract for a particular project will help to ensure high quality and cost effective outcomes. The form of contract in broad terms will cover:

- Obligations of both the client and contractor in performing the contract.
- Details of how the contract will be administered; timing of payments, valuation of changes requested by the client and details of how any dispute between the client and contractor will be addressed.
- Performance and quality standards to be met by the contractor.
- How risk is to be allocated between the client and contractor.

Wherever possible, agencies should adopt a standard form of contract as appropriate for the project. A list of the standard forms of contract available are provided in Section 5. Consider the delivery model, nature of the work, risk profile and anticipated timeframe for delivery when deciding which form of contract to use.

- Use the Contract clause quick reference guide and incorporate these principles wherever possible to achieve the five principles in the Rules and provide greater certainty to agencies, tenderers and contractors.
- Consider other contract related issues and how these are incorporated into the contract documents. Matters to consider include contract administration arrangements and internal resource requirements, contractual interfaces with other related projects, opportunities to develop integrated project teams and the use of any applicable technology based project techniques.
STANDARD VS. BESPOKE CONTRACTS

Use of standard construction contracts can help to reduce procurement and contract administration costs as they are generally well understood by users. Standard construction contracts are generally developed in consultation with clients and the industry and take into account both perspectives to arrive at a fair and equitable contract. Their familiarity within the industry can reduce the number of disputes related to matters of interpretation.

Risk allocation in standard forms is generally well balanced, due to the consultative process between clients and industry in agreeing how these should be structured.

Use of special conditions

Some standard forms, such as the New Zealand standard forms of contract, typically include what are referred to as ‘Special Conditions’. These are typically standard schedules annexed to the standard form, which prompt the client to define requirements specific to the contract, covering such matters as:

- Selected pricing mechanism
- Valuation of variations
- Form of contractors bond
- Programme requirements
- Provisions for payments and retentions
- Insurances
- Warranties and guarantees, etc.

It is not uncommon to see special conditions added into contracts that are over and above those included in the standard forms. Often this is necessary to cover off specific risks or issues that are not adequately addressed by the standard form.

Excessive special conditions can result in significant risk pricing by the contractor, and/or can potentially put the project at risk, if the contractor realises risk it could not adequately manage. Where additional special conditions are required, it may be useful to check whether the number of special conditions are reasonable for the scale and complexity of the project.

Things to check if a large number of special conditions are proposed:

- Is the standard form selected appropriate for the project?
- Has the risk allocation proposed through the special conditions been assessed collectively by the legal, commercial and technical teams, by taking each in turn and determining that the contractor is best placed to manage these?
- Does the business case’s value for money assessment include the potential costs of the risk allocation proposed through the special conditions?

If a large number of special conditions need to be made to the standard form, it is good practice to schedule these out in a format that contractors can insert prices against, so that this can be reviewed if tender returns do not meet expected value for money assessments.
<p>| <strong>Contract Clause Quick Reference Guide</strong> |
|-------------------------------|------------------------------------------------------------------------------------------|
| <strong>Procurement method</strong>       | - Use standard contract forms wherever possible.                                        |
|                              | - Select the form of contract and tendering process to suit the delivery model for the project. |
| <strong>Innovation</strong>               | Include provision in contracts to encourage innovation.                                  |
| <strong>Collaboration</strong>            | Where collaborative principles are to be adopted, include obligations in the relevant contracts for all project parties. |
|                              | - Allocate risk to the party best able to manage the risk.                               |
|                              | - Clearly define roles and responsibilities of the parties, and identify the responsibility for management of each key risk. |
|                              | - When considering liability capping:                                                    |
|                              |  o ensure the cap on liability is based on a rigorous risk assessment and quantification of risk |
|                              |  o consider the level of insurances to be provided under the contract by the client and/or contractor. |
| <strong>Risk allocation</strong>          | - Consider limiting indirect or consequential losses of both parties where these can be appropriately defined. |
| <strong>Limitation of liability</strong>  | - Limit warranties to the work and services to be provided by the contractor, including subcontractors, consultants and suppliers. |
|                              | - Fitness-for-purpose warranties should be clearly ascertainable from the contract.      |
|                              | - Warranties should not be used to avoid having to undertake preventative maintenance.   |
| <strong>Warranties</strong>               | Do not require the contractor to indemnify the client for the client’s (including its employees and agents) negligent actions. |
| <strong>Indemnities</strong>              | - Apply a risk-based approach to determining insurance types and levels that are appropriate to the contract. |
|                              | - Reference full details of insurance that benefits other parties in the contract and/or make this information available to the contractor. |
| <strong>Insurances</strong>               | - The contractor retains ownership of pre-existing intellectual property, and an irrevocable licence to use this property is provided to the client for the purposes of the project. |
| <strong>Intellectual property</strong>    | - Where the client owns intellectual property that is created during the term of a contract, contractors are able to use it under licence. |
| <strong>Confidentiality</strong>          | Define confidentiality provisions in the contract appropriate to the needs of the project. |
| <strong>Key personnel</strong>            | - Key personnel nominated by the contractor for the project at time of tender are provided. |
|                              | - Ensure contractor personnel have skills and experience appropriate for their nominated roles. |
|                              | - Permission must be sought from the client to change key personnel (not to be unreasonably withheld). |
|                              | - Changes to key personnel must be on the basis of providing personnel with the same or similar experience. |
| <strong>Subcontracting</strong>           | - Contractors should not subcontract the whole-of-the-works.                             |
|                              | - Clearly document any requirements for client involvement in the selection of subcontractors. |</p>
<table>
<thead>
<tr>
<th><strong>Cost adjustment</strong></th>
<th>Consider the inclusion of cost adjustment provisions, where relevant to the contract and its duration.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dispute resolution</strong></td>
<td></td>
</tr>
</tbody>
</table>
| - Adopt a collaborative approach.  
| - Include alternative dispute resolution procedures in the contract. |
| **Electronic notices** |  
| - Use electronic documentation and notices, where practicable.  
| - Consider implementing an electronic contract management system. |
| **Security** |  
| - Security is permitted in the form of unconditional undertakings from various security providers that are acceptable to the client.  
| - Unless specifically required to manage identified risks, clients should consider including a provision for the release of part of the security after practical completion (or equivalent). |
| **Overheads and profit** | Define what is covered by payments for overheads and profit, where such payments apply. |
| **Site conditions** | Detail which party is responsible for which site conditions in the contract. |
| **Time management** |  
| - Include provisions for management of extensions of time in the contract.  
| - Unless otherwise specified in the contract, where the contractor builds in a time margin between the construction programme completion date and contract completion date, this margin belongs to the contractor. (This is often referred to as ‘total float’.) |
| **Defects liability** | Set the defects liability appropriate to the delivery model and the scope, complexity and value of the contracted works. |
| **Subcontractor conditions** | Subcontract conditions are to align with the contracting principles included in the head contract. |
| **Novation** |  
| - Where novation is included in the tender documents, the successful tenderer will comply with the required novation.  
| - If consultants are to be novated to the contractor later in the project, this must be indicated to consultants in their tender documents. |
5. Useful reference information

Types of delivery models

Overview

The selection of an appropriate delivery model will determine how you organise your consultant and contractor team. This is a key decision when determining your procurement strategy. There are advantages and disadvantages of each model and the selection needs to be based upon suitability to the specific project and situation. There are many types (and hybrids) of delivery model to choose from:

- Traditional (conventional client led design)
- Design and build
- Package based
- Direct managed
- Alliance
- Public Private Partnerships (PPP)
- Early contractor involvement
- Panel of suppliers.

Each of these models is described in the following pages, looking at:

- the typical circumstances in which they are used
- their potential benefits
- points to watch.
Traditional

Traditional, or conventional client led design, requires that the design is fully developed before the construction contract is awarded.

The client engages consultants to prepare a design against a brief and budget, and to prepare the tender documents. Contractors are then invited to submit bids to carry out the construction work, based on the tender documents. Consultants review the contractor’s bids and select and recommend the most favourable option for the client.

The traditional method can be varied by overlapping design and construction processes, hence reducing project delivery time. If this approach is chosen, the pricing mechanism needs to be modified eg use of a cost reimbursable, target price or approximate bill of quantities approach which can reduce the amount of design required to be carried out prior to tender. The trade-off with both these approaches is that there is reduction in cost certainty achieved prior to committing to build.

Diagram 1 illustrates a typical contractual arrangement for the traditional delivery model. The consultants or the client administer the construction contract. If administered by a consultant, the consultant will certify the works for payment on behalf of the client.

Diagram 1: Traditional delivery model contractual relationships

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**TRADITIONAL DELIVERY MODEL QUICK REFERENCE – GUIDELINES FOR USE**

Generally regarded as the best delivery model to use for routine, uncomplicated works of small to medium size and duration where:

- Timeframes are sufficient to comfortably complete the design and then follow up separately with the construction works.
- Requirements for innovation are less important, as requirements are straightforward and scope is well-defined.
- The client is willing to retain all of the design risk.
- There is likely to be a large pool of tenderers and strong competition.
- The client wishes to retain overall control of the design throughout the project.
- There is need for a high degree of cost certainty at the time of contract award.
- There are appropriately skilled and experienced resources available to administer and manage the
**POTENTIAL BENEFITS**

- The client has full control of the design of the project at all stages.
- The client can reduce design-related risk by ensuring that all design issues are resolved, that design innovation is considered (where appropriate) and that the design fully meets its requirements, before procuring the construction works.
- The straightforward nature of the bidding process, lower cost of tendering and level of risk retention by the client usually encourages a competitive tender field.
- Bids are generally less complex and costly to assess than under many other delivery models.
- There is a high degree of cost certainty at the time of contract award.
- The model is well known and understood by industry and clients.
- The design can be varied with relative ease after the construction contract has been awarded.

**POINTS TO NOTE**

- Price certainty relies on the accuracy and completeness of the client’s design documentation. Errors or omissions in the design will lead to variations and additional cost to the client.
- A long lead-time is required to get to the tender stage, due to the need to progress the design to a level sufficient to complete tender documentation.
- There is no single point of responsibility for design and construction. Design risk rests with the client and construction risk with the contractor. This can lead to difficulties later, in deciding who is responsible for defects e.g. whether they result from design error or poor workmanship.
- The client is responsible for providing accurate information (e.g. drawings and specifications) to the contractor in a timely manner. Any delays may result in additional cost to the client and/or extensions of time for the contractor.
- The separation of the design and construction process reduces the opportunity for the design and construction teams to work together to optimise the design from a construction perspective, e.g. methods of construction, minimising waste and reducing health and safety risks.
Design and build

In the design and build delivery model, the general contractor takes on the responsibility for design as well as construction.

The client develops a set of procurement requirement documents. The level of information provided in the client requirements depends on the complexity of the project. A simple, straightforward project may only require a brief requirements statement, while a more complex project may require a more comprehensive set of requirements documents.

### COMPREHENSIVE SET OF REQUIREMENTS DOCUMENTS

This may include:

- site layout and floor plans showing functional relationships
- perspectives of facility to demonstrate look and feel
- schedules of accommodation (listing rooms and minimum areas to be provided)
- room data sheets setting out the requirements of each specific room in terms of:
  - required function and numbers of people to be accommodated
  - floor, wall and ceiling finishes
  - power and data requirements
  - lighting levels and requirements
  - environmental requirements including:
    - acoustic performance
    - temperature and ventilation
    - natural daylight
- functional and technical performance requirements of facility (output based specification).

Design and build allows for certainty of contract value and can provide cost benefits. Integration of the design and construction processes enables decisions to be optimised on a value for money basis, since a key factor in making design decisions will be aspects of buildability. The design team can work together with the contractor to consider costs associated with constructing the range of proposed design solutions.

The contractor will also be able to bring their expertise, and that of the supply chain, to work with the design team in developing design solutions that maximise value for money. They may for example, specify alternative products that meet the same performance requirements that the design team are looking to achieve, or sourcing alternative products that have shorter lead times.

### DESCRIBING REQUIREMENTS

Sometimes it is important that requirements are described in terms of performance rather than purely prescriptive technical requirements. If requirements are too prescriptive, this can constrain innovation by limiting the contractor’s opportunity to consider alternative solutions from their supply chain.
Overlapping the design and construction processes can help to achieve an earlier on-site start date and can result in better planning and more effective programming. However, time is needed by the client’s consultants to prepare an adequate set of requirements documents, and to compare and evaluate responses from competing tenderers. Once a contract is signed, any changes by the client can prove costly. Diagram 2 illustrates a typical contractual arrangement for design and build.

**Diagram 2: Design and build delivery model contractual relationships**

![Diagram of contractual relationships](image)

The level of design provided by the client to the contractor will largely depend on the degree of control that the client wishes to retain over the design development process. Tendering near completed designs on a design and build basis gives little opportunity for the contractor to realise the benefits that a design and build approach can bring. Clients adopting this approach are simply looking to transfer most of the project risk to the contractor. This can result in significant cost premiums being added to the project as the contractor looks to protect their margin by covering the cost of any unknowns.

A number of variations of design and build exist as outlined in the table below:

<table>
<thead>
<tr>
<th>Design and build variation</th>
<th>Meaning…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive</td>
<td>Several contractors prepare tenders to offer competition on both design and construction proposals. Usually based on a specification that sets out the performance requirements to be achieved.</td>
</tr>
</tbody>
</table>
| Develop and construct      | The client’s consultants design the building to a partial stage, often referred to as ‘scope design’, then competitive tenders are obtained from a select list of contractors to develop (using its own in-house or externally appointed design consultants) and complete the design and construct the building.  
**Note:** The amount of consultant design provided by the client will vary depending on the client’s needs. |
**Design and build variation**

### Novation (sometimes referred to as ‘design, novate and construct’)

- The contractor takes over (from the client) a previous contract for the design work, completes the design and constructs the work.
- The consultant appointments held by the client are transferred to the contractor. In theory the design teams continued involvement should reduce the risk of the original design being compromised.
- In practice however as the design teams are now employed by the contractor they take instruction from the contractor. The client needs to consider appointing its own independent design consultant to monitor the outputs of the contractor, to ensure the design meets the requirements of the contract.
- Novation does however provide an advantage in terms of retaining continuity of the design team, which can avoid the additional cost that would otherwise be incurred as a result of the learning curve of new designers employed by the contractor. A novated approach can also be useful in a suppliers’ market, where design development costs could result in contractors being reluctant to tender.

---

**DESIGN AND BUILD DELIVERY MODEL QUICK REFERENCE**

**GUIDELINES FOR USE**

This model is best used when:

- There is need for a high degree of cost certainty at the time of award.
- Project requirements are well-defined at the time of tender including comprehensive design, quality and finishes standards.
- Alternative and innovative design solutions are desirable, but the client does not want to assume design risk.
- There is a desire for the contractor to provide a single point of responsibility for design and construction.
- There is a requirement to improve integration of the design and construction process, to improve constructability outcomes.
### POTENTIAL BENEFITS

- Construction can commence shortly after contract award, in advance of all detailed design packages being finalised. This makes an earlier start on site possible, compared to traditional methods.

- The design has high potential for innovation, resulting from the input of the contractor and its supply chain into constructability and flexibility in identifying optimum materials and construction methodologies.

- There are potentially fewer disputes and more effective management of any design-related issues, due to having a single point of responsibility for both the design and construction work, and minimising design/construction interface risk.

- There is a high degree of price certainty for both the design and construction works, when a lump sum arrangement is used.

- The contractor generally warrants the design’s fitness for purpose, although this should be clearly defined in the contract. For example:
  - the client may take responsibility for ensuring that the layouts and adjacencies of spaces within a facility are appropriate for their proposed operational functions, while
  - the contractor may take all technical risks around ensuring that the facility can be used as intended by the client.

### POINTS TO NOTE

- The tender period needs to be sufficient for contractor design inputs (novated design approaches) or for contractor led design bids (competitive and develop and construct approaches). Time also needs to be allowed for proper assessment of design proposals in addition to pricing information.

- The cost of tendering is generally higher than under a traditional delivery model, attracting a smaller pool of tenderers. (Novated approaches can reduce this cost.)

- Clients may consider reimbursing some or all of the contractors’ bid costs, as this can encourage good competition and innovation. (Weigh this up against potential whole of life benefits, as design costs usually comprise a small part of the overall whole of life cost.)

- The designer’s primary duty is to the contractor, not the client. The client will need to think about appointing its own design consultants to monitor the design outputs of the contractor, to ensure they meet the requirements of the contract.

- Be clear about the expectations of the contractor around design management. If the contractor is being asked to manage the client’s stakeholders in developing the design, do they have this capability? If not, the client may need to consider appointing its own design manager to coordinate stakeholder requirements and provide client input to the design.

- Quality outcomes of the project will reflect the client’s specified project requirements, so it is critical that these are carefully specified in the tender documents, to ensure high-quality outcomes are delivered.

- It may be difficult for the client to exert any significant level of control over the design process, and design changes that may be required during construction are likely to be difficult and costly.
Package based delivery models allow an earlier start on site and enables the tender process and construction to overlap with the design. They have evolved to provide faster project delivery times while still allowing the client to retain control over the design and therefore quality. Management methods break down a project into small packages that can be let for tender as-and-when the design for each package is complete.

There are two approaches to packaging:

- construction management,
- management contracting.

Each involves significantly different risk to the client due to the different contractual relationships involved with each method.

With construction management, the client enters into direct contracts with trade contractors and engages a construction manager to manage the trade contractors. In management contracting, the client engages a management contractor who will enter into direct contracts with each trade contractor.

The construction management approach presents slightly more risk to the client as there is no single contractual point of responsibility for trade contractors. With both methods the construction manager and management contractor are engaged early on in the design phase to advise the designers on the constructability of the project. With good constructability, projects can enjoy savings in cost and time and can have enhanced quality. The construction manager or management contractor also manages the breakdown of the project into smaller packages, supervises the tendering process for each package and manages the contracts once awarded. Diagram 3 and Diagram 4 illustrate the contractual relationships associated with both management methods.

**Diagram 3: Management contracting contractual relationships**

```
+----------------------------------+
| Client                           |
+----------------------------------+
| Architect                        |
| Structural Engineer              |
| Services Engineer                |
| Cost Consultant                  |
| General Contractor               |
+----------------------------------+

Consultants

Appointed at Design stage

Appointed once design is complete for each work package

Trade Contractors
```
With both methods, the work is bid for on the basis of a percentage management fee. The management contractor takes more risk (and therefore fees) under management contracting, therefore the fees tend to be higher than those for construction management. Although there may be cost certainty for each package there is no final price at the outset for the entire project. The final price is not known until the last package is awarded. Responsibility for managing the budget lies with the client and therefore management methods require the client’s involvement throughout the entire process. If a trade package comes in over budget the client will need to work with the construction manager to identify potential areas where savings can be made.

This can be achieved by making alterations to the design or specification. The lack of price certainty before commitment to build can leave the client exposed to inflationary impacts on the construction market and can result in a more expensive project.

**PACKAGED BASED DELIVERY MODEL QUICK REFERENCE**

**GUIDELINES FOR USE**

This model is best used when:

- The client wants to retain overall control of the project, including design aspects, to ensure flexibility to amend the design without incurring excessive cost for example, where having the ability to incorporate the latest technological developments as the project progresses is important.
- The project is of a specialised nature, for example a project with a large proportion of highly complex specialist services that cannot be bought through a single contractor.
- The risk of potential cost overruns are acceptable where completion is critical to the client’s operational needs (eg manufacturing facility).
- There are complexities that warrant expert advice of an experienced construction manager who can coordinate and administer delivery of the construction works.
- The works can readily be broken down into separate parts and an early commencement (or specific early works) is required.
**POTENTIAL BENEFITS**

- Client has continuity of designers.
- Management and coordination risk to the project is reduced.
- Contract administration is undertaken by the construction manager, reducing time and cost for clients.
- Clients retain a high degree of control over the project with management, coordination services and general expertise contributed by the construction manager.
- The design can be varied with relative ease after the construction contract(s) have been awarded.

**POINTS TO NOTE**

- There is no single point of accountability as the client must enter into numerous different contracts to deliver the works.
- Bulk of the risk remains with the client— the construction manager can only perform a management and coordination role.
- The contract may lack specific relationship management provisions.
- The client needs to commit considerable time and input into the process.
- Arrangements can be administratively complex and problematic in terms of liabilities, insurances etc.
- There may be some uncertainty to clients regarding final construction costs, and the construction manager’s fees add an additional element of cost into the project.

Key points of difference with management contracting approach:

- There is a single point of accountability for construction as it is the management contractor that enters into the trade contracts as the project progresses.
- This approach can be used on less complex projects where the requirement for speed outweighs the risk of a lack of cost certainty before commitment to build.

**DIRECT MANAGED**

In directly managed delivery models the client directly manages all aspects of the delivery of the project works. The client will typically:

- undertake and coordinate some (or all) of the design activities
- be responsible for all preliminaries (e.g. crane hire, site sheds and supervision services) and project management (e.g. scheduling, coordinating, liaising, monitoring and reporting)
- prepare the trade packages, conducts the tenders, and select and pay suppliers and subcontractors
- have control over the quality requirements of the ‘whole of the works’. 
Diagram 5 illustrates the contractual relationships associated with the direct managed delivery model.

**Diagram 5: Direct managed delivery model contractual relationships**

**DIRECT MANAGED DELIVERY MODEL QUICK REFERENCE**

**GUIDELINES FOR USE**

This model is best used when:

- There is a need for the client to control all aspects of the project.
- There is a desire for the client to remain informed and develop the skills of in-house personnel.
- The project is for minor works contracts and/or emergency works.
- There are uncertain or complex interfaces, and flexibility on scheduling and delivery are required.

**POTENTIAL BENEFITS**

- May result in efficient outcomes for small value works where full-blown procurement and contracting is not economical.
- The client may control all aspects of the project and directly manage non-performance.
- Flexibility of the model helps to manage any difficult coordination or interface issues.
- Develop and/or retain the skills of client's personnel.
- Useful where there are limited numbers of suitable contractors in the market to deliver the overall package of required works.
- Useful where the works cover disparate areas and there is little overlap.
- The design can be varied with relative ease after the construction contract(s) have been awarded.

**POINTS TO NOTE**

- The client retains all of the delivery and interface risks.
- There is need for a detailed work programme and schedule to manage trade package interfaces.
- It may be difficult to find skilled project managers with construction expertise to manage the works.
- The level of oversight can be resource-intensive.
- There is considerable uncertainty about price, and lack of tender price competition for trade arrangements may result in inflated costs.
Alliance

This alliance delivery model is a true relationship-style arrangement that brings together the client and one or more parties to work together to deliver the project, sharing project risks and rewards. Collaborative procurement methods are typically used for highly complex or large infrastructure projects that would be difficult to effectively scope, price and deliver under a more traditional delivery model.

Some key features of an alliance include:

- Good faith and trust provisions with a ‘no blame, no disputes’ philosophy.
- An ‘open book’ approach to contract pricing.
- Decisions made unanimously on a ‘best for project’ basis, rather than a ‘best for the individual participants’ basis.
- Joint development of a target out-turn cost agreed between the participants.
- ‘Pain/gain’ share arrangements whereby costs below and above the target cost are shared between the parties based on a pre-agreed percentage split.

Further guidance on alliancing models can be found in relation to the Stronger Christchurch Infrastructure Rebuild Team (SCIRT) at the Officer of the Auditor General

ALLIANCE DELIVERY MODEL QUICK REFERENCE
GUIDELINES FOR USE

This model is generally considered suitable for consideration in more extraordinary project circumstances where several of the following characteristics are present:

- Project scope and risks are highly uncertain.
- There are significant time constraints.
- The project is highly challenging in a technical sense.
- There are complex external factors, e.g. political, environmental or stakeholder-related.
- Innovative or cutting-edge solutions are required.
- There is a need for flexibility, e.g. in scheduling and programming.
- A collective approach is considered advantageous for the management of project risks and challenges.
- There is a desire for knowledge sharing and transfer between parties.
### Potential Benefits

- Enables a project to go to market early, before the scope and details of the project are finalised.
- Improved efficiency and innovation can be achieved.
- There is maximum flexibility across all aspects of delivery, enabling fast-tracking where necessary to meet time constraints.
- Participants can develop a detailed understanding of pricing and cost due to the transparent, collective contract pricing process.
- A fully integrated project team deals with planning, design and construction, encouraging participants to look for ‘best for project’ solutions.
- Supports a high level of knowledge transfer between all participants.
- Alignment of commercial interests, plus the relationship approach and ‘no blame’ culture can result in fewer disputes, and where these do occur quicker resolution is possible.
- Parties are incentivised to work together to achieve time and cost targets.

### Points to Note

- The 'no blame, no disputes' philosophy means legal claims between the participants are generally limited to matters of wilful default or insolvency. Other contract and negligence-related matters are commonly excluded.
- Quality outcomes can be compromised in order to meet cost targets and time demands. Good planning is required to avoid any re-work which must be paid for, which compounds the ‘pain’ for all participants.
- This method requires significant resourcing from the client in terms of governance and management arrangements.
- Clients need to carefully consider the personal attributes needed for personnel to work successfully in an alliance structure, embedding the right culture from day one is critical to success.
- Strong leadership is needed from the client’s senior leaders to ensure that the required ‘no blame’ culture is established and implemented throughout the project.
- Relationships are critical to the success of this model. Issues that could impact include; high turnover of staff (client or contractor) or major relationship breakdowns.
- Value for money is achieved through an open book accounting based approach under the contract, which gives the ability to have the contractor’s rates and margins independently verified to ascertain value for money.
- The accounting based approach, and the requirement for a high degree of scrutiny of costs, requires a higher degree of cost management input compared to other delivery models.
Public Private Partnerships (PPP)

Public Private Partnerships (PPPs) can refer to many different kinds of relationships between the government and the private sector. Generally the term is used to refer to long-term contracts for the delivery of a service, where the provision of the service requires the construction of a facility or asset, or the enhancement of an existing facility.

The private sector partner finances and builds the facility, operates it to provide the service and usually transfers control of it to the public sector at the end of the contract. A key objective of the PPP approach is the drive to optimise whole of life outcomes by encouraging innovation from the private sector.

More information around the use of PPP, can be found through Treasury’s National Infrastructure Unit www.infrastructure.govt.nz/publications/pppguidance

Early Contractor Involvement

Early contractor involvement (ECI) is another term that is sometimes referred to as a delivery model. ECI is an approach to contracting that can complement either a traditional, or a design and build delivery model.

ECI can be used to get early advice and involvement from a contractor into the buildability and optimisation of design. ECI is suited for large and complex contracts because it allows an integrated team time to gain an early understanding of requirements, therefore enabling innovation and value for money.

ECI typically takes a two stage approach to tendering:

- First stage tender.
- Second stage tender.

**First stage tender**

The tender documents include design information to the level required by the delivery model and the level of input required of the contractor by the client. Ideally these tenders should be based on design information at the earliest possible stage (normally at concept or preliminary design stage), to maximise the contractor's and subcontractor’s opportunity to add value to the design process.

The market will be asked to submit via the tender:

- fixed preliminaries and margin (this may include a schedule of rates for common elements)
- second stage construction consultancy fee
- details of their methodology and approach to the project
- details of the proposed project team.

The tender documents should provide an indication of the client’s budget ceiling. The contractor should detail in its methodology their approach for working with the design team in offering buildability and value engineering advice during the second stage to achieve the specified budget.

A successful contractor is appointed from this stage to proceed to the second stage tender process.
Second stage tender

The successful contractor is appointed as a construction consultant. The contractor will work with the design team to offer buildability and value engineering advice. The contractor is paid for its time based on the construction consultancy fee specified during the competitive tender stage; alternatively the client may sometimes elect the fee to be paid to the contractor during the construction consultancy stage.

For a traditional delivery model, the client and contractor will jointly agree how the project is to be packaged. Once the design is complete for each package, the client and contractor will jointly tender each package to the market on an open book basis. Once the client is satisfied that the packages are within budget, the contractor is awarded the contract to proceed to build, usually on the basis of a lump sum fixed price.

For design and build, and novation design and build delivery models, the client and contractor may agree on how the work is to be packaged but the contract sum will be arrived through a process of negotiation since the design may not be fully complete when the contract is awarded. To ensure competitive tension, the process of negotiation is made on an open book basis where the contractor’s cost build up for the project is fully transparent to the client’s cost consultant. All costs are subject to market testing to ensure that the total cost of the project represents value for money.

Once the total project cost is agreed, the contract may be awarded based on a lump sum fixed price, or, if the design is not sufficiently complete at the time of award, based on a guaranteed maximum price arrangement.

In both traditional and design and build delivery models, tender documents will typically state that the contract award is subject to the contractor meeting a specified cost ceiling. Where this is not met, tender conditions will typically give the client the right to go to the open market. This ensures that competitive tension is maintained throughout the process. It is for this reason that the contractor is treated as a construction consultant and remunerated during stage two to avoid any disputes around intellectual property.

EARLY CONTRACTOR INVOLVEMENT QUICK REFERENCE

GUIDELINES FOR USE

An ECI model is attractive to contractors, due to the embedded relationship principles and overall collaborative approach. ECI is suited to large and complex contracts because it allows an integrated team time to gain an early understanding of requirements, which enables innovation and value for money. Clients should also consider this model in circumstances where:

- The project risks are somewhat unknown, and some degree of innovation is needed.
- Project delivery timeframes are constrained.
- They are interested in using a relationship model rather than a more adversarial model, but where there are insufficient resources to fully resource an alliance.
- There is identified value in participating in a collaborative Stage 1 arrangement to drive innovative outcomes and provide for knowledge transfer.
- There is a need to obtain price certainty and demonstrate transparency.
- There are uncertain or complex interfaces, and flexibility on scheduling and delivery are required.
## Potential Benefits
- Potential for improved cost and time savings.
- Enhanced opportunities for innovation.
- A less adversarial culture (with fewer variations and disputes), due to the inclusion of relationship principles and collaborative practices into the contractual arrangement.
- Improved integration of design and construction processes provides greater opportunity for optimising the design from a construction perspective, e.g. methods of construction, minimising waste and reducing health and safety risks.
- Earlier commitment of construction resources to the project.
- Earlier procurement of items with long lead times, such as steel and precast concrete products.
- Good understanding of risk by all parties.

## Points to Note
- Where the client decides not to accept the open book negotiation offers, disruption to the project timelines can occur from re-tendering.
- High turnover of staff or major relationship breakdowns during the tender process can significantly impact on performance, due to the criticality of relationships to the success of the model.
- Value for money is achieved using an open book approach to accounting under the contract, and the ability to have the contractor’s rates and margins independently verified.
- Competitive tension can be maintained by setting clear conditions by which a contractor will be awarded a contract, e.g. achievement of a pre-determined cost ceiling.
- It is important that the contractor is remunerated for the services it provides during open book negotiation, to secure commitment and to ensure there are no intellectual property issues around where the contractor is not subsequently awarded a contract.
Panel of suppliers

Clients that are delivering a number of projects over a longer time period may wish to consider establishing a panel of suppliers. A panel of suppliers is a list of suppliers who have been pre-approved by an agency and who have agreed to the terms and conditions for supply. In establishing a panel of suppliers the agency will verify which suppliers are capable of delivering the works and will agree in advance with each supplier the terms and conditions of supply of the goods, services or works, including the pricing (e.g. hourly rates) or the pricing mechanism that will apply. Once the panel has been established, the client can select an appropriate supplier from the panel each time a project is required to be delivered through a secondary procurement process.

**Key Areas**

Key areas to be addressed in panel contract documents:

- Definition of the scope and potential locations for the works or services
- Anticipated volume and frequency of work
- Start and end dates for panel
- Details of panel selection criteria
- Requirements for quality and pricing information for panel selection
- Contract conditions to be used for:
  - pre-construction services including design services
  - execution of the works
- Key terms of contract:
  - requirements and obligations regarding insurance, bonds and warranties
  - inflation, interest and retention percentages to be applied
  - incentive mechanisms to be applied
  - dispute resolution procedures to be applied
- Details of how suppliers will be selected from the panel for specific projects (e.g. selection by rotation, mini tender, direct source based on the best fit for purpose, equal division of work, or geographical location) (secondary procurement process)
- Details of how contracts will be managed at various stages and how the client will interface with the supplier
- Any other criteria required from tenderers in order for the client to properly assess their suitability.

**Selecting Panel Suppliers for Contracts for Individual Projects**

Although a number of methods can be adopted for selecting suppliers for individual projects, the nature and scope of construction projects tends to vary to some degree between locations, and no two sites are the same. It is therefore considered good practice to adopt a mini-tender approach for construction projects to achieve best value. Setting up a mini-tender process should limit information sought from the contractor to matters specifically related to the project, e.g.:

- specific pricing and details of the contractor’s proposed programme
- quality
- methodology and resources for delivery.
Evaluating pricing information when establishing a panel for contractors can be difficult without the specific details of a project. However, it is good practice to set out a framework for pricing future projects, and to request some initial pricing information at panel selection stage. This enables value for money to be properly considered at the outset. Whatever framework is established to provide a basis for pricing, it should be sufficiently flexible to allow further refinement at secondary procurement stage, once the specific details of a project are known. The following examples may be useful:

- Clients embarking on a known programme of work could use the first projects as a basis for evaluating the pricing component of a value for money assessment.
- Sample projects could be used to ascertain prices from which future projects can be priced.
- Clients could seek to ascertain a fixed range of specified percentages for preliminaries and margin to be applied to the construction cost of future projects, based on a range of project values and described complexities.
- A standard schedule of rates for common components of projects can be developed, from which contractors are evaluated. These can be used as a basis for future pricing of projects.
- Clients who have a high volume of similar projects with reliable cost data may be able to develop a set of target cost benchmarks, from which suppliers are asked to develop proposals that meet or improve on these requirements.

Whichever method of pricing evaluation is chosen for panel selection, the panel agreement will need to clearly set out the process for selection of suppliers, including how quality and price components are evaluated for individual projects.

**OPPORTUNITY FOR CONTINUOUS IMPROVEMENT**

In contrast to one off procurements, panel arrangements provide an opportunity to develop a long-term partnership between the client and the supply chain and other stakeholders. This supports a working environment that can drive continuous improvement. A continuous improvement framework can be set up within the panel to establish objectives and targets and monitor performance. Panels provide the opportunity to measure and improve performance on projects and to compare successive projects to ensure that lessons are transferred from project to project. Keeping a team together over successive projects avoids the steep learning curve typically required for one off projects. This is a critical component of achieving continuous improvement.

**PANEL OF SUPPLIERS QUICK REFERENCE**

**GUIDELINES FOR USE**

This model is best used where clients:

- are continuously commissioning construction work
- have a good degree of certainty on volumes and timing of projects
- wish to seek the benefits that continuous improvement can bring.
### Potential Benefits

- Contracts can be awarded without the need to re-advertise each time. This can result in significant reductions in time and costs of repeating bidding processes.
- Panels are based on a long-term partnership between the supplier, client and other stakeholders, which can help support the working environment needed to drive continuous improvement.
- Panels offer the structure needed to measure and improve performance during a project, and to compare successive projects to ensure that lessons are transferred from project to project.
- The long-term relationship with suppliers can create a commercial environment that encourages sustainable investment and employment in local businesses, and can cut waste in processes and physical resources.
- Performance measurement systems designed to encourage continuous improvement can assist auditors and members to verify that public money is being used wisely.
- There is opportunity to integrate specific construction methods into the design.
- Construction resources are secured earlier, and procurement of critical items with long lead times, such as steel and precast concrete.
- All parties better understand risk and how to manage it.

### Points to Note

- Clients who see panels as simply a convenient way of short cutting procurement processes will not reap any of the continuous improvement benefits.
- A stop-start workload will not promote the right environment for continuous improvement.
- Continuous improvement requires a clear framework for establishing objectives and targets, and monitoring performance. Otherwise, benefits will not be realised.
- The work needed up front to establish a panel is more than for tendering a single project, although longer term benefits may outweigh this.
- Evaluation of pricing information should be part of the initial selection process, to avoid selecting panel providers that are unable to deliver value for money, once the panel is used later to call off contracts for specific projects.
- Be very clear at tender stage about the selection mechanism and criteria to be used to call off contracts for specific projects when the panel is in use (e.g. selection by rotation, mini tender, direct source based on the best fit for purpose, equal division of work, or geographical location).
- Clients that are unclear about the volume and frequency of projects may not attract the best suppliers or value proposition, and run the risk of future complaints from suppliers.
- Although suppliers from a panel are not guaranteed any work, the size of the panel should be proportional to the anticipated demand to give suppliers a fair opportunity of winning work. Panels that have too many suppliers for the volume of work anticipated will not deliver the expected benefits.
Pricing mechanisms

This section looks at the following types of pricing mechanism:

- Lump sum
- Guaranteed maximum price
- Cost reimbursable contract
- Target cost
- Measurement contract.

Lump sum

A lump-sum contract is the most commonly used pricing mechanism in a construction contract. Under this arrangement the contract is a single lump sum price for all of the works. This is agreed prior to award of contract.

Lump-sum contracts are appropriate for projects where the scope is well defined at tender stage and where post-contract changes are unlikely. This enables the contractor to accurately price the risk they are being asked to accept.

Lump-sum contracts require work prior to tender to develop the design to a sufficient level for pricing. Lump-sum contracts are less appropriate where speed is important, or where the scope of work is less defined.

Lump-sum contracts transfer more financial risk to the contractor (particularly when used in a design and build arrangement) than some other pricing mechanisms. Lump-sum contracts therefore offer the client some certainty about the likely cost of the works, however the following issues can vary the final cost:

- Variations – contracts typically contain provision for the contract administrator to issue instructions to vary the scope of work. This may include changes to the design, quantities, and quality, sequence or working conditions. It should be noted that poor scoping of the works can lead to post-contract changes for which the contractor will be compensated.
- Relevant events – these are issues defined under the contract entitling the contractor to additional time or cost. Issues can be caused by the client (for example failure to supply goods or instructions), or may be a neutral event (such as exceptionally adverse weather).
- Provisional sums – an allowance for a specific element of the works that is not defined in enough detail for tenderers to price at the time of tender. Provisional sums are finalised with the contractor post contract as more information becomes available for pricing. The number of provisional sums included in the contract should be minimised, as this can significantly increase the risk of cost overrun for the client.
- Cost fluctuations – mechanisms can be included in the contract to deal with the inflationary impacts of increases in labour and materials costs.
- Payments to nominated sub-contractors or nominated suppliers.
- Statutory fees.
- Payments relating to opening-up and testing the works.

A truly 'fixed' price contract would not necessarily be in the interests of the client as it would require that the contractor price risks over which they may have no control, and which might not arise.
Guaranteed maximum price

A guaranteed maximum price is a form of agreement where a contractor agrees to carry out works based on an agreement that the contract sum will not exceed a specified maximum.

Guaranteed maximum price is typically used for design and build arrangements, as the contractor takes significant financial risk. However, the contractor is in a better position to manage and control this, as they are in control of both the design and construction processes.

Where the actual cost of work exceeds the guaranteed maximum price, the contractor bears the additional cost.

Events – such as adverse weather or strikes, or items that are not sufficiently detailed at the time of tender - that may have been the subject of provisional sums under other forms of contract (e.g. complex ground conditions, which cannot be properly determined until construction starts) are typically at the risk of the contractor. Where other forms of contract might give rise to claims for loss and expense from these risks, the contractor typically bears these costs under a guaranteed maximum price arrangement.

The additional risks involved with this approach means that the contractor will typically tender a higher price to cover these. This may be acceptable where the priorities of the client are speed and cost certainty, rather than lowest possible price. To improve value for money, a guaranteed maximum price approach can incentivise the contractor to make savings on its initial price. In this approach, the contract will set out the agreed percentage of savings to be shared between the client and contractor where the actual total cost is below the guaranteed maximum price. The contractor is incentivised to make savings, while the client has the security of a cost cap.

A common misconception of a guaranteed maximum price approach is that the sum will not be exceeded. This may be true where the scope of work is well defined and the client does not require changes post contract. However, if the scope of work is poorly defined, or the client requires changes to the contract post contract, the contractor will be entitled to variations which will either increase or reduce the guaranteed maximum price. Therefore, despite the name ‘guaranteed maximum price’ the client should still ensure that the project is properly scoped, and they have an adequate contingency to cover these eventualities.

Post-contract changes can lead to disagreement between the client and contractor as to whether these should result in an adjustment to the guaranteed maximum price – particularly where the contractor looks to use the valuation of changes to recover risk costs they may have incurred elsewhere. It is therefore critical that the contract documents define the client requirements clearly, as well as making it very clear what is expected of the contractor, particularly around risks associated with design development. There will always be areas of choice left to the contractor, particularly around choices of material, so it is important that the required performance requirements are clearly specified in the contract.

Guaranteed maximum price approaches tend to be:

- more appropriate for relatively straightforward projects, for example, a project being built on a greenfield site
- less appropriate for projects with a high degree of uncertainty (e.g. refurbishment of an older property or a complex project with inherent uncertainty in ground conditions).
In deciding whether to adopt a guaranteed maximum price approach, clients should ensure that proper investigations are undertaken and a fair apportionment of risks made. Risks passed to the contractor that do not eventuate will cost the client money, too many risks passed to the contractor could lead to other negative project impacts as the contractor looks to recover costs in other areas. It is important to ensure that the client requirements are clearly defined to avoid potential dispute about the nature of the works.

Cost reimbursable contract

Under a cost reimbursable contract, the contractor is paid actual costs for the work carried out. This places significant financial risk upon the client and as such these approaches tend to be used where the nature or scope of the work to be carried out cannot be adequately defined, either due to time constraints or the fact that the work is highly complex. This approach is typically used where there is a need to carry out emergency or repair work.

The final cost of the project will not be known at the time of award of contract and therefore this approach represents a high degree of financial risk for the client. Information prepared for tender using this approach may include an outline specification, drawings and an estimate of costs.

Contract documents need to clearly set out the costs that the contractor is entitled to be reimbursed. Cost management under this arrangement can be complex as some costs which directly relate to the project will be relatively straightforward to determine while other indirect costs might not.

Direct costs to attribute to a project may include:

- labour
- materials
- hired plant
- sub-contractors.

Indirect costs (that may be shared across a number of projects) may include:

- Head office costs including overheads and profit.
- Staff costs.
- Manufacturing facilities.
- Owned plant.

For simplicity, indirect costs might be calculated on a pro-rata basis and charged, along with profits as a pre-agreed lump sum, or percentage fee.

Cost reimbursable contracts require a significant degree of cost management expertise to ensure that all costs claimed by the contractor are properly due under the contract. Clients without this expertise will need to either employ appropriate resources to fulfil this function or consider buying in specialist cost management expertise. Costs will be typically calculated based on the contractor’s accounts and other records, which should be made available to the client on an ‘open book’ basis. The client may also require that activities on site are monitored to verify that the costs being claimed are legitimate, there is no double counting, and that costs are reasonable.
Cost reimbursable contracts can be subject to misuse particularly where there are insufficient financial controls in place to monitor costs and ensure the contractor is operating efficiently. Poor financial control will result in low value for money, particularly where a contractor is operating inefficiently or incompetently. As the contractor is being paid for all work executed any inefficiencies due to poor productivity are paid for by the client. This can be overcome by incentivising the contractor to operate more efficiently by the introduction of a target cost (see below).

**Target cost**

Target cost arrangements incentivise the contractor to work more efficiently than when working under a cost reimbursable pricing mechanism. The target cost is agreed early in the project, and where actual costs vary then the savings or cost overruns are shared between the client and contractor based on an agreed formula. The main aim is to create a positive financial incentive to the contractor to encourage cost control. Bonus and penalty payments are typically capped to avoid disingenuous or adversarial behaviours.

Contracting on a target cost basis can be an effective way of ensuring good collaboration. Target cost pricing mechanisms tend to be a key feature of alliancing type delivery models.

The target cost can be set for the project as a whole, or for specific elements of the works. Agreeing the target cost requires the client to have specific expertise in accurately estimating the likely cost of the works and negotiating effectively with the contractor. A balance needs to be struck between setting a target cost that is easily achievable, and therefore less of a motivation towards efficiency, against one that is totally unrealistic which will result in significant financial pain for the contractor and possible adversarial behaviour from a contractor seeking to recover losses. Target cost contracts therefore require a significant degree of cost management expertise, to ensure that the target cost is reasonable and all costs claimed by the contractor are properly due under the contract.

**Measurement contract**

Measurement contracts are sometimes called ‘re-measurement’ or ‘measure and value’ contracts. They tend to be used where the scope of work is reasonably well defined, but cannot be quantified accurately until the work is completed. Examples of this include major excavation works, or refurbishment projects that have some uncertainty around the full scope and quantity of work that will be required until the contractor is on site. Measurement contracts should describe the works in sufficient detail to enable the contractor to determine its programme in order to build up rates for carrying out different types of work. Tenderers rates are typically based on drawings and approximate quantities. The final contract sum cannot be determined at the time the contract is entered into, as it will depend on a ‘re-measurement’ of the actual quantities of work carried out and the rates tendered.

Measurement contracts can be used to enable an earlier start on site, before completion of design. They provide flexibility for changes to be made to the works with relative ease. However, there is inevitably some risk for the client, as the full cost of the works is not known until the project has been re-measured. One of the advantages of this arrangement is that the client can obtain a like-for-like comparison of rates from the market to obtain competitive prices. The main disadvantage of this approach is that the client takes the risk for any ‘unknowns’. Measurement contracts tend to be used most commonly for civil engineering projects.
Comparison of mechanisms

Table 1 illustrates (in broad terms) the financial risks associated with each of the pricing mechanisms outlined above.

**Table 1: Degree of financial risk shared between client and contractor for different pricing mechanisms**

<table>
<thead>
<tr>
<th>Pricing mechanism</th>
<th>Client</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaranteed maximum price</td>
<td></td>
<td></td>
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<tr>
<td>Lump sum fixed price¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lump sum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target costs</td>
<td></td>
<td></td>
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<tr>
<td>Measurement contract</td>
<td></td>
<td></td>
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<tr>
<td>Cost reimbursable contract</td>
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<td></td>
</tr>
</tbody>
</table>

Table 2 illustrates (in broad terms) the most commonly found uses of each against the range of delivery models described earlier in this section.

**Table 2: Typical combinations of delivery models and pricing mechanisms**

<table>
<thead>
<tr>
<th></th>
<th>Guaranteed maximum price</th>
<th>Lump sum fixed price</th>
<th>Lump sum</th>
<th>Target costs</th>
<th>Measurement contract</th>
<th>Cost reimbursable contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Design and build</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Package based²</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Direct managed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Alliancing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

¹ Fixed price where there are no provisions in the contract for the contractor to be reimbursed for inflationary impacts
² Although package based and direct managed approaches do not provide cost certainty at the outset, lump sums can be agreed on a package by package basis as the project proceeds
Standard contracts

New Zealand standards

The NZ Standard Nzs 3910:2003 has been a commonly used standard form of contract for construction procurement in New Zealand. This standard contract has been revised and replaced with a suite of three standards as follows:

- Nzs 3910:2013 – Conditions of contract for building and civil engineering – Construction
- Nzs 3916:2013 – Conditions of contract for building and civil engineering – Design and Construct
- Nzs 3917:2013 – Conditions of contract for building and civil engineering – Fixed Term

The new NZ Standard Nzs 3910:2013 suite contains a number of changes, including:

- additional provisions on cost reimbursement contracts
- more specific provisions on programmes, safety plans, quality plans, and traffic management plans
- provision for advance notification of matters likely to affect cost or time
- updated insurance provisions
- clearer provisions for valuing variations
- more workable provisions relating to payment claims and payment schedules
- the addition of new schedules, covering warranties, off-site materials, and practical and final completion certificates
- 'Smart documents' for schedules to allow unique contract items to be added while retaining the elements of the main clauses.

New Zealand Institute of Architects

NZIA has developed standard conditions of contract for construction projects, for use between client and contractor, where the architect is engaged to administer the contract. There are two main versions:

- NZIA SCC 2014 – designed to be used for projects of any size and complexity
- NZIA SCC SF 2014 – a short form version designed for use for smaller or less complex projects.

NZIA also provides two forms for use when the architect is not contractually involved in the administration or control of the contract:

- National Building Contract General NBC General 2015 (for use on larger projects).

New Engineering Contracts (known as NEC3)

The NEC3 forms of contracts have been developed based on principles of partnering and look to a more collaborative approach between the client and contractor in sharing risks and rewards. These forms of contract require a high degree of involvement and commitment from both the client and contractor as they involve a proactive approach to managing project risks. Within the standard forms there are a range of options for pricing mechanisms.

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3 www.neccontract.com
International Federation of Consulting Engineers (FIDIC)⁴

A set of contracts that can be used for a range of delivery models which are internationally recognised within the construction industry.

⁴www.fidic.org/organisations/association-consulting-engineers-new-zealand
# Standard Forms Contract Quick Reference

<table>
<thead>
<tr>
<th>Title</th>
<th>Use for…</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Zealand standards. Publisher: Standards New Zealand</strong></td>
<td>These contracts are the most commonly recognised forms used for building projects in New Zealand.</td>
</tr>
<tr>
<td>• NZS 3910:2013 - Conditions of Contract for building and civil</td>
<td>Contractor builds a project based on the design provided by the client.</td>
</tr>
<tr>
<td>engineering construction</td>
<td></td>
</tr>
<tr>
<td>• NZS 3916:2013 - Conditions of Contract for building and civil</td>
<td>Contractor is responsible for both the design and construction.</td>
</tr>
<tr>
<td>engineering construction – Design and construct</td>
<td></td>
</tr>
<tr>
<td>• NZS 3917:2013 - Conditions of Contract for building and civil</td>
<td>Contractor performs works and services over a fixed period of time, for example, repair, maintenance or renewal.</td>
</tr>
<tr>
<td>engineering - Fixed term</td>
<td></td>
</tr>
<tr>
<td>• NZS 3915:2005 - Conditions of Contract for building and civil</td>
<td>Contractor builds a project based on the design provided by the client but the client administers the contract directly.</td>
</tr>
<tr>
<td>engineering construction (where no person is appointed to act as</td>
<td></td>
</tr>
<tr>
<td>engineer to the contract)</td>
<td></td>
</tr>
<tr>
<td>• NZS 3902:2004 - Conditions of Contract for housing, alterations</td>
<td>Used for domestic and small commercial works.</td>
</tr>
<tr>
<td>and small buildings contract</td>
<td></td>
</tr>
<tr>
<td><strong>New Zealand Institute of Architects</strong></td>
<td></td>
</tr>
<tr>
<td>• NZIA SCC:2014 - Standard Conditions of Contract</td>
<td>For projects of any size and complexity. Can be contractor build only or design and build. Contract administered by registered architect.</td>
</tr>
<tr>
<td>• NZIA SCC:SF2014 - Standard Conditions of Contract Short Form</td>
<td>For projects of small size and / or short duration.</td>
</tr>
<tr>
<td>• NZIA National Building Contract General NBC General 2015</td>
<td>A contract between the client and contractor when an architect is not involved in contract administration or observation. For use on larger projects.</td>
</tr>
<tr>
<td>• NZIA National Building Contract Small Works NBC SW 2015</td>
<td>A contract between the client and contractor when an architect is not involved in contract administration or observation. For use on small works projects.</td>
</tr>
<tr>
<td><strong>National Infrastructure Unit (Treasury)</strong></td>
<td>The Treasury’s Standard Form Project Agreement contains the core commercial principles and structure of the New Zealand PPP model. -</td>
</tr>
<tr>
<td>• Standard Form Public Private Partnership (PPP) Project Agreement</td>
<td>The Standard Form PPP Project Agreement provides a credible and market-tested precedent for future PPP projects. It reflects valuable lessons learned and -</td>
</tr>
<tr>
<td></td>
<td>tested contractual positions from previous PPP projects. -</td>
</tr>
<tr>
<td></td>
<td>Used for projects utilising PPP arrangements.</td>
</tr>
</tbody>
</table>
**United Kingdom. Publisher: Thomas Telford**

These contracts are based on principles of partnering and require a high degree of involvement and collaboration between the client and contractor to proactively manage the contract.

- **NEC3 - Engineering & Construction Contract: April 2013**
  - For high complexity/risk construction projects with or without contractor design

- **NEC3 - Engineering & Construction Short Contract: April 2013**
  - For lower complexity/risk construction projects with or without contractor design

- **NEC3 - Term Service Contract: April 2013**
  - This contract cover works and services performed over a fixed period of time, for example, repair, maintenance or renewal.

**International. Publisher: International Federation of Consulting Engineers (FIDIC)**

These are a suite of contracts for a range of different types of delivery model that are internationally recognised

  - Contract used where contractor builds a project based on the design provided by the client.

- **Short Form of Contract: The Short Form, 1999 (the Green Book)**
  - Contract used for small projects or projects of short duration involving construction, electrical, mechanical, or other engineering work.

- **Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant for Building and Engineering Works Designed by the Contractor: The Plant and Design-Build Contract, 1999 (the Yellow Book)**
  - Design and build contract used for construction of mechanical and/or electrical works, building and civil engineering works, or any combination of these elements.

- **Conditions of Contract for EPC/Turnkey Projects: The EPC/Turnkey Contract, 1999 (the Silver Book)**
  - Contractor provides a completed facility to the employer that is ready to be operated at ‘the turn of a key’. Used typically where performance of an asset is critical to the owner, eg the satisfactory achievement of a number of tests upon completion is usually required to satisfy completion rather than just physical completion. Typical uses of this contract are for process or power plants, factories and/or major infrastructure projects.
  - Overall responsibility for the design and construction of the project is with the contractor.

- **Conditions of Contract for Design, Build and Operate Projects, 2008 (The Gold Book)**
  - Combines design, construction and long-term operation and maintenance of a facility within a single entity.
6. Tools

- Client capability assessment tool
- Market capability assessment tool
- Procurement delivery model evaluation tool
7. Further references

<table>
<thead>
<tr>
<th>Creator</th>
<th>Released</th>
<th>Guidance Document</th>
<th>Link</th>
</tr>
</thead>
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