

Traditional Delivery Model

Construction Procurement Guidelines

October 2019

Overview

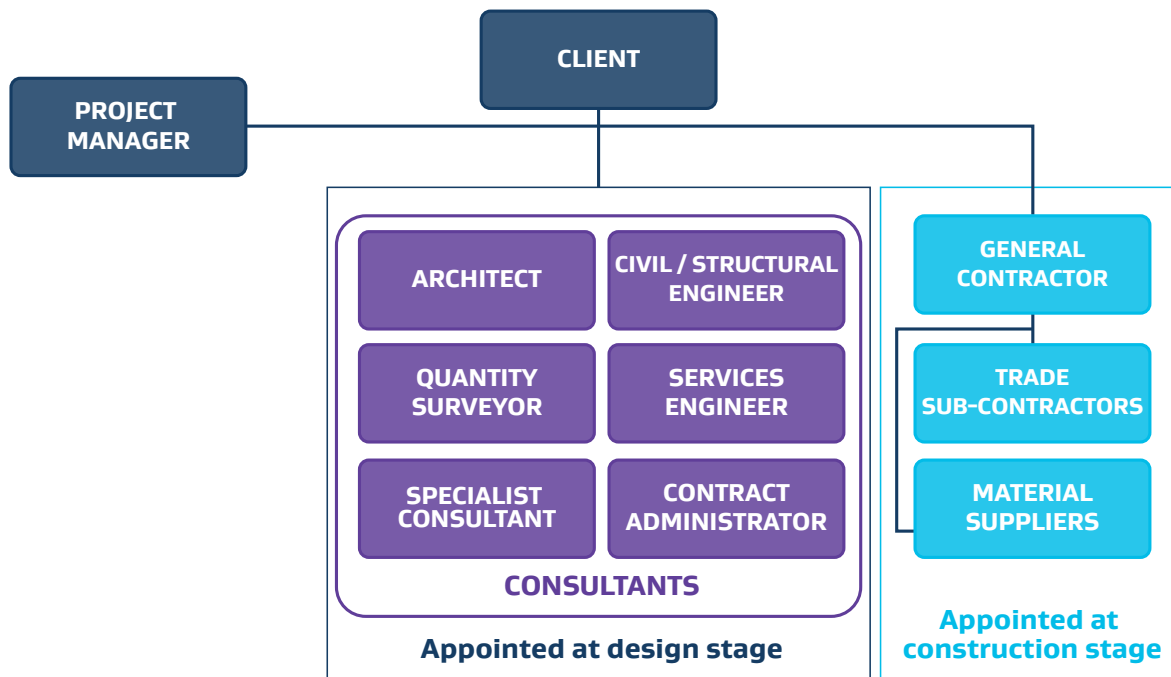
Traditional, or conventional client-led design, requires that the design is fully developed before the construction contract is awarded.

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 do the construction work, based on the tender documents. Consultants review the contractor's bids and recommend the most favourable option for the client.

The traditional method can be varied by overlapping design and construction processes, 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 schedule of quantities approach which can reduce the amount of design required prior to tender. The trade-off with these approaches is that there is an increased risk around knowing the total cost prior to committing to build.

Traditional delivery model contractual relationships

This diagram shows 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.



Basis of pricing information

It's important to consider the information upon which tender pricing is to be based and the market conditions at the time of tender, as these can have a significant influence on achieving public value.

Drawings and specifications pricing approach

Construction tender documentation will contain a significant amount of information including drawings, schedules and specifications. It is not uncommon for these documents to run into hundreds of pages for a major project.

When a project is tendered based on a requirement for the contractor to submit its price based on a set of drawings and specifications, the contractor has to carry out a detailed review of the information to interpret the scope and quantity of work required, so that they can build up their tender price. The contractor will also be required to further break this information down into packages so that it can be used to obtain prices from sub-trade contractors which it can include as part of its tender price.

Contractors pricing tenders on the basis of drawings and specifications will include in their tender a risk allowance to cover possible errors or omissions in pricing. The extent of risk pricing will largely depend on how confident the contractor is ie whether it feels it has had sufficient time and resources to properly review the information and obtain robust price information from the market.

When the construction market is buoyant and resources scarce, there is a higher degree of risk for the contractor in ensuring the tender is priced properly. Clients in these situations may struggle to get the best possible responses from the market.

Schedule of quantities pricing approach

A schedule of quantities as a basis of pricing makes it easier for the contractor to respond to a tender opportunity. They can focus more on construction planning aspects, rather than worrying about whether they've accurately quantified the scope required.

A schedule of quantities describes the individual items of work and quantities that make up a complete building, set out in sections either by trade, element or physical location. The contractor inserts its rates for the various items of work described based on the stated quantities and these are multiplied and added up to arrive at the total tender price.

A professional quantity surveyor appointed by the client prepares the schedule of quantities, using the design team's completed drawings and specifications. This process is a useful check on the completeness of the design information prior to tender, as any inconsistencies and errors in the information will be identified by the professional quantity surveyor and clarification sought from the design team to enable the schedule to be finalised before going to market.

Some clients are put off by schedules of quantities as it adds cost and time to the tendering process. The fee required (typically in the tens of thousands of dollars) and time needed for preparing the schedule (typically several weeks) are considered marginal when compared to the overall cost and duration of a project.

A schedule of quantities pricing approach can be beneficial especially when there is a buoyant market, as it:

- can attract good tender responses from contractors and trade sub-contractors
- acts as a check for completeness of design information prior to going to market
- reduces the tender burden for contractors, raising overall industry productivity
- helps the sub-trade contractors, as many of them don't have qualified quantity surveyors
- makes tender comparisons easier for the client as pricing information is consistent across tenderers
- is cost-efficient, as it is one cost to the client instead of multiple costs to the contractors
- provides a useful cost database for future estimating on projects

- provides an absolute basis for calculation of consultants' fees
- is a useful tool during construction for progress claims and variations

Risks and schedules of quantities

A key question with schedules of quantities is: who owns the risk of any errors in its preparation? It is reasonable for the client to hold some of this risk, given they prepared the schedule. However, it would be administratively difficult if every departure from the schedule on site were treated as a variation by the contractor. The client also can't be responsible for things that the contractor is in control of, such as how they build up their rates for different types of work. This should be a contractor-owned risk.

The following table is suggested as a fair and reasonable approach for allocation of risk between the client and contractor when using a schedule of quantities approach to tender pricing information. The proposed risk allocation should be clearly stated in the tender and contract documents.

Risks	Contractor risk	Client risk
Error in stated quantities	Shared risk based on following:	
	+/- 10% owned by contractor	If more than +/- 10%, adjust quantities and treat as variation
Error in contractor rates	Contractor-owned risk	
Errors or omissions in descriptions of work	Minor errors or omissions as defined by contract, owned by contractor	Major errors or omissions as defined by contract, treat as a variation

While there's some risk with the schedule of quantities, the benefits outlined above, especially in a buoyant market, are a good risk management approach and good practice for achieving public value when adopting a traditional delivery model.

At a glance - Traditional Delivery Model

Guidelines for use

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

- timeframes are enough to 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's likely to be a large pool of tenderers and strong competition
- the client wants to retain overall control of the design throughout the project
- there's 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 contract.

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 (especially if a schedule of quantities is used), lowers the cost of tendering and level of risk retention by the client, and usually encourages a competitive tender field.
- Bids are generally less complex and cheaper to assess than under many other delivery models.
- There's a high degree of cost certainty at the time of contract award, provided the design is substantially complete and properly reflects the project brief.
- 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 completeness and accuracy of the client's design documentation. Errors or omissions in the design will lead to variations and extra cost to the client.
- A long lead time is required to get to the tender stage, as design needs to be at a level sufficient to complete tender documentation.
- There's 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's responsible for defects, eg whether they result from design error or poor workmanship.
- The client is responsible for providing accurate information (eg drawings and specifications) to the contractor in a timely manner. Any delays may result in extra costs 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, eg methods of construction, minimising waste, and reducing health and safety risks.