

Design and Build Contracts



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Introduction

With the construction sector growth taking place in country, the quality and the quantity of construction projects are having higher demands in the property sector. It has integrated the different kind of procurement systems to source main contractors, sub-contractors and even long lead suppliers. Therefore, the most useful protection that can be offered to a client for his value for money is a reasonable policy for selecting a procurement strategy for their development.

The procurement strategy is usually focused on the need for the project as a basic element or as an investment. When considering the above there are procurement criteria in relation to project type or importance to each particular client. Mainly, the above criteria includes, building functions and performance, time, cost, quality, accountability, sustainability, flexibility, risk, value for money, etc.

The procurement strategy applied for the purpose of project procurement in conjunction with the client, designing and overall strategy must suit all of the needs and as many of the wants as possible and also identify the project characteristic.

Furthermore, the choice of procurement strategy must suit the project characteristics and how it is to be administrated. The following three procedures would apply to procurement in many projects:

- Selecting the strategy
- Implementing the strategy
- Planning the administration of the contracts, necessary to implement the strategy.

Finally, the overall objective is to produce a successful project, and thus a satisfied client.

When considering the above procurement criteria and project characteristics for construction projects, it will lead to the selection of the most appropriate procurement path suited to the construction industry. There are a number of procurement approaches utilized in the construction sector. The following procurement approaches can be mainly taken into account:

The traditional procurement path

The traditional procurement path is the most commonly used method in the construction industry. In this method the design team, with an architect as the lead consultant, fully design the project and cost control consultant prepare the tender documents. In most of the project by using this approach, select the contractor. The selection of the contractor would be through the competitive tender and carries it out for an agreed lump sum fixed priced contract.

In the traditional procurement system, the person appointed has taken responsibility for two separate tasks: translating the employer's requirements into drawings, specifications and the like through the process of briefing and design along with administering the building contract.

This type of contract gives the contract administrator the power to change (as a variation) the work as required of the project. According to the RICS annual survey of construction contracts, the traditional path has been ranked as the most commonly used path in the world of construction sector.

The main advantages of the traditional approach are given below:

- Completion of design before tender to provide good time and cost control
- Participation of designer for the entire duration

of the construction process, which provides good quality control

- The approach is well set up and familiar to all – everyone recognizes how it works
- Extensive provision for client changes and well described procedures for the evaluation of variations

However, the traditional approach has the following disadvantages:

- Can be long-winded. The procedure is extremely sequential.
- During the design stages, there is less opportunity for the contractor to provide skills and suggestions regarding constructability and his expert skill in consecution. .

The Figure 1, below illustrates the organizational arrangement of the Traditional method of procurement.

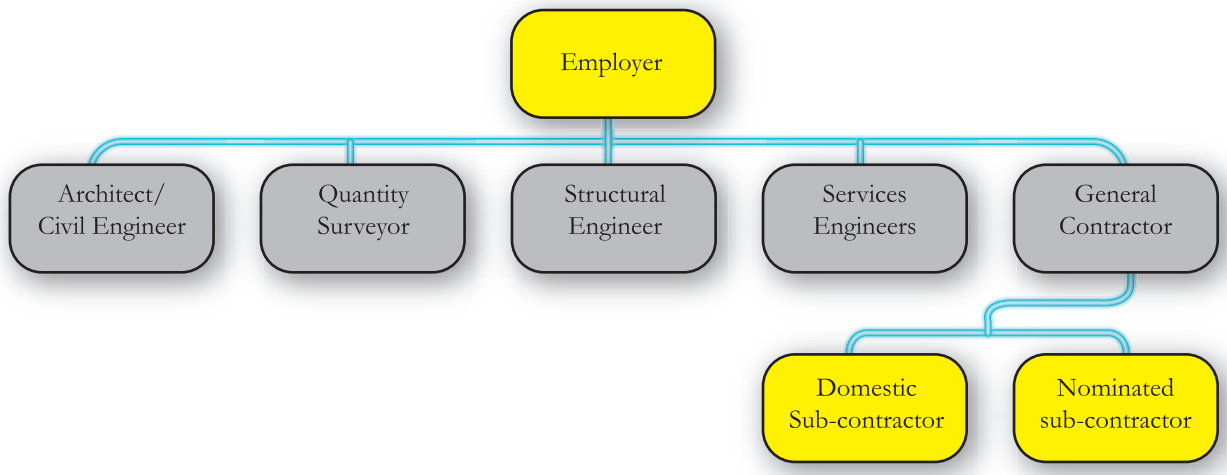


Figure 1: Traditional Procurement Route

Design and Build

Features of design and build contracts

In this method, the employer directly identifies his requirements to one organization. With this type of contract, the organization is responsible for both the design and construction of the development.

Design and build contracts can choose a fixed price or a target price with a sharing mechanism for better cost

efficiency. The above options have a certainty of cost and are also supported by the project team to create savings to the advantage of the client

Where design and build contracts would be suitable

The features of projects where design and build contracts would be appropriate can be considered under the following headings;

- The relative significance of the client’s main concern (time, cost, function, quality, value for money, etc.).
- When expertise knowledge of construction is required for the project.
- The single point responsibility and ease of communication.
- The requirement for an early start on site.

Approaches to design and build contracts

Design and build is a reasonable and obvious system for procuring a wide range of buildings. As a procurement route it is a practical and valuable option to general contracting or construction management. While there is no real limit on the type or scale of project for which it can be used, it is not recommended for use in high-risk projects.

Generally, the following advantages of this type of contract can be taken into Account:

- Speed of construction
- Single point of responsibility i.e. the contractor is exclusively liable for failure and/or the success of the construction
- Specialisation and know-how of the contractor can be utilized for the project development.
- The client is aware of his total financial requirement from the commencement of the project
- Close inter-communication between the contractor's design team and construction teams

Similarly, this method also has some disadvantages:

- The client has no idea whether he is achieving the best value for money unless he employs his own independent advisers, which adds to his costs.
- The quality control assurance procedures are mostly in the contractor's hands

The Figure 2, below illustrates the organizational arrangement of this method of procurement.

Management contract

The management path normally contains a fee for the provision of management Expertise. In this method, normally there are two options are available, Management Contracting and Construction Management.

The important fact here is that the contractor is the main point of contract. In this method, the contractor is involved with the work package contractors. So, although the contractor gives an active contribution during the construction process and he is responsible for managing construction operations, the managing contractor would normally be expected to provide and maintain the entire site facilities (offices, storage, water, electricity, power, plant, equipment and attendance etc.)

The main advantages of management contracts are given below:

- When the work package has been designed, the work can start on site
- The contractor's practical knowledge and management skills are available to help the design team

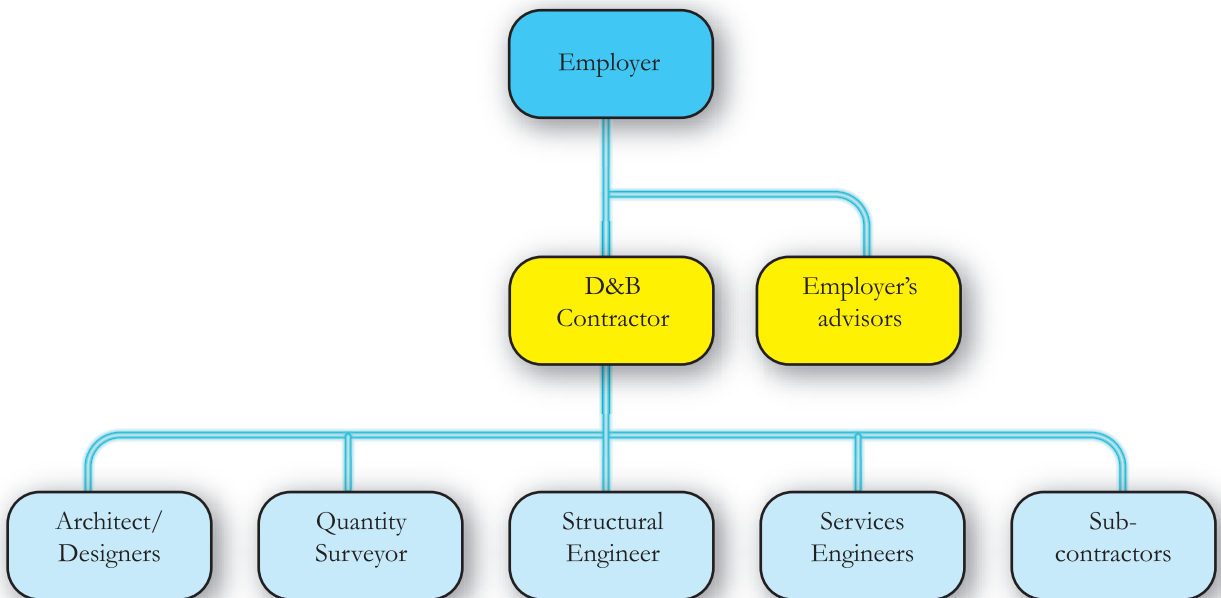


Figure 2: Design & Build Procurement Route

- Overlapping of design and construction can considerably decrease the time requirements, ensuring an earlier return on the client’s investment
- The contractor is part of the client’s team, and therefore able to recognize the client’s requirements

However, the management contracting method also has the following disadvantages:

- Uncertainty regarding the final cost, until the final works package has been completed.
- There may be a cost increase due to design changes during the construction process and because works packages have been closed due to minimal design information.
- Due to the number of works contractors, coordination problems could have arisen, reducing the overall construction progress.

The Figure 3, below illustrates the organizational arrangement of the Management Contracting method of procurement.

Construction Management

Construction Management is similar to the management contracting process. The contractor will be responsible for the planning, management and co-ordination of the works on site and for arranging for it to be carried out in an efficient manner. With this form of management, the construction manager has no contractual liability as the individual trade and specialist contractors are in direct contracts with the employer and can be considered to be working in the best interests of the employer.

The construction manager is then responsible for the overall control of the design team including the cost manager and various trade contracts, during both the design and the construction processes of the project.

The following advantages of these contracts can be taken into consideration;

- Design processes are continuous, in line with construction works
- The construction process is more closely incorporated into the management of the project

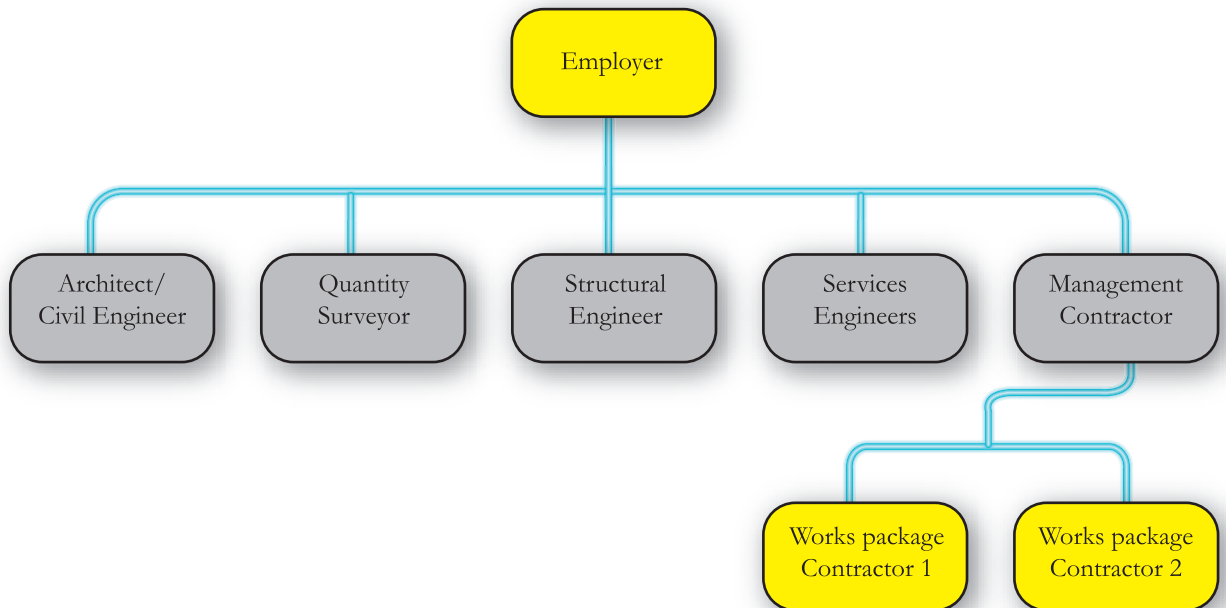


Figure 3: Management Contracting Procurement Route

- Close relationship between the construction management contractor and the designers

However, this method also has some disadvantages:

- The client's financial commitment is uncertain until the final package has been executed
- The client has one consultant and a number of contractors with whom to deal instead of only one main contractor
- Due to the number of works contractors, it could create coordination problems and reduce overall construction progress

This path attempts to merge characteristics of the 'design and build' and 'management' paths. The contractual and management relationships as shown on Figure 4:

Collaborative approach – Partnering

The concept of collaborative procurement refers to where the employer and contractor work jointly to achieve mutually agreed-upon and complementary aims.

'Partnering is a management approach used by two or more organizations to achieve specific business objectives by maximising the effectiveness of each participant's resources. The approach is based on mutual objectives, an agreed method of problem resolution and an active search for continuous measurable improvements. Partnering can be based on a single project (project partnering) but greater benefits are available when it is based on a long-term commitment (strategic partnering or alliancing).'

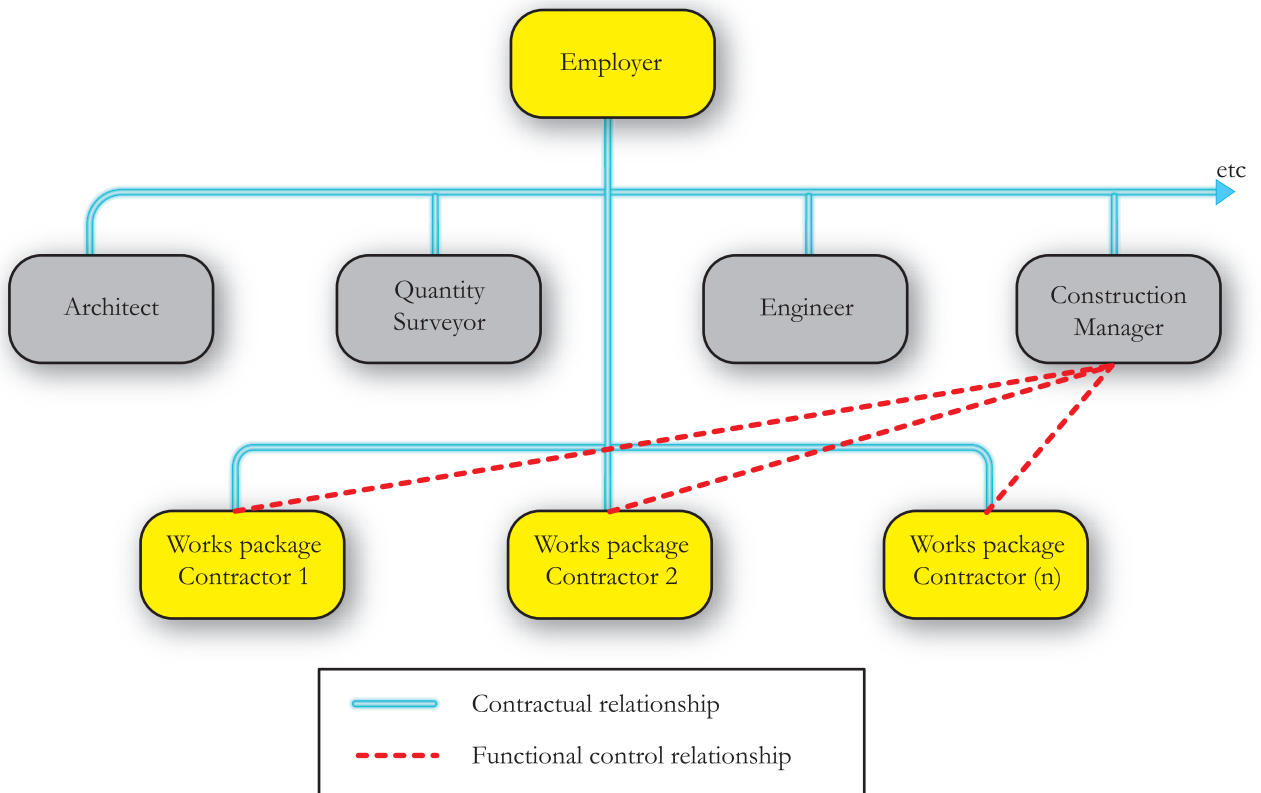


Figure 4: Construction Management Procurement Route

Partnering should not be classed a procurement method for two reasons. Firstly, it is not strictly a procurement system at all. It is a philosophy which can be used in conjunction with most procurement systems. Secondly, the principle of 'you scratch my back and I'll scratch yours' is not new. Two partners helping each other for mutual benefit, instead of each one trying to gain the most at the other's expense, has to be the way forward for any civilised business environment. It should be regarded as the way forward for success in the construction industry.

The potential benefits of successful partnering to the client are given below:

- Better value for money
- At least the same level of quality
- Less confrontation and therefore speedier delivery
- Less risk, greater certainty of satisfaction
- Fewer claims
- Less bureaucracy
- Better communication, understanding and tolerance of problems
- Faster construction
- Continuous improvement

The benefits to the contractor are as follows:

- Increased profit potential
- Less confrontation
- Greater certainty of workload
- Better communications and understanding from clients
- Less bureaucracy
- More involvement in key decision-making
- Greater potential for profit
- No competitive tendering process, therefore reduced overheads
- Reliable flow of design information

In the construction industry the prime objective of a 'partnering' approach is to achieve completion of a project in which both parties are satisfied with the result – the so called 'win-win' scenario.

Discussion

The Government and private developers are the major Employers in the Industry. As the construction industry has continued its level of investment, the strain being positions on construction through conventional processes of procurement..However, when the procurement route is adopted by the contracting parties, it is necessary to bear in mind both the advantages and disadvantages of each approach so that informed decisions can be made prior to project commencement.

Formerly, most projects suffered from inadequate or inappropriate procurement decisions. The industry lacks a sensible and systematic strategy for selecting suitable procurement routes. However, the most helpful protection that can be offered to a client is a reasonable policy for selecting a procurement approach for each project.

However, it seems that the design and build procurement route has the possibility to achieve a win- win status in any project. The success factor is adequately strong, especially when the contractor and the employer are very clear in terms of function and liability of each other while making certain that the appointed consultant is appropriate for this design and build type of projects.

It is a recognized fact that developers look for minimum costs, tight schedules and zero impact on the post-bid budget. Some consider that the final option is choosing the design and build procurement method, not knowing that design and build does not always achieve the required integrated solution.