

# The factors influencing procurement route construction essay



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Recent developments in the field of construction have led to a renewed interest in procurement which helps us to induce the technical complexities by organizing and delivering the construction projects using various specialised methods towards the priorities of the client. In addition, it creates perfect relationship between many organizations working on the project regarding their responsibilities and risks. This paper attempts to report the Principal of Heriot Watt University (HWU) about the advanced procurement strategic approach for the new auditorium which is planned to build at the HWU with supremacy. However, it comprises of 200 comfortable tiered seating providing excellent visibility, high specification technology, multimedia theatre with air conditioning, a full size interactive screen and computer driven presentation facilities.

## **2. 1 Assumptions**

It is required from the initial stage of the project which clearly paves the way for the satisfactory completion of the project. The following assumptions are considered in this report.

### **Capital Cost**

Cash flow is energetic in the organisations which determine the size of the project which is considered primarily. Likewise, updated cost information was shared by the quantity surveyor to the client who correlates them to the contractor. Recent evidence suggests that during urgency the implication of cost is partially neglected whereas the initial cost and lifecycle cost is always preferred.

## **Time**

The two main factors governing the time of the project are Design of the project and Methods adapted in the construction site by the contractor. Data from several sources identified that above features are considered accordingly to the client's priority.

## **Quality**

Quality depends upon the materials used during construction permitting the design specifications. Lifecycle costing is reflected in the quality of the construction work used to reduce the maintenance and replacement cost leading to the better economics overall in the future. The principle of procurement is the eternal triangle which favours the client towards high quality, lowest cost and short time period. All the three factors are mutually concerned in a project if one is given high preference then the other two will suffer.

## **Performance**

It mainly relies upon the designer who prepares the plan and structural designs for the project, essential for aesthetic appeal and eco-friendly. The choice of materials and the constructors plays the key role in performance and also for the future maintenance and refurbishments.

## **Risk Factors**

The common risks faced during the construction projects are ground conditions, artificial obstructions and defectiveness in workmanship, material tests and samples, weather. In addition, delay and disputes from both the

parties, unapproved payments and the discrepancies from the Government policies and Law & arbitration.

Planning – Early acquisition planning is done to select the procurement route.

Environment – Sustainable environment is attained through planning

Flexibility – Changes can be done in the on-going project or in future

### **3. 1 Procurement Strategy**

In general procurement is defined as “ the obtaining of goods and services”[1] which in construction field refers to the construction materials, plant and services in order to design, schedule, manage, organize, execute and commission the project until delivering to the client. A variety of method have been developed and introduced to assess building through procurement which is obtained by group of multiple organizations experience and expertise. The procurement strategy describes the contribution that the effective procurement will make to the fulfilment of the organizations vision and strategic objectives [a].

Secondly, procurement strategy identifies the main objectives, constraints, funding, and risk and asset ownership of the project which later enhances to achieve the target of the client. Besides, it promotes high standards of professionalism and high quality of management information. Furthermore, reduction in cost is attained through aggregated purchasing power and minimizes the exposure through effective risk management.

### **3. 2 Necessity for Procurement**

#### **To achieve the value for money**

To coordinate smoothly with the organizations and to supply focus on chain management

To obtain sustainability by making value for money decisions over the life of the asset and not solely on capital costs [b].

To

### **3. 3 Procurement Routes**

The procurement routes are accomplished with great involvement and knowledge of the individuals and organizations who worked in the industries for years in distinct disciplines. Procurement route is defined as the “ systems and procedures for commissioning the work”. This route is concerned mainly for the strategic approach of the project which simplifies the construction execution by coordinating with the specialist teams of the project.

### **3. 4 Factors influencing Procurement Route**

Central to the entire discipline of the procurement is the concept of assessment about the ability of the economic operators of the project to satisfy the requisite of the client. The key aspects of this route are employer’s requirements, tender period/contractor’s proposals, selecting the specialised contractor and construction. Into the bargain, the following factors are also taken care in this method such as cost certainty, cost reduction, contract period, quality and standards, constructability and

litigation. As well as this route is concerned it depends upon the cost and time of the project at the expense of quality which is well suited for perfect carriage of the project. Next, the factors which encourages this route are listed below [3]

User familiarity with design and build procurement arrangements

Preference of a client or consultant

The desire for the single point responsibility for the client

Greater certainty of outcomes, initially and in the longer term

Despite the fact, follows the present guaranteed maximum price (GMP) which is prepared at the time of agreement and if the contractor finishes the work below GMP then remaining amount will be shared between the client and contractor in most case.

## **Situations Where Design & Build Arrangement Used Widely**

In the case of simple and standard forms of construction are required.

Example: Warehouses

Where the building needs only minimum architectural works.

Example: Farm buildings

Where proprietary system is used in buildings as it reduces the design and approval time.

Example: Buildings with Automations (such as automatic doors)

Where the projects requires local contractor specialists.

Example: Specialised in Flooring and Masonry

To execute Fast-track projects

Example: Hospitals

In projects where cost certainty is most preferred.

Example: Housing Units

### **3. 5 Types of Procurement Route**

There is a large volume of published studies describing the role of procurement route obligatory for producing the required project outcomes and have a profound effect towards finishing point. In general there are many procurement routes available which are listed as follows:

Traditional / Conventional

Design and Build / Package deal arrangement

Construction Management

Management Contracting

Two stage tender

Turnkey

Public Private Partnership

## Framework Agreement

### PFI/PPP

Even though there are many routes available, traditional, design & build, construction management and management contracting are the major methods used generally. On the other hand, according to my opinion for this auditorium project we can adopt Design and Build route or Traditional route.

### **3. 5. 1 Traditional Procurement Route**

This is the standard method which is in practice for the past 150 years in the construction industry. In this route the client appoints the contractor, architect and consultants to guide the project from the initial stage to pursue perfection in planning and design. Furthermore, the client owns the whole responsibility of the design and project team. Here the contractor involved in the tendering documentation and negotiation processes of the proposed project. The valuation and payment in the administrative department is authorised by client's consultants. To put in a nut shell this method benefits the client in cost and quality with some expense of time. Nevertheless, can be used in a number of situations on the basis of pricing results in a lump sum contract, a measurement contract or a cost plus contract and whether the project is a single one project or a part of a program under single specific term[c].

Secondly, for instance with reference to the proposed auditorium project the three organisers consultants, architect and contractor are employed initially and the project thoroughly managed by the client from the preliminary works.

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### **3. 5. 2 Construction Management Route**

### **3. 5. 3 Design and Build Procurement Route**

The Design & Build method is one of the more practical ways of client friendly approach used worldwide to take particularly when the buildings to be produced are either very specialised, and the contractor is an expert in that speciality or when they are generic[d]. Initially, the concept aimed to reduce the conflicts that exist between the architect and the contractor which resulting in poor reputation for the construction project and gave great assurance the timely completion of work at lower cost. However, the client needs to consider the trio of design, cost and quality of the project in advance before employing the contractor. Besides, the desires of the employer (client) is clearly proposed to the contractor to make him/her fully involved in the project including both design and accomplishment which encourages least involvement of the client. The nature of this procurement route is minimizing the design deviations from the original design which aids in cost and time saving for the employer.

Moreover, one major issue in early procurement research is concerned is the quality which is rapidly growing because this method is popularly expanding towards profitability. To gain more projects and profits the design & build contractual firms are focusing deeply on the quality in addition to time and cost which is a positive result in favour of this method. The client gets the total financial commitment in advance before the work is initiated and then the contractor shields the complexity of the client in the construction. At first this method is characterised by the tender documents which is developed according to the client's requirements which is published to welcome the

different proposals from the potential contractors with numerous quotes of project rates. The potential contractor who wins the tender, meeting the client's priorities will be employed by the client to develop design and complete the design proposals. Here, the contractor performs solely under the client towards the start of the project by having his own design team and construction team. On the contrary, the contractor is wholly responsible for the design, construction planning, organization and control of the project and also he has the upper hand to engage subcontractors and the specialist subcontractors for the project. In some case, the client may/may not seek consultant to guide and supervise the contractor's work in the project. .

### **Implementation of the Design & Build Procurement route**

As far as the auditorium in the HWU is alarmed the major thing to be considered was the time and cost of the project. If the proposal is given by the contractor it should be performed within the certain time limit such as the project must be finished in between the summer holidays because the students shouldn't grieve from the construction activities. Moreover, the proposed project should not exceed the financial budget of the university. Therefore, design & build procurement method is highly recommended for this project which augments the successful completion of the project. However, if the university requires a consultant they can seek help from the Built Environment faculties to oversee the project which saves the consultant cost for the university.

## **Benefits of this route**

There are several benefits why this route is adopted for this project which are responsible for successful completion of the project on time and for perfect delivery.

It follows the two phase selection process that narrows the field of the final proposers to those that are most highly qualified based on experience, capability and capacity[e].

The intricacy in the technical aspects is fully eliminated because the contractor (single authority) is answerable for all the issues faced in the design and building of the project.

The work moves forward speedily as there is no need for tendering again for the buildings.

Because this method the contractor can reassure the client regarding the financial help needed for the project, how to receive the funding from the lenders as he is aware and well experienced in the field

There is no need that a client should be an experienced individual in the construction field as contractor hold the whole obligation.

As the contractor is involved from the very beginning he can produce specialised construction knowledge and methods.

There is a direct link between the client and the contract as there is an agreement signed before the start of the project.

The time consumption is less in this route, as the traditional methods are eliminated in this process.

As cost certainty is major concern for this route which benefits the client both economically and technically.

There is a possibility of dropping pre tendering and initial tendering costs.

The functional building at the reasonable cost can be achieved.

As the contractor is in charge for all sub-contractor appointments the client can escape and escape from those burden.

Also there are no claims for the contractor if he/she fails to meet the client's needs and has a delayed in time for completion.

Following this method maximum risk is transferred, although commercial response in design in order to address contract conditions can result[d].

Many argue that this route agonises from lack of architectural merits, but the fact is it clearly benefits the client by disregarding the risks which arises from those designs.

### **Criticism Faced in this Route**

Although this method has a huge number of benefits it also suffers from some common drawback such as,

Since this route is using simplified construction formats and activities there might be reduction in design quality.

Neglecting the innovative design is highly followed in this method which results in the discouragement of architect's innovations.

The contractor's view is always on the capabilities of the firm instead of the requirements of the client.

The aesthetic appearance of the project is surrendered towards the cost effective solutions and easy work executions.

The long term life and maintenance of the building is not considered by the contractor because low cost budget.

The influence of contractor over the quantity surveyor leads to some controversial happenings/activities at the time of payment approval.

## **Bibliography**

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