

Alternatives To Traditional Procurement

Project Control & Contract Administration

ACBA 5006

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Introduction

Two case studies of the most significant errors in judgement in the construction industry will be discussed in this study. The "Senedd" Building and the "Holyrood" Parliament are the two projects in question. The procedures used for the procurement and tendering contractual agreements for both projects will be discussed in this study as these case studies were subject to public scrutiny for time and cost. Each case study will be concluded up with a recommendation in the report as to whether a different route and technique of procurement could have been more beneficial for the projects.

The 'Senedd' – Welsh Parliament Building

Sir Richard Rogers, the winner of an international design competition, created the structure that houses the Welsh parliament, also known as the "Senedd" (*Senedd Cymru / Welsh Parliament, 2021*). The

construction of the Senedd building began in 2001, when an invitation to tender was issued via the management procurement method. This procurement strategy proved that this route was leading the project to failure. The initial chosen procurement route of management, although it can be sometimes a cheaper route with a benefit of time saving, the fundamentals still need to be present and well organised which this project did not have. During a management contract, main appeals to a client are that



Figure 1- This image shows the exterior of the Senedd Building located in Cardiff Bay. <https://senedd.wales/visit/our-estate/the-senedd-a-landmark-building/>

costs can be reduced by about ten percent and the time aspect can be saved as work packages can be tendered earlier in respect of piling packages and so on. Although the client should have been advised and recognised that, for this project having a contractor on board who has much deeper developed knowledge and vast more experience in the design aspects, it would have been more beneficial to assign a main contractor to be involved in the earlier design stages to aid in the buildability of the project. During the early stages of the project, cracks started to arise and as reported by (*John Bourn, 2000*) in a report for the national assembly Wales, it was stated that the client had acknowledged that time had been closely looked at in relation the timetable for the works however the cost had been overseen as there was no "formal project budget set for these adaption of works" and for this the works were not monitored by senior level. These major errors in lack of cost monitoring has been one of the main reasoning behind the project overbudget and the other factor over being late started to appeared well into the project was the poor communication which left the architect and the construction manager being removed from the job, this left the project without an architect, leading to a redesign which forces more time into the equation and with this in mind the project commenced an overhaul in relation

to its procurement route in 2003 the project shortly continued under a "Revised design and build" lump sum contract. (*Senedd Cymru / Welsh Parliament, 2021*). According to (*LexisNexis, 2021*), the client and employer "passes over responsibility for both designing and building the project to a contractor" under the terms of a design and build procurement, however, this does not mean that the contractor must complete the works, they may wish to subcontract out the works. Although the client may not want to hear that the contractor that has been hired for the work, is now sub-contractor out, this still provides the project with high buildability as the contractor will subcontract the work to specialists in that sector of construction. This method of procurement also gives the contractor an early start on the project site and allows for the continued development of the project's future plans even as the base construction is underway although this project has already been semi designed by the time of the revised design and build procurement route had been decided, this still helped the project as the main contractor still managed to provide and input their expert knowledge and skills into the project helping with its overall completion. Another favourable point in relation to the client choosing a design and build contract in the end was that the client then has a single point of contact which helps reduces the client's financial risk and design risk and with this the main contractor's design policy being under the subject of a "fit for purpose" clause which can be seen as a major plus point for the client as this clause puts the designer or contractor beyond the requirement to use reasonable diligence and skill in carrying out the works and places an absolute obligation on them to deliver a result (*Fenwick Elliot, 2016*). The major cost and time related causes for the project came after the attacks on the world trade centres in New York, these attacks created a sense of high alert for all significant public sector buildings in relation to high security precautions being put into place, this increased the overall costing of the project quite significantly. The National Assembly For Wales (*National Assembly For Wales, 2008*) said that the other cause of increased costs were down to cost inflation and the "lack of robustness in previous estimates, some of which were based on an incomplete design of the building" which can prove that some costs were hugely estimated and prices had been processed sometime prior to actual purchase.

To conclude this case study report on the construction of the Senedd, the procurement route first taken was the management procurement route which posed to be the incorrect choice of procurement route, the Welsh assembly government had overlooked the crucial elements of this project in relation to its cost and time, choosing the management procurement route can in some cases save time and cost although this is not always the case as the Welsh assembly government found out. Within management procurement, the project from the offset needs to be filled with trust and this was not the case, poor management and lack of trust and competency has result in the poor organisation and communication of construction of this project. The correct decision in revising the procurement route to a design and build lump sum, helped progress the Senedd back on track and complete the build to satisfactory standard therefore although the initial procurement method did not successfully complete the project, they did manage to complete the project using a better procurement method of design and build. When the decision to revise the procurement method surfaced, the decision to use the design and build procurement route, seemed to be the most favourable choice. The contractors could continue the build while the additional adaptations of the 9/11 attacks on security tightened and due to its time frame, design and build procurement routes can enable shorter delivery times and better cost certainty.

The Holyrood – Scottish Parliament Building

The Holyrood, also known as the Scottish parliament building, had been designed and constructed in 1999 (*The Scottish Parliament, 2021*). The named architect for this project was the Enric Miralles, who was well known for his “overly complicated and structurally irrational designs” as explained by (*Gomez- Moriana, 2021*). The time and cost review on this project was estimated to cost around 40 million with an initial project finish date of 2002, This project greatly overrun by two years and ended up costing up to four hundred



Figure 2 - This Image shows the Holyrood Building located in Scotland.
<https://www.parliament.scot/>

and fourteen million which was almost tenfold the initial budget as sourced by (*Valence, 2016*) This project has been hugely scrutinized on its vastly underestimated initial low budget, its choice of procurement route and its overly complicated and risky designs in relations to its time scales (*Valence, 2016*). The route in which was chosen for this

project was the management procurement route which allows the client to choose a management contractor who will inevitably be the spokesperson and main correspondent between the client and the main contractor, already, here this is a fundamental trust exercise that should have clearly been explained to the client before proceeding with this method and route of procurement, although the cost can be significantly lower here, they allowed for lack of knowledge and no experience in the buildability of the design by choosing this route as not one of the partners would have better knowledge of adequate timescales according to the amount of work required than the main contractor themselves. The possibility of gaining back time on management routes can sometimes be, although you need to have a fully established team, as seen here the lack of knowledge between the project manager and the main contractor lead to “poor communication and dysfunctional relationship” from the off start as stated by (*Valence, 2016*). Successful partnering does really rely on mutual trust between all parties in relation to open and honest team members and being heavily reliant on teamwork, this can be clearly seen in the Bovis and marks and spencer cast study as shown by (*Connell Brothers, 2020*). Partnering does have some advantages to using this within a procurement route, these advantages are that the administrative and legal costs are considerably lower with the increased changes of financial success and in terms of a business advantages for the construction teams, if the project is successful with client satisfaction, this would lead to repeat business and improved turnover with profitability (*Pinseny Masons, 2012*). Sadly, the architect Enric Miralles had passed away during the construction of the project which led to even more communication errors and mishaps, where the project had lost focus on what was needed to be achieved. Although the architect had left the project with very experienced team members to take over in his absence, the obvious hole that Enric had left behind was too much to deal for all the partners in this project especially with the extensive and innovated design. Management procurement can be sold as an effective procurement especially for

the client when entering down the framework agreement route, which is another form of management procurement. Framework agreements gives the client flexibility and especially when the client has many jobs to be issued however no guarantee of when these projects are due to start, there is also potential of “continuous improvement within long term relationships” as stated by (*Constructing Excellence, N.D*) . Many downfalls involved in using these framework agreements as part of the management procurement, they downfalls come in the form of contractor selection for jobs, contractors enter an ‘Economic Test’ which overall is a best value test but then how do you compare which bid is best. Another downfall which is more on the contractor would be framework agreements are more of a promise rather than a guarantee of work in the end. Overall, the project overrun and exceeded its initial budget, all down to poor planning and research in the beginning, along with poor communication by the project managers in even the initial design stages and formation of the land in which the project was due to be built on, which were not calculated correctly and led to more expenses being used to add that additional land and prepared that land for the excavation along with additional design adaptations to meet new regulations and changes as for example, the design needed to be adapted to incorporate granite, which would act as a bulletproof cladding (*Scottish Parliament, 2021*). As with the Scottish parliament building and Senedd project due to the start date and the years in which they were constructed, they were both heavily impacted by the tighter security risks which were led to additional time being added on the redesign to ensure these security risks were covered.

Holyrood, as seen from this report did not utilize knowledge within the construction industry, the choice of management procurement had been massively overlooked and underestimated. It is vastly clear this route for procurement had been the underlying issue for the failure in the project and leading to it being three years over schedule and massively over budget. In relation to the project being used within the public sector, time and cost was crucial therefore a safer and more reliable procurement route would have been a traditional design and build procurement method. The reasoning behind this more suitable choice of procurement methods was down to the similar reasoning of which were mentioned in the Senedd. These reasonings are that design and build routes provides an early start on site which combats some of the stringent time schedule and allowing additional time for any issues that arise further down project build. In relation to costs, these can be closely monitored by the client as all or most of the work is to be carried out by the main contractor and all organisation is being down by the contractor therefore, clients within the design and build procurement have the main focus of the budget and leaving the main design and build aspect to the main contractor who has better knowledge and experience within the field. For the complexity of the design for this build, having the architect working closely with the main contractor. This could have resolved any issues quicker and with less complication particularly with unforeseen unfortunate death of the architect which left the project unfinished and with no direction forward, If the procurement method of design and build would have been chosen, this may have prevented standstill of the project.

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