VALUE GENERATION AND DELIVERY IN LONG-TERM SERVICE CONCESSION PROJECTS: THE ROLE OF FACILITY MANAGEMENT IN VALUE OPTIMISATION

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Long-Term Service Concession (LTSC) projects, including Public-Private Partnerships and Alliance Projects have been used since the mid-1990s to procure facilities and services associated with social and economic infrastructure, at state and national levels. A key feature of LTSC projects is that they generally require a group of organisations associated with the construction and ongoing delivery of services to form a Special Purpose Vehicle (SPV) whose role is to provide sufficiently compelling evidence of technical and financial competence as to win the right to run the concession for the client over an extended period. The primary considerations driving such procurement are to achieve value for money, significant innovation, appropriate risk transfer and superior whole of life outcomes - frequently questions of value for money and whole-life outcomes are raised during the operational phase of a facility. It is apparent that such concessions assume a fundamentally different nature pre-and post-asset delivery once the service delivery phase commences, and that the composition of project players/responsibility for value delivery is at the heart of this change. This paper reports the preliminary findings of a multiple perspective study of key LTSC stakeholders to surface dimensions associated with the role of facility management that enable value maximisation. It concludes that, contrary to expectations based upon theory, the facility management function is often underutilised during asset feasibility and design stages and that this inevitably has a negative effect upon value maximisation during the operational phase of a LTSC. Further, a level of uncertainty can exist as to who will ultimately deliver concession services during the operational phase, and what their eventual scope will encompass.

Keywords: long-term service concession, PPP, alliance, facility management, service delivery

INTRODUCTION

Over nearly two decades a variety of relational-based procurement mechanisms have been developed in order to deliver assets and services in the constructed environment. Typically such assets have been associated with social or economic infrastructure and the services have been associated with the operational phase of them, ranging from basic maintenance through to the delivery of core services throughout the life of an asset. In broad terms this range of operational support activities has come to be delivered by the facility management profession, and the financial/commercial/legal mechanisms developed to facilitate such activities can be thought of as LTSCs. Typically these take the form of alliance agreements or public-private partnerships (Buxbaum and Ortiz, 2007), though full range of adjacent procurement instruments also exist, such as build-operate-transfer, or build-own-operate-transfer (Cheung et al., 2005).

Whatever form the project takes, its initiation requires a public sector body to identify a pressing service need, followed by an invitation to negotiate for the provision of service. This is made to an embryonic body that typically includes financial, construction, and operational service provision functions, which eventually morphs into a SPV. This provides a single point of accountability for the client body. Over time a range of competing SPVs present their cases for technical and financial competence and innovation to the client, and eventually one will trial (Clifton and Duffield, 2006).

From the client’s perspective issues such as appropriate risk transfer, innovation, superior whole-of-life outcomes (as compared to public sector-only service provision) are considered when evaluating competing LTSC propositions, with the ultimate objective of achieving a demonstrable value-for-money proposition. It is apparent that such projects often fall into two distinct phases, the first being concerned with the delivery of the constructed asset whilst the second is solely concerned with the effective delivery of services
during its operational life (Clifton and Duffield, 2006). As with so many constructed or manufactured assets it is this latter phase that has the most significant impact upon the whole-of-life costs of owning and running it, and it would seem logical that the elements within the SPV associated with the operational phase of such projects would have the potential to influence, both positively and negatively, the overall success of the project, from all stakeholders' perspectives (Kadefors, 2008).

This paper presents the preliminary findings of a study of the multiple perspectives associated with LTSC procurement of social infrastructure by an Australian State Government, when viewed from the SPV. In particular it seeks to identify perceptions of the FM function as a generator of innovation and value at the design and operational phases of the project.

LITERATURE REVIEW

In the mid-90s Barrett (1995) identified that proactive FM involvement could improve service provision during the operational phase if FM input was sought during the design phase of the project. This could improve and speed up the procurement process since it would ensure "that the commissioning, testing, training, and facility operations will not be treated as an afterthought, resulting in unanticipated changes that cost time and money" (Trinh et al., 2002: 115). From the client's perspective such proactivity in the context of LTSCs was identified as having the potential to improve occupant health, satisfaction, and productivity (e.g. Oja, 2001; Raiford, 2002). Ideally these would be reflected in consideration of a full life-cycle framework during design and management decision-making (Nutt, 2000). On the other hand, failure to seek or accommodate FM input during the design phase of projects would likely result in an asset's sub-optimal contribution to a client's business needs and core business functions (Brown et al., 2001: 119).

The LTSC procurement route - or the 'finance resource trail' - was identified as a possible future direction for the FM profession, as "it places the operational value of facilities and infrastructure at the centre of concern, targeting the output needs of organisations, their staff and customers over a 25 to 30-year life-cycle" (Nutt, 2000). Identification of the strategic significance of FM to the long-term focus of LTSC projects - particularly in the areas of facility operations and service provision - highlighted the significant influence of FM in the overall success of such a venture (Kadefors, 2008).

In general FM-mediated project success could be realised through increased cost efficiency and other non-cost performance measures experienced by public sector clients, and competitive advantage for bidding consortia utilising FM integration during project development, design and delivery. UK Private Finance Initiative experience indicated a 25/75 split between construction and service delivery costs, emphasising the impact that service delivery would have upon project outcomes over the long-term (Campbell and Ridley, 2001: 9).

Consideration of the impact of design decisions over the long-term could ultimately be considered an issue of risk identification, mitigation, and transfer (Akintoye, Taylor and Fitzgerald, 1998). Issues of performance specifications and levels of service delivery could best be borne by those parties with the experience to make informed decisions as to how to meet them, and whilst the former lay in the province of the construction contractor the latter could best be considered the domain of FM (Kadefors, 2008). Moreover both could be improved by the incorporation of FM expertise during the design and construction phases of the project.

Implicit in all of the foregoing is the notion that a LTSC changes character at certain critical points in its life, most notably at the time when the SPV finalises its financial arrangements, when design of the asset is finalised, and when the asset itself is delivered prior to commencement of service delivery. Clifton and Duffield (2006) examined the hypothetical integration of PPP and Alliance principles in order to improve the risk allocation within a LTSC, indicating that such a hybrid arrangement might be suitable for certain types of PPP project. Their contention was that under certain circumstances a renegotiation of project scope might be necessary at practical completion (delivery of the constructed asset) prior to the commencement of service delivery. It would be at this juncture that the most visible FM involvement would commence, and potentially also the juncture at which refinancing or on selling of the concession could occur. From the client organisation's point of view this could also be the point at which uncertainty (and therefore their risk) associated with service provision would increase - an occurrence that the hybrid PPP/Alliance structure was designed to alleviate.
RESEARCH METHOD

This study was exploratory in nature, designed to surface the experiences of the key participants in a LTSC, in relation to the role, scope, and influence of the FM function in concession delivery over a protracted period. It was predicated on the notion that these aspects of FM function would initially be defined at the time of SPV formation, and would be geared towards value maximisation for the client and profit maximisation for the concession stakeholders. A comprehensive literature review was therefore conducted, thematic analysis of the literature then performed in order to develop a coherent set of topics and questions for use in semi-structured interviews.

Key participants were identified from publicly available project documentation, invited to participate, and subsequently interviewed in accordance with the precepts approved by the University of Newcastle Human Research Ethics Committee (FEBE15-03). The interviews were recorded, transcribed, cleared by the interviewees as true representations of their words, and subjected to detailed thematic analysis.

First level coding was automatically derived from the transcripts according to question. Open coding of the transcripts was thereafter independently conducted by multiple coders to derive a set of themes spanning multiple questions and multiple interviews. Each of these was thereafter given detail through a process of axial coding during a second round of data analysis (Morse and Richards, 2002).

All codes were supported by quotations from the transcripts accompanied by explanatory memos written by the coders. Codes were consolidated at a roundtable coding meeting where similarities and differences between coding outcomes were discussed and resolved. Overarching themes and their details were then developed and described, enabling them to be discussed in relation to existing literature where possible, and for new theory to be surfaced where current literature proved inadequate (Morse and Richards, 2002). The following section provides an overview of these findings.

RESULTS

The process of analysis revealed 13 themes within the data. These appeared across three temporal domains: client's pre-existing expectations of the project; contribution of facility management to LTSC performance, and; potential contribution of facility management to future LTSC performance. These themes are now presented in more detail.

VALUE FOR MONEY

This was one of the primary objectives driving client decision-making in relation to LTSC procurement. It was triggered partially by the need to demonstrate benefits through the use of the public sector comparator and by the political benefit of securing new services without significant capital expenditure, which the financier recognised as being a political expedient in the jurisdiction under consideration.

RISK TRANSFER

This was identified as another objective of government, frequently being co-located with value for money when discussing LTSCs. This was reflected in concession participants' perceptions of risk transfer and where it lay, which was largely acknowledged to fall upon the service provider (facility manager).

CERTAINTY

From the client's perspective the outcome of achieving the previous two objectives would be the assurance of a minimum standard of service being met, at a known cost, over the longer term. The pressure to achieve certainty was reflected in the client's onerous concession deed, the consequences of which would mostly fall upon the facility management function.

REPUTATION

From the client's perspective the achievement of certainty was reliant upon the track record of the concession team. Factors such as credit rating, financial base, appropriate skills, and proven ability to be around for the duration of the concession period would be central to their decision-making, and prior experience would be seen as an advantage. Significantly the financier's concerns and choice of concession partners was driven by similar considerations.
INCENTIVES

These related to high performance and were found to take one of two forms: the opportunity to be demonstrably successful in a lucrative market, with the potential to win other projects and conversely the desire to avoid client impose penalties for underperformance on the current project. The facility manager appeared to have recently recognised the strategic benefits of LTSC projects for his organisation.

RISK

This was recognised as a key element across the entire LTSC organisation, individually and collectively being the recipient of large amounts of risk transfer from the government client. However opinions as to the fairness of the risk distribution within the LTSC organisation differed widely, with the financier acknowledging their comparatively low risk exposure. This contrasted with the contractor who felt that the need to lock in a firm tender price and program before the tender was submitted sharply increased their risks given the long project lead time. However there was a general consensus that the majority of the project risk was born by the facility manager, given their exposure to the long-term consequences of early design decisions, the ease with which they could be replaced during the operational phase of the project, and their position as the target of non-performance penalties imposed by the client.

BALANCE

An often mentioned issue, triggered by the high bidding costs for competing concession consortia, was the need for a balance to be struck between the needs of government and private industry. Specifically, mention was made of the high level of detail expected in tender documentation, together with an expectation that the private sector would accept very high levels of risk transfer, all of which required the development of a new skill set by the private sector. This was not matched by a corresponding high level of demand from the public sector in terms of the volume of projects to which such skills could be applied in the future. The general feeling across LTSC members was that this situation would quickly exclude all but a few concessionaires who had acquired these skills through their early engagement in the marketplace. It was interesting to note that the facility management function was generally recognised as being excluded, or at least its influence severely curtailed, during the early stages of the bidding process in an attempt to limit the cost of bidding. This imbalance was recognised by the facility manager as regrettable but to some extent understandable, but he bemoaned the negative impact this inability to influence design decisions would have over the longer term, during the operational phase of the concession.

PERSONNEL

The failure to engage fully with the early stages of the design process was noted in the previous theme as being driven by cost cutting. However it was also apparent that the construction contractor had expected more input from the facility management contractor, and when it was not forthcoming both parties were prepared to partially attribute this to a combination of the immaturity of the Australian PPP sector, together with a lack of personnel within the facility management function who were experienced in the conduct of LTSCs.

FACILITY MANAGEMENT VALUE

The value placed upon facility management expertise within LTSCs has been implicit in all the foregoing themes, and indeed was made explicit at numerous points throughout the data. There was a recognition that the capacity of a facility management contractor to deliver quality over the long-term was an essential prerequisite for any successful service concession, as the client had to be convinced that not only would the physical asset be delivered but that its continued fitness for purpose would be ensured throughout the term of the concession. This was equally valued by the financier, who would come to rely upon the facility manager as the facilitator of predictable cash flow. From a government perspective the facility management function would serve two further purposes: firstly, to field public complaints about service provision directly, and; secondly, to ensure that the constructed asset was still largely fit for purpose at the end of the concession period, when it would be handed back to government ownership.

LTSC LEADERSHIP

LTSC members contrasted the predominant Australian experiences with those found in the UK, noting that most Australian concessions were led by the finance function in contrast to the UK where contractor-led consortia were the norm. Interestingly the financier dismissed the idea of contractor-led concessions on the basis that construction contractors were only interested in the short-medium term, whereas facility management contractors were potentially well-positioned to lead. Ultimately though, the financier regarded the facility management sector in Australia as currently lacking sufficient maturity to successfully fulfil this role.

INNOVATION

From a government client perspective the attractiveness of LTSCs are to reduce costs and increase the effectiveness of service provision by harnessing private sector innovation. It was evident that all of the LTSC members felt to a greater or lesser extent that their efforts
in these regards were hampered. On the one hand the financier believed that the inexperience of the facility management contractor limited the design innovation that was possible during the early stages of the project. On the other hand both the construction and facility management contractors believed that heavy-handed client input at the briefing stage severely limited their ability to demonstrate true innovation. They cited as examples highly prescriptive materials and finishes specifications, and the client's reticence to engage in the use of new, energy-efficient technologies. A view was also expressed that the client might have political motivations for restricting the extent of private sector innovation as this could expose a gulf between existing, wholly government-supplied services and those supplied through PPP concessions.

EXTERNAL AND INTERNAL PERSPECTIVES OF THE FM FUNCTION

Stark contrasts were evident between the perceptions of the facility management contractor and the other concession partners regarding the role and scope of the facility manager. On the one hand, the facility manager placed high emphasis on its "all-encompassing", service management and delivery. On the other hand, this contrasted sharply with the others who placed more emphasis on the, as yet unfulfilled role the facility management function could play in adding value during the early stages of the project, specifically in relation to life cycle costing, design decisions and specifications writing.

All parties tended to explain this gap between potential and reality in terms of the infancy of the facility management profession in Australia, the nature of the prior experience of this specific facility management contractor, and uncertainty regarding the nature of the risks that would be inherent when accepting a wider role within the concession.

From the financier's point of view the facility management function was more important to the overall viability of the project when compared to the construction contractor. Moreover he acknowledged that the facility management contractor had approval rights for all aspects of the detailed design, noting that this reduced his own organisation's risk by double-checking the construction contractor's designs: he acknowledged that this increased levels of tension within the concession team but felt this was beneficial.

To a greater or lesser extent all parties acknowledged that the specific development of the facility management profession in Australia had led it to focus on maintenance and operations, leading it to ignore the potential opportunities on offer were it to embrace more strategic roles within LTSCs. This was explained variously in terms of a lack of design experience, poor market awareness, the complexity of life cycle costing, and the questionable benefit of developing such skills given the as-yet limited opportunity to use them in an Australian context. It was therefore significant that when all parties were encouraged to speculate as to future developments they all contrasted the domestic facility management market with that found in the UK, where the sector was more mature, and contractors had embraced their central position within PPPs to the extent that some were responsible for providing core services as well as non-core services. This led the financier to concede that facility managers were potentially more suited to front-running such concessions than the construction contractors.

In summary, all parties recognised potential of the facility management function to be a process driver in future projects, from the earliest stages of the project through to final disposal. Opinions only differed where issues of capability, timeframe, and cost-benefit of skills development were concerned.

POTENTIAL OPPORTUNITIES

All the parties interviewed recognised significant limitations in the current PPP/LTSC environment, and indicated that addressing them would create significant opportunities for suitably qualified concession teams. At their heart lay Australia's ageing infrastructure, which was overdue for renewal. Given the prevailing political climate it was felt that the service charges associated with LTSCs would be considered preferable to massive public sector borrowing to support capital works, particularly in terms of social infrastructure.

There was an expectation that acceptance of the suitability of PPP style procurement would trickle down to all levels of government. This was expected to lead to a desirable increase in the number of concession opportunities, the current shortage of which was highlighted as a significant barrier to engagement with such projects, in terms of gaining tender and operational expertise.

There was speculation that concession style models of procurement might be extended into the private sector, leading to privately financed LTSCs. It was felt that this would create optimal conditions within which a concession team could maximise innovation.
CONCLUSIONS

This exploratory study investigated the extent to which SPV participants LTSC projects experience the influence of the FM function in its operations, the consequences of their involvement, and speculations as to the potential that FM involvement in future LTSC projects presented SPVs in terms of value generation and risk minimisation. It came to the following conclusions.

Two primary objectives exist for government sector clients when procuring infrastructure using LTSC strategies: firstly, achieving value for money whilst concurrently securing infrastructure without capital outlay, at a lower cost than the Public Sector Comparator, and; secondly, appropriately apportioning project risks, especially those relating to the construction and subsequent operation of facilities to private sector concessionaires.

This study found that a major benefit for government sector clients has been the guarantee of cost and performance certainty, locked in through the application of a 25-30 year contract. However, whilst the expectation of innovative infrastructure delivery was a further theoretical benefit, little evidence was found for this during the study. On the other hand it was found that LTSC participants received adequate incentives to uphold the contract deed through associated rewards such as competitive advantage in other LTSC bids, and predictable cash flow over the longer term. It was also recognise that client-imposed penalties were also a keen incentive to avoid charges of non-performance.

The role of FM in achieving LTSC performance was both complex and largely underutilised. Despite the theoretical ability of FM to positively influence strategic issues such as project management, design and specification, and whole life costing (WLC) throughout the life cycle of the concession the FM function was reported to be primarily focused on facility operations and maintenance. However all stakeholders in LTSCs recognised the importance and value of this function, highlighting the risks that FM carried during the life of the concession, its ability to underwrite such risks for the concession bid, and ultimately its ability to provide integrated service management.

Yet in spite of widespread recognition of the potential for FM to add considerable value to a LTSC it was perhaps perverse that the FM sector was widely reported as being in its infancy and relatively unsophisticated. Specific issues identified included low levels of expertise in design processes such as life cycle costing, design management, value engineering, and specifications.

This contrasted starkly with the expectation that in the future the FM function could in many ways drive LTSC procurement processes, resulting in additional cost savings, accompanied by increased quality and efficiency savings. Significantly, opinions differed as to how the benefits would be achieved, with FM contractors indicating that their increased involvement during design would result in more efficient design options being specified for inclusion during construction, whereas other stakeholders believed that the Australian FM sector would come to mimic the FM function as displayed overseas (particularly in the UK) where it had become a driver of the design and specification processes through the integration of life cycle costing techniques.

Ultimately this study found that the FM industry in Australia is still immature relative to its overseas counterparts, and lacks the sophistication required to accurately assess the life cycle cost implications of design decisions early in the project design/procurement process. An opportunity exists for the facility management function to become a leader in the quest for value for money through the application of value engineering techniques to both the design of the base building and the provision of services throughout the life of the project.

REFERENCES

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