

VALUE THROUGH INNOVATION IN LONG-TERM SERVICE DELIVERY: FACILITY MANAGEMENT IN AN AUSTRALIAN PPP

Abstract

Purpose - Public-private partnerships (PPPs) and other innovative procurement mechanisms are frequently used to deliver both an asset and a public service over a protracted period. The value streams to the parties involved can be complex, but generally arise from the satisfactory provision of infrastructure that is fit for purpose throughout its life. This research investigates the effectiveness of the Facility Management (FM) function in delivering long-term value to both the client and consortium.

Design/methodology/approach - This paper describes a case study of a PPP in Australia that delivered social infrastructure in multiple locations to a State Government. Drawing upon multiple perspectives from within the consortium it identifies the influences on value generation through innovation by the FM function.

Findings - The ability of an Australian FM contractor to provide value within a PPP context has been shown to reflect some of the attributes described in literature. However the extent of innovation, especially in the design and construction phases has been limited by organisational history and capability, relational and contextual issues.

Originality/value - This research highlights a flaw in the rhetoric relating to PPP delivery, namely the disconnection between the asset delivery and service delivery phases, which stifles the consortium's capacity to innovate and maximise value. It reveals a set of influences that both resonate with the literature and plausibly explain the suboptimal performance of the FM function within an Australian PPP. In doing so it provides the basis for wider investigation of the problem.

Keywords - PPP, facility management, service delivery.

1. Introduction

In the past two decades a variety of relational procurement mechanisms have been developed in order to deliver assets and services in the constructed environment. Typically such assets have been associated with social, national, or economic infrastructure and the services have been associated with their operation, including basic maintenance or the delivery of non-core services throughout their life. This range of activities has come to be delivered by the facility management profession. The financial/commercial/legal mechanisms developed to facilitate such activities can be generalised as projects where fees for use are either recouped directly from government bodies, or from the public through the granting of long term service concessions. Chief amongst these are Public-Private Partnerships (PPPs) (Buxbaum & Ortiz, 2007) though a full range of adjacent procurement instruments also exist such as build-operate-transfer or build-own-operate-transfer (Cheung, Rowlinson, Jefferies, & Lau, 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 morphs into a Special Purpose Vehicle (SPV). For the client body this provides a single point of legal accountability. Over time a range of competing SPVs present their cases for technical and financial competence and innovation to the client, and eventually one will triumph (Clifton & Duffield, 2006).

From the client's perspective issues such as risk transfer, innovation, superior whole-of-life outcomes (as compared to public sector-only service provision) are considered when evaluating competing propositions, with the ultimate objective of achieving demonstrable value-for-money. Such projects often comprise two distinct phases, the first being the delivery of the constructed asset whilst the second is the effective delivery of services during its operational life (Clifton & Duffield, 2006). It is this latter phase that has the most impact upon an asset's whole-of-life costs 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 (Kadefors, 2008).

The rhetoric – both from government client-side and private sector supply-side (e.g. Wakeford & Valentine, 2001) – in relation to PPP projects (and other derivatives such as Private Finance Initiative projects) has been that by integrating built asset and ongoing service provision within a single SPV, there is an improvement in the quality of service thus obtained, and a reduction in the risk that the public sector are exposed to: increased value to the client is the expected consequence. It is therefore perhaps surprising that service failure is frequently reported within PPP projects: these reports couch such failures in terms of the failure of the supply-side consortium as a single entity (Ng, Wong, & Wong, 2011), since liability for failure resides with this rather than one of its constituent parts. Nevertheless it is clear that as a project moves into its operational phase any responsibility for service provision is likely to reside with the FM function.

Again the rhetoric associated with PPPs suggests that it is in the interests of the organisations that comprise the SPV bidding for a project to collaborate in a cohesive way during bid preparation in order to minimise the risk of project failure/underperformance, and maximise project performance/profitability (Oyedele, 2012). This would appear to be a strategy that would integrate the design, construction, and operational phases, so that design decisions were optimised to minimise ongoing operational costs, and the risk of performance failure penalties. The frequency with which performance failures occur (e.g. Clark, 2005) and penalties are applied across a wide range of PPP projects – particularly in relation to social infrastructure projects – would appear to suggest that such integration was not widespread and/or effective. In particular, it would suggest a disconnection between asset and service delivery, which stifles consortium's ability to innovate.

Accordingly this paper presents detailed findings of a case study of the multiple perspectives associated with PPP 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 through the project's entire life cycle.

2. Literature Review

In the mid-90s Barrett (1995) identified that proactive FM involvement during the design phase of the project could improve service provision during the operational phase. 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; p115). From the client's perspective such proactivity had the potential to improve occupant health, satisfaction, and productivity (e.g. Oja, 2001; Raiford, 2002). Ideally these would be reflected in a full life-cycle approach during

design and management decision-making (Nutt, 2000). On the other hand, failure to obtain FM input during a project's design phase would likely result in an asset's sub-optimal contribution to a client's business needs (Brown et al, 2001; p119).

The asset-service delivery process 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; p125). Identification of the strategic significance of FM to the long-term focus of PPP-type 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).

FM-mediated project success is derived from increased cost efficiency and non-cost performance measures experienced by public sector clients, resulting in competitive advantage for bidding consortia utilising FM integration during project development, design and delivery. UK Private Finance Initiative experience indicates a 25/75 split between construction and service delivery costs, emphasising the impact that service delivery can have upon project outcomes over the long-term (Campbell and Ridley, 2001; p9).

The FM contractor plays a key role during both the development of a PPP bid and the subsequent detailed design process, which has significant consequences for its performance during the service delivery phases of the project. El-Haram and Agapiou (2002) detailed a number of specific responsibilities falling upon the FM contractor during these initial stages, which were abstracted thus:

- development of FM cost breakdown structure, which may include operating and occupancy, maintenance and replacement, etc.;
- estimation of FM costs;
- reviewing and assessing the design from maintainability, maintenance, operability, and serviceability point of view;
- identification and selection of the optimum maintenance and replacement strategies for the facility;
- identification and selection of the optimum operating scenario;
- liaison with the design and construction team to select the cost-effective design option that will optimise whole life costing through application of life cycle costing (LCC) techniques; and
- liaison with the bid management team. (Swaffield and McDonald, 2008; p133)

Swaffield and McDonald (2008) identified the desirability of undertaking detailed analyses of the life-cycle costs (LCC) associated with design alternatives. Their study was limited to contractors having their own in-house FM function, but interestingly they assigned responsibility for undertaking LCC as residing with the quantity surveying function. They found that LCCs were generally performed, however they did note that such calculations were not a universal requirement and that where they were omitted or overlooked it was the facility management function that bore the consequences. Additionally whilst others (e.g. Goyal & Pitt, 2007) acknowledged the importance of LCC to FM performance it can be seen that the risks associated with managing LCC within a PPP consortium by the FM function alone are immense.

It was observed that an emphasis on LCC reduced the overall running costs of the facility over the life of the project (Goyal & Pitt, 2007), but that where the calculations were absent and the focus was once more on lowest capital cost the effect was a rise in running costs and the consequent decrease in profitability. It can be speculated that there could be less emphasis on the importance of LCC calculations in

PPP consortia where design and construction, and facility management functions were undertaken by separate commercial entities.

A principal advantage of PPP projects has been the purported increased innovation generated by successful consortia. The greatest scope for this occurs during the operational phase of the project. Mudrak, van Wagenberg, & Wubben (2004) offered an insight into FM firms' innovation processes (not necessarily as part of a PPP), when they highlighted the importance of appropriate organisational environments within which to foster FM innovation. They suggested that such processes must be supported by effective implementation mechanisms and external linkages, undertaken with strategic intent. When translated into a PPP SPV this would imply close liaison with others in the bid development team, which would continue through the detailed design and construction phases (El-Haram and Agapiou, 2002). Critically this would require clear chains of communication and responsibility within the consortium itself, and between the consortium and client. Whilst the business relationships were frequently understood in linear terms the reality was that they were social networks requiring careful management, and clarity of purpose of direct and indirect factors (Besser & Miller, 2011; p128), resulting in a service that was acceptable to the client (Gallouj & Weinstein, 1997; p539).

A survey of the Finnish FM sector revealed critical success factors in the supplier-customer relationship that included: clearly defined and mutually agreed goals, mutual involvement, joint problem-solving, two-way information sharing, and partners' ability to meet performance expectations (Lehtonen & Salonen, 2006; P 73). Culturally speaking, openness, trust, and shared objectives are required to optimise outcomes from the FM function.

Where FM is co-located within a single firm the extent to which integration is achieved would reflect the effectiveness of its culture and organisational structure. Where the FM function is outsourced the level of FM performance could be seen as a barometer of the supplier-customer relationship. However, when translated into a PPP context the situation would appear to be more complex, where multiple relationships would come to exist i.e. FM-consortium partners, and FM-service client (Oyadele, 2012).

For the FM function within a PPP two sets of conditions should be satisfied: firstly, the requirement to maximise the consortium's profitability, and; secondly the requirement to meet or exceed the client's minimum service specification (Campbell & Ridley, 2011). Clearly the two are mutually interlinked since attaining the former is hampered if the latter is not achieved, however the situation is not so clear cut. It is generally the FM provider who is penalised, directly or indirectly, for failing to meet minimum service requirements, and it is the FM provider who is most publicly identified with any such failures. It is therefore perhaps not surprising that FM contractors have been noted as adopting pro-client stances during the design phase of PPP projects in order to specify the highest quality products and materials, and therefore reduce their risk during the operational phase (Campbell & Ridley, 2011). Furthermore, this is not inconsistent with the critical success factors developed by El-Haram and Agapiou (2002).

The impact of design decisions over the long-term can 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 are best borne by those parties with the experience to make informed decisions as to how to meet them, and whilst the former lies 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 – indeed this is a critical issue (Oyadele, 2012).

Implicit in all of the foregoing is the notion that a PPP 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 risk allocation, 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 (Ng, Wong & Wong, 2011; p80). 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.

3. Research Method

PPP research has been based on the belief that asset construction and subsequent operation have been delivered by stable commercial entities whose members have worked towards achieving common project objectives over the long term. Indeed a parallel but unconnected body of knowledge, namely that relating to Product-Service Delivery/Integrated Solutions, is overtly directed towards this end, albeit in the realms of manufacturing and services. The study was therefore designed to commence the generation of new theory that bridged these two established areas.

The PPP arena in Australia is not a large one when compared to others internationally. The limited number of projects potentially available for study turned out to be further constrained by issues of confidentiality. Moreover, given the immaturity of research in this field it was recognised that authentic, in-depth data had to be collected and new knowledge thereafter created before any attempt at generalisation could be undertaken. A detailed, multi-perspective case study of a PPP project within Australia thus became a research objective.

The twin issues of political sensitivity and commercial confidentiality ensured that few firms/ and government agencies were comfortable with being publically identified with this study. To this end, key participants in a PPP project were identified from publicly available project documentation, invited to participate, and subsequently interviewed. The research team de-identified both project and participants. To this end it is necessary to limit description of the project to being a PPP for multiple social infrastructure facilities, commissioned by an Australian State Government.

Philosophically the nature and extent of collaboration (Holt, Love & Li, 2000) in PPP projects by potential stakeholders is influenced by the contractual mechanisms designed for a specific project, the consequent perception and quantification risk exposure, and their impact on individual firms' commercial decisions. Such decisions are made on the basis of both rational and boundedly rational criteria (Simon, 1991), which embody formal and informal dimensions (Bresnen and Marshall, 2002). The phenomenon of decision-making in such an environment is best revealed using qualitative post-positivist approaches (Gajendran et al. 2011; Barrett and Sutrisna, 2009).

Methodologically this research was therefore designed using a constructivist perspective that accommodated consideration of multiple stakeholder realities (Creswell & Clark, 2007). This found its expression in a detailed single case study utilising ethnographic research methods, an approach that was considered appropriate in order to capture both phenomenon and the context within which it was being observed (Yin, 2009), thereby allowing context-specific generalisations to be made. The choice of a single case was considered methodologically appropriate as variously:

- An "instrumental" case (Stake, 1995), where matters beyond the boundaries of the case itself (pertaining to PPPs in Australia) could be revealed.
- A "critical" case (Flyvbjerg, 2006; p 230), where the strategic choice of an exemplar case could reveal matters pertinent to the general problem of the asset/service delivery split.
- A "paradigmatic" case (Flyvbjerg, 2006; p 232), which highlights more general characteristics of Australian PPP projects.

This case was also opportunistic given the researchers' access to key stakeholder organisations in a scarce Australian PPP project. In the event five interviews were conducted across the three functions – finance (one interview), construction (two interviews), and facility management (two interviews) – within the PPP consortium, supported by various documentation proffered by interviewees.

The methods employed in this research were exploratory in nature and rooted in the realism paradigm (Guba and Lincoln, 2005). This approach "enables researchers to deal with complex, layered and often unobservable strata of reality that impact upon our action and thinking" (Joseph and Roberts, 2004; p1). The research therefore had to fulfill two seemingly contradictory objectives: firstly to ask the 'right' questions in order to extract the fullest, most complete data whilst secondly, making no prior assumption as to what the 'right' answer might look like (Cohen & Daniels, 2001).

This case study protocol used as its point of departure the idea that ideally that the FM function would be defined at the time of SPV formation, and that it would be geared towards both 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.

Ten trigger questions were derived from the literature and then used to drive the interviews. These questions covered the following topics, from each respondent's organisation's point of view: their understanding of the purpose and objectives of PPPs; their role in their organisation's business strategy and objectives; scope for expansion and growth of PPPs; role of FM function within a PPP consortium; points of involvement of FM in current PPP project; role of FM function in achieving PPP objectives; actual and potential value of FM in current and future PPP projects; estimation of value of FM involvement at various stages in PPP life cycle. 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 given detail through a process of axial coding during a second round of data analysis (Morse & 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 (13 open codes) and their details (94 axial codes) were then developed and described (see Figure 1: extract from consolidated coding table relating to theme *Value for Money*), 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 & Richards, 2002). The following section provides an overview of these findings.

Take in Figure 1. Extract from consolidated coding table.

4. 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 PPP performance, and; potential contribution of facility management to future PPP performance. These themes (in italics below) were previously detailed (Brewer, Jefferies, Gajendran, McGeorge, Rowlinson & Dainty, 2012) and are now summarised in Figure 2.

Take in Figure 2. Concept model of findings.

Client decision-making in PPP procurement is primarily driven by the desire to achieve *value for money*. Probity dictates that this should be demonstrated through the use of positive Public Sector Comparator (PSC) outcomes – in this case stated to be 7% below the PSC most likely costs – and politically, by securing new public services without capital expenditure. Whilst the former is a universal requirement, the latter was keenly felt to be driving *decision-making* in this jurisdiction.

Concurrently, the government client wishes to engage in *risk transfer* to the private sector (with appropriate compensation) thereby achieving high levels of *certainty*, both in terms of minimum service standards and known costs, over the longer term. The achievement of client certainty is contingent upon the *reputation* of the concession team, with factors including credit rating, financial base, appropriate skills, and proven ability to be around for the duration of the concession period, and prior experience (Swaffield and McDonald, 2008).

Incentives provided to reward the achievement of certainty take the form of either avoidance of client-imposed penalties for underperformance (on the current project, with consequent negative marketing implications), or demonstrable success, with the latter being publicly visible and providing the potential to win other projects. The strategic importance of both incentives is clear and apparent to all consortium members.

In the light of the foregoing it is perhaps surprising that in this particular case study there is widespread acceptance that the *risk distribution* over the long-term has been heavily loaded on the FM function during the service period. This is largely at the behest of the client, through their onerous concession deed, which allows them to change their service requirements (and indeed, their FM service provider) during the operational phase (Akintoye, Taylor and Fitzgerald, 1998).

Client demand for innovation from PPP consortia largely focuses on the service delivery phase, and there is a perception that through their early involvement the FM function may develop the maturity for *PPP leadership* (as opposed to contractor-led consortia in the UK, and finance-led consortia as currently found in Australia). However this future is subject to contrasting *external and internal perspectives* of the FM function, where on the one hand the FM contractor places high emphasis on its "all-encompassing" service management and delivery, whilst on the other, SPV members site the as-yet unfulfilled role of the *FM contractor in adding value* through life cycle costing, involvement in design decisions and specifications writing (Brown et al, 2001).

From the FM perspective their approval rights for detailed design decisions reduce the risk borne by the finance function through the double-checking of the construction contractor's designs, but consequently increase their own risks as well as the likelihood of conflict within the concession team (El-Haram and Agapiou, 2002). From the other team members' perspective the FM reticence to become more involved is symptomatic of the immaturity of the FM profession and personnel in Australia, and their consequent lack of design experience and poor market awareness. Moreover it is reported that the FM function is frequently excluded from the design phase of PPP projects specifically to reduce consultants' costs. Nevertheless all parties recognise the potential FM value available to suitably *balanced* and qualified concession teams in the Australian market, and the consequent opportunities particularly in the replacement of ageing infrastructure.

It is apparent (from the comments of non-FM interviewees who have bid for other PPPs) that the non-*innovation* and conservatism of the FM contractor has had a negative impact on subsequent consortium bids for similar projects. On the other hand, when viewed from the FM contractor's perspective, there are compelling reasons for not committing to particular low-cost design solutions at the design phase, given that they will bear the consequences over the long term during the operational phase of the facilities (Goyal & Pitt, 2007). Moreover, such conservatism presents *potential opportunities* to increase the attractiveness of the facility management contract (i.e. reducing the perceived risk), should it be on-sold at some point.

5. Discussion

Over a decade ago Brown, Hinks & Sneddon (2001; p129) predicted the rise of multi-disciplinary teams to deliver major public projects which " result in the amalgamation of existing PM and FM teams to produce a new overall management team which has sufficient breadth to supply projects with the core competencies of each discipline." As commonly constituted PPPs would appear to embody these principles, and provides the opportunity to overcome the problems reported in Brown et al (2001). Ten years on, and in a different country it would appear that their vision has yet to be fully realised.

Yet all of the foregoing has to be set in a unique project context that is largely defined by incomplete contracts, set in a responsive regulatory environment (Ayers & Braithwaite, 1992). Judicious use of the mechanisms these describe is intended to resolve the problems that are by definition unforeseeable at the outset of the project, arising as a consequence of societal, stakeholder, and statutory changes during a 20-30 year contract period. Central to their resolution is the distribution of the attendant risks, which should be borne by the party or parties most able to do so – FM is clearly likely to have the skills and experience, but unforeseeable problems equate to

potentially limitless risk (Goyal & Pitt, 2007), certainly an unattractive proposition for any single business entity within a PPP consortium and possibly for the consortium as a whole.

Against this background this research has revealed that the fusion of design, construction, and service delivery to public sector clients through PPP and related relational contracting mechanisms appears to display fragmented characteristics, with a disconnect being particularly apparent between the asset delivery and service delivery phases. This runs counter to the expectations of both the client and earlier researchers. In 2005 Lehtonen & Salonen reported the rise of relational procurement - particularly partnering - as an increasingly popular method of engaging the facility management function to the strategic planning of major organisations. Central to this was the notion that there should be a shared understanding of strategic objectives by the top levels of management in both the FM contractor and client organisation, though interestingly, at an operational level, activities tended to be conducted on a reactive and ad hoc basis. Though their findings were based upon a mass survey of practitioners in a market where PPPs and Alliance-type procurement did not exist they concluded that the senior executives in both client and supplier organisations saw no need to continue their personal strategic relationships beyond initial establishment of the business relationship.

In many respects this type of attitude can still be seen in this study, which leads to the speculation that all parties concerned, both then and now, limit consideration of strategic matters to the establishment of contractual relationships, presumably believing that all parties' strategic objectives will remain congruent for the duration of the contract. Given that Lehtonen & Salonen's (2005) study confined itself to partnering agreements - which, unlike PPPs lack explicit legal remedies - the current situation is all the more critical given the economic and business consequences of sub optimal FM performance. This attitude could be explained either by a high level of confidence in both the PPP consortium and its legal foundation, or simply a high degree of trust that the FM function will continue to satisfactorily bear the risks and perform over the long term.

A further explanation for the failure of strategic relationships to develop and endure over the operational phase of a PPP may be found in Edkins & Smyth (2006), where a long-term tendency to abandon relational mechanisms in favour of legalistic ones was identified. Issues of ease, reliability, and demonstrable accountability were cited as reasons for this, though fundamentally any persistence with relational rather than legal client-supplier relationships was dependent upon the behaviour of specific people who had skills in utilising them. Crucially the deterioration or otherwise of relationships were observed both between the PPP consortium and client organisation, and more surprisingly within the consortium itself, with trust/trustworthiness being the critical determinant of outcomes. Ultimately Edkins & Smyth (2006) identified a private sector discomfort with relational transactions and a consequent unwillingness to invest in relationship management skills and techniques.

Contractor-side participants in this study consistently echoed the position of Campbell & Ridley (2001) when they suggested that FM contractors appeared to display a disproportionately pro-client stance during the operational phase of PPPs. This typically manifested itself in them demanding the highest as-built standards as possible, in terms of materials, products, and finishes. This was understood in terms of minimising their risk exposure over the long term, given that they would bear primary responsibility for providing/exceeding minimum service requirements on behalf of the

consortium over a protracted period. On the other hand this has repeatedly resulted in tensions appearing within the consortium studied in this research.

6. Conclusions

This study investigated the extent to which SPV participants in a PPP project experience the influence of the FM function in its operations, the consequences of their involvement, and the potential for greater FM involvement in future PPP projects in terms of value generation and risk minimisation. It came to the following conclusions.

A common complaint regarding PPP consortium membership was the high costs associated with bid preparation and tendering. The underlying intention of a consortium was to demonstrate a higher capacity to generate value for money for the client than any of its rivals. Implicit in this was the notion that all of the consortium members were acting in concert to achieve this aim. The case project (and those discussed by participants during this research) whilst by no means claiming to represent the spectrum of Australian PPPs, did nevertheless provide an interesting insight into the reality of value generation. In particular it highlighted the potential for conflict between the commercial aims of the individual consortium members and the project itself.

It was apparent that the FM contractor saw its individual commercial interests, and therefore its competitive advantage as being derived from holding a position that could be seen to be at odds with the consortium itself, and indeed was by other consortium members. Such a position was defended by the FM contractor on the grounds of its focusing on its organisational core competencies, and therefore defending the best interests of the client. Conversely it was reported by other consortium members that such conservatism had been the undoing of the consortium when bidding for other projects.

A key component in the design of this research was that the case selection could justifiably be described as "instrumental" – that issues of broader concern than simply understanding the case itself could be learnt through its conduct – and the research findings that arose from its conduct have given insights into both the behaviours of key case study participants, and their consequences, beyond the boundaries of the case itself. The literature is replete with references to "inexperienced" or "experienced" clients, linking these terms to their ability to adequately process complex procurement decisions, thereby extracting the best possible project outcomes (or not). The reported rejection of later PPP bids on the grounds of poor FM innovation is therefore an indication of the maturity of at least some client organisations. Moreover it refutes the notion that a conservative FM strategy based primarily on building maintenance and non-core janitorial services safeguard the client's interests and "give them what they want". To the contrary, it is apparent that the other PPP tenders described during the research interviews have eschewed the overly "safe" option in favour of the potential for innovation in the successful PPP consortia. From the methodological point of view the study could therefore justifiably claim to have demonstrated instrumentality.

A further methodological intention was that this case study could be considered "critical" – obtaining information that permitted the logical deduction that findings were generalisable to all cases – though the evidence presented cannot convincingly support this outcome. Whilst, as the previous paragraph illustrates, the behaviour of the FM contractor certainly has had an impact (negative) upon the bidding performance of other consortia to which it has belonged, in a very specialised market

containing few projects (Australian PPPs), there is insufficient evidence to suggest that all Australian FM contractors would behave in a similar fashion. However, given the limited number of players in the Australian FM sector who would have the resources and experience to qualify to bid for Australian PPP projects it is contended that this case presents sufficient evidence to qualify as a "paradigmatic" case – in essence becoming metaphorically representative of many, if not all Australian FM bidders in the PPP market.

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Main code	Axial code 1	Axial code 2	Axial code 3	Axial code 4	Explanation	
Value for money	Government objective	Reduced costs	Design		Generic benefits espoused by proponents of PPP procurement	
			Construction			
			Maintenance			
			Tendering		Single point of responsibility	
			Public Sector Comparator		Objective measure of value as compared to conventional public sector procurement and running costs	
			Capital cost savings		Politically beneficial accounting benefit whereby cost of securing new facilities and services is removed from capital expenditure column in ledger	
		Reduced time	Design		Single point of responsibility	
			Construction			
			Repair	Lost due to breakdown	Increased efficiency triggered by financial penalty for non-availability of facilities	
	Non-government impacts	Public impact	Union members		Potential for public sector job losses	
			Members of public		Perception of service levels being endangered under PPP	
			Two-tier service provision		Perception of service levels being better when provided by PPP as compared to public sector provision.	
			Political damage		Political fallout in the event of demonstrable/perceived negative impacts of PPP	
		Consortium impact	Increased costs	Tendering	Extremely high costs of tender preparation	
			Risk transfer	Uncompensated	Danger of unforeseen/unforeseeable risks going uncompensated	
			Competitive advantage	Reduced costs	Reduced time	Business benefits associated with PPP procurement. Often limited by politically sanctioned constraints, particularly in relation to service innovation
		Innovation				

Conceptual (from literature)	Actual (from case study)	Barriers (current)	Benefits (future)
PPP objectives	<i>Value for money</i>	<i>Potentially limitless risk exposure</i> <i>Exclusion from design process</i> <i>Failure of relationships within consortium</i> <i>Protecting self-interest:</i> <i>* Reducing FM risk during operational phase by "over-specifying"</i> <i>* Increasing attractiveness of FM service package for future on-selling</i>	
	<i>Risk identification and transfer</i>		
	<i>Decision-making</i>		
	<i>Certainty</i>		
Current FM role	<i>Incentivisation and penalisation</i>		
	<i>Risk-bearing</i>		
	<i>Long-term</i>		
	<i>Reputation</i>		
	<i>Innovation</i>		
	Potential FM role		<i>FM driving design phase</i> <i>Increased innovation during service phase</i> <i>FM as consortium leaders</i>