



MEASURING THE VALUE AND SERVICE OUTCOMES OF
SOCIAL INFRASTRUCTURE PPPs
IN AUSTRALIA AND NEW ZEALAND





Infrastructure Partnerships Australia

Infrastructure Partnerships Australia is an industry think tank and an executive member network, providing research focused on excellence in social and economic infrastructure. We exist to shape public debate and drive reform for the national interest.

This research project was commissioned by Infrastructure Partnerships Australia and conducted with the support and sponsorship of governments from Queensland, New South Wales, Victoria and New Zealand.

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Contacts at Infrastructure Partnerships Australia:

Adrian Dwyer

Chief Executive Officer

Infrastructure Partnerships Australia

P +61 2 9152 6000

E adrian.dwyer@infrastructure.org.au

Jon Frazer

Director, Policy & Research

Infrastructure Partnerships Australia

P +61 2 9152 6017

E jon.frazer@infrastructure.org.au

Hamilton Hayden

Senior Policy Adviser

Infrastructure Partnerships Australia

P +61 2 9152 6018

E hamilton.hayden@infrastructure.org.au

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CEO INTRODUCTION

Australia has been at a global leader in the delivery of infrastructure through public-private partnerships. Since the early 1990s, Australian governments have used PPPs to deliver services more efficiently and improve value for money for taxpayers. Through PPPs in the social infrastructure sector – in particular, schools, hospitals and justice facilities – Australians have gained access to innovative and effective infrastructure services, delivered by leading global providers.

Infrastructure Partnerships Australia has played an important role in the history of Australia's PPPs. As our name suggests, partnerships are in our DNA. Since our establishment in 2005, we have provided a forum for the public and private sectors to come together – outside the setting of a deal table – to address critical issues in the sector, and to find common ground on solutions. Through this paper, we are pleased to continue our focus on how the public and private sectors can partner effectively to the benefit of Australian infrastructure users and taxpayers.

After 25 years of PPPs in Australia, this represents an opportune moment to reflect on the performance of this approach to delivering social infrastructure. While many within the infrastructure sector recognise the benefits these PPPs have brought, many in the broader community may not see or understand the differences from regular service delivery.

That is why this research focuses on the experience of service providers and users. By using the data collected over these projects' histories, and the views of the frontline staff and users of PPP facilities, this research aims to assess whether PPPs have lived up to their promise, and communicate these findings to a wider audience.

It is important for this research to be independent and objective. That is why Infrastructure Partnerships Australia commissioned the University of Melbourne to undertake this work. We are grateful to Professor Colin Duffield and Dr Ali Mohammed Saeed for their authorship of this paper, underpinned by objective analysis of projects across Australia and New Zealand, and made possible by those who participated in the study.

I would also like to thank our partners on this project for your support – the Treasuries of Queensland, New South Wales, Victoria and New Zealand. This generous support has not only enabled the research to happen, but also to make it a partnership that reflects the projects this research explores. With the support of the public sector, brought together with the private sector through Infrastructure Partnerships Australia and its membership, and filtered through academic objectivity of the University of Melbourne, this represents a truly collaborative effort.

The authors of this paper are responsible for its words, research and findings. However, the sector owns its outcomes by virtue of having delivered the projects. The findings reflected through this research are overwhelmingly a positive story about the success of social infrastructure PPPs. This success has been built on the foresight, hard work and commitment of infrastructure leaders across the public and private sectors who have developed and delivered these assets and services.

Infrastructure Partnerships Australia have drawn out some of the most pertinent findings on the following page. The sector should be rightly proud of this track record. I also encourage you to consider the recommendations of this paper, and how those developing and delivering the next 25 years of PPPs can take important lessons from past experience.

Adrian Dwyer

CEO, Infrastructure Partnerships Australia

HIGHLIGHTS OF THE RESEARCH

Following engagement with service providers across Queensland, New South Wales, Victoria and New Zealand, service providers confirmed (95 per cent) that PPP projects do deliver on the service as promised by government and departments in media releases, community information documents and public meetings. All service providers reported that the PPP projects investigated opened for service to the community on-time, and since that time, they have performed better than the traditional model.

A clear and overwhelming preference (95 per cent) was found among service providers for working within a PPP facility over that of the traditional government-owned and operated facility. Some respondents also indicated that experience in the PPP model was a significant career advantage.

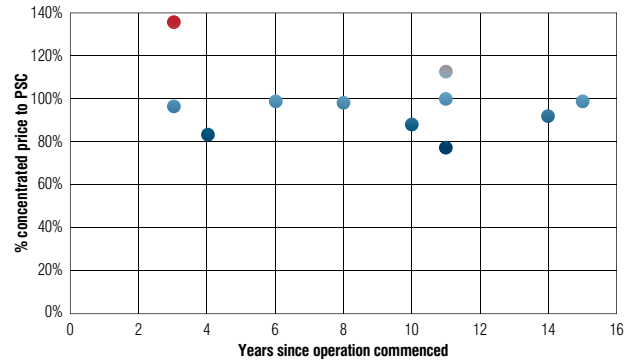
The level of satisfaction with the quality of service delivered remained high through the years of operation investigated. The ongoing high levels of satisfaction suggest that the PPP model was a successful means of achieving and maintaining positive outcomes.



Service providers were of the view that the PPP projects were delivering value for money (VFM), but also constructively identified opportunities for evolution and continued improvement in the PPP model.

The researchers' analysis of project documentation showed that the VFM originally evaluated by government as a part of the tender process has been maintained throughout the operating phase of the PPP agreement with no evidence of price creep nor of risk transfer back to government. This analysis demonstrated that 10 out of the 12 case study projects investigated met or bettered government estimates as expressed within the Public Sector Comparator (PSC). Interesting, where the PSC had not been bettered, there appeared to be a heightened level of satisfaction

of service providers with the product and services being received. Effectively, paying more meant higher levels of services.



Clearly, this shows that PPPs in Australia and New Zealand are delivering on their promise. Governments should continue to consider and use the PPP model for social infrastructure service delivery as a way of bringing greater benefits to service providers and users, and better value for taxpayers.



AUTHORSHIP AND ACKNOWLEDGEMENTS



Authorship

This research and report involved a collaborative effort between The University of Melbourne and Drum Advisory, with support from Infrastructure Partnerships Australia. The research team consisted of:

Professor Colin Duffield

Department of Infrastructure Engineering
University of Melbourne

P +61 383 446 787

E colinf@unimelb.edu.au

Dr Ali Mohammed Saeed

Department of Infrastructure Engineering
University of Melbourne

P +61 403 091 640

E ali.saeed@unimelb.edu.au

Mr Nick Tamburro

Principal
Drum Advisory

P +61 409 970 053

E nick.tamburro@drumadvisory.com

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The research team acknowledges the contributions of public sector organisations and individuals who provided information and freely gave of their time, experiences and insights for this research. We acknowledge the contribution of officers from the Treasuries of Queensland, New South Wales, Victoria and New Zealand, their colleagues from related service agencies and officers with responsibility for managing ongoing PPP contracts. We also acknowledge the contribution of the service providers of PPP social infrastructure projects (the 'service providers') for their candour and enthusiasm in sharing their views.

The Research Team expresses their appreciation to Infrastructure Partnerships Australia and its membership organisations that championed this research and sought an independent evidence-based outcome. Special thanks to Nick Hudson for his enthusiastic and valuable stewardship of this project in its early stages and later to Hamilton Hayden for his assistance in finalising it.

AUTHORS' NOTE

There have been many reports published of research into Public Private Partnerships (PPPs), focusing on matters such as project delivery, risk allocation, financing and time or cost outcomes. For Australian and New Zealand PPP practices, the findings of these studies¹ demonstrate that PPPs reduce the likelihood of time and cost escalation on major projects during the design and construction phase.

The operating performance of mature PPPs as experienced by service providers is less well understood. While PPP projects have been operating in Australia for some 25 years, there is a lack of independent research on the operating performance of PPPs in meeting the service objectives of governments and their communities.

The term 'service provider' is defined in this report as meaning those employees utilising the PPP capital assets to deliver services to their client community members. They may include school principals, doctors, wardens, administrative or management staff. In some PPP models those employees are from the public sector and in other cases they are employed through the PPP consortium.

This research investigates whether mature operating PPPs are meeting the service delivery outcomes expected by service providers. It assessed whether

the promised uplift in service benefits, advertised by the proponents of a PPP social infrastructure project to the service providers and the wider community, have been achieved.

This is one of the first in-depth research projects investigating the operating performance of social PPP projects from the perspective of the service providers in Australia and New Zealand. Service providers in social infrastructure, compared to economic infrastructure, are more likely to physically work in the PPP facility over the long term and through full-time employment. Moreover, these service providers are more likely to become committed, and in some cases emotionally attached, to the PPP facility and its service provision. For example, a school principal, by nature of their work, may be attuned to the effect the classroom layout and upkeep has on student behaviour, whereas a toll-road operator, analysing traffic data remotely, is more likely to have a transactional and somewhat simple fee-for-service relationship.

During the authors' extensive contact with service providers, many expressed an appreciation of research that focused on them. They were universally enthusiastic in engaging with the workshops and providing their experiences and insights with a view to improving future PPP projects, and thereby improving the services outcomes to their client communities.

Professor Colin Duffield
Department of Infrastructure
Engineering
University of Melbourne

Dr Ali Mohammed Saeed
Department of Infrastructure
Engineering
University of Melbourne

Mr Nick Tamburro
Principal
Drum Advisory

AUTHORS' OVERVIEW

This research considers whether mature PPP social infrastructure projects are meeting the service delivery outcomes expected by users of the facility. It assesses whether the uplift in service benefits, promised by the proponents of the PPP model to service providers,² and in turn their client community, have been achieved.

This research and report were commissioned by Infrastructure Partnerships Australia and conducted with the support and sponsorship of jurisdictions from Queensland, New South Wales, Victoria and New Zealand.

The scope of the research was to:

1. assess whether mature social infrastructure PPPs are meeting the service delivery outcomes for service provider and contract manager³ groups set out in contractual agreements, media releases and other community information documents
2. compare, where data is available, service provider and contract manager satisfaction with PPP assets and service delivery to that of traditionally procured and delivered assets and services
3. identify what factors contribute to positive service provider satisfaction in PPPs and what factors can be attributed to poor service provider experiences
4. assess whether value for money (VFM) is maintained over the long-term operating phase of social infrastructure PPP facilities, and
5. provide recommendations for future PPP projects.

The research was underpinned by a review of current literature on trends and use of PPP projects. Specific project documentation was gathered from participating jurisdictions and a survey of government contract managers and service providers was undertaken. The research concluded with workshops (and post workshop surveys) in Sydney, Brisbane, Melbourne and Auckland from June to August 2019. The research covered 12 social infrastructure PPP contracts in operation from about three to 15 years, involved 11 contract managers and 28 service providers in workshops, and a total of 58 respondents to surveys.

The following key findings and recommendations were made.

Finding 1

Service providers (95 per cent⁴) stated that their PPP project has delivered on the service promised by the relevant state government and delivery agency.⁵

Finding 2

Service providers (95 per cent⁶) and all contract managers participating in the research prefer working in a PPP facility and service contract over a traditional government-owned and operated facility.

Finding 3

Service providers (82 per cent⁷) expressed a strong appreciation of the quality of services provided by the Facility Management (FM)⁸ operator in a PPP facility. Satisfaction level with service quality is strongly influenced by the experience level and relationship between service providers, contract managers and FM operators.

Finding 4

All service providers agreed that the PPP model provides similar flexibility provisions to traditional procurement models.

Finding 5

Service providers and contract managers are a valuable and underutilised source of improvement initiatives for future PPPs. There is room to incorporate their operational phase experience into the planning phase of new projects.

The planning of future PPP projects can be improved to help achieve better outcomes by:

- involving contract managers in the early stages of the procurement process to identify and assess additional benefits associated with the choice of a procurement model
- engaging with additional service providers during bidding and design refinement phases of the project
- improving contract management practices to ensure a consistent level of expertise among contract managers within and across state governments
- ensuring that all contracts provide flexibility provisions to manage future changes as the community's service needs evolve, and
- building strategies in the PPP arrangements that promote open and smooth communications between service providers and FM operators during operational phase.

Finding 6

PPP facilities maintain value for money over the long term. There was no evidence of price creep or risk transfer back to the public sector during the operational phase of the case study projects.

Finding 7

Service providers are poorly informed about the difference between PPP and traditionally procured facilities, restricting their effectiveness in the PPP facility.

Recommendation 1

Governments should continue to secure, where supported by business case analysis, new PPP contracts for service providers and their communities to meet current and future social infrastructure needs.

Recommendation 2

Decision-makers in both public delivery agencies and PPP proponents should give a significant voice to service providers and contract managers during the preparation of tender documents and while designing and planning the PPP project.

Recommendation 3

Both public delivery agencies and PPP proponents should be challenged to evolve the PPP contractual terms to further focus on outcome-based service definition, with fewer prescriptive Key Performance Indicators (KPIs), to provide the long-term flexibility service providers need to best serve their communities.

Recommendation 4

Service provider representatives should be educated on the basics of their PPP agreement and the roles and responsibilities of the various PPP parties. Contract management staff and the FM providers would also benefit from an education program encouraging continuous improvement and maximising value through the partnership aspects of the contract.

Recommendation 5

Both government and the private sector should improve the consistency of good communication in their dealings and in the day-to-day operations impacting on service providers.

1. INTRODUCTION

1.1 Purpose of the research

The primary focus of this research project was on the experience and satisfaction of service providers⁹ working in mature Public Private Partnership (PPP) projects providing social infrastructure and associated services. It investigated whether such PPP projects were operating to meet the service delivery outcomes promised by governments and proponents of the PPP projects, and consequently, delivering the service mix and performance expected by service providers in servicing their client communities.¹⁰

The research sought the direct views of service providers on whether the *uplift* in service benefits to them and their client community, as promised by governments and proponents to be delivered by the PPP model over the traditional model, have been achieved.

This research and report seek to contribute to understanding the value for money (VFM) proposition offered by the PPP model in social infrastructure and improve planning for future projects.

1.2 Context of the research

The focus of this research was on the experiences of those using the PPP facility and its related contracted services to deliver services to their client community. The focus being on employees ('service providers') such as senior executives, managers, administrators, teachers, clinicians, prison wardens, as they service their client community, such as students, patients or prisoners. The research does not sample members of these client communities directly, rather it sought to investigate how the PPP facility and its related contracted services enable and contribute to the performance of service providers in servicing their client community.

In some PPP models, the service providers are public sector employees (for example, teachers and clinicians), in other models they are employed through the PPP consortium (for example, prison wardens).

From inception, a fundamental characteristic of the PPP model in Australia has been a commercial structure focusing on achieving defined service outcomes through appropriate allocation of risk, KPIs and payment mechanism. Conceptually, in the PPP model the capital asset is the enabler of the service outcomes that are measured and if successfully delivered are rewarded by government or users. The Australian and New Zealand PPP model in social

infrastructure offer a particularly rich opportunity to assess the service provider experience of the services delivered, especially as PPP projects have been operating in Australia for 25 years.

This PPP environment enables a thorough assessment to be undertaken of the service provider's experience with mature PPPs that are in a "normalised" operational stage. As highlighted in the Authors' Note, service providers in social infrastructure, compared to economic infrastructure, are typically employed in the long term and on a full-time basis within the PPP facility. Moreover, given their professional interactions with their client community, these service providers are more likely to become committed, and in some cases emotionally attached, to the PPP facility and service provision. The research also investigated user satisfaction with PPP assets compared to traditionally procured facilities.

Recently, some social infrastructure portfolio leaders have been critical of PPPs for being too rigid in their contractual outcomes and this may have had an impact on PPP take-up in new projects. This research investigated such concerns with service providers, seeking to identify the source of such issues and what factors can be attributed to positive and poor user experiences.

1.3 Value for money (VFM)

The importance of public infrastructure procurement being able to achieve VFM¹¹ remains a critical consideration in business case development and the prioritisation of projects across all jurisdictions. While the money in VFM is associated with the costs of project delivery and operation, value in VFM is associated with measures of benefits including service delivery outcomes and user experiences.

In the PPP market, it appears that any general media criticisms associated with service and user experience in a few projects can outweigh the greater number of PPPs that have been delivered on-time and on-budget, and which operate successfully in meeting *contracted* Key Performance Indicators (KPIs).¹²

Public-Private Partnerships typically deliver projects within cost and time expectations, and the transfer of risks to the private sector are real. In many examples the public purse has been protected from cost overruns¹³ and the pressure to perform has PPP projects consistently being delivered on-time or early.



Current literature is inconclusive as to whether VFM is held over the long-term operational phase of PPP projects. This research considers whether the pricing received in the initial PPP transaction is maintained during the operational phase of the agreement.

1.4 Literature review

A review of PPP literature was conducted as part of this project. The findings were used to determine the focus of the survey and workshop. For the full literature review please refer to Appendix B.

Australia and New Zealand are considered mature PPP markets by global standards. While the UK may be credited as the birthplace of modern PPP arrangements, governments across the world have used a mix of such public and private sector arrangements to deliver projects throughout history (Wettenhall, 2005).

Australian PPPs can be broadly classified into two time periods: pre-2000 and post-2000. The modern PPP arrangements post-2000s can be accredited to the

Partnerships Victoria body within the Department of Treasury and Finance that developed some of the most comprehensive PPP policies and mechanisms used by different states throughout Australia (English, 2006). The first use of modern PPP arrangement in New Zealand can be traced to Auckland's Hobsonville Point Primary and Secondary Schools in 2012 (Infrastructure New Zealand, 2017).

The PPP model has evolved over time, with different iterations from jurisdiction to jurisdiction and project to project. However, the 'core' characteristics have remained constant, including:

- the involvement of private finance
- bundling of construction and operation into one contract, and
- the use of contracts and risk allocation to align private profit incentives with public service provision.

Numerous studies examining PPP projects in Australia and the UK are available, however there is a limited publicly available analysis of New Zealand social infrastructure PPP projects.

Various international studies conclude that the PPP procurement model has stronger incentives to minimise whole-of-life costs and improve service quality outcomes than traditional procurement approaches like Design and Construct or Construct-Only models (Hodge and Greve 2017, Saeed 2018). However, studies have also found limitations of the PPP model in regard to risk allocation, innovation and operational flexibility (Hodge and Greve 2017, Saeed 2018).

There is a gap in the literature as to whether value for money (VFM) is conclusively maintained over the long-term operational phase of PPP projects. Due to the long time-horizon of PPP projects, there has been limited opportunity for assessment in the mature stages of PPP operation. A number of Auditor General Reports¹⁴ have confirmed value for money is achieved on contract signing but decline from commenting on whether this value for money has been maintained over the life of the contract. It should be noted that many of these reports were published during the early operational years of the case study projects and they mention that retaining value is dependent on sound ongoing contract administration.

This research aims to contribute to available literature by testing previously raised limitations, such as innovation and flexibility, from the viewpoint of service providers. The research also seeks to investigate value for money in the mature stages of PPP operation.

1.5 An overview of operational social infrastructure PPP projects in Australia and New Zealand

Early PPP projects, in the 1990s, were organised in a similar way to the Private Finance Initiative (PFI) projects implemented by the UK Government. These early social infrastructure projects included hospitals, prisons and public facilities such as sporting stadia.¹⁵ These projects passed full responsibility for the provision of services and financing the capital cost associated with infrastructure to the private sector. Initial concerns with the full outsourcing of public services were outweighed by the advantages of the private sector bringing best international practice, sound management principles, financing and whole-of-life thinking to the delivery of quality infrastructure and services.

New PPP policies were released in Australia and New Zealand from 2000, with a different balance of government and private sector roles. Governments

typically retained responsibility for the actual delivery of public services to the community, with the private sector 'owning'¹⁶ and financing capital facilities and providing support services like facilities management and sometimes cleaning. The general contractual phase used for this style of PPP is 'Design, Build, Finance and Maintain' (DBFM). It is this style of PPP project that this study concentrates on and a full list of the projects undertaken in New Zealand are detailed at Table B.1 and Australian projects are detailed at Table B.3 in Appendix B.

Such PPP projects gained wide acceptance until the impacts of the Global Financial Crisis of 2007-08, which impacted access to finance. In response, governments sought to optimise the value obtained from PPP structures by retaining the positive features of PPPs (for example, transferring ownership risks and FM services) and reducing the long-term debt burden on private financing¹⁷ by making contributions to the capital cost of facilities once commercial acceptance was gained.

Since about 2015, there have again been examples where the private sector has taken responsibility not only for DBFM but also operations. Examples include the Wiri Prison in New Zealand and Ravenhall Prison in Victoria.

All projects delivered since 2000 have adopted sophisticated contracts whereby service outcomes are driven by the contracts using KPIs or 'Key Result Areas,' and the application of abatement regimes if areas of the required service are not met by the PPP special purpose vehicle (SPV).¹⁸

There is no single contract or service or contract model for PPP projects that has been used consistently over time. Variants or styles of the model are used by different jurisdictions to suit their individual requirements and appetite for risk allocation. Four apparent styles of Australian and New Zealand PPPs for social infrastructure are depicted in Figure 1 and detailed below.

1. The full transfer to private sector model represented a complete transfer of all core and non-core services, including all project risk to the private sector.
2. The DBFM with core services by government model represents transfer of all non-core services along with facility design, build, finance and maintain to the private sector. The projects undertaken before 2000s using this model routinely transferred most of the project risk of the facility

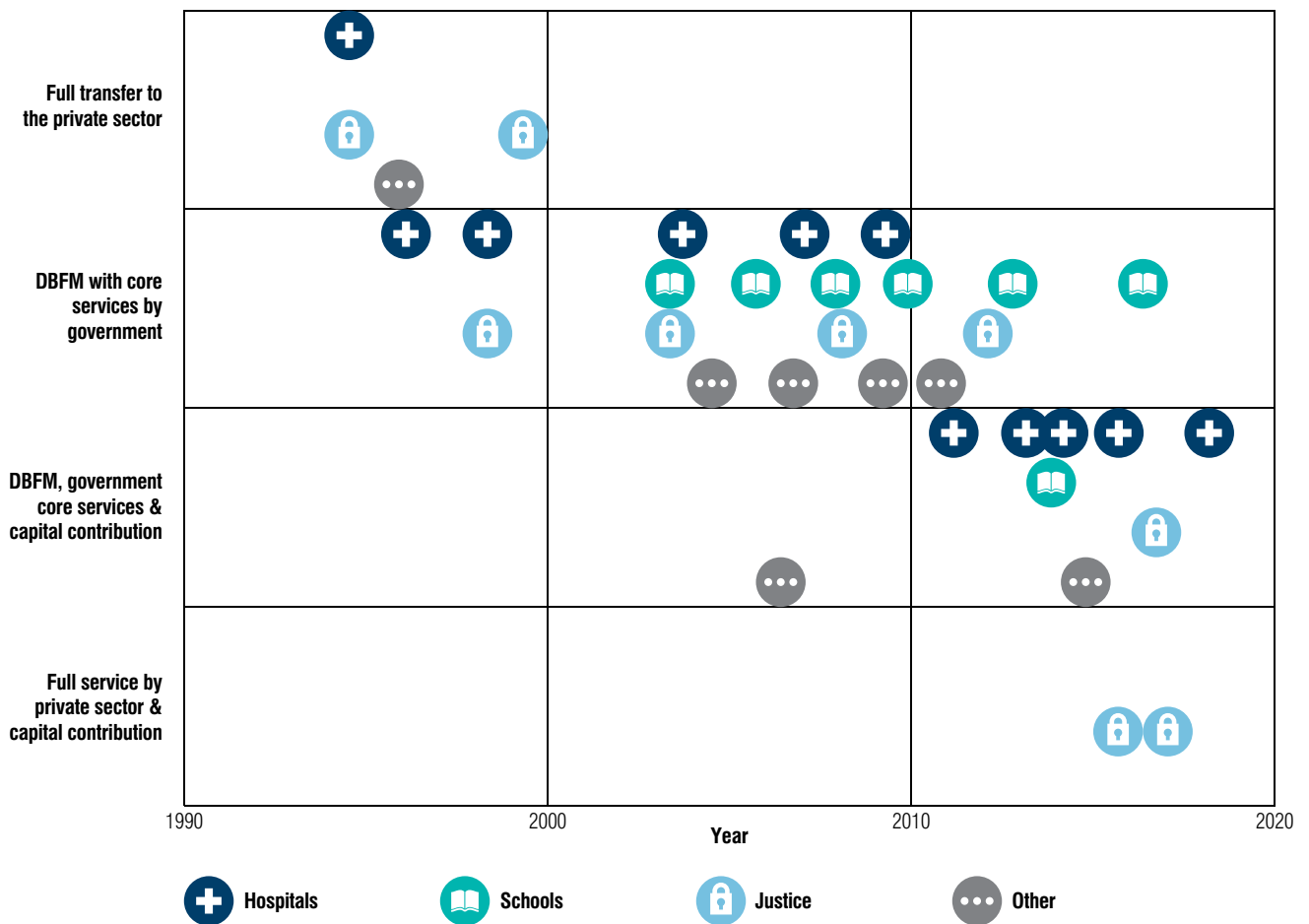
and non-core services to the private sector. However, from 2000 onwards, PPP policy and practices were revised to ensure the 'optimum risk allocation' principle (a risk is assigned to the party best able to manage it) is applied.

3. The model of DBFM with government delivering core services and also making a capital contribution represents transfer of all non-core services along with facility design, build, finance and maintain to the private sector. The objective of upfront capital payments by government was to minimise fiscal risk, lower cost of PPP contracts and improve public-sector flexibility.
4. The full service by private-sector model again represents complete transfer of core and non-core services to the private-sector. Recently there

have examples where justice sectors across both Australia and New Zealand have undertaken prison projects using this procurement model. The difference between this approach and that adopted in the 1990s is the greater level of management control through the use of KPI regimes and the potential for a capital contribution from government.

Given that the focus of this study is to understand whether the current styles of PPPs are meeting the original service expectations during their operational phase, it is reasonable that the sample of this study is drawn from projects since 2000, and where the facility has been in operation for at least three years.

Figure 1: Timeline of the four styles of social infrastructure PPPs in Australia and New Zealand since the 1990s¹⁹



2. RESEARCH

This section of the report discusses the overall research methodology utilised to evaluate mature social PPP projects in Australia and NZ. Additional details are provided in Appendices C and D.

2.1 The research brief

The scope of work undertaken by The University of Melbourne and Drum Advisory was agreed upon by Infrastructure Partnerships Australia and the Treasury departments of Queensland, New South Wales, Victoria and New Zealand. The scope agreed was:

1. assess whether mature social infrastructure PPPs are meeting the service delivery outcomes for service provider and contract manager groups set out in contractual agreements, media releases and other community information documents
2. compare, where data is available, service provider and contract manager satisfaction with PPP assets and service delivery to that of traditionally procured and delivered assets and services
3. identify what factors contribute to positive service provider satisfaction in PPPs and what factors can be attributed to poor service provider experiences
4. assess whether value for money (VFM) is maintained over the long-term operating phase of social infrastructure PPP facilities, and

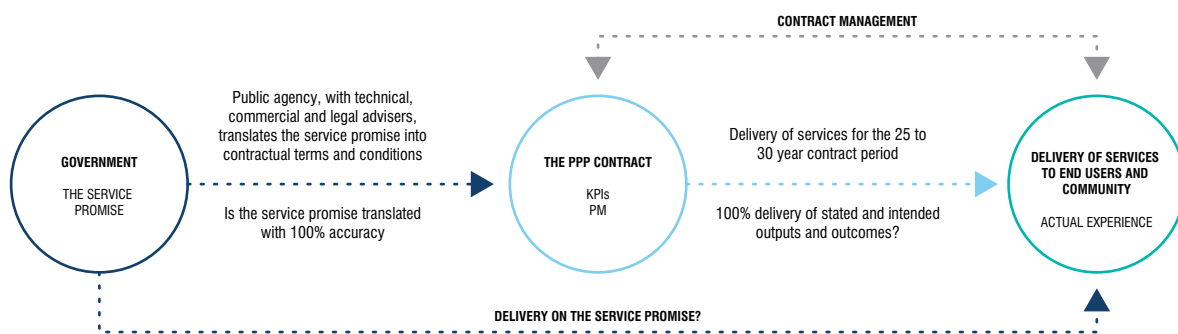
5. provide any recommendations for future PPP projects.

As Figure 2 illustrates, the focus of the report is to assess whether the service promise, as made by government to service providers and the general community, has been filled through:

- the drafting, negotiation and execution of the PPP contract, and
- the performance of the contractual obligations (particularly the Key Performance Indicators (KPIs) and the Payment Mechanism (PM)) as managed by the public agency’s contract manager and the PPP Project Co’s FM operator.

The judgements of the contract managers were observed to be heavily based on formal assessments of whether KPI targets were achieved and other contractual obligations. Conversely, those of the service providers were based on a largely ex-contractual assessment of how well their service needs, and those of their client community, were being fulfilled. This less formal type of assessment, which can be expected to closely correspond with the views of the general public towards PPP projects, is most useful to understanding how well the PPP procurement model is meeting identified service needs.

Figure 2: The service promise in context



2.2 Scope of the research

The case study projects were selected by the participating jurisdictions on the basis that the projects were representative of their social infrastructure PPP projects. The projects sought were in the domains of health, education, justice or ‘other’.²⁰ For a project to be included, it was necessary that:

- the PPP contracted services had been delivered for about three or more years of operations, and
- it was representative of the current style PPP contracts.²¹

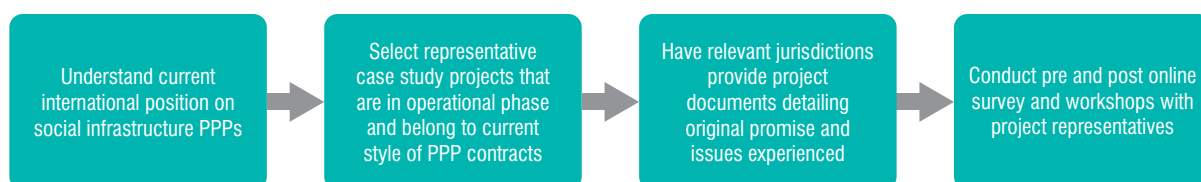
The total number of PPPs meeting these criteria in the participating jurisdictions is 28 and the nominated case study sample was 12 projects, representing 43 per cent of the total. This was considered reasonable given that all four categories of projects were represented, and that the study required access to individuals with knowledge of a project during its operational life. The projects nominated and researched are listed in Appendix C, Table C.1.

2.3 Research methodology

Figure 3 illustrates the four-phase research methodology used. The methodology actively used mixed method data collection and analysis approach to achieve the desired research outcomes (project scope items 1-6).

The project began with a systematic review of the literature on social PPP projects and comparable traditional projects. The literature review was conducted on three key areas: a VFM outcome

Figure 3: Research Methodology



The case study selection process, detailed in Appendix C, ensured that this research included key social PPP projects that are in mature operational phase. The projects investigated covered schools, hospitals, prisons and a general category of social infrastructure projects.

Phase two of research methodology included drafting polling questions and selecting the appropriate polling tool for use during workshop discussions, with separate questions (and workshops) for contract managers and service providers. Ethics approval was obtained from The University of Melbourne's Human Research Ethics Committee (ethics ID 1954426) enabling the researchers to recruit participants and begin the data collection process. Survey questions were administered to participants before the workshops took place.

Phase three of research methodology included overall data collection process using workshop discussions, live polls and follow up survey. Focus group discussions were recorded and transcribed for data analysis. Phase four of the research methodology included a qualitative analysis to identify critical themes (factors contributing to positive or negative experience) and a quantitative analysis to provide a spread (positive or negative) of service provider experiences. Qualitative and quantitative findings from data analysis along were used to draft the Report findings and to meet the final project scope item 6.

assessment including time and cost performance, service outcomes and benefits, and user experience and satisfaction including identification of factors contributing to the positive and negative user experience. The review of literature contributed to the development process for the workshops (focus group discussions) and surveys. This process included developing questions for workshop discussions and surveys, recruiting workshop participants and selecting venues, and is illustrated in Figure 3.

Project scope items one, three and four required primary data to be provided, while scope items two and five required documentation from participating jurisdictions pertaining to media reports, contract documents, annual reports or other secondary data sources.

2.4 Governance of the research project

This research project was sponsored and administered by Infrastructure Partnerships Australia, with funding from industry and governments. Infrastructure Partnerships Australia established an advisory committee that included Treasury officials from the four jurisdictions participating.

The conduct of the research and the drafting and finalisation of the Report were the responsibility of The University of Melbourne and Drum Advisory. This was done in accordance with The University of Melbourne's Human Research Ethics Committee approval and its protocols and guidelines.

3. FINDINGS

This section sets out the main findings of the research as related to the scope of work set in Section 2.1, and are derived from the analysis of the data, which is provided in Appendices D and E, collected from the research participants and project documentation.

The findings presented below are illustrated with the authors' observations in the workshops.

3.1 The PPP projects have delivered on the service promised

Finding 1

Service providers (95 per cent) stated that their PPP project has delivered on the service promised by the relevant state government and delivery agency.

Both service provider representatives and governmental contract management staff, were assessed as to whether their PPP project has delivered on the project commitments, through a series of questionnaires and workshops. The specific service commitments were made by way of business cases, key media releases, major project documentation and other relevant official communications such as Auditor General Reports. The service commitments are paraphrased in Appendix D.

While commitments were specific to each project, there was constancy regarding quality of the facilities, high service standards, whole-of-life expertise, 'value for money' and professional facilities management. While some commitments were contractually measurable, others were assessed by service provider's perceived satisfaction level.

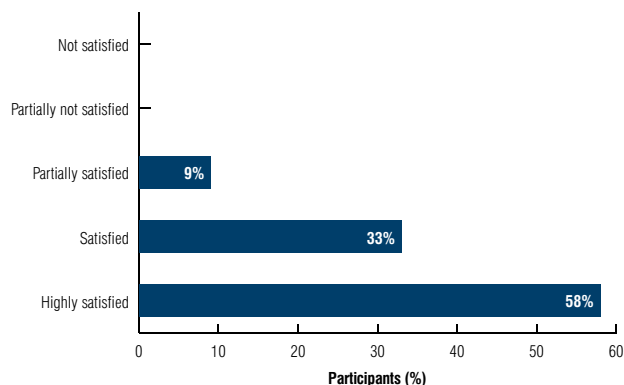
Many of the commitments made related to physical scale of the project, such as the minimum number of hospital beds or capacity of a convention centre and such obligations were reported to have been always fulfilled by PPP Co. Indeed, the acceptance of these deliverables formed the basis of commercial acceptance of the project, and many projects received industry recognition through a range of awards.

Contract managers consistently advised that pricing and risk allocations remained as per the original agreements, and that the private sector had not sought variations against the original agreement unless government requested a modification or

service change. This was measured by comparison of governments' original estimate of the price of the service compared to the price offered by the winning consortium. Appendix D details the savings claimed for the various case study projects. The contract managers and the project documentation also confirmed that it was common for abatements to be applied if services were not received in accordance with the agreement.

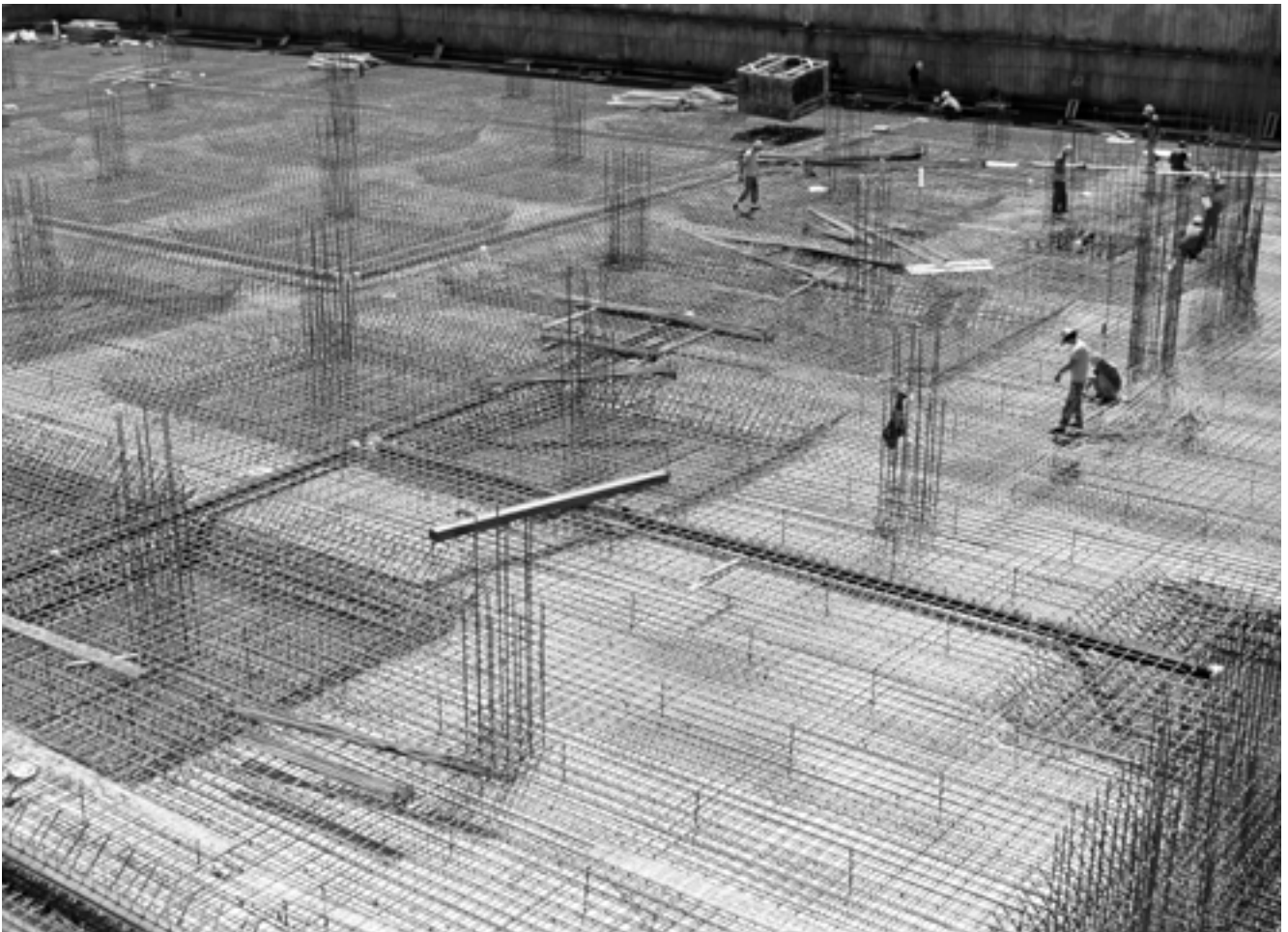
In addition to the straightforward assessment of tangible physical scale or contract value commitments, the study also appraised the perceptions of service providers and contract managers. Participants were tested to see whether their level of satisfaction with the services of the PPP model were as promised. As Figure 4 shows the overall satisfaction tends toward participants being highly satisfied.²² This aligns with the commitment of 'enhanced services' through the PPP model.

Figure 4: Perceived satisfaction level of social PPP projects²³



The service providers overwhelmingly reported that their PPP project has achieved the service and consequent benefit outcomes promised. Contract managers also reported that PPP projects had delivered on the service commitments made by government and others at the stage of project announcement and during establishment. A common theme was that the PPP projects are working very well, and on balance were providing superior service outcomes for the service providers and their client community.

Contract managers made references to issues ("rough edges") that needed on-going management of the contract relationship to ensure optimal delivery of services by the FM operator. However, these same contract managers reported their PPP projects were delivering to government a good deal and in



some cases exceeding expectations. They reported instances of innovations that improved the value proposition for government.

There was near universal agreement among school-based service providers that the PPP model had delivered on the service commitments made by government and others at the stage of project announcement. They reported modern leading edge, fit for purpose facilities combined with a flexibility of operation that allowed for changes to be made. For example, among school-based service providers a key commitment met was to significantly free up the time of school principals for educational leadership. Principals reported that when the new school opened significant extra time compared to the non-PPP school setting was released for immediate pedagogy leadership rather than on FM issues.

Typical of the general view, service providers generally observed that in PPP facilities things get fixed quickly. Some school-based service providers observed that

the older PPP buildings look better than some of the new facilities procured by traditional models. One group of school principals stated that they have not been on a security or FM related call-out for 10 years. A school business manager estimated that her time devoted to FM issues had reduced by 30 per cent. Service providers generally appreciated the time and effort in shifting to the FM operator the security clearance of all FM personnel coming on-site.

While service providers felt that the service commitment was met, some felt that the service promise should be built from bottom-to-top, with the reality being often top-to-bottom. Most service providers reported that they were not consulted on the contracted KPIs and the payment mechanism. However, this was not identified as a significant issue in levels of overall satisfaction.

3.2 Service providers prefer to work in PPP projects

Finding 2

Service providers (95 per cent) and all contract managers participating in the research prefer working in a PPP facility and service contract over a traditional government-owned and operated facility.

The authors clearly observed in workshops a commitment among service providers and contract managers to the PPP model. This preference was expressed not only in wishing to continue working in a PPP facility but also on their keenness to highlight both the strengths of the model and in suggesting improvements for future projects.

Service providers reported that they preferred PPP projects because they afforded the opportunity to focus on providing services to their client community. To paraphrase one school-based service provider, “I like that in a PPP we have a FM expert that does the FM and that the educators do what they are experts in. And, I like that maintenance and upgrades are funded and carried out. PPP schools work better for students, and with better facilities the students take pride and treat the buildings better”.

One principal stated that “*another advantage of a PPP school was a significant decrease in vandalism*”. It was also stated that “*higher student attendance levels were evident in PPP facilities*”. The theme being that maintenance is funded and carried out in a timely manner, and that students’ response to this service uplift with an understanding that they are the beneficiaries.

The one exception to this majority view was a service provider that reported difficult relationship with their on-site FM operator. The result being contractual obstacles being quoted to stop or delay FM services being provided, and the bounds of good manners being occasionally crossed. Interestingly, this on-site FM operator was employed by the same FM operator that employed other on-site FM operators receiving high praise. This comment drew attention to the influence relationships have on actual and perceived levels of service.

Contract managers expressed the view that they preferred working in PPP projects as it gives a richer

and more rewarding professional experience. This experience was found to be largely positive, with the quality of the experience being influenced by whether or not their relationship with the FM operator was a ‘partnership’, characterised as a good working relationship where positive and negative news could be equally aired for discussion and, if necessary, resolution.

3.3 The PPP projects are delivering on their contracted services

Finding 3

Service providers (82 per cent) expressed a strong appreciation of the quality of services provided by the Facility Management (FM) operator in a PPP facility. Satisfaction level with service quality is strongly influenced by the experience level and relationship between service providers, contract managers and FM operators.

The quality level of services being provided in PPP facilities was assessed via contract documentation, and survey and workshop participation. From a contractual perspective, PPPs unequivocally deliver a high standard of service due to contractual obligations. The perceptions of service providers and contract managers also confirmed a high level (82 per cent) of service being provided during the operation stages of the PPP facility. It was found that perception levels were highly influenced by the quality of the relationship between FM operators, service providers and contract managers, as well as the relative experience level of the various parties.

Service providers and contract managers reported, and this was confirmed in review of contract documentation made available by jurisdictions, that the PPP projects were overwhelming delivering satisfactorily on their contracted services.

As expressed by one contract manager, in PPP projects there is more pressure on getting the service right, with greater accountability than in a non-PPP project. This resulting in a heightened focus on the FM operator performing to the requirements of the Contract. This contract manager thought that while this may also make for a risk-averse approach, the PPP model does allow for innovation and to react quickly with focus on providing the contracted and even improved services to the service provider.

Given the long-term nature of the multitude of contracts investigated, it was reasonable to expect cases of KPIs not being met or of other contract breaches resulting in abatements to payments. When contract managers were asked to comment on such cases in their projects, it was found that the application of contractual abatements range from “regularly” to “never,” for fear of relationship damage. However, the fear appeared unfounded as those contract managers that did abate reported changes leading to better, mature and positive relationships. These contract managers reported that abatements were managed through contractual processes and the services were quickly brought back on track.

Most contract managers indicated that constant attention is needed by both themselves and the FM operator to ensure optimum service delivery to the service providers. This was a view shared by service providers. It was also observed that as the contract managers and the FM operators gain experience and expertise, and new generations of PPP contracts are entered into, operations and ease of contract management improve.

Some service providers reflected that the performance of the PPP project was enhanced by the maturity of personnel (both public and private sector) to deal with the reality of operations, and manage the relationship clauses in the PPP contract. They felt that mature discussions lead to speedy resolution of issues. One contract manager observed that 70 to 80 per cent of issues and their solution in the PPP facility and service contract are similar to those faced in a non-PPP facility.

Service providers and contract managers both felt it was important not to allow performance and attention to service quality to drift over time. Some expressed the view that the drift can be towards “what the contract says” rather than working the relationships to optimise mutual benefit. All were of the view that contract management was not “set and forget”.

Contract managers also observed that in social infrastructure PPPs they needed to develop strong service provider relationships, more so than compared to managing economic infrastructure PPPs. Some suggested that management of social infrastructure PPPs projects required more processes and structure, including the escalation of issues, to ensure that the multitude of KPIs, stakeholder action items, outstanding FM matters and other issues were addressed in a timely manner.

When pressed for details, school-based service providers were generally of the view that they were best serviced when the on-site FM operator:

- was responsive and engaged with their activities and the educational objectives of the school
- approached the role with good-will and a “can do” attitude rather than seeking to hide behind the contract²⁴
- acted in a manner responsive to maintaining and advancing the school environment that mirrored a diligent caretaker in a non-PPP school, and
- had a natural aptitude for service.

The service providers were also of the view that such desirable characteristics of the on-site FM operator need to be enabled by the head FM operator. The FM operator needing to be engaged in enabling a strategic, rather than transactional, service. A service should be responsive and tailored to their specific needs and their way of operating. Some service providers, for example, stated the process of logging jobs can get in the way of them servicing their client community in a timely manner.

Another clear theme emerged that superior outcomes with PPP facilities and services are linked to not only a strong on-site facility management team but also open lines of communication with the PPP Project Co. This is discussed further in Section 4.1.

It is worth noting that, while service providers were not shy in highlighting areas of improvement for FM provision (such as maintenance, upgrades and new works) and the service provided by their on-site FM operator, most also quickly acknowledged when prompted that their on-site FM operator had a service-friendly orientation (“they are here to help and they do help”).

3.4 The PPP projects deliver service outcome to expectations

Finding 4

All service providers agreed that the PPP model provides similar flexibility provisions to traditional procurement models.

Service providers stated that the PPP model was not usually inflexible when seeking change. Service providers were generally of the view that overall PPPs



are “flexible”, being in this regard no better and no worse compared to non-PPPs. As a service provider stated, “we get changes done in PPPs and there is a process to follow,” noting that in the traditional setting there were other processes and other types of obstacles to overcome.

However, a few service providers reported that some details in the PPP contract were applied in a way that restricted their flexibility unduly. One such example was the restriction in painting a mural on an external wall (see Section 4.5). Another example was the ability of schools to refresh furniture and equipment through the sale of old stock to partially fund new stock.

Flexibility can be improved through “no-fault, no-blame” changes to KPIs and minimising the administrative cost or effort of changing KPIs (especially where contracts have approximately 100 KPIs). The view from service providers and contract managers was that the PPP arrangements should be outcome-focused and less prescriptive, so that the “small stuff” can be resolved on-site and not take a long time.

A contract manager, whose comments were confirmed by others present in the workshop, stated that the ‘service’ was better at the PPP facility compared to a non-PPP, and although over time management usually make various changes to the PPP facility (as indeed happens in the non-PPP), this does not change the level of satisfaction experienced by the service providers.

3.5 The research provides lessons for planning new projects

Finding 5

Service providers and contract managers are a valuable and underutilised source of improvement initiatives for future PPPs. There is room to incorporate their operational phase experience into the planning phase of new projects.

The planning of future PPP projects can be improved to help achieve better outcomes by:

- involving contract managers in the early stages of the procurement process to identify and assess additional benefits associated with the choice of a procurement model
- engaging with additional service providers during bidding and design refinement phases of the project
- improving contract management practices to ensure a consistent level of expertise among contract managers within and across state governments
- ensuring that all contracts provide flexibility provisions to manage future changes as the community’s service needs evolve, and
- building strategies in the PPP arrangements that promote open and smooth communications between service providers and FM operators during operational phase.

Throughout the workshop process, service providers and contract managers constructively identified opportunities for evolution and continued improvement in the PPP model. The participants displayed an in-depth understanding of the effect facility design and operation had on ultimate service delivery to consumers. For most participants, the workshops were their first opportunity to provide formal feedback on their PPP facilities. The findings are summarised below.

1. Involving contract managers in the early stages of the procurement process to identify and assess additional benefits associated with the choice of a procurement model

Contract managers strongly expressed the view that they should be involved early in the drafting of contracts. Some observed that tenders had the nature of a “drawing competition” (that is, excellent architectural sketches but lacking in depth operational knowledge to inform functional outcomes), with tenderers espousing what resources they would make available solely with an emphasis on the built form rather than operational matters. Without the perspective of the service provider and contract management, this tender approach was not optimal for the operational 25-year relationship.

Contract managers believed tenders could be improved by giving additional attention to how FM operations and the on-going FM relationship would work on the ground with the service providers. They highlighted the complexity in social infrastructure relationships and the need to bridge the interests of future service providers with the FM operator and its representative, the on-site FM operator.

In some jurisdictions, it was reported that a central agency takes the lead role in the PPP procurement process, and that after contract execution the service delivery agency becomes responsible for contract management. It was suggested that early involvement of the delivery agency would facilitate the benefits of contract management perspectives during the drafting of contracts. On the other hand, a heavy focus on the commercial and contractual relationship may lead to a more limited contractual outcome.

2. Engaging with additional facility service providers during bidding and design refinement phases of the project

While service providers overwhelmingly prefer to work in PPP facilities, they suggested greater service provider involvement in the design phase may prevent instances of poor design. The comments were primarily made by service providers of school projects, rather the other Social Infrastructure PPP categories.

Many principals noted that neither they nor a colleague principal had the opportunity to input in the design process.²⁵ They elaborated that such issues were of detail, for example, good green star building outcomes but the use of heavy swinging doors that young students could not push, and inappropriate furniture and equipment provision. A theme emerged that such issues coalesce to create a sense of avoidable negativity, although this does not take away from the broader sense of positivity about the new facilities. While such issues of detail are acknowledged to also exist in non-PPP schools, it was highlighted that in some jurisdictions the input of school-based reference groups are not involved in the PPP design phase.

Another issue highlighted was that in some jurisdictions the government or school was responsible for paying energy and water bills, however, the on-site FM operator had control of energy and water consumption. These principals pointed out that rooms were lit and cooled or heated irrespective of whether they were occupied or indeed the school wanted cooling or heating. They pointed to cases where rooms were heated in the mornings and cooled in the afternoon when sometimes all that was necessary was to open windows. Moreover, such overuse of electricity (and water on playing fields during rainy days) was counter to their wish to instil a respectful use of environmental resources among students.

Service providers generally suggested that in future PPP projects, service providers need to be involved with bidders in design and establishment planning to avoid such issues. While such an involvement may have cost and time implications for the D&C provider of the SPV, the benefit would be greater goodwill from service providers. Another theme that emerged from principals is that each school wants to build its own culture and that “space” needs to be provided in the design and establishment process for this input (see also Section 4.5). In relation to this, the authors heard from some principals that the second generation of PPP schools project address this matter much better than the first generation.

3. Improving contract management practices to ensure consistent level of expertise among contract managers within and across state governments

The workshops evidenced some inconsistency in the experience and confidence that contract managers approach their role. Some contract managers reported that they abated payments to the FM operator as allowed by the PPP contract. And these same contract managers then found the FM service changed for the better, with the on-site behaviours maturing into more positive relationships. Other contract managers stated they were reluctant to abate payments when indicated as a valid step under the PPP contract. These contract managers felt that abatements would endanger their relationship with the FM operator.

The first group of contract managers, which the authors judged to have significant experience in their roles, took that the view that the application of valid abatements worked to get the PPP Project Co's attention and assist with problem solving FM service shortfalls.

4. Ensuring that all contracts provides flexibility provisions to manage future changes as the delivery of core services to the community evolve

Service providers were generally of the view that the PPP contractual arrangements should encompass a provision that "normalised" change and the rectifications of issues arising during the design and specification stages. A number of design or specification shortcomings in the operating facility were reported that arose in spite of best efforts by all parties (for example, acoustic treatment of walls that were not fit for purpose). Service providers expressed disappointment in such cases where they needed to engage with external professional advisers to make the case for rectification. It was felt that their "partner" (that is, a hugely experienced FM operator that was often a large company with similar contracts across many jurisdictions) would work with them collegially to achieve what would be a reasonable and well know FM service requirements.

Some service providers felt that the PPP model could be improved by reducing complexity and being prescriptive on matters that had a high chance of becoming out-of-date over 25 years. For example, catering standards, allocation of energy costs, green energy standards and cleaning standards that were based on assumptions that may or may not be relevant for 25 years. The question of how to evolve and avoid obsolescence has been a long-term issue for the PPP

model, and the service providers in workshops were calling for a resolution by introducing flexibility as a 'business as usual' item in the contractual terms.

While these service providers acknowledged that such an issue of evolution, and dealing with resourcing implications, were common to both PPP and non-PPP projects, the PPP projects had an additional impediment. They thought the PPP contract was written from a risk allocation perspective rather than an operational perspective that focused on service delivery to service providers and their client community.

More generally, service providers felt that there should be a mature-minded process for changing the performance regime (including "resetting" the KPIs) based on emerging industry developments and experience. It was suggested that there is now sufficient history, 15 years of PPP social infrastructure projects, to make more use of price benchmarking in contracts and of recognising flexibility as a "risk", that needs to be managed and costed.

At a more detailed operational level, a few service providers also expressed the wish to make variations to an on-going job order easier to deal with. They sought understanding and flexibility in the FM protocols that were responsive to the professional experience of general staff (that is, coming from a non-works background). These service providers wished to avoid the 'red tape' and unreasonable financial trap experienced when initiating variations, which were more difficult than in non-PPP arrangements.

A few service providers expressed frustration at needing to commission discretionary small works and jobs through the FM operator. They pointed out not only the relatively long delay to getting the job done but also the extra cost. One school principal felt that he could buy \$20,000 of works and equipment directly, but this would only stretch to \$4,000 with the FM operator. While there was an acknowledgement of the FM operator using *whole-of-life* costings and had on-costs to pass on, there were nevertheless objections to this way of doing things.

5. Building strategies in the PPP arrangements that promote open and smooth communications with service providers and FM operators during operational phase

Service providers suggested the introduction of several communication initiatives to improve their experience of the PPP project. One suggestion was formal communication protocols to deal with their large and

small concerns. Some service providers pointed out that “small” concerns (normally low-value, frequent and capable of being quickly addressed) had a way of cumulating and causing significant dissatisfaction. These protocols should allow service providers to follow through the escalation of their concerns from the on-site FM operator through to the PPP Project Co.

Service providers also suggested that the on-site FM services be the focus of continuing communication through the facility. They suggested that the FM operator and PPP Project Co market and advertise throughout the site to all staff and their client community, and include in their communications:

- service ethos
- service outcomes that define ‘success for them’
- the specific services under contract
- quality and time measures of performance
- identifying ongoing on-site FM staff
- identifying and notifying visiting FM personnel (for example, trades and people on-site temporarily)
- notification of jobs and services being undertaken – commencement and completion dates and description of the quality standard, and
- regular and on-time notification of successes and failures in the provision of FM services.

Some service providers were of the view the on-going performance of the FM operator and PPP Project Co should be made visible to all staff and their client community.

3.6 PPP projects are delivering long-term VFM outcomes

Finding 6

PPP facilities maintain value for money over the long term. There was no evidence of price creep or risk transfer back to the public sector during the operational phase of the case study projects.

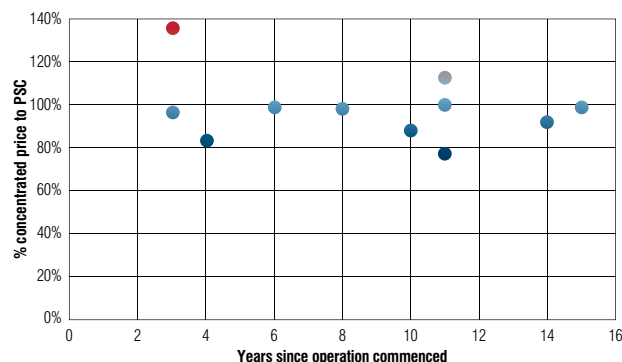
Value-for-money (VFM) during the operational phase was assessed via project documentation and commentary from interviewees familiar with the commercial status of the PPP facilities. There was strong evidence that the contracts were being administered in line with the agreements struck and no evidence of risk transfer back to government. There were many examples of abatements being applied if

the required service standard was not met or met in a timely fashion.

The research explicitly focused on VFM over the long term, to fill a gap in current literature. While reviews by the various Treasuries, as well as Auditor General reports and independent research reports, have established that the VFM test was achieved at the time the contracts were let and then to the conclusion of the construction phase, it was assumed, rather than confirmed, that VFM was maintained over time.

Figure 5 plots current value for money for the case study projects against the number of years in operation. All projects have maintained their value over time relative to the Public Sector Comparator (PSC), with oldest operating project spanning a period of 15 years. There is no evidence of attempted price gouging by the private sector over the operational phase or transfer risk back to the public sector. The alignment of private and public incentives achieved during contract negotiation have held over the long term.

Figure 5: VFM achieved for the case study projects over time



While service providers do not have visibility of the costs for the services being provided, their general impression is that VFM has been maintained during their involvement with the PPP project. They acknowledged that the price of the PPP contract was matched by its high level of service, and they felt this price was appropriate and welcomed. There was one example where general departmental practices had been enhanced to mirror the PPP level of services, and in this case, costs were reported to be similar to that of PPP projects.

Although evaluating the impact of innovation on VFM outcomes was not part of this research project, its importance was evident during the research workshops. Innovation was observed by the authors as one of the VFM factors that was indirectly discussed by service providers. Service providers gave examples of excellent design in facility layout, or new facilities management techniques, which they believed added value to the facility. If innovation is part of the government's project brief, then it is crucial to measure core service performance changes due to innovation in operational phase. Given the key role of innovation in PPP projects, the authors believe SPVs should continue to communicate to all stakeholders the value derived from innovation during operational phase.

3.7 Providing service providers a “handle” on their PPP project

Finding 7

Service providers are poorly informed about the difference between PPP and traditionally procured facilities, restricting their effectiveness in the PPP facility.

During the workshops, it sometimes appeared to the authors that while service providers were experts within their respective professional fields, it was less evident that most understood the principles and details of the PPP procurement model. All displayed an appetite to learn more of the commercial and service delivery principles of the PPP model. Many service providers reported a low or poor knowledge or understanding of the PPP contract applying to their project, stating that they did not have access to a copy. Some also felt that they didn't need to be knowledgeable of the contract,²⁶ they just needed to press and ensure they obtained the FM services and works they required to effectively and efficiently deliver to their client community's needs.

A few contract managers made a point of stating in workshops that part of their job was to remind service providers where the boundaries of responsibilities and accountabilities were in the PPP contract. They pointed to a shift in attitudes from a non-PPP facility where if they wanted a FM matter attended to, they took the responsibility to find the resources to manage it, to a PPP facility where they just put in an order without the same sense of responsibility.

Great interest was expressed by service providers during workshops in understanding the PPP model and how they can engage to continuously improve the services they obtain from the PPP contract. It appears there is currently a shortfall in the breadth and rigour with which service providers in management positions are orientated and informed to work effectively and efficiently in a PPP project. To paraphrase one service provider, “you learn on the job, you don't arrive [at the PPP project] with a good handle on how to maximise your part of the relationship”.

Several service providers reported some mistrust of the FM operator's costings of new work or variations initiated by them. This mistrust was particularly strong in the few instances where the relationship with the on-site FM operator was poor (see also Section 4.1). In this latter case, the service providers also felt that the on-site FM operator was gaming the reporting and recording of FM issues, and employed an inflexible interpretation of the contract to avoid solving issues. These service providers expressed a strong appetite to consult on the strategies used by other service providers, and would welcome an understanding of how they could provide a regular performance review of their on-site FM operator and be part of an escalation process for issues that involved them directly.

The discussions in workshops highlighted that participants had a strong desire for forums, across different sectors, that would provide a platform for on-going sharing of lessons learnt. Service providers stated they would welcome the introduction of such forums, and some contract managers highlighted the importance of existing whole-of-jurisdiction forums and the current national forum.

4. INSIGHTS AND OBSERVATIONS

In addition to the findings in Section 3, this section records additional noteworthy insights and observations on issues of importance to service providers and contract managers, and which were not captured in the Report's main findings. The authors believe these matters are worthy of consideration when managing current PPP projects or planning future PPP projects for social infrastructure.

4.1 Regular engagement with PPP Project Co is a key to success

Many service providers identified that regular project review meetings with a PPP Project Co representative improved working relationship with the on-site FM operator, and gave traction on problem solving issues. This is consistent with the observations among contract managers noted in Section 3.3.

Nearly all service providers experiencing highly productive and satisfying relationships and responsive services from their on-site FM also reported regular meetings with a PPP Project Co representative (or in one case with the “boss of the boss” of their facilities manager). Service providers also observed that FM operations improved significantly once contractual abatements were implemented and the PPP Project Co representative took a close interest in the performance of the on-site FM operations.

At the other end of the satisfaction spectrum, a small number of service providers reported having long-term poor experiences with their on-site FM operator. These service providers reported they had no contact with a PPP Project Co representative nor senior executives from the FM operator. Moreover, these service providers did not feel empowered to escalate their issues.

Interestingly, this group of service providers reporting their poor on-site FM operator experience were from the same jurisdiction and had the same (head) FM operator as another service provider group that reported they were delighted with their on-site FM operator. (This latter group came from a 2nd generation of PPP projects.)

4.2 “Staff do not know whether it is a PPP or non-PPP facility”

Service providers in management positions, and contract managers, reported that non-management staff (for example, classroom teachers, nurses and other clinicians, and prison guards), along with their client community, were not focused on, or even aware, whether theirs was a PPP or non-PPP project.

The general view being that the operating model of the facilities and associated FM services was not front of mind for non-management service providers, although the rules for decorating walls and getting things fixed might be different from non-PPP facilities. However, this difference was not considered to be significant to the non-management service providers as these rules also regularly vary from non-PPP facility to non-PPP facility.

The authors believe that this lack of visibility, of PPP versus non-PPP among non-management service providers, is a significant and positive testament for the PPP model. For example, in the school sector it is important and normal that teachers personalise learning spaces to promote their teaching content or illustrate the work of their students. This being one way that schools define their culture. It is a positive outcome for the PPP model that teachers feel unfettered, and unaware of the PPP contract ‘rules’, in utilising learning spaces for the benefit of their students. It suggests that the ownership and management of the school facilities does not adversely impact on the sense of educational “ownership” teaching staff have for the PPP school.

4.3 Are service providers just tenants?

There was a theme from some service providers in management positions that they either felt like tenants or were described as such by the on-site FM operator and sometimes even by their agency's contract manager. Some felt such a description was used to imply restrictive, low power and negative connotations. Perhaps this description was used to explain the rationale of unfamiliar “dos and don'ts” being imposed upon service providers new to the PPP model. Moreover, this sense of being a tenant was exacerbated in service providers who were involved in planning and developing designs of the PPP facility (by comparison service providers are normally represented in traditional procurement of projects).

The authors believe that having this sense of being a tenant, either by the service providers or by the on-site FM operator, has a negative impact of connecting the service providers of the PPP facility (see Section 3.5). The authors also believe this description of service providers as tenants is incorrect.

Service providers are not working in a PPP facility because the government cannot afford to “buy” such a facility (the common community sentiment of why people become tenants). Indeed, the government has the funds to ‘buy’ the PPP contract which provides a

full service that does not, by all accounts, cut corners. The government, unlike tenants generally, have the resources and decision-making flexibility to decide, usually after much consultation and developing business cases, on whether to proceed with the PPP model. The government calls for tender and produces the terms and conditions under which it is prepared to proceed with the PPP project.

If service providers are made to feel, in a negative sense, that they are tenants, then this is incorrectly and unnecessarily imposed on them. It may be useful for Treasury or the service department to articulate the context and strategic nature of the service provider role in the PPP model (see also Section 3.7.) Similarly, it would be beneficial for the FM operator to explain the PPP model to its on-site FM operators and its role in servicing service providers.

4.4 Are there too many KPIs?

One senior service provider stated, “I would like to challenge the ethos of KPIs”. The view being that there should be a discussion between the State and the PPP tenderers, a challenge on how best to contract (and cost) for service outcomes rather than prescriptive KPIs that seem to grow in number from contract to contract.

A few contract managers expressed the same concern with the large number of contracted KPIs they need to manage, in one case there being nearly 100. Similarly, some service providers expressed concern with the time and energy it takes their on-site FM operator to deal with FM issues because of the contract details. With such details, the ‘process’, can be used as an excuse for either delay or take no action on matters of urgency to the service provider.

A theme emerging from service provider workshops was that a balance between prescriptive versus open requirements for the mutual benefit of the two parties was elusive. That there was a mindset on outputs rather than the outcomes sought by the service providers to service their client community.

The service providers in workshops made a strong favourable impression with their focus and passion for addressing the interests of their client community. And these committed individuals often felt frustrated, not with the ‘big picture’ of their PPP project, but with the small details. The question of whether such dis-satisfaction by service providers should be addressed by additional KPIs details or by a greater reliance on outcome statements (with fewer details) is

an interesting one. One position, to paraphrase one principal, “I don’t know the contract and I don’t really care about it, we just expect the services we require to serve our students”.

Service providers generally expressed frustration²⁷ with the ‘red tape’ of needing to log small jobs that are often repetitive. For example, the rearrangement of furniture in a space before a new activity or an unexpected and urgent cleaning job. Some service providers report that the lack of agility and timeliness by the on-site FM operator responding to such jobs results in the service providers doing the work themselves (sometimes contrary to standing rules). Small delays can be significant as they result in disruptions to the workflow servicing the client community. Some service providers also reported that over time a “partnership” relationship develops with the on-site FM operator where informal or verbal job requests are accepted, making life much easier.

One contract manager provided the opinion that their project was highly successful because the FM operator approached their role as being in an “operational partnership” rather than in a “commercial transaction”. This contract manager believed that their PPP project worked well primarily because of the strong FM operations and less so the design and quality of the facility. It also emerged that school principals had diversity of pedagogical philosophy and a strong interest on the look and feel of their facility (and the furniture and equipment) as an influencer of student and parental attitudes towards the educational experience. Both of these examples suggest the importance of, *inter alia*, an “operational partnership” based on agreed outcomes rather than a “commercial transaction”, an approach not consistent with evermore detailed KPIs.

Arguably, it is difficult for a PPP contract for social infrastructure with many prescriptive KPIs, and a concession period of 25 to 30 years, to address all the complexity, nuance and variant requirements of service providers. While particularly the financiers of the PPP project, might appreciate the certainty detailed KPIs offers them, perhaps governments and tenderers should explore the feasibility of making a greater use of statements of outcomes in future PPP projects and reduce the number of highly detailed KPIs. Given the number, maturity and successful history of PPPs in social infrastructure, such a formulation of outcome statements would not be wholly a leap into the unknown.

4.5 The “hand back” clause in schools

As repeatedly observed in this report, school-based service providers had a strong interest and emotional connection to the look and feel of the PPP facility. One school principal was unhappy at being stopped from commissioning an Aboriginal artist to paint an external wall mural because the FM operator felt this would have an adverse impact when handing the facility to government at the end of the concession period.

The authors feel that with social infrastructure, more so than in economic infrastructure such as toll roads and water treatment plants, the hand back at the end of the concession period is a multi-layered issue. In economic infrastructure, the objective is to take back an un-depleted asset that is close to ‘as good as new’. However, while the objective is to take back a school in a ‘good as new’ physical condition, the school community that has emerged would arguably want to see evidence of a flourishing and continuing culture, and of a tradition developed over the past 25 years. A ‘as good as new’ physical environment that is sterile of culture and tradition is unlikely to appeal.

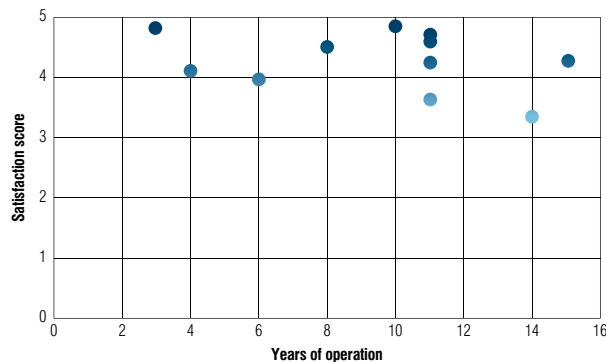
The drafting of the hand back clause in a PPP contract for social infrastructure should be sensitive to the long-term wishes of the community it serves.

4.6 Is there a honeymoon period?

In workshops, where the views of the participants were explored in some detail and issues were assessed on levels of impact, the service providers and contract managers did not believe that there was an early period of exceptional service driven by a freshness and enthusiasm for a new project, which was then followed by fatigue and ordinary service levels in the years following commissioning. In the workshops, the judgement of service providers ranged from exceptional service being a constant over a period of many years to one project where ordinary service was the constant.

However, outside the workshop context, the polling of service providers showed that while nearly all prefer to work in PPPs projects to traditional procured projects, there were some frustrations experienced as the projects mature. This reduction in levels of satisfaction trends from a score of 4.6 to 4.0 or by 12 per cent. Figure 6 shows the trend of satisfaction level among service providers over time based on scores weighted 50 per cent survey and 50 per cent workshop.²⁸

Figure 6: Satisfaction levels expressed by service providers over years of project operations



It can be noted from Figure 6 that 10 out of 12 social PPP projects displayed a high level of performance, while two projects displayed satisfactory performance when compared to the selected pool of projects.

It is possible that some part of this observed reduction in levels of satisfaction can be explained by service providers becoming acclimatised to a certain level of performance and perceive a constancy as a lack of improvement over time and hence a deterioration.²⁹ The contract managers, in managing contracted service levels and KPIs, did not highlight a reduction.

Some service providers stated that the important issue was not fatigue but staff turnover that impacted the on-site FM operator service. These service providers felt that the FM operator should recruit and retain suitable people to minimise the disruption that come with the loss of corporate memory and the loss of investment in productive on-site relationships.

One contract manager observed that after a number of years of operations, the risk emerged of relationships and processes becoming set or cosy with a business-as-usual mode of thinking. The view here being that occasionally contract management may need a reset and that perhaps a new contract manager, with a refresh reading of the Deed Poll, may be beneficial to achieve new levels of service and achievement.

4.7 “Our project is not an island”

Several service providers, across sectors, expressed a view that the presence of their PPP facility, and their organisation’s relationship with the surrounding general community, would have benefited from additional attention and enhancement, albeit at potentially a cost, during the project tender and planning phase.



In the case of schools, some principals noted most new schools open in new residential developments meaning new emerging communities. These principals noted that while traditionally procured schools were able to play an important role as a meeting centre for the developing community, the PPP model can be a barrier. Issues of public liability and insurance premiums can keep the doors to the school grounds and facilities closed out of school hours. Mirroring the comment in Section 4.2, the principals observed that their communities do not care whether their school was procured under the PPP model. However, they do care about the existence such barriers that are not easily understood by them.

4.8 Governments are strategic high-value clients

While not a frequent occurrence, it was reported in workshops that the same FM operator contracted across separate PPP projects in the same jurisdiction provided a different service experience to service providers. In one extreme example, a service provider group reported delight with their on-site FM operator, while another service provider group, in the same sector with the same FM operator, reported high dissatisfaction with their on-site FM operator. The authors further observed that the approach of the public sector contract managers to deal with this FM operator was to consider the performance in each PPP project in isolation.

While there might be a view that each PPP contract should be dealt with on its own terms and conditions, the authors believe that there is nevertheless an opportunity for government as a high value repeat customer. This opportunity is based on recognising

that within a jurisdiction 'government' is one legal entity that contracts and funds across projects and across sectors. As government is often a market dominant repeat buyer, it can be expected that the FM operator would welcome the opportunity to address any negative experience that might impair its reputation when tendering for future contracts, and accordingly would welcome a contract manager highlighting the discrepancy in the quality of service from one project to another.

It is reasonable to expect, following good probity principles, that high performing suppliers would want their client's past and current experience with them to be taken into account in a tender selection criterion for the next contract. Indeed, failure to do so, particularly for poor performing suppliers, may effectively result in the Client allowing itself to be treated as a 'nuisance' or as an 'exploitable opportunity' (there being no adverse consequences for the supplier's past poor performance).

In the case of FM operators, and other members of PPP Project Co, it is reasonable for them to be held accountable for 'patchy' performance when this is documented and evidenced (see also Section 3.3). It is also reasonable for government to appropriately take a FM operator's track record (of performance and its responses to issues of poor performance) when evaluating future tenders. Moreover, the dissatisfied service provider group referenced above, stated that they would be delighted to have the opportunity to provide regular formal performance assessments of their relationship with their on-site FM operator. Indeed, it would be productive for contract managers to carry out regular service provider workshops or surveys to monitor customer satisfaction.

5. RECOMMENDATIONS



The following recommendations, arising from the data and insights provided by the research participants and project documentation, focus on mostly the future planning and operation of PPP projects for social infrastructure.

Recommendation 1

Governments should continue to secure, where supported by business case analysis, new PPP contracts for service providers and their communities to meet current and future social infrastructure needs.

Recommendation 2

Decision-makers in both public delivery agencies and PPP proponents should give a significant voice to service providers and contract managers during the preparation of tender documents and while designing and planning the PPP project.

Recommendation 3

Both public delivery agencies and PPP proponents should be challenged to evolve the PPP contractual terms to further focus on outcome-based service definition, with fewer prescriptive KPIs, to provide the long-term flexibility service providers need to best serve their communities.

Recommendation 4

Service provider representatives should be educated on the basics of their PPP agreement and the roles and responsibilities of the various PPP parties. Contract management staff and the FM providers would also benefit from an education program encouraging continuous improvement and maximising value through the partnership aspects of the contract.

Recommendation 5

Both government and the private sector should improve the consistency of good communication in their dealings and in the day-to-day operations impacting on service providers.

APPENDIX A: ACRONYMS AND DEFINITIONS

Client community	The term is used in the report to refer the community group that the service providers service. For example, principals, teaching staff and school business managers (the service providers) provide services to students and their parents (their client community)
Contract manager	The public official employed by the government agency to manage the PPP contract under which the service providers access capital facilities and receive FM services
DBFM	Design, Build, Finance and Maintain contract model
DBFO	Design, Build, Finance and Operate contract model
D&C	Design and Construct contract model
BOO	Build, Own, Operate contract model
BOOT	Build, Own, Operate and Transfer contract model
FM	Facility Management
FM operator	The FM operator performs on behalf of the PPP Project Co, of which it is often a shareholder, the contractual obligations for FM works and services.
NIP	National Infrastructure Plan, New Zealand
NIU	National Infrastructure Unit, formerly part of New Zealand Treasury, now the New Zealand National Infrastructure Commission – Te Waihangā
On-site FM operator	Employee(s) of the FM operator that work on a specific PPP project site
KPI	Key Performance Indicator
PFI	UK Private Finance Initiative
PF2	UK Private Finance 2
PM	Payment Mechanism
PPP	Public Private Partnerships
PPP Project Co	This is the counter-party to the government in the PPP contract and the legal entity ('company') ultimately responsible and accountable for providing to service providers access to capital assets and FM services. Sometimes called the SPV.
PPP Proponent	An entity bidding in the tender process for a PPP project and contract. This entity may comprise of a number of firms bringing equity and specialist expertise to the bid. The PPP proponent winning the tender is often referred to as the PPP Project Co.
PSC	Public Sector Comparator, a tool used by governments to assess the cost of delivering a service or asset by the public service itself
Service provider	The term is defined in this report as meaning those individuals utilising the PPP capital assets and services to deliver services to community members. In some PPP models those employees are public sector and in other cases they are employed through the PPP Project Co.
SPV	Special Purpose Vehicle, refer PPP Project Co
VFM	Value for money

APPENDIX B: DETAILED LITERATURE REVIEW

B.1 A case for PPP evaluation in the operational phase

This section of the report summarises relevant literature and considers the maturity of PPP projects in Australia and New Zealand from a service recipient's perspective. A longer review of literature is detailed in Appendix B.2.

The public sector engages the private sector to either deliver some or most of the project elements for both social and economic projects. This process of contracting a project or parts of the project to the best capable party provides numerous benefits to the public sector. The arrangement between the parties to deliver specific project phases leads to the development of various procurement strategies. These procurement strategies vary widely in terms of (i) private sector engagement period, (ii) risk transfer profile and (iii) performance requirements.

The public-private partnership (PPP) procurement model is an arrangement between the public and private sectors to deliver social and economic projects. Typically, the private sector is responsible for project finance, design, construction, operation (to some extent) and maintenance for 25-30 years before the project facility is transferred back to the public sector at an acceptable (and contracted) standard. The private sector forms a special purpose vehicle (SPV) using various private sector organisations to deliver the project.

The key benefit to the public sector from using a PPP strategy is that private sector is not only responsible for the traditional design and construct of the project facility but also responsible to maintain and operate the facility at a required standard for many years. The payment for services only commences at the project's operational phase, which is based on certain pre-agreed key performance criteria (KPIs). If the service provider fails to meet the project KPIs during the operational phase, monies can be withheld based on non-performance of an expected service. Conversely, there are a number of examples where excellent service has been rewarded by contract extensions or the addition of major modifications to existing agreements, for example the Melbourne Convention Centre. These contractual mechanisms allow the public sector to ensure standards and quality are maintained as well as providing flexibility as needs change. In social infrastructure projects, services that are allocated to the private sector in the

operational phase are generally non-core services for example: cleaning, catering, gardening, and facility maintenance. The allocation of non-core services to the private sector allows the public sector to focus on the delivery of core services (for example, education, health and justice).

The literature recognises and credits the UK as the birthplace of PPPs and related funding mechanisms. Introduced in 1992, the original form of PPP used in the UK was called the Private Finance Initiative (PFI). Like the UK, Australia and New Zealand have long histories of using PPPs for public infrastructure projects. In both Australia and New Zealand, the development of centralised PPP agencies and units within government Treasuries to develop standardised agreements, and to shepherd and oversee the use and implementation of the PPP model seems to be one of the key factors that have contributed to the success of the model.

The UK currently has 700 operational PFI contracts with a capital value of around £60 billion, which is the highest in the world (House of Commons Committee of Public Accounts, 2018). The PFI projects in the UK have been seen in recent years to have produced mixed performance outcomes. A 2017 study shows a substantial decline in the number of PFI projects undertaken by the UK Government over recent years (Benjamin & Jones, 2017), with a UK Government decision to abandon consideration of new PFI contracts in 2018 putting a halt to the approach in the years since. Cost efficiency, value for money concerns, limited risk transfer, lack of flexibility, long-term fiscal risk for taxpayers and operational complexity were cited as some of the concerns for the PFI model (HM Treasury, 2018).

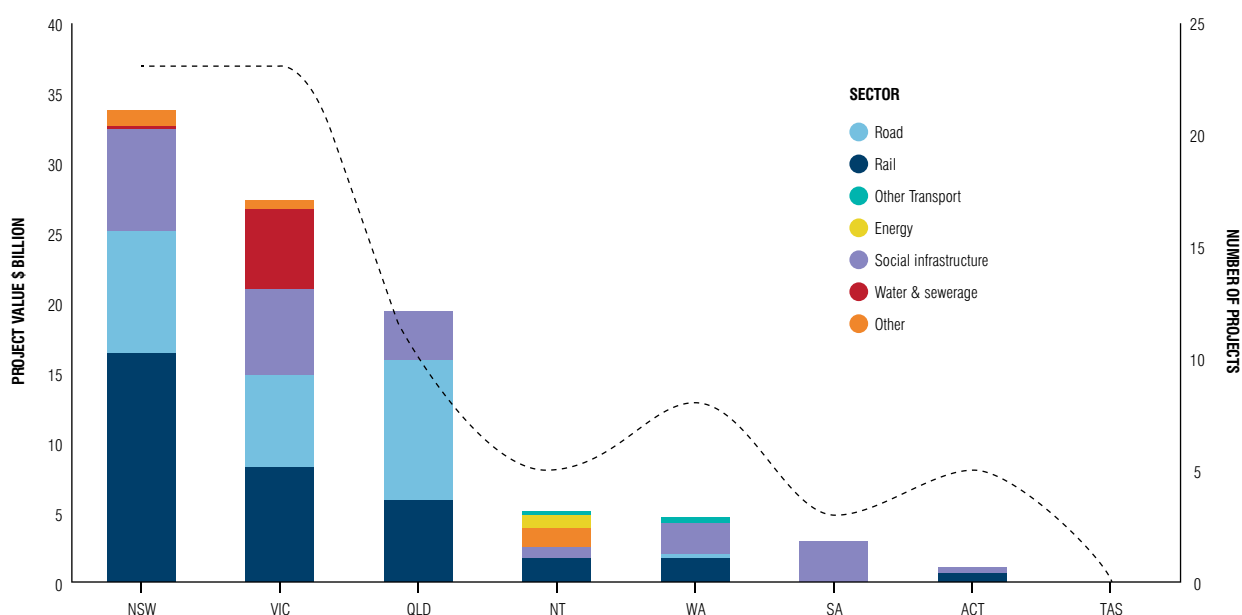
In Australia, the PPP procurement model is being utilised by most states and territories to deliver social and economic projects with Victoria and New South Wales being the leaders in the PPP market, refer to Figure B.1. The National PPP Policy and Guidelines documents provide a general set of guidelines to states and territories on the use of PPP procurement model (Department of Infrastructure, Transport, Regional Development and Communications, 2018). Victoria and New South Wales have developed some of the most robust PPP policy and practice guidelines over the years to ensure successful delivery of PPP projects.

The PPP procurement process in Australia has evolved from first generation to second generation type projects (Duffield, 2005). The first-generation type contracts from the early 1990s to late 1990s were the

result of high public debt and reduced government appetite for new borrowings and were characterised by the comprehensive transfer of project risk to the private sector. This approach to risk transfer led to some project failures as some of the project risks were beyond the effective management of the private sector. The lessons learned gave birth to a second generation

type of PPP contracts after the Second Review of The Private Finance Initiative by Sir Malcolm Bates in 1999 and development of Partnerships Victoria Policy in 2000 (Hodge & Duffield, 2010). The principle of risk sharing was applied, with the emphasis on risk being assigned to the party best capable of managing and mitigating that risk in the most cost-effective manner.

Figure B.1: Public Private Partnerships in Australia, by jurisdiction³⁰



In 2009, there were 49 operational PPP projects with a capital value of AUD \$32.3 billion in Australia (Palcic et al, 2019). Australian PPP projects generally enjoy a good reputation internationally for successful completion on-time and within budget. Australian PPPs are typically characterised by a focus on core services, payment for defined assets and services once delivered, financial accountability for lack of performance, access to private sector technical and management skills resulting from competition, access to private sector finance and innovation (Duffield et al 2008, Saeed 2018). However, there have been some notable failures (for example, Sydney’s Cross City Tunnel and Lane Cove Tunnel, the Adelaide-Darwin Railway and Brisbane’s Clem Jones Tunnel) due to lower than predicted revenue generation, which led to the insolvency of the SPV (Duffield 2008, PwC 2017).

PPP procurement in New Zealand is managed by the New Zealand Infrastructure Commission. This agency has overseen the implementation of a number of social and economic projects. The Auckland South Corrections Facility project is one of the most innovative PPP arrangement undertaken by the New Zealand Government in recent years. The New Zealand Government intends to use the PPP procurement model for future projects where value for money to taxpayers is evident (National Infrastructure Unit, 2010).

Literature examining the PPP projects in Australia and the UK is available, however there is limited publicly available analysis of New Zealand social infrastructure PPP projects. Table B.1 presents some of the major PPP projects in New Zealand.

Table B.1: Major PPP projects in New Zealand

Major PPP projects in New Zealand	Description	Completion	Status
Hobsonville Schools PPP	Primary and secondary schools at Hobsonville Point, with education services provided by the Ministry of Education	2013	In operation
Auckland South Correctional Facility	Wiri Prison – a 960-bed men’s prison, with custodial services provided by the PPP contractor	2015	In operation
Transmission Gully expressway	27-kilometre expressway in Wellington	2020 (estimated)	Under construction
Schools 2 PPP	A bundle of four schools in Canterbury, Auckland and Queenstown, with education services provided by the Ministry of Education	2018	In operation
Auckland Prison	New maximum-security facility and refurbishment of existing facility at Paremoremo Prison, with custodial services provided by the New Zealand Department of Corrections	2018	In operation
Puhoi to Warkworth Highway	18-kilometre expressway in Auckland	2022 (estimated)	Under construction
Schools PPP3	A bundle of three primary schools in Auckland and Hamilton and two co-located secondary schools in Christchurch	2019 (estimated)	Under construction
Waikeria Prison	A new 500-bed high security prison with an integrated 100-bed mental health unit	2022 (estimated)	Under construction

Numerous international studies conclude that the PPP procurement model has stronger incentives to minimise whole-of-life costs and improve service quality outcomes than traditional procurement approaches like Design and Construct or Construct-Only models (Hodge & Greve 2017, Saeed 2018). However, there is also a significant number of studies that have found issues in PPP projects with risk allocation, innovation and operational flexibility (Hodge & Greve 2017, Saeed 2018). It is therefore critical to evaluate outcomes of mature social PPP projects across Australia and New Zealand from the service recipients’ perspective. The service recipients’ unique perspective of mature social PPP projects should be able to shed light on performance issues faced by service recipients during operational phase.

B.2 Detailed Literature Review – Introduction

A public-private partnership (PPP) is conceptualised as a contractual agreement between the public sector (government departments or public agencies) and one or more private sector partners for the purpose of supporting the delivery to the public sector of services like financing, designing, building, operating and/or maintaining a certain project. It embraces a range of structures and concepts, which involve the allocation of risks and responsibilities between the public and private sectors. The literature recognises and credits the UK as the birthplace of PPPs and related funding mechanisms.

The most common and original form of PPP used in the UK, the Private Finance Initiative (PFI), was introduced in 1992 to involve the private sector in the design, construction, financing, operation and maintenance of public infrastructure, and to secure the delivery of well-constructed, well-maintained infrastructure at a good value for taxpayers. Like the UK, Australia and New Zealand have long histories of using PPPs for public infrastructure projects, and that usage is likely to continue. In both countries, the development of centralised PPP agencies to develop standardised agreements, and to shepherd and oversee the use and implementation of the PPP model seems to be one of the key factors that have contributed to the success of the model, or at least to have lessened the number of severe failures.

The use of PPPs in Australia and New Zealand has evolved considerably over the past 25 years and is now used to deliver services across a very wide range of economic (for example, roads, rail, airport infrastructure) and social (for example, schools, hospitals and prisons) sectors. The Australian and New Zealand market has now established a reputation for having a clear and transparent PPP procurement process.

B.3 PFI in United Kingdom

B.3.1 History

In 1992 the UK Government introduced legislation that gave birth to the “Private Finance Initiative” (PFI) in 1992. In 1997, the new UK Labour Government amended procurement rules and introduced public private partnerships (PPPs) which included the introduction of complete or partial privatisation of assets, contracting projects out as PFI and selling government services in collaboration with private sector companies (Spackman, 2002). The systematic development of PFI in UK as set out by Spackman (2002) is shown in Table B.2.

Table B.2: History of PPP in UK³¹

Timeline	Major events
1989	UK Government begins to actively promote private finance in public services.
1990	First PPP style project reaches financial close
1992	Private finance initiative (PFI) launched. First and only toll-road concession reaches financial close.
1993	Private Finance Panel established
1995	List of priority projects produced, and procurement begins
1997	New Government elected, continues and increases PFI
2009	HM Treasury establishes an infrastructure Finance Unit (TIFU) to support PFI's impacted by the credit crisis
2010	New government elected: continues to manage existing pipeline
2012	Details of PF2 published and first project announced
2018	PFI model 'cancelled' by UK Government for new projects

After the 2007-08 Global Financial Crisis, the government reduced its use of PFI and in 2011 HM Treasury consulted on reform. Following a review of PFI, the government published details of a new approach in 2012. It made some changes and re-launched the model as PF2 a year later. In the PFI or PF2 model, usually a private finance company – a Special Purpose Vehicle (SPV) – is set up and borrows to construct new assets such as schools, hospitals or roads. The taxpayer then makes payments to the SPV over the contract term (typically 25 to 30 years) which covers equity and debt repayments, financing costs, maintenance and any other services provided.

The PF2 was officially launched, following a critical report of the Public Accounts Committee (PAC). Although it is similar to the PFI in terms of its financial structure and contract, there are five key differences between the PFI and PF2:

- equity structure and credit enhancement – debt to equity ratio from 90:10 to 75:25 or 80:20 with public sector injecting a small percentage of equity
- acceleration of delivery – a “cookie cutter” approach to planning and designing facilities
- service provision – removal of soft services, for example, cleaning or gardening
- more appropriate risk transfer – (changes in laws, site contamination by offsite sources, utilities consumptions risk, and
- greater transparency (including public disclosure of project data and document).

The first PF2 project was announced in 2012, a £160 million project involving construction and maintenance of 12 schools in North-East England. Since then, however, only six PF2 projects have reached financial close, including the Priority School Building Programme and the Midland Metropolitan Hospital, with capital values of £623 million and £297 million, respectively. Several other projects originally designated for PF2 financing did not begin.

B.3.2 Performances and debates

Figure B.2 shows UK PPP contracts from 1990 to 2014. Under a typical PFI deal, the public sector enters into a long-term contractual agreement with private sector companies, which undertake to design, build, operate and maintain an asset. Currently, in the UK there are around 700 operational PFI and PF2 contracts with a capital value of around £60 billion (House of Commons Committee of Public Accounts, 2018). Annual charges for these deals amounted to £10.3 billion in 2016-17. Even if no new PPP contracts are entered into, existing contract costs will continue until the 2040s, by which time will amount to £199 billion (HM Treasury, 2017).³²

Figure B.2: UK PPP contracts 1992-2015³³

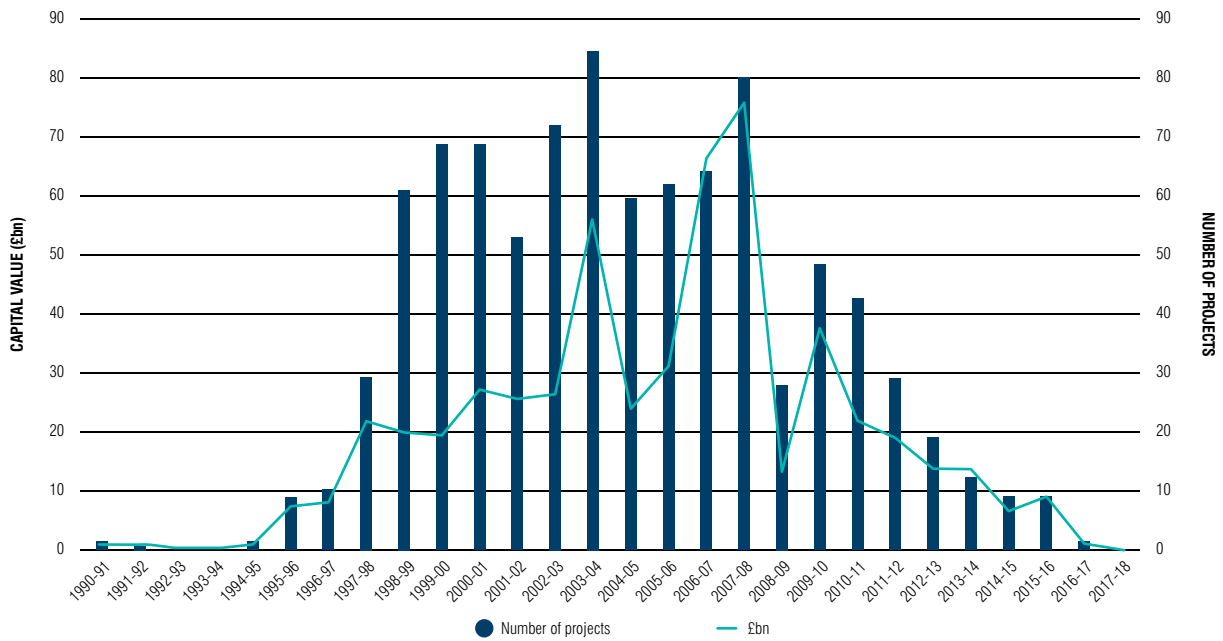
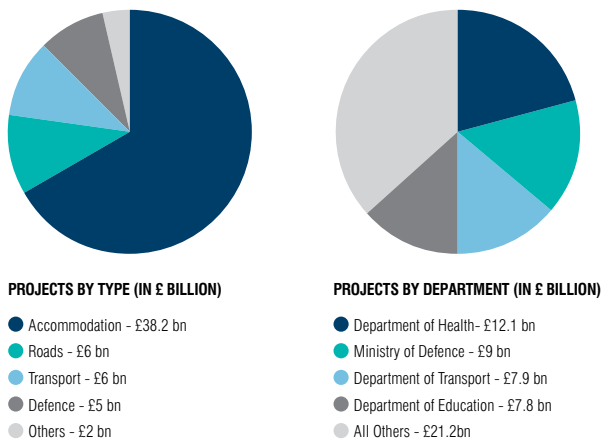


Figure B.2 provides a good representation of how in recent years, the UK Government’s use of the PFI and PF2 models has slowed significantly, reducing from an average of 55 contracts executed each year in the five years to 2007-2008 to only one in the financial year of 2016-17.³⁴ The use of current PFI model was cancelled in 2018 by the UK Government (House of Commons Committee of Public Accounts, 2018). Figure B.3 represents PFI usage in different UK Government departments.

Figure B.3: Use of Private Finance by project and department type³⁵



HM Treasury has noted that the higher cost of private financing means that the economic case for the model rests on achieving cost savings in the construction or operation of the project. The UK Government is open to exploring the use of private finance for government funded projects to achieve potential benefits of risk management, innovation and project discipline (HM Treasury, 2019).

The UK Parliament’s Treasury Select Committee and Public Accounts Committee, and the UK government’s National Audit Office, have corroborated in a study (HM Treasury, 2012) and have established that some PPPs have failed to deliver VFM outcomes, and have created outcomes heavily skewed in favour of private interests. Despite some highly negative observation of facts regarding the domestic utilisation of PPPs, the UK government has played an active role in widening the use of PPPs to developing countries. For example, the UK government has set up and funds the Private Infrastructure Development Group (PIDG) which exists to promote PPPs to finance infrastructure in developing countries. Between 2002 and 2013, the UK’s Department for International Development disbursed £663 million from its aid budget to PIDG, covering two-thirds of the contributions by all donors.

B.4 PPPs in Australia

B.4.1 History

PPPs enjoy a good reputation in Australia based on a successful track record of on-time and cost outcomes, although there have been some notable failures.

During the 1980s, Australian governments – across federal, state and territory levels – owned and operated the major infrastructure and associated services including roads, railways, ports, airports, airlines, coastal shipping operators, electricity generation and distribution networks, water infrastructure, and other assets. Over the past three and half decades, governments have divested a range of public infrastructure assets and services through long-term leases and sales.

An important development was the private sector financing of new public infrastructure, through PPPs or similar arrangements. In Victoria, early PPPs were managed under the Infrastructure Investment Guidelines and Policy (IIPV) overseen by the department of Treasury. Similarly, New South Wales introduced its own guidelines for PPPs. Typical forms of PPP contracting included:

- Design, Build, Finance and Operate (DBFO)
- Build- Own-Operate and Transfer (BOOT), and
- Build Own Operate (BOO).

A key component of such arrangements is that there is a requirement to pay only for defined assets or services when they are delivered.

A key development in the Australian evolution of PPPs was the establishment of Partnership Victoria by the Victorian Department of Treasury and Finance in 2000. As a result of that reform, the delivery of “core” public services (such as clinical and custodial staff from hospital and prison projects) was removed from provision by private sector in PPP contracts. The PPP policies in other Australian states are based on Partnership Victoria policies. In 2005, the Federal Government, along with all state and territory governments, formally agreed to harmonise their approach to PPP development and implementation through nationwide policies and guidelines (Hughes et al 2005).

B.4.2 Performance and debates

Australia's leading state on infrastructure PPPs has been Victoria. However, New South Wales has also been active in its use of PPPs in recent years, with the overall number of projects delivered now being similar to that of Victoria. With the release of ‘National PPP Policy Framework and Guidelines’ in 2008, all states moved to adapt a common strategic direction to achieve more consistency. The National policy applies to projects with a capital value over A\$50 million, and notes the importance of transparency and disclosure, stating that ‘the use of PPPs should not diminish the availability of information on the use of government resources to parliaments, taxpayers and other stakeholders. During 2009, there were 49 PPP projects underway with an aggregate value of some A\$32.3 billion.



Table B.3: Social infrastructure PPP projects in Australia

State	Project name	Cost (A\$ million)	Year of operation
VIC	Bendigo Hospital	110	2013
VIC	Biosciences Research Centre Project (AgriBio)	288	2009
VIC	Casey Community Hospital	120	2004
VIC	Fulham Correctional Centre Contract Extension Project	161	2016
VIC	Hopkins Correctional Centre	394	2010
VIC	New Royal Children's Hospital Project	946	2007
VIC	New Schools PPP	495	2015
VIC	Partnerships Victoria in Schools Project	495	2015
VIC	Port Phillip Prison Contract Extension Project	1831	2015
VIC	Ravenhall Prison	2529	2016
VIC	Royal Women's Hospital Project	365	2005
VIC	Victorian Comprehensive Cancer Centre (VCCC)	1278	2011
VIC	Victorian Correctional Facilities	275	2004
VIC	Victorian County Court Project	195	2000
VIC	Melbourne Convention Centre Development	367	2009
QLD	Southbank Education and Training Precinct	227	2008
QLD	New Schools 1	550	2016
QLD	New Schools 2	400	2017
NT	Darwin Prison	495	2011
NT	Darwin Convention Center	108	2008
ACT	New ACT Courts Facility Project	150	2015
NSW	New schools project	131	2005
NSW	New schools project 2	178	2010
NSW	Orange and associated health services PPP project	256	2011
NSW	Long Bay Prison and Forensic Projects	130	2008
NSW	Newcastle Community Health Centre	N/A	2007
NSW	Newcastle Mater Hospital Redevelopment	150	2009
NSW	Northern Beaches Hospital	2140	2018

State	Project name	Cost (A\$ million)	Year of operation
NSW	Royal North Shore Hospital (RNSH) and Community Health Facility	700	2014
NSW	Hawkesbury Hospital	47	1996
NSW	New Grafton Correctional Centre	1980	2020
NSW	Bonnyrigg Living Communities Project	368	2020
WA	Midland Public Hospital Project	360	2015
WA	Eastern Goldfields Regional Prison Redevelopment Project	246	2015
WA	WA Schools PPP Project	631	2022
WA	Perth Convention and Exhibition Center	220	2004
WA	CBD Courts Project	235	2008
SA	New Royal Adelaide Hospital	2900	2011
SA	Education Works	193	2009

The University of Melbourne in December 2008 studied the comparative achievements of PPPs and traditional procurement methods in Australia (Duffield, Raisbeck & Xu, 2008). This study differentiated the construction cost and time outcomes of 25 PPP projects, and found that the Australian PPPs experienced average construction cost over-runs of 4.3 per cent compared to 18 per cent for the traditionally procured projects, and the average construction phase delay for the PPPs was 1.4 per cent, compared to 25.9 per cent for traditional procurement. This improved cost and time performance in comparison to traditionally procured projects is a key indicator of the potential benefits from the use of PPP procurement model (Raisbeck, Duffield & Xu, Duffield, 2009).

Governments can use their credit ratings to finance infrastructure projects at lower rates, however, increased borrowing and project risk can affect their credit ratings. The SPV's cost of borrowing may be higher but it only reflects the standalone risk of the project. As is common with the PPP model globally, the higher cost of private financing means that the economic rationale for proceeding with a PPP tender rests on the SPV achieving cost efficiencies (savings) and managing project risk (including on-time and within budget completion) in the construction and/or operation of the project. However, there have been cases where these projected cost efficiencies have not been achieved in the PPP project by the SPV (Hodge and Greve, 2017).

There have been some Australian PPPs where the government has taken the decision to take control of the project or has provided additional financial support to the project because the private sectors failed to meet its financial and/or performance targets. For example, in October 2000, the Victorian Government took control of the Metropolitan Women's Correctional Centre to overcome such a failure by the private sector. In 2006, the New South Wales Government announced it would buy back the contract for the provision of health services at the Port Macquarie Base Hospital to address poor service levels. In each case, the private sector had underestimated the cost of meeting its service obligations and suffered from financial loss.

The PPP model for social infrastructure continues to be supported by jurisdictions because, inter alia, it is seen to provide a greater scope to capture innovative solutions from the private sector, and can deliver the required services at a lower whole-of-life cost.³⁶ However, there is a view that PPPs suffer from insufficient flexibility when it comes to making changes to a project, due to the constraints of private finance. In particular, negotiating a contract variation requires the agreement of all SPV and financing parties, and this can be a cumbersome process. It is generally thought that social infrastructure projects require the flexibility to make contract variations over a period of 25 years as the needs of the community, and the potential response strategy to these needs, change.

B.5 PPPs in New Zealand

B.5.1 History

The New Zealand Treasury defines a PPP as long-term contract between the public and private sector for the delivery of services where the provision of the service requires the construction of a new asset, or the enhancement of an existing asset, that is financed from external sources on a non-resource basis and where full legal ownership of the asset is retained by the Crown.

Initially in New Zealand, unlike the UK and Australia, there was no specific authority responsible for the promotion of PPPs. However, the Local Government Act empowered a local council to develop a PPP project and to determine the nature and scope of its commitment of resources to the project. A PPP project was overseen by the local council and the project was monitored through reporting on the implementation of the long-term community plan of the local council. Over the years, there were several milestones in the

development of PPPs in New Zealand.

- In November 2003, the Land Transport Management Act was passed, empowering public road controlling authorities to enter into concession agreements with a third party, relating to the construction and operation of the roads.
- In December 2007, Kaipara District Council awarded a A\$53 million Design Build Finance and Operate (DBFO) contract for delivery of wastewater services to the town of Mangawhai.³⁷
- In June 2008, the Water View Connection Procurement Steering Group concluded that PPPs can offer value for money through disciplines around casting, defining objectives and risk allocation together with the performance incentives that arise from having private finance at stake.³⁸
- In March 2009, Treasury established a National Infrastructure Unit (NIU) to formulate a long-term infrastructure plan for New Zealand.³⁹ In the following months during 2009, various government announcements were further made supporting PPPs for use across different economic and social sectors.
- In March 2010, the NIU released the National Infrastructure Plan (NIP), which confirms that the government intends to use PPPs where they represent value for money for taxpayers.

The NIP outlines a “step change in the level of infrastructure investment” with NZ\$7.5 billion allocated for new capital projects over five years. The New Zealand Council of Infrastructure Development has estimated the government and local authorities will spend about NZ\$70 billion on infrastructure development and maintenance over 10 years (Venter, 2009). New Zealand PPP projects to date include projects in the Education, Corrections and Transport sectors. PPP projects in New Zealand are listed in earlier in the section in Table B.1.

The PPP scheme in New Zealand is managed by the NIU – a specialised unit within the Treasury – and has clearly learnt some lessons from the Australian experience. New Zealand is one of Australia's most important partners in the areas of business and trade. The formulation and development of Australia's PPP market provided useful lessons for New Zealand's PPP market.

The overall approach to PPPs taken by the New Zealand Government is: “*The government intends to use Public Private Partnerships where they represent value for money to taxpayers.*” (National Infrastructure Unit, 2010) “Off-balance sheet” consideration, as is the case in Australia,



is not a factor that determines the government's choice of procurement option given the underlying economics and accounting treatment of PPPs in New Zealand (National Infrastructure Unit, 2010).

New Zealand's recently released guidance for business case development (NZ Treasury, 2011a and NZ Treasury 2011b) is similar to the UK's guidance. Both documents indicate the respective governments' structured and standardised approach regarding business case development for capital projects, with a special focus on value for money. However, the UK's documents represent a higher level of details while those of New Zealand's tend to be more general. This is in line with the PPP development status of the two countries: While the UK has pioneered the PPP use, New Zealand is an emerging market. As opposed to the UK and Australia, where relatively abundant literature is available examining PPP application, there is limited research providing a critical review of the key issues in relation to PPPs, with a special focus on New Zealand.

It appears that New Zealand currently favours PPP contracts that deliver value for money and involve government in the operational phase of projects.

B.6 Conclusions

In the UK, when PPPs were first introduced, the government was interested on using private finance to meet the infrastructure needs, removing the public assets from the public budget. It is notable that UK guidance includes Value for Money Assessment

Guidance (HM Treasury, 2006), which sets out a three-stage process to assess the value for money of PPP schemes, and the Quantitative Assessment User Guide (HM Treasury, 2007), serving as a practical tool for conducting the quantitative assessment.

Both Australia and New Zealand have provided extensive guidance on the use of value for money as the decision criterion for PPP projects.

Australia has a long history of PPP development. Despite being considered a leading country in PPP development, with a sophisticated PPP market, there exists a lack of in-depth evaluations of social PPP infrastructure. More than 30 of such projects have been completed and are currently in their operational phase. Bianchi et al (2017) report that there is a paucity of knowledge with respect to PPP outcomes and link this to the lack of disclosure and transparency in how completed PPP projects are performing.

Governments have acknowledged that PPPs can provide stronger incentives to minimise whole-of-life costs and improve service quality than is possible within the public sector. This conclusion is supported by international studies which have shown that PPPs can lead to cost efficiencies and better value for money outcomes versus traditional procurement models. The research undertaken for this Report evaluates outcomes of mature social PPP projects across Australia and New Zealand from the service providers' perspective.

APPENDIX C: ETHICS PROCESS, DATA AND APPROVAL

C.1 Ethic process and approval

This project followed the detailed ethics approval process of The University of Melbourne. Ethics approval was received on 10 May 2019 (ID 1954426).

A copy of the following documentation follows:

- the ethics approval
- the plain language statement issued to all participants
- the pre-workshop questionnaire
- the workshop questions for service providers
- the workshop questions for contract managers, and
- the post-workshop questionnaire.

C.2 Selected projects and data sources

The projects nominated by the jurisdictions are detailed in Table C.1.

Table C.1: Projects⁴⁰ included in the research

Jurisdiction	Project	Category
Queensland	The Southbank Education and Training Precinct	Education
Queensland	SEQ Schools Project	Education
New South Wales	New Schools Project	Education
New South Wales	New Schools Project 2	Education
New South Wales	Long Bay Prison and Forensic Project	Health
New South Wales	Darling Harbour Live	Other
Victoria	Partnerships Victoria in Schools Project	Education
Victoria	Royal Women's Hospital	Health
Victoria	Casey Community Hospital	Health
Victoria	Melbourne Convention Centre Development	Other
New Zealand	Hobsonville Schools PPP	Education
New Zealand	Auckland South Correctional Facility	Justice

Throughout the research, it was anticipated that participants (service providers and contract managers) with experience in other projects (normally in the traditional model) would also bring examples and comments from additional projects as appropriate.

The four jurisdictions also agreed to:

- make available to the research team media releases and other community information documents and files pertaining to the nominated project
- make available to the research team files on
 - » Cabinet-approved business case targets on project costs and service outcomes
 - » Gateway Review reports
 - » Formal project reports on outcomes during contract management related to contracted KPIs and financial matters such as on-going contractual payments and abatements
 - » Formal reports to project control committees of business case versus actual costs (capital and recurrent) and time outcomes, and
- nominate “appropriate” project service providers and contract managers for participation in workshops conducted by the research team.

The definition of an “appropriate” representative person was one that:

- has worked for at least a few years in one of the nominated PPP projects
- can provide their view as a senior executive (for example, school principals/deputy principals), middle manager (for example, senior staff), staff (for example, professional staff outside of management) and/or administrative officer (for example, business manager), and
- has experience working in both PPP and non-PPP facilities.

The service providers and contract managers nominated by the jurisdictions were invited by the university’s researcher to participate in the following activities:

- complete an individual pre-workshop survey
- attend a workshop for either contract managers or service providers (two separate workshops were conducted in each of the four jurisdictions)
- complete an individual post-workshop survey, and
- complete an additional individual survey if unable to attend a workshop.

A total of 39 participants attended the workshops which included 28 service providers (principals, clinicians, event managers, custodial staff, business managers and others) and 11 contract managers. A total of 37 responses were collected for pre-workshop survey and 21 responses for post-workshop survey.

10 May 2019

Prof C.F. Duffield
Infrastructure Engineering
The University of Melbourne

Dear Prof Duffield

I am pleased to advise that the Engineering Human Ethics Advisory Group has approved the following Minimal Risk Project.

Project title: **Delivering on the service promise: 25 years of Public-Private Partnerships in Australia**
Researchers: **Mr N Tamburro, Prof C F Duffield, Mr A Saeed**
Ethics ID: **1954426**

The Project has been approved for the period: **10-May-2019 to 31-Dec-2019**.

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

Please note that the following conditions apply to your approval. Failure to abide by these conditions may result in suspension or discontinuation of approval and/or disciplinary action.

(a) **Limit of Approval:** Approval is limited strictly to the research as submitted in your Project application.

(b) **Amendments to Project:** Any subsequent variations or modifications you might wish to make to the Project must be notified formally to the Human Ethics Advisory Group for further consideration and approval before the revised Project can commence. If the Human Ethics Advisory Group considers that the proposed amendments are significant, you may be required to submit a new application for approval of the revised Project.

(c) **Incidents or adverse affects:** Researchers must report immediately to the Advisory Group and the relevant Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.

(d) **Monitoring:** All projects are subject to monitoring at any time by the Human Research Ethics Committee.

(e) **Annual Report:** Please be aware that the Human Research Ethics Committee requires that researchers submit an annual report on each of their projects at the end of the year, or at the conclusion of a project if it continues for less than this time. Failure to submit an annual report will mean that ethics approval will lapse.

(f) **Auditing:** All projects may be subject to audit by members of the Sub-Committee.

Please quote the ethics registration number and the name of the Project in any future correspondence.

On behalf of the Ethics Committee I wish you well in your research.

Yours sincerely



A/Prof George Buchanan - Chair
Engineering Human Ethics Advisory Group

cc:
Mr A Saeed, Mr N Tamburro
HEAG Administrator - Engineering
HEAG Chair - Engineering



Plain Language Statement

Department of Infrastructure Engineering

Project: Delivering on the service promise-25 years of public-private partnerships in Australia.

Professor Colin Duffield (Responsible Researcher)

Tel: +61 3 8344 6787, Email: colinf@unimelb.edu.au

Mr Ali Mohammed Saeed (Researcher)

Tel: +61 4 0309 1640, Email: ali.saeed@unimelb.edu.au

Mr Nick Tamburro

Tel: +61 4 0997 0053, Email: nick.tamburro@drumadvisory.com

Introduction

Thank you for your interest in participating in this research project. The following few pages will provide you with further information about the project, so that you can decide if you would like to take part in this research.

Please take the time to read this information carefully. You may ask questions about anything you don't understand or want to know more about.

Your participation is voluntary. If you don't wish to take part, you don't have to. If you begin participating, you can also stop at any time.

What is this research about?

This project is being sponsored by Infrastructure Partnerships Australia with the support of key government agencies from Australia and New Zealand and includes typical private sector participants in public-private partnership (PPP) projects.

Your name and contact details have been drawn from one of the following:

- 1) Potential participant list provided by Department of Treasury and Finance (VIC)
- 2) Potential participant list provided by NSW Treasury (NSW)
- 3) Potential participant list provided by Queensland Treasury (QLD)
- 4) Potential participant list provided by The Treasury (New-Zealand)

As someone who is a key stakeholder / decision-maker / industrial expert / end-user, we would like to invite you to participate in our research project. The aim of the study is to evaluate the impact of mature social PPP projects on service delivery outcomes. This research project undertaken by Professor Colin Duffield and Mr. Ali Mohammed Saeed at The University of Melbourne in collaboration with Mr. Nick Tamburro of Drum

Advisory. This research project has been approved by the Human Research Ethics Committee.

What will I be asked to do?

Should you agree to participate we would invite you to take part in the following:

- 1) Pre-workshop online survey (3-5mins), to gather information on specific project domain and to capture your perception of value and service quality from mature social PPP projects.
- 2) Focus-group workshop up to 6 hours, so that we can get a more detailed understanding of value, benefits, service delivery quality and end-user satisfaction for mature social PPP projects.
- 3) Post-workshop online survey (5-10mins), to present workshop domain findings and to gather your perception of the findings.

With your permission, discussion at focus-group workshop would be documented electronically so that we can ensure that we make an accurate record of what you say. You would be provided with a copy of the workshop transcript, so that you can verify that the information is correct and request changes or deletion of your response, if needed. We estimate that the total time commitment required of you would not exceed 6 hours.

What are the possible benefits?

This research will lead to better understating of the value and benefits offered by social PPP projects and will lead to improved performance evaluation practices. The findings of this research will empower the key decision makers to opt for procurement model that is best suited to meet community requirements. The findings of the study will be able to provide critical insights on the performance of social PPP projects from early to mature operational phase in comparison the performance of traditional projects. The findings will also steer furture social PPP processes, policies and protocols to account for improved project outcomes.

What are the possible risks?

Few of the identified risk areas below:

- 1) Identity disclosure/Privacy issue – due to small project sample size
- 2) Participants may not fully understand the research context and the scope
- 3) Participants might be worried about the confidentiality of the data
- 4) Participants might be worried about the extent to which the data will be used for the research purpose
- 5) Participants might be worried about the ownership and the accountability of the data
- 6) Participants might worry if the generated data could be re-used for other research or purposes

To counter all the potential risk in the research project, the following risk management strategy is implemented:

- 1) A plain language statement will be issued to address the research scope, voluntary role of the participants, whom to contact for further information and will address all the five ethical issues a) consent b) privacy and confidentiality c) data ownership and authority d) data governance and custodianship and e) data sharing issue.
- 2) The written consent form will be made available to the participants if they agree to participate for the study. This written consent form will address and provide an option to the participants to opt out at any stage, will address the accountability, ownership, and reusability issue.
- 3) Opening statement before the workshop will explain the various themes and associated questions.
- 4) Utmost care will be undertaken by the research team to ensure that the identity of the participants is non-identifiable.
- 5) The data collected will be stored in a password protected file on two systems at the department of infrastructure engineering building and can only be accessed by the two members (Prof Colin Duffield and Mr. Ali Saeed) of the research team, who will also be accountable for the safety of the data. This data will be stored for a period of five years from the date of participation, before being destroyed.
- 6) Participants will be made clear in the written consent form that the generated data will be used for social PPP projects and will also be used in future by the same research team to conduct a qualitative comparative analysis from the data of other case studies to explore in depth, the similar concepts of value for money, benefits and user satisfaction. Participants will be re-approached to seek consent for future use of data.
- 7) The data will be made available to the participants to comment or request for deletion, revised transcribed data will also be provided to the participants to ensure correctness of information.
- 8) A de-briefing statement will be given by the research team once the workshop is over, which will explain why if any follow up/additional questions were asked during the workshop that were not present in the questionnaire.
- 9) A summary of the findings will be made available to the participants for comments before the findings are made public via industry final industry report and journal paper.

Do I have to take part?

No. Participation is completely voluntary. You are able to withdraw at any time. If any data is already collected by the research team before you decide to withdraw from the study that data will be destroyed and will not be used for any purposes.

Will I hear about the results of this project?

Once industry report/journal paper arising from this research has been completed, a summary of the findings will be made available by the researchers to the study

participants. It is also possible that the results will be presented at academic conferences.

What will happen to information about me?

We fully intend to protect your anonymity and the confidentiality of your pre and post survey responses, within the limits of the law. Your name and contact details will be kept in a separate, password-protected computer file from any data that you supply. This will only be able to be linked to your pre and post workshop survey responses by the researchers. In the final report, you will be referred to by a pseudonym. We will remove any references to personal information that might allow someone to guess your identity. The data will be kept at The University of Melbourne's digital repository called Minerva Access for five years from the date of publication, before being destroyed.

Who is funding this project?

This research is being funded by Infrastructure Partnerships Australia (IPA) with contributions from the government treasuries of Australia (VIC, NSW, QLD) and New-Zealand.

Where can I get further information?

If you would like more information about the project, please contact the researchers; Professor Colin Duffield [+61 3 8344 6787], or Mr. Ali Mohammed Saeed [+61 4 0309 1640]

Who can I contact if I have any concerns about the project?

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Manager, Human Research Ethics, Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: HumanEthics-complaints@unimelb.edu.au. All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project.

Pre-workshop questionnaire

1. Please identify the relevant domain where you can contribute during the workshop discussion, select domain from options below:
 - » Health (hospital) PPP projects
 - » Education (school) PPP projects
 - » Justice (prison and court) PPP projects
 - » Other (e.g. convention centre) PPP projects
2. Please identify your area/areas of expertise as it applies to PPP project lifecycles
 - » Project initiation
 - » Project transaction
 - » Project design
 - » Project procurement selection
 - » Project construction
 - » Project finance
 - » Contract management
 - » Project operations and maintenance
 - » Project monitoring and evaluation
 - » Other _____
3. Please identify your stakeholder domain
 - » Public sector
 - » Private sector
 - » Service provider
 - » Other _____
4. Please identify the projects where you would like to contribute during workshop discussion
 - » Health project list
 - » Education project list
 - » Justice project list
 - » Other project list
5. For each of the selected social PPP projects (from Q4), please list up-to 5 benefits that were delivered to service providers/community members as a result of the project
 - » Project 1
a)...b)...c)...d)...e)...
 - » Project 2
a)...b)...c)...d)...e)...
6. For each of the selected social PPP projects, please state if the stated outcomes made to the service providers/community members during project initiation phase were met. For a 'NO' response please provide a brief reason/explanation
 - » Project 1
Yes No
 - » Project 2
Yes No
 - » Project 3
Yes No
 - » Project 4
Yes No
7. Please identify the top 5 major issues/risks faced by social PPP projects during their lifecycle
8. For the selected social PPP projects, please rank your satisfaction based on the benefits delivered to service providers/community members
 - » Project 1
Highly satisfied
Satisfied
Partially satisfied
Not satisfied
Partially not satisfied
Highly not satisfied
 - » Project 2
Highly satisfied
Satisfied
Partially satisfied
Not satisfied
Partially not satisfied
Highly not satisfied
9. Please advise if you agree or disagree with comments below based on your experience in social PPP projects
 - » "Social PPP projects deliver more benefits to community members/service provider groups than traditional projects" (agree/disagree)
 - » "Social PPP projects deliver equal amount of benefits to community members/service provider groups as traditional projects" (agree/disagree)
 - » "Traditional projects deliver more benefits to community members/service provider groups than social PPP projects" (agree/disagree)
 - » "Social PPP projects are more innovative than traditional projects" (agree/disagree)
 - » "Traditional projects are equally innovative as social PPP projects" (agree/disagree)
10. Please identify your preference (only for service provider stakeholder domain)
 - » "I prefer working in a PPP facility over traditional facility"
 - » "I prefer working in a traditional facility over PPP facility"
 - » There is no difference between traditionally operated facilities and PPPs
11. Please provide additional comments/suggestions for this upcoming workshop

Workshop questions for service providers

Please discuss the following questions on your project domain tables and document the responses.

1. Think back to a time when you first heard of your public-private partnership (PPP) facility, before you worked there and perhaps before it was built. It may have been when it was first mooted by government and your agency in media releases, community information documents or public forma. What do you remember:
 - » of what was then promised to be delivered by the PPP model and facility?
 - » any specifics of the additional service benefits to you and the community that would be enabled through the PPP facility and model?
2. Your PPP facility has been operating for some years and would now be past the stage of establishing and its teething problems. It is now in what can be described as a mature stage. Would you say that:
 - » the service delivery outcomes as promised by government and your agency in media releases, community information documents or public forma?
 - » and on the other hand.....in strict legal terms.... Is the facility is meeting the service delivery outcomes as set out in contractual agreements, which may be managed by other people in your agency?
3. Think back for a few seconds to when you were working at a non-PPP facility....and now contrast this to working in your current PPP facility.....what do you think are:
 - » The major differences in exercising your professional role?
 - » What are the positive differences?
 - » What are the negative differences?
4. Where do you prefer work – at a PPP or non-PPP facility? How strong is your preference?
5. Think about how your PPP model and facility is operating and its successes and shortcomings in delivering services and now think about planning a new PPP facility. Your suggestions please:
 - » What changes to the contractual terms and conditions that impact on the day to day management and commercial relationship?
 - » What changes to the establishment and design of the facility?
 - » What factors do you think contribute to an uplift of positive user satisfaction?
 - » What factors do you think contribute to poor user group experiences?
 - » What else would you like to say?

Workshop questions for Contract Managers

1. Think back to a time when you first heard of your PPP facility, before you worked there and perhaps before it was built. It may have been when it was first mooted by government and your agency in media releases, community information documents or public forma. What do you remember (know about):
 - » of what was then *promised* to be delivered by the PPP model and facility?
 - » any specifics of the *additional* service benefits to service providers and the community that would be enabled through the PPP facility and model?
 - » of what was mooted as your role in enabling the service providers to service the community with this PPP facility and contract?
2. Your PPP facility has been operating for some years and would now be past the stage of establishing and its teething problems. It is now in what can be described as a mature stage. Would you say that:
 - » the service delivery outcomes as promised by government and your agency in media releases, community information documents or public forma?
 - » and on the other hand.....in strict legal terms.... Is the facility is meeting the service delivery outcomes as set out in contractual agreements?
 - » How is the service provider level of satisfaction with PPP facility/ service over the years tracked?
3. Thinking in terms of the Government's objectives and wishes in providing services to the community from the PPP facility, and your role in enabling this to happen, is the PPP contract being implemented with good will and an ongoing commitment by the PPP operator? Do they support with good will service providers so they can do their best for the community members? [ie Do the contract administrators find the PPP contractor hard work to ensure a fresh up-to-date service?]
4. Think back for a few seconds to when you might have been working at a non-PPP facility....and now contrast this to working in your current PPP facility..... what do you think are:
 - » The major differences in exercising your professional role?
 - » What are the positive differences?
 - » What are the negative differences?
 - » Where do you prefer work – at a PPP or non-PPP facility? How strong is your preference?
5. Think about how your PPP model and facility is operating and its successes and shortcomings in delivering services and now think about planning a new PPP facility. Your suggestions please:
 - » What changes to the contractual terms and conditions that impact on the day to day management and commercial relationship?
 - » What changes to the establishment and design of the facility?
 - » What factors do you think contribute to an uplift of positive user satisfaction?
 - » What factors do you think contribute to poor user group experiences?
6. What else would you like to say?

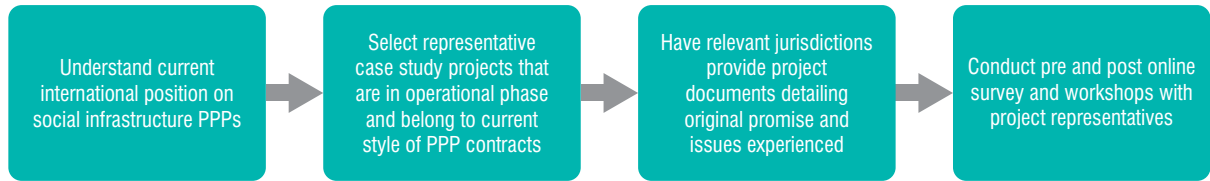
Post-workshop questions

1. Please identify relevant project domain where you contributed during the workshop discussion
 - » Health (hospital)PPP projects
 - » Education (school) PPP projects
 - » Justice (prison and court) PPP projects
 - » Other (convention centre) PPP projects
2. Please identify the projects where you contributed during workshop discussion
 - » Health project list
 - » Education project list
 - » Justice project list
 - » Other project list
3. For each of the discussed social PPP project during the workshop, please list up-to 5 benefits that were delivered to service providers/community members
 - » Project 1
a)...b)...c)...d)...e)...
 - » Project 2
a)...b)...c)...d)...e)...
4. For each of the discussed social PPP project, please state if the promises made to the service providers/community members during project initiation phase were met. For a 'NO' response please provide a brief reason/explanation
 - » Project 1
Yes No
 - » Project 2
Yes No
 - » Project 3
Yes No
 - » Project 4
Yes No
5. Please identify top 5 major issues faced by the social PPP projects during their lifecycle, as discussed during the workshop
6. For the discussed social PPP projects, please rank your satisfaction based on the benefits delivered to service providers/community members
 - » Project 1
Highly satisfied
Satisfied
Neither satisfied or dissatisfied
Dissatisfied
Highly dissatisfied
 - » Project 2
Highly satisfied
Satisfied
Neither satisfied or dissatisfied
Dissatisfied
Highly dissatisfied
7. Please advise if you agree or disagree with below comments based on your experience in social PPP project
 - » "Social PPP projects deliver more benefits to community members/service provider groups than traditional projects" (agree/disagree)
 - » "Social PPP projects deliver equal amount of benefits to community members/service provider groups as traditional projects" (agree/disagree)
 - » "Traditional projects deliver more benefits to community members/service provider groups than social PPP projects" (agree/disagree)
 - » "Social PPP projects are more innovative than traditional projects" (agree/disagree)
 - » "Traditional projects are equally innovative as social PPP projects" (agree/disagree)
8. Please answer the following questions (only for service provider stakeholder domain)
 - » "I prefer working in a PPP facility over traditional facility"
 - » "I prefer working in a traditional facility over PPP facility"
 - » There is no difference between traditionally operated facilities and PPPs
9. During the workshop a number of conclusions and recommendations were derived as reproduced below [to be completed post workshop]. Please state the level of your agreement with on the following scale:
 - » Strongly agree
 - » Agree
 - » Neither agree or disagree
 - » Disagree
 - » Strongly disagree

APPENDIX D: INVESTIGATION, SURVEY AND WORKSHOPS

The research program comprised both qualitative and quantitative methods, as summarised in Figure D.1.

Figure D.1: General research method



The first step was obtaining an international perspective of social infrastructure PPP projects. An overview of the findings of this literature review is provided in Appendix B.

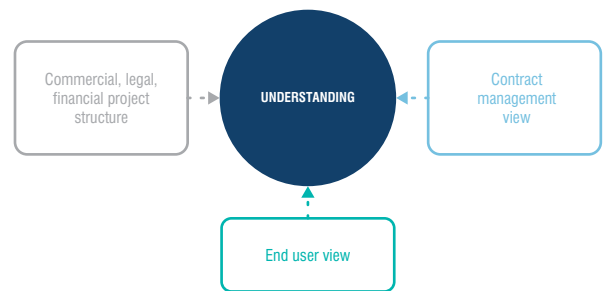
The *second step* of the research method involve the selection of representative case study projects. The four jurisdictions involved were asked to nominate projects from the sample domains of health, justice, education, and a catchall category for general public spaces like convention centres referred to in this Report as “other”. The sampling of projects was also constrained or limited to projects where staff representatives are still available to talk about the different elements of the project and where access to service providers can be arranged. It was also important to select PPP projects that have been in operation for at least three years, and where the form of the contractual terms and conditions are commensurate with current practice.

Thirdly, jurisdictions were asked to provide background documentation on the projects. This background documentation was to include the scope of the original expectations as detailed in media releases and where possible the original business cases, along with more current materials that indicated how the contracts were in fact at working and functioning through investigation of project reports and independent reviews if they were available.

Having gathered these background materials, in the *final step* the project team progressed to capturing of first-hand data through surveying two primary groups of people involved in the projects, namely, the contract management staff of the case study projects and secondly with the employed service providers of the PPP asset and service.⁴¹ Workshops were convened separately with both group in each jurisdiction during June and July 2019, and both groups undertook online surveys pre- and post-workshop.

The data for each case study project came from three sources which is summarised in Figure D.2.

Figure D.2: Data sources



D.2 Project selection

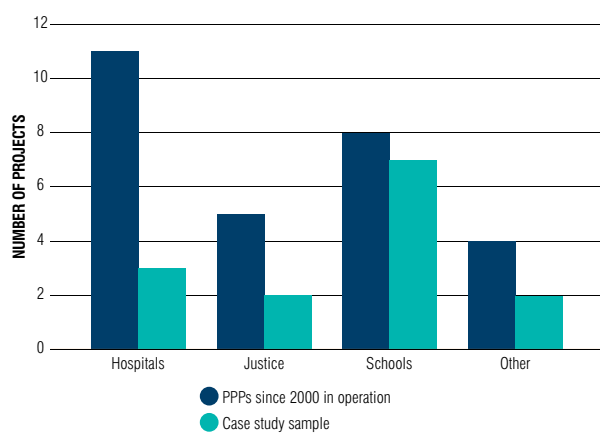
The case study projects included in the research were nominated by the four jurisdictions as listed in Figure D.3.

Figure D.3: PPP projects included in the study

Health	Justice	Education	Other
Royal Women's (VIC)	Long Bay Forensic Prison (NSW)	Southbank (QLD)	Darling Harbour Live (NSW)
Casey Hospital (VIC)	Auckland South Corrections (NZ)	SEQ Schools (QLD)	Melbourne Convention Centre (VIC)
Long Bay Forensic Hospital (NSW)		NZ Schools (NZ)	
		NSW Schools 1 & 2 (NSW)	
		VIC Schools (VIC)	

The appropriateness of the nominated sample was tested against the overall population of social infrastructure PPP projects delivered in Queensland, New South Wales, New Zealand and Victoria. Since the early 1990s there have been a total of 51 such projects contracted. Of these 51, some early projects were done early using BOO or BOOT style contracts. The terms and conditions adopted in these early projects lack the nuances currently used in PPP contracts, for example, refined Key Result Areas and associated KPIs. Further, some of these contracted projects are still under construction or in the start-up phase of operations. There are 28 projects using the modern form of PPP contracts that have been in operation for more than two or three years. The nominated sample of 12 case study projects thus represents 43 per cent of the population and as such is deemed a reasonable representation of social infrastructure PPP projects. A comparison of the case study projects with the population is provided in Figure D.4.

Figure D.4: Comparison of case study projects with total number of social PPPs meeting selection criteria



All sectors originally proposed for consideration in this research are included in the sample. The largest sector represented being education, as each contract has multiple schools. There are therefore many voices representing the educational sector. It is considered that the sample size is too small to make specific sectorial findings and recommendations, although insights from specific sectors are highlighted to illustrate a more general finding or a significant and emergent matter.

D.3 Initial promises

Each participating jurisdiction was asked to provide background documentation on the initial promises communicated for their projects. Information was sought by way of business cases (with extract pertaining to project costs, service delivery outcomes, KPIs and performance standards), key media releases, major project documentation released to the community and other relevant official communications such as Auditor General reports. From the materials provided (which were not always complete from each jurisdiction) a detailed analysis was undertaken of promises made, and of commentary from sources external to the project on the achievement of such promises.

Tables D.1 to D.4 provide a review of the original promises or expectations. Common themes emerging from analysis of these expectations against actual outcomes reveals the following were constant across projects and jurisdictions:

- quality buildings and facilities that incorporate best international thinking
- performance of the contractual requirements that set a higher standard of services than can otherwise be achieved
- whole-of-life expertise to enable the facilities to be maintained at a high standard
- value for money (VFM), and
- professional management of Facilities Maintenance that allows key operational staff (service providers) to focus on their primary service outcomes.

In terms of achieving these promises or expected outcomes, strong evidence was found to support the following findings.

- *Quality buildings and facilities that incorporate best international thinking:* Ministerial media releases, Auditor General reports and awards received from industry are clear indications that this expectation was delivered.
- *Performance of the contractual requirements that set a higher standard of services than can otherwise be achieved:* The testing of this expectation required feedback from service providers and was the focus of the questionnaires and workshops conducted as a part of this study. The research confirmed that this expectation was achieved.

- *Whole-of-life expertise to enable the facilities to be maintained at a high standard:* The established contracts clearly detail in their scope of works and associated KPIs that whole-of-life thinking in terms of costs, maintenance and refurbishments are to be included. Contract management reports reviewed during the course of this study confirms achievement of works and KPIs.
- *Value for money (VFM):* Reviews by the various Treasuries along with Auditor General reports and independent research reports have established that the VFM test was achieved at the time the contracts were let and then to the conclusion of the construction phase. There is also compelling evidence that the facilities are commissioned in a

timely manner. Whether VFM was maintained over time was investigated in this study and the finding was affirmative.

- *Professional management of Facilities Maintenance that allows key operational staff (service providers) to focus on their primary service outcomes:* This was a particular focus of this study and the results were overwhelmingly affirmative.

Tables D.1 to D.4, organised in the infrastructure categories investigated, have been compiled to illustrate the promises or expectations (which are paraphrased) made, and of the type of commentary that was found on the achievement of those promises.

Table D.1: Original promises – Health

Original promise (paraphrased)	Outcome (illustrative statements)
<ul style="list-style-type: none"> • Improved services and clinical outcomes • Synergies and cost efficiencies • Capital funding offsets • Retention of specialised women's health care professionals 	<ul style="list-style-type: none"> • A state-of-the-art hospital has been developed that include ICU services. • Integration of clinical and non-clinical services in a metro hospital with improved efficiencies achieved. • A hospital is so successful that following a positive report in 2008 from the Auditor General, where VFM was confirmed, questions were raised in the media as to why the facility was not bigger. • Value for money achieved over the life of the facility.
<ul style="list-style-type: none"> • The hospital will be built to the highest standards and is to be maintained to the highest levels. • Enable hospital staff to focus on what it does best – deliver health services to the local community. • Create local jobs – construction jobs while it was being built, and then employment for doctors, nurses and other hospital staff when it opened. 	A hospital set a new benchmark for regional care and has recently been expanded on the back of its success and the growth in demand for the services offered.
<ul style="list-style-type: none"> • A major focus on VFM • Expected services detailed 	VFM achieved and services are being provided in accordance with the contract

Table D.2: Original promises – Justice

Original promise (paraphrased)	Outcome (illustrative statements)
<ul style="list-style-type: none"> • A major focus on VFM • Expected services detailed 	The project summary report has detailed how the PPP Contract has met all specified requirements and achieved VFM.
<p>The general benefits sought were to improve the delivery of service outcomes from the assets by:</p> <ul style="list-style-type: none"> • integrating asset and service design • incentivising whole-of-life design and asset management • allocating risks to the parties who are best able to manage them, and • only paying for services that meet pre-agreed performance standards. 	In a 2016 report the Ombudsman confirmed that good facilities and whole-of-life outcomes were obtained but the Ombudsman was critical of the lack of transparency on costs. Questions in parliament later sought to show that clear VFM had been achieved.

Table D.3: Original promises – Education

Original promise (paraphrased)	Outcome (illustrative statements)
<ul style="list-style-type: none"> • Create an exciting education and training precinct in the heart of an internationally acclaimed metro precinct. • Quality facilities that are properly maintained over time. • Provided at a competitive price, also energy efficiency. • Achieve a re-development of facilities that integrates multiple educational sectors and specialist programs. • Innovation through the planning and service delivery skills of the public and private sectors. • Modern Schools will be built for modern learning styles • Flexible and adaptable learning spaces • Feature some of the most technologically advanced educational buildings in Australia • Be the state's flagship for international training - architecturally designed and learner focused campus • Redevelopment to ease students' progression from secondary to tertiary learning. • Integrate other services like childcare • Increase out of hours use of school facilities 	<ul style="list-style-type: none"> • Facility won international award 'Best Global Project' confirming the facility was setting new standards for education and training facilities around the globe. • Judged best example of a PPP the judges recognised it met the criteria best with its innovation, design quality and sustainability, financial efficiency and effective risk assessment and management. • Quote "these new facilities will allow the [educational institute] to deliver world-class training in some of the most technologically advanced buildings in Australia" • Design includes a range of integrated facilities • VFM has been achieved along with delivery of the creative facilities consistent with the long-term vision for education.
<ul style="list-style-type: none"> • Deliver VFM that includes ongoing maintenance • Potentially lower costs and enhanced benefits • Costs over the life of the asset, such as maintenance and replacement costs, being considered when a school is built • Help to fast-track the building of new schools • Decreased energy costs due to improved design and construction • Obtain first-class facilities with energy efficiency measures that will achieve a four-star Greenstar rating from the Green Building Council of Australia 	<ul style="list-style-type: none"> • Auditor General reports that VFM has been achieved • Project summary details evidence of a clear VFM outcome. • Quality facilities delivered on-time or early.
<ul style="list-style-type: none"> • Allow the principal and teachers to get on with the job of teaching rather than attending to building maintenance • Reduced Board and senior school staff time spent on property issues • Will allow school principals to concentrate on helping our students rather than working on the day to day maintenance of the buildings 	<p>This was a particular focus of this study and the results were overwhelming affirmative.</p>

Table D.4: Original promises – Other

Original promise (paraphrased)	Outcome (illustrative statements)
<ul style="list-style-type: none"> • Major commercial development opportunity to revitalise the metro precinct and thus boost the state's competitive advantage. • The construction of a new convention centre of sufficient capacity to enable the city to compete for the important larger international convention market, to ensure the city maintains and expands its position in the international and national convention markets 	<ul style="list-style-type: none"> • The achievement of outcomes supported Auditor General reports, including integration with existing centres • Government media releases draw attention the successful attraction of international events
<ul style="list-style-type: none"> • Flexibility in venue and venue management including energy efficiency • Deliver world class events • Leading urban entertainment precinct 	<ul style="list-style-type: none"> • Achieved a major commercial development and a stunning array of buildings • Contract enables flexibility to change operator without break costs at particular points in time • Achieved 6-star Green Star communities (v1) rating from the Green Building Council of Australia • Awarded LEED gold for sustainability by US Green Building Council

D.4 Observations from project performance reports

In addition to data sought from jurisdictions regarding the initial expectations, data was also sought on the ongoing performance of PPP Project Co by way of other documents that may exist like:

- Gateway Review reports
- extracts of agency project progress reports on actual outcomes during the contract management phase as they pertain to contracted KPIs, and financial matters such as on-going contractual payments and abatements, and
- extracts of project progress reports, as may be prepared for agency project control committees, pertaining to tracking actual costs against business case cost estimates (capital and recurrent), and time performance outcomes.

The PPP Project Co. and their FM providers produce, on a regular basis, comprehensive facilities management reports. There is also frequent evidence that there are regular meetings between service providers and the FM providers, and in a number of cases oversight by PPP Project Co through regular meetings with all parties. Internal government documentation indicates that mostly the PPP Project Cos are meeting and, in some cases, bettering contractual KPIs and that abatements are often applied if the service is not being delivered to the right standard.

There was no evidence of upward price adjustments for the scope of services originally contracted nor was there any evidence of risks being transferred back to government. Variations and modifications to the contracts were being undertaken where new services or changed requirements were required.

There was strong evidence of whole-of-life maintenance being undertaken such as routine maintenance, upgrades and refurbishments as envisaged by the original contracts. Some issue that required interpretation like what constitutes vandalism in schools formed part of the learning curve in the early years of some contracts.

There was also strong evidence that unforeseen events like flooding were repaired and reinstated promptly and that the FM companies had good tracking records of events that occurred frequently. Where responses to logged maintenance jobs were not done in a timely manner, abatements were applied.

D.5 Value for money results

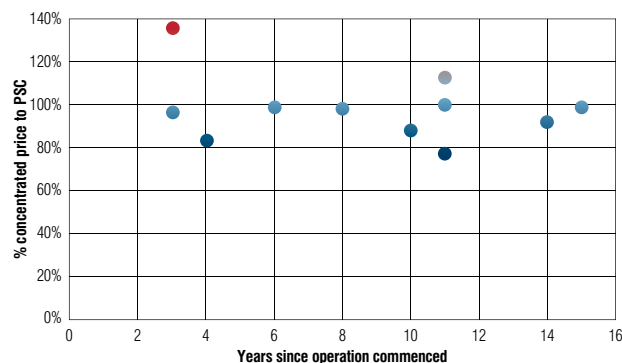
Analysis of project documentation

An analysis of project documentation listed in Section C.2 was undertaken. And given there was no evidence of price adjustments for contracted services or for changes to the allocated risks in the executed contracts, it was considered reasonable to rely upon the original assessments of VFM regarding the tender accepted by government. This assumption was tested during interviews with key staff.

Based on official government records, the VFM achieved is often expressed as a ratio of the contracted price of the PPP project compared to governments estimate of what it would cost to provide the service, known as a Public Sector Comparator. To test value over time a number of comparisons have been made.

Figure D.5 details the ratio of the contracted price of the PPP project compared to the PSC over time for the 12 case study projects. Some important observations from this figure are that: only two projects exceeded governments estimate – in all cases government had strong bids from a competitive market so it can only be assumed that the market price was the right price for the service outcomes specified. The one project that exceeded the PSC by some margin also achieved a very high satisfaction rating. Overall, it appears that the PPP market has operated consistently over the last 15 years with value being achieved. There is no indication of price creep over time. It is concluded that the PPP market is functioning as a mature market.

Figure D.5: VFM (ratio of contracted price to original PSC) over time



Analysis of workshop and survey responses

The survey results are based on responses from specialist project managers and executive service provider managers. 37 responses were received for the pre-workshop survey and 21 responses from the post-workshop survey. Workshops were conducted in Sydney, Brisbane, Melbourne and Auckland from June to August 2019. One workshop with contract managers and a second workshop were held with service providers representative in each jurisdiction. 11 contract managers attended the workshops and 28 service providers participated in the workshops. Detailed workshop results are provided in Appendix E and the combined satisfaction scores of survey and workshop participants are compared against the projects in Figures D.6 and D.7 below.

Analysis of *workshop and survey* responses provided an overall level of satisfaction with the PPP project and this was compared to the ratio of the contract price versus the government's PSC (original estimate). This comparison is provided in Figure D.6. Most perceived satisfaction scores for the projects were very good to excellent and all results were well above satisfactory. There is a tendency for an increasing level of satisfaction as the relative payment to PPP Co increases. Given that there is no evidence of PPP Co increasing its pricing over the contracted amounts, this tendency indicates that the companies are managing within their budgets.

Figure D.6: Overall satisfaction compared to the ratio of the contract price vs the government's PSC (original estimate)

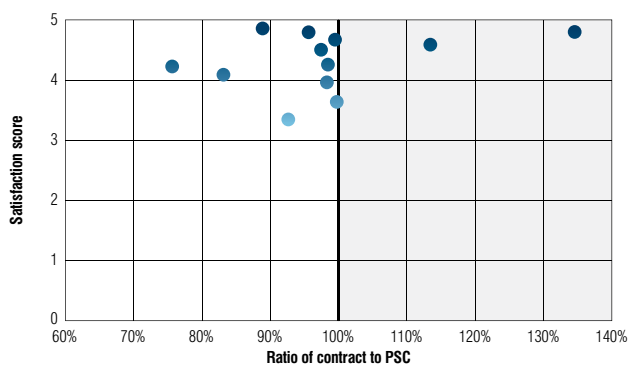
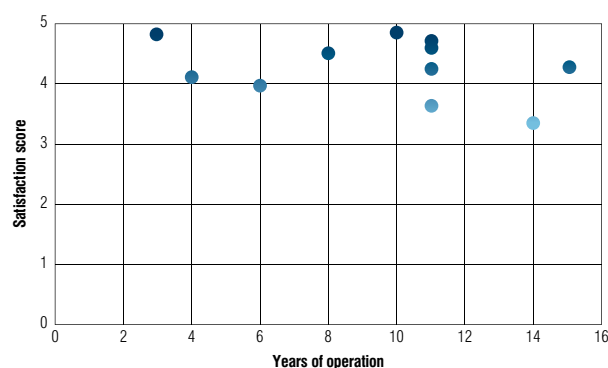


Figure D.7 compares the satisfaction score, computed by averaging the satisfaction scores recorded in the *survey* with those stated by participants in the *workshops*, over the years the PPP project was in operation. A satisfaction score of five indicates the users considered excellent outcomes were being

achieved, a score of one indicates poor outcomes were being achieved. A score of three indicates that on balance an acceptable outcome was being achieved.

Figure D.7: Project satisfaction versus years in service



The satisfaction levels shown in Figure D.7 indicate that service providers are very satisfied with all PPP contracts with the majority rating four or greater. This leads to the conclusion that users consider the services being received to be of very high to excellent level.

The level of satisfaction of the service over time was tested in the *workshops*. Workshop user representative participants initially indicated they had little or no specific understanding of the PPP contract and thus early comments received tended to be related to any areas of frustration or desires for improvement they may have. As the sessions unfolded users started to understand the services provided by PPP Project Co and those matters and decisions that remained in the hands of government. The users then tempered their initial comments (focusing on frustrations) when they reflected on their overall experience with the quality of their PPP facilities and services compared to traditional procurement (something that was not at the fore of their thinking). This reflection led to a more positive satisfaction score being expressed in the workshops compared to surveys.

There is also a high likelihood that some of the reduced level of satisfaction over time may in fact be attributable to the well-known social psychological phenomenon 'Recency Effect'. This is the effect of more recent events being better remembered when forming a judgement than former events. Confirmation of this would require further investigation.

APPENDIX E: INVESTIGATION, SURVEY AND WORKSHOPS

Workshop representatives came from the 12 case study projects, that included 20 school sites, which were in operation from about three to 15 years. Overall, the feedback from workshop participants was very positive, particularly when they got over some initial local frustrations and started to reflect on their overall experience with the quality of their PPP facilities and services compared to traditional procurement. The total number of positive comments made in the workshops exceed the negative comments, with:

- 145 positive comments (or 53 per cent of all comments⁴²), and
- 129 negative comments (or 47 per cent of all comments).

Given there were 12 projects across multiple sites operational for up to 15 years, the number of negative comments received were particularly surprisingly, in the opinion of the authors, few indicating the contracts are working well. However, the research did not have a control group, that is, 12 case study projects, including 20 school sites, which were in operation from about three to 15 years and delivered and operated under traditional models. Therefore, the authors cannot comment with any certainty the comparable positive or negative comments arising from a similar sample of traditionally procured case study projects.

Details the themes that emerged from the workshops on the operation of the PPP projects researched are provided below. For completeness, both significant and minor themes and sub-themes are reported.

E.1 Introduction

The method detailed in Appendix D was followed using the questions outlined in the ethics approval set out in Appendix C. All comments were recorded by the workshop attendees working in groups that represented their category of case study projects. These recorded comments were analysed, amalgamated and categorised according to asset types and respective states. This data of comments was then coded into two major categories: *positive comments* and *issues*. Specific findings follow.

E.2 Category 1: Positive themes

The data of comments coded in *positive* category lead to the identification of various sub-themes. These sub-themes could be reasonably categorised to form two *core* themes: *service delivery* and *stakeholder and relationship management*. Table E.1 represents positive themes with the sub-themes listed in order of frequency.

Table E.1: Breakdown of positive comments into core themes and sub-themes (sub-themes are listed in priority order)

	Core Themes	Sub-Themes
POSITIVE 145 comments (100 per cent)	Service delivery (84.3 per cent)	Facilities maintenance
		Service quality
		Facility design and build quality
		Core service outcomes
		Lifecycle planning
		Innovation
	Stakeholder and relationship management (15.7 per cent)	Consortium relationship
		Facility maintenance relationship
		Stakeholder engagement
		Communications

E.2.1 Service delivery core theme

The *service delivery* core theme recorded 84.3 per cent of positive comments. The six sub-themes identified are discussed below:

E.2.1.1 Facility maintenance

Facility maintenance in the PPP model represents hard and soft services that the private sector delivers to the public sector for length of the contract term. Hard services include maintenance of the building fabric, maintenance of grounds and gardens, maintenance of electrical, mechanical, civil engineering components in the building, and programmed lifecycle replacement and maintenance. While the soft services include waste management, catering, cleaning services, car parking services and other services.

The facility maintenance sub-theme ranked highest of positive comments among all sub-themes. For all the 12 PPP projects, the service providers and contract managers accepted that facility maintenance is an essential part of service delivery that has led to positive operational outcomes.

The service providers and contract managers for the education category generally appreciated the hard services component of PPP model which leads to school being maintained at a high standard throughout the contract period. It contributes work life balance to principals who no longer must take time after school hours or during vacations to ensure that facilities are kept in high operational standards. School business

managers are no longer spending their time managing or monitoring facility maintenance related activities. This gives principals time to focus on core service (education and leadership) rather than non-core services (facility maintenance – hard and soft).

The service providers and contract managers for the education category were also highly appreciated of both the soft and hard services component of PPP model. The high standard of soft services ensured that teachers always receive clean and well-maintained facilities to deliver education. School service providers also agreed that the facility maintenance provision reduces the workload for business managers and reduces stress for leadership teams as repairs are conducted efficiently.

The two key services that attracted positive comments as a result of PPP model were security and vandalism. Principals from various jurisdictions were happy with the quality of security services received. This always ensured safety of staff and children in the school facilities. While some of the schools reported instances of vandalism, several schools had no incidents of vandalism. School PPP contracts in which the risk of vandalism was allocated to private sector received additional positive comments compared to school contracts where the vandalism risk was shared between public and private sectors.

The service providers and contract managers from hospitals and other categories from all four jurisdictions also appreciated the facility maintenance component of the PPP model.

In conclusion, the workshop participants appreciated the facility maintenance component of the PPP models which ensures that hard and soft services are delivered efficiently for the contract period.

E.2.1.2 Service quality

The *service quality* sub-theme represents that overall quality of services received by service providers. Service providers and contract managers from the 12 projects agreed that performance and service expectations are being met as promised.

E.2.1.3 Facility design and build quality

The *facility design and built quality* sub-theme represents the quality of facility design and built.

Most of the positive comments in this sub-theme came from service providers in the education

category. Teaching and non-teaching staff at schools expressed appreciation that facilities received were of high built quality and better designed in comparison to traditional schools.

Commentary was provided that this better build quality and design is due to the involvement of the FM operator in the initial project phase, which enables them to influence the work of architects and builders ensuring low cost maintenance throughout project lifecycle.

E.2.1.4 Core service outcomes

The *core service outcomes* sub-theme represents the impact of PPP services on the performance the core services being delivered by the service providers.

Service providers from the education category stated that PPP schools are helping achieve better student outcomes. The quality of well-maintained learning spaces throughout school assets results in positive student outcomes. It was commented that PPP schools are helping teaching staff to spend more time on teaching activities which leads to positive outcomes in the following areas:

- Work-life balance for teaching staff
- Mental health for teaching staff
- Better well-being of students and staff
- Higher student performance – academic and non-academic activities

E.2.1.5 Lifecycle planning

The *lifecycle planning* sub-theme represents the private sector requirement to plan facility maintenance and equipment for the entire contract period (typically 25 years). This ensure that facilities are, for example, painted in timely manner, and carpets or equipment are replaced. Service providers and contract managers of different projects were positive on the private sector's planning and costings for project lifecycle, thereby ensuring future maintenance and replacement funds were available to upkeep the facilities at high standards.

Discussions in workshops suggests that the relatively low ranking of this sub-theme does not indicate that there are issues with lifecycle planning nor that it was not satisfactorily addressed. Rather, it represents being business-as-usual and not front of mind.

E.2.1.6 Innovation

Innovation attracted few comments. Innovation is normally a complex matter with limited understanding and visibility by service providers of how it impacts on the value proposition offered by PPP projects.

The comments reflected positively on the ability of the PPP model to provide additional innovation by the private sector on processes and programs that is difficult to achieve in traditional procurement models.

E.2.2 Stakeholder and relationship management

The *stakeholder and relationship management* core theme recorded 15.7 per cent of all positive comments and discussion of each sub-theme follows:

E.2.2.1 Consortium relationship

Consortium relationship sub-theme represents the relationship that the service providers have with the PPP consortium member – the FM operator - responsible for delivering project services (facility and non-core services) in the PPP model.

Service providers for most of the PPP projects reported a good partnership with the private sector consortium. The positive comments on this sub-theme were mostly due to regular meetings which developed a stronger perception of partnership among service providers. Positive comments are indicative of the efforts that consortium places in managing the service providers across different PPP facilities. Service providers from some projects commented on a strong partnership and a high level of engagement in certain project decision making by the consortium.

E.2.2.2 Stakeholder engagement

The *Stakeholder engagement* sub-theme relates to the service provider engagement conducted by the PPP consortium at various project phases. All comments were from one Australian state and related to one school project and one non-school project. These positive comments arose from communication and engagement during the bidding phase. Consultations included inputs from service providers on facility design, construction and operations.

E.2.2.3 Facility maintenance relationship

Facility maintenance relationship sub-theme relates to the quality of relationship service providers have with the on-site FM operator.

The on-site FM operator is usually the first point of contact for service providers in PPP facilities. The on-site FM operator is responsible for both hard and soft services of the facility. The positive comments were indicative of the good relationship that the service provider have with their on-site FM operator.

E.2.2.4 Communication

The *Communication* sub-theme relates to the quality of communication service providers have with different members of the PPP consortium. It was generally agreed by all the service provider representatives that communication plays a significant role in building relationship with the FM operator.



E.3 Category 2: Issues raised

The data coded in the *issues* category led to the identification of many sub-themes, much more than the *positive comments*, across 12 projects in four jurisdictions. These sub-themes were then categorised to form six core themes that are represented in Table E.2:

Table E.2: Breakdown of negative comments into core themes and sub-themes (list in priority order)

	Core Themes	Sub-Themes
NEGATIVE 129 comments (100 per cent)	Stakeholder and relationship management (32 per cent)	Consortium relationship
		Communications
		Stakeholder engagement
		Facility maintenance relationship
		Respect and trust
		Transparency
		Partners or tenants
	Performance (16 per cent)	Performance reporting and monitoring
		Performance failure
	Fit for purpose (16 per cent)	Funding
		Design
		Construction
		Community access
		Risk allocation
	Modifications/changes/ replacement (14 per cent)	Asset extension
		Time
		Cost
		Governance
	Flexibility (12 per cent)	Performance
		General operational flexibility
Service provider flexibility	Service provider flexibility	
	Service provider training	
Training and education (10 per cent)	Consistent understanding of PPP approach across both consortium members (incl. FM) and governmental staff	

E.3.1 Stakeholder and relationship management

The *stakeholder and relationship management* core theme recorded 32 per cent of total issues. Sub-themes are discussed below:

E.3.1.1 Consortium relationship

The *Consortium* relationship sub-theme represents the relationship that the service providers have with the PPP consortium member – the FM operator - responsible for delivering project services (facility and non-core services). The percentage of issue count for this sub-theme is also the highest among all the sub-themes under the stakeholder and relationship management theme, which suggests significant opportunity for improvement.

E.3.1.2 Communication

The *Communication* sub-theme relates to the quality of communication service provider have with different members of private sector consortium. The comments indicate communication between the PPP Project Co and service providers can be improved.

E.3.1.3 Stakeholder engagement

Stakeholder engagement sub-theme relates to the service provider engagement conducted by the PPP consortium at various project phases.

The non-involvement of principals during pre and post school design and construction phases emerged as the key issue in this sub-theme. It was noted that often the principals that were consulted during the design phase were not the same that were appointed to manage the school at operations. Similarly, in some jurisdictions, the principals were appointed only six months ahead of school opening. This has a potential to create conflict during operational phase due to the differences in teaching methodologies of the principal consulted during design phase and the principal that is appointed at school opening.

It was also noted that in some PPP schools, principals were not kept engaged and informed of on-going maintenance activities for their facilities. This may inadvertently hinder delivery of core services (education) by the schools.

The percentage of negative issues raised here were much higher than the percentage of positive comments received for this sub-theme.

E.3.1.4 Facility maintenance relationship

Facility maintenance relationship sub-theme relates to the quality of the relationship service providers have with the on-site FM operator. These comments were indicative of weak relationship between the on-site FM operator and service providers.

This sub-theme recorded both positive and negative comments. It was concluded, following further exploration in the workshops, that irrespective of whether the facility maintenance relationship is overly positive or negative, the facilities are being maintained to the standard required by the PPP contract.

It was suggested that the PPP sector consortium can easily resolve this issue by ensuring the on-site FM operator are trained and place a high value on relationships with service providers.

E.3.1.5 Tenants or partners

This sub-theme of *tenants or partners* relates to the concept of service providers being seen as “partners” or as “tenants” in the PPP relationship. The reference of “tenant” phrase for school-based service providers had negative implications.

E.3.1.6 Respect and trust

The *respect and trust* sub-theme relate to relationship aspects between the service providers and the on-site FM operators. This was only raised in a small number of PPP project school sites where service providers experienced a lack of respect from their on-site FM operator responsible for managing the facility on a daily basis. It was considered crucial for the success of relationships in the operational phase that service providers are treated with respect by all members of private sector consortium.

E.3.1.7 Transparency

This minor sub-theme of *transparency* relates the visibility that the service providers have over financial spending during maintenance of the PPP facility.

E.3.2 Performance

The *performance* core theme consists of two sub-themes and attracted 16 per cent of all *issue* comments.

E.3.2.1 Performance reporting and monitoring

Performance reporting and monitoring sub-theme relates to the issues faced by service providers in monitoring and reporting FM performance. Most of the comments were obtained from PPP school projects across three states and from one hospital project in one state. Currently, there is no provision in the PPP contract that allows service providers to monitor and report the performance of the on-site FM operator over the project lifecycle. Service providers clearly had a preference to be engaged in a mechanism to monitor and report performance of on-site FM operator to the PPP Project Co. It was observed that these comments were mainly due to varying quality of FM services (hard and soft non-core services) received by service providers.

E.3.2.2 Performance failure

The *performance failure* sub-theme relates to the on-site FM operator not being able to meet the contracted KPIs. All the issues in this sub-theme were recorded from PPP schools across three states. The major issue reported in this sub-theme was service providers’ limited capacity to control air conditioning in school facilities. Most of the PPP school principals were wanting the ability to control air conditioning units in their schools. The requirement to constantly maintain a certain temperature throughout the facility was not in their view good practice and worked against their educational programs of teaching the principles of sustainability to students.

E.3.3 Fit for purpose

The *fit for purpose* core theme recorded 16 per cent of the total *issues*.

Most of the fit for purpose issues came from two sub-themes: design and construction. Most of the design issues were reported from PPP school projects followed by one PPP hospital and one PPP convention centre project. The following were reported under design issues:

- Limited storage
- Limited consideration for glare
- Staff and traffic flow
- Automatic utilities causing higher utilities bill

All the issues reported under the *construction* sub-theme are from PPP schools across three states. The construction sub-theme relates to issues experienced by service providers as a result of poor construction decisions. *Community access* to the school facilities was mentioned in PPP school projects where risk of vandalism is allocated or shared with the private sector. To limit damage to the school facilities, the PPP consortium at times restricts the use of school facilities by community members. While this might reduce the operational cost, it decreases asset utilisation by the general community.

The *asset extension* sub-theme relates to the situation when schools receive add-on modules to accommodate an increase in the student population beyond the designed capacity. Service providers from all the PPP school projects noted that the quality of add-on modules was below the quality of the PPP built school facilities.

E.3.4 Modifications/Changes/Replacement

The *modifications/changes/replacement* core theme recorded only 14 per cent of total *issues*.

The four sub-themes of *time*, *cost*, *governance* and *performance* relates to the issues faced by service providers when changes are requested for both major and minor modifications impacting the facility or the replacement of facility equipment. It was observed that some service providers were severely concerned with the time it takes to get changes approved or implemented in PPP projects. The cost for modifications/changes was equally concerning to some service providers. Unlike, traditional projects where service providers could directly procure products or services “off the shelf”, PPP project requires service providers to not only pay for the capital cost but also for lifecycle maintenance cost of the product. For example, a new \$500 door fit out in traditional schools could cost PPP service providers an upfront \$2,500 which will include the lifecycle maintenance cost of the door. This high upfront cost takes away financial liquidity from service providers.

E.3.5 Flexibility

The *flexibility* core theme recorded only 12 per cent of total *issues*.

The *general operational flexibility* sub-theme relates to day to day processes in place that the service providers are required to follow to implement any significant changes. Even though PPP contracts have provisions incorporating the concept of flexibility, other provisions on maintaining the facility as built over the contract period can create issues for service providers. One example from this sub-theme is of a school that wanted to have a mural painted on a school wall to promote and display school's culture. The requirement to handover the facility to public sector after the contract term without any changes to the facility makes it difficult for schools to display their achievements and evolving culture. See also Section 4.5.

The *service provider flexibility* sub-theme relates to changes required by service providers due to the evolving nature of core services. It was observed that at times implementing requested temporary changes can be challenging for service providers. An example from this sub-theme is that teachers have a preference to stick coloured tape on carpets at the beginning of term to help guide younger students. In PPP schools this was considered unacceptable due to potential damage to the carpet. It was suggested that the PPP Project Co should be sensitive to teaching activities requiring some flexibility on the part of the on-site FM operator where there is no significant impact on the delivery of core services.

E.3.6 Training and education

The *training and education* core theme recorded only 10 per cent of total *issues*.

It was observed that many service providers did not have much visibility of the PPP contract. Even though this is the least contributing sub theme, it is noteworthy that some other stakeholders and relationship management issues are a result of a poor understanding of the PPP contract and PPP model, and the model's implementation during operational phase. For optimal operations of PPP projects, it was considered important that appropriate training and education workshops are conducted with various stakeholders.

APPENDIX F: REFERENCES

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ENDNOTES

- 1 In 2007, the Australian industry undertook a major benchmarking study into the performance of PPPs under the auspice of Infrastructure Partnerships Australia, Allen Consulting et al (2007). This was followed by a similar benchmarking investigation by Government Treasuries across Australia, Duffield et al (2008). Both studies confirmed that PPPs provide governments with an enhanced mechanism to manage the procurement of major infrastructure in terms of time and cost performance. These studies have since been supported by numerous researchers, for example, Raisbeck et al (2009), Regan et al (2011), Junxiao et al (2015).
- 2 The term 'service provider' is defined in this report as meaning those employees utilising the PPP capital assets and services to deliver services to their client community. In some PPP models those employees are public sector and in other cases they are employed through the PPP consortium.
- 3 The contract manager has responsibility for managing the project, usually after commercial acceptance once operations have commenced. They act as government's agent in managing contractual arrangements between the government party and the private party during the service delivery phase of a PPP. Once a PPP is operational, the contract manager should have an excellent understanding of whether the PPP party is fulfilling their obligations under the agreement.
- 4 Determined from the workshop, where only two of the thirty nine participants (service providers and contract managers) stated they preferred to work in non-PPP facilities and the same two people questioned whether the service promise was achieved. The other participants all preferred PPP facilities and were of the view the service promise was fulfilled.
- 5 The term 'delivery agency' refers to a department or an authority (which may be administered through a department) that has responsibility for a State's delivery of selected services and infrastructure to the community. Examples include a Department of Justice and an Office of Corrections. On the other hand, a Department of Treasury or a Department of Premier and Cabinet are normally referred to as 'central agencies' and not delivery agencies. In New Zealand, the responsibility rests with the New Zealand Government.
- 6 Determined from the workshop, where only two of the thirty nine participants (service providers and contract managers) stated they preferred to work in non-PPP facilities and the same two people questioned whether the service promise was achieved. The other participants all preferred PPP facilities and were of the view the service promise was fulfilled.
- 7 Determined from the workshop where, of the 28 service providers interviewed, 23 were prepared to endorse the comment that they appreciated the quality of services provided by the FM operator.
- 8 The term Facility Management (FM) Operator is defined as the organisation responsible for ensuring the buildings, equipment, plant and other infrastructure relating to the facility are maintained, modified and refurbished from time to time in accordance with the PPP agreement.
- 9 The term 'service provider' is defined in this report as meaning those employees utilising the PPP capital assets and services to deliver services to their client community. In some PPP models those employees are public sector and in other cases they are employed through the PPP consortium.
- 10 The term 'client community' is used to refer the community group that the service providers service. For example, principals, teaching staff and school business managers (the service providers of PPP school projects) provide services to students and their parents (their client community).
- 11 "Value for money denotes, broadly, a net measure where the required benefits (including quality levels, performance standards, and other policy objectives such as social, economic and environmental impacts) are balanced and judged against the cost (price and risk exposure) of achieving those benefits. Value-For-Money is assessed on a 'whole-of-life' or 'total-cost-of-ownership' basis, and in a PPP project this includes both the construction and operational phases. [This definition has been adapted from the National Alliance Contracting Guidelines: Guidance Note No. 4: Reporting Value-for-Money Outcomes, Commonwealth of Australia 2015.
- 12 Several iconic and successful examples of social infrastructure through PPPs are recognised in the general public media, for example, the Victorian Comprehensive Cancer Centre, Wiri Prison and Sydney International Convention Exhibition and Entertainment Project.
- 13 Examples of social Infrastructure projects where the public purse was protected from cost and time overruns include: Southern Cross Station and Hopkins. There are also a range of economic infrastructure project exams where the risks materialised and again the public purse was commercially protected, for example, Lane-Cove Tunnel in Sydney and Clem Jones Tunnel in Brisbane.
- 14 For example, in the 2006 Performance Audit- The New Schools Privately Financed Project (Sendt, 2006) Sydney NSW, Australia: Audit Office, the Auditor stated "The contracts in the New Schools Privately Financed Project are at an early stage of their 30 year lives and the savings and other benefits are not guaranteed. The contracts will need to be carefully managed over the 30-year period to ensure that benefits are realised and that costs do not escalate beyond expectations." Other Auditor reports make similar comments, for example, The 2013 Victorian Auditor General Report: Operating Water Infrastructure Using Public Private Partnerships VAGO where the Auditor states "A PPP can be an effective way of delivering water infrastructure projects because it draws on the strengths of both the public and private sectors. However, realising these benefits is reliant on how well the services are delivered, whether risks are managed effectively and ensuring the costs for doing so are minimised. It also depends on having effective contracts, and contract management arrangements that ensure continued performance of the private providers." This report goes on to recommend that "The Department of Treasury and Finance should develop a best-practice approach to assessing value for money throughout the public private partnership contract operating period."
- 15 Examples include the Junee Prison and Sydney Olympic facilities in New South Wales, Latrobe, Werribee and Mildura hospitals in Victoria, and the Borallon Correctional Centre in Queensland.
- 16 The private sector normally took the accountability and responsibility for the design and construction of the capital facilities and, where they did not legally own the land and facilities, assumed the ownership risks.
- 17 One of the first projects to reduce the risk of finance not being available at a reasonable rate after the Global Financial Crisis was the Victorian Desalination Project in 2009. The project included State support for syndication in the form of a guarantee, under which the State would effectively act as a lender of last resort if the debt which was to be syndicated was not completely sold down. This option was not called upon as the debt was successfully sold down. The breadth of project using a capital contribution by government is evident in rows three and four of Figure 1.
- 18 The special purpose vehicle (SPV), or PPP Project Co is the entity created solely to fulfil the service obligations of the agreement with Government. This entity is responsible for arranging finance, the design and construction of the facility, facilities management, maintenance and aspects of operations such that the service is delivered for the term of the agreement. The SPV is generally a single-purpose entity.
- 19 Refer to Tables B.1 and B.3 for the full list of projects in Australia and New Zealand respectively.
- 20 The 'Other' category included public facilities such as convention and entertainment complexes.
- 21 Appendix B discusses the development of PPP projects over recent decades and for this research it was decided that projects since about 2000 were reasonable to be considered as representative.
- 22 During the workshops it became evident that some service providers had little understanding as to how PPPs work. After some clarification these workshop participants were better able to particularise their comments to matters relating to either the PPP agreement or more generally with the service support they were receiving from their government department.
- 23 Perceived satisfaction represents that of workshop participants in terms of the benefits delivered to service providers or community members.
- 24 Interestingly, a few service providers mentioned that effort of dealing with "large" FM issues was the same whether in a PPP or non-PPP project. However, the smaller FM issues could be much more difficult in the PPP project when a "difficult to deal with" on-site FM operator was involved.
- 25 Similar comments were received from those organising events at the convention and exhibition centres.
- 26 As Figure 2 illustrates conceptually, service providers are generally not involved in drafting PPP contracts or in tender negotiations. Moreover, they have no direct role in contract management. Therefore, it is not surprising that service providers may express ignorance or even a lack of "ownership" in the PPP contract.
- 27 It is worth noting that some service providers also reported that the on-site FM operator, and its staff like cleaners, were similarly frustrated by this 'red tape'.
- 28 There was a minor difference between survey and workshop results, with the workshop results generally being more positive.
- 29 As mentioned earlier, during the workshops it became very evident that the service providers have little understanding as to how PPPs work. After some clarification the workshop participants were better able to particularise their comments to matters relating to either the PPP agreement or more generally with the service support they were receiving from their governmental department. This may at least partly explain a difference in perceived satisfaction received during the workshops, when compare to a not dissimilar question being asked in the pre-workshop questionnaire.
- 30 Source: Infrastructure Partnerships Australia, infrastructurepipeline.org.
- 31 Source: Spackman, 2002 and further research.
- 32 This is based on HM Treasury's PFI and PF2 database which covers all the operational PFI and PF2 projects. In addition to all the projects are in procurement, as on 31 March 2016.
- 33 Source: Benjamin & Jones, 2017.
- 34 National Audit Office (2018) Report on PFI and PF2, 2017-18.
- 35 Source: National Audit Office, 2009.
- 36 This perception is being tested by the research that is the subject of this report.
- 37 See http://www.Kaipara.govt.nz/Kaipara/notices.htm#waste_scheme.
- 38 Report of the Waterview Connection Procurement steering Group, "Progressing the Waterview Connection as a Public Private Partnership", 26 June 2008.
- 39 See <http://www.treasury.govt.nz/releases.es/2009-03-02i>.
- 40 The 12 PPP contracts included some 20 school sites (with different school principals and school councils) across three to 15 years of operations.
- 41 Based on the advice of the Treasuries and others that the people receiving the service, for example, patients in a hospital and school students, generally had limited visibility or understanding whether a facility was or was not a PPP, a decision was taken to have hand on operations managers represent service providers.
- 42 A "comment" was taken to be a matter of discussion during the workshop that made a judgement on the performance of the PPP project. In addition, during the workshops a number of observations and insights were offered by workshop participants that were not directly a judgement on the performance of the PPP project.

