The APMG Public-Private Partnership (PPP) Certification Guide

The APMG PPP Guide, referred to here as the PPP Guide, is the Book of Knowledge (BoK) detailing all relevant aspects of creating and implementing efficient, sustainable public-private partnerships (PPPs). It is intended for use by PPP professionals, governments, advisors, investors, and others with an interest in PPPs. The PPP Guide is part of the family of CP^{3}P credentials that, once obtained, allow individuals to use the title "Certified PPP Professional," a designation created under the auspices of the APMG PPP Certification Program. The APMG PPP Certification Program, referred to here as the Certification Program, is an innovation of the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank through its Multilateral Investment Fund (IADB through its MIF), the Islamic Development Bank (IsDB) and the World Bank Group (WBG) funded by the Public-Private Infrastructure Advisory Facility (PPIAF).

Chapter 7: Managing the Contract – Strategy, Delivery and Commissioning

Table of Contents

Boxes

Figures

Tables

Introduction

Once the PPP contract is signed and financial close has been achieved (refer to chapter 6), the Construction Phase commences. This culminates in a form of commissioning, which triggers the beginning of the Operations Phase. While the structure of the PPP Guide treats the Construction Phase and the Operations Phase as being distinctive phases and provides separate guidance on each, there is an overarching theme that unites the two phases. The theme is contract management.

This chapter begins with a general introduction to contract management in PPPs (part A of this chapter), covering the main components that will be applicable to both the Construction and Operations Phases. Sections 2, 3 and 4 below introduce contract management in the PPP context and set out an overall contract management framework including governance structures, leadership and management, roles and responsibilities, establishing and implementing contract administration, and relationship and performance management. These sections provide a high level view of each of these activities. Further detail is provided in the individual sections that fall under the Construction Phase (part B of this chapter) and Operations Phase in chapter 8.

1. PART A – Introduction to Contract Management

This general introduction shows the main components of PPP contract management, together with steps that need to be taken in order to be effective. The learning objectives are outlined in box 7.1 below.

BOX 7.1: Learning Objectives for Part A

After studying part A of this chapter, the reader should understand:

- The definition of contract management
- How to establish a PPP contract management framework
- How to establish appropriate governance and a contract management team
- The roles and responsibilities of the private partner and the government within contract management
- How to plan and establish administrative processes.

2. Definition of Contract Management in PPPs

The objective of PPP contract management is to obtain the services specified in the output specifications and ensure ongoing affordability, Value for Money (VfM) and appropriate management of risk transfer.

PPP contract management is the process that enables both parties in a contract to meet their respective obligations in order to deliver the objectives required from the PPP contract. Once the contract has been signed, and the "deal" has been agreed, each party should perform its respective role. Effective contract management requires a good working relationship between the two parties, and it should continue throughout the project term[1].

A second dimension of PPP contract management is proactive management to anticipate future needs, as well as the requirement to react appropriately to unforeseen situations that arise. PPP contract management seeks to achieve continuous improvement in performance over the life of the PPP contract.

For the purposes of this PPP Guide, PPP contract management is applied from contract signature until hand-over.

Effective contract management requires a number of activities which fall outside the purview of the PPP contract, but are essential to the success of the project. These include the following activities:

- Addressing the various needs, concerns, and expectations of the stakeholders in executing the project;
- Establishing, maintaining, and carrying out stakeholder communications that are active, effective, and collaborative by nature;
- Managing stakeholders efforts in meeting project requirements; and
- Communicating project deliverables to these stakeholders in a way that improves their buy-in to the project.

From a private partner management perspective, good practice in PPP contract management requires the balancing of the competing project constraints which include scope, quality, schedule, budget, resources, and risks.

The specific project characteristics and circumstances can influence the constraints on which the contract management teams of both the government and private partner need to focus. The relationship among these factors is such that if any one factor changes, at least one other factor is likely to be affected. Box 7.2 provides examples of such circumstances.

[1] South African National Treasury (2004). *National Treasury PPP Manual Module 6: Managing the PPP Agreement*, http://www.ppp.gov.za/Legal%20Aspects/Standardised%20PPP%20Provinsions/National%20Treasury%20PPP%20Practice%20Note%20No%201%20of%202004;%20Standardised%20PPP%20Provisions;%20First%20Issue;%2011%20March%202004_1.pdf

BOX 7.1: Examples of a Relationship between Project Constraints and Outcomes

If the schedule is shortened, often the budget needs to be increased to add additional resources to complete the same amount of work in less time. If a budget increase is not possible, the scope or targeted quality may be reduced to deliver the required end result of the project in less time and within the same amount budgeted.

If the commencement of construction is delayed by unseasonable rain (but not such that a force majeure event or relief event is triggered), the public sector contract manager needs to understand that this may result in late completion of construction, or the private sector may incur additional expenditure in order accelerate construction and make up for the lost time. In this case, the public sector contract manager should be aware of a greater risk of financial stress for the private partner. Alternatively, the construction contractor may seek some recourse through relief or compensation regimes, in which case the public sector contract manager should be aware of the correct application of the contractual provisions related to these regimes.

Project stakeholders may have differing ideas as to which of the project objectives are the most important, which presents an even greater challenge. Changing the project requirements or objectives may create additional risks. The project team needs to be able to assess the situation, balance the demands, and maintain proactive communication with stakeholders in order to deliver a successful project[2]

3. Importance of Contract Management

A tangible contract management function assists in managing obligations in an effective manner; this saves the two parties significant time and effort and provides benefits in terms of business strategies and procedures.

Contracts dictate every aspect of key business strategies and relationships. Many contractual parties spend a considerable amount of time and resources concluding contracts to their liking.

Once the contract is finalized and services are procured, many parties fail to properly monitor and oversee the implementation of these contracts and fail to fulfill their contractual obligations. Failure to meet these obligations can result in missed savings, heavy fines, costly litigation, and broken relationships — all of which constitute decreased public benefits and Value for Money.

[2] Guidance on Private Finance Initiative (PFI)/PPP Procurement and Contract Management. HM Treasury and Infrastructure UK, November 2007. (Last updated in Oct. 2013), pp. 15-16.

Because PPP contracts define the payment terms, negotiation patterns, work flow, and expected service levels, effective contract management not only ensures better relationships between contractual parties, but also enforces compliance and mitigates risk.

Infrastructure works and services provided by a private partner on behalf of the government require as much, if not more, management by the procuring authority than those provided in-house[3]. This is particularly true of PPP contracts. Although output-driven, such contracts require considerable management efforts on the part of the government. This is due to the nature of such contracts which have a long time span, require substantial works and services to be provided, and from which significant complexities arise due to the uncertainty of the future events and occurrences.

Sound contract management is therefore crucial to the success of a PPP. Failure to adequately manage the project will inevitably erode its Value For Money and may ultimately undermine its objectives.

Furthermore, the PPP contract, through which project risks are shared at the start of the relationship between the government and selected private partner, is at the heart of the relationship between the parties. The initial allocation of risk must be managed over the whole life of the project in order to:

- Enforce, clarify, and/or modify the risk allocation when unforeseen risks or consequences of those risks arise;
- Ensure that the private partner bears the risks it is required to bear and mitigates them adequately; and
- Monitor and effectively manage the risks borne by the government.

The European PPP Expertise Centre (EPEC) (2014) states that proper project monitoring enables the government to develop a detailed understanding of the project issues and show the private partner that it is an informed and vigilant counterparty.[4] Once a PPP contract has been signed, opportunities for public expenditure savings often arise over its lifespan. Savings can be achieved and, better still, shared between the parties only if there is proper monitoring by the government (provided the PPP contract allows for such a sharing). These savings may enable the government to release financial resources that can be usefully reinvested in other activities or projects.

As contract management is important to the government, so it is to the private partner. It has been shown through reviews of PPP projects that, after a period of time, many private partners become complacent and do not execute their obligations, as the contract dictates. Therefore, it is crucial that the private partner is familiar with the government's contract management procedures in order to enhance the efficiency and success of the PPP project.

---

[3] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract Life – Guidance for Sound Management.

[4] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract life – Guidance for Sound Management.

Finally, contract management is important because a project is rarely undertaken in complete isolation from other PPP initiatives. Engaging in the communication and knowledge sharing of existing PPPs is critical to the identification of improvements that could be made in future contracts, which in turn creates a virtuous cycle.

PPPs are first and foremost a collaboration between the parties; the private partner has a genuine interest and stake in these types of procurement projects. As a result, relationship management and communication are extremely important when dealing with PPP projects.

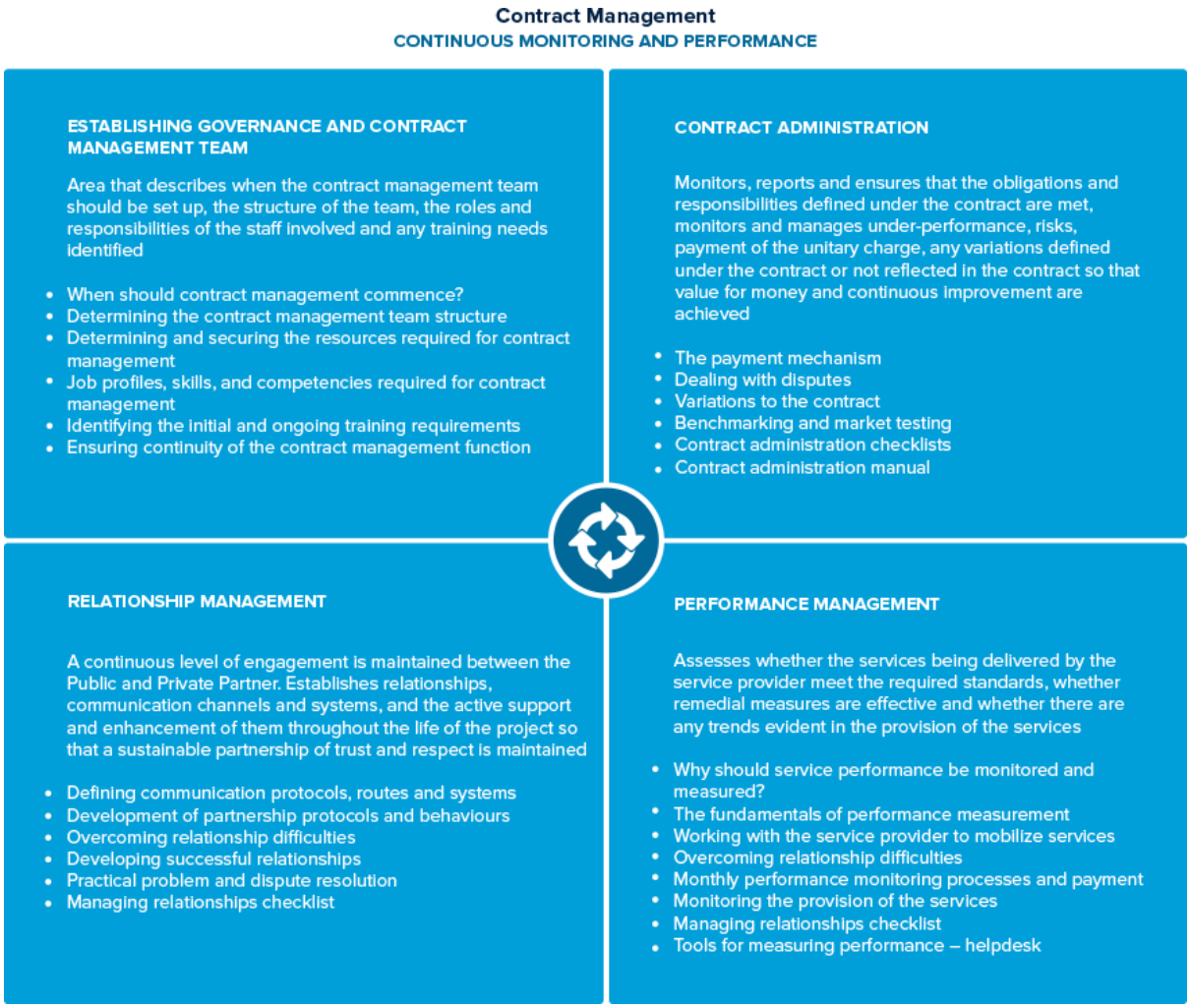
4. Contract Management Framework

Contract management is a complex function, which consists of multiple activities. However, the primary activities can be divided into four main components.

- Establishing governance and the contract management team;
- Planning, establishing, and executing contract administration;
- Relationship management; and
- Performance management.

Figure 7.1 below describes the four components of contract management and provides details on the steps to be taken in order for the contract management to be implemented and executed, as per good practice.

FIGURE 7.1: Contract Management: Four Main Components of PPPs



Source: 4Ps, 2007[5]

4.1. Governance and Contract Management Team Establishment

From a practical perspective, the Value for Money generated through a PPP depends on the quality of the private partner and the government's contract management systems and teams. This is especially true for PPP contracts that have some form of risk retention on the part of the government, be it in the form of a minimum revenue guarantee or some other form of contractual undertaking.

The PPP contract will set out the various obligations of the private partner with regard to the management and reporting of its activities and achievements against the project specification. Since the PPP contract may have very limited obligations for the government, it is common for the procuring authority to assume that the PPP contract will be self-regulating and self-reporting[6]. This assumption often results in

[5] 4ps in collaboration with Mott MacDonald, Public Private Partnerships Programme: A Guide to Contract Management for PFI and PPP Projects (2007). pp.6-7.
[6] Dreyer, W., K. Breytenbach, M. Watters, W. Van Oudenhove, and P. Parking. 2005, Innovative PPP Saves Chapman's Peak: PPP Brings Together the Public and Private Sectors for Rehabilitation of Famous Road, Proceedings of the 24th Southern African Transport Conference, Pretoria, July 11–13.

weak governance and contract management regimes being established by the procuring authority. Often, it can also result in a reduction in the overall benefits of the PPP compared to those estimated in the various ex-ante studies.

In the Chapman's Peak example provided in appendix A of this chapter, the government was responsible for obtaining environmental approval for a permanent toll plaza. It had to pay a minimum revenue guarantee during the time in which the approval was outstanding. At the end of the project, the amounts paid as a result of a delay in the environmental approval far outweighed the cost that the government would have needed to pay for a specialist contract management unit (which could have been established within the government in order to manage and mitigate the risk of the outstanding approval).

The establishment of a contract management team is an example of good practice for the government. However, the establishment of a contract management team will not, in itself, guarantee that the government will maximize the Value for Money (VfM) of the PPP contract. Table 7.1 describes the characteristics of a contract management team.

TABLE 7.1: Characteristics of a Contract Management Team

Function	Description
Mandate	The contract management team will have a clear mandate to act on behalf of the government. In this context, the contract management team acts as the representative of the government within the public regulatory environment. In some instances, this is achieved through internal delegations or institutional arrangements within the government, while in others a specific form of legislation may establish and empower the contract management team.
Contractual Standing	The contract management team must be empowered within the terms of the PPP contract to act as the representative of the government and to exercise specific powers or rights under the PPP contract.
Resources	The contract management team must have the human and financial resources to fulfill these mandates and contractual rights effectively and efficiently.

The specifics of the mandate, contractual standing, and resources required will differ from sector to sector and even from one project to another. Factors that will influence these functions are as follows.

- Scale of a project or program of projects: A useful metric is the value of the assets created by the PPP;
- Administrative complexity of the projects, such as whether they are cross-border or cross-agency in jurisdiction; and

- Extent of risk retained by the government in terms of the PPP agreement (which can be determined by considering the financial consequences accruing to the government of a risk materializing).

These factors must be taken into account when designing the contract management team prior to the contract award and Signing Stage, as the contract management team should be involved in the stages that follow (financial close and construction). In some cases, it will be preferable to establish a contract management team for a single project, particularly when the project is very large, complex, or unique. In other cases, it will be preferable to establish a single contract management team for multiple projects, particularly when the projects are smaller, less complex, and in the same or similar sectors.

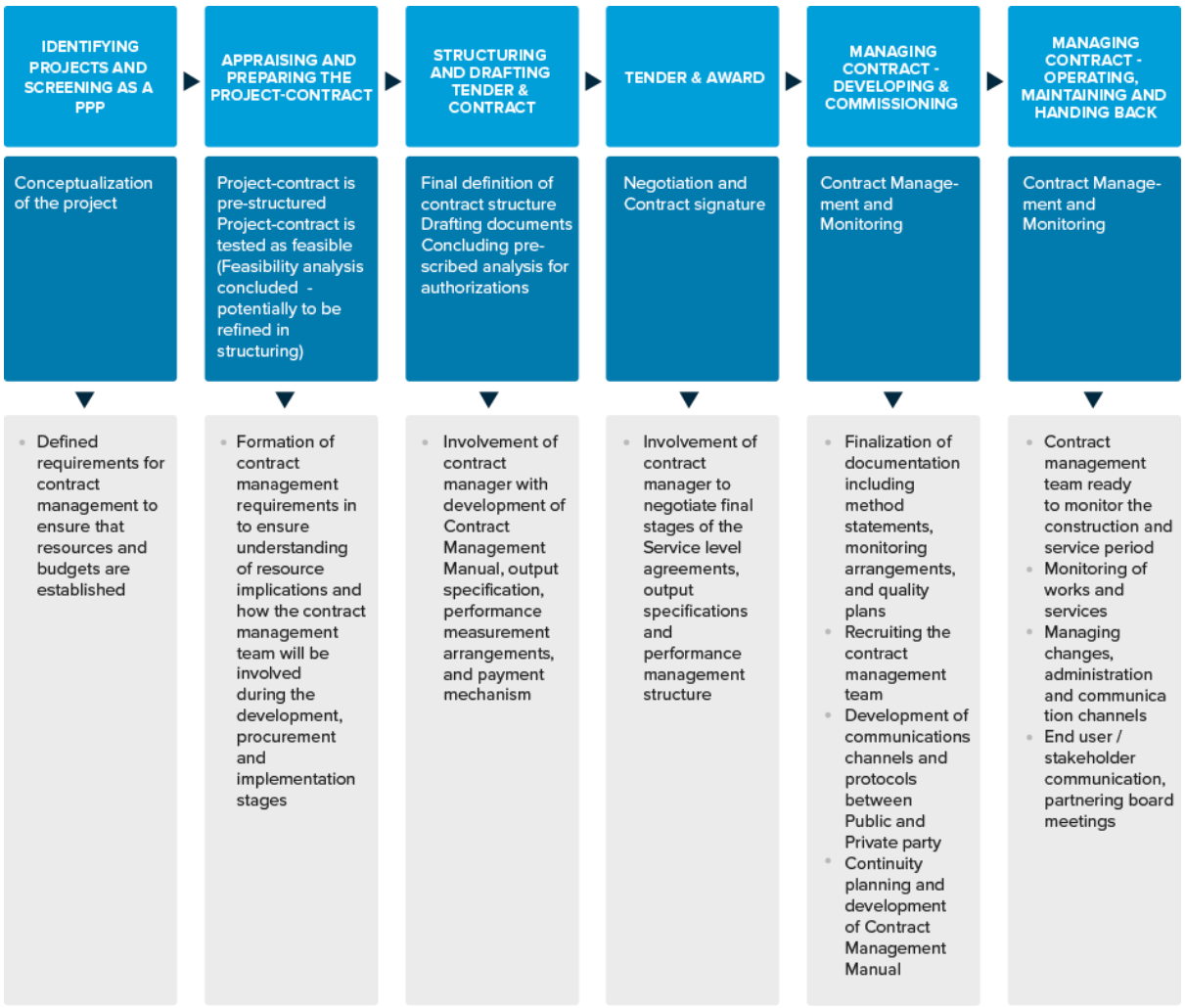
Figure 7.2 describes the stages and activities of the contract management function in each of the phases of a PPP project. In the Project Identification and Screening Phase, the contract management requirements should be defined and operational, and budgetary requirements should be discussed and agreed. During the Appraisal Phase, the contract management function should be described in detail, and the resource requirements and their function in the Construction, Commissioning and Operational Phases needs to be set out. A budget also needs to be secured in order to be operational for the duration of the PPP contract.

A detailed project plan with activities of the contract management team should be produced, as the requirements and obligations of this function will vary from phase to phase. During the Structuring Phase and the Tender Phase, representatives of the future contract management team should be involved in order to assist and be introduced to the operational requirements and outputs of the project to provide the monitoring tools and manuals for later stages of constructing, commissioning, and operating the asset.

At the end of the Tender Phase, the contract management team should be in place, and the final documentation (including method statements, monitoring arrangements, and quality plans) should be completed and finalized. Development of communications channels and protocols between the government and the private partner must also be completed. Any training required should also be provided for both the government and private partner.

It is common in PPP projects for the majority of the project team for the Tender and Award Stage to leave the project following the award or financial close. Putting the contract management team in place prior to the end of the Tender Phase can therefore be an important means of preventing a loss of knowledge about the project; knowledge can be transferred to the contract management team before key project team members move on. The private partner often faces similar issues, as its bidding team will move on to prepare bids for other projects and can use a similar approach to prevent a loss of project knowledge.

FIGURE 7.2: Stages of Contract Management Activities throughout the PPP Life Cycle



The establishment of governance and contract management functions by the government during the early stage of a project will unlock numerous benefits. Some examples are listed below.

- It will help build in-depth knowledge of the project from the inception, and therefore a strong negotiating position when the project is in procurement;
- It will ease co-ordination and integration of all the stakeholders and works once in the Construction Phase; and
- It will help build familiarity with proposed service measurement targets and preparation for the monitoring of the same.

The governance and contract management functions should also reduce the chance of possible pitfalls such as those listed below.

- A lack of knowledge and understanding of what the private partner's intentions were when devising their solution, as well as what has been incorporated into the contract, resulting in conflict and affecting the establishment of the partnering relationship;
- Poorly monitored and executed financial management because the contract management function is not involved in the design of the payment mechanisms at the Structuring Phase;

- A lack of opportunity to influence the implementation of services. A lack of awareness of problems and the implementation of the solutions can be avoided if the contract management function is involved from the inception of the project; and
- A lack of knowledge of the signed contract, obligations, and roles and responsibilities arising from the late appointment of the contract management function may delay the project, bring indecision and in certain circumstances, and shake the relationship between the government and private partner.

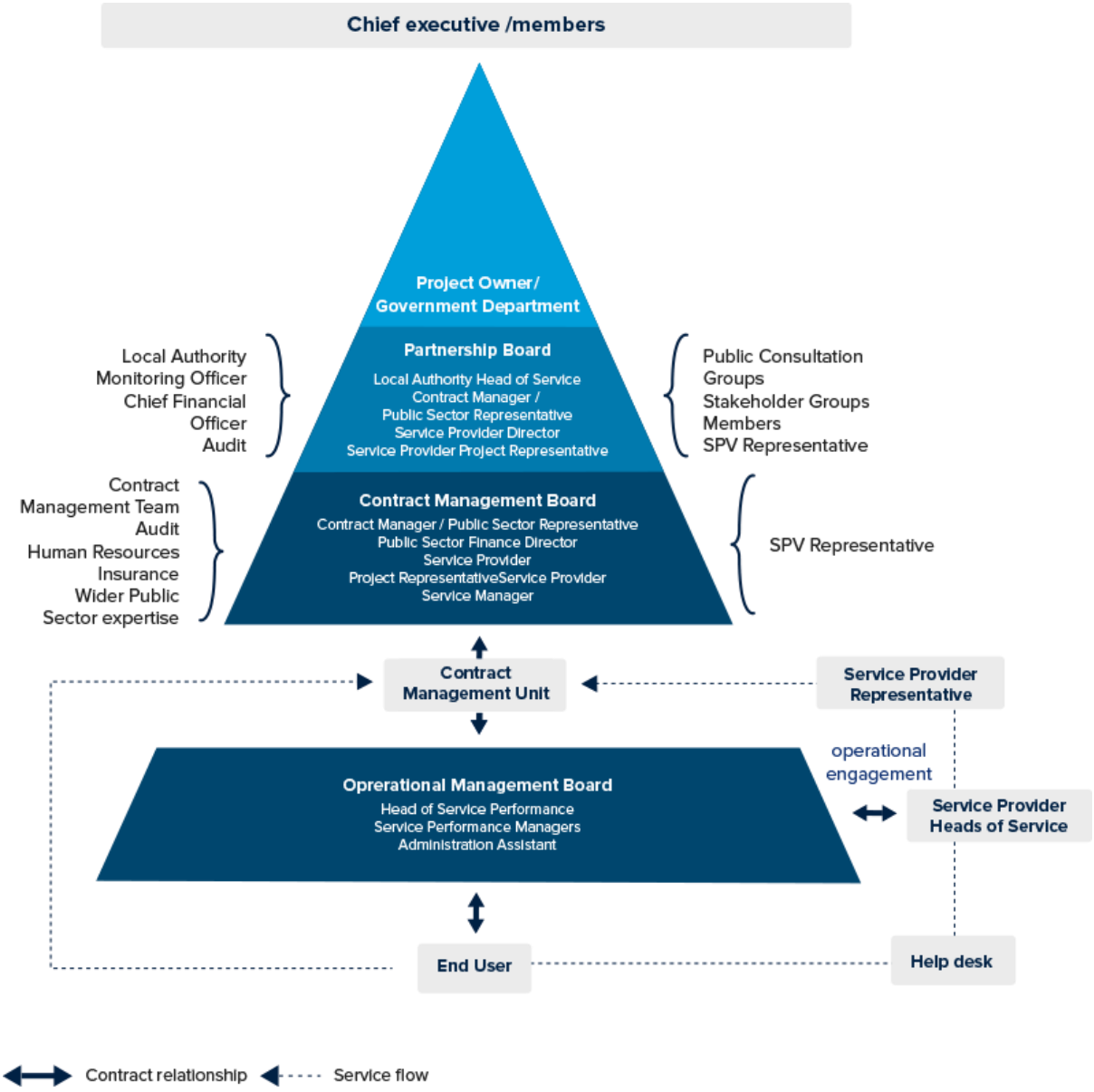
4.1.1. PPP Governance Structure

Good practice for PPP contract governance structures requires various layers of interaction between the two parties. An example of this is the use of a partnership board, a contract management board, and an operational management board, which will liaise directly with the contract management team. Figure 7.3 below represents a typical PPP structure with the members of each board and organ, as well as their communication lines. This will represent a typical structure in light of overall PPP delivery.

It should be noted that these structures and the best practice requirements for good, collaborative relationships between the parties do not detract from the contractual obligations of the two parties. In addition, the government should adopt the structure that best suits internal existing structures and governance arrangements. It also needs to be adapted to the complexity of the project so that the resources and structures used are appropriate given the size and complexity of the project.

The partnership board's role is to ensure that the project runs smoothly and that the partnership relationship is successfully executed. The communication with all of the stakeholders is channeled through the partnership board, and any issues that need to be resolved would be addressed at this forum. As a rule, the board should meet quarterly, however should the need arise, it is advisable that the board meet on an 'ad hoc' basis.

FIGURE 7.3: Project Governance for PPP Contracts



Source: 4PS (2007).
Note: SPV= special purpose vehicle.

The primary objectives and functions of the partnership board are as follows.

- Strategically lead the project and provide guidance to ensure that long-term issues are properly considered and resolved;
- Ensure effective communication is taking place at all levels;
- Ensure that the objectives of the contract are met over the full term of the contract;
- Ensure that an ethos of working in partnership is developed and maintained;
- Ensure that the project is aligned with both parties' business or service plans;
- Consider and report on any changes in legislation;
- Agree on proposed efficiencies and changes;
- Set year-on-year improvement targets if appropriate; and

- Promote best value through the management of whole project life costing through innovation and service improvements.

The contract management board is responsible for monitoring service delivery against service levels and key performance indicators, as well as ensuring that daily contractual matters are dealt with as efficiently as possible. The contract management board usually meets once a month. The primary objectives and functions of the contract management board are as follows.

- Review, discuss and agree on issues arising from the monthly monitoring report;
- Review the payment report and agree on payments due;
- Review the past and future financial performance of the project;
- Resolve issues with regard to production of information;
- Take a forward view of the project;
- Identify efficiencies and necessary changes;
- Record/discuss issues affecting the contract, for example compensation events, delays and extensions of time;
- Review areas of conflict;
- Ensure the partnership board is briefed and actions taken; and
- Promote partnership working process.

The function of the operational management board is to monitor and discuss performance, and manage contractual obligations as well as any changes driven by the contract or outside the contractual limits that would affect the project. The operational management board meets with the contract management team on a regular basis, and as a good practice this is recommended at least bi-monthly.

The main objectives for operational engagement are as follows;

- Provide early identification of issues;
- Produce or review monitoring reports and payment reports (where these are produced by the private partner);
- Review financial performance of the project and the parties;
- Discuss and, whenever possible, resolve minor operational issues;
- Ensure that all parties are clear as to the level of service required;
- Promote partnership working; and
- Implement changes when necessary and report back on the same.

4.2. Roles and Responsibilities of the Government and the Private Partner within Contract Management

4.2.1. The Role and Responsibilities of the Private Partner

To enable the government to effectively manage the contract, certain roles and responsibilities must be required of the private partner through the contract. It is very important that the reporting system of the private partner complies with the government's requirements. In this context, the government will have clear policies

and procedures with respect to private partner reporting. These requirements must have been communicated in the Tender Phase to ensure that the private partner has been given the opportunity to design and implement a reporting process, and to allow for time to ensure that information management systems are compliant with the needs of the government.

As part of this process, the private partner should set up a Quality Management System (QMS) (see section 7.5 below) through which the process and procedure of documentation issuing, and monitoring of service and performance is recorded. It is equally important to keep the communication channels between the government and private partner continuously open and to raise issues when anticipated, as the risks might affect the project. However, one of the most vital points is that the government not get involved in the actual decision-making and execution, as the risk transfer will be affected.

A Management Information Systems (MIS) will form a great part of the QMS (see section 4.3.4 below). The importance of the MIS is to aid the reporting and monitoring of the private partner by the government, reduce time and costs in providing necessary documentation, and use for record keeping and safety. The MIS also assists in the management of the documentation version controls, and aids in reporting back to the end-user if necessary. The aim is to ensure that performance can be measured and monitored using the information technology (IT) tools, and that these IT tools generate reliable and accurate data on a regular basis which will be part of the complete QMS.

The government, however, should be careful not to prescribe to the private partner how it should structure itself. This is because of the discipline imposed by the project finance structure. In particular, the lenders and shareholders to the private partner generally need to ensure that good practice is applied in terms of corporate governance.

There are, however, some areas in which the government should be prescriptive in setting out either explicit contractual obligations or requirements of formal approvals related to the structure of the private partner and its governance arrangements. These include:

- Changes in shareholding;
- The ability of the private partner to perform its obligations with suitable experienced and qualified personnel;
- Changes in the financial structure of the private partner, such as distributions made by the private partner and refinancing; and
- Reporting requirements in terms of timing and contents of such reports.

4.2.2. Contract Management by the Government

The government will have a number of roles, possibly at different levels, in managing the contract. It will have a strategic commercial contract management role in sharing policy and other strategic developments with the private partner. It will also have a role in monitoring:

- The contract to ensure that the obligations therein are being met and remain with the party contracted to fulfill these; and
- The performance of the private partner so that services are delivered to the required standard and the actions for non-performance set out in the contract are adhered to.

From the outset of the project, the government should follow the steps listed below.

- Clearly define roles and responsibilities of its contract management team;
- Monitor the project delivery;
- Manage changes permitted under the PPP contract;
- Manage changes not provided for in the PPP contract; and
- Provide for dispute resolution.

In essence, the project's success will greatly depend on the monitoring and management of the project by the government.

After the PPP contract has been signed, responsibility for contract management will normally be transferred to a contract management team established by the government. The responsible person for driving the contract management team on a daily basis will be the contract director. It is good practice to include the proposed contract director in the government's project management team at an early stage of the procurement process. The continuity as well as experience of a good contract director can be beneficial for the formulation of a sound PPP contract. This early involvement will also provide the contract director with a good understanding of the project and its inherent risks to enable him/her to devise an appropriate contract management strategy.

There is no simple formula when structuring the contract management team; it will greatly depend on the type of project, complexity, duration, and interface with the government and private partner as well as the end users. It is extremely important that the government has understood and reviewed the resource requirements for the various stages of the Construction and Operations Phases. The government should also think carefully about the skills that will be needed, as well as how it will secure those resources. Larger and more complex projects may require a contract director (see chapter 5.2.2.2 for detail), contract manager, contract administrator, and a knowledge and training staff member.

Specialist skills in some areas can be obtained as and when needed (see section 7.1.3 below) provided it is not necessary to go through lengthy procurement processes in order to mobilize them.

If the government does not identify and appoint appropriately skilled staff with the right attributes and appropriate levels of empowerment to carry out contract management duties, this will inevitably lead to under-resourcing in the Operations Phase, particularly in the early stages which are intensive and will lead to variable quality of management of the contract.

Since PPPs are long-term projects (often enduring for 20 years or more), it is highly unlikely that the same team that started the project will see it through to the end. Therefore, it is extremely important to ensure that there is continuity and transfer of knowledge within government. Two elements that ensure that continuity and transfer of knowledge are succession planning and putting in place contract management policies, procedures, and manuals.

4.2.2.1. Roles of the Contract Management Team

The contract management team has a number of primary and secondary roles within the government domain. The primary roles relate to the PPP contract itself and the oversight exercised over the private partner in the achievement of the project objectives and VfM. The secondary roles relate to a broader role in fulfilling public policy and communicating across a range of stakeholders to whom the private partner is not accountable.

Primary roles include:

- To act as the contractual representative of the government (to protect governmental interests) in performing obligations and enforcing the rights of the government in the PPP contract;
- To monitor the performance of the private partner in providing the services specified in the PPP contract, and to enforce the payment or penalty mechanism associated with the performance monitoring;
- To liaise with the private partner in achieving the project objectives;
- To ensure that financial instruments such as securities and insurances are properly maintained;
- To manage any disputes that arises under the PPP contract;
- To manage the changes (variations and amendments) to the PPP contract in accordance with public policy and law, so as to achieve VfM through such changes;
- To oversee the management of the project assets and to ensure that these are correctly maintained, accounted for, and reported on;
- To ensure that user charges are amended in accordance with the PPP contract and public policy and law (if relevant);
- To report on the financial performance of the project in accordance with generally accepted accounting practices applicable in the jurisdiction;
- To report on the contingent fiscal obligations accruing to the government from the project and any changes thereto; and
- To monitor, evaluate and report on the progress of the project, and identify lessons learned for the project and for future PPPs.

Secondary roles include:

- To liaise with and promote cooperation between governmental structures in all spheres of government in relation to the project;
- To monitor the policy and legislative environment of the project; and
- To enhance the integration of the project with other public services, programs, and projects.

The roles and responsibilities of individual functions need to be included in the formal mandate of the contract management team. They must also be well aligned with the PPP contract by incorporating reporting obligations on performance and assets (for example) that allow the contract management team to fulfill its role. The contract management team mandate must also be reflected in the dispute resolution process in the PPP contract, as a misalignment will diminish the ability of the contract management team to avoid costly disputes.

4.2.2.2. Contract Director Roles and Responsibilities

The individual appointed as contract director and leader of the contract management team is critical to the effective functioning of the team and the PPP itself. Such an individual has significant delegated authority from the government party to manage the PPP contract and represents the government. The contract director also has to lead the contract management team and make it a well-functioning unit. That person has to have adequate authority and seniority to liaise with the private partner and other government entities in a manner that enhances decision-making and expedites action.

The contract director should always be accountable for all decisions made and for ensuring that appropriate consultation and compliance with legal requirements takes place on major decisions (such as dispute resolution or amendment of the PPP contract).

A good contract director acts within existing delegated authority to make decisions in the day-to-day management of the PPP contract so that the PPP is implemented efficiently. A high performance contract director is able to elevate extraordinary decisions with cost or risk implications, to appropriate levels in government.

The contract director should be given the following tasks.

- Responsibility for the development of a contract management plan that accords with the activities and reporting of the private partner under the PPP contract;
- Developing and leading of the contract management team in accordance with that plan;
- Developing annual plans for areas of specific oversight, including audits and reports on key risk areas;
- Communication and liaison with the private partner in a structured manner about performance, financial, and dispute related matters; and
- Monitoring of risks and fiscal obligations that arise from the PPP contract.

The contract director plays a key role in developing relationships with the private partner and monitoring the private party's performance, and therefore it is a critical appointment. As such, the appointment is likely to be full-time and will take the risk and complexity of the project into account.

4.2.2.3. Contract Manager Roles and Responsibilities

The contract manager will, in essence, be the "right hand" of the contract director and his/her skills need to reflect strong interpersonal skills which will provide

direction, clear communication, strong problem solving, and be able to deal effectively with people without having authority. The contract manager should also have basic technical expertise relevant to the type of PPP project. Technical knowledge gives the contract manager the creditability to provide leadership for a technically-based project, the ability to understand important aspects of the project, and the ability to communicate in appropriate technical language. The contract manager should also possess good administrative skills, which would include planning, organizing, and managing/overseeing/coordinating the work.[7]

The contract manager will perform duties that the contract director assigns. This might include the following duties:[8]

- Providing an appropriate contract management methodology and risk register;
- Putting in place an appropriate performance monitoring and audit system;
- Overseeing and ensuring the service provider mobilizes effectively and in keeping with the program;
- Keeping the output specification and method statements up-to-date;
- Forming a good, long-term, sustainable relationship with the service provider;
- Ensuring that service standards are provided and maintained, and have day-to-day links with the service provider;
- Monitoring the service provider's ongoing performance and service delivery, and identifying key trends in the service delivery and the service provider's performance;
- Ensuring remedial measures for improving service delivery are implemented when required, and monitoring the service provider's approach to rectifying non-compliance;
- Managing changes in legislation within the contract;
- Managing variations, benchmarking, market testing, and change; and
- Monitoring and managing risks.

4.2.2.4. Contract Administrator Roles and Responsibilities

The contract administrator must have good organizational skills, an eye for detail, and be at hand to assist the contract manager on administrative matters. Some of the responsibilities include:

- Organization of file and documentation management;
- Operational execution of financial management;
- Keeping records of risks and possible impacts thereof; and
- Managing the contract manual, processes, and procedures in relation to claims, organizing meetings, communication, and ensuring that all issues are resolved or brought to the attention of the relevant parties.

---

[7] Amado, M., Ashton, K., Ashton, S., Bostwick, J., Clements, G., Drysdale, J., Francis, J., Harrison, B., Nan, V., Nisse, A., Randall, D., Rino, J., Robinson, J., Snyder, A., Wiley, D., and Anonymous. (2012). Project Management for Instructional Designers. Retrieved from http://pm4id.org/. Licensed under a Creative Commons Attribution NonCommercial ShareAlike (BY-NC-SA) license.

[8] 4ps in collaboration with Mott MacDonald, Public Private Partnerships Programme (2007), *A Guide to Contract Management for PFI and PPP Projects*.

4.2.2.5. Training for the Contract Management Team

When recruiting and mobilizing for the government contract management team, staff training might be needed depending on the past PPP experience of the individual and the knowledge obtained within the field. Therefore, the knowledge and training specialist will have an ongoing function with responsibility to identify initial and ongoing training requirements.

Generally, two types of training are available: firstly where an overall introduction into PPPs and the project life cycle and key features are explained, and secondly where specific training (such as contract and project management, payment mechanism, risk analysis, and so on) is presented.

General training in contract management would describe the basic contract management principles, some project management skills, negotiating skills, general commercial skills, and basic principles of effective communication.

Training specifically for PPP/private finance initiative (PFI) projects involves stages in mobilization and handover, change management, the payment mechanism and its application, help desk function and performance monitoring, the application of the contract, contractual change and variation management, and benchmarking and market testing.

4.3. Contract Administration Planning, Establishment and Execution

4.3.1. Process for Planning of Administrative Process

Management and control of risk is one of the most important factors during the PPP life cycle. Properly implemented administrative processes are imperative for effective risk management. However, the planning and establishment of administrative processes is not an easy task and when doing so, the government must:

- Formalize management responsibilities for transition between the project stages;
- Monitor project delivery, service outputs, and contract performance;
- Manage change and variations;
- Maintain the integrity of the contract;
- Promote strong working relationships with the project parties;
- Resolve project issues and disputes fairly and efficiently; and
- Advocate for regular contract and project reviews to ensure continuous improvement[9].

[9] Partnerships Victoria, 2003. Contract Management Manual: Main components.

Therefore, the contract director should prepare the PPP contract management plan, paying attention to PPP contract administration responsibilities. The PPP contract management plan should set out those points covered in box 7.3.

BOX 7.2: Contents of Contract Management Plan

- A summary of the proposed systems and procedures for variation management, PPP contract monitoring, and financial administration.
- The roles and responsibilities of the procuring authority and the private partner in relation to variation management, PPP contract monitoring, and financial administration.
- The plans for the development of the PPP contract management manual that will be used to provide details of all documents relating to the PPP contract, variation management, PPP contract monitoring, and financial administration procedures.
- An estimate of the resources that the procuring authority will devote to variation management, PPP contract monitoring, and financial administration.

4.3.2. Formulating the Contract Management Manual

A contract management manual is a collection of policies and procedures. It should be written in plain language and needs to explain what is expected from the government with respect to its duties and obligations, as well as what needs to be done in order to successfully monitor the private partner's progress and delivery. The manual should also provide processes and procedures that need to be followed between the organizational structures and departments. This is typically the case for internal procedures involving different departments within the government's administration, for example the operational management team and accounts department for the payment procedure. With respect to projects that involve numerous public stakeholders such as schools and hospitals, the scope of the manual may be broadened to deal with the interaction among the key public stakeholders.[10]

The contract management manual should always be read in conjunction with the signed contract and must be aligned with the processes contained within the contract. It should never be substituted for the contract itself. The contract management manual must build on the contract management plan and must also be practical and relevant to both the day-to-day and the longer term management of the project contract. Box 7.4 below provides an example of what should be covered in the contract management manual.

[10] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract Life – Guidance for Sound Management

- BOX 7.4: Contract Management Manual: Main Components Necessary steps for taking action: The contract management manual must highlight the most immediate and critical actions that must be taken by the contract director and relevant team members while administering the contract. These actions need to be set in the context of a clear understanding of the commercial intent of the parties, and the relevant commercial, legislative, regulatory, and policy background.
- Alignment of resources: The contract manual must enable the contract director to identify the resources required to perform necessary tasks and manage the most time critical and materially significant risks at various stages during the project life cycle.
- Provide support to governance: The contract manual must support the governance practices of the government, which include communications, accountability, and decision-making processes.
- Contract management tools and processes: The contract manual must provide a single point of reference for contract management tools and processes.
- Adaptability: The contract manual must be a dynamic document and must be updated regularly to ensure that it remains relevant throughout the project life cycle.

Source: Partnerships Victoria, 2003.

The contract management manual further serves as a knowledge management tool, and it will be particularly important for succession planning and transfer of knowledge. For that reason, when new members join the contract management team, it is recommended that they be given specific training in use of the manual.

Finally, the contract management manual will serve as a tool to facilitate the hand-over from one phase to another, and as a comprehensive reference document of the processes and procedures to be followed under these circumstances.

4.3.3. Implement Information and Documentation Management

The government relies on accurate information and relevant documentation in order to make sound decisions, monitor the private party's performance, comply with its contractual obligations, and manage project specific risks[11]. In a typical PPP project, most of the information is provided by the private party. The government's role consists primarily of receiving this information and verifying that it is accurate and consistent.

The most common requirement by a government is to ensure that the private partner provides information surrounding financial, legal, and technical issues that are needed for the government to successfully monitor and review the performance of the private partner.

[11] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract Life – Guidance for Sound Management.

When drafting the contract, the government should be clear and prescriptive with regard to the level of detail, format, and deadlines of the data to be produced by the private partner. EPEC (2014) states that the documentation and information requirements differ between the Construction and Operating Phases. However, for both phases, the type of information needed from the private partner should be carefully considered so as to avoid:

- Requiring too much information, which would be costly to produce and collate for the private partner and ultimately for the government to analyze; and
- Requiring too little information, which would limit the government's ability to perform its duties.

4.3.4. Management Information Systems (MIS) in a PPP Environment

Activities and documentation management of a PPP project are recorded and managed by a MIS. Because the PPP contract ultimately aims to deliver an efficient service to a range of end-users, performance must be closely monitored by the government so as to ensure proper and constant engagement by the private partner.

Certain activities must be performed by a government in order to successfully implement a MIS solution as an integrated communication tool for PPPs[12].

- Stress in the tender documents that the government expects to have transparent access to these tools throughout the life of the contract;
- Discuss during the Procurement Stage (to the extent that this is possible under the applicable procurement rules), which MIS solutions the bidders are planning to use and the extent to which they can be shared with the authority (for example, licensing rights, personal data protection issues);
- Request that the private partner design appropriate MIS interfaces, such as dedicated web portals, for the government; and
- Test-run the private partner's MIS solutions in advance of operations commencement in order to ensure that they are functional.

The objective of a sound MIS solution is to ensure that performance can be measured and monitored using the MIS, and that the MIS generates reliable and accurate data on a regular basis. The government will need to ensure that there is full consistency between the contractual performance of the private partner and the MIS interfaces that will be adopted.

Given the rapid evolution of MIS technology, the private partner should have the obligation to upgrade the MIS regularly. It should also avoid expensive, bespoke MIS solutions that rely on the unique intellectual property of one service provider. For example, open source systems are typically cheaper to upgrade and are developed with innovation in mind. Such systems vary in their capabilities, and they can provide: sophisticated document management solutions; clear, auditable

[12] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract Life – Guidance for Sound Management.

communication between the parties; and drive efficiencies over weeks, months, and decades by linking approved processes, notice templates, and prescribed tasks to the underlying PPP documentation.[13]

In some circumstances, however, the private partner or one of its consortium members may have an existing proprietary system that can be used for the project at a low cost. In such cases, it may not be Value for Money for the government to insist upon the use of an open system.

Some systems can also be used by the procuring authority during the tender process for document management and communication with bidders. However, it may not be Value for Money for the procuring authority to mandate the use of the same system through the life of the contract.

4.4. Relationship Management

PPPs, by their very nature, span a very long time frame. They are detailed and complex when it comes to managing relationships between the various parties in the PPP contract. There are many stakeholders within a PPP, including the parties, lenders, SPV shareholders, end-users, regulators, legislative and executive arms of the government, and wider communities. Critically, one risk that cannot be quantified is relationship risk. This risk is more complex than many other risks. Damage to the relationship can be the result of poor or unsatisfactory communication and cooperation, and it usually follows and exacerbates a reduction in mutual trust.

4.4.1. Key Factors in Establishing Good Relationships

The effective management of relationships is essential to achieve long-term success. The key to this is the establishment of a collaborative working relationship, together with systems and communications that actively support and enhance the relationship throughout the life of the project.

When 'things go wrong' in a contractual relationship, a typical result would be a reduction in efficiency, which in turn would lead to a reduction in Value for Money. The procedures for rectifying issues and problems should be put in place from the outset of the project, with relationship management being a priority. Only if a mutual consensus cannot be reached should issues and dispute management come into play.

The main attribute to effective relationship management is communication. Poor or unsatisfactory communication and cooperation can lead to a reduction in trust. Sometimes, the lack of communication can lead to misinterpretation of the party's intentions to do positive things. For example, the procuring authority may perceive that poor reaction times from a private partner are due to cost reduction strategies,

[13] See, for example, Affinitext website https://www.affinitext.com/solutions/ppps.htm [accessed 01/07/2015]

when in fact the reaction times originally specified were inappropriate. The private partner might be concerned about a perceived slowness in decision-making by the procuring authority, when in fact the private partner does not understand the procuring authority's sign-off procedures.

A partnership style of working is a commitment by the parties within a PPP contract to collaborate to achieve mutual goals. These goals are achieved through inter-partner collaboration and joint problem solving. The result is less conflict and improved performance in terms of quality, time, and cost. Over the life of the contract, further benefits accrue as the whole team builds on lessons learned and continually improves. The overall statement of the partnering relationship that describes the principles of a good working relationship should be recorded in a contract management manual (see section 0 above).

Effective relationship management starts with a collaborative, rather than an adversarial attitude. If the either party starts with an adversarial relationship, this can force the other party to adopt the same tactics and compromise the long-term interests of both parties.

An example of one way to establish a collaborative working environment is externally facilitated team-building workshops. These can be undertaken throughout the life of the project to help foster the relationships and the development of a team 'culture'. This is especially the case in pilot or initial PPP projects in a jurisdiction in which the public and private partners are new to each other. If roles and responsibilities are clearly defined and understood by all individuals within the partnering team, this will help to minimize conflict. This includes defining governance structures and establishing procedures for monitoring and reporting. It also includes understanding risk allocation and who is responsible for managing the risk.

4.4.2. Importance of Stakeholder Management

Project success and failure is related to stakeholders' perceptions of the value created by the project. This section demonstrates a link between the successful management of the relationships between the project and its stakeholders, and the stakeholders' assessment of a successful project outcome.

Using a mechanism for assessing the relative influence of a project's stakeholders and understanding their expectations is a critical element for success, as this will help to define appropriate engagement procedures to influence the key stakeholders' for the benefit of the project.

The purpose of stakeholder management at the project level is to ensure that the necessary individuals or groups are appropriately lobbied and engaged, thereby ensuring their ongoing support of the project. Key interfaces with internal stakeholder groups include the partnership board, although the project communications strategy should address the majority of the organization in some form. Important external stakeholder groups may include critical suppliers, various governmental bodies, regulatory bodies, community groups, and third party investors. In short, anyone who

has a financial, business, or political interest in the outcome of the project should be considered when establishing relationship interfaces.

Even if the private partner has, under the PPP agreement, taken the risk associated with dealing with a particular stakeholder, the contract management team can play a role in informing that stakeholder about the project and ensuring that they do not unnecessarily slow down the project. For example, where the private partner is responsible for obtaining a permit from another government department, the contract management team can ensure that the other government department fully understands the project and the context in which the private party is seeking the permit — provided the contract management team does not provide any assurance to the private partner that the permit will be granted.

Table 7.2 describes the key stakeholder management objectives, activities to achieve these objectives, and typical risks if the activities are not implemented.

TABLE 7.2: Stakeholder Management Procedure

Objective	**Activity**	**Typical Risks if the Activities are Not Implemented**
Determine and define engagement strategy, objectives, and scope	Establish a strategy for stakeholder engagement, ensuring establishment of the context, objectives, and scope for the engagement.	Engagement of stakeholders is not optimized and results are not achieved.
Accountability commitment	Adopt AA1000SES Stakeholder Engagement Standard (an international standard on stakeholder engagement), and commit to the practices of "exclusivity", which means giving the stakeholders the right to be heard and accepting the obligation to be accountable to them.	Lack of accountability may result in an uncoordinated approach to address stakeholder needs. The ultimate impact of poor stakeholder management is that the project is completely derailed or stopped.
Build and strengthen capacity	Assess stakeholder capacity needs, both in resources (staff, money, time) and competencies (expertise, experience). The organization should commit itself to responding to these needs in order to enable effective engagement.	Without adequate resources committed to management of stakeholders, there is a heightened risk that their expectations will not be effectively managed.

TABLE 7.2: Stakeholder Management Procedure		
Objective	**Activity**	**Typical Risks if the Activities are Not Implemented**
Establish engagement plan and implementation schedule	Demonstrate the intent to engage with stakeholders.	Interaction with stakeholders is inadequate both in terms of frequency and content.
Preparing and engaging	Establish appropriate ways of engaging with stakeholders. Procedures should be established. There are numerous models that are available for stakeholder engagement.	Inadequate engagement and lack of clarity with regard to the approach in dealing with stakeholders may result in either miscommunication or poor outcomes, which may ultimately impact the success of the project.
Identify stakeholders	Establish a methodology, including systematic processes to identify and map stakeholders and manage the relationship between them in ways that build accountability to stakeholders and enhance overall performance.	A stakeholder may adversely impact the project activities or outcome.
Initial Identification and material issues	Establish processes to identify material issues associated with the project for which the government has either a management/ legal responsibility or the ability to influence associated performance outcomes.	Incompleteness in understanding stakeholder concerns, views, needs, and performance expectations as well as perceptions associated with their material issues may adversely impact the project activities or outcome.
Engage with stakeholders in a way that facilitates understanding, learning, and improvement	Identify and understand stakeholder concerns, opportunities, and risks in a way that enhances the understanding of materiality. The government should identify enablers for learning and improving performance.	Project outcomes and progress are adversely impacted.

TABLE 7.2: Stakeholder Management Procedure		
Objective	**Activity**	**Typical Risks if the Activities are Not Implemented**
Reporting and measuring	Apply what is learned through stakeholder engagement to inform organizational strategies and operations, and to ensure that they are consistent with sustainable development. The government should communicate what it learns and how it intends to respond.	**Project outcomes and progress are adversely impacted.**
Measure and assess performance	Establish a process and mechanisms to measure, monitor, and assess the quality of organizational stakeholder engagement practice.	The consistency and intensity of activity results in sub-optimal outcomes, which may impact directly on the progress and outcome of the project.
Assess, remap and redefine	Assess and remap stakeholders, and redefine the stakeholder strategy where changes have occurred or new learning experiences have been gained.	Lack of assessing and redefining will become redundant and not applicable to the project.

Source: AA1000 SES.[14]

The Waghdari-Ribbanpally State Highway-10 toll road PPP in the state of Karnataka, India illustrates the benefits of systematic stakeholder management. All of the stakeholders worked together in a true partnership to ensure the success of the project. According to the agreement, the contractor had a period of two years for the construction period. However, through coherent partnership and stakeholder management, the construction was completed three months ahead of planned schedule.

[14] AA1000 Stakeholder Engagement Standard 2011, Accountability, http://www.accountability.org/images/content/3/6/362/AA1000SES%202010%20PRINT.PDF, [accessed 2/02/2015]

4.4.3. Relationship with Communities and Broader Stakeholder Groups

There are many projects in which the government itself is not the end-user. In these projects, the government should involve end-users at an early stage because inadequate consultation of stakeholders can lead to delays in the implementation of the project or make contract management challenging. It can lead to certain risks being underestimated. It could also limit the ability of both the government and the private partner to mitigate certain sensitive risks such as:

- Public objection to related fees;
- Administrative risks, for example, land acquisition and construction permits;
- Local residents and communities objecting to the project; and
- Operational staff, such as teachers in the case of a school project, objecting to the project.

It is good practice to establish a database of key contacts at the start of the project and to regularly update this during the life of the contract. A dedicated website is often suggested to facilitate communication between the users and to disseminate key/controlled messages. The Construction Phase of a project is often the most delicate. Opponents to the project may seek to obstruct its construction, providing a focal point for criticism among the local communities. It is further good practice to appoint an experienced person or company to design and implement a sound communication strategy toward stakeholders.

4.5. Performance Management

Service performance should be monitored and measured in order to ensure that contractual compliance is achieved and demonstrated.

Management of service performance is fundamental to the PPP contract, as it is through this process that payments to the private party are calculated and any deductions made. It is therefore vital that there is a sound understanding of the relationship as it impacts the requirements in the output specification, the performance measurement system, and the method for making deductions for poor performance as set out in the payment mechanism. A detailed description of performance monitoring and management within the Construction Phase is provided below, and for the Operations Phase in chapter 8.

PART B – The Construction Phase

5. Construction Phase – Delivering and Commissioning

Where are We in the Process Cycle?

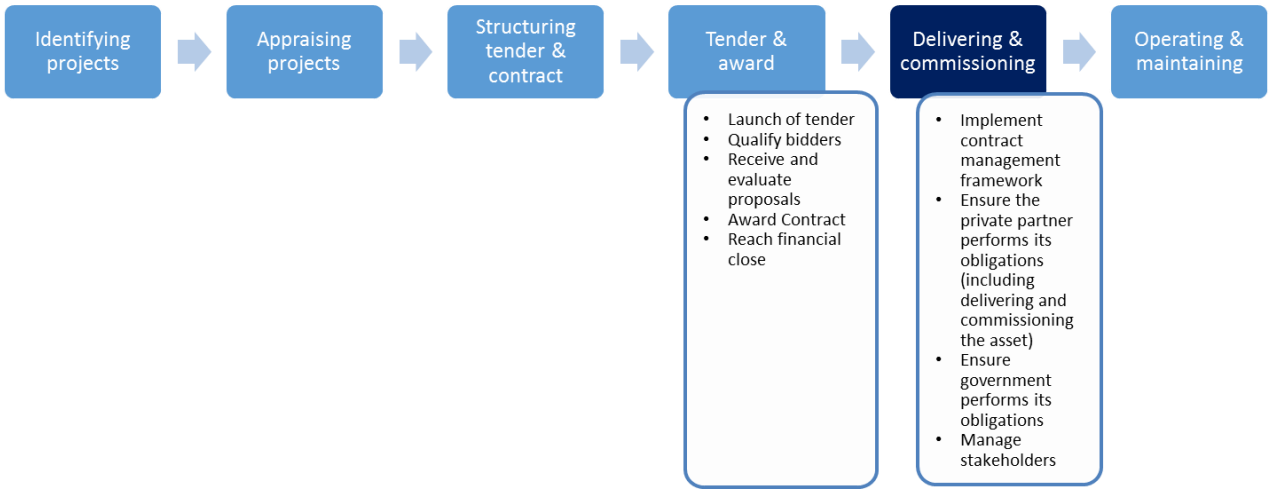
This part of the PPP Guide covers management of the contract during the Construction Phase of the PPP life cycle (delivery of the asset up to and including the commissioning of the asset). Therefore, all the general issues discussed previously in this chapter will apply. However, certain activities that are only relevant to the Construction Phase are discussed in more detail below. Box 7.5a and 7.5b deal with the learning objectives of this part of the PPP lifecycle.

In the previous phase, the tender was launched (through a Request for Qualification [RFQ] stage or by directly issuing a Request for Proposal [RFP] in some jurisdictions), bidders were qualified, proposals were received and evaluated, the contract was awarded, and financial close was achieved.

In this phase, the private partner delivers and commissions the different components of the project. The government implements its contract management framework, ensures that both the private partner and government perform their obligations, and manages stakeholder interfaces. See figure 7.4.

At the end of this phase, the project reaches the Operations Phase in which the infrastructure is operated and maintained to deliver services to users.

FIGURE 7.4: Where We are in the Process Cycle



BOX 7.5a: Objectives – Construction Phase

The objectives of contract management in the Construction Phase are as follows.

- To ensure that the private partner performs its obligations to deliver and commission the asset.
- To ensure that the government performs its obligations in accepting the asset.
- To manage stakeholder interfaces to support project outcomes.
- To help achieve project objectives.
- To assist the project team in execution of effective contract management during the Construction Phase in PPP projects.

BOX 7.5b: Learning Objectives for Part B

This section will allow the reader to understand the following concepts:

- The tools and processes used in managing the PPP contract during the Construction Phase.
- How the PPP contract provides commercial drivers for the private partner's performance during the Construction Phase.
- The techniques and processes for managing change during the Construction Phase.
- The forms of corrective action that can be taken by the government if the Construction Phase does not proceed to plan.
- The importance of knowledge management.

5.1. The Importance of Contract Management during the Construction Phase

This is the phase during which the project finance is drawn down and the construction contractor and subcontractors engaged by the private partner begin construction, testing, and commissioning of the different components of the project according to an implementation schedule. The major responsibility related to the implementation tasks in this phase lies with the private partner. However, a management process by the government needs to be in place from the outset to ensure timely completion and satisfactory operation.

PPP contracts are complex and detailed. Depending on the asset needing to be constructed, such as transportation sector infrastructure (roads, rails, ports), health sector infrastructure (hospitals), and commercial buildings (office accommodations, schools), contract management must be appropriate for the specified construction or implied construction method. It is therefore important that the government has some understanding of the technicalities involved when a private partner designs and constructs the specific asset. Even although the government does not have control over this particular phase, it is important that it understands and acknowledges the relationship of the main components of construction which are time, quality and cost of an asset.

It is also important to distinguish between the wants and needs of the government as the “wants” might exceed the “needs” and not necessarily achieve VfM. Whatever the “wants” and “needs” are of the government, the private partner’s obligations are set out in the PPP contract. If the government decides that its wants or needs differ from what is in the contract, change management processes and decision-making come into play.

In order for the Construction Phase to commence and run smoothly through to the Delivery and Commissioning Phase, several points need to be considered and actioned by the government:

- Take steps to resolve differences in the interpretation of the output specification;
- Monitor the progress of project delivery and the quality of work;
- Oversee the conduct of required tests, evaluate the test results, and take decisions as required;
- Consider variations to the output specifications;
- Inspect equipment to be installed; and
- Certify and provide approvals as may be needed under the contract.

5.2. Complexity of the Construction Phase

There is nothing that illustrates complexity better than the implementation of mega-projects. In this case, mega projects are PPP projects that are of high value, and are complex and lengthy by nature[15]. It can be demonstrated that a distinction among four different types of complexity helps to define mega-projects best. One is the overall project complexity, the other three are task, social, and cultural complexity. Normally, the literature has only been concerned about task complexity[16]. If the other types of complexity are not addressed as well, a mega-project is set for failure. Contractors in mega-projects deal with overall project and task complexity by breaking it down to functional departments, to social complexity by trust and commitment, and to cultural complexity by sense-making processes.

Table 7.3 represents the general complexities facing construction projects, including PPPs during their Construction Phase. Many of these tasks are the private partner’s responsibility. However, for the government, contract management is extremely important to ensure the private partner performs these obligations and obeys local laws and by-laws, such as those pertaining to health and safety. The government must also carefully monitor the private partner’s performance and its construction schedule so that delays are quickly identified and responsive actions can be implemented.

[15] Brockmann, D. I. C., and Girmscheid, G. (2007). Complexity of Megaprojects. *In Proc. CIB World Building Congress (pp. 219-230).*

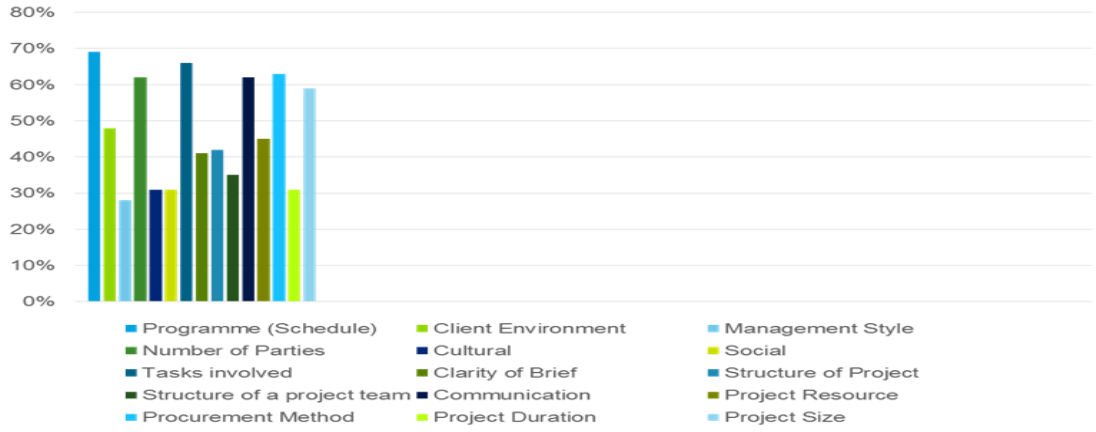
[16] Gidado, K. I. (1996). Project Complexity: The Focal Point of Construction Production Planning. *Construction Management & Economics*, *14*(3), 213-225.

TABLE 7.3: Areas of Complexities in a Construction Project

Area	Task
Organizational planning	• Organization • Organization chart • Competency matrix • Job descriptions • Contract management • Quality management • Safety management • Personnel management • Purchasing • Financial accounting • Cost accounting • Communication • Correspondence and filing
Design planning	• Outsourcing of design • Coordination of design • Approval procedure • Design schedule • Documentation (as-built drawings)
Work preparation	• Work estimate • Controlling • Outsourcing • Construction methods • Scheduling • Deliveries • Planning of site installation • Logistics
Site setup	• Land acquisition • Various permits and studies • Purchase of plant and equipment • Utilities • Offices, labor camps, canteens, lavatories and so on. • Waste management
Construction management	• Production processes • Quantity and quality control of materials • Quantity and quality control of subcontracts • Deployment of plant and equipment • Deployment of workforce • Deviations from contract • Hand-over • Warranty

During the Construction Phase, schedule, cost, and quality play a significant role for both parties. Depending on the type of PPP, one party might have more of a vested interest in schedule than in the cost and vice versa. Yet it must be noted that both parties will have obligations that would ultimately involve significant cost, which might not be planned for. Figure 7.5 illustrates definitive areas of complexities in construction projects. It shows the percentage of a sample of professionals who have a perception that a particular item within the Construction Phase will affect the overall success of the project. Interestingly, most of these are soft issues relating to either social or cultural backgrounds, and understanding and expectations about when assets are delivered.

FIGURE 7.5: Definitive Areas of Complexity in Construction Projects



Source: Brockmann & Girmscheid, 2007.

Therefore, the government, even though its primary function is not to build the asset, must understand the overall construction delivery. It must also satisfy itself that all of the relevant permits, procedures, and required documentation is in place by the private party in order for the correct reporting to happen. As is with the case of many other projects, the government needs to play its part in the Construction Phase; otherwise, issues of delay, miscommunication, and potential claims can arise.

Contract management can reduce complexity through decision-making, coordinating, communicating, and learning. A decision connects parts of the project in a specific way by allocating resources and choosing a solution. Coordination allows us to address a variety of problems simultaneously to deliver a planned result, particularly where there are a range of specialized tasks that must be completed concurrently in order to meet time lines.

Communication helps to reduce social and cultural complexity because barriers can be found, discussed, and brought to a resolution. Learning helps to standardize solutions and therefore limits the search. The result is a reduction in the required resources (learning curve). Cultural complexity can also be reduced if the core management group already knows each other through previous projects.

5.3. Reasons for Unsuccessful PPP Projects during the Construction Phase

Several studies show that some PPPs were cancelled during the Construction Phase due to the lack of or a poorly executed contract management function[17]. See table 7.4.

TABLE 7.4: Examples of Projects Cancelled during the Construction Phase

Project	Reason
Light Railway Transit (LRT) Project – the Metro Sul do Tejo (MST), Portugal	The project did not go beyond the first phase of construction. The reasons behind the cancellation were stated as an unclear risk-sharing mechanism, lack of supporting documents for contract management, no provision of contingency plans for emergencies, and a lack of expert personnel for complex contract management (Tavares 2014).
Domestic Terminal at Murtula Muhammed Airport, Nigeria	The project was initially awarded to Royal Sanderton Ventures Ltd. Due to a lack of significant progress after six months, the government decided to revoke Sanderton's mandate and it was awarded to the second bidder, Bi-Courtney Ltd. The company faced challenges in securing financing and had to start construction without a long-term finance model. On the operations side, airlines were reluctant to move to the new terminal owing to its small size. There were also disputes by parties and claims of breach of contractual rights (Nigeria 2012).
Panagarh-Palsit Highway Project, India	The contract for the design, construction, operation, and maintenance was signed between the National Highways Authority of India (NHAI) and Gamuda-WCT in November 2001. The Construction Phase was completed five months behind schedule. The delay was caused by land availability issues and a change of scope orders. The Auditor General of India, on inspection, found consistent and major cracks, repairs, and deflections values. Ineffective structuring of the PPP agreement led to time overruns and insufficient quality (India 2012).
Lekki Toll Road Concession Project, Nigeria	The contract for the upgrading and maintenance of the Expressway was awarded to LCC. However, the project faced problems, such as protests by local communities who were against paying tolls, which led to tolling suspension. A need for strong contract management and stakeholder communication within the government team was addressed.

[17] Sources: Tavares, S.A. (2014), The Contract Management in Public-Private Partnership, https://fenix.tecnico.ulisboa.pt/downloadFile/395144992772/Resumo%20alargado.pdf; Infrastructure Concession Regulatory Commission, Federal Government of Nigeria (2012); PPP Project Case Studies, http://ppptoolkit.icrc.gov.ng/ppp-project-case-studies/

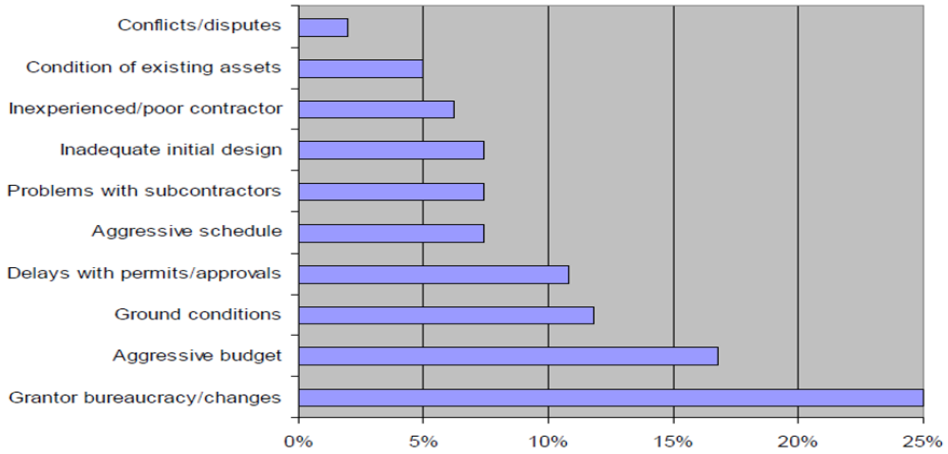
	There was also a need to set performance standards backed by penalty regimes in the contract in order to ensure better quality of roads (Nigeria 2012).

Sources: Adapted from case studies and reports referred to in the reference section.

Historically, there are various other projects which have not achieved the desired outcomes during the Construction Phase. One was for an urban rail system. The project involved a strict deadline due to an international event that was to be held in the country. The project was to be completed in 30 months with commissioning having been scheduled for July 31, 2010. Construction of the project took longer than expected. The government allowed for a one month extension to August 31, 2010 for the commencement of operations, as there had been a delay on its part in handing over some of the stations. The line was denied a statutory safety clearance after a two-day inspection in the last week of September 2010. The inspector found that false ceilings, emergency staircases and exit points, ticket counters, electrification work, software, and signaling were incomplete. Having missed the deadline, the government required the payment of compensation for the system not being operational and the consequent loss of income.

The Robert Bain[18] study presents an interesting statistical representation of PPP construction risks. It highlights that the main reasons behind PPP construction budgeting and scheduling problems are those represented in figure 7.6 below:

FIGURE 7.6: Construction Risks relating to Budget and Schedule



Source: Bain, Rovert 2007, PPP Construction Risk: International Evidence from the Road Sector Institute for Transport Studies, University of Leeds

Nearly 25 percent of all responses within the Bain study point to the cause for Construction Phase problems for PPP projects being the government, either directly

[18] Bain, Robert (2007) PPP Construction Risk: International Evidence From The Roads Sector Institute for Transport Studies, University of Leeds.

or indirectly. Respondents went to some length to emphasize that their comments were not restricted to countries new to PPPs. This survey showcased how a number of PPP problems stem from a government's lack of 'buy-in' to the concept of PPPs. The lesson from this is that governments need to put in place good contract management as recommended in this PPP Guide.

Examples of ways in which the government had aggravated the construction of PPP projects can be summarized in table 7.5 below.

TABLE 7.4: Issues relating to Government Involvement during Construction	
Capability	The government did not possess the experience, technical skills, or resources to manage its obligations associated with a long-term, active partnership with private sector providers.
Traditional thinking	The government tried to manage the PPP as it had previously managed conventional design and build contracts, including use of amended design and build contracts in an adversarial 'them versus us' environment.
Preparation	The government failed to define a clear output specification to complete enabling works, secure land, and grant permits or approvals.
Expectations	The government's expectations of who is responsible for what, and what has to be delivered (by when) failed to match the understanding by the private sector.
Process	The government failed to establish streamlined, transparent procedures for daily liaison with its private sector partners. The bureaucracy was slow and resistant, and projects were labored by extended negotiation periods and delays in achieving sign off.
Oversight	There were existing deficiencies in the government's project supervision and control procedures, which could not be cured simply by moving from traditional procurement to PPPs.
Change	The government pushed for scope or specification changes, or variations, with limited regard for cost or time implications, or in the absence of contractual clarity about how such changes should be accommodated.

There are three main attributes of PPP project success or failure: the completion of the project within budget, on schedule, and to the required specifications.

In general, some projects suffer from a degree of construction cost overrun. The more common reasons reported for construction cost overruns include over-aggressive bidding, variations, particularly high specifications demanded from the government, and disputes surrounding the scope of work. In the context of disputes, two respondents pointed to the fact that complications can arise when the primary construction contractor is also part of the Special Purpose Vehicle (SPV).

Generally, this is regarded as a useful project characteristic as it incentivizes the contractor to perform. However, in distressed cases, a key shareholder may be reluctant to claim against credit support instruments (such as performance or

completion guarantees) which they, themselves, are providing. Independent adjudication would appear to have a place in cases in which ownership/control and contractual/business interests conflict.

Some projects experience overruns by months, or even years. This is usually due to the miscommunication of the parties with respect to the roles and responsibilities of the parties, that is, the hand-over of the site.

A key issue in the context of a budget overrun is identification of who should pay for the construction budget overrun. In traditional procurement, this responsibility has fallen on the government; this is a procurement characteristic that PPPs (their risk allocation and use of fixed price contracts) are specifically designed to address. In terms of shifting this responsibility to the private sector, PPPs appear to have been particularly successful.

Many specification-related problems are reported to have stemmed from the use of unclear or ill-defined specifications or scopes of work from the outset. Yet other reported problems are linked to PPP projects that incorporated sophisticated technologies (such as those employed in water or waste treatment). Road projects have performed relatively well compared to other sectors, probably because road projects are at the lower end of the technology spectrum.

These examples emphasize that planning and good practice contract management are exceptionally important for project success, specifically when dealing with cost, schedule, and final specifications (design).

6. Overview of the Construction Phase

6.1. Main Stages of the Construction Phase

The following key activities typically occur during the Construction Phase of a PPP.

- The private partner must establish itself on site and obtain the necessary permits and clearances to enable it to carry out the construction works;
- The private partner must finalize the design for the construction works;
- The construction works must be carried out; and
- The completed infrastructure must be commissioned and handed over to the operational team.

6.1.1. Project Site Set Up and Permits Clearance

In the majority of PPPs that involve construction of infrastructure, the government will make land (sometimes with existing buildings and infrastructure located thereon) available to the private partner. During the project term, the private partner will manage the operation and maintenance of the land and infrastructure.

In the Appraisal Phase, the government should have commissioned a thorough investigation by appropriately qualified experts of all property rights in, and all title

and land use restrictions attaching to, the land (and any improvements thereon). This is done to ensure that the project will not be jeopardized due to a late discovery of a third party claim to the land or a land-use restriction that could delay or prevent the construction of the project or interfere with the private party's possession of the land. If it has followed good practice, the government will have also undertaken the necessary land acquisition from legitimate residents and managed the relocation of any other occupants. Depending on the location of the site and the nature of the project, the government may also have had to construct an access road and ensure the availabilities of utilities at the site.

The government should then have required the bidders to conduct a thorough investigation of the proposed project site, including any existing buildings or infrastructure located thereon and site conditions. The site condition investigation should include surveys of the climatic, hydrological, hydro-geological, ecological, environmental, geo-technical, archaeological, and paleontological conditions at the project site. The scope and extent of such an investigation will depend on the complexity of each bidder's design and engineering proposal for the works to be erected at the project site.

These actions of the government prior to contract award will have ensured that both parties are well aware of land-related issues and risks.

Problems with regard to the chosen sites and the conditions can and do emerge during the Construction Phase. One of the more common issues is the timely hand-over of the site to the private party and its construction sub-contractor. For projects with a single site, it is recommended that the government ensure the site is available and handed over immediately after the contract is signed. This will ensure that at least land hand-over related disputes are avoided.

Site availability is more complex in projects with extensive land requirements over a large number of distinct properties. These include projects involving roads, rail, pipelines, and transmission lines. Although hand-over of a single continuous stretch of land is ideal, it is not always possible. In cases where it is not possible, the government must ensure that it does not subject itself to disputes and claims from the private partner.

A report by NAO (2014) discusses some of the challenges that can occur during the construction phase on the example of a PPP waste project in Surrey, United Kingdom (UK)[19]. The Surrey contract had not been able to secure planning permission. First, an issue occurred where a planning application for a site in Redhill failed because Surrey County Council's Planning Committee rejected it, and the second planning consent for a site at Capel was subsequently reversed following a judicial review.

Land hand-over processes must be detailed in the PPP contract. Importantly, the obligations of both parties to mitigate the effects of late land hand-over must be explicitly stated in the contract. There are examples of claims by a private partner to

[19] National Audit Office (NAO), (2014), Oversight of Three PFI Waste Projects, http://www.nao.org.uk/wp-content/uploads/2014/06/Oversight-of-three-PFI-waste-projects.pdf [accessed 30 June 2015]

a transport PPP contract because a single stretch of land was not available, and consequently all construction work ceased until the land was handed over. In reality, a sensible work-around plan could have been agreed with minimal losses of time and money to both parties.

6.1.2. Project Design

The design phase of the project will inevitably go through the stages, from the conceptual design right through to the final design, specified to carry out the construction works as per the PPP contract.

The responsibility of obtaining any consents relating to the design, construction, engineering, technical, and installation specifications put forward by the private partner (such as any building consent and any record of decision regarding Environmental Investigation Approvals [EIAs] required) should be borne by the private party. Since the private partner bears the design and construction risks in the project, it should also assume the responsibility for identifying and obtaining all design and construction related consents. Otherwise, these risks will be transferred back to the government.

The private partner must also allocate adequate time in its works program for the obtaining of all such consents. In cases where the delays are inevitable in the obtaining of such consents, they should not delay the progress of the PPP itself. Instead, this can be dealt with through alternative mechanisms (such as relief events), to the extent that such delays are not attributable to any fault on the part of the private partner or its sub-contractors.

Design proposals submitted by the private partner at the bid stage are typically conceptual in nature. However, the government should have satisfied itself during its evaluation of the private partner's bid and the negotiations on the PPP contract (and in any event prior to the signature date) that the private partner's design proposals included in its bid will achieve the required output specifications as set forth in the RFP.

The private partner must be solely responsible for the design. The government should have a right to review the design and advise the private partner of any areas of non-compliance with the contract. The contract may prohibit the private partner from proceeding with construction until the government gives its approval to move forward following its review of the design.

However, the government should not have rights of approval in respect of the design that would amount to acceptance by it of any errors or inadequacies in the design. In this way, the government reassures itself that the design and construction is in accordance with the output specification (and the construction prescriptions if any), but the private partner remains responsible for the achievement of the output specification and for any failure of the design. If the government approves the design, the private partner could argue that the government has accepted the risk that the design might not, in the future, enable the private partner to meet the output

specification. Similarly in this situation, risks related to life-cycle costs may revert back to the government.

6.1.3. Project Construction

Construction, in general, can take many forms of delivering the final product. It is not uncommon for the construction contractor to split the work into phases or smaller packages in order to achieve its milestones. In this case, the construction contractor will often tender individual work packages out to sub-contractors. However, the main contractor will retain responsibility for the quality of all work and for coordination of sub-contractor activities.

During the construction works, there are many issues to consider but the most important points are as follows.

- Have appropriate quality requirements and a duty of care been imposed on the contractor?
- Is there any assurance that defects identified in the inspected works will be remedied?
- Is there a defects liability period and, if so, for what period?
- Does the contract draw any distinction between different aspects of the work, for example between engineering and civil works?
- Has the design been addressed appropriately?
- Is the project schedule optimistic or realistic? and
- In the case of a dispute, what are the procedures that would be implemented?

The activities during the construction works are numerous, but the most work intensive period is in the middle of the phase where all of the work packages are delivered. It is in this stage of the project that many sub-contractors would be involved. As a result, it is particularly important to pay attention to sequencing, lead times for the material delivery, and any time-sensitive legislative compliance matters which can disrupt the program.

6.1.4. Commissioning and Hand-Over to the Operations Team

Before the asset is formally handed over to the operations team, there are certain steps that need to be carried out by the independent certifier or engineer (or construction inspector or engineer)[20] (see section 0 below) on behalf of the government. These activities include the testing of an asset (see section 7.3.3 below) and issuing the completion certificate.

[20] Independent Engineer (IE) is the most common approach to these roles in common law countries. In some other countries (mostly in civil code countries), the engineer firm supporting the government in project oversight and monitoring is not an Independent Engineer, but is contracted by and reports to the procuring authority who retains the sole responsibility of approvals. Under this approach, this position is titled Construction, Engineering and Inspection (CEI) “engineer” in some countries (for example, in some states in the United States), or simply as Construction Engineer, Construction Inspector, or like terms.

When dealing with the testing of an asset, the PPP contract should set out the requirements for notification that an asset is ready for inspection by the independent certifier. It should require the private partner to give the independent certifier access to the site in order to observe the tests and examine the asset, and it must include any documentation that will aid as evidence to the results of the performance tests.

If the performance tests for the readiness of an asset fail, the private partner must remedy such defects in order to obtain the completion certificate.

The completion certificate is issued by the independent certifier (or by the authority on the basis of the evidence reported by the Construction, Engineering and Inspection engineer in some countries) and is contractual evidence that the Construction Phase is complete. Once it is issued, there is typically a process whereby the independent certifier, the authority or the private partner (depending on the nature and needs of the project) issues a certificate or authorization for the availability of the infrastructure and commencement of services. This is known in many jurisdictions as the “service commencement date” or the “operating commencement date”.

In some projects, the completion certificate and availability or service commencement authorization may respond to a two-stage approach with a provisional acceptance of works (or provisional completion certificate) that allows for entering into operations provided that:

- the project has been substantially completed;
- Operations can commence under appropriate safety standards ; and
- Only a list of minor defects or non-compliances of minor relevance have been detected (usually referred to as the “punch list”) and these don’t prevent service commencement.

The “punch list” items are allowed to be resolved within a certain time (which will entitle the private partner to receive the definitive authorization).

The government should generally not seek to impose pre-service commencement milestones in the construction/development phases or otherwise accept the delivery of the works in stages prior to service commencement, as this may reverse the prescribed allocation of risk.

In projects that are partly funded by means of a capital contribution by the government, it may be necessary to provide for the achievement of construction milestones when capital contribution payments will be made to the private partner. This may affect the risk transfer as the government is inserting itself into the method of construction of the private partner. Where this is done on the basis of improved financial efficiency of the project, the terms of such milestone payments must be carefully crafted and must show overall Value for Money.

In certain PPPs, it may be appropriate to have service commencement despite incomplete construction. In this case, the government must ensure that the private partner always remains incentivized (through the payment mechanism) to complete the outstanding works. In certain PPPs it may be feasible to have phased-in service commencement (that is, different buildings or sections or different pieces of plant

and equipment being brought into service at different milestones in the PPP). In these situations, an appropriate phasing-in of the revenue stream or the use of penalties for late completion may be justified. In such cases, the government may either stipulate that full service commencement will only be achieved when all phases in the project reach the required output specification level, which would incentivize the private partner to bring them all up to the required output specification levels as quickly as possible or stipulate that partial service commencement will be achieved as each phase reaches the output specification level for the services provided.

7. Monitoring Tasks during the Construction Phase

7.1. Understanding Monitoring (performance and risk monitoring)

Performance monitoring may be defined as an assurance role played by the government (primarily through the contract management team although other affected agencies and departments may also be involved) where assurance is obtained that the private partner has:

- Adequate systems, policies, procedures, and resources in place to perform the specific performance-related obligations set out in the PPP contract (the output specification);
- A functional quality assurance system in place to do self-monitoring; and
- Achieved the required outputs to meet the specification.

Performance monitoring does not mean managing the task for the private partner or approving the method by which the output is achieved. Neither does it mean leaving the performance management entirely to the private partner. There are a number of reasons for this. First, the incentive for the private partner is to achieve financial efficiency over the period of the PPP contract and not the whole life-cycle of the asset created. In large infrastructure projects, this can create a misalignment of incentives, where the private partner may seek to reduce construction costs and incur increased operational or maintenance costs over a concession period that is substantially less than the life of the assets. Given a choice, the government would prefer a higher capital investment that meant a lower life-cycle cost. A second reason relates to the Operations Phase when the private partner will incur penalties for poor performance. An unmonitored self-reporting performance management system might result in penalties not being applied.

The contract management team must undertake a range of regular monitoring tasks during the Construction Phase, including:

- Monitoring against the schedule;
- Monitoring against the scope (and any agreed variations);
- Monitoring performance and compliance with applicable laws and regulations;
- Quality control and materials monitoring;
- Daily relationship monitoring with the private partner; and
- Stakeholder reporting and management.

But performance is not the only area or task to be monitored. During the Construction Phase, risk management will be one of the most important functions of the contract management team. The team will need to monitor and, where appropriate, manage the project risks contractually allocated between the parties, inherent risks borne by the government, project risks not contractually allocated, and also the management of risks and threats associated with changes to the PPP contract.

The framework for performance monitoring will be set out in each PPP contract. It will establish the output specification, the private partner's performance management reporting requirements, and the penalty regime that applies in cases of non-performance. It will also set out roles for the government and rights of, for example, audits that can be exercised by the government or lenders to the private partner.

7.1.1. Approach to Performance Monitoring

The approach to performance monitoring differs in both the Construction and Operations Phases. During the Construction Phase, the performance must be monitored mainly to ensure that the facilities provided reflect the PPP contract, that work progresses properly through commissioning according to the schedule, and other contract obligations are being met. Performance monitoring during the operations phase will, however, be focused on the quality or level of achievement of the service performance requirements, especially on the service standards or target levels of services. In both cases, monitoring actions are needed so as to prepare (detect) and manage contract changes and risk events. See box 7.6.

BOX 7.6: The Government's Role in Monitoring the Construction Phase

During the Construction Phase, the government will need to manage and monitor the progress of the project. Having continuity between the project team that negotiated the contract to financial close and taking this knowledge base into the Construction Phase is beneficial to the government. Some examples of the government's roles and responsibilities during this phase are as follows:

- Providing management arrangements that create a clear and easily understood interface with the contractor.
- Reporting to public sector stakeholders on the progress of the project.
- Assessing design data submissions by the contractor, including the review of any potential impact on services delivery. These must be completed within the contractually defined time period.
- Monitoring progress on site to ensure that the facilities meet the contractual requirements, and attending monthly progress meetings to ensure the government's views are recorded and actioned.
- Monitoring the quality of the facilities during building operations and bringing matters of concern to the attention of the private party.
- Managing variations.
- Discussing and assessing the validity of any claims for relief events or works compensation events.
- Maintaining the risk register to address issues of uncertainty to project delivery.
- Planning, communicating, and coordinating arrangements alongside the private party.
- Maintaining communication links with all relevant stakeholder groups.
- Preparing for the Operations Phase.
- Managing public relations.

In the Operations Phase, the focus is on the delivery and availability of the services in accordance with the output specification. The two approaches require different resources. Typically, the Construction Phase has a range of independent parties who are required to report on the achievement of program milestones and compliance with the specification. These will include the independent engineer or certifier and the lender's agent.

The Operations Phase relies on the self-reporting of the private partner and the oversight and assurance systems applied by the government. In the Operations Phase, the performance monitoring is often linked to the penalty regime (be they actual financial penalties or some form of accrual of points that could lead to a termination).

7.1.2. Roles and Responsibilities of the Government during the Construction Phase

The government should carefully consider the resources that it will require following contract signature, but prior to the asset becoming operational. In addition to the

contract management resources, the team is likely to include the expertise outlined in table 7.6.

TABLE 7.6: Resources and Skills from the Government Side Required during the Construction Phase

Role	Responsibilities	Time Input
Project manager	Manage and coordinate the Construction Phase.	Full-time role depending upon the size and scale of the project.
Quantity surveyor / commercial manager	Control cost and manage contractual interface issues with the contractor.	These skills could be combined with the project manager role.
Facilities Management (FM) specialists	Establish the effect of any changes on operating period regime (including costs) and aid the transition to operations.	Part-time role, but the input will be more intensive over the last few months of construction. These skills could be combined with the project manager role.
Architect	Monitor the building progress/quality of work and manage the fit-out process from the governmental perspective.	Full-time role depending upon the size and scale of the project.
Specialist practitioner in the field of development (for example, a health/education advisor)	Liaise with stakeholder groups, manage the change and, if applicable, ensure that the specialist aspects of the work are moving forward in line with the project and stakeholders' objectives.	Part-time role depending upon the size and scale of the project.
Information and communications technology (ICT) resources	Manage the interface between project and government systems, and assist during commissioning.	Part-time role with the most intensive input required towards the end of the construction period.
Legal support	Monitor any developments that may impact on the agreed contract and assist in cases of dispute.	Ad hoc support as required.
Administrative support	Provide support to the project manager and wider team.	Full-time role depending upon the size and scale of the project.

7.1.3. Roles and Responsibilities of the Independent Certifier

In many jurisdictions (and most of the common law jurisdictions), the PPP contract provides for the hiring of an independent certifier (sometimes called the Independent Engineer) who is an expert in terms of the type of the project. This person will be responsible for certifying that, in his/her professional opinion, the Construction Phase and the Commissioning Phase have been satisfactorily completed in compliance with the PPP contract. A certifier is also responsible for issuing a certificate that starts the Operations Phase and the right of the private partner to collect or receive revenue from users or the government.

The decisions of the independent certifier are of great commercial importance to both the private partner and the government. As such, the independent certifier must be beyond the influence of either party. This is normally achieved by appointing a company with the appropriate expertise (dependent on the type of project) and a reputation for fairness and impartiality.

The independent certifier should have a duty of care to both the private partner and the government and may even be jointly appointed. In many cases, the independent certifier is identified and agreed to by both parties, and paid for by the private partner. The PPP contract should protect the independent certifier in that it should clearly stipulate that the fact that the independent certifier is paid by the private partner in no way derogates from its fiduciary duty to act impartially.

The primary function of the independent certifier is to inspect and monitor the work, attend any performance testing during commissioning, advise the private party of any items that in the independent certifier's opinion require rectification, and finally, when satisfied, to issue the certificate permitting operation.

In performing its functions, the independent certifier does not in any way accept any risk in relation to the design, construction, fitting, installation, or commissioning of the construction works.

In some jurisdictions (particularly common law jurisdictions), the independent certifier is given quasi-judicial powers to make decisions that are binding on the parties, or even to act as part of the dispute resolution processes. In other jurisdictions, the independent certifier acts in a purely advisory capacity on any matter outside of the direct duty of certifying completion. In this case, the decisions of the independent certifier are subject to review. It therefore makes sense, in the PPP contract, to explicitly limit the powers of the independent certifier to certification in the Construction and Commissioning Phases.

As noted in section 6.1.4, in some other jurisdictions (mostly civil code countries), the certification role is performed by the Construction, Engineering and Inspection engineer who is contracted by the authority and formally reports to it.

7.2. Cost Implication Oversight

As the Construction Phase progresses, the private partner (and the government in cases where the government makes a capital contribution) must make payments that match the progress made by the construction contractor in completing the

construction works. These payments are typically made against milestones that are pre-agreed and part of the PPP contract. Thus, at each milestone, it is necessary for evidence to be provided that the work has advanced to the required stage and is of adequate quality to meet the output specification.

The independent certifier often plays this role if the government is making milestone payments, otherwise the lender's technical agent will certify that the milestone has been achieved and permit the drawdown of more debt by the private partner. The monitoring of costs at each milestone is also a factor in the provision of security by the construction contractors as well as in the calculation of termination payments in cases of early termination of the PPP contract.

7.2.1. Importance of Cost Oversight during the Construction Phase

If the government is making a capital contribution to the project during or at the end of the Construction Phase, then it will have a strong interest in the costs incurred at each milestone achieved. The risk it must manage is that its grant portion is applied correctly and in the sequence determined in the PPP contract (or grant agreement). Government capital contributions during the Construction Phase are normally made after equity has been drawn down and at the same rate with debt draw downs. The interests of the government are thus closely aligned with those of the lenders.

7.2.2. Where Cost Oversight is Needed

As noted, the interest of the government and the lenders is not so much linked to the correct recording of the costs, but is more about ensuring that the sequence of financing sources is correctly followed. The risk of cost overruns is typically passed on to the construction contractor and to the private partner in cases where the overruns arise from factors outside of the construction contractor's control. Cost overruns must be funded by the private party or the construction contractor. The government should avoid being drawn into any disputes that may arise between these two parties about such overruns. Cost monitoring should therefore be only for informational purposes for the government.

7.2.3. Explanation on Different Cost Structure Mechanisms when Constructing an Asset

The most common cost structure that arises from project finance principles being applied is that the private party is responsible for, and bears the risk of, raising all the financing required for the project. It then applies the financing during the Construction Phase by making payments to its sub-contractors.

In this structure, the financing sources are applied in the sequence of equity followed by quasi-equity or mezzanine debt and finally by senior debt. Senior debt is subject to restrictions on its drawdown, including the requirement that the specified

milestones have been met. This is to ensure that the risk that the asset is not correctly constructed is assigned primarily to the equity and quasi-equity providers.

The government grants can be applied, in the form of assets constructed by the government, as a single payment at the end of the Commissioning Phase or at milestones during the Construction Phase. For each, the risk profile differs and care should be taken not to disturb the risk allocation or incentives that apply in the straight-forward project finance structure.

7.3. Approval Processes

The private partner should be solely responsible for the design. Although the government should have a right to review the design (see section 6.1.2 above), it should have no rights of approval in respect of the design. Accordingly, all changes in the design to ensure that the output specifications are achieved should be at the risk of the private partner. The government will want the reassurance that the construction or development is capable of delivering the services on time and in a way that meets the output specifications in the PPP contract. Should this principle not be applied for an exceptional reason, then the approval rights must be exercised in a very carefully crafted and specific regime explicitly set out in the PPP contract.

7.3.1. Design Development Process

Most of the preliminary design should have been done during the Tender Phase, and the government will have done some design review as part of the process of selecting the private partner. The risk is that the private partner's design proposals included in its bid will not achieve the required output specifications. Design proposals submitted at the bid stage are typically conceptual in nature and are more often than not substantially modified in later phases.

In this context, the government should ensure that:

- The private partner's design does not extend beyond the extent of the land to be provided. If it does, the cost and risk that may result from the acquisition of additional land is the responsibility of the private party;
- The private partner's design proposal that is current at contract award is incorporated into the PPP contract so that a record of what was designed remains in the formal agreements;
- The PPP contract is sufficiently flexible to allow for changes and improvements to the preliminary design in order to allow for any planning, environmental, or other requirements; and
- The private party is required to submit for review all revised designs.

7.3.2. Certifying, Inspecting, and Obtaining Approvals

A certification service is typically provided to both the government and the private partner by the independent certifier who will inspect the completed construction works; if satisfied, the independent certifier will issue the required certificates for commencing operations (section 6.1.3 above). Whereas the government must be entitled to monitor the work during the Construction Phase, it should not have any approval rights in respect of the works. The responsibility for obtaining all consents and approvals from third parties should be that of the private partner with the reasonable assistance of the government.

7.3.3. Performance Tests and Verifying Asset Suitability

Before commencement of operations, the private partner should be obliged to demonstrate that the assets will meet the required output specifications. The method of demonstration to be used by the private partner will be project specific, but may take the form of inspections, demonstrations, acceptance or commissioning trials, or other performance tests.

7.3.4. Private Party Obligations when Delivering an Asset

The private partner must give adequate prior notice of any performance test which requires it to provide access to the tests, as well as the documents required to evidence the results thereof. The independent certifier should be responsible for assessing the success or failure of the performance tests, and there must be a process for the private partner to remedy any defects arising from such tests.

7.4. Schedule Management in the Construction Phase

It is crucial that the government is aware, at all relevant times, of the development and progress of the project. The most efficient way to ensure that this is done under the circumstances is by requiring the private partner to liaise with the government on a regular basis and report on progress against the construction schedule. The reporting should include information on the progress of the works, notice of any anticipated delays, the program for managing any delays, and other issues of importance during construction.

7.4.1. Importance of Schedule Management

Schedule or time management is the responsibility of the private partner and is the domain of professionals on PPP projects. It is of significant importance to government. In some PPPs, the government will depend on the completion date for a scheduled move-in. For example, the schedule for an office accommodation may have been set to enable the government to move out of an existing building before the existing lease expires. If the schedule for the PPP is not well managed, and there

is a delay without sufficient notice being provided to the government, the government might find itself without a “home”.

Poor schedule management also creates political and reputational risks for the government. For example, an important national event may depend on the timely completion of infrastructure surrounding the event itself. The government must therefore recognize that schedule management is integral to commissioning and constructing an asset, as it might affect complete project delivery and even budgetary planning in cases where capital is partly funded by the government.

7.4.2. Processes Required to Manage the Timely Completion of the Project

Monitoring of the project is essential to ensure that the project is completed within the prescribed target date.

An example of insufficient monitoring of the project schedule can be seen through Performance Audit Report No. 3 of 2014 of Union Government (Railways). Indian Railways executed eight PPP projects in collaboration with private partners. The audit examined four of these projects. The provisions contained in the concession agreements required the private partners to report annually to the government on their performance under the agreements. In addition, the concession agreements provided for the formation of Construction Progress Review Boards (CPRBs) consisting of representatives of the main stakeholders.

The CPRBs were expected to review progress on the projects on a monthly basis, producing monthly reports and issuing necessary instructions or taking corrective measures for timely completion of the projects. The audit observed that though monthly progress reports were being prepared, there were no records confirming the fact that the progress of the projects was being monitored by the CPRBs. The role of the procuring authority for monitoring the performance of projects was not laid down in any of the concession agreements.[21]

Table 7.7 outlines the activities that need to take place when dealing with the PPP project schedule. It is important for the government to understand these steps in order to monitor the progress and implement any further actions should it not be completed in time.

TABLE 7.7: Processes to Follow when Dealing with Schedule Management

Key Activity	Description
Baseline schedule	The baseline schedule is prepared by the contractor according to the requirements of the contract. Typically, the government

[21] Office Of The Comptroller and Auditor General Of India, 2014, CAG Performance Audit Report on Public Private Partnership Projects (PPP) in Indian Railways Presented, New Delhi, Press Release.

TABLE 7.7: Processes to Follow when Dealing with Schedule Management	
Key Activity	**Description**
	retains the right to review the baseline schedule for coordination and monitoring purposes. It is used to identify the project critical path and near critical paths that, if delayed, would result in overall delays to project completion. The baseline schedule is adjusted to incorporate schedule changes for approved change orders and time extensions. Should the contractor propose any other changes to the baseline schedule, the contractor must obtain the government's approval. For major changes in the sequences, durations, and relationships of critical or near critical activities, or for the adjustment of delivery dates for major equipment items, the contractor will prepare a schedule revision meeting for all contract requirements. The revised schedule is used for coordination and monitoring purposes in place of the baseline schedule.
Schedule management	Schedule management requires the active involvement of all project participants to remain informed about the status of the project and any delays that may impact schedule performance. The contractor is primarily responsible for organizing and managing the work of the project. As a result, the contractor's schedule management procedures must be shared with and communicated to all project participants. Should delays occur either to critical path activities or otherwise, the contractor needs to develop alternative work sequences with input from the affected sub-contractors, suppliers, and equipment vendors. Schedule management is essential to ensure that the contractor delivers the project within the approved time and budget. A Schedule Management Plan should contain all of the following major elements. • Baseline Schedule Development and Approval. • Schedule Analysis and Coordination. • Schedule Changes and Revisions. • Schedule Delay Mitigation Planning.
Schedule management of scope changes	Schedule management of scope changes concerns the planning, scheduling, and approval of schedule related changes, which result from the change control process. The primary objectives of managing schedule changes are as follows. • Document the direct and indirect effects of scope changes to the project schedule. • Analyze the costs of schedule impacts.

TABLE 7.7: Processes to Follow when Dealing with Schedule Management	
Key Activity	**Description**
	• Communicate schedule and cost impacts to project participants.

7.4.3. Ensuring the Schedule Accurately Reflects Progress

Ensuring the schedule accurately reflects progress, and is updated to reflect delays or changes, is critical because tasks are mutually interdependent and delays can increase costs. Project planning can establish the overall schedule and should specify when particular tasks must be completed. A good technique is to establish milestones that are easily observed and verified. Although PPP contracts do not require that the government updates the schedule, it must be informed by the private partner of any changes that might impact the milestones or the critical path for delivery of the project.

7.4.4. Approval of Schedule Milestones

Approval of the schedule milestones is usually done by the independent certifier (section 0 above) who will issue works completion, practical completion, and final completion certificates.

7.5. Quality Management

For the purposes of this PPP Guide, quality management is defined as a set of policies, processes, and procedures required for planning and execution (production/ development/ service) in the core business area of an organization. A Quality Management System (QMS) needs to integrate the various internal processes within the organization, as well as within a specific project. It should also provide a process approach for project execution. The QMS enables the organization to identify, measure, control, and improve the various core business processes that will ultimately lead to improved business performance and mitigation of construction risk.

7.5.1. Quality Assessment Implemented by a Private Partner

A private partner has several obligations toward the government when dealing with quality management. Table 7.8 describes the key activities required by the private partner for compliance with good practice quality management.

TABLE 7.8: Criteria for Sound Quality Management Processes	
Key Activity	**Description**

TABLE 7.8: Criteria for Sound Quality Management Processes	
Key Activity	**Description**
QMS Planning	**The planning process for the development of an overall Quality Management System (QMS) identifies those processes, procedures, and other documents that ensure effective operations and control over the entire project execution program. This planning effort will result in a well-documented, integrated process.**
QMS Development	**This activity involves the development of the QMS processes, procedures and other documents, as well as preparation for their implementation.**
QMS Implementation	**This activity involves the active incorporation of the Quality Management Project Plan (QMPP) elements into the workflow processes. The QMS should be able to address the following.** • **Sequence and interaction of these processes.** • **Criteria and methods to ensure effective operation and control of the processes.** • **Availability of information necessary to support the effective operation and monitoring of these processes.** • **Methods of measurement, monitoring, and analysis needed in order to implement those actions that will achieve planned results and continual improvement.**
QMS Reporting	**This activity involves reporting on how well a quality requirement is being met or how well a quality process is performing. It includes developing methods to measure, report, and improve on both the performance and effectiveness of processes. It also addresses the need to collect and use data on non-conformances to address improvement issues. It should also document what has happened in the past.**
QMS Monitoring	**Incorporates methods of control and oversight over the entire process. This process establishes, maintains, and implements a program to control and minimize non-conformance. This activity can be controlled by written procedures, instructions, or checklists as appropriate. Results should be recorded, authenticated, and documented.**

7.5.2. Quality Assessment Reviewed by the Government

Monitoring management quality is difficult and largely falls into the 'soft' indicator category. Nevertheless, an experienced contract director should regularly monitor the quality of the private partner's management and operating personnel, looking for weaknesses or trends that may provide an early indication of trouble ahead.

8. Change Management in the Construction Phase

8.1. Importance of Change Management

One of the common questions asked about PPPs is why, despite the great development of standardized PPP contracts, so many PPP contracts are varied or amended during their term. With standardization in all areas of PPP project development and implementation, why would any form of change or amendment to the PPP contract be required?

The most obvious answer is that it is impossible to predict the range of possible risks and to allocate these with precision over 20 years or more in a complex and changing environment. As such, the key to achieving long-term value from a PPP does not only lie in the pre-implementation phases, but also in how the balance of risk and rewards is established in the PPP contract so as to be able to survive significant changes over a long period of time — and to manage such changes in a structured manner that preserves the public benefit or Value for Money in the PPP.

There are many examples of PPP contracts that have been amended or renegotiated. Gausch (2004) cites a pervasive renegotiation of PPPs in Latin American countries, noting that it is likely that such renegotiation is also common in other jurisdictions, particularly ones where the PPP model is that of user-pays rather than government-pays PPPs.[22]

Yet, there are also many examples of projects that have performed better than expected. In this context, the equitable sharing in the so-called "upside" of PPP agreements is important in the context of the PPP projects being a form of publicly-owned social or economic infrastructure. Considerable effort has gone into the prescribed sharing of returns above a threshold limit, or even of refinancing to the benefit of the sponsors generating a refinancing gain share for the government (chapter 8.9.3).

Some critical lessons have been learned, for example, that the flexibility to amend contracts is very important, but so is the need to maintain public sector oversight over the change process to maintain the public benefit or Value for Money. Also, it is important to ensure that the risk allocation between the parties remains consistent (given the changes to the PPP contract) with that approved as part of the original PPP contract. In addition, if the government seeks too much flexibility in the contract, the risk of change may be unacceptable to bidders. If the government needs a very high degree of flexibility for change in the project, this suggests the project was not suitable to be a PPP in the first place.

[22] Gausch, J.L. (2004)., Granting and Renegotiating Infrastructure Concessions: Doing it Right, World Bank Institute Development Studies.

As a result, the legislative framework in many countries describes the process of change of PPP contracts and permits in terms and reallocations of risk. Good practice requires that the changes take place in a structured environment. It also requires that the government applies the same level of diligence to changes as it did to its original decision to proceed with the PPP, particularly in cases of significant changes.

The PPP contract will set out the events in which the changes are allowed under the contract. It may not, however, specify all the logistical or administrative steps that need to be taken in order to agree or implement permitted changes. The government contract management procedures should set out the necessary logistical and administrative details, such as:

- The person to whom a request for a change must be sent;
- The person who will assess the impact of the proposed change;
- The persons authorized to agree to a change on behalf of the government and private partner; and
- The person responsible for overseeing and verifying the implementation of the change.

One key lesson learned has been to permit PPP contracts to enter into a stage of liquidation without the government stepping into the contract and rescuing the shareholders. Two examples of this occurred in New South Wales, Australia where lenders stepping in saw the shareholders replaced. The "let the market work" approach in the Cross City Tunnel[23] and the Lane Cove Tunnel[24] saw lenders step in and sell the concession through competitive bidding. An alternative approach would be for the government to renegotiate and rescue the shareholders, thereby creating a strong moral hazard. Nevertheless, if the PPP market is relatively undeveloped, there may not be other parties willing take over the project through such a process, and it may be necessary for the government to take step-in or default action to prevent a complete failure of the project.

Any intervention or renegotiation must therefore be based on a public benefit. In Australia, the relevant governments in the Reliance Rail and Southern Cross Station projects (see appendix A) were much more active in negotiating amended agreements to stave off termination and provide a public service or save dispute costs. However, they did so with a clear focus on the public benefit from the outcome.

8.2. Changes in Ownership

[23] Danny Graham, *The Use of PPPs for Infrastructure Investments in Urban Areas*: Case Study: Sydney's Cross City Tunnel, New South Wales, Treasury, http://www.oecd.org/gov/budgeting/45039865.pdf [accessed 01/07/2015]

[24] Motorway Projects Branch, 2010, Post-Implementation Review: M7 Motorway, Cross City Tunnel and Lane Cove Tunnel, http://www.rms.nsw.gov.au/documents/projects/sydney-north/lane-cove-tunnel/m7-motorway-cct-lct-post-implementation-review-report.pdf [accessed 01072015]

It is common for the private partner to seek to change its shareholding arrangements and thereby, its owners. Provided that such a change does not increase the risk to the government or diminish the public benefit, it should not be prohibited by the PPP contract. The following circumstances are examples in which such a change may be appropriate.

- Following completion of construction, when the construction contractor wishes to exit the project – this enables that party to recycle its investment into a new project; and
- When a financial investor wishes to exit if the financial investor does not bring any special skills to the project. Their replacement with another equivalent investor may not introduce any new risks or diminish the public benefit.

However, one possible risk that must be mitigated is the disposal of shares to an unsuitable new shareholder. This applies to circumstances where the government has taken comfort from a commitment by the original shareholders to keep their economic stake in the project. This is particularly true of a shareholder who has a specified an active role in the project, such as a construction contractor or equipment supplier.

The government may reserve the right to approve a change in shareholding, especially where such a change in shareholding in the private partner means that the beneficial ownership or control of the private partner is altered. The meaning of change in control and of beneficial ownership will have to be defined in the PPP contract. The contract may specify that a period of time must lapse before any disposal is permitted (for example, disposals of shares may be forbidden until two years after construction is completed).

Lenders have legitimate interests in limiting permitted changes of control of the private partner and in requiring some commitments from the shareholders (and their holding companies) to maintain their shareholdings and economic stake in the project, at least for some minimum period (usually not ending before they have invested all of their equity and shareholder loans in the project). The government should not use its approval right in a way that will interfere with the ability of the lenders to protect their legitimate concerns.

8.3. Changes in the Scope of Works

Scope management is essential to ensure that the project actually delivers that which the ultimate users of the project works require. The output specifications, which are set out in the PPP agreement, should take into account the government's current, as well as future, requirements to the extent that these are identifiable and quantifiable. Variations to the output specifications may, however, be necessary to cater for changes in the government's requirements, which could not be anticipated or quantified at the commencement of the contract. Variations may also be necessary for changes imposed by external factors for which the government has retained responsibility (for example, a change of policy). The government must be notified of all variations prior to their implementation.

It is necessary to differentiate between changes to the scope of work by the source of the change (that is, the private partner, government, or some external event), the timing, and the size and impact of the change. In all cases, changes to the scope must be dealt with systematically and in terms of the PPP contract.

The likelihood of scope changes originating either from the private partner or the government is greatest in the Construction Phase, as the best means of achieving the output specifications in the context of actual conditions becomes apparent. Regardless of the source of the change, there must be a formal process of scoping and reaching agreement on such changes. The most common means of doing so is a variation notice issued by one party to another, setting out the costs and risk implications and also the formal changes to the specification. The cost implications must be clearly identified, and approvals should be sought from the appropriate decision-makers, depending on the quantum of the change.

There is significant value to be derived through establishing dynamic and empowered committees with representatives from the private partner and government to consider proposed changes, particularly to apply specifications in a manner that drives efficiency in public facilities such as hospitals. Where minor changes to the specifications have no cost implications, these committees are a valuable tool to manage the agreement processes.

Changes with minor cost implications may be approved by the contract management team. Larger changes by the government and private partner executives, and significant changes (expressed as a percentage of the overall construction capital cost, or where there is a material change in the risk allocation or project scope) should be approved by the appropriate approval authority under the project's governance arrangements. These approving entities may be a central PPP unit or a committee of representative government departments.

On the private partner's side, the shareholders and lenders have an interest in managing and approving changes. Approval processes, similar to those of the government, should be established where shareholders and lenders are notified of changes and their approval is required, and in some instances, where cost exceeds a certain threshold.

8.3.1. Managing Government-Initiated Changes

Where the government seeks to change the contract specification, it must issue a formal variation notice. It is generally good practice to provide the variation notice in the contract that the private partner is obliged to respond to; the notice should have detailed information in relation to the impact of the proposed variation.

The private partner must be permitted to identify the costs and risks of implementing the variation, notifying the government of such costs through a variation proposal. The costs should be compared to the original or base case capital costs. Where such costs exceed a specified amount, the private partner should be required to tender out such variation in an open market. Where the costs are relatively minor,

the private partner should implement the variation using its existing sub-contractors, as this will be the most cost and time efficient.

The government must decide to accept or decline the variation proposal. It is extremely useful for the PPP contract to have a method by which the various overhead costs and mark-ups of the private partner are identified for variations, so that the decision to implement the variation depends on the base costs that the private partner receives from its contractors rather than the mark-ups that the private party seeks to cover for its costs and risks.

The variation is then formally signed off between the parties and implemented as such.

The private party must be obliged to implement the variation unless any of the following conditions are met:

- The variation would, if implemented, give rise to a breach of any legal requirement or good industry practice. Alternatively, if the variation would adversely affect the ability of the private partner to exercise its rights and powers to perform its obligations under the PPP contract;
- The private partner does not have the legal capacity to implement the variation;
- The variation would, if implemented, make any insurance effected or to be effected unavailable on reasonable commercial terms;
- The variation is not technically feasible on reasonable commercial terms; and
- It would place the private partner in breach of its loan agreements.

The costs for the variation must be financed by the government. There are a number of ways in which this can be achieved. The easiest to implement is a capital grant paid as a lump sum to the private partner upon implementation of the variation. Since this change may also involve consistent operating and maintenance costs that were not included in the PPP contract and the financial model, there must be a mechanism by which these can be reimbursed by the government. In cases of a government-pays PPP, the payments can be increased to cover the costs (and risks) of the variation post-implementation. For user-pays PPPs, the cost recovery might be effected by way of an increase in user fees, although this is not common.

The variation in its entirety might also be funded with capital raised by the private party. This is more common in government-pays PPPs where the capital and funding costs can be received from an increase in the payments.

8.3.2. Managing Private Partner-Initiated Changes

There are likely to be many private partner-initiated changes. The majority of these should be changes to the means by which the output specification is achieved and should be at the cost and risk of the private partner. Nevertheless, the government has a significant interest in reviewing and approving these changes so that the output specification continues to reflect the needs of the government. This is because the government remains the owner of the asset created in most cases, and

it has an interest that the asset performs over a period much longer than the term of the PPP contract.

In this case, the private partner issues the variation notice and confirms the detail of the change to the specification and that there is no cost to the government. There may be some cases where the government is willing to make a cost contribution to a private partner variation in the interest of increasing Value for Money, but these should be the exception.

The government then issues some form of no objection to the variation. It is then formalized and signed off on by the parties and then implemented.

The government must be sensitive to the concept of value engineering by the private party. Value engineering is where costs are reduced by the use of some innovative implementation method and is common in construction and system development. Cost reductions may well be shared between the parties in the variation agreement, but care must be taken to examine the risk that comes with such value engineering.

An example in a rail system could be reducing the amount of derailment containment to a level that is consistent with good industry practice, but below that set out in the original output specification. An actual derailment in an area where the containment was omitted as part of a value engineering that the government shared in, would lead to some interesting liability issues in the civil and even criminal legal proceedings that would be sure to follow.

8.4. Changes Caused by External Events

As noted, the general risk of implementing the PPP contract lies with the private partner. Exceptions to this general principle are limited to areas of specific relief such as relief events, compensation events, and force majeure events. In such cases, the PPP contract must specify the manner in which such events are notified between the parties. It also needs to clearly indicate the extent that such an event will result in a variation to the PPP contract, a variation that must also be formalized between the parties — albeit without a requirement for approval by either party. Where a party objects to or disagrees with the outcome of such a process, the variation would be decided in accordance with the dispute resolution procedure set out in the PPP contract.

8.5. Amendments and Renegotiation of PPP Contracts

Managing the changing environment and emerging risks through amending and adapting contracts is key to de-stressing projects. As such, there are very few, if any, absolute prohibitions on amendment of PPP agreements in any jurisdiction with significant PPP projects. The European Union (EU) has one of the most regulated procurement environments and may be taken as a reasonable representative of good practice on the subject of renegotiation of concession agreements.

While some renegotiations are efficient, many are opportunistic and should be discouraged. Renegotiations of significant aspects of the PPP are in principle forbidden under EU law.[25] It cites the following reasons for discouraging renegotiation.

- Competitive bidding may be distorted and the most likely winner is not the most efficient company, but the one most skilled in renegotiation;
- With renegotiations carried out bilaterally, the positive effects of competitive pressure are lost;
- Renegotiations often reduce the overall economic benefits of PPP arrangements and might have a negative impact; and
- It may interfere in lender rights to intervene in or prevent changes to the contracts in order to protect their rights.

However, a closer look at EU procurement law and in particular the 2014 Directive on the Award of Concession Contracts is highly illuminating. Article 43 explicitly permits the modification of a concession contract in any of the circumstances where the value of the concession is not increased by more than 50 percent, as well as in the following cases:

- The modifications, irrespective of their monetary value, have been provided for in the initial concession documents in clear, precise, and unequivocal review clauses and do not alter the overall nature of the concession;
- Additional works or services by the original private partner are necessary and cannot be provided by a new private partner for valid economic and technical reasons, and procurement of a new private partner would impose "significant inconvenience or substantial duplication of costs" on the procuring authority; and
- The modifications, irrespective of their value, are not substantial.

In Chile, the Concessions Law of 2010 made some substantial changes to the manner in which Chilean concessions are amended. These are outlined in box 7.7.

BOX 7.7: ***Amendments to Concessions under Chile's Concession Law of 2010***

The Concession Law allows the parties to agree to change the works and services contracted in order to raise the service levels and technical standards by up to 15 percent (which figure is established in the bidding conditions) of the approved capital value. If there is no cost to the government, then no agreement is necessary.

Where conditions subsequent to the signing of the contract require additional investment by the private partner, the government and the private partner may increase the additional investment value by 20 percent in terms of an amendment agreement that is also approved by the Ministry of Finance. The Ministry of Public

[25] European PPP Expertise Centre (EPEC). (2014), Managing PPPs during their Contract Life – Guidance for Sound Management.

Works must be able to justify the changes for duly substantiated reasons of public interest in a public report.

To prevent monopolistic pricing, if the increase exceeds 5 percent of the approved capital works, it must be put out to open tender by the private partner. The private partner is then compensated by one or a combination of subsidies provided by the state: a voluntary payment made directly to the concession holder by third parties interested in the development of the works, a modification to the current amount of the concession total revenues, a change in the concession term period, modification to the rates, or any other factor of the concession's agreed upon economic regime.

In exceptional circumstances and only in the Construction Phase in which variation exceeds 25 percent of the capital budget, the amendment agreement must be approved by the Ministry of Public Works and the Ministry of Finance. Conditions for the amendment include that the facts and circumstances giving rise to the amendment occur after the awarding of the concession, and could not have been foreseen upon its awarding and that — for reasons including expertise, behavior, performance, social and environmental impacts, management economies or economies of scale — awarding the new works to the original concession holder is more efficient than granting a new concession.

The technical panel established in the amended Concessions Law, and comprised of independent experts, must verify that these conditions are met by the amendment. The compensation to the private partner is calculated and paid in such a way as to get the net present value of the additional project to equal zero, taking into account the applicable discount rate and the economic effect the additional project may have on the original project, including the higher risk that may occur.

8.6. Financial Restructuring

In troubled projects, financial restructuring may be considered. A method of dealing with a project in financial difficulty is for the PPP contract to be auctioned by the government, whereby a new bidder will pay the actual worth of the project and then continue to provide the service. This is consistent with the risk allocation to the private partner and is the preferred method of dealing with such projects. However, in less mature PPP markets, there is a risk that there will be no buyers willing or able to take over the project.

Other tools employed for financial restructuring may include amendment to the finance documents or conversion of debt to equity. These are managed within the private partner, and government involvement is limited to approvals of the changes made in the restructuring, especially where there may be change of control provisions in the PPP contract.

Finance document amendments may include extended maturity dates, revised interest rates, and amended financial covenants, among others. As an example, in the San Joaquin Hills toll road transaction in the United States, $2.06 billion in toll

revenue bonds were restructured by increasing maturity dates, revising coverage ratios (debt service), and reducing annual debt service amounts[26]. Debt restructurings were also implemented for the Dulles Greenway (Virginia) and Southern Connector (South Carolina) projects.

8.7. Changes in Law during the Construction Phase

The cost of complying with a law that is current or foreseen at the time of entering into the PPP contract is usually built into the price that the private partner bids in order to provide the services. It may, however, not be possible for the private partner to price specific costs that may arise from changes in a law which are not foreseen at the time it signed the PPP contract. The issue that arises from this is who should be responsible for the costs due to changes in a law and how such costs should be funded.

8.7.1. Allocation of Risk of Change in Law

The private partner's concern is that a change in law is a risk that it cannot control and one which it regards as being within the control of the government. In a non-PPP business, the business operator would usually be able to pass on the costs of a change in law to its customers. In contrast, PPP contracts often lack flexibility in pricing, and the private partner may believe that it should not have to bear the costs of any change in law. Furthermore, governments are of the view that changes in law, to the extent that they apply to all businesses in the country, should not be the cause for extraordinary protection for the private party. To balance these arguments, countries with relatively stable and limited changes in law apply a test of discrimination in deciding who bears the cost and risk of a change in law.

8.7.2. General Change in Law

A general change in law is one that affects either all business in the country or all those involved in the sector in which the PPP contract is centered. In these cases, the risk and cost of compliance with the law remains with the private partner. Examples of general changes in law are changes in tax legislation or environmental law.

No variation is required for general changes in law except where the output specification must be changed. In such circumstances, a private partner variation will be appropriate. Foster Infrastructure (2012) states that where the government proposes a significant policy change that will affect a PPP project, it may be possible to implement that change through either the variation process or the change in law process. In these circumstances, the government should consider the relative merits

[26] Primoff, M.G. and Hampton, N., Kaye Scholer 2013, *In: Developing a Framework for Renegotiation of PPP Contracts, Ministry of Finance, Government of India:* Secrets of Successful Restructuring. LLP article, Infrastructure Investor.

of each process, including the impact upon Value for Money and the long-term PPP relationship.

8.7.3. Project-Specific Change in Law

A project-specific change in law occurs when there is an element of discrimination in the effect of the change in law. This discrimination may be against the private partner specifically or against businesses involved in PPP contracts, of which the private partner is one.

In such cases, the government bears the cost associated with the change in law. However, the private partner must be obliged to use all reasonable endeavors to mitigate any cost increases. The factual determination of whether a change in law is general or project specific, and whether or not the costs were reasonably mitigated, will be a source of dispute. Therefore, it is advisable for the parties to convene on any matter that may become a change in law. In some cases, the two parties may be able to avoid project-specific changes in law by jointly lobbying the institution driving such a change in the law.

Procedurally, the change management system used for government variations should be used in cases of project-specific changes in law.

9. Claims Management in the Construction Phase

9.1. Importance of Claims Management

A claim in the context of PPP contract management is somewhat of a misnomer. Well-structured PPP contracts allow for specific consequences for specific failures by one party to meet its obligations to the other party. These failures normally give rise to a compensation event or to a breach of the PPP contract, not to a general claim for damages. Therefore, it is possible for a party to implement a form of claim on the grounds that the other party has caused it such harm or loss that it would be impossible to obtain relief without instituting a claim for damages. It is beyond the scope of this PPP Guide to examine the legal merits of such an argument, and this section will focus on how to deal with the various forms of claims that may arise.

The first observation is that the likelihood of some form of claim increases with the degree of involvement of the government in the running and financing of the PPP. Such involvement, be it in the approval of designs, provision of ancillary infrastructure to the private partner, the obtaining of necessary consents (such as environmental approvals), the provision of land, or the provision of capital or operating grants, gives rise to risks of the government not meeting the required standards of compliance.

The role of the contract management team is thus critical in ensuring the compliance of the government and correctly documenting all events in meeting such obligations. If land is being provided, then all land-related documents and agreements must be

well recorded. Similarly, obligations related to obtaining approvals must be met and documented.

Even with contract management systems working well, it is possible that some claims or notices of relief or compensation events will be received. The contract management team should have the resources and processes to permit good claims management.

Claims management allows claims and potential claims to be identified and evaluated. By assessing their merit early on, claims or potential claims can be avoided or resolved quickly. Alternatively, the decision can be made to pursue other routes to resolution. Table 7.8 is a non-exhaustive list of claims that may be raised by a private partner. This is not to say that all claims listed are legitimate claims in terms of the PPP contract. Claims that are not legitimate should be rejected by the contract management team.

BOX 7.8: Potential Claims that Might Arise

- General Claims
- Missing Scope
- Breach of Contract
- Mismanagement
- Over billing
- Improper Labor Charges
- Improper Material Charges
- Design Errors or Omissions
- Architect/Engineer Error
- Architect/Engineer Omission
- Improper Specification by Owner
- Delay Claims
- Delay Due to Owner or Contractor action or inaction
- Delay due to Improper Allocation of Resources
- Improper Acceleration Charges
- Impact Claim
- Disruption of Owner Facilities
- Interference by Owner with Contractor Means and Methods
- Disruption of Contractor Productivity (Sequencing of work and trades)
- Differing Site Conditions
- Hidden Conditions
- Differing Site Conditions than those shown on Plans and Specifications
- Abnormal. Weather Conditions

Upon receipt of any claim or notice of breach, relief, or compensation event, the contract management team should follow the steps set out below in Table 7.9.

TABLE 7.9: Process of Evaluating a Claim

Process	**Description**
Identification	Determine the source of potential claim. For example, design error/omission, scope gap, documentation conflict, hidden/differing site conditions, abnormal weather, and so on.
Legal compliance check	Determine whether or not the claim has any basis in the PPP contract or in law. Consult legal resources on the matter.
Evaluate merit	Determine potential success of claims based on established legal precedent and contract documentation.

Evaluate magnitude	Determine worst case and best case magnitude from each party's perspective.
Strategy development	This may range from a settlement agreement to following the dispute resolution process.

In general, government officials are seldom empowered to reach settlement agreements on claims, as these often have significant financial implications. As such, the dispute resolution process (DRP) is the default in all claims. Both parties need to follow the prescribed DRP to ensure that all time lines are met and all procedures complied with. The worst possible outcome is a default judgment under the DRP without the merits of the matter being decided upon.

A common form of claim is that which arises between a private partner and its sub-contractors, or between sub-contractor and supplier or sub-sub-contractor. The reason for this is that these sub-contracts often follow the form of more conventional construction or Engineering, Procurement and Construction (EPC) contracts where claims for specific performance and/or damages are far more common.

In such cases, it is appropriate for the government to refuse to join such claims and disputes. Rather, it will focus on ensuring that the private party continues to deliver according to the conditions of the PPP contract.

Prevention of Claims

The private party is best positioned to prevent claims arising by using the form of contract as well as project and quality management tools to identify and mitigate disputes and claims proactively. Table 7.10 sets out some such tools.

TABLE 7.10: Types of Claims and Possible Preventative Solutions

Type and Cause of Claim	Key Control	Preventive Solution
General Claims		
Missing Scope, **Breach of Contract**	Contract	Provide appropriate change order and change directive procedures in a contract, and incorporate **flow down** of procedures to trade sub-contracts.
Mismanagement	Project Governance	Clear. well-defined policies and procedures. Proper compliance with change directive and change order procedures pursuant to contract documents.

Improper Labor Charges, **Improper Material Charges**	Procurement	Well defined RFPs.
Over Billing	Financial	Transparent financial reporting.
Design Errors or Omissions		
Architect/Engineer Error	Quality Control	Proper review and acceptance procedures for design review and work sign off.
Architect/Engineer Omission	Project Management	Integrated design management and scope change processes. Proper compliance with change directive and change order procedures pursuant to contract documents.
Improper Specification by Government	Procurement	Well defined RFPs and thorough proposal review/clarification.
Delay Claims		
Delay due to Government or Private Partner action or inaction	Scheduling	Thorough and integrated scheduling processes that utilize proper scheduling tools and techniques.
Delay due to Improper Allocation of Resources	Planning	Utilization of resource loading and manpower optimization tools for optimal staffing.
Impact Claim		
Disruption of Government Facilities	Risk Assessment	Perform analysis and contingency plans in relation to high-risk scenarios.
Interference by Government with Private Party Means and Methods	Risk Assessment	
Disruption of		Develop and maintain an all-inclusive project execution plan for each phase of

Private Party Productivity (Sequencing of work and trades)		the project.
Differing Site Conditions		
Hidden Conditions	Contract Management	Provide proper contract language allocating risk of unforeseen conditions, differing conditions, weather, and schedule delays.
Differing Site Conditions than those shown on Plans and Specifications	**Planning**	During planning, conduct a thorough analysis of site conditions and engage adequate third party verification.

A case study of claims management by a government is set out in appendix A, namely the Southern Cross Station in Melbourne Australia as reported in the *Audits of 2 Major Partnerships Victoria Projects* by the Victorian Auditor-General in November 2007.

9.2. Dealing with Extension of Time in the Construction Phase

The private partner will have a limited set of events for which it can claim to:

- Extend the completion date by which the asset must be created, commissioned, and operated; and
- Extend the expiry of the PPP contract (effectively an extension to the period in which it can earn revenue from operating the asset).

These events will be set out in the PPP contract, and relate to matters outside the control of the private partner. Allowing an extension of time in these circumstances enables the project to continue with the private partner remaining incentivized to complete the project; this is a better Value for Money outcome than initiating a default process as a result of an event beyond the private partner's control. See chapter 5.5.5 for further information on the basis for this risk allocation.

The role of the contract management team in the government is to ensure that the basis for granting such an extension meets the criteria in the PPP contract in basis of fact and in terms of compliance with the procedure set out therein.

Although the sections below differentiate between relief events (which entitle the private partner to an extension of time) and compensation events (which entitle the private partner to an extension of time and/or payment of an amount of

compensation), it should be remembered that time is money to the private partner, and the process followed in both events should be the same.

9.2.1. Relief Events (time only)

Relief events are those events listed in the PPP contract that may arise at any stage during the term of the PPP contract, the consequences of which are best managed by the private partner even though they may not be within its control. The best example of a relief event is unforeseeable adverse weather conditions. The private partner bears the financial risk of relief events but neither liquidated damages nor rights of termination should arise because the private partner is granted an extension to the completion date.

The private partner should give the government notice of the occurrence of any of the relief events specified in the PPP contract. This should be done as soon as reasonably practicable after becoming aware of the occurrence of the event and within a defined period (for example three months). The notice from the private partner should:

- Specify the event that has occurred and explain why it qualifies as a relief event;
- Identify the impact that the event has had or is likely to have upon the performance of the private partner's obligations, its financial arrangements, and its operations; and
- Provide details of the additional time required to remedy that impact.

The government must request further details and particulars if it is not satisfied that it has sufficient information to justify the extension of time.

If the government and the private partner agree on the time for extension of the completion date, then the PPP contract will be amended with the new date for completion of the works and the start of operations. If the parties have not agreed, then the matter must be determined in accordance with the DRP.

The government should interrogate the private partner about the information provided. The private partner must minimize the adverse effects of any relief event by taking action to minimize the delays caused by the event.

9.2.2. Compensation Events (time and money)

Compensation events differ from relief events because the private partner is entitled to an amount of compensation and possibly a time extension to the term of the PPP contract. Examples of compensation events are a failure to provide land or a right of way by the public partner or a delay caused by another government agency.

In addition to the requirements for relief events the private partner must:

- Specify the event that has occurred and explain why it qualifies as a compensation event;

- Identify an impact that the event has had or is likely to have upon the performance of the private party's obligations;
- Provide details of the additional time required to remedy that impact; and
- Provide details of the additional liabilities, costs and expenses, and the loss of revenue that the private partner has incurred or is likely to incur.

This must be summarized into a capital cost, for which the private partner must be compensated, and an operating cost that must be covered by an increase in revenue (user fees or government payments) or an extension in the term of the PPP contract.

The government's contract management team must interrogate and audit these costs closely as they may be overstated. The mitigation costs of the private partner must also be examined to see whether they were effective.

Any unresolved disagreements on the matter must be dealt with through the DRP.

9.3. Dealing with Force Majeure Events

Force majeure events are a limited set of events which may arise during the term of the PPP contract through no fault of either party. These are best managed by the private partner. They are more severe than relief events, will typically last longer and may result in termination of the PPP contract. They are, by definition, unusual and rare events, and the contract management team should deal with these as exceptions. The focus should be on avoiding termination by the private partner mitigating the effects and, if required, obtaining support from the lenders to defer payment until such time as the project is stable again.

9.4. Process of Approvals of Claims by Private Party

A very strict process of processing claims, as listed below, must be followed.

- The government must be notified of all claims within a limited period of time after the event. Claims submitted long after the event become impossible to evaluate, and the private partner will struggle to show how it dealt with the event and mitigated its consequences;
- The notices must contain complete information, otherwise the notice should be rejected;
- The government should request further information on the claim until it is satisfied that it has enough information to evaluate it; and
- The claim should be grounded on the base case financial model and the original project schedule in order for the effect of the event to be evaluated against the original base case in terms of time and money.

The parties should endeavor to reach agreement on the schedule and cost implications of the event. In some cases, the independent certifier can assist in this. The fall-back position should be the DRP, as the independent certifier cannot play a

role in providing a final and binding decision on matters that may include legal matters beyond his/her technical expertise.

Some jurisdictions (Chile in particular) have established technical panels charged with resolving disputes of this nature, staffing the panel with independent legal, financial, and technical experts.

10. Dealing with the Private Sector's Underperformance and Non-Compliance during the Construction Phase

Monitoring the performance of the private partner is a primary function of the contract management team of the government. In most PPPs, the performance monitoring and reporting is done by the private partner, making the function largely one of assurance that the reporting is accurate and auditing performance measures when it is not. During the term of the PPP contract, it is almost certain that the private party will not meet the required standards and not comply with the specification in the PPP contract. This is termed "non-performance" even though some of the services may have been partly provided or have partly met the specification.

10.1. Mechanisms for Dealing with Under-Performance and Non-Compliance

When dealing with under-performance and non-compliance in the Construction Phase, the issue is not the standard of services provided but rather the time taken to complete the asset and the quality of the asset on completion. In general terms, the private partner is incentivized to bring the asset into revenue-earning operation, but the government may suffer some losses in cases of delay and may create a right to claim some form of liquidated damages.

10.1.1. Impact of Non-Compliance by the Private Partner

Non-compliance by the private partner decreases the public benefit or Value for Money in the PPP by decreasing the quantity or quality of services offered to the public. The relationship between the public and private partners will be negatively affected to the detriment of the project's sustainability. It also creates a bad precedent for PPPs as the public perception of private delivery of these services will be poor, and will lead to strong opposition to PPPs and questioning of the Value for Money offered.

There are also more direct implications. The workload of the contract management team in the government will increase as the contractual remedies are time consuming to apply and must be done correctly to be effective. The financial sustainability of the private partner will come under pressure and defaults under the financing agreements may be triggered, thereby leading to lender step-in.

10.1.2. Impact of Acceptance of Private Partner's Non-Compliance by the Government (including waiver by the government)

It is inappropriate for the government to condone or accept material non-performance by the private partner. The most common manner in which this occurs is if the contract management team of the government misses or fails to apply a penalty for non-performance. This is not necessarily fatal to the government attempting to hold the private partner accountable for future non-performance, as an

isolated failure or delay by any party in exercising any right or remedy may not operate as a waiver of such right or remedy. Any waiver of a breach of the terms of the PPP contract is not necessarily a waiver of any subsequent breach or default. However, depending upon the applicable legal system, repeated acceptance of non-compliance may result in the government losing the right to insist on compliance at a later date.

Where non-performance is not material and instead constitutes a technical non-compliance with the contract that will not compromise the project outcomes or Value for Money, it may be appropriate for the government to waive compliance with that requirement, as it may be counterproductive to initiate the contractual penalty or default processes for a non-material, non-performance issue. However, before doing so, the contract management team should seek the following advice and approvals.

- Legal advice as to whether the non-performance can be waived without comprising other obligations under the contract, as well as legal advice regarding how to document the waiver to ensure that it only applies to the specific non-material obligation;
- Technical advice (for example, from the government's engineering advisers) to confirm that the non-performance is not material and will not compromise the project outcomes or Value for Money (VfM); and
- Approval through the contract governance arrangements for the waiver, following consultation with relevant stakeholders.

10.2. Mechanisms for Dealing with Late Delivery of Works

In PPPs, liquidated damages are the preferred remedy for late service commencement. Liquidated damages are a payment representing a genuine pre-estimate of the actual losses or damages suffered if the private partner fails to achieve service commencement on time. The events giving rise to liquidated damages, and the amounts, should be set out in the contract. In some jurisdictions, liquidated damages are referred to using the term "penalties", while in other jurisdictions, the term "penalty" is a different concept referring to amounts which bear no relationship to the harm suffered by the other party and which are unenforceable.

An example would be the cost to the government of renting alternative accommodation or paying higher service fees in the absence of the services to be rendered by the private partner under the PPP contract. In many PPPs, both the government and the lenders are entitled to liquidated damages. The liquidated damages payable to the lender are often significantly larger than those payable to the government, and they provide a strong incentive for the private partner to complete construction on time.

10.2.1. Impact of Late Delivery of Works on the Private Partner and Government

The private partner suffers a number of negative impacts from late completion of the Construction Phase that then impacts on operational commencement. The first is that revenue is lost and the lenders require that their loans be serviced even though there is no revenue to do so. The private partner must raise this in the way of additional capital, and this decreases shareholder returns. Where the fault lies with the construction contractors, the private partner will levy liquidated damages on this contractor.

The private partner may also be subject to liquidated damage claims by the government, and may have performance bonds or other forms of security called in by the government. At the same time though, the government suffers the loss of the services to the users. Both parties suffer reputational damage as a result of delays.

10.2.1.1. Financial Impact

These include the imposition of liquidated damages on the private partner and its sub-contractors, the calling of bonds in the security package, the loss of revenue, and the continued debt service obligations. Operations sub-contractors often claim against the private partner for costs incurred in delayed starts.

The loss of revenue is always severe as the private partner has a shorter period to earn revenue and, especially in government payment PPP contracts, this loss is never regained. Simultaneously, shareholder returns are reduced. This may even extend to reduced refinancing gain opportunities.

10.2.1.2. Operational Impact

The operational impacts of delayed service commencement relate largely to the delay in the provision of the services. Where these involve social infrastructure like hospitals and schools, patients may receive inadequate treatment at alternative facilities, and learners may miss the start of a school year. In economic infrastructure, the main operational impact is the loss of revenue to be earned as the asset stands idle.

10.2.2. Processes in Cases of Late Delivery of Works

The government's contract management team must closely monitor the progress of the works and the quality thereof as certified by the independent certifier. Poor quality will result in delayed completion as the private party struggles to commission the work and obtain the certification needed to begin the Operations Phase.

10.2.2.1. Liquidated Damages

PPP contracts typically have a specific regime for the claiming of liquidated damages and the procedures must be closely followed. An example of a trigger is that the

service commencement date is missed. However, it is normal for there to be some requirement for a notification to the private partner followed by a remedy period. If the contract management team is lax, procedural irregularities could undermine this process for claiming liquidated damages.

10.2.2.2. Construction Bonds

A construction bond will usually take the form of an on-demand bank guarantee which can be called by the recipient when, for example, the service commencement date is not met. The private partner may well require a construction bond from the construction contractor who will pass through the costs and time effects of providing such a bond to the private partner. This increases the cost of the project, but provides security in the case of a default. This default risk is highest in the early stages of the Construction Phase because the government may not be able to find another party to take over the project and therefore may incur significant cost in reinstating it.

The calling of a performance bond requires that contractual triggers are met. As with liquidated damages, these include missed dates for completion, a failure to remedy, and above all the correct following of procedures by the contract management team of the government.

10.2.2.3. Sponsor Support

It is quite common for PPP contracts to require some form of support from shareholders or key sub-contractors to the private partner because the private partner is a Special Purpose Vehicle and has no inherent ability to provide technology support or experienced human resources (as could a large existing enterprise specializing in a type of technology or construction particular to the PPP).

Sponsor support usually takes the form of undertakings from one or more of the sponsors of the private partner in favor of the lenders and/or the private partner to support the private partner's obligations. One of the undertakings may be to provide technical support and/or general undertakings to ensure that the private party reaches service commencement on time.

As with liquidated damages and construction bonds, sponsor support needs to be triggered by the failure to reach service commencement by the scheduled date.

10.2.2.4. Long Stop Date

Many PPP contracts contain a "long stop date" by which services must commence regardless of what events or claims occur during the Construction Phase. If, notwithstanding all of the remedies described above, the services have not commenced by the long stop date, the government must commence the process to terminate the PPP contract. This is described in more detail below.

11. Issue Management and Dispute Resolution during the Construction Phase

11.1. Issue Management Procedures

Issue management usually comes into effect when significant risks arise or materialize. The PPP contract management manual should include issue management procedures that deal with irregularities and mitigate the issues that lead to risk materialization.

Conflict and issues typically occur within a contract when a problem occurs. Therefore, a key aspect of a partnering relationship is the resolution of problems quickly, efficiently, and without dispute. This can be achieved through, for example, the following defined mechanisms:

- Documented discussion and formal note of agreement;
- Harnessing the contractual change mechanism so that the issue does not affect the overall affordability of the project;
- Agreed arrangements for change to the procuring authority's performance requirements and the private party's method statements; and
- Regular scheduled meetings with attendance by key stakeholders from both parties.

Issue management procedures are normally left to individual PPP contracts to arrange the most suitable way for the parties to avoid disputes and the development of a blame culture. However, the basic tenets of a collaborative problem resolution methodology are to develop a systematic approach, incorporate an agreement to seek win-win solutions rather than parties to blame, create a culture of open discussions and equality of rights, and to acknowledge that adversarial attitudes waste time and money.

In the Docklands Light Rail project in London, UK, the procuring authority and the private partner ensured close coordination and open communication by maintaining offices adjacent to one another. This provides an example of the practical steps that parties can take to encourage the early detection and resolution of issues.

11.2. Dispute Resolution Procedures

Dispute circumstances are intrinsic in any PPP construction projects and could influence the success and failure of projects, thereby generating additional costs for all parties[27] [28]. PPP construction project issues, concerns, and disputes occur as a result of numerous factors such as technical, climatic, and logistical events, while

[27] Thompson, R. M., Vorster, M. C., Groton, J. P. (2000). Innovations to Manage Disputes: DRB and NEC, Journal of Management in Engineering ASCE 16(5): 51–59.doi:10.1061/ (ASCE) 0742-597X (2000)16:5(51).

[28] Marzouk, M., El-Mesteckawi, L., and El-Said, M. (2011)., Dispute Resolution Aided Tool for Construction Projects in Egypt. Journal of Civil Engineering and Management, 17(1), 63-71.

resolution of PPP construction project disputes is influenced by people's ideas, manners, activities, and cultural implications.[29]

Some issues arising throughout the lifetime of the PPP contract, especially during the Construction Phase, cannot be solved through issue management processes and will inevitably end up in dispute. Therefore, a proper mechanism to secure resolution is needed. In such cases, the private partner often argues that a usual litigation procedure through courts can be slow, expensive, and sometimes even misjudged or misguided, as there are not too many experts that are familiar with the complexities of PPP agreements. This party will also often argue that the arbitration process is favored as the process is faster, even though the required resources can often be expensive and the same legal procedure needs to be followed.

Therefore, governments may legitimately argue that a proper court procedure is better as the need to build up a precedent base and the compelling case is far greater than in arbitrations. In this context, the courts can be provided with the opportunity to grow the expertise required to deal with the complexities of PPP agreements and to promote a measure of transparency regarding the interpretation and enforcement of PPP agreements. Ultimately, the choice will be country specific, taking into account factors such as the judicial environment and the state of the arbitration processes in that jurisdiction.

11.2.1. Binding and Non-Binding Determinations

Binding and non-binding determinations will be implemented differently in different countries as well as in different types of PPPs. As noted, some countries will prefer the litigation measures taken through the courts and some will have a preference to use Dispute Resolution Boards (DRB). Within the Construction Phase, the most usual method is to use the Dispute Resolution Board, which will usually provide a binding resolution in common law countries, but not in civil law countries.

Some countries have Dispute Avoidance Boards (DAB) in place, which can be helpful in resolving disputes throughout the life span of the project. The function of the DAB is dispute avoidance. DABs meet with the parties regularly during the delivery of a project to discuss emerging issues and help the parties to resolve them on a consensual basis. This method has been very successful in quickly resolving any issues, with minimal cost to the parties and the most productive outcome for the project. DABs also serve a decision-making function. Either party to a dispute can refer it to the DAB for a written determination.

One more option when dealing with disputes is a "fast track dispute resolution". This method is often final and binding on all parties in common law countries (but not in civil law countries), with an option to be appealed. Fast track dispute resolution usually refers to the usage of an Independent Expert to establish facts, the determination of which is within the capability of a suitably qualified class of person.

---

[29] McInnis, A. (2003). New Forms of Non-Adversarial Contracting Focusing upon the New Engineering Contract: Keynote Lecture 1. Second International Conference on Construction in the 21st Century. "Sustainability and Innovation in Management and Technology."

Examples include the following:

- Calculation of any refinancing gains;
- Application of any inflation-indexation mechanism; and
- Application of the economic test to determine whether the proceeds of the material damage insurances should be applied to reinstate the project.

In these cases, an independent financial expert would be appointed through agreement by both parties.

11.2.2. Dealing with Step-In Situations

A step-in occurs when another party temporarily assumes some or all of the obligations of the private party. It may be implemented by either government step-in or lender(s) step-in.

11.2.2.1. Step-In by the Government

The South African National Treasury Guidance on PPPs (2004)[30] states that the government may want the right to take urgent action in respect of the services to avert a serious threat to an essential public concern (such as public health, safety of persons and/or property, national security, or the environment) or to discharge a statutory duty. The need for this right may be due to matters outside the project or due to a breach by the private partner of its obligations under the PPP agreement.

The step-in by the government usually constitutes short-term involvement where an urgent and necessary solution is needed. It also usually happens only in projects where core services are provided by the government such as the case of hospitals, schools, and so on.

In cases where there is no private partner breach, the private partner is relieved from the obligations that the government has taken on by stepping-in. This also relieves the private partner of any monetary penalties and/or deductions in respect of its non-performance of those obligations. Furthermore, if the step-in does not involve the private partner but affects its duties and obligations to perform its work, then the government must continue to make any required payments to the private partner when due — irrespective of whether the services under the agreement have been delivered or not.

If the step-in by the government arises due to the private partner's breach, then the private partner should remedy any such breach at its own expense and should meet the government's costs of stepping-in. If the breach by the private partner persists after the government has stepped-out, then the lenders have the right to step-in.

[30] South African National Treasury, *First Issue. (March 2004),* National Treasury PPP Practice Note Number 01 of 2004: Standardised PPP Provisions.

11.2.2.2. Step-In by Lenders

The lenders' step-in occurs primarily when termination of the PPP agreement could occur. They step-in to ensure the continuity of the project if the private partner defaults under the PPP agreement or the financing agreements. In some countries, the government will sign a "direct agreement" with the lenders and the private partner, which creates a mechanism for the continuation of the project (in some cases, for only a limited period of time). This allows the lenders to remedy defaults following a threatened termination of the PPP agreement and the financing agreements.

The following steps are based on the main principles on which lenders implement a stepping-in approach.

- The lenders must voluntarily step-in to resolve the issue in question;
- The government must not suffer due to the step-in process, and the PPP contract must carry on according to the original set up, including any penalty deductions;
- The private partner must inform the lenders of all private partner's defaults, non-payment of the penalties, and any other issues that my affect the project;
- The lenders may only exercise their step-in rights upon payment of all such liabilities to the government; and
- Agreed remedial work within the time frame attached to it must be supplied by the lenders in order to assist in rectifying the issues that the private partner needs to achieve.

The Jarvis Case Study from the UK (appendix A) provides an illustration of the use by lenders of their step-in rights.

12. Knowledge Management and Succession Planning

12.1. Importance of Knowledge Management

The importance of knowledge management is two-fold, firstly to ensure the continuity of knowledge throughout the life of the project, and secondly to assist the contract management team in meeting legislative and contractual requirements.[31]

12.1.1. Developing a Knowledge Management Strategy

Several items need to be considered when developing a knowledge management strategy. These include receiving, collecting, and recording the meaningful information; storing and sharing the information; information security; and maintaining and disposing of information. The collection and reviews of the information would effectively culminate in lessons learned.

[31] Partnerships Victoria. (2003), Partnerships Victoria Guidance Material: Contract Management Guide.

A process for such activities must be put in place well ahead of time and the contract management manual must address questions such as who collects and stores the information, how is it managed, who has access to it, which phase the information is applicable to, how information will be shared, who will keep the versions and revisions of the documentation (for example, drawings), and what information is necessary for which activity.

12.1.2. Implementing Knowledge Management

Implementing and managing knowledge and information requires dedicated personnel who will actively manage documentation using an appropriate system. This will enable all parties involved to be proactive and record documentation accordingly. Different phases of the project might require different systems, for example construction could be best managed with a Primavera 6 system - https://www.oracle.com/applications/primavera/products/project-management.html.
The contract management manual, covering policies, procedures, and documented processes can assist in knowledge management implementation and management in the absence of sophisticated and expensive software. However, the most important factor when implementing knowledge management is the dedication of the team leading this task.

12.1.3. Measuring Knowledge Management

The government can effectively measure the success of knowledge management by checking whether the relevant documentation is easily retrievable and identifiable.[32] It is important to ascertain whether the information and data collected is recent and accurate; if the process of obtaining, storing, sharing, and disposing of the data been successfully implemented; and if the information and data is submitted and transferred between stakeholders in the appropriate form and at the appropriate time.

12.2. Importance of Succession Management

The life span of PPP projects is extensive and it is rare that the same staff and personnel will see the project through to the conclusion. Therefore, it is likely that the personnel involved in the management of the contract is going to change several times throughout the life cycle of the project, and the new staff will need some time to familiarize themselves with the details and the history of the project in order to successfully manage the PPP.

12.2.1. Planning for Succession

[32] Partnerships Victoria. (2003), Partnerships Victoria Guidance Material: Contract Management Guide.

Planning for succession must be done at the time of writing the contract management manual. All the processes for transferring knowledge from staff exiting the project to new staff must be recorded. The government and private partner must ensure that, at any given time, the transfer of knowledge takes place and that lessons learned are logged, which will assist new staff in becoming familiar and gaining experience with the project.

Partnerships Victoria (2003) states that the need for a comprehensive succession plan is related to broader governmental objectives: supporting contract management as a recognized career path, and the career advancement of contract management personnel.

12.2.2. Implementing Succession Plans

There are several procedures that need to happen while implementing succession plans. The exit of old personnel needs to be accompanied by the transfer of a clear and documented history of the project, as well as a factual trail of all current issues and details to inform new personnel. Training for all new personnel with regard to the contract administration and the contract management manual is imperative to ensure that all the policies and procedures are clear and implemented in the same manner by the new personnel. In addition, a log of lessons learned needs to be kept and updated in order for new personnel to familiarize themselves with these potential hurdles.

Appendix A to Chapter 7: Case Studies

Case Study – Southern Cross Station, Australia

In July 2002, the Southern Cross Station Authority (SCSA) entered into a Services and Development Agreement (SDA) with a private consortium (Civic Nexus Pty Ltd) under a Public-Private Partnership (PPP) for the redevelopment of the station. Under the SDA, Civic Nexus Pty Ltd (the concessionaire) was to redevelop the station and, upon completion, manage the operations of the station for 30 years.

Construction of the station was contracted to be completed by 27 April 2005. By late 2004, the developer had publicly announced a forecast loss on the project of $122.6 million and was beginning to make some significant compensation claims, primarily against the state and to a lesser extent against the concessionaire.

The SCSA undertook a lengthy negotiation process with the concessionaire and the developer to settle the claims. On 31 July 2006, a global settlement agreement was finalized and the principal construction works were completed. On 1 August 2006, the concessionaire took over the management of the station precinct operations.

Under the original SDA signed in 2002, the state was not required to make any payment to the concessionaire until completion of construction and hand-over of operations. At this point, the 30-year concession period would begin and the SCSA would commence quarterly core service payments (CSPs) to the concessionaire. The concessionaire subcontracted the design and construction of the station to a developer (Leightons Contractors). Delays were encountered by the developer and the agreed construction milestones were not met. This resulted in a global settlement agreement worth $32.25 million between the state, the concessionaire, and the developer.

The trigger was the lodging of a dispute under the concession agreement dispute resolution procedures. This permitted “that senior representatives of the parties must meet and use their reasonable endeavors, acting in good faith, to resolve the dispute by joint discussions”.

The global settlement agreement was negotiated to minimize adverse impacts on the state’s original cost expectations for the redevelopment. This was achieved by the following.

- A rigorous and structured negotiation process overseen by an interdepartmental committee.
- Using independent experts to assist in legal, commercial, and financial risk assessments to determine the state’s actual liability and potential risk exposure, persuading the concessionaire to contribute a fair and significant cash payment to the settlement.
- Avoiding lengthy litigation and legal costs estimated by the SCSA’s legal advisers to potentially exceed $200 million.
- Appointing a high-level negotiating team to conduct negotiations.

The government was kept informed on the progress of negotiations and ensured that negotiations were conducted within the set parameters. Prior to finalizing the agreement, the SCSA appointed an independent commercial mediator to assess the proposed settlement and certify whether:

- The process to negotiate a settlement was properly informed and rigorous
- The analysis of the proposed settlement and the amount to be contributed by the state was consistent with the SCSA’s assessment of the state’s potential commercial and legal risk, and adequately addressed that risk.

The SCSA engaged a Queen’s Counsel (QC) experienced in the construction industry and dispute resolution to provide certification on the settlement. The QC concluded that “the settlement agreement was the best possible commercial settlement that was able to be negotiated following a lengthy and vigorous process of commercial negotiations”.

There was an agreement to extend the practical completion date for principal works by 15 months from April 2005 to the end of July 2006, and to relieve the concessionaire and developer of their obligation to pay liquidated damages for not meeting the original scheduled completion dates. Under the terms of the global settlement, the concession period (originally scheduled to be the 30-year period commencing 27 April 2005) was effectively split into two concession periods.

- The 30-year operating concession period that commenced upon handover of operations to the concessionaire on 1 August 2006 was 15 months later than agreed in the original SDA.
- The 30-year capital concession period remained the original 30-year planned period commencing 27 April 2005.

As a result of this decision, the SCSA then owed (and paid) the concessionaire the capital payments owing from 27 April 2005 in a $30 million lump sum upon settlement.

The settlement was audited by the auditor general.

Source: Victorian Auditor-General: Audits of 2 Major Partnerships Victoria Projects. Victorian Government Printer November 2007.

Case Study – The Reliance Rail Rolling Stock Project, Australia

Reliance Rail was Australia's largest PPP project when it was put to market in 2005-06 at Australian Dollar (AUD) 3.6 billion, with a capital requirement of AUD 2.35 billion. The contract required the design, construction, and maintenance of 78 urban train sets (626 carriages with 8 per train) for 30 years with options for further rolling stock purchases beyond that term. The contract was the first PPP for rail rolling stock procurement in Australia involving a long seven year manufacturing and construction period, complex risk allocation, and international procurement arrangements.

The new trains featured high levels of innovation and the contract extended to driver and crew training, and construction of a new maintenance facility to service rolling stock over the life of the contract. The trains were operated by the state-owned RailCorp organization as part of the NSW rail transport service, and the PPP paid by way of an availability payment involving availability, reliability, and disruption performance criteria.

The winning bidder for the project was a consortium of the engineering company Downer EDI (49 percent), ABN Amro and Babcock and Brown Public Partnerships (12.75 percent each), and AMP Capital Investors (25.5 percent). ABN Amro provided an underwriting of the AUD1.95 billion bond debt component and the bank debt was provided by Westpac, Mizuho, National Australia Bank, and Sumitomo Mitsui.

The Reliance Rail project was highly leveraged with equity accounting for around 6 percent of project capitalization. The debt finance and the interest rate swaps required for the fixed (pre-operational stage) and floating (operational stage) debt feature a monoline guarantee from FGIC and Syncora. The bonds were swapped into the Consumer Price Index (CPI) for inflation protection at a lower cost than otherwise available in the Australian market (Project Finance 2006-07).

A credit wrap was purchased in 2007 from two monoline insurers, Syncora Guarantee Inc. and FGIC UK Limited for the bond and bank finance to reduce the cost of capital to that available for AAA grade debt. Following the financial crises of 2007-08, both insurers incurred credit rating downgrades, and in 2010 Moody's rated the guarantee of both companies at Ca (Standard and Poor's CC) (Moody's Investor Services 2010).

In 2012, Reliance Rail encountered credit reappraisal ahead of a drawing on its bank facility. The concern involved the consortium's weak financial position, delivery delays, and an 18-month slippage in the delivery schedule. The project's AUD 2.060 million senior debt was given a credit rating by Standard and Poor's CCC+ in May 2013, and the AUD100 million junior debt was rated CCC- reflecting a weakened credit position and operational problems and delays.

Source: Project Finance: Transactional Evidence from Australia (2014). http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1064&context=pib

Case Study – Chapman's Peak Drive, South Africa

South Africa's Western Cape Provincial Government (the province) entered into a Concession Agreement with a consortium of private sector companies named Entilini (Pty) Ltd (the concessionaire) in May 2003 for the design, build, and operation of Chapman's Peak Drive. This contract was the culmination of work undertaken over the previous three years by the provincial Department of Transport and Public Works in terms of Treasury Regulation 16 governing such PPPs. A Viability Gap Funding (VGF) capital grant of approximately 50 percent was approved as part of the concession. The road was successfully completed on time and to a high quality in very difficult mountain-side conditions.

Chapman's Peak is a very high-risk road perched on the side of a mountain in Cape Town. It is an important economic and tourist route linking the north and south of the city on the west side of Table Mountain. A key contractual provision was that the concessionaire takes the first risk in relation to traffic. Once a debt-service coverage ratio of 1.00 is reached, the public sector agency provides support up to a maximum of 50 percent of the debt service in that period.

The support is in the form of a temporary, interest-bearing advance to the concessionaire, which is repayable once cash flows improve above a debt-service cover ratio (DSCR) of 1.0 over a period of time to be agreed with lenders. The support can continue for a maximum period of 18 months, after which the support terminates and, failing additional shareholder or sponsor support for the project, the concessionaire will be in default under the loan agreements. A concessionaire-default termination will then occur with the support amount advanced deducted from the termination payment made.

Because of a single outstanding environmental approval for the toll plazas, the concessionaire was unable to complete the toll plazas. For five years, the concessionaire claimed payment to the extent that revenue was below forecast because such circumstances were classified as a "designated event" under the Concession Agreement. Between 2005 and 2008. The situation was exacerbated by a road closure due to what the concessionaire cited as dangerous road conditions. Given the lack of revenue incentive to keep the road open, this was contested by the province and a public outcry raised political tempers.

The Minister of Transport in the province appointed a joint task team of treasury and transport department officials assisted by financial, legal, and technical advisors to investigate the matter. The task team's terms of reference may be summarized as the following.

- Establishing what happened to give rise to the current circumstances.
- Establishing whether there was any financial impropriety in any of the events.
- Establishing why things went wrong.
- Providing options and recommendations as to what the province should do in response to the circumstances.

The task team carried out a detailed financial and non-financial systems analysis to identify any fraudulent or financially inappropriate behavior by the concessionaire and the adequacy of the systems. Compliance with technical and operational specifications was also analyzed.

The task team analyzed the following:

- The key, high impact causes of project distress.
- The cost of termination of the concession under any of its provisions.
- The cost-benefit analysis of the project.
- The likely future financial outcomes for the project.
- Future scenarios regarding traffic volumes and revenues.

The task team concluded that based on affordability (cost), risk transfer and Value for Money it would be best to do the following:

- Amend the Concession Agreement to provide more comprehensive definitions of the closure event and damage events, and prevent the concessionaire from unilaterally closing the road.
- Provide revenue support to restore the concessionaire to its base case return on equity. This would be done on the basis of an interest-bearing loan with repayments commencing when the base case Return on Equity (RoE) was exceeded.

This was then effected by means of an amendment of the Concession Agreement.

Source: Nazir Alli and William Dachs (2015), "Consideration of Risk Transfer and the Impact of External Events in Road Concessions in South Africa" - Chapman' s Peak Drive Case Study, ICPPP2015 at the University of Texas.

Jarvis Case study, U.K. (step –in)

Until the beginning of 2004, Jarvis was a successful group of companies in the United Kingdom (UK), winning PPP contracts across a range of sectors (for example, rail, emergency service centers, and schools) with a strategy of aggressive bidding. Jarvis was involved in 27 educational Private Finance Initiative (PFI) projects with a whole life value of £3 million. Typically, Jarvis undertook the role of a contractor and operator in these contracts and invested equity alongside a financial investor.

As the result of a rail crash in 2002, in which Jarvis was later found to be negligent, authorities across the UK began to disregard Jarvis as a private partner for their projects, even when the group was offering the best price. From 2003, concerns were being raised about the quality of work done by Jarvis in the PFI business. In 2004, the Brighton and Hove Council branded Jarvis's work on four schools as "unacceptable". This resulted in a deteriorating financial position, which in turn led Jarvis to breach its main banking covenants in 2004.

Despite some major restructuring, Jarvis' partners (for example, sub-contractors) stopped work or demanded payment in advance for their work. This led to substantial delays in some of the PPP projects under construction in which Jarvis was involved. As authorities were eager to see the construction of their projects completed, notably school projects as the start of the school year was approaching, they encouraged lenders to utilize their step-in rights to rescue the projects.

Overall, 14 projects under construction were successfully restructured through a range of measures. From the banks' point of view, the projects were refinanced through a rescheduling and increase in senior debt within the projects. Although authorities had to suffer delays to the delivery of the assets, they incurred no financial loss and the projects are now operating normally. Jarvis was eventually declared insolvent in 2010.

Source: Public Centre Research Centre, PriceWaterhouseCoopers LLP, http://www.infrastructureaustralia.gov.au/publications/files/The_Value_of_PFI.pdf

European PPP Expertise Centre Allen and Overy LLP (2012) http://www.allenovery.com/SiteCollectionDocuments/Termination_Report.pdf

References

Name of Document	Authors/Editors and Year	Description	http link
General Guidance on Contract Management and Construction Phase Management			
4ps – A guide to Contract Management for PFI and PPP Projects	4ps in collaboration with Mott MacDonald, Public Private Partnerships Programme (2007). pp.6-7.	Provides general guidance on PPP contract management.	archive.teachfind.com/ttv/static.teachers.tv/shared/files/10030.pdf
Managing PPPs during their Contract Life – Guidance for Sound Management	European PPP Expertise Centre (EPEC) (2014).	Provides detailed guidance on PPP contract management.	http://www.eib.org/epec/resources/epec_managing_ppp_during_their_contract_life_en.pdf
National Treasury PPP Manual Module 6: Managing the PPP Agreement	South African National Treasury (2004).	Provides detailed guidance on contract management in PPPs.	http://www.ppp.gov.za/Legal%20Aspects/PPP%20Manual/Module%2006.pdf
Partnerships Victoria Guidance Material: Contract Management Guide.	Partnerships Victoria (2003).	Provides detailed guidance on PPP contract management, including good practices in planning and knowledge management.	http://www.dtf.vic.gov.au/Publications/Infrastructure-Delivery-publications/Partnerships-Victoria/Contract-management-guide
Other References Referred to in this Chapter or Related to Specific PPP Contract Management Issues			
Project Management for Instructional Designers	Amado, M., Ashton, K., Ashton, S., Bostwick, J., Clements, G., Drysdale, J., Francis, J., Harrison, B., Nan, V., Nisse, A., Randall, D., Rino, J., Robinson, J., Snyder, A., Wiley, D., and Anonymous. (2012).	Includes content relevant to contract management by the government.	http://pm4id.org/.

	Licensed under a Creative Commons Attribution NonCommercial ShareAlike (BY-NC-SA) license.		
PPP in Practice: National Savings and Investments' deal with Siemens Business Services, Four Years On.	NAO (2003) House of Commons, London.	Illustrates the importance of contract management.	http://www.nao.org.uk/wp-content/uploads/2003/05/0203626es.pdf
"Consideration of Risk Transfer and the Impact of External Events in Road Concessions in South Africa" - Chapman' s Peak Drive Case Study	Nazir Alli and William Dachs (2015).	Includes information on the Chapman's Peak Drive case study.	Presented at ICPPP2015 at the University of Texas in May 2015.
AA1000 Stakeholder Engagement Standard	Accountability, 2011.	Provides guidance on stakeholder management.	http://www.accountability.org/images/content/3/6/362/AA1000SES%202010%20PRINT.PDF
4PS, 2007. Project Structure for PPP Contracts	4ps in collaboration with Mott MacDonald, Public Private Partnerships Programme (2007) pp.6-7.	Provides general information on PPP project structures.	archive.teachfind.com/ttv/static.teachers.tv/shared/files/10030.pdf
Audits of 2 Major Partnerships Victoria Projects	Victorian Auditor-General in November 2007. Southern Cross Station, Melbourne, Australia.	Examines the Southern Cross Station Redevelopment project, illustrating the importance of claims management.	http://www.audit.vic.gov.au/publications/2007/20071121-Audits-for-Major-Partnership.pdf
Award of Concession Contracts. Article 43: Modification of Contracts during their Term.	Directive 2014/23/European Union of the European Parliament and of the Council of 26 February 2014 on	Provides an example of regulation of amendments and renegotiation of PPP contracts.	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.094.01.0001.01.ENG

	the Award of Concession Contracts.		
Comparative Study of Variation Clauses in Public Private Partnership Contracts.	Foster, R. Working Paper (2013).	Provides general information on variations and changes in PPP projects, including changes in law.	http://www.fosterinfrastructure.com/PDFs/Publications/Richard%20Foster%20-%20Comparative%20Study%20of%20Variation%20Clauses%20in%20PPP%20Contracts%20-%20April%202013.pdf
Complexity of Mega-projects.	Brockmann, D. I. C., and Girmscheid, G. (2007). In Proc. CIB World Building Congress (pp. 219-230).	Explains the complexity of the Construction Phase in projects.	http://e-collection.library.ethz.ch/eserv/eth:845/eth-845-01.pdf
Concessions Law of 2010, Chile.	Republic of Chile.	Provides an example of the regulation of amendments and renegotiation of PPP contracts.	http://portal.mop.gov.cl/CentrodeDocumentacion/Documents/Concesiones/Ley%20de%20Concesiones.pdf
Dispute Resolution-Aided Tool for Construction Projects in Egypt.	Marzouk, M., El-Mesteckawi, L., and El-Said, M. (2011). Journal of Civil Engineering and Management, 17(1), 63-71.	Provides an example of dispute resolution procedures.	http://www.tandfonline.com/doi/abs/10.3846/13923730.2011.554165#.VSTOAPm4Wd8
Granting and Renegotiating Infrastructure Concessions: Doing it Right	Gausch, J.L. (2004). World Bank Institute Development Studies.	Analyzes the prevalence of renegotiation in PPPs and provides guidance on renegotiation.	http://elibrary.worldbank.org/doi/book/10.1596/0-8213-5792-1
National Treasury PPP Practice Note Number 01 of 2004: Standardised PPP Provisions.	South African National Treasury, *First Issue (March 2004).*	Describes the key issues that are likely to arise in PPPs, and specifies how these key issues (including	http://www.ppp.gov.za/Legal%20Aspects/Standardised%20PPP%20Provinsions/National%20Treasury%20PPP%20Practice%20Note%20No

		government step-in) can be dealt with in a PPP agreement.	%201%20of%202004;%20Standardised%20PPP%20Provisions;%20First%20Issue;%2011%20March%202004_1.pdf
New Forms of Non-Adversarial Contracting Focusing upon the New Engineering Contract.	McInnis, A. (2003). Keynote Lecture 1. Second International Conference on Construction in the 21st Century. "Sustainability and Innovation in Management and Technology."	Contains information on dispute resolution procedures.	http://www.citcglobal.com/files/95119523.pdf#page=7
Post-Implementation Review: M7 Motorway, Cross City Tunnel and Lane Cove Tunnel.	Motorway Projects Branch, Road Transport Authority (RTA), NSW, Australia (2010).	Illustrates the importance of change management.	http://www.rms.nsw.gov.au/documents/projects/sydney-north/lane-cove-tunnel/m7-motorway-cct-lct-post-implementation-review-report.pdf
PPP Project Case Studies.	PPP Case Studies. (2012) Infrastructure Concession Regulatory Commission, Federal Government of Nigeria.	Provides examples of PPP projects during the Construction Phase and shows the reasons for their cancellation.	http://ppptoolkit.icrc.gov.ng/ppp-project-case-studies/
Project Complexity: The Focal Point of Construction Production Planning.	Gidado, K. I. (1996). Construction Management and Economics, 14(3), 213-225.	Examines the complexity of the Construction Phase of projects.	http://core.ac.uk/download/pdf/9552740.pdf
Project Finance: Transactional Evidence from Australia	Regan, M. (2014). Public Infrastructure Bulletin. Vol. 1 (9). Article 9.	Provides a case study of contract management in the Reliance Rail Rolling Stock Project.	http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1064&context=pib
Project Governance: A	HM Treasury and Infrastructure UK,	Provides guidance on project	https://www.gov.uk/government/uploa

Guidance Note for Public Sector Projects.	November 2007. (Last updated in Oct. 2013) Pg. 15-16.	governance, PFI/PPP procurement and contract management.	ds/system/uploads/attachment_data/file/225314/01_ppp_projectgovernanceguidance231107.pdf
Secrets of Successful Restructuring.	Primoff, M.G. and Hampton, N., Kaye Scholer LLP article, Infrastructure Investor, 2013. In: Developing a Framework for Renegotiation of PPP Contracts, Ministry of Finance, Government of India.	Examines issues associated with renegotiation and provides case studies of the financial restructuring of the San Joaquin Hills toll road transaction (United States), Dulles Greenway (Virginia) and Southern Connector (South California).	http://pppinindia.com/NPBCP_images/PDFs/DEVELOPING%20A%20FRAMEWORK%20FOR%20RENEGOTIATION%20OF%20PPP%20CONTRACTS.pdf
The Contract Management in Public-Private Partnership.	Tavares, S.A. (2014).	Examines the reasons PPP projects are cancelled during the Construction Phase, portraying poorly executed contract management function, using a Light Railway (LRT) case study – the Metro Sul do Tejo (MST), Portugal.	https://fenix.tecnico.ulisboa.pt/downloadFile/395144992772/Resumo%20alargado.pdf
PPP Construction Risk: International Evidence From The Roads Sector	Bain, Robert (2007) Institute for Transport Studies, University of Leeds.	Reports research into the reasons PPP Projects are cancelled during the Construction Phase.	http://abstracts.aetransport.org/paper/download/id/2578
The Value of PFI: Hanging in the Balance (Sheet)?	Public Sector Research Centre. (2008) *PriceWaterhouse Coopers LLP.*	Examines the long-term benefits of PPPs in the UK and includes a case study of the collapse of Jarvis,	http://www.infrastructureaustralia.gov.au/publications/files/The_Value_of_PFI.pdf

		a PPP contractor and operator.	
Termination and Force Majeure Provisions in PPP Contracts: Review of Current European Practice and Guidance.	Allen and Overy. (2013) European PPP Expertise Centre.	Examines European practice and guidance in relation to termination and force majeure in PPPs.	http://www.allenovery.com/SiteCollectionDocuments/Termination_Report.pdf
Innovations to Manage Disputes: DRB and NEC	Thompson, R. M., Vorster, M. C., Groton, J. P. (2000). Journal of Management in Engineering ASCE 16(5): 51–59.doi:10.1061/ (ASCE) 0742-597X (2000)16:5(51).	Explores approaches to dispute resolution procedures.	
"Innovative PPP Saves Chapman's Peak: PPP Brings Together the Public and Private Sectors for Rehabilitation of Famous Road."	Dreyer, W., K. Breytenbach, M. Watters, W. Van Oudenhove, and P. Parking. 2005. Proceedings of the 24th Southern African Transport Conference, Pretoria, July 11–13.	Provides a case study of issues arising in contract management of the Chapman's Peak PPP road.	http://repository.up.ac.za/handle/2263/6594?show=full
Oversight of Three PFI Waste Projects	National Audit Office (Nao), (2014).	Demonstrates the importance of project site set up and permit clearances.	http://www.nao.org.uk/wp-content/uploads/2014/06/Oversight-of-three-PFI-waste-projects.pdf [accessed 30 June 2015]
Performance Audit Report on Public Private Partnership Projects (PPP) in Indian Railways	Office Of The Comptroller and Auditor General Of India, 2014 New Delhi, Press Release.	Examines a number of PPP projects and identifies inadequate processes to ensure the timely completion of the	http://www.saiindia.gov.in/english/home/public/In%20_Media/3of2014.pdf

		projects.	
The Use of PPPs for Infrastructure Investments in Urban Areas: Case Study: Sydney's Cross City Tunnel	Danny Graham, New South Wales, Treasury.	Illustrates the importance of change management.	http://www.oecd.org/gov/budgeting/45039865.pdf [accessed 01/07/2015]
Post-Implementation Review: M7 Motorway, Cross City Tunnel and Lane Cove Tunnel	Motorway Projects Branch, 2010.	Illustrates the importance of change management.	http://www.rms.nsw.gov.au/documents/projects/sydney-north/lane-cove-tunnel/m7-motorway-cct-lct-post-implementation-review-report.pdf [accessed 01072015]
A Guide to the Project Management Body of Knowledge	Project Management Institute, Inc. (PMBOK® Guide) – Fifth Edition, 2013.	Includes information on quality management.	Book
Cordell Parvin Llc	PDF file Section 3 Types of Claims 2011/12 [no other data].	Explains the types of claims seen in construction projects and provides guidance on their management.	http://www.cordellblog.com/files/2011/12/Types-of-Claims1.pdf
Construction Handbook: A Guide For Modernization And Development Of State-Aided Public Housing	Construction Management Unit Department of Housing and Community Development, Massachusetts, 2013.	Provides guidance on construction management, including a discussion of schedule management.	http://www.mass.gov/hed/docs/dhcd/ph/handbook/handbook.pdf
PPP Project Case Studies: Panagarh-Palsit Highway Project	Infrastructure Concession Regulatory Commission, Nigeria Public Private Partnerships Manual	The case study shows how the construction and operations phase can cause project that initially viable loses its value through mismanagement and delays.	http://ppptoolkit.icrc.gov.ng/ppp-project-case-studies/
Official Journal of	DIRECTIVE	Prohibition of	http://eur-

the European Union	2014/23/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the award of concession contracts	modifying contracts signed which is significant for long term contracts such as PPPs.	lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0023&from=EN