

1

Introduction

Public-private partnership (PPP) projects are significant given the demand for various type of partnership between the public and private sector, and the growing interest from other developed and developing countries to learn from the UK experience. Most of the previous books on PPP have focused on the procurement processes, examining specific issues such as risk management, legal aspects, finance and cost planning. However, governance and knowledge management in PPP projects have not been addressed. The aim of this book is therefore to fill that gap. First, by providing an understanding of the principles of governance and how it affects processes, people and actors. Second, to demonstrate how knowledge management can accelerate the learning and capacity building process to develop expertise and facilitate improvement in processes affecting planning and design development, construction and operational aspects of such projects.

This chapter starts with a brief context to provide an understanding of why PPP/PFI projects have become popular, and the key economic, technical and political arguments that have led to an increase in the use of PPP as a method of delivering traditional public services. The nature of such partnerships is defined and the specific features of PPP, as well as the different types of PPP projects, are explained. The evolution and development of PFI model in the United Kingdom are explained with specific reference to the impact of the Ryrie rules and the Bates reviews to improve the take-up and implementation of PPP/PFI projects. The role of governance and knowledge management to ensure continuous improvement in PFI/PPP projects is briefly explained followed by an organisation of the remaining chapters of the book.

1.1 The Context

There is a growing demand for investment to improve the quality of public services. Public sectors or governments worldwide are experiencing significant challenges as public resources are often insufficient to meet the increasing demand for new infrastructure projects to facilitate and sustain economic growth. As a result, there has been a growing and intense debate about the respective roles of the public and private sectors in the delivery of traditional public services. The United Kingdom and many other developed countries

2 Governance & Knowledge Management for PPP

in Europe, United States, Canada, Australia, New Zealand and many developing and middle-income countries from Asia, Latin America and the Caribbean, Eastern Europe, Africa and the Middle East have now recognised the importance of the private sector in the delivery of traditional public services. There are a number of reasons for this. First, there are significant constraints in public sector investment affecting the quantity, quality and renewal of infrastructure stocks necessary to improve the delivery of public services and to enhance economic development. Second, there is evidence of poor performance in the execution and delivery of traditional public projects such as over-design, inadequate project and risk management resulting in time and cost overruns. The consequences are higher maintenance and operational costs associated with poor design and build quality. The traditional procurement approach of funding public sector projects also resulted in a huge backlog of maintenance leading to a deteriorating performance of infrastructure assets. The problems in the traditional procurement are exacerbated by a culture of separating the responsibilities for design, construction and operation. As a consequence, decisions on capital investment are often separated from operating expenditure critical for the effective maintenance and operations of public assets. Third, there is now an increased political will and awareness of the need to change by shifting the emphasis in public service delivery to outcome, results or performance-based approaches. However, it is widely recognised that an effective PPP policy and a strategic framework are required where the public sector is able to identify specific development needs, and engage the private sector to address them using their knowledge, innovation, technology, finance, technical and management skills.

The Private Finance Initiative (PFI) was introduced by the UK Conservative government in 1992 as a specific model of PPP. The Labour government consolidated the policy of encouraging private sector participation in the delivery of traditional public services in 1997 by developing a comprehensive PPP framework, with PFI as a cornerstone of the partnership. As Edwards and Shaoul (2003) noted, 'the delivery of state activities, which could not be privatised for financial or political reasons' are now transferred to the private sector under a range of partnerships. Such partnerships involved the public sector procuring the delivery of 'support' services and 'increasingly their core professional services' through long-term contractual arrangement in return for payment or fee from the public sector. Different types of PPP or variants of PFI were subsequently introduced such as Local Improvement Finance Trust (LIFT), Building Schools for the Future (BSF). However, they are underpinned by similar principles and the objectives of improving the delivery of traditional public services to ensure that the United Kingdom remains internationally competitive. For example, BSF was set up to 'transform the delivery of twenty-first century teaching and learning facilities in schools across England'. LIFT was set up to develop primary care and community-based health care facilities by creating a new market for investment through PPP.

Under the Labour government, there has been a significant momentum in the signing of PFI/PPP deals to modernise public infrastructure such as the underground, roads, hospitals, schools, housing and urban regeneration and

other public buildings to improve services. However, the advent of new forms of PPP/PFI procurement has required a change creating fresh opportunities and challenges for both public and private sector organisations.

1.2 Key Drivers of PPP/PFI

Although the concept of PPP has existed for centuries in Europe, United States and other parts of the world, there are a number of reasons for the re-emergence of PPP/PFI projects in the United Kingdom. First, there is the central economic and efficiency argument focusing on value for money (Akintoye *et al*, 2003) and improving public services in health, education, transport and other core sectors in the United Kingdom. There are limits to the level of public expenditure available for infrastructure investment due to the constraints in public sector borrowing requirements (PSBR) as a result of Treasury and EU regulations (Fleming and Mayer, 1997). It was also a fundamental belief that the ‘macroeconomic circumstances of the United Kingdom necessitate tight controls over public spending to restrain inflation’ and to fulfil the Maastricht conditions to be part of the European Monetary Union (Grout, 1997; Broadbent and Laughlin, 1999). A key driver is therefore to facilitate infrastructure investment without imposing a heavy burden on public expenditure through the use of private funding (Forshaw, 1999). There is also the associated argument that the private sector is able to achieve greater efficiency and value for money in service delivery due to innovation to reduce whole life costs, risk management and the level of competition. The off-balance sheet argument has also been cited as a key factor. However, the Treasury argued that the objective of PFI is to provide high-quality services that represent value for money for the taxpayer and the key determinant of whether a project should go ahead is not the accounting treatment. PFI, therefore, eliminates significant capital expenditure requirements to design, build and own a capital asset. Instead, the public sector makes relatively small revenue payments (unitary charges) to pay for services delivered by the private sector throughout the concession period.

Second, there are the technical and environmental arguments relating to the traditional procurement process of delivering public assets. The fragmentation of design, construction and operation created a culture of focusing too much on minimising capital costs at the expense of whole life performance due to public sector practices separating capital expenditure from recurrent expenditure. It is increasingly argued that PFI can provide a valuable platform to improve the sustainability of buildings (Fell and John, 2003) due to its service-focused and whole life approach. The PFI approach is likely to result in the production of more efficient design solutions and functional buildings to minimise operational costs associated with maintenance and energy usage.

Third, there is the political motivation to urgently improve the level of public services such as reducing waiting lists in hospitals, tackling crime through urban regeneration and housing, and improving conditions in schools and the transport system. Voting outcomes are strongly influenced by the visibility of

4 Governance & Knowledge Management for PPP

infrastructure projects and the level of public services. Under PFI, the initial expenditure requirement is considerably lower. As a result, infrastructure projects such as schools, hospitals, housing and roads unable to be funded using traditional procurement could go ahead. The public sector would therefore be able to undertake more projects with greater impact on public services which would otherwise have to wait longer to be implemented.

The economic and efficiency, technical and environmental as well as political arguments are central in the policy debate to stimulate the demand for PFI/PPP projects and to improve public services. A range of public sector or client organisations such as local authorities and NHS Trusts are therefore involved in PFI/PPP projects as it provides access to funding for large infrastructure projects and there is also a clear government policy to support it. It is therefore expected that the public sector will continue to be involved as long as they can engage the private sector and demonstrate value for money. The key drivers for the private sector are high returns on investment, profitability, steady stream of income in terms of unitary charge payments, long-term diversified workload and the opportunity to utilise their capabilities, competence and track record in PPP/PFI projects (Robinson *et al*, 2004). However, the continuous involvement of the private sector particularly design, construction organisations and other consulting firms depends upon getting good commercial returns, effective bid management to reduce cost and the level of political commitment.

1.3 Definitions and Key Features

A partnership is generally defined as a collaborative effort and relationship between parties to achieve mutually agreed objectives. However, a partnership involving the public and private sectors should be carefully structured to avoid potential problems because of the different value systems driving each side. Often, there is some tension between the private sector motive of profit maximisation and the public sector objective of delivering an acceptable level of service for public good in a manner that represents value for money. There are various definitions of the term 'public-private partnership (PPP)'. PPP is a generic term for any type of partnership involving the public and private sectors to provide services. It is generally a contractual arrangement where the private sector performs some part of a public sector service delivery responsibilities or functions by assuming the associated risks in return for payment. A recent research paper by the World Bank (2007) defines a PPP broadly as 'an agreement between a government and a private firm under which the private firm delivers an asset, a service, or both, in return for payments contingent to some extent on the long-term quality or other characteristics of outputs delivered'. According to HM Treasury (2000), 'public-private partnership' (PPP) is an arrangement that brings public and private sectors together in long-term partnership for mutual benefit. But regardless of the definitions, the objective is to utilise the strengths of the different parties to improve public service delivery and should always be underpinned by clear principles and contractual commitment reflecting a balance between profit and the

need for regulation to ensure value for money in the use of public resources. For example, the private sector can reduce costs to increase profits through what Lonsdale and Watson (2007) refer to as quality shading to compromise service delivery to the public sector.

Under a PPP approach, public sector expertise are complemented by the strengths of the private sector such as technical knowledge, greater awareness of commercial and performance management principles, ability to mobilise additional investment, innovation, better risk management practices, and knowledge of operating good business models with high level of efficiency. PPP facilitate the exchange of skills between the public and private sector and improve the efficiency of resource allocation and the quality of public services. PPP programmes are therefore seen as an effective mechanism in delivering a long-term, sustainable approach to improve public services through investment, appropriate allocation of risks and rewards.

Partnerships are characterised by certain fundamental features. First, a partnership involves two or more actors or organisations, from the public and private sector which could also include the third sector, the so-called non-profit organisations. Sometimes the partnership is characterised by different types of private sector organisations complementing each other's role and interacting with different agencies in the public sector such as central and local governments resulting in complex relationships. Second, partnerships require some competitive element to select the best partner(s) and a degree of cooperation after selection (sometimes referred to as co-opetition). According to Lonsdale and Watson (2007), this is not a contradiction, as partners need to cooperate during the development of a PPP project and over operational matters such as monitoring and auditing service delivery. From the public sector perspective, 'competition is the best guarantor' for value for money (Broadbent and Laughlin, 2003). A third feature of partnerships is the existence of what is often referred to as an 'enduring and stable relationship' among the actors. This is achieved through cooperation, contractual obligations and commitment, once partners are selected through a competitive process. Fourthly, to fulfil their obligations, there are shared responsibilities defined by the contractual agreements for the resources and expertise required to achieve the project outcomes through specific delivery processes and activities. For example, planners, financiers, architects, engineers, surveyors, contractors and facilities management firms work together through various subcontracts to design, construct and manage a completed facility. Each party contributes resources to the partnership, in the form of money, land and skills to perform specific activities such as establishing the needs, appraising the options, planning and developing a business case for a project, evaluation of bids, design, construction, operation and maintenance. The roles in a partnership are formalised through various contract documents and the responsibility of each actor or partner is often reflected in interlocking subcontracts for design, construction, funding, cost and project management as well as facilities management. Another key feature is that the private sector is usually encouraged and given a high degree of freedom to provide innovative solutions that will represent value for the public sector based on the client's project or output specification. Finally, there is a risk-reward

6 Governance & Knowledge Management for PPP

structure depending on the private sector inputs, requirements of the public sector and the service delivered by the private sector. The private sector party receives a fee or payment from the public sector usually based on predefined performance criteria and payment mechanism structured to reflect the risk allocation and incentives to avoid poor performance or quality shading. The payment may be entirely from service tariffs, or user charges or a public sector department's budget or a combination of both depending on the type of PPP.

1.4 Types of PPP/PFI Projects

PPP are implemented using different models. There are varying degrees of private sector composition and participation, resource allocation and risk-reward structure. The partnerships range from those dominated by the private sector to the other extreme where the public sector plays a dominant role. Different classification systems are used to categorise PPP/PFI projects based on investment, risk-reward structure, inputs or the range of specific activities involved. For example, HM Treasury (2007) identified three main types of PPP projects based on investment and reward structure such as financially free-standing projects, joint ventures and services sold to the public sector.

A *financially free-standing* PPP is where the private sector undertakes a project on the basis that costs will be fully recovered through user charges. The private sector recovers the capital expenditure involved in planning, designing, constructing an asset as well as the operating expenditure for operation and maintenance through, for example, a fee for using a toll bridge or road.

Joint ventures (JV) PPP projects are typically characterised by 'co-responsibility and co-ownership for the delivery of services' (Li and Akintoye, 2003). The projects are managed by the private sector, with the objective of delivering specific services to the public sector using their expertise, skills and finance. Usually, part of the project costs are recovered through some source of income other than payments by public sector such as tolls or other direct charges to users. The public sector contributes to achieve wider socio-economic objectives such as providing access and affordable transport, housing and other public facilities. Examples include infrastructure agreements for transport systems, housing and urban regeneration projects.

Service provision involves an arrangement where services are provided by the private sector to the public sector, typically by a Design, Build, Finance and Operate (DBFO) project. The public sector pays for the services provided by private sector through unitary charges or payments. Examples include privately financed social infrastructure such as health centres, libraries, schools and other forms of public or social infrastructure facilities.

PPP arrangements are also classified based on the range of activities required to deliver and manage the assets. It is important to distinguish between key activities relating infrastructure provision and production, the different roles played by the public and private sector. Traditionally, infrastructure provision relates to the planning, financing, monitoring and regulation of services. Production, on the other hand, focuses on the design, construction,

maintenance and operation of the facilities. In the past, the public sector was responsible for both provision and production, but this was later followed by a gradual shift of production activities to the private sector due to privatisation in many countries. Such distinction between public and private sector activities is disappearing as there is now a growing trend to involve the private sector at every opportunity in the provision and production of public infrastructure. This point is illustrated by Edwards and Shaoul (2003), who noted that under PPP 'the government and its agencies are in effect becoming the procurer and regulator of services rather than the provider'.

Procurement of assets or services involves a range of interrelated activities from (1) planning, (2) financing, (3) design, (4) construction, (5) operation and maintenance to (6) monitoring and regulation of services (Howes and Robinson, 2005). Under PPP procurement, the public and private sectors participate based on the allocation of these activities to deliver an asset and to facilitate the delivery of core clinical or medical services (as in health care) or teaching services (as in education). There are therefore different PPP models as shown in Table 1.1 reflecting a combination of these key activities and requiring different types of payment regime such as usage, availability, operation and maintenance, and management fees (Aziz, 2007).

Under conventional procurement approaches, the public sector contracts out design and construction activities. The private sector carries out the design and construction tasks as separate activities as in the traditional 'architect-led' approach or as combined activities but with varying degrees of overlap as in 'design and build' and the management-based approaches such as construction management and management contracting. In Operate and Maintain (O & M) contract, the public sector outsource the operation and maintenance of the asset under a separate contract to the private sector after the facility is planned, designed and built as separate activities. The private sector is paid a fee for operating expenditure incurred in managing the asset but the public sector retains the responsibility for financing and ownership of the asset. Under other PPP models such as Design, Build, Operate and Maintain (DBOM) and Design, Build and Operate (DBO) procurement, significant activities are outsourced to the private sector. Some housing PFI projects are based on Rehabilitate, Operate and Transfer (ROT) model which involves rehabilitating existing asset owned by the public sector, managing the asset by operating and maintaining to a specified condition for a fee/payment during a period which is then transferred to public sector at the end. However, the most dominant and well-documented form of PPP in the United Kingdom is the DBFO model which underpins most PFI projects. Broadbent and Laughlin (2003) describes this as the 'exemplar PPP'. Through PFI, the responsibility for design, construction, operation and financing of infrastructure assets is transferred to the private sector usually for a period ranging from 20 to 30 years. The process involves creating an asset but the core objective is to deliver services to the public sector client in return for a performance-related payment reflecting the level of services provided. PFI is therefore a type of PPP which is fundamentally about the delivery of services rather than the procurement of assets (Birnie, 1999). A key feature of DBFO contracts is their long-term nature to allow for the economic amortisation of capital investment made by the private sector (Dowdeswell and Heasman,

8 Governance & Knowledge Management for PPP

Table 1.1 Types of PPP models.

Type of PPP model	Public sector responsibilities	Private sector responsibilities
Operate and Maintain (O & M)	Existing asset owned by public sector (already planned, designed, built and financed). Monitoring and regulation of FM services retained	Private sector manages the asset by operating and maintaining the asset to a specified condition for an operating and maintenance or management fee/payment
Rehabilitate, Operate and Transfer (ROT)	Existing asset owned by public sector transferred to the private sector. Planning/specifying the requirements for the assets/services	Private sector rehabilitates (involves modification of design/construction according to the specification/service requirements of the public sector and financing). Manages the asset by operating and maintaining the facility to a specified condition for a fee/payment during a period which is then transferred to public sector at the end
Design, Build, Operate and Maintain (DBOM)	Planning (specifying the requirements for the assets/services), financing capital cost of asset, monitoring and regulating asset/service performance	Designing the facility (subject to public sector requirements/specification), constructing, operating and maintaining assets (as well as financing the operating expenditure) for a fee/payment
Design, Build and Operate (DBO)	Planning (specifying the requirements for the assets/services), purchases asset for a pre-agreed price (financing). Monitoring and regulation of asset/FM services retained	Designing the facility (subject to public sector requirements/specification), constructing, operating and maintaining the asset for a fee
Design, Build, Finance and Operate (DBFO)	Planning (specifying the requirements for the assets/services), pay for availability and/or usage of assets (and services) through unitary charge. Monitoring and regulation of FM services retained	Designing the facility (subject to public sector requirements/output specification), financing, constructing, operating and maintaining the asset. Retains ownership and associated risks but assets transferred to public sector at the end. Receives a payment reflecting capital investment and operating expenditure

2004). There are also other variants which are widely used to reflect similar partnerships such as Build, Operate and Transfer (BOT), and Build, Own, Operate and Transfer (BOOT).

1.5 Evolution and Development of PPP/PFI

Privately financed infrastructure or PFI projects in the United Kingdom were initially subjected to a framework in the 1980s called Ryrie rules. There were

two important elements to the Ryrie rules. First, privately financed projects should only be undertaken if value for money can be achieved compared to projects financed publicly. Second, this should also be accompanied by an equivalent reduction in public spending. The rules were set to prevent government departments from expanding and evading spending limits through private finance. However, the Ryrie rules were later criticised for being too restrictive and not providing incentives to pursue the private finance option. As a result, the rules were relaxed or modified in 1989 by eliminating the requirement for privately financed projects to be offset by an equivalent reduction in public spending. Subsequently, the Ryrie rules were fully retired in 1992 when the PFI was launched (Broadbent and Laughlin, 2003).

In 1992, the then Chancellor, Norman Lamont, announced the launch of PFI in the United Kingdom for the provision of public services, and to change government's attitude to privately financed infrastructure projects. However, few projects were signed partly due to limited knowledge and technical difficulties associated with this new form of PPP procurement. As a result of these problems and the slow start, a Private Finance Panel was created within Treasury as a knowledge centre to support PFI projects. There were a number of other changes to stimulate the use of PFI. For example, it was announced in November 1993 that public finance would not be available to NHS Trusts for capital investment without exploring the viability of the PFI route often referred to as universal testing. In November 1994, the NHS approach was adopted throughout, which meant that no public finance for capital projects would be approved unless PFI option does not provide value for money.

In 1997, Malcolm Bates, a former member of the Private Finance Panel, was asked to review the operation and delivery mechanism of PFI projects. The review concluded that the PFI should continue to be used by the public sector in partnership with the private sector to secure value for money. However, it was recommended that the public sector structures should be simplified and their roles and responsibilities clarified. A new Treasury Taskforce was subsequently established to develop PFI policy and to provide support for major projects. The Bates review also recommended the removal of the barriers affecting the progress of PFI projects. As a result, the Treasury Taskforce came together with government departments and the private sector to set the policy context and prepared technical notes which provided practical advice for implementing PFI procurement. This 'joined up' initiative resulted in, for example, the development of a standard template for PFI transactions. In 1998, the second Bates review recommended further changes to existing arrangements to improve the government's approach to PFI/PPP. There were also other changes suggested. For example, the HM Treasury paper, entitled 'PFI: Strengthening Long-Term Partnerships' (HM Treasury, 2006), identified ways in which the government could improve the PFI procurement process. This includes developing a secondment model within the public sector so that public servants with tacit knowledge or experience of complex procurements can be retained and deployed on projects across the public sector to facilitate the transfer of knowledge. This was further supported by the evidence of poor knowledge transfer for public capital projects as identified in the Green Public Private Partnerships Handbook (OGC, 2002).

1.6 Need for Governance and Knowledge Management

The changes to PFI procurement highlighted in the previous section reflect the importance of developing and applying new knowledge in continuously improving the delivery structure of PFI projects. The United Kingdom has experienced a steep learning curve and there have been a number of major reviews undertaken to improve the use of PPP/PFI for public service delivery. According to the World Bank (2007), the United Kingdom has driven much of the world thinking about PPP, and many other countries borrowed heavily from their experience in shaping their own PPP programmes. The increasing awareness of the successful application of PPP/PFI in addressing constraints in public funding in the United Kingdom has therefore resulted in a growing demand for this type of knowledge. Knowledge management is central to developing effective and sustainable PPP by accelerating learning and continuously improving PPP processes. Many other governments are now exploring private finance as an alternative means of funding to meet public service delivery needs. As a relatively new form of PPP, there are important lessons learned from the UK experience in PFI/PPP projects that can be transferred to other countries, particularly where there are budgetary constraints and the need to improve the level of public services is greatest.

PFI/PPP projects are required to represent value for money (VFM) when measured against an equivalent project delivered through traditional public funding. However, the VFM argument to establish the need for a PPP project places high expectation on the ability and knowledge of *people, actors in government departments* in the partnership and the efficiency of the *processes* used to deliver projects. It is therefore essential to understand the governance mechanisms, firstly, to control the actions of people and actors in government departments to observe due processes, and secondly, to accelerate learning to develop expertise and improve processes in PFI/PPP delivery. PFI/PPP projects, therefore, require an effective governance framework of processes and controls for people's actions and government actors to safeguard against poor decision-making, error and fraud, illegal transactions resulting in inappropriate delivery, poor VFM or project failure.

Governance is the 'the act, manner or function of regulating the proceedings of a corporation' or simply to steer, exercise restraint, control the speed and actions, policies or affairs of a nation, an organisation or project. Good governance in terms of people and actors (soft) and processes (hard) is therefore critical for the successful delivery of PFI/PPP projects. As a relatively new form of procurement, there are shortages of PFI/PPP experts. It is therefore important that lessons learned about processes and tacit knowledge of people involved are codified or transferred effectively to other individuals or organisations interested in PFI/PPP projects. This is absolutely critical for countries where there are public sector budgetary constraints and the need to improve the level of public services through PPP.

Understanding the role of governance and how to transfer lessons learnt through knowledge management and capacity building is fundamental to facilitating a sustainable improvement in the delivery, efficiency and

effectiveness of PFI/PPP projects. Knowledge gained by the authors from recent research on knowledge management, PFI/PPP projects and governance in PFI projects has identified the need for a better understanding of how governance and knowledge management can facilitate the delivery of projects. The findings from the research has underlined the significance of both governance and knowledge management; hence, the book is aimed at bringing together two of the most important aspects of good governance and the transfer of lessons learnt to continuously improve PFI/PPP delivery. The book focuses on how to improve *processes* and the decision-making ability and expertise of *people* and actors in PFI/PPP transactions using a governance and knowledge management approach to ensure a successful project outcome.

1.7 Organisation of the Chapters

Following this introduction, the book is divided into four parts. Part 1 (Chapters 2 and 3) starts by examining the policy and strategic context to provide an understanding of key policy and strategic variables, nature of PFI/PPP projects, the key principles underpinning PPP, structure and the delivery mechanisms of PFI/PPP projects. This part provides the context for the subsequent chapters in Part 2 on the principles of governance and its application, and Part 3 on knowledge management theories, principles and practices. Part 4 focuses on the need to improve governance and knowledge management through capacity building and a framework for knowledge transfer and learning.

Part 1: Policy, Strategy and Implementation

Chapter 2 focuses on the policy and strategic considerations for PFI/PPP projects. The key policy elements of PFI/PPP such as policy theory and objectives, the institutions and their roles, expertise and resources, processes, information and knowledge management systems, monitoring and evaluation as well as the policy environment are examined. The governing principles of PFI/PPP projects such as VFM, risk transfer, whole life commitment, focus on core services and payments based on performance underpinning PFI theory are outlined. The management structure and strategy is discussed in terms of the team composition, contract and interface management between key stakeholders, the need for stakeholder analysis to identify potential impact on others affected outside the core group, the key benefits, expectations and risk faced by different stakeholders to develop effective and successful PFI/PPP projects. The funding strategy of PPP/PFI projects, the importance of bankability, project structuring and credit enhancement to make PFI/PPP projects attractive, strengthen risk management and the viability are also explained. Whole life assessment and the need to integrate sustainability strategy are discussed. There is also some reflection on PFI/PPP projects from a European and international perspective identifying key regions, countries and the level of investment, in particular PFI/PPP sectors and market.

12 Governance & Knowledge Management for PPP

Chapter 3 discusses the delivery phases of PPP/PFI projects. The key stages and issues associated with the procurement of PPP/PFI projects from planning and design development to construction, operation and service delivery are examined and discussed. The planning and design development phase is identified as crucial for the success of PPP/PFI projects. Key issues relating to needs assessment, developing a business case, and advertisement to generate interest and create competition necessary to achieve VFM are discussed with respect to the competitive dialogue and negotiated procedures. The importance of the output specification which provides the basis for design by defining the standards for accommodation/facilities and the scope of hard and soft facilities management services required by the public sector client and its role in justifying a PFI/PPP solution and determining affordability is explained. The specific issues relating to invitation and pre-qualification of potential bidders, design development, evaluation of bids, selection of the preferred bidder, financial close and developing the full business case for the PPP/PFI project are also examined. The construction phase focusing on the assembling and production process and key issues relating to phasing of completed projects and decanting are examined. The operation and service delivery phase involves the management of the completed facilities for service delivery. From the public sector client perspective, the operation and maintenance phase is the most crucial, so the role of performance monitoring and payment mechanisms to ensure VFM is achieved is discussed.

Part 2: Concept, Principles and Application of Governance

Chapter 4 examines the principles of governance and how they relate to key issues at various phases and stages in PPP/PFI projects discussed in Chapter 3. It starts with a review of the concept, principles and dimensions of governance. The objectives of governance to control processes, decision-making, and behaviour of people and actors in public sector to ensure project outcomes are not hindered or compromised are explained. Key components of governance such as project approval, procurement processes, control mechanisms such as standards or procedures, organisational structures, accountability and post-project evaluation are related to the key phases and stages of PPP/PFI delivery. The importance and the role of Gateway Review at key phases and stages in the delivery process are highlighted and discussed. Following the adoption of PPP/PFI, various governance tools have been established such as a business case to assess the compliance of the completed project to its original objectives, a project team with roles and responsibilities clearly assigned, a defined method of communication to each stakeholder, an agreed specification, a plan that spans all stages from initiation through to completion and managing risks identified during the project are discussed. The relationships between internal and external stakeholders involved in the project, the flow of project information to all stakeholders and the approval mechanisms at appropriate stages of PPP/PFI projects to monitor compliance are analysed.

Chapter 5 uses case studies from the health sector which is one of the most significant, complex and mature sectors in terms of the level of investment

and development of PFI/PPP in the United Kingdom to reinforce concept and principles of governance discussed in Chapter 4 and to assess its impact on project delivery. Four recent PFI projects are selected with varying degree of complexity, organisational, development and implementation challenges. The first two (Case Studies 5.1 and 5.2) are simple early wave PFI schemes, built on demolished or adjacent brownfield land. The other two (Case Studies 5.3 and 5.4) are highly publicised and complex PFI schemes involving mergers or co-location of more than one National Health Service (NHS) Trust's onto single or multiple sites. Case Study 5.3 examines the early planning phase of a complex multi-organisation PFI scheme, involving co-location of two NHS Trusts and a single research institute onto a single site. Case Study 5.4 examines the early planning phase right through to the completion of the full business case (FBC) for a complex, single NHS Trust but multi-site PFI scheme. Findings relating to project governance focusing on key issues such as reporting structure and levels of responsibilities, project controls, risk management, and critical success factors at various stages of project delivery are compared and discussed. The key similarities and differences in each case study organisation's approach to project governance and the relationship with project delivery in terms of success and failures are summarised, analysed and discussed. The lessons learnt and the need for knowledge transfer is identified as crucial to improve governance and the performance of future PPP/PFI projects.

Part 3: Theory, Principles and Application of Knowledge Management

Chapter 6 focuses on the theory and principles of knowledge management; the different types of knowledge and dynamics of knowledge are explained using Nonaka and Takeuchi's model of knowledge creation. The key building blocks and elements required to develop a knowledge management strategy such as knowledge management goals, dimensions of knowledge, leadership, resources and the strategic options available for effective knowledge management implementation for PPP/PFI projects are discussed. The application of practical tools developed in collaboration with leading design and construction firms for implementing KM strategy and benchmarking KM implementation efforts in project organisations such as CLEVER, IMPaKT and STEPS are described to show how knowledge can be managed effectively to improve the performance of PPP/PFI projects.

Chapter 7 uses case studies from public sector client organisations and leading private sector organisations involved in PFI/PPP projects to capture the perspectives of various stakeholders in PFI/PPP. Four case studies are selected reflecting the experience of the Public Sector Client (Case Study 7.1), Special Purpose Vehicle (Case Study 7.2) Consultant and Adviser (Case Study 7.3), Design and Build Contractor and Facilities Management Provider (Case Study 7.4). The role and activities of the case study organisations, types of knowledge required and key issues at critical stages of delivery such as the outline business case, preferred bidder, facilities management (FM) and operational stages are examined. The key problem areas and scope

14 Governance & Knowledge Management for PPP

for learning to acquire the knowledge required to continuously improve processes and the decision-making ability of actors in the public and private sector organisations are discussed. The knowledge transfer issues in PFI/PPP projects, the implications for various stakeholders in terms of the improvement capability and organisational readiness of organisations to adopt a knowledge management strategy are also examined. The need for the development of a practical framework to facilitate the development of knowledge transfer capabilities in PPP/PFI projects is identified as crucial to accelerate learning and capacity building.

Part 4: Knowledge Transfer and Capacity Building

Chapter 8 focuses on the key issues and some of the challenges in building capacity to accelerate the delivery and improve the performance of future PPP/PFI projects. Approaches for developing explicit and tacit knowledge are examined through the development of best practice, guidance documents and knowledge centres such as Partnerships UK, 4Ps, PPP dedicated units, Office of Government Commerce and Treasury. The role of training and capacity building institutes, research and development, technical assistance and advisers to improve governance and to facilitate knowledge transfer in the implementation of PPP/PFI projects are also examined.

Chapter 9 discusses the application of a practical tool/framework evaluated by industry partners to demonstrate how to implement a strategy to accelerate learning and capacity building process for organisations involved in PFI/PPP projects. The key development stages or steps for using the knowledge transfer framework are identified and discussed. The three-stage framework involves (1) improving participation and exploring opportunities in PFI/PPP, (2) building a knowledge map and transfer capability and (3) implementing a knowledge transfer action plan to facilitate improvement in PFI/PPP projects. The evaluation of the knowledge transfer framework and the benefits to PPP/PFI organisations are also discussed.

Chapter 10 is the concluding chapter providing some reflection on current issues and challenges relating to governance and knowledge management affecting key phases from planning and design development to construction and operation of PPP/PFI projects. The need for an output specification to clearly define the requirements of the public sector and a performance monitoring mechanism to ensure continuous improvement are highlighted as crucial and the implications for the sustainability of PPP/PFI projects are outlined.

References

- Akintoye, A., Hardcastle, C., Beck, M., Chinyio, E., and Asenova, D. (2003) Achieving best value in private finance initiative project procurement. *Construction Management and Economics* 21, 461–470.
- Aziz, A.M.A. (2007) A survey of the payment mechanisms for transportation DBFO projects in British Columbia. *Construction Management and Economics* 25, 529–543.

- Birnie, J. (1999) Private Finance Initiative (PFI): UK construction industry response. *Journal of Construction Procurement* 5(1), 5–14.
- Broadbent, J., and Laughlin, R. (1999) The private finance initiative: clarification of a future research agenda. *Financial Accountability and Management* 15(2), 95–114.
- Broadbent, J., and Laughlin, R. (2003) Control and legitimation in government accountability processes: The Private Finance Initiative in the UK. *Critical Perspectives on Accounting* 14, 23–48.
- Dowdeswell, B., and Heasman, M. (2004) *Public Private Partnerships in Health: A Comparative Study*. Report prepared for the Netherlands Board for Hospital Facilities. The EU Health Property Network with The Centre for Clinical Management Development, University of Durham.
- Edwards, P., and Shaoul, J. (2003) Partnerships: for better, for worse? *Accounting, Auditing and Accountability Journal* 16(3), 397–421.
- Fell, D., and John, R. (2003) *Sustainability Incentives: Contracts and Payment Mechanisms, CIEF (Construction Industry Environmental Forum?) Meeting Notes 25th November*. Commonwealth Institute, London.
- Fleming, J., and Mayer, C. (1997) The assessment: public sector investment. *Oxford Review of Economic Policy* 13(4), 1–11.
- Forshaw, A. (1999) The UK revolution in public procurement and the value of project finance. *Journal of Project Finance* 5(1), 49–54.
- Grout, P.A. (1997) The economics of the private finance initiative. *Oxford Review of Economic Policy* 13(4), 53–66.
- HM Treasury (2000) *Public Private Partnerships: The Governments Approach*. The Stationery Office, London.
- HM Treasury (2006) *PFI: Strengthening Long-Term Partnerships*. HM Treasury, London.
- HM Treasury (2007) *Accounting for PPP Arrangements Including PFI Contracts*. Financial Reporting Advisory Board, Discussion Paper, December. The Treasury, London.
- Howes, R., and Robinson, H. (2005) *Infrastructure for the Built Environment: Global Procurement Strategies*. Elsevier Butterworth-Heinemann, Oxford.
- Li, B., and Akintoye, A. (2003) An overview of public-private partnership. In: Akintoye, A., Beck, M., Hardcastle, C. (eds). *Public Private Partnerships: Managing Risks and Opportunities*. Wiley-Blackwell, Oxford, pp. 3–30.
- Lonsdale, C., and Watson, G. (2007) Managing contracts under the UK's Private Finance Initiative: evidence from the National Health Service. *Policy and Politics* 35(4), 683–700.
- Office of Government Commerce (2002) *Green Public Private Partnerships*. OGC, London.
- Robinson, H.S., Carrillo, P.M., Anumba, C.J., and Bouchlaghem, N.M. (2004) *Investigating Current Practices, Participation and Opportunities in Private Finance Initiative*. Loughborough University, Leicestershire.
- Sustainable Development Department in East Asia and Pacific, The World Bank (2007) *Public Private Partnership Units: Lessons for Their Design and Use in Infrastructure*. The World Bank and Public-Private Infrastructure Advisory Facility (PPIAF).