ASEAN PUBLIC PRIVATE PARTNERSHIP GUIDELINES

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Cover Art by Artmosphere.

Book design by Chrestella Budyanto.

Published December 2014.

FOREWORD

Infrastructure is vital and in increasing demand, especially in emerging economies with rapid rates of economic and population growth. Lack of infrastructure has been a major concern of many Southeast Asian leaders, triggered by the wide gap between demand and supply.

Apart from lacking an adequate supply of infrastructure to support economic growth and rapid urbanisation, emerging countries are also dealing with the challenges of improving the quality of their existing infrastructure. Infrastructure quality is a crucial factor in improving human well-being and safety, production efficiency, as well as expanding capacity. People can move faster and more safely, and can work more efficiently and creatively, giving them larger access to markets. Children can receive decent treatment in hospitals and education in schools, seeding us with hope for a better future across the region. Infrastructure is also believed to be a major factor in poverty alleviation.

As a growing region, Asia is the future of the world. By 2030, Asia will represent two-thirds of the global middle class. Southeast Asia will play an increasingly important role in the world economy. Some of countries in this region have been categorised as middle-income economies, and have started to turn their attention towards avoiding the middle-income trap. Although there are debates among economists on the magnitude of the impact of infrastructure on growth, there is no dispute that when an infrastructure project is selected correctly and the process to develop it is conducted in an efficient way, it can have a significant impact on growth. A recent study by the IMF in its World Economic Outlook dated October 2014 points out that USD1 spent on capital spending (infrastructure) raises output by USD3.

If PPP is based on a good governance process, we should expect that the PPP will be implemented in the right way, providing additional sources for infrastructure finance and supporting economic growth. Efficiency, innovation, and quality are among the key advantages sought by PPP projects. However, setting up and launching a PPP is no easy task, especially in emerging economies with limitations in market characteristics and size, and inexperience with PPPs. Connectivity has become a major issue in the ASEAN community, with calls for faster and better infrastructure development. Thus, PPP is inevitably included in those collective efforts targeting connectivity.

ERIA has been active in conducting this study, capacity-building and supporting ASEAN Member States (AMS) in the areas of infrastructure development and PPP. After a series of PPP country reports in ASEAN, ERIA has produced a book on "Financing ASEAN Connectivity" and now these ASEAN PPP Guidelines. The 9th EAS Chairman's Statement Paragraph 29 dated 13 November 2014 in Nay Pyi Taw, Myanmar, has mentioned these PPP Guidelines as support from ERIA and encouraged further work of ERIA.

These Guidelines are aimed at providing AMS with a customised guide recognising the unique features of ASEAN countries. While aiming at full-featured PPP, the Guidelines also acknowledge possible PPP implementation using a transition state before progressing towards a matured PPP policy state. These Guidelines are the first among PPP guidebooks to be concerned with a transition state of PPP and cross-border PPPs. The features are important because they are the two unique issues in which PPP could play a further role in Southeast Asia beyond its conventional form. Undoubtedly, there are significant challenges to using PPPs. At the current time, the AMS consist of diverse states of development and PPP policy maturity, with no common recipe that would work for all countries. However, PPPs provide room for a larger scope of cooperation and stronger bonding as an ASEAN community.

These ASEAN PPP Guidelines could not have been completed without valuable support from the ASEAN Secretariat and active contributions from the members of the ACCC, under the leadership of U Min Lwin, Myanmar Permanent Representative Ambassador for ASEAN. Among notable parties that generously provided the team with constant inputs and feedback are AMS government officials and the World Bank Infrastructure Policy team in Singapore. ERIA extends its highest appreciation to everyone who has been involved in the writing of the ASEAN PPP Guidelines. It also sincerely hopes that this book can be a valuable contribution in the field of infrastructure development and PPP in Southeast Asia in the years ahead.

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Executive Director, ERIA

Jakarta, November 2014

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Precious inputs and feedback from various parties that we cannot mention all here, including: PPP-related institutions in ASEAN Member States, especially PPP Center of the Philippines, PT SMI and PT IIGF of Indonesia, The ACCC, The World Bank PPP Group in Singapore, JBIC Representative Office in Singapore, METI (Japan and Singapore), and TDRI (Bangkok).

ASEAN PUBLIC - PRIVATE PARTNERSHIP GUIDELINES

1. Introduction

The ASEAN PPP Guidelines are designed for ASEAN nations and provide a common set of policy principles for member countries. The Guidelines offer a broad framework based on best practice standards that will help government departments to manage the processes and procedures that need to be taken when implementing PPP projects. In this respect, common policy principles provide consistency, confidence and certainty to foreign private investors and help facilitate cross-border PPP projects and enhance greater connectivity through harmonisation of member's regulatory requirements. ASEAN nations will already have in place PPP laws and policies, and many international agencies provide financial assistance and general guidance to government departments and agencies to select, analyse and implement PPP projects, and deal with project-specific challenges that arise from time to time. The ASEAN PPP Guidelines are intended to be complimentary with the Organisation of Economic Cooperation and Development PPP Policy Principles, the United Kingdom Green Book, the European Centre for PPP Excellence, the PPIAF-World Bank PPP Reference Guide, and Partnerships Victoria PPP Policy.

1.1 What Is a Public Private Partnership?

These guidelines are designed specifically as a reference source for the use of ASEAN member countries, subnational governments and their departments and agencies. The guidelines take into account the significant differences that exist between member nations in their institutional arrangements, industry structure, economies, trade, and levels of development. With this context in mind, these guidelines are based on Asian transactional experience and case studies, best practice principles, and lessons learnt from 20 years of international PPP experience across a large number of industry applications.

A public-private partnership (PPP) is a specialised procurement method employed by government for the delivery of public goods and infrastructure services. PPPs and build-operate-transfer (BOT) contracts have been widely used by ASEAN member countries since the early 1980s and are to be distinguished from conventional procurement methods such as design and construction contracts. PPPs may take many forms and the PPP Guidelines adopt a transitional approach whereby member nations in the process of drafting a new PPP policy may include all forms of infrastructure procurement in the early stages of the program and transition to more specific contractual forms at a later date. The essential differences between a PPP contract and conventional procurement are that PPP contracts are long-term arrangements featuring private capital at risk and the allocation of transactional risk to the private party, including responsibility for lifecycle costs.

The definition of a PPP contract will include the following contract forms over the policy development period.

Table 1. Transactions Included in PPP Policy

	Early Stage or Initial PPP Policy	Intermediate Stage PPP Policy	Mature PPP Policy
Privatisation of State Businesses Enterprises	X		
Privatisation of State Assets	X		
Privatisation with Residual Interest	X		
Private Finance Initiative (PFI)	X	X	X
BOT, BOO and BOOT Contracts	X	X	X
Design, Renovate, Build, Operate Contracts	X	X	X
Operations and Maintenance Contracts	X	X	X
Design, Build, Finance, Operate (DBFO) Contracts	X	X	X
Renovate, Build and Operate Contracts	X	X	X
Concessions	X	X	X
Management and Service Contracts	X	X	
Traditional Construction Contract			

Initial PPP Policy

The primary objectives of PPP policy in the initial stage are the speedy implementation of strategic infrastructure plans and growth in the flow of foreign direct investment (FDI). To facilitate introduction of a PPP policy, all projects involving private sector participation are included with the exception of traditional construction contracts. Ideally, policy should be designed and implemented by a specialised unit situated in a central policy-making government department. Typically, this may be Treasury and Finance, National Development and Planning, or the Department of the Prime Minister and Cabinet. The PPP unit's activities include project implementation, building capacity in government departments, adopting project and bidding selection criteria, and designing governance standards appropriate for the pipeline of projects under consideration. In early-stage PPP policy, wide use will be made of experienced consultants and the financial and technical assistance of multilateral development organisations. Work will begin on the drafting of PPP guidance materials.

Intermediate PPP Policy

The policy drivers in intermediate stage PPP contracts are widened to include the priorities of government departments and projects that assist in the transition of the economy from reliance on factor-based primary industries to growth in the service and manufacturing sectors, improved productivity, urbanisation and international competitiveness. Projects may typically include improved airport and port facilities, land transport projects, and intercity freight and urban transport services. The aim of intermediate PPP policy is to manage more complex projects, improve infrastructure services, adopt wider use of incentives and responsive regulatory principles, design and construction innovation and new technologies. Privatisations and outsourcing contracts are excluded from PPP policy and the project implementation framework is adapted to include an output specification, risk measurement and allocation, the creation of a viability gap fund for marginal projects and adoption of two-stage bidding and contractor selection methodologies. The PPP unit would further assist with continuing technical training for government departments and the issuance of comprehensive guidance materials.

Mature PPP Policy

A mature PPP policy will place greater emphasis on extracting from PPP procurement, which may take the form of improved service delivery, early delivery of projects, better utilisation of infrastructure assets, construction and design innovation, and new technology. This can be achieved with greater rigour in the PPP procurement process, wider consultation with the bid market, the development of a transaction pipeline, the implementation of social infrastructure projects and availability payment streams, and formalisation of viability gap funding options and governance frameworks. The latter will include contingent liability and availability payment accounting and disclosure. Greater emphasis is placed on post-implementation contract administration and relationship management with the PPP unit providing continuous training for government departments to help development capacity and particularly the skills necessary for the management of PPP contracts.

The transition process is described more fully at Appendix 1. The objective of the transitional PPP policy development is wider use of common policy principles and best practice standards over time. However, the process is informal and the timing and manner of the transition to a mature PPP policy determined by national governments from time to time.

A mature PPP program will not include the privatisation of government assets, which generally involves the sale of government assets and government business enterprises (GBEs) in perpetuity. For the purpose of the guidelines, a PPP refers to a long-term contract between government and private parties for the delivery of an infrastructure asset and/or services to government or to the community on behalf of government. PPP procurement may be distinguished from other procurement methods and the privatisation of government services by the following characteristics:

a. Significant transfer of risk to the private party

b. Private capital at risk: the private party meets the cost of providing assets and delivering services

c. While public sector is responsible for public service provision, PPP can improve efficiency of service delivery management

d. Long-term contracts with embedded mechanisms to manage change and contractual disputes over the term of the contract

e. The private party derives revenue from a government availability payment or shadow toll, or assumes market or 'user pays' risk

f. The economics of the transaction are measured on a life-cycle basis

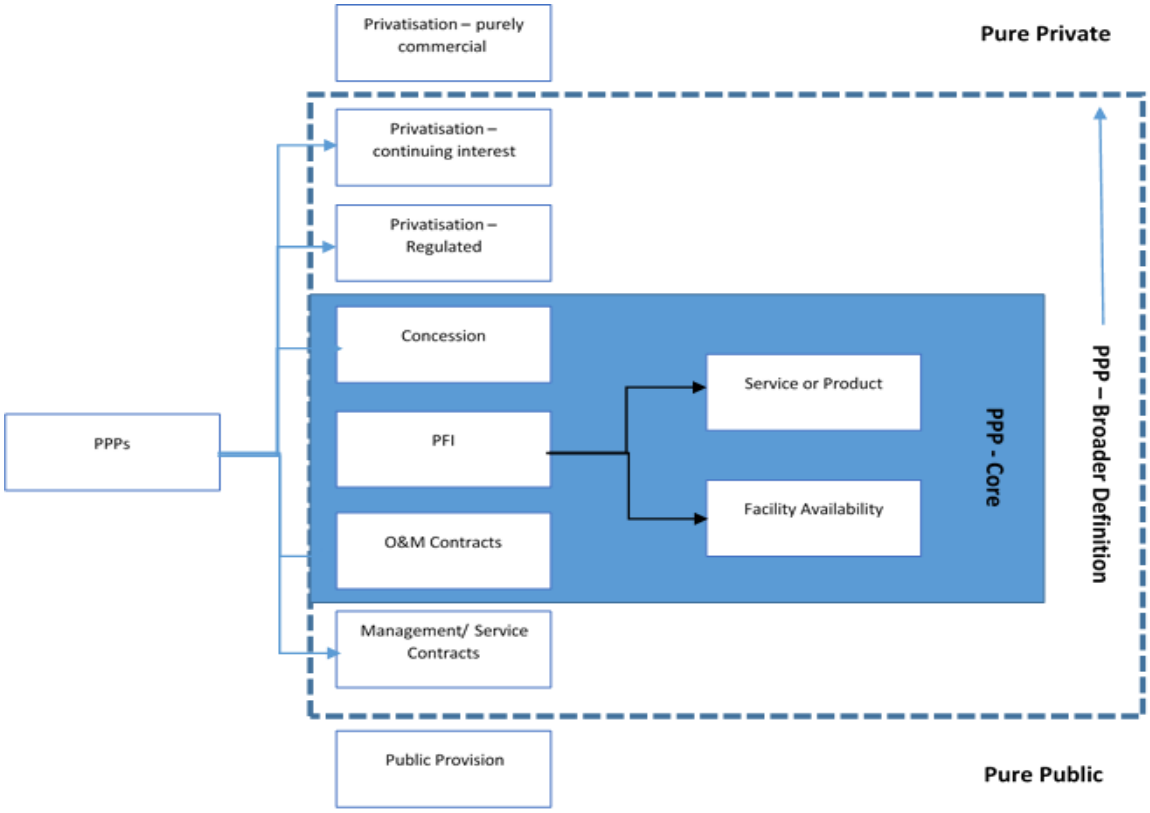
g. Assets are transferred to government on termination of the contract (World Bank, 2013), thus asset remains with the public sector.

PPPs change the manner in which government provides services to the community. In conventional procurement, the government prepares an input specification, undertakes design, finances construction and commissioning, carries life-cycle cost risk, and manages service delivery over intervals of 20 or more years. Unless specific risks are transferred to the private party under construction and equipment supply contracts, residual risk is borne by government. A PPP changes the role of government from the provider to a buyer of services. The government prepares an output specification that describes the services required, the private party designs and constructs the assets it needs to deliver the service, and bears financial, operational and life-cycle cost risk. If the private party fails to deliver the services or if the services do not meet specification, the payments to the private party may be abated or financial penalties may be applied. Essentially, the government only pays for services delivered to specification. A PPP transaction can be compared to the lease of land that grants the lessee a right to occupy and make use of the land but only during the term of the lease. The right terminates when the lease expires.

The private party awarded a PPP contract will finance production and delivery of services as they are defined in the specification. As a general rule, the relationship between the government department commissioning the project and the contractor is regulated under the PPP contract. For example, the contract may specify the mechanisms for dispute resolution, revenue adjustments, the application of "cure" periods for remedying breaches of contract, and may apply a schedule of liquidated penalties for non-compliance with the contract and/or service delivery failure. In some sectors such as water and energy, an industry authority is appointed to regulate prices, resolve disputes and monitor service quality. In some industries, both the contract and an industry authority may be used to regulate a contract.

The guidelines are based on the World Bank definition of PPP (World Bank, 2007; 2012) as illustrated in Figure 1.

Figure 1. Public Private Partnership Procurement Forms



Source: World Bank (2007).

In mature policy form, the ASEAN PPP Guidelines include a number of procurement methods as follows:

a. Contracts for the outsourcing of services that involve significant private sector capital investment and risk (for example, operations and maintenance (O&M) contracts, municipal waste management and recycling contracts, road maintenance and repair contracts).

b. Build-operate-transfer (BOT) contracts (for example, construction and management of a new section of a public toll road or an urban railway system) build-rehabilitate-operate-transfer (BROT) contracts (for example, projects requiring restoration of existing buildings and construction of new extensions or additions), and build-lease-transfer (BLT) projects.

c. Projects delivered under private finance initiative (PFI) programs.

d. Concessions and franchises (for example, contracts to construct and manage facilities servicing government-owned or community buildings).

e. Hybrid arrangements for delivery of services that transfer risk, management and responsibility for provision of capital to a private party (for example, a joint venture between government and a private party for delivery of new telecommunications services).

A detailed description of the more commonly used PPP contract forms is set out in Figure 1. A broader definition of PPP used in some countries includes management and service contracts (for example, contracts for the management of government assets), partly privatised government assets, privatisations subject to further government regulation, and alliance contracting arrangements. While this group of contracts has some similarity with PPPs and will continue to be delivered as PPPs in the early stage policy, these transactions are excluded as nations transition to a mature PPP policy.

PPPs are not suitable for all infrastructure procurement and are not a substitute for public provision of government services. PPPs are an alternative procurement method that brings additional resources to government infrastructure delivery, and contributes to improved service quality and better value outcomes.

PPP and Traditional Procurement

A PPP is fundamentally different to traditional design and construction procurement methods, which are not included in the meaning of PPP for these guidelines. The key differences include the following:

- Under a PPP, government transfers design, construction and operational risk to the private party over the term of the contract
- The form of specification – traditional procurement employs an input specification, which fully describes the assets to be constructed and the manner of their construction. A PPP uses an output specification which defines the services to be delivered and leaves the "how to" question to the private party
- For a PPP, the management of the asset including lifecycle cost risk is undertaken by the private party
- The private party meets the cost of providing assets and delivering services.

The input specification used in traditional contracts limits scope for the private party to contribute design, construction and operational innovation, the services are not costed over the life of the asset, and the government pays for the assets and carries residual asset and operational risks. The output specification used with a PPP contract encourages design and construction innovation, incentivised and efficient management, and better quality construction for lower life-cycle costs.

Where Are PPPs Employed?

PPPs may be used for delivery of most economic and social infrastructures (Table 2). In the case of economic infrastructure, PPPs are commonly employed to deliver toll roads, ports and airports, information and communications technology, bridges and tunnels, public transport systems, hotels and convention facilities, water storage and distribution pipelines, and electricity generation and transmission facilities. Economic infrastructure frequently employs user pays principles and the private party carries the risk that users will generate sufficient revenue to meet debt servicing and operating costs. For social infrastructure projects, PPP is used for the delivery of services in justice, public buildings, and health and education. For health and education projects, the private party will generally deliver non-

core services such as construction and management of buildings, cleaning and waste management, catering, utilities, car parking, and information technology services.

Table 2. Optimal Application of PPP Methodology

Economic Infrastructure Projects	Social Infrastructure Projects
Ports and airports	Education (i.e., schools, universities)
Toll roads, inter-city and urban rail transport	Public housing
Water resources and sewage facilities	Justice (i.e., courts and correctional facilities)
Telecommunications and communications	Public buildings
Energy generation, transmission and distribution	Emergency services
Conference and car-parking facilities	Health services (i.e., hospitals, outpatient services).

Many early PPP transactions in ASEAN countries were economic infrastructure projects in the water, energy and land transport sectors. More recently, social infrastructure projects have assumed greater importance in sectors such as health and education, public buildings, regional police stations and courthouses, and corrective service facilities. Unlike many economic infrastructure projects, PPPs delivering social services are not generally based on user pays principles. The private party is responsible for financing and managing services delivery over the term of the contract and is paid an availability or unitary charge by government for services delivered to specification. Under a user pays arrangement, the private party derives revenue from users although there may be a contribution by government as a subsidy to ensure the project is viable or services are delivered at least cost to the community. PPPs subject to an availability or unitary payment require government to make periodic payments based on key performance indicators contained in the contract. Availability payments over terms of 20 years or more can be significant and future payment obligations need to be included in government budgets. Government guarantees provided by government in relation to private loans, tariffs, revenue and other project uncertainties may also need to be recognised as a contingent liability in national accounts.

Not all projects are appropriate for delivery as PPPs. The most appropriate are projects that possess the following characteristics:

a. May be delivered under an output specification

b. Possess economies of scale (minimum size of USD50 million)

c. Involve a level of technical and/or operational complexity

d. Offer scope for design and construction innovation and operational technologies

e. May be privately financed

f. Would benefit from incentivised private expertise and management

g. Provide opportunity for significant transfer of risk.

The value drivers of PPP projects are examined in further detail in Section 2, "Why We Do PPP?", and in Project Selection in Section 4, "Project Selection and Appraisal".

Further Reading:

European Public Private Partnership Expertise Centre 2011, A Guide to Guidance, Sourcebook for PPPs, Luxembourg, pp. 79-99. Viewed on 14th October 2014 at http://www.eib.org/epec/g2g/

1.2 Why PPP?

The demand for infrastructure services in ASEAN nations has never been greater. Infrastructure makes a significant contribution to economic and social development through output growth, reduced transaction costs, trade facilitation, microeconomic efficiency and the spatial distribution of development in regional economies (Regan, 2004). Infrastructure is also critical for managing the high rate of urbanisation now taking place in ASEAN cities and providing the energy, transport and water resources necessary to sustain present levels of economic development. Public infrastructure is capital-intensive and requires large amounts of capital invested for long periods of time. The Asian Development Bank estimates that the ASEAN infrastructure investment requirement over the next decade will be USD60 billion annually, and the size of the funding gap is significant given that present investment at 4 percent of GDP is around half the investment made between 1980 and 2009 (Groff, 2014). The major part of this investment must come from government because the options for raising capital are limited.

Government may meet the cost of new infrastructure by increasing taxes, by borrowing from capital markets, by appropriating expenditures from present and future budgets, and with financial assistance from multilateral development agencies. Raising money by taxation and borrowing attract deadweight costs and there is an opportunity cost with budget substitution. The difficulty of raising public capital is greater in times of fiscal constraint, softer bank lending markets, and during conditions that prevailed in capital markets in the years following the financial crisis of 2008/09. PPPs offer government a further funding option and when projects also employ user pays principles, the cost to government is significantly less than traditional procurement methods.

PPPs possess a number of features that bring benefits to ASEAN connectivity. First, PPPs require an enabling policy framework that incorporates project and bidder selection criteria and a governance regime. This assumes importance with cross-border transactions where there is a need to harmonise policy frameworks and encourage both design and operational collaboration between member countries. ASEAN offers the opportunity for the adoption of uniform PPP policy principles over time, as occurs in the European Community and between states and provinces in federal jurisdictions such as India, Australia and Canada.

Second, a further benefit of standard policy principles is the additional rigour that is applied to project selection, analysis and costing. Unlike traditional procurement, PPPs require government departments to select projects against criteria, which include value drivers such

as transaction size, level of complexity, scope for design and construction innovation, and risk transfer. Government departments will need to develop technical capacity to undertake project selection and prioritisation, procurement options analysis, bid selection criteria, valuing life-cycle operating costs, preparation of business cases, identification, measurement and pricing of risk and project benchmarking. These disciplines generate greater value and improve procurement outcomes for government. The capacity building experienced by governments from PPP programs also transfers lessons learnt to other procurement activities of government. In OECD countries, the "gateway" process for improving the quality of traditional procurement practices in the United Kingdom was adopted from PPP policy principles.

Third, PPPs provide a good model for greater cross-border collaboration. Cross-border PPP projects form part of coordinated supply chains, whose effectiveness relies on the certainty of life-cycle costing and provision for future maintenance and upgrade work. PPPs in particular necessitate cross-border coordination of regulatory and pricing arrangements. Greater certainty also stems from skills transfer to local workers and firms, and private capital. For the private sector, a pipeline of transactions brings an important flow of new work, enabling training and retention of a skilled workforce and helping local firms to specialise and collaborate on bids with international consortia.

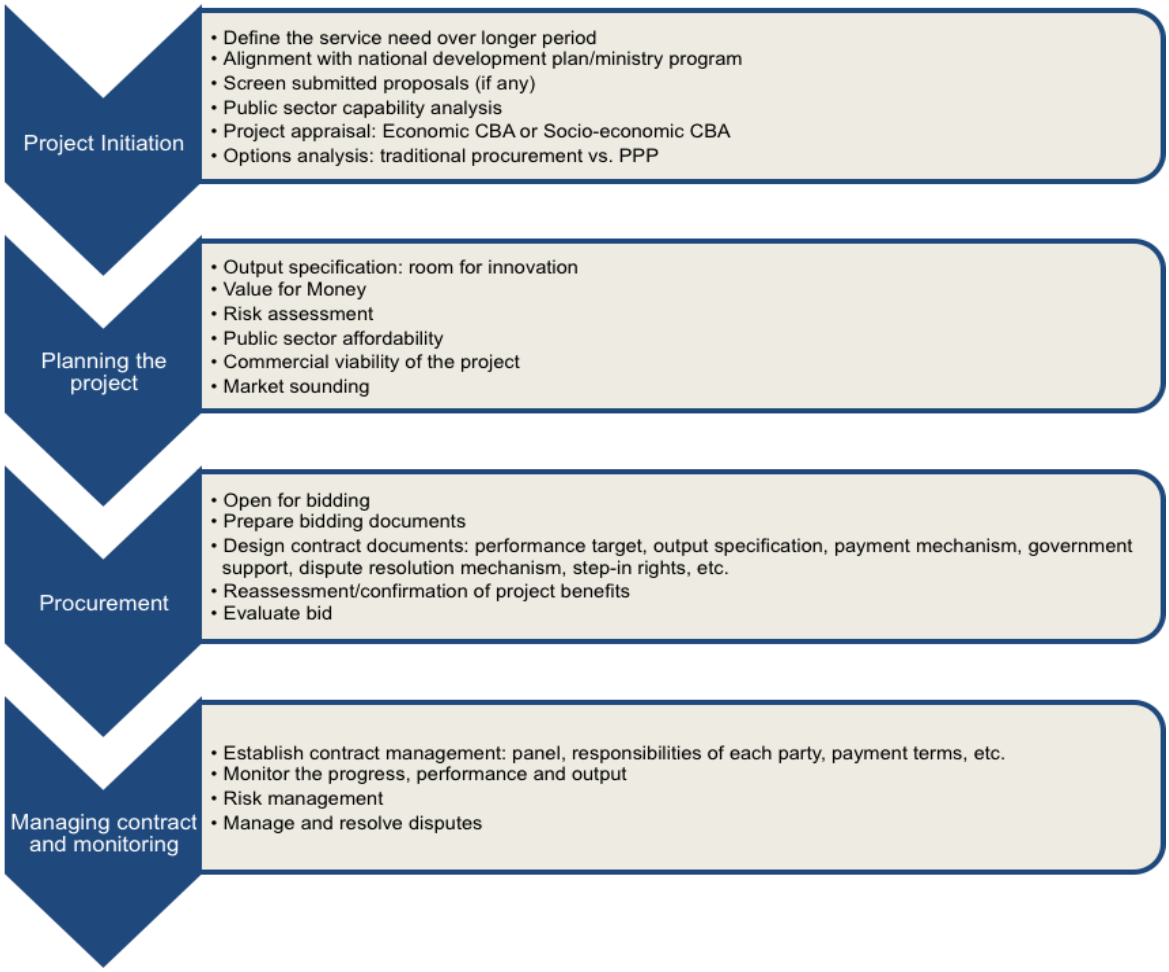
Fourth, cross-border infrastructure promotes economic exchange and access to wider markets, worker mobility and employment, and key inputs to economic growth, such as access to resources, technology and knowledge (Bhattacharyay, 2009).

1.3 Institutional Framework

Enabling Institutions

The institutions dealing with PPPs belong to both public and private domains. The public sector comprises of all types of government agencies, including at the national and subnational tiers, and government business enterprises. Government institutions may play a role as policy-maker and regulator, as the supplier of raw materials to the project or the buyer of its off-take. For example, in the Phu My 3 energy project in Viet Nam, the gas-fuelled plant purchases gas from the state-owned gas company, sells its energy to the state-owned electricity transmission and distribution network, and uses state-owned banks for the remittance of interest and dividend payments offshore (Cooper, 2004). PPP policy requires government to clearly define institutional arrangements and responsibilities, and arrange coordination of agencies involved with projects to ensure effective communications and regulation over the life of the contract. This will also apply to projects that may require the participation of both central and provincial departments and agencies. An example is the situation where the PPP Centre is the authorised body to award the contract, and the line ministry or subnational government is the responsible agency for the project, while the guarantee and fiscal support is provided by the Ministry of Treasury and Finance. In this instance, the relationship among these entities should therefore be made clear and non-conflicting. A secured institutional arrangement within the public domain is as equally important as a secured relationship between the public and private sectors.

Figure 2. Typical PPP Flows

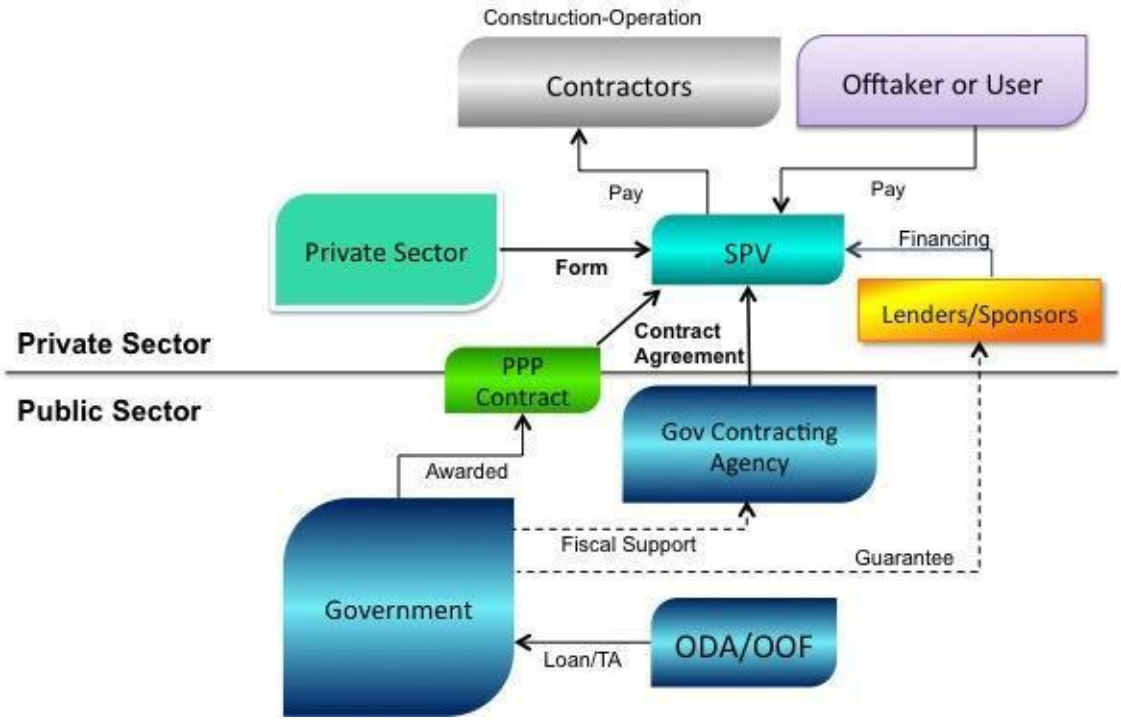


Typical flows of PPP project initiatives are started either from government line ministries (Public Works, Transportation, Maritime, Energy, etc.) or from a PPP-specialised agency. The former can initiate the project or follow up on the list from national development programs. The sequential flows are more complex and conducted in various approaches based on the country governance system. It is critically important to clearly assign the responsible government agency for each step of the process. Unclear assignments and authorities will lead to confusing procedures and red tape, thus increasing sunk costs and reducing public sector credibility. Strong coordination will be needed in the process that well-established governance systems are likely to be familiar with and used to providing; but in the transition the governance system may create burdens and delays. In the latter case, a PPP Centre with strong leadership and sufficient authority can be a key factor in successful PPP implementation.

In many ASEAN countries, in order to reduce the cost of capital and improve the bankability of the project for private lenders, official development assistance (ODA) programs and multilateral development agencies (MDAs) play an important support role. This may include technical assistance, the funding of specialist advisers, direct financial assistance to the project, and the provision of guarantees and financial services including currency risk management and political risk insurance. A proportion of ODA can be used as a guarantee to back up a project channelled through the government budget. The World Bank's guarantees

are an example of this external support for PPPs (Figure 3). In order to facilitate ODA, the country's PPP regulations should be aligned with policies and procedures held by the donor agency.

Figure 3. Typical PPP Structure in Emerging Economies with Support from External Entities



The roles of public authorities in PPP also include:

a. To ensure the contract complies with all relevant legal requirements

b. To determine the level of financial or other support from government

c. To exercise good project governance

d. To adopt and facilitate alternative dispute resolution procedures.

The PPP Unit

As a specialised method of procurement, it is important for government to establish a PPP unit within an agency that is located at the centre government. The PPP unit with require a mandate to serve as a PPP resource centre and provide specialist services to assist departments and agencies to implement the government's PPP procurement policy and program. The scope of the PPP unit's mandate will be determined by the government from time to time, and may include some or all of the following responsibilities:

- Management of the government's PPP policy and strategy
- Assistance with project identification, selection, coordination and analysis for, or in conjunction with, government departments

- Capacity-building and learning-by-doing training for government employees concerned with implementing PPP projects
- Provision of advisory, coordination and transaction management services to departments and agencies to assist them to develop and implement PPP projects
- Project oversight, contract management services
- Coordinate departments and agencies for projects that also require the participation or approval of subnational government agencies
- An approval and governance role.

For subnational governments, a PPP unit is also recommended to provide departments and agencies and local government bodies with advice and technical information.

An important role of the PPP unit is communications and providing information about recent transactional experience, draft contract documentation, post-commissioning reports and technical assistance across government. The PPP unit should also play an important communications role with stakeholders and the wider community. An important element of the success of a PPP program is political and community support, and the PPP unit is well-placed to coordinate and manage this process.

The location of the PPP unit within government institutions is important. The need for strong political leadership, a clearly defined role, and technical and transactional skills and experience, suggest that the PPP unit should be proximate to a central policy-making agency of government. In many countries this is the Department of Treasury, the Prime Minister's Department or the Department of Finance. To be effective in this role, the PPP unit will require a budget to meet its operational costs, conduct capacity-building in government, provide financial resources to meet the cost of advisers and consultants, and assist departments and agencies to undertake preliminary project selection and evaluation work. This assistance may also extend to advice during the bid stages of a project and assisting with negotiations for the final contract.

The adoption of an ASEAN help desk as a one-stop shop for information about PPP projects has many benefits for member nations and especially, subnational governments. The functions of the help desk may include:

- Information about the PPP guidelines
- A reference source for international publications, case studies and transactional data
- Sharing of experience and lessons learnt from recent international and Asian PPP projects
- A record of delivered, current and planned ASEAN PPP projects
- Provide a contact point for cross-border PPP communications
- Provide a database of ASEAN PPP data and statistics.

Further Reading:

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Sanghi, A. Sundakov, A. Hankinson, D. 2007, Designing and using public-private partnership units in infrastructure, Lessons from case studies around the world, Gridlines, number 27.

Supporting institutions

Successful PPP implementation needs many supporting institutions, both public and private. PPP policy should be prepared with a good understanding of the supporting institutions required to deliver successful and sustainable projects. The requirements include services that include:

1. An education and communications centre that maps the skills needed by government agencies, provides training, develops guidance materials and standards, manages knowledge exchanges, documents transactional experience and promotes PPPs to stakeholders and the wider community.

2. Financial markets provide important financial services for PPP transactions, including foreign currency exchange, interest rate hedging services, and the repatriation of interest and dividends. For local companies in consortium bids, the capital market also provides access to equity, debt and mezzanine capital with loan terms commensurate with the project's forecast cash flows and capital structure. The capital market also provides a governance role that monitors project performance, and applies performance covenants and regular reporting. In countries with developing capital markets, ready access could be facilitated with regional markets through the establishment of offshore branches, and the waiver of withholding tax requirements and other taxes between jurisdictions.

3. Transaction support entities that provide services to the PPP by third parties. These will also help the Special Purpose Vehicle (SPV) or PPP consortium to focus on core business and not become overloaded by non-core tasks. Various institutions that serve this purpose include consultants and project management services, sub-contractors, escrow account management, and legal and technical advisory services. A competitive local market for these services reduces transaction costs, which is a key factor in the economics of PPP projects.

1.4 The value drivers

The World Bank defines the value drivers of PPP as the ways in which PPP can obtain better value for money in infrastructure provision, including:

- Risk transfer: Risk retained by the government in owning and operating infrastructure typically carries substantial, and often, unvalued costs. Allocating some of this risk to a private party that can better manage it can reduce the project's overall cost to government.

- Whole-of-life costing: Full integration, under the responsibility of one party, of up-front design and construction with ongoing service delivery, operation, maintenance and refurbishment, can reduce total project costs. Full integration incentivises the single party to complete each project function (design, build, operate, maintain) in a way that minimises total costs.

- Innovation: Specifying outputs in a contract, rather than prescribing inputs, provides a wider opportunity for innovation. Competitive procurement of these contracts incentivises bidders to develop innovative solutions for meeting these specifications.

- Asset utilisation: Private parties are motivated to use a single facility to support multiple revenue streams, reducing the cost of any particular service from the facility.

- Focus on service delivery: This allows a sponsoring department or agency to enter into a long-term contract for services to be delivered when and as required. Management in the PPP firm is then focused on the service to be delivered without having to consider other objectives or constraints typical in the public sector.

- Predictability and transparency of costs and funding: Whole-of-life costing and budgeting are considered, providing infrastructure and related ancillary services to specification for a significant period, and including any growth or upgrade requirements. This provides budgetary predictability over the life of the infrastructure and reduces the risk of funds not being available for maintenance after the project is constructed.

- Mobilisation of additional funding: Charging users for services can bring in more revenue, and can sometime be done better or more easily with a private operation than in the public sector. Additionally, PPPs can provide alternative sources of financing for infrastructure where governments face financing constraints.

- Accountability: Government payments are conditional on the private party providing the specified outputs at the agreed quality, quantity, and time frame. If performance requirements are not met, service payments to the private sector party may be abated.

An important characteristic of PPPs is the role performed by the private party. The PPP contract will transfer production and management of service delivery to the private party who will only be paid for services delivered to specification. This incentivises the private party to manage assets efficiently, control costs, and ensure compliance with the terms of the contract. The private party's response to incentives may include design and construction

innovation, the adoption of new technologies, and improved construction quality to reduce lifecycle operating and maintenance costs.

Further Reading:

Her Majesty's Treasury 2013, The Green Book, Appraisal and Evaluation in Central Government, HMSO, London, Appendix 4, page 82. Viewed on 4 November 2014 at

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf

World Bank Institute and Public Private Infrastructure Advisory Facility 2012, Public Private Partnership Reference Guide, Version 1.0, International Bank for Reconstruction and Development-International Development Agency, Washington, pages 17-18. Viewed on 5th November 2014 at https://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/WBIPPIAFPPPReferenceGuidev11.0.pdf

1.5 Thresholds

PPP projects are capital intensive, form part of complex supply chains and distribution networks, involve a large number of contracts, and necessarily carry high transaction costs for government and the private party. The economies of scale require minimum transaction sizes and, for these guidelines, a transaction threshold of USD50 million is required to fully amortise the high cost of commissioning the project as a PPP. For projects of less than USD50 million, a PPP-Lite option is available that provides for a simpler and lower cost implementation procedures.

Government may also apply other thresholds and tests to ensure that the overall cost of PPP projects to government is reasonable. Three methods commonly used with PPP projects are: benchmarking, the scope ladder, and value for money. For the early development of PPP policy, benchmarking and value for money may not be applied in a systematic way, although this will change as policies are developed and transactional experience grows. Value for money examines the quantitative and qualitative benefits of a bid and enables a comparison of the traditional procurement options and other bids. It is an important method for differentiating bids for projects featuring significant complexity, and the scope for new technology and innovation, when design is an important factor, and when the quality of service outcomes is important. Benchmarking enables a proposed PPP to be measured against a number of recent projects to assess cost equivalence. The scope ladder permits government to reduce the scope of the project put to market until the cost of the procurement falls below the proposed budgeted amount. Each method provides government with additional tools to test project outcomes against objective criteria that informs government's procurement solution.

Value for Money

Value for money is a measure of the quantitative (cost) and qualitative (qualitative aspects) of PPP proposals and may be used in two stages of the PPP process. First, it is taken from the business case and designed as a traditional procurement with life-cycle costing, adjusted for risk, and modelled using discounted cash flow analysis. It is used as a measure for assessing

alternative procurement options and adjustments to project scope. Second, it is used to compare proposals received from bidders.

The qualitative difference between bidders' proposals is generally conducted by a multi-disciplinary government committee, which looks at qualitative differences in output quality, asset utilisation, contribution of design, technology and innovation, and the use of third-party income to reduce costs to government. If bids are equal to, or lower than, the public sector comparator, they will be further measured against the qualitative criteria.

Value for money is widely used in OECD countries for the rigour that it brings to government procurement generally, particularly with discounted cash flow analysis, and risk-weighting and life-cycle costing. In those countries where it is used, the more exacting measurement process is utilised to improve outcomes from complex project procurement generally.

Benchmarking

Benchmarking is commonly used in the business case and is a measure of project costs compared with recent and similar transactions of this type. A benchmark is prepared by the PPP unit or the department conducting the business case and is a guide to typical costs of similar projects for a similar specification adjusted for significant differences in scale, locational factors, and scope of works. Benchmarking is commonly used for generic buildings, such as standard design classrooms for average class sizes, police stations and court houses in regional areas, low-rise office buildings, roads and railway infrastructure. The benchmark is updated regularly for changes in costs and typical service requirements, and is a relatively simple process with which to confirm competitiveness in bid markets. (See 3.2 PSC or benchmarking)

The Scope Ladder

The scope ladder is used for availability payment projects and is a method for ensuring that bids do not exceed the government's capacity to pay for the service measured over the term of the contract. A target sum is prepared and used to compare with the bidder proposals. If the bids exceed the targeted sum, the project is put back to the market for rebidding with changes in scope designed to reduce the bid amounts. This process continues with progressive reduction in scope until a bid falls below the target sum. The government is trading off project scope to ensure affordability. Where one or more bidder meets the target amount then selection will be done against alternative selection criteria.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, pages 61-79. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

European Public Private Partnership Expertise Centre 2011, A Guide to Guidance, Sourcebook for PPPs, Luxembourg, pp. 16-p17. Viewed on 14th October 2014 at http://www.eib.org/epec/g2g/

World Bank Institute and Public Private Infrastructure Advisory Facility 2012, Public Private Partnership Reference Guide, Version 1.0, International Bank for Reconstruction and

Development-International Development Agency, Washington, pages 138ff. Viewed on 5th November 2014 at https://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/WBIPPIAFPPPReferenceGuidev11.0.pdf

Department of Treasury and Finance 2013, *Partnerships Victoria Requirements*, Melbourne, May. Viewed on 4th November 2014 at http://www.dtf.vic.gov.au/Publications/About-publications/Future-direction-for-public-private-partnerships

2. Project Planning

2.1 The Initial Procurement Decision

PPP policy should include a number of provisions dealing with project implementation. Government departments should conduct regular reviews of project priorities to test for suitability for delivery as a PPP project. The matters included in the initial assessment are:

Selection of a project short-list from national development plans and regional strategies

PPPs are generally selected from the industries, regions, and connectivity priorities laid out in national development strategies. Projects should be tested against social and economic criteria, using any of the standard techniques such as cost effectiveness or multi-criteria analysis. A project with a sound socio-economic rationale will usually win political support, which is very important to safeguard implementation.

Financial viability of the project

Project viability is determined using cost-benefit analysis conducted by a government agency to determine whether a PPP project provides a positive welfare return to the community. Cost-benefit analysis provides a basis for initial decision-making on whether to proceed with the project. This is generally followed by a risk-weighted feasibility study or options analysis to determine whether a PPP, or an alternative procurement method, is optimal for the particular project. These studies can be undertaken in-house or prepared by consultants for government.

Scope for PPP value drivers

PPPs will generally deliver better procurement outcomes when projects are complex, involve significant risk to government, require innovation and technology-based solutions, and if there are benefits to government from incentivised and efficient private sector operational and management expertise. The value drivers can be measured using risk-weighted discounted cash flow analysis with sensitivity analysis. This work provides the basis of a business case if one is required and provides a benchmark for testing of subsequent projects. The value drivers are described in further detail in paragraph 2.1.

Form of specification required to deliver the service

PPPs require an output specification that transfers design, construction and operational responsibilities to the private party. An output specification describes the quantity and

quality of services to be delivered. An output specification encourages the private party to consider innovative design and construction practices that deliver better service outcomes at the lowest cost to government. An output specification is very different to an input specification used for traditional procurement, which provides an exacting description of what and how the private party will perform under the contract. An input specification limits the opportunity for private parties to contribute to the design and construction of the project, and reduces the opportunity for private sector contributions to design and construction technology, early delivery of projects, and better quality buildings that can effectively reduce life-cycle operating costs.

Level of affordability to government

PPPs may require government to provide viability gap financial assistance for projects in the form of capital contributions, availability payments or subsidies to help meet the cost of service delivery. These government contributions should be calculated and factored into the government's forward estimates for budgeting and disclosure purposes. A PPP that requires a high level of government financial support may not be viable, and should either be deferred or alternative procurement methods investigated.

Economic, social and environmental impact of the project

PPP policy may require PPP projects to comply with national and subnational government requirements in matters such as sustainability, environmental and social standards, and address requirements such as employment of local workers, local-content rules and technology transfer to local industry. In PPP contracts, sustainability principles may be included in the output specification of the project.

Governance framework for the project

Central to PPP policy is the design and application of governance principles. Governance is concerned with the processes adopted by governments that guide and influence their decision-making and the manner in which programs are implemented and/or managed. At the project level, governance describes the protocols that operate for the agency's procurement activities and their administration to ensure that the procurement complies with the approved scope, budget and timeframe for the project. Governance itself requires the application of principles of transparency, accountability, reporting, disclosure and observance of codes of conduct.

A governance framework will also allocate responsibility for project selection and implementation to a PPP unit or a government department. Depending on the policy preference, projects are selected, evaluated and managed by departments with responsibility for the industry. However, some departments may require assistance from other agencies of government to finance preliminary project selection and feasibility analysis, or to provide technical assistance with the project specification, risk identification and allocation, and the bidding process and approvals.

Market conditions

An early requirement for government is to ascertain local market conditions and identify stakeholders who would be affected by the project. It is especially important for government to maintain "deal flow" and engage with bid markets to ensure competitive bid fields in the

future. Competitive tension in bid markets and competitive negotiations during post-bid negotiations has been shown to reduce costs and deliver better service outcomes for government.

Departments should identify and prioritise future PPP projects and develop a project pipeline that provides bidders with an indication of future transactions. Project pipelines are necessary to ensure that private parties bidding for PPP projects retain the technical capacity, the skilled personnel and financial resources that they will need to regularly bid for projects. Poor planning of deal flow may lead to skills shortages and unwillingness on the part of bidders to finance multiple projects at the same time. An uncompetitive bid market may also lead to collusion and reduce value outcomes for government.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, pages 18-22, 26. 39. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

European PPP Expertise Centre 2011, *A Guide to Guidance, Sourcebook for PPPs*, EPEC, Luxembourg, pages 12-13. Viewed at http://www.eib.org/epec/g2g/ on 14th October 2014.

Partnerships Victoria 2001, *Public Sector Comparator*, Technical Note, Department of Treasury and Finance, Government of Victoria, June. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/Publications/Infrastructure-Delivery-publications/Partnerships-Victoria/Partnerships-Victoria-public-sector-comparator-Technical-note

2.2 Option Analysis

An early step in PPP project selection is the choice of procurement method. The alternatives available to government include non-asset-based solutions, extension of existing services, and delivery by PPP, or by alternative procurement methods. To proceed as a PPP, the project will need to meet basic criteria to ensure the best value outcomes to government. Under some PPP policies, government may proceed with a PPP because it is the only way that the asset and service can be procured in a timely manner. In other PPP policies, a PPP is required to pass a value-for-money test that may require that the project is not only a lower cost option than alternative procurement methods but also delivers qualitative benefits to government and users as well. Nevertheless, PPP policy should ensure that all projects delivered as PPPs are the best procurement option for government and offer sustainable services to specification and value for money.

The following criteria will help government departments and agencies to evaluate the PPP option:

1. Project size. PPPs generally involve high transaction costs and economies of scale require a minimum project size to be viable to both government and the private party. For most projects, this is USD50 million. However, the PPP Lite option is available for projects with a cost of less than USD50 million and offers a simplified evaluation process that lowers typical transaction costs.

2. The project is capable of being defined in an output specification that is clear and measurable.

3. The government can transfer project risks and responsibility for financing the project to the private party.

4. The project involves an availability payment scheme that government can afford and has budgeted for in future availability payments.

5. The project is commercially viable, there is market appetite for the project, it is capable of being financed, and there exists a market appetite and capability to meet the project requirements.

6. The existence of a competitive bid market.

The options analysis enables government to make a decision about the best procurement method for the project. If a decision is made to proceed with the project, a business case may be prepared to scope the project and analyse the costs and benefits of the project to government and the community.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, pages 17-19. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

Her Majesty's Treasury 2013, The Green Book, Appraisal and Evaluation in Central Government, HMSO, London, Chapter 5, pages 17ff. Viewed on 4 November 2014 at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf

European PPP Expertise Centre 2011, *A Guide to Guidance, Sourcebook for PPPs*, EPEC, Luxembourg, page 13. Viewed at http://www.eib.org/epec/g2g/ on 14th October 2014.

2.3 The Output Specification

PPPs differ from other procurement methods in not having a detailed input specification. A traditional input specification will be based on a prescriptive approach to the client requirements, which will include detailed designs and drawings, a full description of the work to be provided, building materials, the manner of construction, and fittings and finishes. With this type of contract, the client is responsible for meeting the cost of variations and will carry all the risk of the project unless specifically assigned to the contractor. An important characteristic of the input specification is that contractor is not incentivised to suggest design and construction innovations that may result in lower construction costs, improved asset utilisation and better service delivery. Input-specified construction projects experience greater time and cost overruns than alternative procurement mechanisms (Allen Consulting and the University of Melbourne, 2007; Regan, Smith and Love, 2011).

PPPs use an output specification that is a detailed service requirement only. The focus on outputs means that government can pursue outcomes that best meet the service needs of the community. The design of structures, selection of building materials, the method of construction, and fittings and finishes, are all matters determined by the private party bidding for the contract. In a competitive bidding situation, contractors will look to design and construction innovation, improved productivity and new technologies to reduce costs and gain a competitive advantage. For complex projects such as hospitals, the government may provide detailed specifications for certain types of specialised equipment, the location of emergency or service facilities, the number of beds in different wards, and the operating efficiency of air-conditioning plants and security systems. However, all other aspects of the design, construction, and fittings and finishes of the building will be determined by the private party.

Innovation also operates in another way by encouraging private bidders to consider other innovations that may improve asset utilisation, third-party revenues or deliver better services. An output specification also offers other benefits to both government and the private party. A contractor faced with responsibility for the life-cycle costs of buildings and equipment will generally carry out construction services to a high standard in order to reduce the risk of premature deterioration and high maintenance costs. The output specification creates an incentive for the contractor to build a better building that will be passed over to government at the conclusion of the contract.

Further Reading:

Her Majesty's Treasury 2013, The Green Book, Appraisal and Evaluation in Central Government, HMSO, London, pages 13-15. Viewed on 4 November 2014 at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf

2.4 Programming

Project planning requires the preparation of a detailed procurement schedule for the PPP project. The schedule provides a pathway for government planners, private investors, financiers, contractors and sub-contractors engaged in the delivery of the project. A forward program imparts certainty and confidence, and enables both government and the private party to plan for consultants and advisers, conduct stakeholder consultations, set budgets and plan cash flows, schedule work contracts and labour requirements, and order materials and services. For contractors engaged in several concurrent projects, future planning of labour and financial requirements is essential. PPP bids for complex projects may require lengthy periods for bid analysis, and risk-weighted financial evaluation, and may involve a large number of stakeholders, consultants and advisers. For private bidders, scheduling of due diligence investigations, appointment of project managers, meeting lender requirements, and appointing sub-contractors and consultants requires careful planning. Delays in delivering a PPP project to market, together with delays in the bidding process or post-bid negotiations, will increase costs for all parties and extended delays may result in the withdrawal of bidders and a less competitive bid market.

Affordability

PPP projects must be feasible and bankable to the private party if PPP policy is to signal certainty and confidence to the bid market. The PPP label does not convert a non-viable project into a viable one automatically. Bid markets also require a pipeline of viable projects to justify the financial and technical resources necessary to regularly bid for projects and maintain a competitive bid market. PPP projects must also be affordable for government and for all projects this requires detailed costing, expenses associated with preliminary works, site selection, benchmarking, the acquisition of land, stakeholder identification and consultation and, if required, the cost of viability gap funding and other indirect forms of government support for the project. The budget must also recognise the costs of professional advisers, consultants, the recruitment and training of project delivery and contract management teams, and any residual payments to the private party on termination of the contract.

In addition to preliminary and establishment costs, government will need to calculate the cost of availability payments over the term of the contract. Future availability payments will need to comply with government budgeting and reporting standards and, in the case of central or subnational government guarantees and similar support mechanisms, reporting may be required as a contingent liability.

PPPs are not simply an additional source of money to finance government projects. They involve complexity and high transaction costs and, in the final analysis, projects must follow a rigorous evaluation and approval process if they are to be affordable and deliver better outcomes for government and the community that it serves.

Providing Larger Financial Options

If the SPV can access various types of finance, it will have greater choice in structuring its financial liabilities to reach the least expensive one. Optimal project finance can be achieved through best combination of debt, equity and, in many cases, with additional government support. Equity is the funding provided by SPV shareholders and usually used as front fund: any project losses are borne first by the equity investors, and lenders suffer only if the equity investment is lost. This means that equity investors accept a higher risk than debt providers, and require a higher return on their investment (Farquharson *et al*., 2011). Debt is raised from banks or other financial institutions and debt market. There are several types of debt each with their own characteristics.

Another way to reduce capital or operational costs is sourced from public sector. Government may provide capital grants to reduce investment costs, guarantees to increase revenue security, subsidies for several types of assets or user charges, etc. By reducing project costs, the lower user charges can be applied, making the facility attractive for users and for investors.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, page 37. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

European PPP Expertise Centre 2011, *A Guide to Guidance, Sourcebook for PPPs*, EPEC, Luxembourg, pages 13-14. Viewed at http://www.eib.org/epec/g2g/ on 14th October 2014.

2.5 The Business Case

The preparation of a business case is a key step in the decision-making process. The scope for the project is finalised and cost-benefit analysis undertaken to test the net benefit of the proposal to government. In addition to preparation of the business case, the responsible agency should conduct a market briefing at this time to test private party appetite for the project, bid depth and measure the potential of the private sector to add value.

The specific matters included in the business case include:

- The scope of the project from a cost and an output perspective
- The costs and benefits of the project calculated with discounted cash flow methodology.
- The cost to government of the PPP procurement option
- Confirmation regarding the commercial feasibility of the project for private parties.

The business case will build on work previously done and, as this document will often be used for the Minister's final approval to proceed, it should contain the following:

- A description of project objectives and scope.
- A schedule of the services to be delivered and how performance will be measured.
- A detailed risk analysis showing the risks retained by government and those to be transferred to the private party. Retained risks should be accompanied by a risk mitigation schedule and risk management plan.
- The payment method and cost of the project to government, including preliminary expenses getting the proposal to market, and the cost over time of a stream of availability projects if required.
- A cost-benefit analysis based on a risk-weighted and life-cycle costed basis that compares the economics of the proposed PPP procurement with the "do nothing" alternative. The discount rate will be advised by the Department of Treasury and project-specific risks are taken into account in the forecast cash flows.
- Identification of stakeholders.
- Land tenure and site issues.
- Project delivery timetable and the agency resources needed to bring the project to market.

The business case is an important requirement when commissioning a PPP project and is often the last point of project approval before the project is implemented. The business case

also provides information for the PPP contract documents, the key performance principles and regulatory principles to be embedded in the contract, and provides a basis for inter-departmental briefings and liaison and wider whole-of-government and community communications.

Projects involving high risk transfer to the private sector will generally deliver better value-for-money outcomes at lower cost to government than projects with minimal risk transfer. Risk weighting requires assessment of each major cost item as follows:

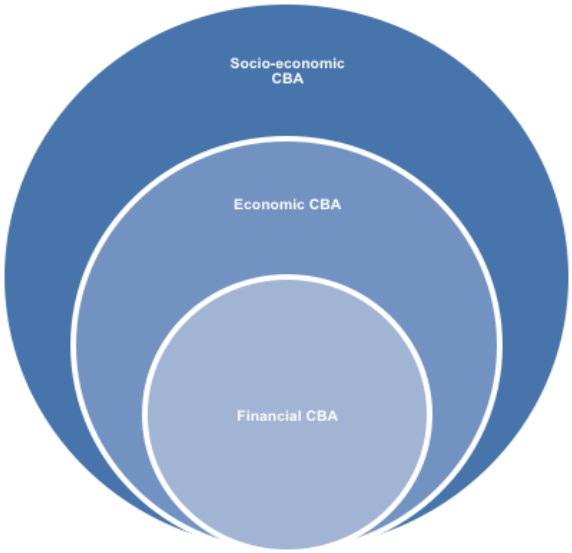
Risk weighted cost = prime cost + (cost of risk x probability of occurrence).

The *cost of risk* is the financial cost of a specific risk if it eventuates. For example, departmental delay in finalising design work may result in an extension of time claim by the contractor. The *probability of occurrence* is the likelihood that a risk may eventuate. Experienced risk managers may assist departments to construct the risk-weighted financial models they require for each procurement type under consideration.

Cost Benefit Analysis (CBA)

CBA is designed to determine the net benefit to government of the PPP method of procurement and is frequently compared with the "do nothing" option. CBA measures the financial, social and economic costs (inputs) and benefits (outputs) of the proposal for a given set of assumptions (Figure 4).

Figure 4. Cost Benefit Analysis Approach



There are several methods for doing a cost-benefit analysis (CBA) that can be explored from various sources dealing with investment analysis. Box 1 below provides references for the concept and technical aspects of CBA. The critical part of CBA lies in estimating demand and risks. Projects with a dynamic demand function will have a higher risk of making mistakes in demand estimation. Note that CBA has different scopes depending on the objectives:

i. The smallest scope of CBA is the financial CBA, which deals with all the tangible costs and revenue streams of the project. This type of CBA is usually used by investors or lenders. In this approach, all payments to the government, such as taxes and fees, are

treated as costs. This simple CBA is viewed from the perspective of project finance by the investor. The investor uses this approach to analyse the viability of the project.

ii. An enlarged financial CBA, known as an economic CBA, covers all costs and benefits affected by the economy. This economic CBA is based on the perspective of public sector (government) that looks at the project from the level of the economy as a whole. In this approach, payments made by investors to the government are neither viewed as costs nor revenue, because from the whole economy's point of view there is no additional cost or creation of revenue/value added; it is only a transfer of resources from private to public sectors. In contrast, intangible costs and benefits that affect the whole economy will be quantified. This could be for instance, the employment generated from the project vs. the number of settlers who lose their jobs, or the amount of incrementing productivity caused by the project vs. the reduced productivity of negatively affected people, etc. This approach is suitable for the government to establish rationale arguments for approving or rejecting the project's proposal.

iii. A more comprehensive way to assess the project's costs and benefits is to conduct a socio-economic CBA. This approach uses a socio-economic perspective. Thus, threats to the local culture or non-material damage are the project costs, while preserving environment or nurturing knowledge are the project benefits. It is easy to understand that while this concept is interesting and idealistic, it contains many debatable criteria and technical issues. Thus, most governments do not follow this approach.

Box 1. Further Reading:

ADB. 2002. *Handbook for Integrating Risk Analysis in the Economic Analysis of Projects*. Manila: ADB. http://www.adb.org/sites/default/files/integrating-risk-analysis.pdf

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, pages 27ff. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

Commonwealth of Australia. 2006. *Handbook of Cost-Benefit Analysis*. January 2006. http://www.finance.gov.au/finframework/docs/Handbook_of_CB_analysis.pdf

ADB. 1997. *Guidelines for the Economic Analysis of Projects.* http://www.adb.org/sites/default/files/pub/1993/eco-analysis-projects.pdf

Adhikari. R. & J. Weiss. 2003*. A Methodological Framework for the Economic Analysis of Sub-regional Projects*. ADB Institute. http://www.adbi.org/files/2003.12.11.cmats.weiss.paper.pdf

Designing the Project Size

In the project pipeline, it is important that government offers appropriate size and types of the projects. There are possible caveats when government decides the project size to be offered, for examples: (i) the project is too complicated, covering various types of infrastructure or services that are too large to be handled as a single project, or (ii) the

project is too small to achieve economies of scale, there is not enough potential revenue to cover basic costs, or the type of service is only appropriate as public goods.

A large project may consist of various types of sub-projects, each with different characteristics. To undertake the whole project will require a complex and comprehensive approach that may be difficult for developing economies with limited resources.

Without disregarding the whole cost-benefit approach, unbundling the project can be done to improve efficiency and enable the use of appropriate methods for each sub-project. However, some sub-projects may not be financially viable if they are not run by a single company because of the issue of economies of scale. It is therefore important for government to look at various business cases in this context in order to be able to choose the best project structure.

In general, a project may be considered for splitting up or bundling up when it shows the following indications:

a. It consists of different characteristics of subprojects (commercially viable, economically viable, socially viable) or a project can be expanded to include other projects.

b. It may have different types of users (affordable, poor, local users, national users) across sub-projects.

c. It may have different types of usefulness (basic infrastructures, non-basic services).

d. It may have different sectors or sub-sectors (railway, road, ports, energy, leisure/commercial, etc.).

Splitting into appropriate sub-projects or bundling up several projects can help to improve the design and structure of financing, and the variability of funding sources, as well as efficiency gained from the interface across sub-projects.

PPP-Lite

Although there is no universal consensus on the minimum project size appropriate for PPP, some countries such as Australia set AUD50 million as the minimum project size. Projects below this size are considered inefficient to be run under PPP policy. For Southeast Asia, we propose that the minimum size for a full PPP project be set at USD50 million, and between USD20-50 million for a light version of PPP ("PPP Lite").[1]

PPP-Lite projects are those handled with less complex procedures and administrative requirements. This can be made possible because typical projects are less risky than full PPP projects and government can provide a streamlined "front-end" procedure (for example: standardised forms to be submitted by bidders), while a "back-end" procedure can entail some adjusted specifications. Projects that would be suitable for this scheme have the following features:

- Do not involve currency mismatch risk.

[1] The amount could be slight differences from country to country on the threshold. The proposed threshold is for the general reference.

Projects financed with foreign currency but with revenue streams in local currency face this type of risk. When there are exchange rate fluctuations, the value of costs will change, and often in emerging economies, currencies tend to depreciate, resulting in increasing investment costs in the local currency. Managing currency mismatch is challenging because it is affected by many external factors over a long period, increasing uncertainty. Hedging will be costly when the size of the project is not optimum to cover hedging costs.

- Do not involve demand risk (or have a state availability payment).

  Projects with dynamic demand bear a ridership risk, where there is uncertainty in the future demand for the services. Typical examples are transportation projects with a user fee. The estimation of the number of annual users for the next 20 or 25 years carries great uncertainty. This applies even more so to green-field projects without any historical data on demand. This type of risk usually becomes a topic of negotiation between government and the private sector.

  Another type of demand is predetermined demand, where the government acts as the buyer and has agreed in the contract to pay a certain amount of fee/price annually. Examples in this case are independent power producer (IPP), where a certain amount of electricity is generated by the PPP project and purchased by the government agency to be sold again to end users, or instalments are paid by the government for the standardised service level for school buildings and maintenance.

- Financing structure is relatively simple.

  The financing structure of projects that are complex and involve several types of investor and loan will generate complex procedures and ways to settle disputes or renegotiations. This will generate costly processes that need to be fully recognised at the beginning of project implementation. The project needs to be arranged as a full PPP, and not as a "lite version" of PPP.

- Do not involve complexities in technology adoption.

  Sophisticated or complex technology adoption requires some anticipated actions that result in higher costs of preparation. For example, a new technology may face potential failures that should be resolved in the middle of the contract period, it could require changing technology in the middle of the contract period, or it could require third-party involvement to maintain or inspect the facility.

- Typically not a large project.

  With all the restrictions mentioned above, appropriate PPP projects suitable for adopting "PPP-Lite" schemes are those that are relatively simple, and ate not mega projects, therefore containing less uncertainty. There might be slight differences across countries regarding their specific conditions. For instance, land acquisition may create complexities in some countries but not in others, or some sectors may need special treatment due to their specific characteristics. For instance, specific types of fossil energy may call for complex environmental procedures or restrictions.

It will be helpful if countries define and check clearly the issues that can create complexities in PPPs before deciding whether a project should be categorised as PPP-Lite or not.

2.6 Revenue Streams

A PPP will need to provide a revenue stream for the private party. For projects that will use user-pays principles, the market or patronage risk of the project is allocated to the private party, for example, toll roads, IPPs and waste management services. A further option for government is to apply a new tax to meet the cost of the availability payments. New taxes raise equity and fairness factors with a risk that the catchment area for a tax may result in the majority meeting the cost of a benefit enjoyed by a few. Such distortions will need to be assessed by government when undertaking the business case. If a project is delivering public goods to the community, the revenue stream will generally come from government in the form of availability payments based on the quantity and quality of services delivered. Examples here include schools, hospitals and corrective services. With both the market risk and availability payment models, government may also provide viability gap funding in the form of capital contributions or guarantees to project financiers to assist the viability of the PPP project. In several sectors of the economy, user-pays models may not generate sufficient revenue because of high operating costs (public transport), high capital costs (urban rail services) and under-pricing of output (the water sector).

The method of payment will be stipulated in the business case and an important early decision of government is the bankability of the project to the private party and in the case of an availability payment project, the affordability of the availability payments that government will need to make over the term of the project.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, page 42. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

2.7 Required Resources and Project Management

Once the business case is finalised, the responsible agency will appoint a multi-disciplinary and preferably experienced steering committee to further develop the project and prepare the necessary bid documentation, drafting of pro forma contracts and preparing a procurement plan. The resources required for this work may call for the appointment of an experienced project director who will assume responsibility for leading the project team and delivering the project. The project management team will include commercial and legally trained support staff, a financial adviser and specialists to deal with technical and planning matters.

The immediate task of the project management group is to prepare a project plan and program. A budget is also necessary to enable use of external consultants and advisers during the implementation stage.

Further Reading:

Partnerships Victoria 2001, *Practitioner's Guide*, Department of Treasury and Finance, Government of Victoria, June, page 42. Viewed on 17th September 2014, at http://www.dtf.vic.gov.au/files/c22ff1fa-606b-4329-8d90-a1cb010d6524/PV-Guidance-Material-Practioners-Guide.pdf

World Bank Institute and Public Private Infrastructure Advisory Facility 2012, Public Private Partnership Reference Guide, Version 1.0, International Bank for Reconstruction and Development-International Development Agency, Washington, page 23. Viewed on 5th November 2014 at https://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/WBIPPIAFPPPReferenceGuidev11.0.pdf

European PPP Expertise Centre 2011, *A Guide to Guidance, Sourcebook for PPPs*, EPEC, Luxembourg, page 23. Viewed at http://www.eib.org/epec/g2g/ on 14th October 2014.

Good Governance for PPPs

For a successful PPP policy that delivers benefits to government, the PPP policy should be designed to incorporate good governance principles. Good governance has many benefits for government, private bidders, stakeholders and the community. For government, it means more efficient and lower-cost procurement outcomes and accountability. For the bid market, it means certainty that the project will proceed to schedule and ensures confidence in the bid process. For stakeholders, governance means access to information. For the community, good governance demonstrates accountability and access to information and transaction documentation.

The United Nations Economic Commission for Europe (UNECE) Guidebook on Promoting Good Governance in PPPs defines governance as "the processes in government actions and how things are done, not just what is done". All elements of the PPP Framework described in this module contribute to the governance of the PPP program. UNECE further describes "good governance" as encompassing the following six core principles:

1. Efficiency: use of resources without waste, delay, corruption, or undue burden on future generations.

2. Accountability: the extent to which political actors are responsible to society for their actions.

3. Transparency: clarity and openness in decision-making.

4. Decency: development and implementation of rules without harming people.

5. Fairness: equal application of rules to all members of society.

6. Participation: involvement of all stakeholders.

One of the aims of establishing a sound PPP framework is to ensure these principles of good governance are followed in the implementation of PPP projects.

Dispute Resolution

PPPs necessarily involve complex contracts with various stakeholders over periods of 20 or more years. PPPs will experience many changes over their operating life and contracts cannot provide answers for every possibility that may arise. In this sense, PPP contracts are said to be incomplete and require provisions to deal with a number of financial and operational scenarios. These include:

- Negotiation of changes in the government's service requirements.
- Changes in the operating environment that affect the delivery of services. For example, the availability of lower cost alternatives to the services being provided or new technologies.
- Resolution of disputes.
- Variations in the output specification for the service.

If either government or the private party were to initiate variations to the contract, a time-consuming and costly renegotiation period may follow and, if that process is unsuccessful, the parties may attempt to have the matter dealt with by a court. For PPP contracts, the settlement of a dispute may take several years and involve high professional fees. Decisions of a court may also be subject to appeal that may delay judgement for several more years. PPPs contracts rely on a sound contractual relationship and protracted legal disputes are likely to result in an adversarial operational climate and further conflict over operational matters. To manage the long-term contractual relationship, PPPs contain provisions that permit speedy resolution of disputes and variations to the contract at relatively low cost. The most common provisions are embedded options and alternative dispute resolution mechanisms. An embedded option permits either party to the contract to exercise a right to vary the contract in certain events. For example, a contract for a toll road may contain a provision that requires the payment of compensation to the private party if the government opens a new and non-tolled public road that adversely affects patronage of the toll road.

Alternative dispute resolution mechanisms may be applied either under the PPP agreement or by reference to existing agencies set up by private industry associations, professional bodies or by multilateral agencies. The contract will generally contain the procedure for settlement of disputes including notifications, meetings, reference to a mediation and possibly arbitration processes, the use of cure periods, penalties and abatements rules, and the exercise of step-in rights and contract termination.

Further Reading:

UNECE Guidebook on Promoting Governance in PPPs [2008, #1, pages 13-14] Section 2.1: Principles of Good Governance in PPPs viewed on 2 November 2014 at http://www.unece.org/fileadmin/DAM/ceci/publications/ppp.pdf

World Bank Institute and Public Private Infrastructure Advisory Facility 2012, Public Private Partnership Reference Guide, Version 1.0, International Bank for Reconstruction and Development-International Development Agency, Washington, pages 60; 93-100.kk Viewed on 5th November 2014 at https://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/WBIPPIAFPPPReferenceGuidev11.0.pdf

3. Project Implementation

When a project has been identified as a PPP scheme, then the government brings it to the next levels that typically consist of the following:

1. Select a competitive procurement procedure

   The process could involve the establishment of a tender committee, defining timeframes and the way to invite bidders, and procedures. Europe recognises four types of procedure: open, restricted, negotiated, and competitive dialogue. For further information, please refer to Annex C.

   Open procedure does not include a pre-qualification stage and allows any interested party to submit a tender. A restricted procedure allows any interested party to participate in the tender but only those decided by the tender committee/contracting authority after a pre-qualification stage may submit a tender. A negotiated procedure is a relatively flexible procurement procedure under which the tender committee or contracting authority consults contractors or suppliers of its choice and negotiates the terms of the contract with one or more of them. A competitive dialogue has been used for complex projects and subsequently its application has replaced many of the negotiated procedures. The authorities invite bidders into a dialogue about their requirements before issuing a final tender. After the final tender has been submitted, no substantial changes will be allowed, only fine tuning.

2. Define bid evaluation criteria

   Criteria to evaluate bidding proposals should have sound economic justification and avoid myopic (short-term) perspectives. The criteria should be identified clearly in advance. Some examples of criteria could be:

   - the lowest subsidy or grants,
   - the lowest tariff
   - the best service level
   - the largest payment to government
   - or combination

3. Prepare the draft PPP contract

   A PPP contract may consist of several documents, depending on the nature of the project. A project containing an availability payment from government may be governed through a payment agreement between a government agency that acts as a client or supporter and the SPV, while implementation will need an implementation agreement between a responsible authority (CGA) and the SPV. The contract should be comprehensive and cover all important matters, particularly performance requirements, period of contract and its milestone, payment mechanism, penalty system, adjustment mechanism, dispute resolution, and termination.

4. Financial Close

   After the contract is finalised, the SPV can close financing commitments with sponsors/lenders/consortium and start financing the construction. Depending on when the SPV can secure financial commitments (during the bidding or after the contract is awarded), financial close could be reached immediately after the PPP contract is signed, or could be secured later on. In order to prevent failure of the implementation, government can set required conditions for the SPV to fulfil before it can start to construct the project. Government can also impose a penalty if the SPV fails to secure financial close after the deadline.

3.1 Identifying Stakeholders

The objective at this stage is to identify all the stakeholders who might contribute to, or have a stake in, the partnership. Identification may include: the level of participation of stakeholders; the potential roles of stakeholders in relation to objectives; the potential conflicts of interests; and the relationships between stakeholders. Ideally, every project has primary and secondary stakeholders. Primary stakeholders are those directly affected by the project or who can directly affect it; secondary stakeholders are those who are less directly involved in, or affected by, the project. Participation in decision-making is the main methodology for involving people in the analysis of issues and the design of associated solutions. This ensures that the voices of all parties, including the poorest and most vulnerable groups in the population, are heard and taken into consideration (UNDP, PPPUE, 2004).

The process of identifying stakeholders requires a set of analysis. This includes the process of identifying the individuals or groups that are likely to affect, or be affected by, a proposed action, sorting them according to their impact on the action and the impact the action will have on them. Stakeholder analysis is a vital instrument for identifying those groups and organisations that have significant and legitimate interests in a specific infrastructure sector.

The analysis should separately identify relevant groups and interests within the public sector, within the private sector and within civil society. In addition, the analysis can seek out potential stakeholders to ensure proper representation in relation to gender, ethnicity, poverty or other locally relevant criteria. Based on this analysis, a plan for how to involve each stakeholder group in subsequent stages of the project or policy work can be developed. Stakeholder analysis is used to acquire an understanding of the power relationships, influence and interests of stakeholders involved in the development of a PPP project. Its findings can provide early and essential information about:

- existing and potential stakeholders (individuals, organisations and groups);
- the individuals/leaders within the stakeholder group (key stakeholders);
- the capacity of the organisations to engage in service-related activity;
- the capacity and attitudes of stakeholders to work in partnership with other sectors;
- the interests of each stakeholder – overt and hidden;

- the potential role of the stakeholder;
- the likely impact of the stakeholder – positive or negative; and
- the risks and assumptions about stakeholder actions.

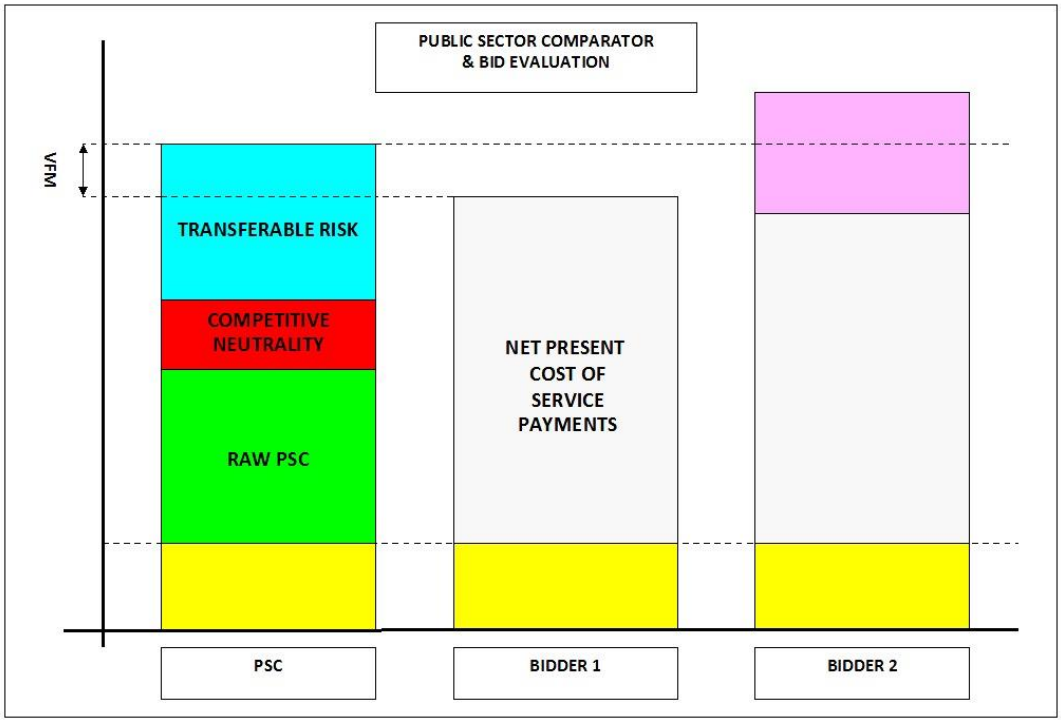
Ideally, all stakeholders need to be included in the analysis of partner identification. In fact, the complexity of the work requires a team effort, making the decision-making process more effective. In a simple PPP in a local government/municipality, for example, the municipality may take on the role of coordinator. The municipality may wish to undertake partner appraisals itself. In most circumstances, however, departments should consider using external advisers. Such consultants could be funded by the government itself or by donors; alternatively, the expertise could be drawn from local academia.

Further elaboration of types and mechanism on stakeholder management, including sectoral based perspectives is provided in Annex D.

3.2 PSC or Benchmarking

A public sector comparator (PSC) is an estimate of hypothetical life-cycle project costs that the government would pay were it to deliver the project by itself. It uses the whole-of-cost approach, including government overhead costs, to provide a fair comparison between public vs. private procurements (Figure 5).

Figure 5. Public Sector Comparator: Illustration of the Main Components



Benchmarking is done to assess whether the government is buying the project according to its affordability, and that the project has lower costs than if the government were to deliver it itself. It should be evaluated during the period of the project life-cycle, not only for construction costs. Calculating PSC is not easy, as it deals with assumptions and subjective

judgments. Apart from this, adjustments are needed to make a fair comparison between the public and private sectors. There are two adjustments made in the calculation: (i) transferred risks, whereas in a PPP the private sector assumes several types of risks. These transferred risks should be monetised as part of the cost that would be shifted from the public to the private sector; and (ii) competitive neutrality, to maintain a fair condition because of advantages of the public sector against private companies, for example different costs resulted from different tax treatments of the public vs private sector. In the illustration of estimated cost (Figure 5), the PSC is superior because it offers better value for money, as the PPP's total cost is less than the PSC's total cost.

3.3 Bankability and Viability Gap Funding (VGF)

Improving Project Attractiveness

Not all projects are commercially viable, where the project costs can be financed and funded by user fees. In many cases, transportation projects are viable only with high user charges, which will bring down the number of users. There are some ways to increase the project attractiveness, for example through designing appropriate project size, providing larger financial options, and reducing capital or operational costs.

Not all projects are commercially viable, where the project costs can be recovered through the project's revenue stream. For instance, a transportation project is viable only when high user charges are applied, which will bring down the number of users or violate the objective of the project to facilitate mobility. Assessment of project commercial viability is done mainly through financial CBA, where the private investor evaluates profitability of the project. A lower-than-market value of the rate of return (RoR) will reduce project attractiveness. Potential investors can conduct simulations to find an appropriate RoR that requires some adjustments.

When the above options are incorporated in the new financial CBA and result in a rational RoR, this may require some prerequisites beyond the authority of the private sector. Here the government starts to evaluate the requirements and put them in the context of an economic CBA. There is some room for negotiation, for example, by lowering the amount of viability gap funding (VGF) in exchange for a government guarantee to increase the bankability of the project.

VGF is state financial assistance for privately financed infrastructure projects. The assistance may take the form of capital grants to help meet construction costs, operating subsidies or guarantees against specific project risks. VGF is predicated on the assumption that government believes that PPP procurement is the optimal way to deliver the infrastructure services to reduce project costs, ensure delivery in a timely manner, ensure a competitive bid market, and provide a basis for sustainable service delivery over long service intervals. However, the project may not be viable for private investors and lenders without significant government intervention. Typically, these are projects with user-pays revenue streams.

VGF may improve the investment economics of the PPP project and raise the level of market interest in specific PPP projects. VGF essentially internalises externalities in infrastructure markets (Irwin, 2003a) and is often justified for reasons of public policy and the social, economic, fiscal and commercial benefits that the project creates for the community.

Most PPP policies apply eligibility criteria for VGF assistance. Eligibility requirements vary between countries and recent evidence suggests that policies are revised from time to time to meet changes in the PPP operating environment, such as capital market conditions, the capacity of local and international contractors to participate in complex projects, depth in the bid market which is essential for competitive bids, and difficulty in attracting bidders to industry sectors in which there are significant gaps between costs of production and output pricing. Public transport and water supply are two such sectors.

Eligibility criteria differ, but generally include several of the following:

- Projects that are economically feasible but not financially viable
- A competitive bidding process
- The project is one of the government's preferred industries
- Maximum contribution level as a proportion of total project costs.

Other criteria used in policy frameworks include VGF pre-approval of projects, a minimum project or investment value, pre-determined user charges, a requirement that the private party construct, finance and operate the project and competitive bidding (Government of India, 2008; Saragih, 2013). The budget appropriation for VGF is determined in advance and VGF is allocated on a first-come-first-served basis.

As a general rule, the government VGF payment is only made after all of the private party equity has been contributed and expended. In many jurisdictions, bidders will nominate the VGF contribution that they require in their submission.

VGF is more likely to be required with economic infrastructure projects in which user charges provide the revenue stream. These projects have a high-risk profile and likelihood of forecasting errors, particularly with transport projects, and these are a major cause of project failure (Standard and Poor's, 2003; Flyvbjerg, Bruzelius and Rothengatter, 2003; Welde, 2009; Parliament of NSW, 2006). VGF helps to mitigate unsystematic project risks through a degree of risk-sharing with government although, in the event of project failure, government will retain a functioning infrastructure asset while the private party may incur losses to equity investors and possibly debt providers.

Social infrastructure projects are less likely to require VGF for financial viability because the bid market will cost service provision over the project life-cycle without the uncertainty of an unknown future revenue stream. Social infrastructure requires government to pay an availability or unitary charge over the life of the contract. Nevertheless, VGF can arise with all projects when the bidder's forecast revenue stream is significantly less than the government's estimate of the cost of the contract that cannot be mitigated with other contractual variations, such as a reduced service requirement or an extended concession period. VGF is not a substitute for private finance but is a measure designed to deliver a PPP project when the revenue stream is insufficient to meet the private cost of delivering and managing service delivery over the life of the contract. VGF reallocates a proportion of project risk back to the state, lowers the cost of capital for bidders, and bridges the viability gap that would otherwise prevent the project proceeding as a PPP.

It is important that PPP project selection is based on the projects that are national infrastructure priorities selected by central and regional governments on the basis of their contribution to economic and social development. Many national investment laws, PPP policies, and VGF provisions specify priority industry sectors. National priorities generally include priority land transport infrastructure, energy, port and airport facilities.

Table 3. Improving Commercial Viability

Adjustment Factor	Examples	Remarks
Redesign project size or project scope to reach economies of scale	An MRT project may become commercially viable if combined with concessions of commercial complexes in some major stations (malls, office, etc.) Toll roads could become viable if expanded to another segment.	Additional scope or size may require new bidding/selection process, coordination and approval from different agencies, more complex feasibility study (incl. environmental impact), etc.
Receive VGF or Minimum Revenue Guarantee (MRG) to reduce capital or operational costs	VGF can be valued as compensation for huge sunk cost, one time grant to reduce total investment cost thus increasing attractiveness, or to reduce end user tariff. MRG to give subsidy for end user or tackle demand risk.	As upfront capital injection, VGF does not trigger future liabilities. As asset will be transferred to the government in the end of contract period, VGF can be favourable compared to MRG. However, it needs fresh and chunk fund upfront (may not meet by budget constraint). MRG causes obligatory fiscal payment over period of project operation. There is risk of over estimated demand that shifted to public burden. MRG scheme should be designed very carefully to avoid moral hazard.
Larger financial options	Some projects may have limited interests from potential sponsors/lenders. Government's guarantee may eliminate uncertainty. State-owned banks/financial institutions may provide loans. Open/facilitate access to foreign financial/capital markets. Provide regulation (if there is not	Some efforts can be done immediately if the legal framework allows. Some other efforts may require another greater effort (e.g. to enact or revise regulation in financial sector, or to obtain approval for market liberalisation)

Adjustment Factor	Examples	Remarks
	yet available) to allow larger financing structure.	
Options to refinance after some years	Some projects may be viable or more efficient if there are possibilities to refinance after certain years (e.g. after construction or after the first year of operation or at time to replace with new technology).	The government should have capability to assess the proposal, in order to avoid disputes or failures.

The following categories of risk are common to many PPPs (WB PPP Reference Guide, 2012):

- **Site**: risks associated with the availability and quality of the project site, such as the cost and timing of acquiring the site, needed permits or assuring rights of way for a road, the effect of geological or other site conditions, and the cost of meeting environmental standards
- **Design, construction and commissioning**: the risk that construction takes longer or costs more than expected, or that the design or construction quality means the asset is not adequate to meet project requirements
- **Operation**: risks to successful operations, including the risk of interruption in service or asset availability, the risk that any network interface does not work as expected, or that the cost of operating and maintaining the asset is different to what was expected
- **Demand, and other commercial risk**: the risk that usage of the service is different to what was expected, or that revenues are not collected as expected
- **Regulatory or Political**: the risk of regulatory or political decisions, or changes in the sector regulatory framework, that adversely affect the project. For example, this could include failure to renew approvals appropriately, unjustifiably harsh regulatory decisions, or in the extreme, breach of contract or expropriation
- **Change in legal framework**: the risk that a change in general law or regulation adversely affects the project, such as changes in general corporate taxation, or in rules governing currency convertibility, or repatriation of profits
- **Sponsor, or default**: the risk that the private party to the PPP contract turns out not to be financially or technically capable to implement the project
- **Economic or financial**: the risk that changes in interest rates, exchange rates or inflation adversely affect project outcomes
- **Force Majeure**: the risk that external events beyond the control of the parties to the contract, such as natural disasters, war or civil disturbance, affect the project

- **Asset ownership**: risks associated with ownership of the assets, including the risk that the technology becomes obsolete or that the value of the assets at the end of the contract is different from what was expected.

3.4 Risk Allocation

One of the important features of PPP is risk allocation between public and private sectors. The rule of thumb of risk allocation is that "the risk is borne by the party that is best able to manage it or to absorb it." Thus, in this sense, political risk should be borne by government, while construction risk should belong to private party. Table 4 (Grimsey, 2007 with modification) provides various types of risk and their sources with the suggestion of responsible party.

Table 4. Risk Allocation

Type of risk	Source of risk	Risk taken by
Site risks		
Site conditions	Ground conditions, supporting structures	Construction contractor
Site preparation	Site redemption, tenure, pollution/discharge, obtaining permits, community liaison	Operating company/project company
	Pre-existing liability	Government
Land use	Native title, cultural heritage	Government
Technical risks	Fault in tender specifications	Government
	Contractor design fault	Design contractor
Construction risks		
Cost overrun	Inefficient work practices and wastage of materials	Construction contractor
	Changes in law, delays in approval etc.	Project company/investors
Delay in completion	Lack of coordination of contractors, failure to obtain standard planning approvals	Construction contractor
	Insured force majeure events	Insurer
Failure to meet performance criteria	Quality shortfall/defects in construction/commissioning tests failure	Construction contractor/project company
Operating risks		
Operating cost overrun	Project company request for change in practice	Project company/investors
	Industrial relations, repairs, occupational health and safety, maintenance, other costs	Operator
	Government change to output specifications	Government
Delays or interruption in operation	Operator fault	Operator
	Government delays in granting or renewing approvals, providing contracted inputs	Government
Shortfall in service	Operator fault	Operator

Type of risk	Source of risk	Risk taken by
quality		
	Project company fault	Project company/investors
Revenue risks		
Increase in input prices	Contractual violations by government-owned support network	Government
	Contractual violations by private supplier	Private supplier
	Other	Project company/investors
Change in taxes, tariffs	Fall in revenue	Project company/investors/government
Demand for output	Decreased demand	Project company/investors/ shared with government in MRG agreement
Financial risks		
Interest rates	Fluctuations with insufficient hedging	Project company/government
Inflation	Payments eroded by inflation	Project company/government
Force majeure risk	Floods, earthquake, riots, strikes	Shared
Regulatory/political risks		
Changes in law	Construction period	Construction contractor
	Operating period	Project company, with government compensation as per contract
Political interference	Breach/cancellation of license	Government
	Expropriation	Insurer, project company/investor
	Failure to renew approvals, discriminatory taxes, import restrictions	Government
Project default risks	Combination of risks	Equity investors followed by bank, bondholders and institutional lenders
	Sponsor suitability risk	Government
Asset risks	Technical obsolescence	Project company
	Termination	Project company/operator
	Residual transfer value	Government, with compensation for maintenance obligations

A vital consideration of risk allocation involves the capacity of the government to manage its support that could trigger contingent liabilities.[2] For instance, when government promises to guarantee the minimum revenue to cover demand risk, there is a probability that this liability

2 A potential obligation that may be incurred depending on the outcome of a future event.

may or may not be realised in the future. A problem arises if the government has given a guarantee without proper consideration to the contingent liabilities that affect the state budget and fiscal policy. The size and probability of contingent liabilities need to be assessed carefully since they can place huge future fiscal burdens on the state.

4. Taking Project to Market

4.1 Market Consultation

Government consultation with the market at an early stage of the bid process will assist two-way communication of the objectives and requirements for the project before the formal expression of interest process begins. Potential bidders may seek clarification about aspects of the project, make suggestions about how the project may be improved or done differently, and government will have the opportunity to gauge market interest and bid depth. For example, if potential bidders advise the government that the proposed risk allocation is unlikely to be supported by financiers in prevailing capital market conditions, the government may modify the project in order to ensure good bid depth and ensure that the project is more bankable.

4.2 The Bidding Process: Expressions of Interest

An expression of interest (EOI) is generally advertised widely by government both domestically and internationally to provide an opportunity for interested parties to respond. Projects may also be bought to the attention of parties that are particularly well qualified for the task. The timetable for responses will vary depending on the scale and nature of the project and a typical response time is less than 10 weeks.

An EOI may be accompanied by a briefing session for potential bidders and these can serve a valuable communications role enabling clarifications to be sought, project information to be exchanged and comments from potential bidders about the project, its proposed structure and suggestions about how the procurement process or project may be improved.

The EOI will contain criteria for the private party responses including evaluation criteria that will be used in short-listing or an invitation to participate in the request for tender (RFP) process. The information to be submitted by private parties will vary between projects. However, the following information provides a general guide for a typical EOI submission:

1. Full details, structure and experience of the consortium members, principal contractors, advisers and consultants.

2. Description of the project, project scope and output specification, background information, and an explanation of the government's objectives for the project.

3. Service obligations.

4. Design principles, engineering standards, maintenance and safety aspects, required approvals.

5. The principal stakeholders for the project including affected parties, network participants, and community consultation if required.

6. Description of the tendering process, timetable and EOI evaluation criteria.

7. Project delivery capability and sources of finance.

A copy of a draft contract may be included with the EOI together with a proposed risk allocation schedule. This enables the private party to better understand the requirements of the project and the terms under which the contract will be managed.

4.3 Request for Proposal

The request for proposal (RFP) outlines the required services sought by the contracting agency, and some general information about the manner in which the services are to be performed. The RFP process brings structure to the procurement decision and allows preliminary identification of risks and benefits. The added benefit of input from a broad spectrum of functional experts ensures that the solution chosen will suit the contracting agency's requirements. In addition:

- An RFP provides the means to compare quotes accurately since all quotes are generated from the same set of criteria. In other words, the contracting agency will be comparing apples to apples.

- A RFP process is a good method for leveraging the contracting agency's negotiating ability and purchasing power with bidders.

- Alerts bidders that the selection process is competitive.

- Allows for wide distribution and response.

- Ensures that bidders respond factually to the identified requirements.

- By following a structured evaluation and selection procedure the organisation demonstrates impartiality.

- A RFP process may include the preliminary draft of the PPP contract.

It will be beneficial for a country to have guidelines that standardise RFP documents, while taking account of the different cases of procurement, e.g. single stage, single bidder procurement calls for different RFP documents than multi-stage, multi-bidder procurement.

Further Reading:

National PPP Guidelines: Practitioners' Guide, Volume 2, Infrastructure Australia
http://www.infrastructureaustralia.gov.au/public_private/files/Vol_2_Practioners_Guide_Mar_2011.pdf

Guidelines for Public Private Partnership: Request for Proposal, 2009, Planning Commission Government of India, New Delhi

http://www.infrastructure.gov.in/pdf/Model_REQ.pdf

4.4 Bid Evaluation Criteria and Selecting the Winning Bid

Bid evaluation criteria should be clearly defined in the request for the proposal briefing document. The criteria will be determined under policy but generally consists of a test of value for money with a quantitative or cost element and a check-list of qualitative factors, such as the quality of services to be delivered, innovative design and construction methods that may increase asset utilisation, lower costs or result in projects being delivered earlier than planned.

Quantitative Measurement

To qualify for selection bidders will need to better the department's budget for the project if delivered by traditional design and construction contract methods. The benchmark may need to be adjusted for the value of risks retained and transferred to the contractor and life-cycle costing, to ensure equivalence between the government's benchmark and bids. Some PPP policies require preparation of a formal benchmark, known as a public sector comparator, which requires preparation of a risk-weighted, life-cycle costed and discounted financial projection adjusted for competitive neutrality and the value of risk transferred. In other jurisdictions where there is little prospect of the project being delivered by an alternative procurement method, reliance is placed on a competitive bid market to produce lowest cost to the government generally in the form of availability payments provided by government over the life of the project or the cost of services to users.

Qualitative Measurement

Qualitative assessment of bids takes place once the respondents to the request-for-proposal process have been evaluated against quantitative criteria. Bids are examined for the value of the benefits that a proposal brings to government. The criteria will vary between projects but generally may include:

- Design features and design innovation.
- Improved departmental productivity with the delivery of core services.
- Construction innovation, timeliness of delivery.
- The quality and flexibility of services and service delivery.
- The sustainability of service delivery in economic and operational terms.
- Asset utilisation and opportunity to derive third-party income.
- Benefits of a proposal that cannot be measured in financial terms.

There are a number of examples of qualitative benefits to government from PPP projects. They may include new tunnelling or bridge-building technology that enables early project delivery, additional services or environmental sustainability not contemplated in the output specification, construction methods that minimise disruption to the community, or the

application of new technologies such as solar-powered street lighting, dredging or improved road surfacing methods.

Qualitative and quantitative evaluation of bids is described as value for money and is widely used for bidder selection in most international PPP policies.

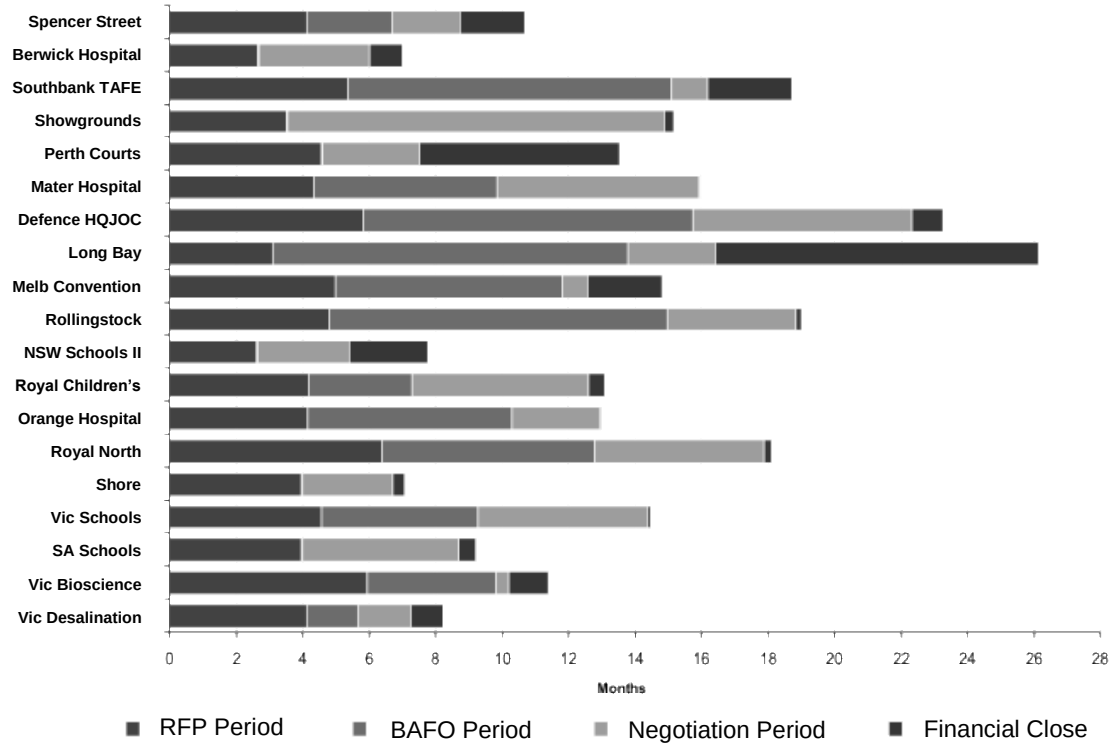
4.5 Negotiations

Competitive negotiation is a procedure whereby only the most qualified bidders are invited to the request for tender stage of the bid process for a PPP. This is most commonly achieved with pre-qualification of bidders or selecting a limited number of bidders from the private parties responding to the expression of interest stage. The parties issued with an invitation to bid are generally provided with an output specification, relevant site information, the bid evaluation criteria and detailed requirements for the form and content of bids. During the bid preparation period, answers to questions raised by a bidder are shared with all bidders, undertakings are given about recognition and preservation of intellectual property rights, and meetings with bidders are generally supervised by a probity auditor. The objective of a competitive negotiation process is to minimise the time taken to evaluate bids, to improve value for money outcomes, and to ensure a competitive bid process.

Competitive negotiation may be created with a best and final offer (BAFO) process that follows receipt of bids. This process is generally implemented when bids fail to meet the government's expectations and bidders are asked to revise and resubmit their bids. It may also be used during the negotiation period that follows selection of a preferred or winning bid. The objective here is to avoid asymmetric bargaining power in the final negotiations whereby a preferred bidder may push back on risk allocation and other key terms of the contract in the knowledge that government will be forced into a time-consuming and costly rebidding process if agreement is not reached in the agreed time. Competitive tension may be created by appointing two bidders for final contract negotiations in place of a single preferred bidder. Both bidders are engaged in this process until the contract is signed with a single bidder. This process may require a department to refund the bid costs of the losing bidder between their appointment as preferred bidder and the final award of the contract.

Competitive negotiation has several advantages for government. Delay in the final negotiation process over the details of a long-term contract contribute to hold-up risk, which is a major cause of escalation of formation and bid costs with PPP projects ((National Audit Office, 2000). The impact of hold-up risk on delivery schedules and costs is explained with a sample of Australian PPP projects at Figure 6.

Figure 6. Implementation Periods for Australian PPP Projects



Source: Jeff Daley 2010.

Notes: RFP Request for Proposal; BAFO Best and Final Offer.

4.6 Contracts

A PPP project has four distinct stages:

1. A procurement stage during which government identifies a suitable PPP project, conducts financial evaluations of the opportunity, and takes the project to market.
2. A construction phase at the end of which the project is commissioned.
3. An operational phase during which the contracted services are delivered.
4. A contract expiry and termination stage at the end of which ownership of assets and service delivery passes to government.

The longest stage of the contract is the operational phase during which services are delivered, revenue is derived by the private party, and change events are managed to ensure continuity of service delivery as required under the contract. The contract manager is responsible for ensuring that the private party delivers services to the required standard over the life of the contract and provide government with an understanding of the sustainability of the project. The contract manager operates in a dynamic environment in which change in service requirements, the operational environment and externalities will need to be monitored and reported. Risk is one of the change drivers and it is a key part of the project manager's role to

identify and report, mitigate and manage the project's risk profile over the term of the contract.

Contract management planning and the appointment of a contract manager takes place at an early stage in the project and continues until the contract reaches financial close. The involvement at the planning stages of a PPP ensures the contract manager has a sound understanding of the service requirement, the risks allocated to the private party, and the key performance indicators and compliance requirements that will need to be monitored over the life of the contract. Contract managers also perform four other important functions:

- Monitor performance under the contract by government and the private party, and the commercial and financial environment within which the contract operates.
- Manage relationships and maintain communications with the private party and stakeholders.
- Manage change over the term of the contract including variations in service requirement and availability payments, change in project risks, default events, the intervention of natural events and damage to assets, dispute resolution, refinancing of private investment, and transfers of equity interests. Additionally, the contract manager must identify, monitor and report all risks over the life of the contract and develop strategies to mitigate and manage potential risk events.
- Governance including probity and monitoring of compliance requirements in general law and the various contracts that comprise a PPP transaction.

Central to the contract manager's role is the contract management plan which assigns accountabilities, identifies government's obligations, and creates mechanisms for the identification, mitigation and management of risk. The plan will also contain information about how the manager will monitor the private party's performance of its obligations. The plan also provides continuity to manage change in personnel and ensure consistency in the application of governance standards. Specific matters dealt with in the plan include:

- Accountabilities, reporting procedures and governance principles.
- The identification of government obligations, and the resources, delegations, and authorisations required to ensure government compliance with its obligations under the contract.
- Contingency planning and mechanisms for the mitigation and management of risks.
- Managing applications for the review of output pricing.
- Private party operational and financial reporting (construction and operational phases of the project).
- How the private party's performance will be monitored.

- The process for initiating dispute resolution procedures, cure periods and management of minor and major breaches of contract.

- Managing default and penalties for breach of output specification and standards.

The contract management plan will also provide a centralised collection of the documentation for the tools and processes used in managing the contract, such as a record of meetings between the parties, the terms of resolution of disputes, a record of day to day operational matters, informal consents and waivers during the term of the contract. The contract management plan must be reviewed regularly and updated to ensure its ongoing relevance to the project.

Box 2. Further Reading and Document Templates

Partnerships Victoria 2003, Contract Management Guide, Department of Treasury and Finance, Melbourne viewed on 14th October 2014 at http://www.dtf.vic.gov.au/Publications/Infrastructure-Delivery-publications/Partnerships-Victoria/Contract-management-guide

European PPP Expertise Centre 2011, A Guide to Guidance, Sourcebook for PPPs, EPEC, Luxembourg, pp. 79-99. Viewed on 14th October 2014 at http://www.eib.org/epec/g2g/

4.7 Unsolicited Proposals

PPP policy should contain specific provisions dealing with unsolicited projects that private parties may bring to government from time to time. Generally, government should promote discussion with the private sector on ideas for improving the quality of infrastructure services. However, private parties may be reluctant to disclose their ideas or intellectual property because of the risk that their proposal will be disclosed to competitors or put to market as a competitive bidding process.

All unsolicited proposals should be examined for their feasibility and the opportunity that these may offer for improved infrastructure services. Departments conducting the analysis should undertake to recognise intellectual property rights if they exist. The decision on whether to proceed with an exclusive negotiation or submit the proposal to competitive bidding is a decision for government. Projects that possess significant intellectual property attributes are more likely to be negotiated on an exclusive basis than projects with fewer attributes. In some jurisdictions, all unsolicited bids are put to market but the party submitting the proposal is given an agreed advantage in the bidding process.

4.8 Financing vs Funding

The concepts of financing and funding are often used interchangeably but they actually have different meanings. Financing refers to the provision of the funds required to build the project, including paying for land acquisition, construction cost, etc., while funding describes the means to pay for the operations of the project in the longer term. Funding may cover both operational and maintenance costs.

Projects may be financed form private or government sources, or by both. Under traditional procurement, government uses public money to finance infrastructure projects. PPP projects awarded to a company or usually a consortium established for the project (special purpose vehicle = SPV) are usually financed by a combination of equity and debt. Equity investors are company owners/shareholders, while debt can be raised through commercial loans provided by banks or other financial institutions, and bonds or other financial instruments. A country with a developed capital market provides advantages to investors, especially if it can match the currency between the revenue and capital, thus eliminating exchange rate volatility risk. Five countries in ASEAN have mature capital markets, namely Singapore, Indonesia, Malaysia, Thailand and the Philippines, while the rest have yet to develop or are in the early stages of capital market development. However, regional and international capital markets are generally accessible, especially if the borrowers have a good international track record.

Loans from commercial banks are usually limited in terms of amount and borrowing period, with relatively high interest rates.

The consortium of PPP project's awardee, or SPV, can raise the money from own source, loans, sponsors, etc. In some cases, government may give partial capital subsidy as viability gap funding (VGF) or provide the land, tax allowance, etc. The VGF reduces the total investment costs, resulting in a lower price of services or increasing viability of the project. Other types of government fiscal support include one-time payment or over-period payment, which should be incorporated in the budget policy. One of the challenges is to estimate the probability of contingent liabilities on the budget and to deal with budgeting policy to accommodate necessary steps.

Based on the financial degree of certainty, there are three types of government fiscal support: budget support with a certain amount, budget support with an uncertain amount, and contingent liability. The certain amount of budget support happens when the government has determined a fixed amount of funding within a certain period. For example, government has allocated a fixed amount of funding to buy electricity from an IPP at a pre-determined price and volume. There is a possibility that although the allocated budget is decided, the exact amount may change over several variables, for example: adjusted to inflation, exchange rate, the number of users (in case of subsidy), and expanded usage. The last one, contingent liability, occurs when government gives a guarantee to pay under probabilistic specific conditions, for instance: government guarantees to pay a subnational government's loan when it fails to repay, or government guarantees to cover excess costs beyond the pre-determined level of the exchange rate.

Contingent liability may be realised or not realised in the budget. To incorporate it into the budget, government can use the probabilistic method of contingency, such as the Monte Carlo method, etc., which is referenced in Box 3 below. However, in some countries, the unrealised allocated post may become a problem, and may not be allocated in the subsequent fiscal year. Indonesia uses an off-budget system through capital injections to the Indonesian Infrastructure Guarantee Fund (IIGF). Thus, the national budget is not exposed to contingent risks, as the IIGF is the responsible body for guaranteeing PPP projects.

Box 3. Reference for Some Methods of Contingent Liabilities Estimation

Belli, P., J. R. Anderson, H. N. Barnum, J. A. Dixon & J.-P. Tan. (2001). *Economic Analysis of Investment Operations: Analytical Tools and Practical Applications.* Washington, DC: World

Bank.

Brandimarte, Paolo. (2014). *Handbook in Monte Carlo Simulation: Applications in Financial Engineering, Risk Management, and Economics.* Wiley.

Eijgenraam, C. J. J., C. C. Koopmans, P. J. G. Tang & A. C. P. Verster. (2000). *Evaluation of Infrastructural Projects: Guide for Cost-Benefit Analysis.* Netherland: CPB Netherlands Bureau for Economic Policy Analysis & Netherlands Economic Institute.

European Commission. (2008). *Guide to Cost Benefit Analysis of Investment Projects.* European Commission, Directorate General Regional Policy. http://ec.europa.eu/regional_policy/sources/docgener/guides/cost/guide2008_en.pdf

Irwin, Timothy. (2007). *Government Guarantees: Allocating and Valuing Risk in Privately Financed Infrastructure Projects.* Washington: World Bank.

Lewis, C.M. and Mody, A. (1998). "The management of contingent liabilities: A risk management framework for national governments" in Dealing with Public Risk in Private Infrastructure. Irwin, Timothy et al. (eds.). Washington: World Bank.

Sundaresan, Suresh M. (2002) "Institutional and analytical framework for measuring and managing government contingent liabilities". in Government at Risk: *Contingent Liabilities and Fiscal Risk*. Brixi, Hana Polackova and Schick, Allen (Eds.). Washington: World Bank.

In general, the decision to give fiscal support should fit the national fiscal policy. In this regard, it covers national development and spending priorities, fiscal space available for PPP support, and future fiscal burden. In this context, CBA of a PPP project is very important to the decision-making process at the macro level. Government has to have a strong economic rationale to justify the allocated fiscal support or future fiscal burden. Long-term fiscal liabilities resulting from PPP projects should be estimated vis-à-vis other fiscal liabilities, including national interest and debt instalments and social security obligatory payments. In short, all fiscal liabilities, both certain or uncertain, should be incorporated into the national budget system.

5. Issues of Cross-Border PPP

This section discusses some of the keys to implementing cross-border infrastructure projects through PPP in ASEAN. Cross-border infrastructure plays a pivotal role in accelerating intra-regional connectivity through logistic cost reduction, trade expansion, or integration of isolated areas. Despite their huge potential benefits, it is challenging to realize cross-border projects in the region primarily because they entail increased complexity in inter-governmental coordination caused by the economic, political or institutional heterogeneity of ASEAN countries. The difficulties become aggravated when PPP, which is generally complex per se, is selected as a procurement method for such projects. Although there is no such thing as a 'one size fits all' solution, some clues can be found through investigating individual cross-border infrastructure projects that have been, or are going to be, procured between ASEAN countries. In this section, we first outline (i) characteristics of cross-border infrastructure projects, and (ii) rationale and challenges in private participation in cross-border

arrangements. We then present some of the crucial factors as ASEAN to mobilise such projects using a PPP approach derived from an ASEAN Cross-border Infrastructure Study jointly conducted by the Japan Bank for International Cooperation (JBIC) and ERIA in 2014.

5.1 Characteristics of Cross-Border Infrastructure Projects

Cross-border infrastructure can be defined as either an infrastructure project with activities spanning two or more countries, or a national infrastructure project that has significant cross-border impact (Fujimura and Adhikari, 2010). An easy-to-understand example is transport infrastructures connecting two or more countries, such as international bridge, road, or railway network. The development of a roll-on/roll off (RoRo) network is deemed to fall into the category of transport (maritime) infrastructure in the ASEAN context. The cross-border infrastructure also includes less visible infrastructure, such as power projects involving the transmission or sale of electricity or gas to neighbouring countries, or regional telecommunications networks.

The importance of such cross-border infrastructure in ASEAN was recognised in the ASEAN Master Plan on ASEAN Connectivity (MPAC), adopted by the ASEAN member countries on 28 October 2010. It identified transport (primarily road and rail), ICT and energy as the key sectors of focus, and prioritised six regional projects as important in facilitating physical connectivity of ASEAN. The Master Plan envisions that these projects will lead to enhanced connectivity, which will eventually promote economic growth, and contribute to narrowing the development gaps in ASEAN.

However, these cross-border infrastructure projects cannot be dealt with under the same consideration as a national infrastructure project, because of characteristics such as:

- Externalities (which include environmental and social impacts) spreading over wide geographical areas (beyond physically connected areas) and over various stakeholders.
- Strong influences from the geopolitical situation of two or more countries on project initiation.
- Large-scale investment with huge initial capital requirements and a long-term horizon.
- Necessity of cross-country coordination in policy or institutional arrangements, and soft infrastructure alignment.

As such, cross-border infrastructure projects, by definition, involve more than one government, which makes them inherently more challenging than similar projects located within a single country. The increased number of stakeholders signifies the complexity with respect to economic, social, or environmental benefits/ losses and their management. These projects, furthermore, presume procurement and management of significant amount of resources, such as land and financial capital, which are often cited as major constraints even to domestic projects in the ASEAN context. A successful implementation of cross-border projects, therefore, requires a high level of cooperation among relevant authorities, effective stakeholder management, or a realistic planning and procurement strategy as we propose in the last part of this section.

5.2 Private Participation in Cross-Border Projects: Rationale and Challenges

Despite the difficulties arising from the nature of cross-border projects, there is ample reason to invite private party involvement in these projects in ASEAN. First, large-scale funding requirements for cross-border projects could be fulfilled through mobilisation of private financial resources. Second, technological challenges in cross-border infrastructure (such as in an offshore marine environment, or need of effective integration with national infrastructure) call for innovative approaches proposed by international, as well as domestic, private enterprises. Third, a cross-border infrastructure project, when managed exclusively by the public sector, could give rise to governance issues at the inter-governmental level. If a single private concessioner somehow controls the project and the roles of each stakeholder are stipulated prior to a contract, then this could overcome such coordination problems. Lastly, and most importantly, significant spill-over benefits to geographically wide areas, coinciding with the ongoing process of economic integration in ASEAN, which is striving for the freer movement of goods, services, skilled labour and investment, will produce strong demand and room for profit-based investments to the cross-border facilities themselves.

The issue is, cross-border projects, once they start to seek a PPP approach, become even more vulnerable to a number of risk factors stemming from the complex nature of PPP arrangements. Some of the potential drawbacks/ risks in implementation of cross-border PPP projects by project cycle can be found below (Table 5):

Table 5. Examples of Drawbacks to Implementation of Cross-Border PPP Projects

Project Stage	Examples
1. Initiation	Project Selection/ Initiation • Absence of a holistic development plan/ vision that provides guidance in identifying and prioritising cross-border projects based on national socio-economic benefits • Geopolitical situation that prevents neighbouring countries from embarking on economically beneficial projects in a cooperative manner • National economic protectionism or lack of support from citizens in a single country Option Analysis • Lack of capacity/experience in assessing procurement options through CBA or other methods in more complex situations • Differences in willingness in adopting PPP approach at a national level • No dedicated PPP authority in a country to appraise or initiate a project from each country

Project Stage	Examples
2. Planning	Feasibility Study • Underestimation of externalities, especially social or environmental impacts which are significant in cross-border projects • Over-ambitious project scope in one country • Lack of expertise or experiences within a government agency or domestic private advisors in realistic demand forecasts or other crucial factors to gauge financial viability Formation of Inter-Governmental Arrangements • Proceeding without forming an inter-governmental coordination or decision-making body to oversee a project • Lack of agreement on critical issues (e.g., tender process and timing, the form of concession arrangements, levels of government support, tariff setting mechanisms) effective throughout the life of a project • Large gaps in regulatory frameworks (e.g., PPP specific laws, sectorial regulations, caps on foreign equity participation) among countries which make it difficult to compromise key agreements. PPP Design/ Planning • Unrealistic procurement timeframe or unattractive structure to private (by insufficient market sounding exercises, unavailability of government financial support, etc.) • Uneven risk allocation between public-public, as well as public-private
3. Procurement	Bidding Process • Difficulties in agreeing upon a RFQ/RFP format with international benchmarks • Lack of transparency in bidding procedure and evaluation criteria (in favour of national enterprises, etc.) **Land Procurement** • Difficulties in securing large-scale property stemming from insufficient public support in necessary land acquisition from each government

Project Stage	Examples
	Contract Agreement • Lack of standardised template of a PPP contract draw upon tried and tested precedents in each country **Financing Procurement** • Difficulties in securing long-term financing with a currency mix consistent with a project's revenue stream
4. Managing Contract and Monitoring	Construction and Operation • Delay in construction or operational inefficiencies arising from a lack of integration between hard and soft infrastructure (custom clearance, immigration procedure, operational standards, etc.) Contract Administration • Large differences in national legal systems or a lack of clear agreements, which impede resolution of disputes, contract waivers and amendments, enforcement of default and termination provisions.

It should be worthwhile noting that most of the above-mentioned impediments are related to public capacity in initiating, coordinating, or designing a project, rather than mere commercial aspects. The challenge is how to avoid such government failures in a situation where there is diversity in readiness, experience, or even willingness to adopt PPPs among nations such as in ASEAN (see Annex B for a comparative status of a PPP framework in the 10 ASEAN countries). For instance, the absence of policy and legislation frameworks specific to PPP in many of the GMS countries to date would lead to delays or uncertainty in agreeing on a regime to govern a cross-border project. The existence of a dedicated national PPP authority with sufficient capacity and decision-making plays a crucial role in assisting with planning and transactional coordination between domestic government departments, as well as cross-national arrangements. The ability to create successful cases or pipelines under PPP could also be a milestone for assessing the possibility of applying PPP to more complex cross-border projects.

If we take a look at the other side of the coin, structuring a PPP project with other countries can potentially be an opportunity to upgrade PPP readiness of a country. Cross-border procurement requires agreements on critical issues, such as the tender procedure, the RFQ/RFP format, the form of concession contract, government support, tariff-setting mechanisms and so forth. Negotiating in these terms with other countries could direct attention to the domestic PPP structure itself and would call for improvements in weaker areas through learning from other well-structured PPP frameworks.

5.3 Principles for Cross-Border PPP Infrastructure

Considering the above recognition and implications obtained from the ASEAN Cross-border Infrastructure Study conducted jointly by the Japan Bank for International Cooperation (JBIC) and ERIA in 2014 (Box 4), we derive below nine principles for successful implementation of a cross-border PPP in ASEAN member states.

Box 4. ASEAN Cross-border Infrastructure Study

The study, conducted jointly by the JBIC and ERIA in 2014, identifies the typical issues and challenges in cross-border infrastructure projects, referring to six projects in ASEAN as case examples, both existing and proposed, and provides recommendations to address such issues and challenges. The projects into which the study investigated are (some of them were/ are going to be procured with full public or private structure):

- Nam Theun 2 Hydropower Project (Lao PDR-Thailand)
- Malaysia to Singapore Second Road Bridge Link (Malaysia-Singapore)
- Telecommunications Backbone Project Phase II (Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam and China)
- Kuala Lumpur to Singapore High Speed Rail Link (Malaysia-Singapore) – See Annex E
- Melaka to Pekanbaru to Power Interconnection Project (Malaysia-Indonesia)
- ASEAN Highway Network Missing Links (in the section of Myanmar and Lao PDR)

1. Initiation by public parties with domestic leadership and effective inter-governmental arrangements/ committees

Throughout the project cycle strong political leadership and commitments to initiate a project play a central role. These imply both project initiation at the domestic level and inter-governmental coordination are effective throughout the life of a project.

Good domestic communication is indispensable, because benefits and interests among citizens, local authorities, or central government can be different even within a single country. Before undertaking a project, the central authority should play a role of coordination in national interests. In this process, a dedicated PPP unit or concerned national authorities with strong influence on national development planning and fiscal decision-making would lead the nation effectively. Ideally, in order to show a commitment on a project at a national level, it would be desirable that the project is included in the National Development Plan or PPP pipeline as a prioritised project.

Meanwhile, there would preferably be an inter-governmental agreement (or a bilateral treaty) or a joint committee among governments to reconcile differing interests and command a cross-border project. The inter-governmental agreement should detail issues such as: project scope and feasibility; procurement strategy and tender process timing; the form of concession arrangements; levels of government support; tariff-setting mechanisms; border

arrangements; and project governance and management. This should, if possible, be agreed and entered into at an early stage in the procurement process. As well as inter-governmental agreements, the implementation of cross-border infrastructure projects can be facilitated by the establishment of the joint committee or similar joint undertaking or joint venture (which may be provided for in the inter-governmental agreement). This committee would include representatives from both countries and would be responsible for supervising the procurement and implementation of the project. There should also be clear procedures for decision-making by the joint committee.

2. Realistic planning and procurement strategy

Cross-border infrastructure projects, which often require intensive capital and complex arrangements, have long lead times to procure by nature. Whilst it is important to maintain momentum, project planners need to be realistic about how long the procurement process will take. In this respect, setting realistic milestone dates will help to enable optimal structuring, procurement and implementation of the project.

By the same token, seeking a full PPP approach or one single 'international' concession may not always be the best solution considering time and costs involved in the implementation process. For a large-scale cross-border project in particular, the approach of splitting the project into several sub-projects could pave the way for timely procurement of the project (see 2.5. Business Case, Designing the Project Size). As with any cross-border project, one of the key structural questions to be addressed at the outset is whether the project will consist of one single integrated international infrastructure designed, financed, built, operated and maintained under one single 'international' concession awarded by the two governments acting as joint grantors. Alternatively, there could be two sections forming two different interfaced projects, under separate concession contracts.

In order to achieve the best structure within a reasonable timeframe and an appropriate risk allocation mechanism between public-public and public-private, careful feasibility studies or continuous market sounding exercises should be carried out.

Box 5. Malaysia-Singapore Second Link Bridge Project: Inter-governmental Arrangements and Procurement Structure

A road bridge connecting Johor in Malaysia with Tuas in Singapore was opened for use in January 1998.

As for its governance structure, the international elements of the project, and the respective responsibilities of the Malaysian and Singaporean governments with regard to the design, construction, operation and maintenance of the Second Link, are governed by an inter-governmental agreement, which was signed in March 1994. Each government was responsible for the construction of the portion of the Second Link which fell within its borders, based on a common agreed design, and representatives of both the Singaporean and Malaysian governments were appointed to a joint committee, which was set up with the purpose of overseeing the implementation of the project.

At the structural level, the procurement was separated to the two countries. The Malaysian portion of the project was procured on the basis of a private sector BOT concession with 30-year exclusive rights of planning, constructing, operating and maintaining the link and

related roads, whereas the Singaporean portion was procured on a more traditional public sector basis.

3. A minimum level of enabling environment for PPP applied to concerned countries

The governments and other agencies involved in procuring cross-border infrastructure projects may have differing policy objectives, regulatory regimes, institutional capability, and financial resources. Reconciling these differences is often the main challenge to successful procurement. Unless the governments can reach agreement on key matters, the successful implementation of the project cannot proceed.

For a project between Malaysia and Singapore, for instance, even though neither country has enacted specific PPP laws, a solid regulatory framework with international standards has enabled them to procure a number of infrastructure projects at the domestic level. This would make it feasible to implement cross-border projects between the countries, such as the proposed Kuala Lumpur to Singapore High Speed Rail Link project (see Annex E) on a PPP basis. In such a case, the afore-mentioned effective concession structure and inter-governmental arrangements, rather than specific PPP framework, are of more importance.

Conversely, there are few projects that have been procured on a PPP basis in GMS countries (aside from IPP projects). This reflects the challenges of adapting the PPP model to a cross-border situation in the region. Countries such as Lao PDR, Cambodia and Myanmar are still at an early stage in developing a coherent policy framework for PPP and have not yet enacted specific PPP laws to date. None of the GMS countries has much experience in successfully implementing PPP projects (see Annex B for the policy framework or implementation status of these countries). Thus, a cross-border PPP project in the GMS region, in particular, would require a significant amount of work to agree a common approach to the procurement process and concession terms. Despite the challenge, we believe that the process of procuring a PPP with other countries itself could be an opportunity for such a country to address practical weaknesses and enhance national regulatory or institutional readiness.

4. Social and environmental risk mitigation strategy

Infrastructure projects in a developing region such as ASEAN can present significant environmental and social challenges. Infrastructure development may have significant adverse impacts on the environment (e.g., CO2 emission) or on the livelihoods of indigenous peoples. This is even more so for a cross-border infrastructure on a massive scale. It is important that appropriate environmental and social impact assessments, based on internationally accepted standards such as the IFC Performance Standards or the Equator Principles (see Box 6), are carried out at an early stage in project development. Identification of external stakeholders and close consultation with local people are critical initial steps. Adequate mitigation strategies including compensation arrangements and technological requirements should be agreed and incorporated into contractual structures.

Box 6. Environmental and Social Impact Assessment Standards

IFC's Environmental and Social Performance Standards, viewed on 4th November 2014 at http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/performance+standards/environmental+and+social+performance+standards+and+guidance+notes#2012

The World Bank EHS (Environmental, Health, Safety) Guidelines, viewed on 4th November 2014 at
http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/ehsguidelines

The Equator Principles, viewed on 4th November 2014 at
http://www.equator-principles.com/index.php/ep3/ep3

Box 7. Nam Theun 2 Hydropower Project: (1) Social and Environmental Impact Mitigation

The hydropower project in Lao PDR has been commercially operational since April 2010. A concession agreement with the Lao PDR government governs the Nam Theun 2 Power Company Limited (NTPC)'s rights and obligations as the project company. The Thai government, through a state-owned enterprise, the Electricity Generating Authority of Thailand (EGAT), agreed to purchase 95 percent of the power produced for the first 13 years.

Environmental and social concerns in the project included downstream impacts, impacts on biodiversity, resettlement and reservoir sedimentation. NTPC and the Lao-PDR government each have a variety of responsibilities to manage and fund various environmental and social impacts, with the project being contractually committed under the terms of the concession agreement to spend more than USD100 million in mitigating environmental and social impacts during the construction period. The full costs of mitigants to be funded by NTPC were factored in as part of the project budget to ensure that there would be no funding shortfall. The project also has a multi-layer environmental and social monitoring and evaluation mechanism consisting of a number of independent panels of experts reporting to the Lao PDR government and/or the World Bank on an ongoing basis.

5. Alignment and upgrade of soft infrastructure

Benefits from a physical infrastructure attained in a form of cost or time reduction rely on the level of maturity and alignment of formal and informal soft infrastructure, such as customs clearance, quarantine, or operating/ traffic/ technological/ environmental standards. In cross-border projects, concerned public sectors are expected to enhance compatibility of such soft infrastructures simultaneously with the hard infrastructure development. For GMS countries, an agreement, Cross-border Transport Facilitation Agreement (CBTA) for instance, has been formed with support from ADB for promoting cross-border movement of people, goods, and services among the six GMS countries. Such common regional platforms will potentially increase the benefits from the development of transportation linkage in a cross-border situation.

6. Strong government support in land- or asset-related rights

Cross-border infrastructure projects inevitably require large-scale land procurement. Moreover, border areas tend to be where ethnic minorities reside and agricultural-based communities are located, which makes resettlement a burdensome activity. It is unlikely that the private sector will shoulder the significant land-acquisition risk, and thus, each government is advised to commit to securing the land issues in the respective areas under the respective regime. In many of the ASEAN countries, nevertheless, land tenure is one of the most contentious issues and support in land procurement for PPP projects is limited (see

Annex B for the country-wise status of land support mechanism). The ownership and *usufruct* rights[3] on land or operational asset, and their boundaries between countries, should be at least clearly defined by as a prerequisite to the offering of a project to private parties.

7. Transparent and competitive bidding procedure and standardised contracts

The procurement process should be transparent and structured to encourage competitive tendering. It might be sometimes the case that each government prefers a private partner who brings in benefits mostly to its own country. To avoid such conflict of interest, it is advisable that qualification criteria, selection procedures, timeframe of pre-qualification, competitive bidding, preferred-bidder awards and negotiations to contractual/ financial close are predetermined in inter-governmental agreements on the basis of clear, objective and realistic standards. In this regard, having a standardised template of RFQ/RFP and sample contract documents at country level, or ideally at regional level, would streamline and expedite decision-making by the authorities in a fair and transparent way (see Box 2 for Document Templates).

8. Involvement of Multilaterals or ECAs in support of long-term financing

Cross-border infrastructure requires substantial amounts of capital for construction, as well as ongoing operation and maintenance. The availability of long-term financing, especially of long-term debt financing (which is the dominant source of project financing), influences the bankability of a project.

In ASEAN, however, it is rare for PPP projects to be entirely self-financing. The governments involved are required to take effective measures by way of partial funding of construction costs, availability payments or revenue subsidies to make a project bankable (see 3.3. Bankability and VGF). That said, naturally, these schemes cannot be applied to cross-border projects unless each government has prepared an effective supporting framework domestically. The challenge in ASEAN is how to achieve an agreement on the fiscal matters among countries whose attitude towards, and readiness for, the provision of financial support are uneven (see Annex B for the country-wise status of government financial support mechanism).

Multilateral institutions (such as the World Bank Group or ADB), and export credit agencies (e.g., JBIC, China EXIM Bank, Korea Exim Bank) have in some cases been able to fill this funding gap, whether through ODA or other types of loans or guarantees. Other sources of institutional funding include dedicated regional infrastructure funds such as the ASEAN Infrastructure Fund (AIF), funded by nine ASEAN member countries in addition to ADB. Financial support from these multilateral sources can be key in catalysing private finance in ASEAN cross-border projects.

Box 8. Nam Theun 2 Hydropower Project: (2) Financial Structure

The financing of the Nam Theun 2 Hydroelectric IPP Project was closed in 2005. Just under one-third of the project cost, being USD450 million, was equity financed, with the remainder being debt financed.

[3] Usufruct: the right to enjoy the use and advantages of the property.

The total of about USD1,000 million long-term debt was provided by a broad base of lenders, including two bilateral and five multilateral lenders, four export credit agencies, as well as the international commercial banks which lent under the US dollar, political risk and export credit agency facilities. Commercial banks in Thailand provided the baht-denominated tranche of debt of USD500 million.

That such large funding requirements could be successfully met by a considerable number of commercial banks was due largely to the support from the World Bank, the Multilateral Investment Guarantee Agency (MIGA) and the ADB in the form of political risk guarantees or public sector loans to the Lao-PDR government (De, Samudram, and Moholkar, 2010). After its operation, ADB was reported in May 2014 to be considering the project for a project bond scheme, whereby a subordinated debt tranche would be issued (likely to be either mezzanine debt or a contingent credit line) for up to a fifth of the total senior debt value, with the purpose of allowing the project company to issue bonds at the investment grade level. [4]

9. The pros and cons of multi-tier dispute resolution measures in international dispute resolution

Given the long-term nature of the contract, complexity of risks, and the large number of stakeholders, procedures of multi-tier dispute resolution, starting from the negotiations among stakeholders under a third-party facilitator, should be stipulated in a contract, as well as inter-governmental agreements. To keep effectiveness in inter-national relations, this should include an alternative dispute resolution mechanism, such as an international mediation/conciliation or arbitration procedure, which will take place in a third country based on international rules. Mediation, while it usually takes less time than arbitration, lacks legal enforcement, which often makes it difficult for reconciling key differences. [5] Arbitration, meanwhile, involves binding decisions despite the fact that it usually requires a longer duration. Recognising the pros and cons of each measure and simulating a decision tree on solution selection are necessary.

[4] Infrastructure Journal, "ADB considers Nam Theun 2 for project bonds (on 27 may 2014)", Accessed 4 Nov., http://www.ijonline.com/Articles/91737#article, 27 May 2014).

[5] A recent Initiative by the World Bank Singapore Infrastructure Hub to establish the Regional Infrastructure Mediation Center (RIMC) within the Singapore Mediation Center (SMG) is expected to institutionalise and expand the use of mediation for infrastructure disputes in Asia.

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Annex A. ASEAN Public Private Partnership Policy

Table 6. Policy Development Stages

	Initial PPP Policy	Intermediate PPP Policy	Mature PPP Policy
Policy Drivers	Private investment in economic infrastructure assets and services building on national BOT and privatisation experience	Adoption of a wider "value to government" test that examines proposals for improved service outcomes	Embedded value for money principles that require PPP projects to deliver better services at lower cost to government
Policy Type	A new PPP policy or amendments to existing procurement policy and project implementation processes	PPP policy development independently managed by central policy-making department	PPP policy updated regularly to deal with changes in infrastructure procurement or market conditions
Managing Agency	A government agency positioned close to the policy-making centre of government, typically Treasury and Finance, Development and Planning or the Prime Minister's Department	Creation of a PPP Unit to manage policy administration and provide technical assistance to project implementing agencies/departments	Widen the role of the PPP unit if appropriate to encompass training and governance roles
Guidance Materials	General policy principles containing project implementation and approval procedures	More specialised guidance regulating project selection, evaluation, the bidding process and regulation/contract management principles	Comprehensive technical guidance for government agencies and practitioners. Adoption of standard commercial principles and value for money benchmarking criteria (if required).

	Initial PPP Policy	Intermediate PPP Policy	Mature PPP Policy
Technical Assistance	Building expertise internally with assistance from external consultants, ODA and multilateral aid agencies	Greater reliance on the PPP Unit with technical assistance to project implementing agencies/departments. Intra-ASEAN information sharing	Implement permanent agency/department training programs
Government Financial Assistance	Determined on a case by case basis given the importance of the project. Contribution to project capital costs preferred.	Adoption of a Viability Gap Financing policy	Further development of the Viability Gap Funding framework to include greater risk sharing, availability payment options and government provided debt
Unsolicited Bids	May be accepted subject to financial impact assessment or market testing	Evaluated under the policy framework with market testing and resolution of intellectual property issues	Detailed unsolicited bid policy
Bid Process	Competitive bidding preferred. Adoption over time of a two-stage (or prequalification) bidding process. Introduction of market briefing about forthcoming projects. Formal process of inter-departmental communications and coordination	Adoption of expression of interest and request for proposal bidding stages. Issuance of risk allocation and contract templates.	Greater focus on bidder selection criteria, use of competitive negotiation methods.
Governance	Implement a governance framework with the initial focus on the tender and bidding processes, recognition of future availability payment cash flows and transition to contingent	Transition to IPSAS compliance Adoption of principles of accountability, transparency, reporting	Full compliance with IPSAS or IFRA standards

	Initial PPP Policy	Intermediate PPP Policy	Mature PPP Policy
	liability reporting	and disclosure.	
Form of Specification	Mixed input with recognition of output construction methods and service standards	Transition to a output-focused specification	Output specification
Project Types	May include privatisations, BOT, concession, and management contracts including lower cost economic infrastructure. Wide use of the PPP Lite option	Transition to larger scale economic and social infrastructure projects involving greater complexity.	More complex projects undertaken that offer greater "value drivers" to government such as risk transfer, early completion, design and construction innovation, improved asset utilisation and incentivised private management
Representative Policies	Myanmar, Loa PDR, Cambodia	Vietnam, Thailand	The Philippines, Singapore, Malaysia

Note: This table is a general guide to the optimal stages of policy development for the gradual implementation of common PPP policy principles in ASEAN.

Annex B. Development Status in PPP Readiness among ASEAN Countries

In addition to the intricate nature of the cross-border PPP project, what makes it even more challenging to promote PPP in the ASEAN region is the uneven status of the enabling environment for PPP at the national level (See Table 8). The situation crucially affects the possibility of transnational cooperation/ leadership as it hinges on the capacity of and willingness to employ PPP within individual countries.

What kinds of 'missing links' can therefore be identified in ASEAN PPP? Table 7 summarises the comparative status of PPP frameworks and experience of project implementation in each country.

- *PPP Policy and Legal Framework*: For countries such as Singapore or Malaysia, to publish PPP Guidelines has been sufficient to undertake PPP projects in a various sectors having a solid business environment. On the contrary, the absence of a policy and legislation framework specific to PPP in many of the GMS countries without a policy framework would lead to delays or uncertainties in agreeing on a regime to govern cross-border projects.

- *Dedicated PPP Unit*: Although key decision-making on PPP procurement remains with relevant government departments, such as the finance or transportation ministries, the existence and capacity of central PPP authorities is crucial for domestic, as well as inter-governmental, coordination. Such agencies can assist with planning and transactional coordination between government departments, as well as cross-border arrangements. Some countries in the region have established, or are aiming to establish, PPP agencies. Having such a dedicated agency within government can add focus and give credibility to a country's efforts to develop its PPP sector not only for domestic projects but also for cross-border infrastructure projects.

- *Track Record and Pipeline of National PPP Projects*: Although a government's attitude towards private resource mobilisation depends on macroeconomic conditions or the fiscal space of each country, the ability to create successful cases under PPP could be a milestone for assessing the possibility of applying PPP to more complex cross-border projects. Many of the ASEAN countries with limited experience of PPP are advised to start by focusing on learning from initiating a pilot project domestically. In this connection, a National Road 13 in Lao PDR or Dau Giay-Phan Thiet Expressway Project in Viet Nam can serve as this kind of example.

Table 7. Summary of PPP Framework/ Experience in the ASEAN Member Countries

	Policy Framework	Legal Framework	PPP Government Agency	Guidelines	Government Financial Support	Land Acquisition	Implemented Projects	Pipeline New Projects
Brunei	Limited PPP specific policies	No specific PPP laws	No specific PPP agency	Guidelines for Government Procurement	No developed regime beyond subsidiaries	Limited government support	Several ICT and airport projects	Limited
Cambodia	Limited PPP specific policies	No specific PPP laws (governed by general Law on Concessions)	No specific PPP agency (CDC is a focal point of the Law on Concessions)	Procurement manual (but not PPP specific)	No developed regime	Limited government support	Mainly in the power sector and airport concessions	Limited
Indonesia	Set out in Economic Master Plan and PPP Book	Several specific PPP laws and regulations	Bappenas and some other bodies play each role	PPP Investor's Guide and PPP Book (published annually)	Guarantees (through IIGF) and VGF	A various forms of Land Funds or related laws place	Several water and power projects currently in procurement	27 projects set out in 2013 PPP Book, mainly in the transport, water, waste and power sectors
Lao PDR	Limited PPP specific policies	No specific PPP laws (foreign investment laws provide a basic framework)	No specific PPP agency	General investment guidebook from Ministry of Planning and Investment	No developed regime beyond general tax incentives	Limited government support	Mainly in the hydropower sector	Limited (Proposed National road 13 PPP, social infrastructure projects)

Malaysia	Mainly set out in Privatization Policy and 2009 PPP Guideline	No specific PPP laws	3PU (UKAS)	PPP Guideline (2009)	Limited government support (Facilitation Fund in place for purely private initiatives)	Federal and State Authority can acquire private land	Several road projects in the early 2000s (using BOT structure)	Some projects in procurement. 52 projects proposed in 10th Malaysia Plan (2010)
Myanmar	Limited PPP specific policies. Some infrastructure policies in National Comprehensive Development Plan	No specific PPP laws (new Foreign Investment Law provides a basic framework)	No specific PPP agency	No published PPP guidelines	No developed regime	Limited government support	Several airport or power projects in procurement	Limited (several airport PPPs are in procurement (Hanthawaddy, Mandalay, Yangon)
Singapore	Limited overall framework for PPP. Some policies set out in PPP Handbook	No specific PPP laws	MOF has overall responsibility (but not specific to PPP)	PPP Handbook published by MOF	Limited government support. Refinancing guarantee provided on Sports Hub PPP (2010)	Compulsory acquisition is possible	Several in water and social infrastructure sectors from mid-2000s to present	Limited (water and waste projects currently in procurement)
Philippines	Philippines Development Plan by National Economic and Development Authority	Republic Acts developed from BOT framework and their Implementing Rules and Regulations	PPP Center	PPP manual and Sector Guidelines published by the PPP Center	Project Development and Monitoring Facility, PPP Strategic Fund	Strategic Fund was established to support Right-of-Way (ROW) acquisition	Airport, expressway, school infrastructure	37 projects of Airport, railway, or social infrastructure projects are ongoing (As of 10 July 2014)

Thailand	General policies to increase spending on infrastructure and develop PPP regime	PPP law - Private Investment in State Undertaking Act 2013	PPP Committee is the key agency for PPP, supported by State Enterprise Policy Office	No published PPP guidelines	No developed regime	Government has the responsibility for land acquisition	Some transport projects structured as BOT concessions	Being developed, but likely to focus on transport (esp. road and rail)
Viet Nam	Policies to develop pilot PPP projects and establishment of PPP feasibility study fund	2010 PPP regulations created a legal framework for PPP (currently being updated)	PPP Team and Steering Committee to develop new PPP projects established in 2012	No published PPP guidelines	Government guarantees have been provided on BOT power projects	Limited government support	Several BOT projects in the power sector	Being developed, but likely to focus on transport and water

(As of July 2014)

Annex C. Four procurement procedures in the EU:

Table 8. A comparison of EU procurement procedures

	Open Procedure	Restricted Procedure	Negotiated Procedure	Competitive Dialogue
Possibility to limit number of bidders	No prequalification or pre-selection is permitted. Any interested company may submit a bid.	The number of bidders may be limited to no less than five in accordance with criteria specified in contract notice (prequalification and shortlisting permitted).	The number of bidders may be limited to no less than three in accordance with criteria specified in contract notice (prequalification and shortlisting permitted).	The number of bidders may be limited to no less than three in accordance with criteria specified in contract notice (prequalification and shortlisting permitted).
Discussions during process	The specifications may not be changed during the bidding process, and no negotiations or dialogue may take place with bidders. Clarification is permitted.	The specifications may not be changed during the bidding process, and no negotiations or dialogue may take place with bidders. Clarification is permitted.	Negotiations permitted throughout process. Successive stages can be used to reduce the number of bidders (further short-listing).	Dialogue with bidders permitted on all aspects (similar to negotiated procedure, including further short-listing). When dialogue is concluded, final complete bids must be requested based on the solution(s) presented during the dialogue phase.
Discussions after final bid is submitted	No scope for negotiations with a bidder after bids are submitted.	No scope for negotiations with a bidder after bids are submitted.	Not relevant because the negotiations can continue until the contract is agreed. There need be no "final bid" per se.	Only permitted to clarify, fine tune or specify a bid. No changes permitted to basic features.
Basis for award	Lowest price or most economically advantageous tender	Lowest price or most economically advantageous tender	Lowest price or most economically advantageous tender	Most economically advantageous tender

Source: http://www.eib.org/epec/g2g/ii-detailed-preparation/22/223/index.htm

Annex D. Stakeholder Management and Strategy

PPP Forum as the Communication Strategy

For stakeholders to play an active role in the PPP process, they must be given not only a forum for participation but also the information they need to participate effectively. The appropriate forum to communicate and build support for PPP is through an iterative dialogue with stakeholders. Each communications program must be tailored to the local context and PPP, but should include some or all of the components below:

- Opinion research: Opinion research gathers data on stakeholders, their perceptions, and behaviours with respect to the issues concerning a specific PPP. The research influences the content and media of the communications program, as well as the reforms themselves. The research is conducted on a relatively formal basis through questionnaires, polling, etc.

- Stakeholder consultation: Consultation is a less formal process through which themes and policies of interest are discussed within or across stakeholder groups. It is intended to gather information and build an understanding among the reformers as to current perceptions and understanding and the basis of those opinions. A key part of stakeholder consultation is to manage expectations with respect to how feedback will be incorporated into the reform process; that is, the feedback may not translate into direct change in the PPP design or process but will be one stream of influence. This might be accomplished through focus groups or stakeholder discussion groups.

To establish realistic and workable PPP guidelines and supporting technical documents, as well as to disseminate and build equal perception across ASEAN member states, a PPP forum is necessary. This is also to support constant inputs and feedback from stakeholders. The forum can become a means to communicate the concept and practical approach, providing knowledge exchange and sharing experience. The feedback may be used to improve the PPP Guidelines and supporting documents.

Stakeholder Involvement in Infrastructure Development

Table 9. Various Stakeholders Involvement in Infrastructure Development

Sector	Major Concern	Public Involvement	Communication Tools
Transportation			
Highway Construction	Inconvenience During construction	Expectation from facility, and selection between alternatives	Meetings, workshops, door-to-door, visits, site office
Bridge Aesthetics	Represents community		Meetings, surveys, workshops, computer-aided graphics, mock-ups

Bridge Structure Type	Performance, cost, use of local labour and materials		Meetings, workshops, surveys
Transit Planning	Flexibility, speed, reliability, cost		Notifications, meetings, workshops, surveys
Transportation Planning	Land use, air quality, accessibility, mobility, economic growth		Open house, workshops, information kiosks, newsletters, website
Water			
Water Resource	Number of people benefited, extent of benefit, quality, cost	Selection between alternatives	Interviews, notifications, meetings, workshops, surveys
Water Supply	Effect on land (esp. privately owned), people and area's ecological system		Meetings with community and its leaders, local meetings with landowners, public workshops, media outreach
Water Treatment	Quality and price of water, reliability on supply, disruption in view due to treatment plant	Can influence in the location of treatment plant, detailing their requirements	Meetings, workshop, door-to-door visits
Solid Waste Management	Effect on neighbourhood air quality	Site location (especially the location of incinerator)	Meetings with local organisations, notifications, press releases

Source: adapted from El-Gohary et al. (2006)

Government Engagement and Stakeholder Consultation

Despite the long experience with PPPs, they remain controversial among a range of stakeholders. This is partly attributable to the diverse range of stakeholders involved in the process and the difficulty in reconciling their interests and concerns. In addition, the stakeholders often have not been properly consulted or engaged in the process. Consultation is increasingly seen as important for several reasons:

- Inadequate consultation or communication with stakeholders increases the danger of opposition, potentially late in the process, leading to delays or even cancellation.

- Stakeholders are critical to the sustainability of a PPP. Even if the contract is awarded despite opposition, the difficulty and risk of the project increase if public support is not present.
- Stakeholders provide valuable input to the design and practicality of an approach. Allowing stakeholders to comment on PPP strategies gives a sense of buy-in and can lead to innovative approaches.
- Broad public support and understanding of the reform agenda encourage politicians to stay committed.
- Dissemination of information leads to increased credibility of project partners.

Despite these compelling reasons, some governments see risk in public consultation either due to the danger of raising expectations that may not be met, losing control of the flow of information, being unable to reconcile differences, or fuelling opposition as a result of the information provided. These risks are easily outweighed by the benefits of communication and the crucial role it plays in building support for, and understanding of, PPP.

Each role is critical, yet specific stakeholders will have different interests that influence how they approach their role. There must be a consultation process to reconcile and prioritise issues, leading to broad agreement on the objectives of PPP. Table 10 lists the roles of the PPP process stakeholders.

Table 10. Selected Roles of Stakeholders in the PPP Consultation Process

Stakeholder	Role
Political decision makers	Establish and prioritise goals and objectives of PPP and communicate these to the public Approve decision criteria for selecting preferred PPP option Approve recommended PPP option Approve regulatory and legal frameworks
Company management and staff	Identify company-specific needs and goals of PPP Provide company-specific data Assist in marketing and due diligence process Implement change
Consumers	Communicate ability and willingness to pay for service Express priorities for quality and level of service

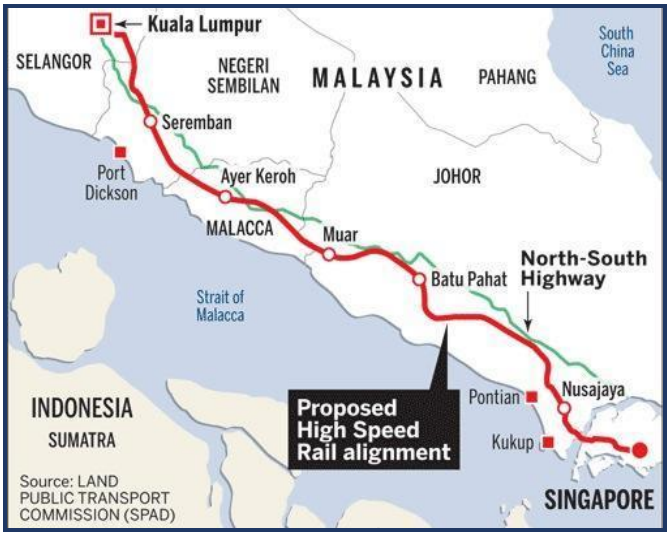
Stakeholder	Role
	Identify existing strengths and weaknesses in service
Investors	Provide feedback on attractiveness of various PPP options Follow rules and procedures of competitive bidding process Perform thorough due diligence resulting in competitive and realistic bidding
Strategic consultants	Provide unbiased evaluation of options for PPP Review existing framework and propose reforms Act as facilitator for cooperation among stakeholders

Annex E. Case Study of Cross-border PPP Project: Kuala Lumpur to Singapore High Speed Rail Link (Ongoing Project) [6]

Project History

A high-speed rail link between Kuala Lumpur and Singapore was initially proposed by Malaysian conglomerate YTL Corporation in 2006, but was cancelled in 2008 by the Malaysian government on grounds of cost. It was later included in the Malaysian government's 2010 Economic Transformation Programme as an "entry point project" to help facilitate the transformation of Malaysia into a high income economy. In 2011, the Malaysian Transport Commission ("SPAD") was tasked by the government with driving the project forward, initially by carrying out pre-feasibility and feasibility studies. The Prime Ministers of Malaysia and Singapore agreed to proceed with the project at a meeting on 19 February 2013, with a target operational date of 2020.[7] It was reported that the Singaporean Land Transport Authority ("LTA"), in turn, has started to hire consultants to conduct an engineering feasibility study of the Singapore leg of the project. [8]

Figure 7. Proposed High Speed Rail Alignment[9]



Rationale

A high-speed rail link would significantly reduce the travel time between Kuala Lumpur and Singapore. This is expected to connect the two metropolises in 90 minutes by passenger trains running at approximately 300 km/hour. The existing railway, which no longer

[6] The case study is based on the information available as of July 2014.
[7] Joint Statement By Prime Minister Lee Hsien Loong and Prime Minister Dato'Sri Mohd Najib Tun Abdul Razak at the Singapore-Malaysia Leaders' Retreat in Singapore on 19 February. Accessed 4 Nov. 2014. http://www.mfa.gov.sg/content/mfa/media_centre/press_room/pr/2013/201302/press_20130219_01.html
[8] Railway-technology.com "LTA invites bids for feasibility study of Kuala Lumpur-Singapore HSR link" Accessed 4 Nov. 2014. http://www.railway-technology.com/news/newslta-invites-bids-for-feasibility-study-of-kuala-lumpur-singapore-hsr-link-150414-4214884
[9] THE STRAITS TIMES. "Proposed stops for KL-Singapore high-speed rail" Accessed 4 Nov. 2014. http://www.straitstimes.com/news/singapore/transport/story/proposed-stops-kl-singapore-high-speed-rail-20140703

continues into Singapore, takes seven hours. Road journeys take around five hours and air travel can take four hours or more, including airport procedures and travel to and from the city centres. According to SPAD,[10] journeys between Kuala Lumpur and Singapore are expected to more than double by 2060. The project is intended to relieve congestion on the roads and to offer a quicker alternative to flying. It is also seen as offering a more environmentally friendly solution than increased road or air traffic.

In addition to the obvious transportation benefits, the project has received strong political support, especially in Malaysia, for the likely wider economic benefits. These include: job creation; urban regeneration in key hubs; regional economic development; and increased business activity through the "economic mass" or agglomeration effect of enhancing connectivity between major urban areas.

Procurement Status

The project is being procured by SPAD through four stages: (i) Pre-feasibility and detailed feasibility studies (15 months); (ii) Government-to-government engagement, structuring and tender process (12 to 24 months); (iii) Construction (to be completed by 2020); and (iv) Operations.

The feasibility studies in the first stage have been completed with positive results. The project is currently in phase 2, with the optimal structure, risk allocation, procurement strategy and inter-governmental agreement being developed before it proceeds to the tender process. SPAD announced in December 2013 that it had formed a joint working committee of Malaysian and Singaporean government officials under the purview of the Joint Ministerial Committee for Iskandar Malaysia to work on structuring and tender preparation.[11] It has been reported that SPAD expects to be able to issue the tender in early 2015.[12]

Key Challenges in Procuring as PPP

SPAD and the Singaporean Land Transport Authority ("LTA") are currently evaluating the appropriate structure for the project. There are several different types of structure and risk allocation that could be chosen, ranging from a fully publicly funded, procured and managed project to a full PPP type concession.

An explicit hurdle in adopting the PPP approach is lower for Malaysia-Singapore compared with other combinations of the ASEAN countries. Although neither Malaysia nor Singapore has enacted specific PPP laws, they both have experience in procuring infrastructure projects in a number of sectors on a PPP basis. Their PPP sectors can therefore be said to be somewhat closer to international standards than other countries in the region and it may not be necessary to develop specific PPP laws in either country in order to procure a new cross-border infrastructure project between them. The concession and inter-governmental arrangements that would need to be developed are of more importance.

[10] http://www.icn.org.au/sites/default/files/10.40%20-%20Mohd%20Nur%20Ismal%20Mohamed%20Kamal.pdf
[11] http://www.todayonline.com/singapore/singapore-and-malaysia-form-joint-work-group-high-speed-rail-link
[12] http://www.thestar.com.my/Business/Investing/2014/06/09/CIMB-Research-sees-YTL-Gamuda-benefiting-from-KL-Singapore-rail-link

Some of the key challenges including the inter-governmental issues can be summarized as follows:

1. **Inter-governmental Issues**: The Malaysian and Singaporean governments have demonstrated a common desire to move the project forward. Nevertheless, there remain a number of important matters that will have to be agreed at the inter-governmental level. These include:

    a. *Bilateral agreement*: The form of the agreements between the countries and their respective procuring authorities, e.g. treaty or agreements, including the applicable language, governing law and dispute resolution procedures.

    b. *Joint committee*: The form of any joint implementing body between the countries such as a joint committee or joint venture, its funding, scope, remit, governance and decision-making procedures.

    c. *Project scope*: Key technical and operational parameters such as route alignment, location of terminal stations and international boundary point, rolling stock type, frequency of trains and extent to which the project is standalone or interfaces with existing networks.

    d. *Procurement strategy*: Timing of the tender process, number of tender stages, evaluation criteria and decision-making procedures for award of contracts or concession.

    e. *Concession arrangements*: Traditional public procurement or private sector concession, degree of integration between infrastructure and operations, risk allocation between public and private sectors, track access arrangements, tariff arrangements, performance regime, and detailed form of concession agreements.

    f. *Termination and expiry*: Treatment of project assets on termination or expiry of the concession, early termination payments, concession extension and future re-franchising.

    g. *Government support*: Extent of public funding of construction costs, government revenue or loan guarantees, availability payments or other subsidies.

    h. *Liability*: Inter-governmental liability and interface with concession agreements.

    i. *Regulatory framework*: Harmonisation of applicable regulations, establishment of a joint regulatory authority and separate safety regulator, tax treatment of the project and regulation of customs, immigration, security and emergency situations.

    j. *Contract administration*: Administration of contracts with the private sector, resolution of disputes, contract waivers and amendments, changes in scope and enforcement of default and termination provisions.

2. **Rail Sector Issues**: Rail infrastructure projects are costly and complex, even more so in the case of high-speed rail. The high costs and uncertainties in forecasting passenger volumes have historically made it difficult for governments to procure high-speed rail projects without significant public sector funding or subsidies. Attempts to do so have

sometimes resulted in the need for subsequent rescue financing from the public sector, such as Taiwan High Speed Rail in 2009. The wider economic benefits created by high-speed rail infrastructure have been the main justification for such investment. In addition to funding challenges, rail infrastructure projects have a number of features that need to be considered carefully in structuring and procuring them. For example:

a. *Different level of regulation in rail sector*: Singapore's rail sector is considerably less regulated than Malaysia's. That said, rail projects in Malaysia notoriously suffer through lack of funds and, despite Malaysia encouraging investment from the private sector in development projects, concerns about inefficiencies and corruption exacerbate difficulties in the sector. Conversely, in Singapore the government generally retains control of operating assets, granting licences to private operators, and therefore is able to inject sufficient capital when required.

b. *Stakeholder's management*: Railway operations involve multiple stakeholders whose interests must be aligned as far as possible. Public sector political and economic objectives will need to be balanced with an adequate private sector returns to encourage investment in the project. At the same time, passengers will expect safe, efficient and affordable services to be provided.

c. *Land acquisition*: The length of the proposed track means land rights will be a significant issue. It is likely that the Malaysian and Singaporean governments will have to ensure that the necessary land corridor is acquired for the project, either through compulsory purchase powers or otherwise. Transferring land acquisition risk to the private sector would create significant procurement difficulties and would likely not be bankable.

d. *Technology*: SPAD intends that the project will make use of existing high-speed rail technology. However, proven technology still requires complex systems integration and has many ongoing technical and operational interfaces. The technical specifications outlined in the tender documents and proposed by bidders will need to be adequate to meet the operational objectives of the project both safely and cost-effectively.

e. *Track access arrangements*: The basis upon which train operators will be entitled to use the track will need to be determined, e.g. exclusive use by a single operator or multiple franchisees. If there is a separate infrastructure concession and operations franchise, the track access charges will need to be agreed and factored into the financial model.

f. Traffic risk, subsidies and fares: The extent to which traffic risk is transferred to the private sector is a crucial aspect of structuring the project. It may be that a significant amount of public sector subsidy is required, e.g. in the form of an availability payment to a concessionaire. Regulation of passenger fares and increases will also need to be considered.

g. *Performance and safety standards*: The train operator will need to be subject to objective performance standards and, in the case of an availability based concession, a payment deductions regime. Applicable safety standards and the body or bodies

regulating safety matters in relation to the project will have to be identified and developed.

3. **Funding/ Bankability Issues**: Each structure, ranging from public procurement to full PPP, has advantages and disadvantages, but ultimately the project will need to be structured so that it works for all stakeholders. Key considerations include:

   a. *Integration*: If a concession structure is chosen (rather than a fully public sector project), there could be a fully integrated PPP structure under which a private sector concessionaire enters into a project agreement with the relevant procuring authority and is responsible for designing, financing, constructing, operating and maintaining the entire project. Given the scale of the project, this may not be a viable structure. One alternative would be to separate the infrastructure concession from rolling stock procurement and operations. Another would be to have multiple infrastructure and maintenance concessions for different works packages. Civil works could be separated from systems such as signalling. There are several variations to each of these structures, for example where the public sector procures part or all of the works separately from an operations franchise. There will be a degree of integration risk for the public sector where different infrastructure works are procured separately.

   b. *Management*: A fully public sector project would require the procuring authority to retain a high level of responsibility for managing project delivery and operations. Given the cross-border nature of the project, this might also give rise to governance issues at the inter-governmental level. In a full PPP structure, the public sector's management burden is minimised since the concessionaire will have overall responsibility for delivering the project.

   c. *Risk transfer*: A balanced and realistic risk allocation is a crucial aspect of project deliverability. Key risks to be allocated between the public and private sectors include land acquisition, cost overruns, completion risk (including integration of separate works packages), operational interfaces, performance risk, traffic risk, political risks and termination compensation. The level of risk retained by the public sector and transferred to the private sector will depend on the structure chosen for the project and will to a large degree determine the level of private sector interest and funding of the project.

   d. *Financing*: The availability of long-term debt financing will depend in large part on the way in which the project is structured. A key aspect in transportation project will be the level of traffic risk to be borne by the concessionaire. Government support in the form of partial funding of construction costs, availability payments and revenue or loan guarantees may be necessary in order for the project to be bankable. Aside from public sector funding, sources of finance may include international and local commercial banks, multilaterals and export credit agencies. An appropriate level of gearing will also have to be considered, bearing in mind that significant equity investment in a project of this size may be difficult for many sponsors. Lenders may also require some level of sponsor support such as a completion guarantee or additional equity to cover cash shortfalls.

Glossary

ADB	Asian Development Bank
AIF	ASEAN Infrastructure Fund
AMS	ASEAN Member State
ASEAN	Association of Southeast Asian Nations
BAFO	Best and Final Offer
BLT	Build-Lease-Transfer
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
BOT	Build-Operate-Transfer
CBA	Cost-Benefit Analysis
CBTA	Cross-Border Transport Facilitation Agreement
DBFO	Design-Build-Finance-Operate
EGAT	Electricity Generating Authority of Thailand
EOI	Expression of Interest
ERIA	Economic Research Institute for ASEAN and East Asia
GBE	Government Business Enterprises
GMS	Greater Mekong Sub-region
ICT	Information and Communication Technology
IIGF	Indonesia Infrastructure Guarantee Fund
IPP	Independent Power Producer
JBIC	Japan bank for International Cooperation
LTA	Singaporean Land Transport Authority
MIGA	Multilateral Investment Guarantee Agency
MPAC	Master Plan of ASEAN Connectivity
MRT	Mass Rapid Transit
NTPC	Nam Theun Power Company Limited
O&M	Operation & Maintenance
ODA	Overseas Development Assistance
OECD	Organisation of Economic Cooperation and Development
OOF	Other Official Flows
PFI	Private Financial Initiative
PPP	Public-Private Partnership
PSC	Public Sector Comparator
RFQ	Request for Quotation
RFP	Request for Proposal
SPAD	Malaysian Land Public Transport Commission (Suruhanjaya Pengangkutan Awam Darat)
SPV	Special Purpose Vehicle
TA	Technical Assistance
VGF	Viability Gap Financing
WB	World Bank
WBG	World Bank Group