EXECUTIVE SUMMARY OF DESIRABILITY STUDY: METHODOLOGY GUIDELINES

November 2009
Executive Summary of Desirability Study Methodology

Introduction

The purpose of this document is to summarize the Puerto Rico Public-Private Partnerships Authority’s (the “PPPA” or the “Authority”) recommended methodology for undertaking the Study on Desirability and Convenience (“Desirability Study”).

This document should be read as a summary guideline for preparation of the Desirability Study for all projects where PPPA and its advisors have determined that such projects are likely to benefit from public private partnership (“PPP”) procurement in terms of securing value for money for the public. A more thorough description of the components of a Desirability Study can be found in Deliverable 1F.

The main questions the Authority or the Governing Agency should answer in the context of a Desirability Study are as follows:

1) What public service does the PPPA or the Governing Agency want to accomplish? What level of service does the PPPA or the Governing Agency want to deliver? (e.g. for school projects, how many classrooms to build?, who would maintain the facilities?; for road projects, how can the maintenance and safety of roads be improved?; for water projects, how can new communities receive quality water? how to improve water redundancy and reliability?)

2) What procurement options are available to deliver this level of public service and achieve the Puerto Rico Government’s public policy goals?

3) Among those procurement options, which one achieves the highest value for money?

4) Can the Authority or the Governing Agency afford the best identified procurement option?

Different types of project will require a different level of detail in terms of the analysis necessary to complete an adequate Desirability Study. For example, the granting of a Concession over an existing brownfield asset will usually be more straightforward and require less detailed analysis of service delivery, procurement options and risks than a new greenfield (new build) project.

The detail of the Desirability Study should therefore be tailored to the specifics of the transaction under consideration.
Summary of Desirability Study Methodology

POLICY CONTEXT


The Desirability Study is required under Section 7 of the PPP Act.

Goal: The PPP Act states that the public policy of the Government of Puerto Rico is to favor and promote the establishment of PPPs for the creation of Priority Projects, and among other things, to

- Further the development and maintenance of infrastructure facilities;
- Share the risk involved in the development between the PPPA and the Concessionaire;
- Manage operations and/or maintenance of such projects;
- Improve the services rendered and the functions of the Government; and
- Encourage job creation and promote the island’s socio-economic development and competitiveness.

WHAT IS A PPP?

Generally speaking, the main goal of a PPP is to secure value for money for the public through the procurement of a project with the participation of a private sector partner, while ensuring the public interest in terms of health, safety, equality, and sustainability, among others, is protected.

The key feature of the PPP approach is “risk transfer”, which is achieved by making the private sector partner responsible for delivering services that would otherwise be provided by the public sector (or not provided at all). These risks can include: construction, schedule, and functionality of design, financing, and the long-term performance of the asset through the optimal allocation of responsibility for operations, maintenance and rehabilitation.

The type, amount and effectiveness of possible risk transfer differ considerably based on the procurement method, contract structure selected and characteristics of a particular project. Traditional procurement has typically involved construction management (“CM”) and design-bid-build (“DBB”), where there is very little or no transfer of project-related risk to a private partner.

The range of procurement options that are generally accepted to be PPP structures include:

- Design build (DB);
- Design build finance (DBF);
- Design build maintain (DBM);
- Design build finance maintain (DBFM); and
- Design build finance operate (DBFO).

Those options are considered to be partnership structures as they

- Can be structured to require some degree of private financing;
- Are longer term;
- Can include responsibility for operations and life cycle performance of the asset; and
- Are enforceable with a performance-based payment mechanism for the duration of the contract term (This financial incentive is key to providing a stronger, more effective means of optimizing the life cycle costs of a project in a way that meets public policy and performance requirements)

A PPP will typically have the following potential benefits which result in value for money:
- Effective risk transfer to the private sector;
- Schedule and cost certainty;
- Integration; and
- Innovation.

**SUMMARY OF OVERALL PROJECT SCREENING AND SELECTION PROCESS**

The overall project screening and selection process should serve as a means for the Government of Puerto Rico to effectively identify projects that best serve the needs of the citizens of Puerto Rico and how to best deliver the project to meet those needs. Primarily, this process involves the following steps:

- **Mission Statement**: Public service statement on what the PPPA would like to achieve. It is on this basis that projects are proposed by Government entities and submitted for asset review;
- **The Asset Review Criteria**: Identifies viable projects to be further analyzed; and
- **The Desirability Study**: A multi-part process that determines whether a project, and the method of project delivery identified in the Study, offers value for money for the Government of Puerto Rico and its citizens.
The Desirability Study is essentially the business case for the project as a PPP: i.e. does the proposed project “makes sense”, and is the PPP option the best value for money means of procurement.

**Part A – Planning Future Service Delivery**

The first step of a Desirability Study is the identification of needs for the project. Part A sets out to determine what public service the Government agency is trying to provide.

Part A not only contains many of the process elements undertaken for conventional procurement (e.g. cost/benefit analysis, business case analysis), but also has a greater focus on the service needs (i.e. is the project necessary and desirable) rather than the definition of the physical assets necessary to deliver those services.

This part will typically be completed by the Government agency without specific input from PPPA.
Upon completion of Part A of the Desirability Study, the following should have been identified:

- A clear understanding of the public policy context of the project, i.e. does the project conform with the purposes of the PPP Act;
- A clear understanding of the public service needs to be satisfied by the project;
- A clear understanding of the current status of project development, e.g. permits status; and
- A cost-benefit analysis of the project under conventional procurement assumptions (assessment of the commercial, economic, social and environmental implications of the project), these issues are typically addressed in the environmental documents and other permits.
Part B – Service Delivery Options Analysis

When it has been determined that the project meets the general requirements of the PPP Act, the public service benefits have been identified, the project’s timeline is generally understood, and there is a general understanding of the financial resources required to complete the project, it is time to move to Part B.

Part B of the Desirability Study is the identification of risks, and analyzes the various Service Delivery Options for the project as a possible PPP. This includes:

- Identification of project risks;
- The importance and value of schedule certainty or acceleration;
- The degree of flexibility in asset provision (e.g., a bridge or a tunnel); and
- Analysis of delivery options ranging from CM or Design-Bid-Build to DB, DBFOM.

Part B will typically include market soundings of interested private sector bidders, and will present the objectives, scope, program delivery options analysis (i.e., pros and cons) and recommendations for the preferred service delivery option.

Part B forms the investment decision for the project.

Figure 3 – Part B | Scale of PPPs
 PART B – KEY CONCLUSIONS

On completion of Part B of the Desirability Study, the following should be identified:

- There should be a comprehensive list of project risks identifying and quantifying:
  - Those risks to be retained by the public sector agency; and
  - Those risks intended to be transferred to a private partner.
- One or more Service Delivery Options should be identified for further analysis (for example, a bridge or a tunnel) and the areas for potential private sector innovation in respect of the Service Delivery Options should be identified;
- One or more Procurement Options (Design-Build/Design-Build-Finance-Maintain) should be identified for each of the Service Delivery Options; and
- A qualitative assessment of the different Service Delivery Options and Procurement Options should have been completed (i.e. pros and cons).

Part C – Procurement Options Analysis

Part C of the Desirability Study compares the procurement options available to one another to identify the option that achieves the most value for money, i.e., a Public Sector Comparator (“PSC”) is assessed against a Shadow Bid for each alternative procurement approach.

The PSC is a risk-adjusted estimate of the costs of delivery of the project over its life through conventional procurement (by the Authority or the Government agency). This is compared with a Shadow Bid, which is the estimate of the costs of the project under PPP delivery, based on the procurement options selected for consideration. Comparing the PSC (traditional procurement) against the Shadow Bid (P3 procurement) will determine the estimated cost savings (or expense) of using a P3 procurement method.

♫ This results in the procurement decision – should a P3 be used or not?

Figure 4 – Part C | Project Net Present Value (“NPV”) Cost Analysis
Figure 4 is an illustration of the PSC and Shadow Bid cost breakdown. Some items are self explanatory, while other parts require some clarification:

- **Shared Risk** represents the risk associated with the project that is shared by both parties, such as environmental risk;

- **Raw O&M Cost in the PSC** represents the direct costs to the Government agency if Operations and Maintenance ("O&M") costs were to be performed in-house;

- **Transferable O&M Risk** represents the O&M risk that could be transferred but is retained by the Government agency when the O&M is undertaken in-house;

- **O&M Costs in the Shadow Bid** represents the O&M costs if they are undertaken by the private sector. The cost, which includes O&M related insurance and bonding costs, are smaller than the combined transferable and raw O&M costs, because the private sector can better manage the risk;

- **A similar concept applies to the Construction Cost**;

- **Competitive Neutrality in the PSC** represents the adjustment required to factor in costs borne by the private sector simply because they are a private company (this primarily consists of a variety of taxes); and

- **Retained Risk** represents the risks (costs) retained by the Government agency, independent of how the project is delivered.

The net present cost (NPC) of costs for both the PSC and the Shadow Bid are arrived by discounting expected cashflows at the risk-adjusted rate of return for the Government agency and the private sector.

Figure 5 below summarizes the process for determining the quantitative value for money by comparing the NPC of the alternative cash flows for a project.
PART C – KEY CONCLUSIONS

Upon completion of Part C of the Desirability Study:

- The range of Service Delivery and Procurement Options identified in Part B, should have been subjected to rigorous quantitative analysis (i.e. PSC vs Shadow Bid). The potential value for money from PPP procurement should be identified in the Shadow Bids to provide the same or better service at a lower overall net priced value cost (i.e. NPC);

- Any appropriate revisions to the proposed risk allocation or refinements to the Service Delivery Options have been made;

- A single recommended Service Delivery Option and Procurement Option has been selected to be taken forward into procurement; and

- The type of procurement process recommended to achieve the benefits forecast in the Shadow Bid has been identified.
Part D – Affordability Analysis

Part D provides a detailed funding and affordability analysis, including accounting, financial statement, budget and ratings analysis of the preferred service delivery option. It establishes any affordability ceilings and leads to the final decision on the recommended option affordability.

PART D – KEY CONCLUSIONS

Upon completion of Part D of the Desirability Study:

- The public sector accounting and budgeting implications of the recommended Service Delivery and Procurement Options have been identified;
- Any funding constraints have been identified, the proposed payment structure has been revised to accommodate this, and the PSC and Shadow Bids have been re-run as necessary;
- The funding stream for the project has been identified and any appropriations or other issues clarified; and
- Any scope flexibility or risk transfer flexibility has been identified in the event the Shadow Bids start to exceed the affordability ceiling.
General Disclosure

This Executive Summary of Desirability Study: Methodology Guidelines (the “Guidelines”) has been prepared as a technical guide and outline that can only be used as a general framework for a Desirability and Convenience Study. The Public-Private Partnerships Act (the “Act”) requires the completion of a Desirability and Convenience Study to determine whether the establishment of a proposed PPP is advisable.

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Estudio de Deseabilidad y Conveniencia:
Descripción de Marco de Análisis y Metodología

Junio de 2010
¿Qué es un Estudio de Deseabilidad de Alianza?

Flujo y proceso de análisis que contiene un Estudio de Deseabilidad

1. **Determinación de decisión de inversión**
   - Análisis de necesidades y objetivos
   - Alcance del proyecto deseado
   - Alternativas para gestionar el proyecto (Gobierno o APP)
   - Identificación y distribución de riesgos

2. **Análisis de Valor para el Interés Público**
   (VfM)
   - Comparación de alternativas para gestionar proyecto
   - Estimación de costos y riesgos de cada alternativa

   Método Tradicional
   Gobierno hace Proyecto
   (PSC*)
   Vs.
   Método Innovador
   Modalidad APP
   (Shadow Bid**)

Existe valor para el público si la modalidad APP es menor en costos o mayor en valoración que el método tradicional.

3. **Análisis de Asequibilidad**
   (Affordability Analysis)
   - ¿Podrá el Gobierno sufragar el perfil de pagos del proyecto?
   - ¿Serán suficientes los ingresos del proyecto para saldar deuda del Gobierno?

Una Alianza es deseable y conveniente cuando se cumple las siguientes condiciones:

1. Existe una necesidad clara y apremiante del Proyecto
2. Hay claridad en la transferencia de riesgos
3. El análisis de valor es positivo para el interés público
4. El proyecto es factible para el Gobierno

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* PSC = Public Sector Comparator, siglas en inglés para Comparable del Sector Público.
** Shadow Bid = Término en inglés para Comparable del Sector Privado.
Fuente: Autoridad de Alianzas Público-Privadas.