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SECTOR GUIDELINES

HEALTH

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ACRONYMS

| | |
|--------|--|
| ADB | Asian Development Bank |
| ADR | alternative dispute resolution |
| BOT | Build Operate Transfer |
| CAPEX | covenanted or mandatory future capital expenditure |
| CAPM | Capital Asset Pricing Model |
| CFADS | Cash Flow Available for Debt Service |
| CIIP | Comprehensive and Integrated Infrastructure Program |
| CLs | Contingent Liabilities |
| COA | Commission on Audit |
| CPI | Consumer Price Index |
| DBCC | Development and Budget Coordination Committee |
| DBM | Department of Budget and Management |
| DBP | Development Bank of the Philippines |
| DOF | Department of Finance |
| DOH | Department of Health |
| DOTC | Department of Transportation and Communications |
| DPWH | Department of Public Works and Highways |
| DSCR | Debt service cover ratio |
| EBITDA | earnings before interest, taxes, depreciation and amortization |
| EIRR | Economic Internal Rate of Return |
| ESIA | Environmental and social impact assessment |
| FIRR | Financial Internal Rate of Return |
| FS | Feasibility Study |
| GAA | General Appropriations Act |
| GDP | gross domestic product |
| GFIs | Government Financial Institutions |
| GOCCs | Government-Owned-and Controlled-Corporations |
| GPH | Government of the Philippines |
| IA | Implementing Agencies |
| ICC | Investment Coordination Committee |
| ICT | Information and Communications Technology |
| IRR | Implementing rules and regulations |
| ITB | Invitation to Bid |
| ITPB | Invitation to Pre-Qualify to Bid |
| LBP | Land Bank of the Philippines |
| LGUs | Local Government Units |
| LLCR | Loan life cover ratio |

| | |
|------|--|
| LRTA | Light Rail Transit Authority |
| LT | long-term |
| MCA | Multi-Criteria Analysis |
| MPSS | Minimum Performance Standards and Specifications |
| NEDA | National Economic and Development Authority |
| NGA | National Government Agency |
| NPV | net present value |
| O&M | Operations & Maintenance |
| OBA | Output based aid |
| ODA | Official Development Assistance |
| PBAC | Pre-qualification, Bid and Award Committee |
| PDST | Philippine Dealing System Treasury |
| PDP | Philippine Development Plan |
| PFS | Prefeasibility Study |
| PHIC | Philippine Health Insurance Corporation |
| PIP | Philippine Investment Plan |
| PLCR | Project life coverage ratio |
| PNR | Philippine National Railways |
| PPA | Philippine Ports Authority |
| PPP | Public Private Partnership |
| PPPC | PPP Center |
| QALY | National Economic and Development Authority |
| RFP | request for proposal |
| ROWA | Right-of-way acquisition |
| SCBA | Socio-economic Cost Benefit Analysis |
| SDR | social discount rate |
| SPC | special purpose company |
| SUCs | State Universities and Colleges |
| TOR | Terms of reference |
| VfM | Value for Money |
| VGf | Viability Gap Funding |
| WACC | Weighted average cost of capital |

1.0 INTRODUCTION

1.1 Agenda

1. This paper provides guidance in early stage development of public private partnerships (PPP) in the Department of Health (DOH). In Section 10, the next steps are summarized including key reference manuals to assist the DoH manage these stages of the PPP process.
2. The paper is structured in ten sections, including this section, as follows.

| Section | Contents |
|--|---|
| 2.0 Definition of Terms | Includes a glossary of key concepts and terms encountered in PPP projects in the Health Sector. |
| 3.0 Early Stage Work | Includes a review of the multi-criteria analysis (MCA) process for identifying, selecting, and prioritizing candidate PPP projects for implementation; alternative uses and applications of the MCA; and guidance on how to scope out a project before attempting to do the MCA. |
| 4.0 Application of the MCA Screen to health projects of the DOH | Provides examples of how to construct the MCA Screen, particularly the revenue variables. |
| 5.0 Prefeasibility and Feasibility Study Content | Describes in summary the general considerations that impact on the scope and content of prefeasibility and feasibility studies, including the social cost benefit analyses—the principal basis for investment decisions. |
| 6.0 Detailed Feasibility Study Checklist | The objective of this section is to provide a complete checklist from which the IA officer can either create a terms of reference or to check if the feasibility study is complete. |
| 7.0 Development of the Minimum Performance Standards and Specifications (MPSS) | <p>Provides guidance on the development and preparation of minimum performance standards and specifications for a hospital facility, used as an example for the Health sector.</p> <p>All PPP projects must specify the IA's needs in terms of service outputs. The MPSS is the contractual statement of the IA's service requirements, defined prior to formal engagement with the market. It forms the basis on which the bidders prepare their proposals, and against which the procurement team or the Pre-qualification, Bid and Award Committee (PBAC) of the IA carries out its tender evaluation.</p> |

| Section | Contents |
|---------------------------|--|
| 8.0 Project Structuring | Identifies frequently encountered obstacles to developing bankable PPP projects and the typical ways in which they are structured to avoid the issues. |
| 9.0 The Payment Mechanism | Refers to the various ways in which the payment mechanism is determined following the project structure. |
| 10.0 The Next Steps | Briefly summarizes the processes involved in taking the project through Stages 2, 3 and 4 in the life cycle of a typical PPP project and includes key reference manuals to assist IAs successfully tender, contract and manage projects through to final handover. |

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2.0 DEFINITION OF TERMS

- a) **Affordability analysis** means (a) the ability of the implementing agency (IA) to pay a recurring service fee for a PPP project, if it is structured as an “availability PPP”; or (b) the ability of users to pay a tariff for the right to use a facility, where the initial tariff and the parametric formula for adjustment is stipulated in the contract or approved by the regulator. The former would require a careful analysis of the IA’s capacity to pay over the term of the project agreement; while the latter would require an affordability/willingness to pay survey among users. In the case of the Concession Fee, the Affordability Analysis is used to more accurately determine the volume of usage each year of the project facility, the tariff it can reasonably charge to maximize usage, and the total revenues which can be generated under normal circumstances.
- b) **Availability PPP** means a PPP project which is structured as the sale of capacity to a single buyer supported by a service fee usually under a take-or-pay instrument, e.g., a bulk water treatment facility selling power to the water utility; or a power plant that sells bulk power to the utility.
- c) **Capital subsidy** refers to a viability gap funding (VGF) grant provided to a project by the government during its construction period. Refer to definition of viability gap funding, further below.
- d) **Concession PPP** means a PPP project which is structured to provide defined services to multiple users, for a defined tariff that is regulated by contract, or under the purview of a regulatory body.
- e) **Contingent liabilities (CLs)** in this context, means a potential liability usually belonging to the national government that does not crystallize until some defined event occurs, e.g., this could happen if the national government issues a performance undertaking covering among other matters the direct obligations of a Government-Owned-and Controlled-Corporations (GOCC) under a take-or-pay contract, and the GOCC defaults under its contractual obligations.
- f) **Contractual obligations** refer to those actual or potential obligations entered into by the government, or its IAs (See definition below), including GOCCs, Government Financial Institutions (GFIs), State Universities and Colleges (SUCs) and Local Government Units (LGUs). In a PPP contract, contractual obligations can cover both direct and indirect liabilities as defined further below.
- g) **Credit enhancement** refers to commitments or other measures (such as provision of collateral) undertaken by a third party to provide assurance that the obligation of a given entity will be honored in accordance with their terms. The most usual PPP credit enhancement is a performance undertaking issued by the Department of Finance (DOF), as agent for the government.
- h) **Debt service cover ratio (DSCR)** means the measure of cushion between debt service and cash flow available for debt service (CFADS) in any given period (typically annual, but lenders apply the ratio intra-annually, by quarter or semester). It is calculated as the period ratio of CFADS (after all other expenses are met, but excluding cash reserves such as the debt service reserve or the maintenance reserve) divided by the total amount of senior debt service and any other equal-ranking obligations due (principal and interest) in that period. Minimum, maximum and average periodic DSCRs are taken into account over the entire loan period in the analysis as they both give an indication on volatility of cash flows. Apart from measuring the DSCR on a period by period basis, other ways of measuring it include the following:
- Project life coverage ratio (PLCR)**. This is the net present value (NPV) of CFADS over the remaining project life, divided by the principal outstanding at the date of calculation. Typically,

“project life” will refer to the remaining economic life of the asset. Where a concession is granted that runs for a term less than the expected economic life of the asset, the remaining project life can be the remaining life of the concession term. The PLCR is also a useful alternate to the LLCR in situations where long-term debt is not available, and where cash-flow coverage is too narrow to retire debt over the shorter available debt life. The discount rate used to calculate the NPV of CFADS will typically be the projected interest rate, but where refinance risk is analyzed; varying assumptions about the cost of capital may be incorporated.

-Loan life cover ratio (LLCR). This is indicative of total capacity for debt service over the life of the rated instrument. This is the NPV of CFADS after operations and covenanted or mandatory future capital expenditure (CAPEX) infusions, from the calculation date to the final maturity of debt divided by the principal outstanding on the rated debt instrument (plus all equal-ranking and senior debt) at the calculation date. Cash flows are discounted at the projected interest rate. Residual values at maturity are excluded unless assets are specifically structured to be liquidated.

- i) **Direct liability** - as used in this memorandum, arises when the Government and/or one of its IAs contractually agrees to assume, or incur, a defined and time-certain financial obligation (for example, through VGF).
- j) **EBITDA** is a commonly used acronym in project finance which stands for earnings before interest, taxes, depreciation and amortization.
- k) **Economic benefits.** A benefit constitutes an increase in output or savings in resource use. In the case of transport projects for instance, the set of benefits may include: reduced vehicle operating costs; lower maintenance costs; fewer accidents, savings in time for passengers and freight; and in the case of developmental transport infrastructure, production increases. Of these cases, only the first two benefits and the last are easily quantifiable. However, to the extent possible, the effects of other benefits on national income should be quantified (e.g., value of each human life saved in terms of the capacity to earn during productive life).
- l) **Economic internal rate of return** refers to the rate at which the net present value of economic benefits is equal to zero.
- m) **Expected value.** A probabilistic calculation which multiplies the estimated effect of an event by the probability of its occurrence. The expected values of events connected to PPP projects covered by standard contingent liabilities is generally quite low in that although there could be major financial exposures, say from an expropriation, the probability of an occurrence is quite low. Expected values would be higher most of the time for non-standard contingent liabilities which usually involve contingent liabilities in relation to ongoing operations. Expected value is part of the range of possible values. It is important also to look at the nature of the overall statistical distribution of which the expected value is only the most likely value to occur.
- n) **Feasibility study** means an analysis of the commercial sustainability of building, operating, insuring and maintaining an infrastructure project successfully, taking into account the technical, social, economic, financial, and legal constraints. Rather than just diving into a project and hoping for the best, a feasibility study allows implementing agencies to investigate the possible negative and positive outcomes of a project before investing too much time and money. It differs from a **prefeasibility study** in that the latter is a more preliminary and less precise measure of commercial sustainability.
- o) **Financial internal rate of return** rate at which the net present value of the net revenues is equal to zero.
- p) **Government support** - refers to direct and indirect costs and risks that the government is willing to absorb, the general constraints involved, and the degree to which the absorption of

these risks should be included in the DOF Annual Fiscal Risk Statement of direct and indirect risks taken in the PPP program, along with the nominal costs and expected values. As such it is broader than government share. Government share refers to direct grants, guarantees and other kinds of contingent liabilities. Following the Revised Implementing rules and regulations (IRR) of the Build Operate Transfer (BOT) Law, government support can include, inter alia: cost sharing, credit enhancements, direct government subsidy, direct government equity, performance undertakings, legal assistance and security assistance.

- q) **Implementing agency (IA)** refers to any unit of the government with the mandate and authority to identify, select, prioritize, prepare, tender, negotiate and execute a PPP project agreement with a private entity. This can be a department (as in the case of Department of Public Works and Highways (DPWH) or Department of Transportation and Communications (DOTC), a GOCC (as in the case of Philippine Ports Authority (PPA), Light Rail Transit Authority (LRTA) or Philippine National Railways (PNR)), a GFI (as in the case of Development Bank of the Philippines (DBP), Land Bank of the Philippines (LBP)), an SUC or an LGU.
- r) **Information and Communications Technology (ICT)** allows users to store, access, transmit and manipulate information through the integrated use of telecommunications (telephone lines and wireless data transmission) systems and computers using enterprise software.
- s) **Investment Coordination Committee (ICC)** refers to the Investment Coordination Committee of the NEDA Board, which approves national PPP infrastructure projects up to PHP300 million and endorses PPP infrastructure projects that have higher costs to National Economic and Development Authority (NEDA) Board for approval.
- t) **Implementing rules and regulations (IRR)** refers to the Revised Implementing Rules & Regulations of Republic Act 7718 (referred to as the Amended BOT Law).
- u) **Market risk** means the extent to which a private sector proponent's infrastructure service offering is exposed to demand risk under prevailing market constraints related to the business cycle and conditions, perceived affordability of tariff, willingness to pay, and available alternatives to the service.
- v) **Minimum Performance Standards and Specifications** - refers to the minimum quality and quantity of service or outputs of a facility as defined by the IA, including the environmental standards prescribed by the DENR.
- w) **Output based aid (OBA)** - is a development aid strategy that links the delivery of public services in developing economies to targeted performance related subsidies.
- x) **Overseas development assistance** - grants or loans at or near concessional terms extended to the Philippines by foreign official donors, excluding export credits which are regarded as commercial loans.
- y) **Payment mechanism** - is the principal way of allocating risk between the proponent and the IA. A payment mechanism consists of five parts:
 - i. Service payments in any form, received only after commissioning, with this modality effectively transferring commissioning risk to the proponent;
 - ii. Adjustments to be made in the tariff path as a result of inflation or the agreed pass through costs, neutralizing risk for the proponent associated with (i) the inflationary pressures impacting on direct and variable costs of operation; (ii) commodity costs; and (iii) variable interest rate costs;

- iii. Penalties for failure to perform during construction or operations, partially or fully, with corresponding deductions from service payments due or, otherwise, directly invoiced on a monthly basis by the IA to the proponent, thereby transferring operations risk to the proponent;
 - iv. Agreement on service payments to be made during uninsurable *force majeure* or political *force majeure* when such events prevent full operation or result in partial destruction of the facility, through no fault of the proponent;
 - v. Defined payments to be made in the event of early termination, with such payments adjusted to take the cause of the early termination into account
- z) **Public Private Partnerships (PPP)** refers to a variety of contractual arrangements under which a private party provides infrastructure facilities, or other “government” services, under contract with an IA and which have the following characteristics:
- i. Include Availability or Concession Agreements or a combination of both;
 - ii. A long term agreement between a private party and an IA, delegating the offer and provision of infrastructure services to the former;
 - iii. A focus on project outputs rather than project inputs, taking account of the whole life cycle cost implications for the project;
 - iv. Transfer of certain project risks to the private sector, notably designing, building, operating and/or financing risks of the project;
 - v. Usually, the application of private financing to underpin risk transfer; and
 - vi. Payments to the private sector which are reflective of the costs of services to be provided. The project company may be paid either by users through user charges (e .g. tolls or tariffs), by the IA (availability payments or shadow tolls) or by a combination of both (e.g. user charges together with public operating subsidies). Payments may be regulated and/or be subject to parametric adjustment formulas.
- aa) **Project agreement** refers to the umbrella agreement between an IA and a private party, around which all of the other legal documents revolve.
 - bb) **Project cost** refers to all the reasonable hard and soft costs of implementing a project including the interest rollup during construction.
 - cc) **Project scoping-** is an investigation of the project that is sufficiently deep so as to be able to describe the project qualitatively, in particular its siting options including merits of each, minimum performance standards and specifications, probable payment mechanism, potential structuring options, rough approximation of implementation and operating costs, and some concept of how its revenue would be structured.
 - dd) **Proponent** is the sponsor(s) of a PPP project who is normally also the beneficial shareholder(s).
 - ee) **Quality Adjusted Life Years (QALY)** - is a measure of disease burden, including both the quality and the quantity of life lived. It is used in assessing the value for money of a medical intervention. It is based on the number of years of life that would be added by the intervention. Each year in perfect health is assigned the value of 1.0 down to a value of 0.0 for being dead. If the extra years would not be lived in full health, for example if the patient would lose a limb, or be blind or have to use a wheelchair, then the extra life-years are given a value between 0 and 1 to account for this.

- ff) **Right-of-way acquisition (ROWA)** as used in this document means the acquisition of real property and property rights. Real property, or property rights acquired must be for projects that are approved by the NEDA/ICC for implementation in the following year's budget;
- gg) **Risk management** is a component in the evaluation of a PPP project which is done in five distinct stages:
- Risk identification: the process of identifying all the risks relevant to the PPP project, whether during its construction phase or its operational phase;
 - Risk assessment: determining the likelihood of identified risks materializing and the magnitude of their consequences if they do materialize;
 - Risk allocation: allocating responsibility for dealing with the consequences of each risk to one of the parties to the PPP contract, or agreeing to deal with the risk through a specified mechanism which may involve sharing the risk;
 - Risk mitigation: attempting to reduce the likelihood of the risk occurring and the degree of its consequences for the risk-taker; and
 - Risk monitoring and review: monitoring and reviewing the identified risks and new risks as the PPP project develops and its environment changes. This process continues during the life of the PPP contract.
- PPP project risks can be divided broadly into commercial risks and legal and political risks:
 - Commercial risks can be divided into supply and demand risks. Supply risk concerns mainly the ability of the PPP Company to deliver;
 - Supply risk can be subdivided into construction risk and supply-side operation risk (where construction and operation constitute the two phases of the project);
 - Design/Construction and supply-side operation risks include financial market risk due to, for example, changes in the cost of capital or changes in exchange rates and inflation;
 - Demand risk relates to insufficient user volumes compared to base case assumptions;
 - Legal and political risks relate to, among other factors, the legal framework, dispute resolution, the regulatory framework, government policy, taxation, expropriation and nationalization;
- hh) **Social discount rate-** The social discount rate (SDR) is used to discount the stream of economic costs and benefits to their present values. It is the rate at which the social value of program/project costs and benefits decline over time. The SDR will likewise be used as the hurdle rate for a program/project's Economic Internal Rate of Return (EIRR). SDR currently used is 15%.
- ii) **Statistical Life Value**, in simplest terms, is the amount of money a person or society is willing to spend to save a human life. As there is no formal market for lives, statistical life value is estimated through surveys and other indirect means. Studies on statistical life value are regularly conducted and reported in developed countries, however are relatively few in most developing countries.
- jj) **Tariff** means the fee, including its indexation, that a user pays over the whole life of a project agreement to a private party in return for building, operating, insuring,

maintaining and transferring title to an infrastructure facility with a PPP multiple user (concession) structure.

- kk) **Usage fees** or operating subsidy refers to a grant, or grants, provided to a project during its operating period. This could take the form of a revenue deficiency guarantee, an operation/maintenance subsidy or a defined multi-year grant to cover defined operating expenses. This type of support to a PPP project is generally discouraged, though exceptions are made for social sectors such as Health.
- ll) **Value for money** is the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user's requirements.¹
- mm) **Viability gap funding** is a grant, or other value component extended by the government or an Implementing Agency, in any of the agreed forms for the purpose of making the tariff affordable to users while improving the commercial attractiveness and sustainability of the project. As indicated above, VGF grants can take several forms, amongst them:
- a. Outright extension of funds to cost-share implementation of a PPP project, including capital costs or operating subsidies of a PPP project;
 - b. Subordinated or concessionary loan, where the monetary value of the grant is based on the difference between the present value of prevailing commercial terms for such loan and actual terms extended by the government. (Note that in some cases, the grant element can be determined precisely only after the tender, depending on its terms and what proponents offer to do);
 - c. The commercial value of performance undertaking which has an economic value that can be calculated, but normally no identifiable "cash value" for accounting purposes; and
 - d. Any contribution of real property to a project, over which usufruct rights to the proponent has been granted.

Subject to existing laws and implementing rules, the government may provide any form of direct or indirect contribution or support, including ROWA, subject to the limitation that, in unsolicited proposals, there can be no government equity, subsidy or direct government guarantee (Revised BOT Law IRR, Section 13.3);

WHAT VGF IS NOT - Any business-as-usual arrangement such as a take-or-pay agreement (otherwise referred to as a "credit enhancement"), any incentive (fiscal or otherwise) or any contingent liability except those arising from a contingent liability that mitigates the risk of an operations event, such as hydrology risk for a hydroelectric power plant, or minimum revenue guarantee for a transport project. The latter are discouraged as VGF because their fiscal impact would not be known at the time the project agreement is executed.

- nn) **Weighted average cost of capital**- Financial institutions usually apply the WACC approach in analyzing the financial viability of the project as they decide on how much and in what form their exposure would be.

The WACC is the weighted average of the yields, net of tax on different sources of funds put up by the project proponent. This is determined by calculating the relative weights of the capital resources and multiplying them with the corresponding opportunity cost of capital for each of the capital resource. The WACC is mathematically represented in equation form by:

¹ <http://www.government-accounting.gov.uk/current/frames.htm>

$$\text{WACC} = \frac{[P_e \times R_e] + [P_1 \times R_1]}{[1 - T_r]}$$

Where P_e = percentage of equity investment to total capital investment

P_1 = percentage of loaned funds

R_e = opportunity cost of equity funds

R_1 = effective cost of loaned funds

T_r = corporate tax rate in Philippines

The use of the WACC in financial analysis should be limited to cases where the project risk is consistent with the overall risk-taking capacity of the agency and national government, and the project is financed from a pool of funds with proportions for debt and equity that are consistent with best practice, usually 70:30 for availability PPPs and 60:40 for concession PPPs.

As an alternative, pricing all the funds at the opportunity cost of equity is appropriate, particularly:

- a. When capital markets are imperfect, where cost and availability of long term capital is unpredictable, and prevailing financing sources are relied upon at any given time; and
- b. When the nature and scale of the project influences the sources and cost of financing, such as the case when foreign financing is tied to the program/project.

Conditions relevant to GOCCs appear to warrant the application of the “equity capital” approach if the sources of financing being considered come from abroad. See also Technical Note 1 appended.

- oo) **Willingness to pay survey** refers to the consumers’ ability and willingness to pay for an infrastructure service such as toll road, water supply, co-pay arrangement, etc.

3.0 EARLY STAGE WORK

3. Volume 1, Chapter 2 of the National Government Agency (NGA) Manual details the development of a generic MCA which contains two components: (a) a Pass Fail Screen; and (b) a full MCA screen that includes project merit scoring and weighting. The guidelines contained therein for the creation of such a screen should be read side-by-side with these Sector Guidelines.
4. The MCA is intended to assist IAs identify projects that are suitable for PPP implementation, and assist in identifying projects that should be considered further for this implementation strategy. Its function, quite simply, is to improve the efficiency of PPP project selection by avoiding unnecessary expense and effort. For those projects that survive the screen and are selected by the Department Secretary for additional in-depth work, a prefeasibility study (PFS) is prepared - the purpose of which is to validate the selection of the project as a PPP. If the results are positive, then the agency can deepen the analysis to come up with the full feasibility study, which shall be the basis of the ICC evaluation and approval;
5. For purposes of this paper, the scope and content of prefeasibility and feasibility studies can be found in Volume 1, Chapters 2 and 3 of the NGA Manual. In implementing such studies, however, the following distinctions will be made between the two:
 - Pre-Feasibility Study (PFS) – Refers to a preliminary assessment of likely project viability, including basic project analysis within orders of magnitude for financial and economic analysis, but which would also include an overview of the technical, social and institutional merits of the project and which ensures a solid basis for undertaking a feasibility study;
 - Feasibility Study (FS) – Refers to the full analysis and evaluation of a project based on the pre-feasibility study with extensive fieldwork-based analysis of the technical, financial, economic, environmental, social and institutional merits of the project, as well as more definite estimates of financial returns and the economic impact of project implementation. Feasibility studies also include a full justification for undertaking the project as a PPP, as well as the results of market-scoping interactions with developers and lenders to discuss the project's purpose, payment mechanism, structure and other key elements.
6. The PFS must be done in sufficient detail to show that the project is likely to be capable of delivering a financial internal rate of return (FIRR) of at least the estimated weighted average cost of capital (refer to appended Technical Note 1), and somewhat higher if the project has demand risk, and an EIRR of 15%, the benchmark stipulated by NEDA. There are instances where the project may not be financially viable based on user fees alone. If the project is economically viable, as discussed further below in Sections 7, 8 and 9, the IA may want to consider structuring the project in a manner which enables an attractive FIRR, either by incorporating a VGF grant to buy down project construction costs or, otherwise, through usage fees or operating subsidies as set forth in Section 9, The Payment Mechanism.
7. As a general rule, other than in the social sectors, health and education, government discourages the use of operating subsidies as their impact on the national budget is less predictable than approaches such as VGF. Health facilities are a special case, considering that operating costs are generally higher than capital expenditures and in view of government's commitment made to provide health care for the poor. Nonetheless, where usage fees are part of the structure, it is greatly preferred to employ OBA² mechanisms for delivering project support that is capped at some reasonable level. The intention in using defined OBA mechanisms is to avoid unanticipated draws on the national budget, as a result of operating subsidies that are inherently unpredictable. OBA is a results-based subsidy mechanism to address a funding gap between the cost of the service and the beneficiaries'

² OBA is a PPP project strategy that links the delivery of public services to targeted performance related subsidies.

ability to pay. The third party service provider will be paid only upon the satisfactory delivery of the service, which shall be independently verified based on the minimum performance standards and specifications. The OBA mechanism requires the service provider to pre-finance and take on the performance risks.

8. Figure 1 below illustrates where MCA would fit into the flow of work in Stage 1 of the life cycle of a PPP project³. This is the period when projects that are deemed to be aligned with the Philippine Development Plan (PDP) are being considered for either PPP implementation, or public funding and traditional procurement. Note that a scoping study for each project is needed, as described further below, because a screen such as the one being suggested, cannot be used effectively if one does not have a clear idea of the project's objectives, development benefits, functional performance, siting, probable technical configuration, payment mechanism, social safeguard issues, and how it fits into the legal and regulatory framework. MCA, properly applied, does minimize the amount of data that has to be collected but it does not eliminate the need entirely.
9. MCA can also be used to address the following investment considerations:
 - It can be employed to compare different ways of addressing congestion and unserved patients in a health facility for example, from the do-minimum scenario, using technology and management techniques, to the wider panoply of investments in potential expansion of the facility or building a new facility;
 - Compare functionally equivalent, but differently configured technological solutions for the same project to determine which one is likely to have the best-value configuration solution.
 - Compare different contractual arrangements (Lease agreement, Build Operate Transfer, Build Lease Transfer, etc.) for the same project, to determine which one has the best potential risk-reward tradeoff for the Philippines, fewest contingent liabilities or the best fit into the legal and regulatory structure;
10. Since there is a great deal of subjectivity involved in applying MCA, a key principle is that MCA should be carried out by a team of experienced professionals (preferably representing multi-disciplines) and not by an individual, to ensure that the results of the analysis reflect the collective information and understanding of facts and issues possessed by the IA, or PPP Center.
11. It is also important to note that MCA is no substitute for detailed analysis, but it is useful at an early stage in pipeline development when preliminary decisions have to be made based on scant information.

3.1 Principles to apply in using MCA when identifying candidate PPP Projects

12. The MCA is best used in comparing projects of the same type such as those that are found in the long-list of projects from one sector, rather than projects from different sectors, for example, comparing a transportation project to a health project.
13. The MCA methodology described in this guideline provides an approach for IAs to develop a rational basis and a systematic process for selection of candidate PPP projects. The analysis needs to be tailored to each sector's own project dynamics, particularly on project revenues.
14. Failure to pass the MCA for PPP implementation does not mean that the project should not be undertaken. If it is economically viable the IAs can consider funding it from public resources, such as from internal revenues or Official Development Assistance (ODA) financing. Projects that initially failed the MCA for PPP implementation may be reconsidered if elements or circumstances that made it fail are reversed or mitigated.

³ The flow chart is from Volume 1, Chapter 2 of the NGA Manual

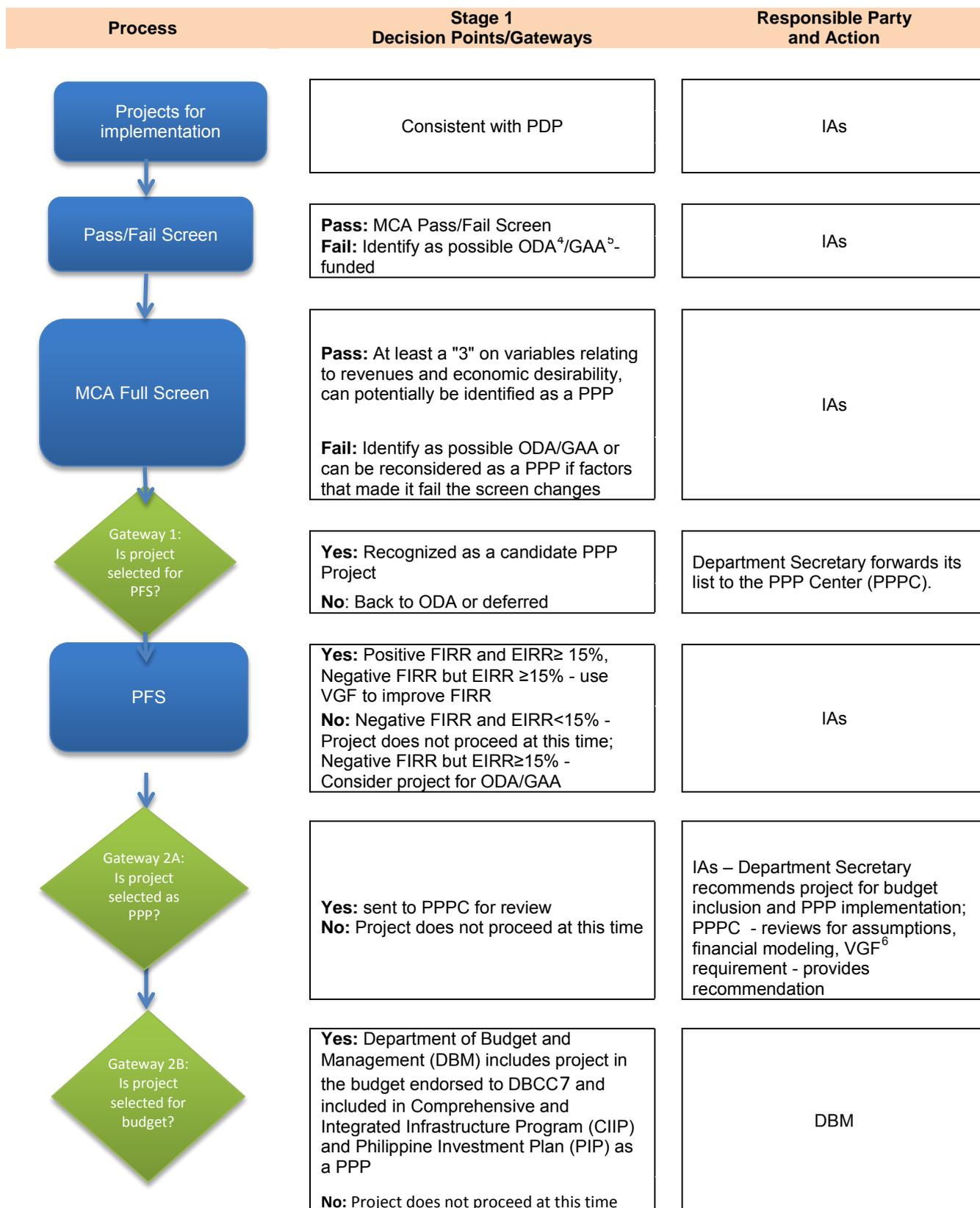


Figure 1: Stage 1 Life Cycle

⁴ ODA stands for Official Development Assistance

⁵ GAA stands for General Appropriations Act

⁶ VGF stands for Viability Gap Funding

⁷ DBCC stands for Development and Budget Coordination Committee

3.2 Scoping the Project for MCA Application

15. The term, project scoping, means different things at different stages in the development of a candidate PPP project. In these Guidelines, project scoping will be taken to mean: a desktop investigation of the project that is sufficiently deep so as to be able to describe the project qualitatively, in particular its siting options including merits of minimum performance standards and specifications, probable payment mechanisms, potential structuring options, rough approximation of capital and operating costs, and some concept of how its revenue would be structured⁸.
16. The approach described here is intended to focus in a high level way on certain attributes of the project that aid in understanding the project conceptually.
17. The analysis is informed by the conceptual description of a simple financial model that can be developed by the IA analyst, the ultimate objective of which is to measure the level of revenues the project requires in order to be financially viable. The targeted revenues can be identified by working backwards from distributable cash flows, to debt service and operating expenses to get an approximation of the revenues needed (see appended Technical Note 2). Once there is a fix on revenue requirements, it may be easier to make judgments regarding the ability of the project to be commercially sustainable with just user fees; or alternatively some combination of (a) user fees and VGF for the capital expenditures; (b) user fees and usage fees or operating subsidy (c) performance based fees, or (d) availability payments⁹.
18. Project scoping is not a precise science; it is merely one way to understand a project and its potential requirements. It should take a short period of investigation to complete it. It is recommended that IAs develop their own approach to project scoping that is consistent with the attributes of projects in their sectors. While the principles of project scoping are the same for every sector, there may be slight differences in the way that the project is conceptualized with certain attributes taking on more importance than others. The example shown in Table 1 features a hospital facility. Note however that there are other health related projects that could also be suitable for PPP. Upon a study and familiarity with this methodology and the insights it produces, it should make the process of using MCA much easier and more effective.

Table 1
Project Scoping of a Public Hospital¹⁰

| Steps | Project attributes | Guidance |
|-------|-----------------------------------|--|
| 1 | Purpose of the project | <p>State purpose of the project based on DOH's identified needs of its constituents in the project's area of influence. The purpose will help define the scope of the project, which will be the preliminary basis for determining the minimum performance standards and specifications of the project.</p> <p>Refer to Annex 6 of the NEDA PPP Guidelines, which provides guidance on how to develop minimum performance standards and specifications for the service. At this stage the project scope is "high level" and will be refined with additional detail during the development of the project, particularly during the PFS and FS stages.</p> |
| 2 | Is there a "do minimum" scenario? | Consider a range of management or administrative actions that might meet the demand for the services of the |

⁸ NEDA PPP Guidelines

⁹ NEDA PPP Guidelines, Annex 7

¹⁰ Note that this is an example only and that PPP will be applicable to many other projects types within the broad scope of the health sector.

| Steps | Project attributes | Guidance |
|-------|--|---|
| | | <p>proposed project e.g., instead of building a new hospital, consider enlarging the capacity of a nearby hospital, which may be a cheaper alternative; or before considering the expansion option improve layout, out-patient care and day surgery; or upgrade management and administrative system for higher staff productivity; invest in new technology such as ICT solutions or modern equipment for medical tests and treatment to improve the efficiency of and to upgrade the level of service of the existing facility.</p> <p>▷How far into the future does the do minimum scenario resolve demand for the service? ▷In what other way can the demand for the service be met through a “do minimum” scenario?</p> |
| 3 | Is there more than one technical solution? | Consider all the potential technical solutions and determine the differences in project cost? This may be a function of the amount of land that is available for this purpose and is under government control or can be purchased by the latter, or of the cost of the new technology in terms of physical assets and capacitation of medical staff on the use of the technology. |
| 4 | Does the hospital administration have the management capability to manage the project? | Assess the capability of the hospital leadership to implement the project and manage the contract. Add to the project cost if capability building or additional expertise/manpower is required. |
| 5 | Project site | <p>▷Is there a proposed site or sites? ▷Are the sites available and free of encumbrances? ▷What are the merits/demerits of each site? Which site is the most convenient? Which provides for the least congestion? ▷Are there natural hazards, e.g., is the area prone to flooding ▷Consider the technical difficulties of constructing a hospital in each site;</p> <p>How long will the construction take? Do not underestimate this as it has a bearing on project cost.</p> |
| 6 | Project cost | ▷Use past experience to estimate maximum and minimum project cost for each technical configuration - such that the actual is almost certain to fall in the selected range. |
| 7 | What is the typical cost of operations and maintenance of a facility such as this one? | This will require the acquisition of data from a comparable hospital which can provide estimates of total Operations & Maintenance (O&M) costs. |
| 8 | It is important to identify all of the operating costs ▷fixed ▷variable | <p>▷Estimates should be based on the actual experience the IA has for similar undertakings; ▷Fixed operating costs are usually a fixed percentage of project cost, indexed to inflation; ▷Variable operating costs are a function of the size of the hospital and the mix of services it offers</p> |

| Steps | Project attributes | Guidance |
|-------|---|---|
| 9 | Demand | <p>Check on the following aspects to determine if statistics are available on, among others:</p> <ul style="list-style-type: none"> • Population served by the proposed hospital, • Demand analysis studies, • Current hospital occupancy levels, • Gross domestic product (GDP)/household income growth of the area, and • Induced demand, that is, demand that is likely to shift from other neighbouring hospitals due to lower costs, comfort and convenience. <p>A hospital administrator can help provide benchmarks for revenue based on hospital specialization, location, and other such factors.</p> |
| 10 | Socio-economic cost benefit analysis | <p>What is the cost of not providing adequate service to society, or put another way what are the social and economic benefits of providing adequate service?</p> <p>Compare the economic benefits with the economic cost of the project and calculate the EIRR. The methodology is provided for in Volume 1, Chapter 3 of the NGA Manual.</p> <p>Determine if the project is able to achieve an EIRR of at least 15%.</p> |
| 11 | Estimate the potential revenues of the project | <p>Identify the revenue centers of the hospital, including those from ancillary services such as pharmacy and food stall concessions, and estimate the projected revenues with the project.</p> |
| 12 | Financial analysis (see Technical Note 2 on the calculation of the required revenue to achieve financial viability) | <p>Perform financial or cost efficiency analysis to determine the required revenue of the project that will meet debt service requirements, operation and maintenance cost and a reasonable return of equity investments.</p> <p>The range of revenues may not be achievable immediately, or may be achievable at different ramp up rates, or possibly not at all. If so, either VGF or some type of subsidy will be required.</p> |

4.0 APPLICATION OF MCA TO THE HEALTH SECTOR

19. This section must be read together with Volume 1, Chapter 2 of the NGA Manual which sets forth the guidance in scoring and weighting those variables that indicate whether the proposed project has the potential to be implemented as a PPP. As mentioned in that Chapter, to apply the MCA to specific sectors, amendments to the generic MCA scoring and weighting screen found therein will be needed. While amendments are not needed to the Pass/Fail screen, they will be needed where there is an impact on revenue.
20. Health projects, generally, have well established purposes which include general or specialized medical care including diagnostic services. Table 2, below, demonstrates the changes in revenue criteria needed for a health facility when compared to the generic criteria identified in Chapter 2 of the NGA Manual.

Table 2
Health Infrastructure
Changes in the Revenue Variables to the Generic MCA Screen

| EXAMPLES FROM A GENERIC MCA SCREEN: | TO (A SECTOR SPECIFIC APPROACH): |
|---|--|
| For “Concession PPPs,” revenue stream is predictable due to a government support package, either in the form of VGF, OBA, minimum revenue guarantee or other such instrument. | The Project’s Payment Mechanism can be built based on a combination of user fees (co-pay) and benefits from Philippine Health Insurance Corporation (PHIC) and private insurance companies plus VGF. If VGF is not an option, usage fees (fees paid by government based on the number of patients treated or vouchers for each type of treatment) can be incorporated into the Payment Mechanism to make the project bankable; |
| Demand for service is inelastic relative to its cost and is expected to remain high into foreseeable future. | There is no competing health facility in the immediate area for the group of pathologies that will be treated. |
| Cost of services appears competitive with alternative service providers based on a favorable “Affordability and Willingness/Capacity to Pay” survey. | Good data available on patient flows and trends, would appear to predict increasing need for the service. |
| A do-minimum scenario has been considered and the conclusion is that the demand cannot be accommodated in this manner. | To improve operating performance, and given the size of the population that will be served, full and relevant diagnostic services will be offered, as well as short and long-term treatment options. |

5.0 GENERAL CONSIDERATIONS FOR PREFEASIBILITY AND FEASIBILITY STUDIES IN THE HEALTH SECTOR

5.1 Project objectives

21. Health sector investment projects are correlated with the prevention and/or treatment of a wide range of medical conditions and refer to different categories of the population. The overarching goals are increasing life expectancy and quality of life. Critical factors to consider include:

- Different types of patients with specific ability-to-pay;
- The rate of growth of effective demand (number of patients per year);
- Economic life of equipment or period of obsolescence;
- Measures for ensuring safety of patients;
- The costs related to possible damage, regardless of the cause;
- Operating costs; and
- The long-term dynamics of hospitalization costs.

5.2 Project identification

22. Due to the complexity of a health care infrastructure, there is a need to clearly describe the objectives and characteristics of the proposed project. The main features to be considered and analysed include:

a. Functional features, for example:

- the range of health services involved;
- the minimum level of service required;
- the area and size of the target population;
- the diagnostic functions; and
- the short- or long-term treatment involved.

b. Basic data, for example:

- the average and maximum number of patients per day, month, year;
- how many of the patients pay full cost, partial or no pay at all;
- A list of the departments for assistance and prevention, treatment and diagnosis; and
- Patient admissions per Department and numbers in Outpatients.
- Physical data (for example):
 - The surface area and covered area,
 - Number of treatment rooms, wards, prevention and/or diagnostic consulting rooms,
 - Existence and size of outpatient department.

c. Technical and engineering features, for example:

- Standard on gross area per bed (rule of thumb: emerging markets have 120 sqm; Europe 170 sqm and US 360 sqm);¹¹
- Layout; arrangement of internal/external areas;
- Description of the principal equipment and machinery for diagnosis and/or treatment (e.g. X-ray, scans, nuclear medicine, endoscopes etc.);
- Patient safety measures (e.g., negative pressure rooms for air-borne communicable diseases; infection control in surgical areas);
- Construction, and layout of buildings or parts thereof; and

¹¹ IFC Journal, Handshake, Issue #3, 2011, Article by Lindsay Stowell and Matthias Loening, "PPP Basics: Is your project affordable?" Note that this is gross area so includes operating theatres, laboratories, admission centers, kitchens etc.

- Ease of entry and exit, parking and ease of movement in the facility's premises.

5.3 Technical analysis

23. The feasibility of the projects should be verified according to patient flows and trends and by taking into consideration the epidemiological and patient service data available.
24. For the alternative options, the critical issues to establish are:
 - Different medical-technological solutions;
 - The construction of a new infrastructure, or the expansion, upgrading and modernization of an old one;
 - Different treatment systems.

5.4 Economic analysis

25. The benefits of the investments in health infrastructures can be derived primarily from morbidity and mortality improvements, and added quality of life years efficiency gains.
26. Assigning a monetary value to health benefits is complex. The most prominent techniques are to refer to the market prices of the service (willingness-to-pay) or to use standard methods, such as the indices for increased life expectancy suitably adjusted by the quality (e.g. Quality Adjusted Life Years) which can be valued according to the principle of lost income or to similar actuarial criteria.
27. The two most important techniques to evaluate the statistical life value are:
 - Human-capital approach: this considers the improvements in health status as investments that yield future gains in productivity. The limitation of this approach is that it examines only the effects of health on economic output and ignores the consumption value of health (e.g. even after retirement, life continues to have value);
 - Willingness-to-pay: this is a widely-accepted measure; estimates are derived from revealed preference studies examining earnings' premiums for risky jobs or safety expenditures by consumers;

➤ Economic Benefits

- The future savings in health costs which are directly proportional to the decrease in the number of people affected and/or the lesser degree of gravity of the illness, which is a result of an effective public health program;
- The avoided loss in production, due to the lower number of working days lost by the patient and his or her family;
- The reduction in suffering on the part of the patients and their families, identifiable as, the increased life expectancy of the patient and the improved quality of life for the patient and his or her family;
- The number of deaths prevented (involving concepts such as the value of statistical life and quality of life years);
- Cost savings due to efficiency measures, such as use of ICT to streamline processes or simplify procedures in hospital operations.

➤ Economic Costs

- Financial costs converted into economic cost for the facility. The conversion of financial to economic prices is discussed in Volume 1, Chapter 3 of the NGA Manual.

➤ Economic Internal Rate of Return

- The economic internal rate of return should at least be 15%.

5.5 Financial analysis

28. The financial inflows and outflows could include the following:

➤ Financial inflows

- Room rates;
- Fees for diagnosis;
- Fees for treatment;
- Revenues from ancillary services or commercial activities such as food concessionaires;
- Transfer from government budget (e.g., PhilHealth).

➤ Financial outflows

- Investment costs, e.g., civil works, equipment;
- O&M Costs: personnel, maintenance, supplies;
- Utilities.

➤ Financial Internal Rate of Return

- The financial internal rate of return should at least be equal to the weighted average cost of capital. Refer also Technical Note 1 appended herewith.

5.6 Checklist for risk assessment

29. The risk assessment will follow the risk assessment matrix in the NEDA PPP Guidelines. Risks are identified according to the project life cycle. While these will be discussed in more detail in the next section, the critical factors are:

- Site Conditions- vulnerability to climate change hazards, cost, availability and suitability of land, congestion in the area and limitation in space;
- Construction Risk- events that could delay construction or increase in cost that will result to significant overruns;
- Demand Risk- affordability to pay an issue; forecasted patronage not met or significantly higher number of partial or non-paying patients thereby reducing forecasted revenues;
- Operating Risks- increase in operating costs, including prices of special medical supplies that do not move in line with the general consumer price index (hence difficult to forecast), and need for re-training of staff;
- Technical obsolescence of equipment or innovations in medical treatment.

6.0 DETAILED CHECKLIST FOR PREFEASIBILITY AND FEASIBILITY STUDIES FOR HEALTH FACILITIES

30. The checklist below can be used in several ways:
- To design a terms of reference (TOR) for an external consultant for the feasibility study;
 - To check whether a consultant's draft of a feasibility study is complete and deals with those issues that are relevant to the project in a comprehensive manner;
 - To create an early scoping study by focusing on the items under "General" in each project section to be able to conduct and guide the conduct of a "Multi-Criteria Analysis" of a proposed project, a "Technical Review" or even that of a "Desktop Prefeasibility Study," and/or
 - As a Planning Tool, for allocation of responsibility to the team members that will be developing the project.
31. The checklist is not meant to be a static grouping of issues, but rather should be thought of as a guideline which is constantly updated as each new project is developed with additions and deletions, depending upon relevant issues involved and their complexity.
32. The detailed checklist below is organized in the following order:
- General Information related to the proposed project;
 - Demand Assessment;
 - Environment, Social and Gender Assessment;
 - Economic and Financial Assessment;
 - Assessment of Appropriate PPP Structure;
 - Institutional Assessment;
 - Implementation Plan;
 - Risk Management.

6.1 General

33. DOH will use the following criteria to make a determination as to what aspects of the project, if any, need more investigation before appraisal could commence:
- Preliminary description of rationale of the project, including nature and measure of benefits and beneficiaries broken out by income level, gender, ethnicity and age.
 - What is the hospital's purpose (clinic or other facility), what population will it serve, what medical care will it provide, how would one formulate preliminary MPSS?
 - Confirmation supported by appropriate data, that the proposed project is likely to deliver the stated benefits to identified beneficiary groups, informed by meaningful public consultation which may include income and gender-based focus groups and a stakeholder analysis.
 - Identification of the role of the project in the DOH sector strategy and investment plan.
 - Indication supported by appropriate data that commercial or private financing is available for the project, e.g., consultation with commercial banks on interest and capacity to lend to health facilities.
 - A preliminary description of the institutional arrangements in place to manage and maintain public hospitals, the responsible organization, funding arrangements, maintenance history, and general capability. Management capability of the hospital administration group if it is an existing facility.

- Identification of areas which require more detailed, current or reliable information to be obtained. For example, the location of the hospital; availability of land, or the cost of the land at that locale; size of the hospital and physical configuration; percentage of rooms allotted for sponsored patients, indigent and private patients; number of rooms and percentage of rooms that can be priced commercially and that will be priced at concessional rates for sponsored or indigent patients; diagnostic equipment required and its cost; other necessary medical equipment; number of doctors, nurses, other personnel; facilities other than medical e.g., pharmacy and food stall concessions. If a new approach road (or realignment of an existing road) is proposed, obtaining approvals from all relevant parties for right-of-way acquisition may be a significant and time consuming issue; identify the party responsible, process, approving authority, and a timeline at commencement of the appraisal phase.
 - Discussion with hospital administrators in other public hospitals regarding the revenue and cost dynamics of a hospital- what are the standard benchmarks in the Philippines for the fixed and variable operations and maintenance costs? What kinds of issues are involved in operating a hospital and how do they impact on costs?
 - Collection and integration of satellite imagery and topographical maps at the appropriate scale (typically 1:25,000 for urban planning) identifying key elements of existing and proposed infrastructure, rights-of-way, and service areas. In addition, it will be appropriate for the appraisal process to identify other geo-spatial data – including but not limited to census data, location of other hospitals, services provided by surrounding hospitals, access to reliable water and electricity resources, and geological data – and combine them into a single GIS database.
34. Once the DOH has been cleared to commence appraisal, the PPP unit will conduct the following assessments and identify any key constraints:

6.2 Demand Assessment

- What is the current demand? How much of this is served, underserved or unserved?
- Determine the hospital's potential and growth prospects through a thorough market assessment and business forecasts for the general or specialized medical care to be offered. Also, discussion with hospital administrators and other professionals can be very illuminating in this regard.
- Market survey is likely to include population growth in the area, types of illnesses and prevalence statistics for such illnesses, segments of the population to be served, average income levels, other health services providers in the area, affordability issues, options availability to cope with affordability constraints, etc.
- Precise facilities and services to be offered, medical and non-medical, hours of operation, other pertinent issues needing to be included in the MPSS?
- What are the sources of revenues? What fees will be charged to users? What will be the source of subsidized fees? How is the payment mechanism to be structured?

6.3 Technical Assessment

- How large is the hospital going to be? Is there land available and is the location optimal for the purposes on which the hospital will be built? Is there space for parking? Will the hospital have its own power generation plant?
- Confirm acceptability of site, or site selection for the medical facility and that it meets standards. These standards should include, but not be limited to, (a) land free of title dispute, (b) land that conforms to all applicable zoning, regulations and permitting, (c) access easements are permanently available, (d) not at risk to floods, landslides, active earthquake faults or unstable soil (liquefaction, underlying landfill, toxicity, low bearing strength), (e) there is permanent utility right-of-way to service water, sewage or septage¹²

¹² Partially treated waste contained in a septic system.

management, electricity, telecommunications and solid waste disposal, and (f) the physical access to the construction sites. Should location, or land availability, call for modified standards (e.g., large scale seismic zones), mitigation of hazards should be included in the designs;

- Ensure that building site access is commensurate with its intended use and that there is adequate area for parking, access to the emergency room, loading bays, etc.;
- Ensure that soils, geological, seismic, vulnerability to flooding investigations are complete;
- Review all aspects of preliminary technical designs and proposed building standards and confirm appropriateness of design criteria;
- Prepare and assess economically justified alternative design options taking into account gross area per bed, layout, use of modern equipment for better outpatient care and day surgery to avoid need for confinement;
- Review maintenance requirements and costs, and compare against current maintenance benchmarks derived from hospital administrators (see the institutional assessment section below);
- Identify major project construction risks and quantify, as much as possible, the impact of these risks on project cost, timeline and quality. Identify or develop mitigation measures and estimate the cost of mitigation;
- Identify local factors that may affect the timely completion of the hospital works, including transport to/from the location for the contractor's equipment, fuel and other materials, seasonal weather patterns (such as the wet season) that need to be taken into account during the construction period, traffic congestion, local security concerns etc.;
- Develop project cost estimates of +/-20%, including all associated costs, such as costs relating to environmental mitigation, resettlement compensation, social safeguard measures, construction supervision, project management and technical audits;
- Develop provisions to be included in project cost estimates, such as physical contingency, allowances for specific risks that were identified in appraisal, price contingencies, and allowance for the effects of foreign exchange rate fluctuations, and determine meaningful rates of inflation – local and foreign – to apply to base costs;
- With the help of a hospital administrator, or other medical expert, make a comprehensive list of the major equipment items that will be required and their capital and utilization cost-- for example, some equipment and some laboratory procedures require costly re-agents. Other capital expenditure for smaller medical and office equipment should be estimated. These costs should be added to the building costs to arrive at a total cost for the facility;
- Any capacity building of staff required in say operating new equipment or systems improvement, for example computerization should also be estimated and factored in the project cost.

6.4 Environment, Social and Gender Assessment

35. The DOH environment and social assessment and gender experts will review the proposed project for compliance with government environmental guidelines, gender policy, and resettlement guidance, which include an expectation of compliance with laws, regulations and standards. Particular attention must be paid to issues which generally arise, including, but not limited to, land ownership and right of way, incursion into sensitive areas (reserves, parks, wetlands, etc.), drainage and erosion control (especially in hilly situations). Assessment will also inform design by including gender analysis of use, control of resources, design appropriateness, and how well gender is integrated into project design, participatory planning processes, and implementation.
- Identify how solid waste, especially toxic and hazardous wastes and other sensitive hospital discards should be disposed of;

- Provide by income, gender, and age as appropriate, the impact of the project on health services for women and children and disabled peoples;
- Determine whether the local community has been consulted using participatory approaches in accordance with the government's gender policy with mechanisms in place to ensure design takes into account findings from consultation with various stakeholders.

6.5 Economic and Financial Assessment

36. The DOH economist working on the project should ensure that the proposed hospital project complies with NEDA PPP guidelines. For example, the economic rate of return for each project should at least meet the 15% threshold criteria established by government or, otherwise, be sufficiently high to warrant being a priority investment. Relevant governance practices, including laws and regulations, as well as reforms, should have been contemplated, or taken, to enhance the anticipated economic benefits generated by the proposed medical project.

- See recommended variables to focus on for economic analysis in Section 5.4. Identify the beneficiaries, to the extent possible, disaggregated by income, gender, age, and ethnicity. Compare projected incomes and other benefits with and without the proposed project.
- Summarize the design standards, design life and cost estimates (capital and maintenance) and confirm these are consistent with the assumed benefits and duration of the benefit stream. Note that the duration of the benefit stream is typically assumed to be twenty years. Assumptions that the duration is longer or shorter than this should be clearly justified.
- Confirm that costs and project life are consistent with the engineering design.
- Complete a financial model and undertake a financial analysis and FIRR for income generating subprojects. See recommended variables to focus on for the financial analysis in Section 5.5.

6.6 Assessment of Appropriate PPP structure

37. The financial analysis will inform the most appropriate PPP arrangement. As may be expected with typical public health facilities, private revenue contribution is low hence necessitating continuing government support. Moreover, health facilities in general have more significant operating expenses compared to the capital expenditure. Given these critical characteristics, it is unlikely for the facility to achieve financial viability from user fees alone. Thus the following five basic PPP modalities, among others, are suggested:

- **Lease Agreement¹³:** Government builds the facility and leases it to the private operator on the basis of public bidding, with the bidding parameter being the highest value lease. Private party takes full market risk subsequently. However the proponent may put a cap on the number of patients paying below market rates or non-paying. Any service above the cap will be charged to the government.
- **Build-Transfer-Operate:** Similar to the lease agreement, government contracts out the construction of an infrastructure facility to a private entity such that the Contractor builds the facility on a turnkey basis, assuming cost overruns, delays, and specified performance risks. Once the facility is commissioned satisfactorily, ownership is transferred to the government. The private entity however operates the facility on behalf of the IA under a lease agreement.
- **Build-Operate-Transfer with VGF funding infusion:** Hospital fees are set at affordable levels and private party builds the project on the basis of an agreed VGF grant, which is determined by public bidding with the bidding parameter being the lowest VGF grant. Private party operates the facility and takes full market risk subsequently. However the

¹³ A Lease Agreement is treated as a variant under the BOT Law which requires specific approval of the President.

proponent may put a cap on the number of patients paying below market rates or non-paying. Any service above the cap will be charged to the government.

- **Build-Operate-Transfer with Usage fees or OBA.** Hospital fees are set at affordable levels and private party builds the project on the basis of agreed usage, or OBA fees, which are determined by public bidding with the bidding parameter being the lowest discounted cash flow level of usage or OBA fees.
- **Build Transfer.** Government contracts out the construction of a health infrastructure facility to a private entity such that the Contractor builds the facility on a turnkey basis, assuming cost overruns, delays, and specified performance risks. Once the facility is commissioned satisfactorily, ownership is transferred to the government.

6.7 Institutional Assessment

- Opposition to the concept of PPPs for health care facilities and arrangements made for staff in the event of a change of management arrangements.'
- Review existing performance with respect to clarity and acceptance of arrangements and responsibilities; Identify causes of potential inadequate performance including legal, policy, or administrative arrangements, and resource allocation.
- Assess leadership and capability of hospital management and key staff who will implement and manage the contract.
- Prepare a summary of actions needed to maintain the hospital to an acceptable level, including institutional strengthening, capacity of staff, funding (responsibility and funding levels) and additional resources needed.
- Review the annual budgeting process internally and within the entire government to ensure continuous funding of obligations for availability payments, VGF or usage fees.
- Review arrangements for transferring the hospital to the appropriate governmental entity at the end of the project agreement term.

6.8 Implementation Assessment

- Identify the PPP unit that will oversee PPP project implementation.
- Prepare an implementation program from project preparation, pre-bid approvals and permitting, bid preparation and tendering, contract awards, and contract management. Identify potential hold points and plan how to address them.
- Prepare a detailed work plan and schedule of activities for each stage and delineate roles of people in the Agency who will be involved, e.g., policy group, PBAC, Technical Working Group and the approving authority.
- Identify areas where in-house staff expertise should be supplemented by consultants or advisors.
- If VGF is proposed, ensure inclusion in the budget proposal at the earliest possible time.

6.9 Risk Management Assessment

38. Table 3 shows an indicative basic risk management matrix based on a BOT arrangement with either a VGF or usage fees. This matrix is derived from the NEDA PPP Guidelines. The provisions for managing other risks included in the Guidelines are applicable to health projects.

Table 3
Indicative Major Risk Matrix for a Public Hospital

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|--|---|--|--|--|--|
| Site risks | | | | | |
| Existing structure (refurbishment/extension) | <ul style="list-style-type: none"> Risk that existing structures are inadequate to support new improvements resulting in additional construction time and cost. | <ul style="list-style-type: none"> Private | <ul style="list-style-type: none"> Private sector can manage cost effectively provided that proper due diligence of existing structure is conducted. | <ul style="list-style-type: none"> Private firm will pass to builder which relies on expert testing and due diligence. Give private firm enough time to do site studies. Undertake and make available, due diligence studies of existing structures. | <ul style="list-style-type: none"> Contract clause requiring private partner to provide performance bond. |
| Site conditions | <ul style="list-style-type: none"> Risk that unanticipated adverse geological conditions (geotechnical risk) are discovered which cause construction cost to increase and/or cause construction delays. | <ul style="list-style-type: none"> Private, except when complex geological conditions are present and project is government solicited; private to absorb only up to a specific cost amount, after which the government assumes the balance. | <ul style="list-style-type: none"> Private sector can manage cost effectively if site study effort is moderate and enough time is provided to bidders. | <ul style="list-style-type: none"> Private firm will pass to builder which relies on expert testing and due diligence. Give private firm enough time to do site studies. Reimburse part of the bidding cost to encourage bidders to prepare their own site studies. | <ul style="list-style-type: none"> Contract clause requiring private partner to provide performance bond. |
| Permits and approvals | <ul style="list-style-type: none"> Risk that necessary approvals (for example, environmental license, environmental management plan, construction permit) may be obtained, or may be obtained only subject to unanticipated conditions which have adverse cost | <ul style="list-style-type: none"> Private if and when permits and approvals have been obtained prior to the submission of proposals by potential bidders, and later modified at the request of the successful bidder. Government if and when permits and approvals have not | <ul style="list-style-type: none"> When Private: Private is better informed about the rationale for its request. When Government: Government is better informed and positioned to influence the speed of the approval process, particularly in | <ul style="list-style-type: none"> Government to obtain the requisite permits and approvals, prior to submission of the bidder proposal, which would allow the private firm to achieve a measure of pre-contractual certainty and an early start of the approval process. | <ul style="list-style-type: none"> Contract clause stipulating the schedule to obtain permits and approvals and stipulating liquidated damages payable to private partner in case of delay. |

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|---|--|--|--|--|---|
| | consequences or cause prolonged delay. | been obtained prior to submission of bidder proposal although private is responsible to manage the process. | situations that are complex or sensitive. | | |
| Design, construction and commissioning risks | | | | | |
| Design and hospital layout | <ul style="list-style-type: none"> Risk that the design and layout of the facility is substandard, unsafe, inefficient or incapable of delivering the services at the anticipated cost and specified level of service (often resulting in long-term increase in recurrent costs and long-term inadequacy of service). | <ul style="list-style-type: none"> Private partner will be responsible except where an express government mandated change has caused the design effect. | <ul style="list-style-type: none"> Private partner has more experience, knowledge and control over the variables that determine the quality of the design (i.e., experience, competent staff, etc.). | <ul style="list-style-type: none"> Ensure that the feasibility study is available well in advance of the procurement process to adequately guide the design process. Incorporate strict experience and competency requirements in the procurement process. Private partner may transfer risk to builder/architects and other hospital system subcontractors while maintaining primary liability; government has the right to abate service charge payments where the problem cannot be suitably remedied. | <ul style="list-style-type: none"> Contract clause requiring performance bond. Contract clause stipulating liquidated damages. |
| Construction | <ul style="list-style-type: none"> Risk that events occur during construction which prevent the facility from being delivered on time and within the stipulated cost. | <ul style="list-style-type: none"> Private | <ul style="list-style-type: none"> Private partner has more experience, knowledge and control over the variables that influence construction cost and control over construction process (i.e., schedule, equipment, materials and technology, etc.) provided that the private partner has enough information to estimate costs and start operations on schedule | <ul style="list-style-type: none"> Incorporate strict experience and competency requirements in the procurement process. Ensure that feasibility study is available well in advance of the procurement process. Private firm generally will enter into a fixed term, fixed price building contract to pass the risk to a builder with the experience and resources to construct so as to satisfy the private firm's obligations under the | <ul style="list-style-type: none"> Contract clause requiring performance bond for the cost share of the private partner. Contract clause stipulating liquidated damages. Contract cost overrun guarantee for complex structures. |

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|--|--|--|--|--|--|
| | | | and as planned. | contract. | |
| Construction | <ul style="list-style-type: none"> If there is a VGF component, risk that the government funds not readily available | <ul style="list-style-type: none"> Shared | <ul style="list-style-type: none"> Government has control of the budget process. | <ul style="list-style-type: none"> Government to manage budget process to ensure timely availability of funds for the VGF | <ul style="list-style-type: none"> If the VGF is in the agreement, government will disburse contribution according to project S Curve |
| Sponsor and financial Risks | | | | | |
| Inflation (including extra ordinary increase in price for, for example, hi-tech medical equipment) | <ul style="list-style-type: none"> Risk that value of payments received during the term is eroded by inflation. | <ul style="list-style-type: none"> Shared <ul style="list-style-type: none"> - Government to assume part of it by allowing total or partial indexing of payments to inflation. - Private to assume remainder risk through the methodology adopted to maintain value. | <ul style="list-style-type: none"> Government has more experience and information regarding the factors that influence inflation. | <ul style="list-style-type: none"> Government to transfer part of it to users by allowing total or partial indexing of payments to inflation rate. Government to ensure that its payment does not overcompensate for inflation and it avoids any double payment for after costs adjustments (for example, changes in exchange rate). | <ul style="list-style-type: none"> Contract clause defining payment adjustment mechanisms. |
| Financing for the private partner component is unavailable | <ul style="list-style-type: none"> Risk that when debt and/or equity is required by the private firm for the project it is not available then and in the amounts and on the conditions anticipated. | <ul style="list-style-type: none"> Private | <ul style="list-style-type: none"> Private partner is responsible for arranging financing. | <ul style="list-style-type: none"> Government requires all bids to have fully documented financial commitments with minimal and easily achievable conditionality. | <ul style="list-style-type: none"> Contract clause requiring firm letters of credit from reputable financial institutions. |
| Sponsor risk | <ul style="list-style-type: none"> Risk that the private partner is unable to provide the required services or becomes insolvent. Risk that the private | <ul style="list-style-type: none"> Government (or shared where there is a performance bond that government can call upon) | <ul style="list-style-type: none"> If this risk materializes, there is no private partner to transfer the risk to. | <ul style="list-style-type: none"> Ensure project is financially remote from external financial liabilities. Ensure adequacy of finances under loan facilities or sponsor commitments | <ul style="list-style-type: none"> Contract clause requiring a performance bond and letters of credit. Contract clause requiring minimum |

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|---|--|--|---|---|---|
| | <p>partner is later found to be an improper person for involvement in the provision of these services.</p> <ul style="list-style-type: none"> Risk that financial demands on the private partner exceed its financial capacity causing corporate failure. | | | <p>supported by performance bond.</p> <ul style="list-style-type: none"> Ensure adequacy of finances through the use of non-financial evaluation criteria and due diligence on private partner. Ensure adequate 'performance bond' is included | <p>liquidity and debt ratios.</p> |
| Refinancing benefit | <ul style="list-style-type: none"> Risk (upside) that at completion or other stage in project development the project finances can be restructured to materially reduce the project's finance cost. | <ul style="list-style-type: none"> Private partner to benefit. Government to share in limited circumstances (i.e., symmetrical risk allocation and super profits). | <ul style="list-style-type: none"> Similar to interest rate risk, private partner has control over its choice of long term financing, if downside burden is placed on private partner; same principle applies to upside (symmetrical risk allocation). | <ul style="list-style-type: none"> Government to assure itself that likely benefit has been factored into competitive bids to avoid the risk that the private firm will be allowed to earn super profits from the project. | <ul style="list-style-type: none"> Contract clauses spelling out circumstances where government is to share and at what rate. |
| Operating risks | | | | | |
| Inputs, including capacity of medical personnel | <ul style="list-style-type: none"> Risk that required inputs cost more than anticipated, are of inadequate quality or are unavailable in required quantities. | <ul style="list-style-type: none"> Private except when: <ul style="list-style-type: none"> Government controls inputs (for example, water catchment). | <ul style="list-style-type: none"> Private partner is in control of the selection of inputs. | <ul style="list-style-type: none"> Private partner may manage through long-term supply contracts where quality/quantity can be assured. Private partner can address to some extent in its facility design. Private partner can provide training programs for medical personnel | <ul style="list-style-type: none"> Contract clause imposing penalties for breach of specific and well-defined performance and quality specifications. Contract clause on compensation to private for issues attributable to government-supplied inputs. |
| Maintenance and refurbishment | <ul style="list-style-type: none"> Risk that design and/or construction quality is inadequate resulting in higher than anticipated maintenance and | <ul style="list-style-type: none"> Private | <ul style="list-style-type: none"> Private partner is in control of design and construction processes. | <ul style="list-style-type: none"> Private firm to manage through long-term subcontracts with suitably qualified and resourced subcontractors. | <ul style="list-style-type: none"> Contract clause imposing penalties (and possible termination) for not meeting specific and well defined |

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|--|--|--|---|---|--|
| | refurbishment cost. | | | | performance, level of service, and quality specifications. <ul style="list-style-type: none"> Contract clause requiring performance bond from private. |
| Changes in output specification outside agreed specification range Given the nature of health care, the minimum performance standards and specifications may change over time | <ul style="list-style-type: none"> Risk that government's output requirements are changed at some point of the contract period. | <ul style="list-style-type: none"> Shared | <ul style="list-style-type: none"> Both should be abreast with more effective and efficient treatment approaches and procedures. | <ul style="list-style-type: none"> Contract should clear reopener procedures and negotiating parameters. | <ul style="list-style-type: none"> Contract clause of best endeavors obligation by private to fund with option for government to compensate via fee increase or capital contribution. |
| Technical obsolescence or innovation | <ul style="list-style-type: none"> Risk of the contracted service and its method of delivery not keeping pace, from a technological perspective, with competition and/or public requirements - Private partner's revenue may fall below projections either via loss of demand (user pays model) payment abatement (availability model) and/or operating cost increase; | <ul style="list-style-type: none"> Private except where contingency is anticipated and government agrees to share risk possibly by funding a reserve. | <ul style="list-style-type: none"> Private partner is able to use its expertise and know-how to minimize the risk. | <ul style="list-style-type: none"> Government to develop detailed, well-researched output specifications. Private partner to develop detailed, well-researched design solution. Private partner to arrange contingency/ reserve fund to meet upgrade costs subject to government agreement as to funding the reserve and control of reserve funds upon default. Both partners to monitor obligations in the contract. | <ul style="list-style-type: none"> Contract clause imposing penalties (and possible termination) for not meeting specific and well-defined performance, level of service, and quality specifications. Contract clause defining the condition required of the facility at the end of the term. Contract clause requiring performance bond from private. Contract clause specifying mechanism to establish a reserve |

| Risk | Definition | Preferred Allocation | Rationale | Possible Mitigation Strategies | Allocation Instrument |
|--|--|--|---|---|--|
| | - Government may not receive contracted service at appropriate quantity/quality. | | | | fund (private, public-private, public). |
| Appropriation risk (e.g., Multi Year Obligational Authority) | <ul style="list-style-type: none"> Risk that annual budgetary appropriation for the government obligations will not be approved | <ul style="list-style-type: none"> Government | <ul style="list-style-type: none"> Government is in control of the appropriation process | <ul style="list-style-type: none"> IA to always include the obligations in its budget request for core expenditures | <ul style="list-style-type: none"> Government undertaking |
| Demand risks | | | | | |
| Demand risk | <ul style="list-style-type: none"> Risk that operating revenues fall below forecast as a result of decrease of service volume | <ul style="list-style-type: none"> Private | <ul style="list-style-type: none"> When demand can be estimated with relative certainty, the private partner is in a better position to mitigate risk through commercial management practices. | <ul style="list-style-type: none"> Government and private to perform independent market demand analyses commensurate with project scale and characteristics. | <ul style="list-style-type: none"> Government will not guarantee minimum patronage but will regulate fees and provide VGF or usage fees to the proponent. |
| Increase in non-paying patients or those paying below the market rates | <ul style="list-style-type: none"> Risk of higher growth of indigent patients not paying or partially paying, leading to a shortfall in cash flows. | <ul style="list-style-type: none"> Government | <ul style="list-style-type: none"> Government has better access to information needed to identify non-paying users and stop/continue service to them. | <ul style="list-style-type: none"> Government to include this case in payment mechanism (i.e. plan for a change from standard 70% sponsored, 30% private mix). | <ul style="list-style-type: none"> Contract clause compensating proponent for service to a patient approved by the government |

SOURCE: Modified for the Health Sector from the Generic Preferred Risk Matrix Adopted by NEDA for PPP Risk Identification, Allocation, Mitigation and Management

7.0 MINIMUM PERFORMANCE STANDARDS AND SPECIFICATIONS¹⁴

39. The purpose of this section is to provide guidance on the development and preparation of minimum performance standards and specifications (MPSS) for a public hospital facility.
40. All PPP projects must specify the service outputs, which must be aligned to the IA needs. The MPSS is the contractual statement of the IA's service requirements, defined prior to formal engagement with the market. It forms the basis on which the bidders prepare their proposals, and against which the procurement team or the IA's PBAC carries out its tender evaluation.
41. The MPSS must be consistent, and fully aligned, with the Payment Mechanism of the contract and the bid evaluation decision rules.

7.1 Developing the Minimum Performance Standards and Specifications (MPSS)

42. The MPSS is solely about the service products, deliverables, or outputs, hereafter referred to as "outputs" required by the IA. The MPSS is a statement of 'what' is required by the user, in this case the IA or the citizenry that will be served by the infrastructure facility; the outputs, collectively, constitute what is consumed by the user.
43. The MPSS is **not** a specification of 'how' the user's needs should, or could, be met; nor is it a description of the equipment, assets, infrastructure, facilities and other resources (hereafter referred to as "inputs") that the proponent will need to provide in order to deliver the output. The MPSS should not envisage the solution to the user's need nor should it contemplate the inputs that might constitute the best solution;
44. The MPSS should be entirely focused on the use to which the equipment, assets, infrastructure, and other resources will be put. For example, the provision of a hospital does not constitute an output; the hospital, instead, is characterized by its outputs: the services offered, diagnostic tests it will be able to provide, the number of beds it will have, so that the user can achieve the outcome, which is to have quality health care.
45. The MPSS must also set out the functionality or performance characteristics required for each output. For example, the hospital will specialize in advanced cancer treatment, it should have the requisite diagnostic equipment to detect and treat cancers, extend long and short term care, provide for example a minimum of 1000 beds for patient in-treatment, 900 such beds for short-term treatment and 100 beds for long-term care patients.
46. The MPSS should also identify, at the very highest level the volume of use for each output. For example, the hospital will operate 24-hours a day, 365 days each year, and will be manned by a full complement of skilled medical professionals at all times, and will extend specialized diagnostic and treatment services to the general public from 8:00 a.m. to 6:00 p.m., each working day, or 50 hours per week, between the hours of 0800 hours to 1800 hours each week day. Short and long-term accommodation will consist 75% of rooms with two beds and 25% of rooms for private suites.
47. The MPSS will also have to set out the constraints, for example the limitations of the land area, building restrictions, environmental standards for disposal of hospital wastes, within which bidders will have to devise their solution, and the eventual proponent will have to comply during the operation of the service. These constraints must be kept to an absolute minimum and should not act as a hindrance to innovation or be a source of unnecessary cost.

¹⁴ The discussion in this section is based on the BOT Law IRR and the following reference work: Government of United Kingdom, MOD Private Finance Unit Guidance Note, Output Based Specifications for PFI/PPP Projects, Version 2, 2010.

48. While the MPSS is the statement of the IA's requirement, its role and function during the procurement process will be supplemented by prescribed economic parameters crucial for the financial and risk analysis; and other project and contract documents, post-tendering. These supplements may not form part of the MPSS, but should be included in the Instructions to Bidders. The economic parameters include, among others¹⁵:
- i. Discount rate, foreign exchange rate and inflation factor;
 - ii. Maximum period of construction;
 - iii. Fixed term for the operating period and collection of fees, rental and other charges;
 - iv. Formula and price indices for the adjustment of tolls/fees/rentals/charges;
 - v. Minimum period of repayment for specified schemes;
 - vi. Revenue share by the implementing agency or basis of usage fees or OBA;
 - vii. Minimum amount of equity.
49. In the early stages of the procurement, the principal purpose of the MPSS is to:
- a. Clearly and comprehensively detail the technical standards and specifications which will meet the needs of the facility users;
 - b. Form the basis for the development of the Payment Mechanism in the PPP Contract;
 - c. Inform potential bidders as to the scope, boundaries and constraints of the contract.
50. During the tendering stage the MPSS is the basis against which bidders will develop their proposals. The IA will also have to provide instructions to bidders as outlined in the BOT Law IRR, Section 7.
51. During the IA's evaluation of bids, the MPSS becomes the benchmark to evaluate compliance of the bidders' technical proposal. Failure to comply with the MPSS will result to rejection of the bid.

7.2 The MPSS as Contract Obligation

52. The MPSS is a critical provision in a PPP Contract. It takes precedence over delivery of inputs; so that even if the proponent successfully delivers the inputs in accordance with its proposal, but fails to satisfy the requirements of the MPSS, then the Proponent will be in contractual default and the remedies in the Payment Mechanism will apply.
53. This is further reinforced by other provisions of the PPP Contract whereby:
- a. The proponent warrants that his proposal meets the requirements of the MPSS;
 - b. Under the terms of the PPP contract, the IA does not necessarily have to pay on completion of the hospital or following installation of equipment; moreover, the payment mechanism is triggered only when the combined functionality of these inputs is able to meet the MPSS;
 - c. Under the Payment Mechanism, the IA only makes payment for the delivery of outputs, rather than the provision of the inputs. It reduces amounts payable when the output is not delivered or is not fully available, as set forth in the MPSS.

¹⁵ BOT Law IRR Section 4.3

7.3 Stages in Developing Minimum Performance Standards and Specifications

54. There are several key phases to the development of the MPSS along with the supplementary project and contract documents, as shown in Table 4 below, through the procurement process.

Table 4
Initiating, Expanding, Refining and Finalizing
Minimum Performance Standards and Specifications¹⁶

| Phases | Issues |
|--|--|
| 1. The basic service requirements are developed at the same time as the Prefeasibility Study. The focus should be on the development of technical specifications required from the Proponent based upon the Key User Requirements. | <p>Definition of what is required, along with function and purpose, drafted from the IA perspective, along with any constraints.</p> <p>Should make clear the service boundary between the IA and the proponent.</p> |
| 2. During the preparation of the Feasibility Study, the MPSS should be carried out in conjunction with the development of the Payment Mechanism. This stage involves the definition of the functional performance and service levels of each output that crosses the service boundary. | <p>This includes volume requirements and quality standards, for example:</p> <ul style="list-style-type: none"> ▪ What output is required: medical services that can diagnose and treat a given list of pathologies on out-patient an in-patient basis ▪ How often/during what periods: 365 days a year, 24/7 ▪ Minimum performance standards and specifications of the output as regards consultations, out-patient care, in-patient care, medical tests and treatment. <p>For both the MPSS and the Payment Mechanism, the key questions that will need to be answered are:</p> <ul style="list-style-type: none"> i. Is the level of performance specified in the MPSS sufficient to enable the user to achieve the desired outcome; ii. What level of poor performance would cause the user inconvenience, incur additional costs or amount to non-delivery of service. |
| 3. Once the MPSS is sufficiently developed, the PBAC will need to consider the tender evaluation criteria for the bidders' proposals. It will be best for the PBAC to be backstopped by a Technical Working Group that would prepare the technical aspects of the tender evaluation plan. The TWG may consist of in-house staff of needed discipline | <p>The evaluation of the bidders' qualifications and technical and financial proposals, once the tendering stage begins, will need to consider the criteria that will be used to determine:</p> <ul style="list-style-type: none"> i. Bidder's competence in terms of past experience and track record as it relates to the service outputs required by the project; ii. If minimum inputs, such as equipment and specialists will be prescribed; iii. Determine the indicator of full compliance of |

¹⁶ While Table 4 focusses on MPSS, the role of the IA also includes other factors, for example, bidder's satisfaction of legal requirements and financial capability to undertake the project.

| Phases | Issues |
|---|---|
| or consultants. | <p>the bidder on the MPSS;</p> <p>iv. Soundness of management organization; and</p> <p>v. Best value of the financial proposa</p> |
| <p>4. Based on the evaluation criteria defined above, and given that the bidder's proposal will be incorporated into the Contract, the bidders' will go through two hurdles:</p> <p>a. pre or post qualification process</p> <p>b. technical evaluation of the proposal</p> | <p>First, the qualification process will evaluate among others evidence of bidder's competence, skill and experience to deliver and implement the proposed solution.</p> <p>Second, the bidder should submit a technical proposal that defines the solution and provide a functional specification of the inputs to satisfy the MPSS.</p> <p>Relatedly, the PBAC is advised to prepare, as part of the final bid evaluation reports, a requirements traceability matrix that shows how the key user requirements are reflected in the MPSS and are then satisfied by the bidder's technical proposal.</p> |
| <p>5. The technical proposal of the winning bidder will be incorporated in the Contract Award.</p> | <p>Changing the MPSS that constitute non-compliance will be a cause for contract termination.</p> |

8.0 PROJECT STRUCTURING

55. Six variables have a significant impact on structuring projects so that they become financially viable. These are, respectively, the:
- Legal framework,
 - National fiscal space,
 - Business conditions,
 - Social and political environment
 - Institutional capacity, including sustainability of tariff paths,
 - Willingness of users to pay for services (affordability concerns), and
 - Size of project, location and/or complexity.
56. These variables are illustrative of the most common factors that apply to all countries and all sectors, including the Philippines.
57. Table 5 provides guidance on how to structure a PPP project given its exposure to one or more of the above conditions. The discussion focuses on how to adapt to less than optimal conditions, as public health facilities will likely be faced with. If conditions are optimal, then the demand for the service may be met by commercial providers.

Table 5
Structuring Guidance Given less than Optimal Local Conditions

| Local condition | Possible Structure | Comments |
|---|--|---|
| Lack of Fiscal Space | BOT, particularly if user fees are affordable. | Provided project tariff path can be regulated by contract, and no operational subsidies are needed – Government support will be extended only in the form of Standard Contingent Liabilities. |
| Institutional capacity is lacking, regulatory risk is great. | BOT with IA as the institutional buyer of the service with a guaranteed minimum; otherwise referred to as an Availability PPP Structure. | Government to collect fees directly from consumers based on annually determined tariffs, make availability PPP payments to proponent. |
| Capacity/Willingness to Pay is absent, as affordability a real problem. Or Legal framework cannot deliver tariff sustainability because a single homogeneous national tariff is in effect, applying to all projects in the sector (e.g., hospitals have national homogeneous user charges). | Still a BOT but with a Viability Gap Funding (an Affordability Grant), structured in one of two ways. (a) VGF is the bid parameter in a tender, which can be structured as a direct, straight grant; or indirectly, by extending Government finance (b) Concession fee is bid parameter. | When VGF is bid parameter, the government determines tariff in advance, tenders the project, awards it to lowest VGF. When concession fee is the bid parameter, the government builds the project, determines tariff in advance, tenders the project, and sells the usufruct rights via concession fee. Otherwise, government can collect tariffs from public and pay proponent on an Availability PPP basis. |

| Local condition | Possible Structure | Comments |
|--|---|---|
| Project size, location or complexity will make it difficult to secure private finance. | Consider sharing costs by Government on a compartmentalized basis. | For example, for health facilities, Government pays for land, and perhaps expensive diagnostic or treatment equipment. These are common ways of compartmentalizing and sharing costs of implementation. |
| Willingness to pay is there but proposed facility does not recover all of its costs in the first ten years (time period could be varied depending on circumstances). | Project probably will not result in an attractive return. There are two alternatives: VGF may be considered, which is generally preferred; or Usage fees (operating subsidies) may be extended by Government Alternatively, OBA for low income patients. | In the health industry, the payment mechanism most likely has to be structured on the basis of user fees (co-pay arrangements), insurance payments if any, plus some operating support from government in the form of usage payments (payments based on number of patients treated, or some other form of operating subsidy, e.g. Phil Health). |
| Is the project going to take more than three years to construct? (time period could be varied depending on circumstances). | Consider doing it in stages, particularly if it lends itself to modular construction. | Each stage must be self-sufficient and produce its own attractive internal rate of return. Lenders seldom commit funds over a time frame that exceeds three years, so each stage must not last longer than that. |
| Department will sponsor the project but appropriation risk a strongly perceived problem. | Use Build Lease Operate mechanisms. | Project is built by proponent and leased to government. Separately, an O&M contract is entered into with proponent. Structure appears to have more traction with lenders, although appropriations risk does not disappear. |
| Business conditions are not optimal – interest rates are very high, money in short supply, flight to quality. | Government tenders project and first ranked bidder tenders finance in collaboration with Government (UK has used this modality successfully). IA should favor leasing structures i.e. Build, Lease, Operate and Maintain. Finance should be on floating rate basis. | However, project agreement should have provision to share in refinancing gains IA tenders out the project, awards it to a proponent, leases it from the proponent when successfully commissioned, issues a separate Operation and Maintenance Contract to proponent. Provision is built in to share in refinancing gains. |

9.0 THE PAYMENT MECHANISM

58. The payment mechanism is the principal way of allocating risk between the proponent and the IA. To be able to structure the payment mechanism correctly, it is important to be able to determine the levels of service expected from the proponent and the most cost-effective risk transfer to the proponent. A correctly structured payment mechanism should provide the proponent with the incentive to perform well, while at the same time enabling the IA to apply remedies in the event that the performance of the proponent is less than expected.
59. PPP projects provide considerable scope for the transfer of risk to proponents. For example, by relying on the private proponent to cover the full, or most, costs of construction and commissioning before any service payments are made, the IA is transferring cost, delay and specification risk to the proponent. Aside from the advantage, the PPP modality provides Government with at least two other advantages: improved flexibility in budgeting and accelerated implementation of infrastructure.
60. This section provides a summary of the main issues related to the development of a payment mechanism that should be aligned with the optimum project structure and risk allocation strategy.

9.1 Developing a Payment Mechanism

61. In general, payment mechanisms are likely to include one or more of the following basic components:
- **User charges:** payments received by the proponent directly from private users of the infrastructure or service (e.g. operating theatre use fees);
 - **Viability gap fund:** capital grant from the government intended to improve the commercial viability of the project;
 - **Usage payments:** payments from the IA to the proponent that vary according to how much the infrastructure or service is used;
 - **Availability payments:** payments from the IA to the proponent for making infrastructure or services available for use at an acceptable standard; and
 - **Service performance payments:** payments from the IA to the proponent that vary according to the quality of service provided.

9.2 Application of User Charges

62. The application of user charges to DOH projects to finance the construction and operation of PPP projects should reflect government policy on user charges and, where appropriate, the application of the *user pays* principle in the health sector. In devising payment mechanisms for health projects, a principal objective should be to attribute an appropriate proportion of the costs of constructing and operating the project to its users. However this should not be to the detriment of providing health care to constituents who have low ability to pay.
63. Thus DOH has to have a clear policy when subsidies to users will be provided, who these users are and what is the targeting mechanism so they are not given indiscriminately. There are a number of approaches that could be considered by DOH for the setting of user charges for PPP projects. These approaches include setting a national rate for user charges for each type of health facility (for example, PhilHealth case rates); setting user charges independently for each individual project, or setting user charges for each individual project through a competitive tendering process.
64. When considering the application of user charges, consideration should be given to a range of factors including the objectives of the project, affordability considerations, the availability of alternatives services, the elasticity of demand, the practicality of applying user charges, the

ability of the DOH or the prospective proponent to forecast demand, the level of charge that should be set, and the most appropriate methods of revenue collection.

65. Consideration of these issues enables IAs to determine whether or not user charges can be relied on to make a project viable, and if this is not the case, the extent to which reliance should be placed on complementary sources of revenue such usage fees or OBA.

9.3 Payment Mechanisms used in Practice

66. Table 6, below matches basic project typologies in health sector and looks at the policy, market and affordability constraints, the likely level of reliance on user fees and other complementary forms of revenue in the payment mechanism.

Table 6
Payment Mechanism Structure for Other Type of Health Projects

| Project Type | Policy or Market Constraints | Can demand risk be transferred through user fees? | Potential Government Subvention |
|---|------------------------------|--|---|
| Referral/Tertiary care Hospital | DOH regulated tariff | User fees are applied, but universal tariff often is serious constraint | Viability Gap Funding (VGF); or Usage Payments (Operational Subsidies as a special case for the Health Sector) |
| Satellite Primary Healthcare Clinics to the Referral Hospital | DOH regulated tariff | User fees are applied, but universal tariff often is serious constraint | Viability Gap Funding (VGF); or Usage Payments (Operational Subsidies as a special case for the Health Sector) |
| Maternal Care and Birthing Centers | DOH regulated tariffs | Generally, user fee based, but cost can be serious constraint to indigent patients | PHIC coverage or use of voucher system paid for by government; government will determine who is eligible for the voucher |
| Pharmacy | User pays | Generally, user fee based in large part but affordability a major problem | Consignment of public health drugs at DOH prescribed prices including regulated mark up by the pharmacy operator; voucher system for indigents eligible for free medication Note: DOH bulk procurement can significantly lower cost of |

| Project Type | Policy or Market Constraints | Can demand risk be transferred through user fees? | Potential Government Subvention |
|--------------------------------|------------------------------|---|--|
| | | | drugs. |
| Specialized Treatment Facility | User pays | Generally, user fee based in large part but affordability a major problem | PHIC coverage; VGF for the equipment or usage payments for eligible patients |

67. For projects for which there is insufficient historical data on which to base demand forecasts, or other projects, for which user charges are not considered appropriate, consideration should be given to developing a payment mechanism based primarily on usage payments, preferably using an OBA mechanism such as the voucher system.
68. If however market soundings suggest that there is no likelihood of transferring demand risk cost effectively, even on a shared basis, then the payment mechanism could be based primarily on availability PPP basis. For DOH facilities, however, this should be a last resort.

9.4 Other Finance Provisions of the Payment Mechanism

Indexation

69. It is usual practice for a PPP contract to take account of the impact of inflation through a suitable indexation arrangement. The indexation formula used will be dependent on the nature of the project, and will be arrived at by considering the nature of the risk allocation arrangements between the public sector and the private sector in relation to inflation. The most commonly used index is the Consumer Price Index (CPI). This does not however represent specialized medical inputs. For consistency between projects being undertaken by different IAs, the relevant index may be specified by the government.

Benchmarking and Market Testing

70. It is widely recognized that a payment mechanism that offers no flexibility in price over a long period of time, perhaps 20 or 25 years, is unlikely to offer best value for money for the IA. For this reason, PPP contracts may provide for those services that cannot be priced accurately over the duration of the contract to be periodically benchmarked and/or market tested to ensure that value for money (VfM) is provided over the duration of the contract.
71. However, for contracts that contain the provision of infrastructure, it is usual for the maintenance element to be excluded from the benchmarking/market testing provisions. This is because such services cannot be easily separated from the provision of the infrastructure itself, and the proponent takes on the risk of making the facilities available over the life of the project.

Revenue Sharing

72. In addition to delivering the core service requirements of the IA, there may be opportunities for the proponent to derive additional income by using the facilities for other uses (e.g. food courts). In such circumstances, the payment mechanism should reflect the additional revenue generating potential of the project by way of a revenue sharing arrangement.
73. Whatever arrangement is used to share additional revenues, the payment mechanism should still provide an incentive to the proponent to enhance overall efficiency and to identify new opportunities to generate additional income. Care should be taken to ensure that the activities

undertaken by the proponent to generate additional income do not conflict with the IA's core service delivery objectives.

Refinancing

74. Most risks in a project are concentrated during the construction phase and, once this is successfully completed, it may be possible for the project to be refinanced on more favorable terms. This would result in a reduction in the ongoing cost of the debt service component to the proponent, and, if the benefits of refinancing are shared, could in turn lead to a reduction in the usage or Availability payments made by the IA (or by users in the case of user charges). The IA should therefore normally allow refinancing by the proponent on the understanding that benefits are shared.

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10 THE NEXT STEPS

75. Section 10 briefly summarizes the processes involved in taking the project through Stages 2, 3 and 4 in the life cycle of a typical PPP project and includes key reference manuals to assist IAs successfully tender, contract and manage projects through to final handover.

10.1. Procurement Stage

76. After an IA obtains approval of its proposed PPP project from the Approving Body – the ICC for projects costing up to PhP 300 million, and NEDA Board for negotiated projects and projects costing over PhP 300 million and all unsolicited projects – the project enters the procurement stage of the PPP process.
77. The key objectives of the IA at this stage of the PPP process are to ensure:
- Principles of transparency and equal treatment of bidders are followed to bolster the professionalism and legitimacy of the procurement or tender process;
 - Adequate competitive tension between bidders so as to arrive at the best bid from the most competent bidder;
 - Minimize cost and delays without sacrificing the rigor or quality of the PPP process; and
 - A bid is selected.
78. The PPP procurement stage starts at the Invitation to Pre-Qualify to Bid (ITPB) or Invitation to Bid (ITB) and ends at the start of construction/groundbreaking. Construction/groundbreaking (or implementation) begins soon after financial close.
79. At the procurement stage of the PPP project, the IA's Pre-qualification, Bids and Awards Committee or PBAC, is responsible for overseeing all aspects of the pre-bidding and bidding process including that of the 'Swiss challenge' process for Unsolicited Proposals. As indicated in Rule 3 of the Revised IRR of the BOT Law, the PBAC is composed of the third ranking regular official of the IA; technical experts on legal, technical and finance; representatives from the private sector (contractors association and facility users), a representative from the Commission on Audit (COA) and the PPP Center. The representatives from the private sector, COA and the PPP Center are considered non-voting members.

10.1.1 Solicited Proposals

80. At the bidding process phase, the PBAC's objective is to ensure that the procurement activities comply with what is prescribed by the Revised IRR of the BOT Law. This is crucial not only to the project achieving value for money but also to ensure that legal challenges and costly delays are avoided. A big part of the PBAC's efforts in this phase of the procurement process lies in ensuring that not only are comparable bids received, but also that well-qualified bidders submit quality bids.
81. This would entail undertaking adequate due-diligence, such as:
- a) Clarification or rejection of Proposals – involves comparison of the ratings assigned by each member of the PBAC to clarify ambiguities in the bid. This may include:
 - i. The IA may ask bidders for clarification of their bids in order to assist in the examination, evaluation and comparison of bids. However, no change in a matter of substance in the bid, including changes in price or changes aimed at making an unresponsive tender responsive, shall be sought, offered or permitted.
 - ii. Notwithstanding subparagraph (a) above, the IA shall correct purely arithmetical errors that are discovered during the examination of bids. The IA shall give prompt notice of any such correction to the bidder.

- iii. When the clarification of bids is required, the IA shall maintain a written "Minutes of Clarification" report. Adequate notice should be given to the bidder prior to conducting the meeting. The location and setting of the meeting should be conducive to professionally discussing all issues leading to a resolution of the matter to be clarified.

In the case of the need to reject all bids:

- i. the rejection is subject to approval by the IA Secretary, and if so specified in the bid documents, the IA may reject all bids at any time prior to the acceptance of a bid. The IA shall communicate promptly to all bidders that submitted proposals, the grounds for its rejection of all bids.
 - ii. The IA shall incur no liability, solely by virtue of its invoking this provision and rejecting all submitted bids. The IA is not obligated to rebid if bids are rejected.
- b) Ranking of all responsive bids from Qualified Bidders – involves fairly and impartially ranking those bids determined to be responsible and responsive, from qualified bidders. Bids should not be rejected due to minor deviations which do not affect the price, quality, scope, or completion date of the PPP requirement or limits in any material way the responsibilities, duties, or liabilities of the bidder or any rights of the IA. The IA shall not accept nor rank a bid if (i) the bidder that submitted the bid is not qualified; or (ii) the bid is not responsive. The IA shall prepare a Selection Memorandum detailing the bid evaluation process and the ranking of all responsive bids.
 - c) In certain instances, when there is only one complying bidder left, direct negotiation is undertaken. The conditions for direct negotiation are governed by Rule 9 of the Revised IRR of the BOT Law.
 - d) Meeting timelines, conditions and requirements for Award and Signing of contract as per Rule 11 of the Revised IRR of the BOT Law which includes:
 - a. Receipt of requirements for the notice of award such as (i) the prescribed performance security, (ii) commitment of the required equity contribution, (iii) proof of firm commitments from a reputable financial institution to provide sufficient credit to cover the total estimated cost of the project, (iv) agreement indicating that members are jointly and severally liable for the obligations of the project proponent under the contract (in the case of a consortium), (v) registration of the special purpose company (SPC) if an SPC is formed for the purpose of undertaking the project, and (vi) other conditions imposed by the IA.
 - b. Public dissemination of bidding results.
 - c. Conditions of SPC for e.g. winning Project Proponent subscribes to and pays for a significant/principal shareholding or controlling interest in the SPC, subject to nationality and ownership requirements of the Philippine constitution; and proof of contractual or other legally binding ties (in the case of the consortium).
 - d. Conditions governing the withdrawal or substitution of a member of the consortium, or a shareholder of the SPC.
 - e) Meeting timelines, conditions and requirement for the Contract Approval and Implementation as per Rule 12 of the Revised IRR of the BOT Law which ensure the consistency of the contract with the provisions of the Philippine Constitution and other existing laws (e.g. New Civil Code), rules and regulations, including securing the necessary and appropriate environmental clearances of the project from DENR.

10.1.2 Unsolicited Proposals

82. Rule 10 of the Revised IRR of the BOT Law provides guidance on the process and requirements for Unsolicited Proposals. The requirements and timelines for the procurement process for unsolicited proposals will not be repeated here but rather the following are included; (i) outline of the unsolicited procurement process and corresponding due diligence that should be taken into account; and (ii) key factors in undertaking proper negotiation.

10.1.2.1 Outline of Process and due diligence

- a. *Pre-Approval Evaluation.* Due diligence is undertaken before a proposal is submitted to the Approving body to ensure completeness and compliance:
 - i. Evaluation for completeness and administrative compliance of an unsolicited proposal to determine whether or not the proposed project (i) involves a new concept or technology; (ii) is not included in the list of priority projects; (iii) does not require a direct government guarantee, subsidy, or equity; and (iv) is a complete proposal, that is, it includes: a cover letter, feasibility study, company profile, draft contract and other documents that may be proprietary in nature.
 - ii. Evaluation of the Unsolicited Proposal to determine (i) the project's merits, (ii) proponent's qualifications in accordance with the requirements of Rule 5 of the Revised IRR of the BOT Law, to carry out the project; and (iii) appropriateness of the contractual arrangement and reasonableness of the risk allocation. The IA recommends a rate of return based on its evaluation of the unsolicited proposal.
- b. *Negotiations on the draft contract.* After the Approving Body (the ICC) approves the project, the Head of the IA negotiates the draft contract specifically on the project scope and contract based on contract parameters set by the ICC. Negotiations should essentially focus on the project scope, implementation arrangements, reasonable rate of return and other parameters determined by the Approving Body, and the terms and conditions of the draft contract, among others. According to the Revised IRR of the BOT Law, the IA has the option to reject the proposal by advising the original proponent in writing stating the grounds for rejection and thereafter may accept a new Unsolicited Proposal, or bid out the project as a solicited proposal, or undertake the project on its own.
- c. *Comparative Proposals.* Once negotiations on the draft contract are successful, the draft contract is reviewed by the Office of the Solicitor General or Office of Government Corporate Counsel, and DOF (if necessary) and subsequently approved by the IA, a certificate of negotiation is signed. The agreements on the draft contract form the basis for the Swiss Challenge on the bid terms of reference wherein comparative or competitive proposals are solicited from challengers. Preparation of solicitation and contractual documents shall be prepared in accordance with the provisions specified under IRR Rules 4 and 5 of the Revised IRR of the BOT Law. The contract executed with the proponent, and as approved by the Approving Body, shall be part of the Comparative Proposal documents, and shall be considered final and non-negotiable by the comparative proponents. Proprietary information should however be respected, protected and treated with utmost confidentiality. It should not form part of the bidding/tender and related documents.
- d. *The Swiss Challenge.* Section 10.11 of the Revised IRR of the BOT Law provides the timelines on the invitation for comparative proposals. For projects costing at least PhP500 million, the invitation should also be published at least once (1) in at least one (1) international publication. It shall indicate the time, which should not be earlier than the last date of publication, and place where tender/bidding documents could be obtained. The invitation shall explicitly specify a time of sixty (60) working days, calculated from the date of issuance of the Comparative Proposal documents, for proposals to be received by the IA. Beyond that deadline, no proposals shall be accepted. A pre-comparative proposal conference shall be

conducted thirty (30) working days after the simultaneous issuance of the Comparative Proposal documents to all bidders.

- e. *Posting of Proposal Bond by the Original Proponent.* To be eligible to compete further, the original proponent shall be required to submit a bond equal to the amount and in the form required of the comparative proponents. The submission of the Bond shall be due at the date of the first day of the publication of the “invitation for comparative proposals”.
- f. *Submission and Evaluation of Comparative Proposals.* To be eligible to compete further, each Comparative Proponent is required to submit its proposal in three separately-sealed envelopes at the time and place specified in the Tender Documents. The first envelope shall contain the qualification documents, the second envelope the technical proposal as required under Section 7.1 (b) of the Revised IRR of the BOT Law, and the third envelope the financial proposal as required under Section 7.1 (c) of the Revised IRR of the BOT Law. The IA shall evaluate proposals in three stages (i) the qualifications of each Comparative Proponent to carry out the project; (ii) each Comparative Proponent’s technical proposal; and (iii) each Comparative Proponent’s financial proposal.
- g. *Ranking of all Responsive Proposals.* The IA shall fairly and impartially rank those bids determined to be responsible and responsive, from qualified Comparative Proponents. Comparative Proposals should not be rejected due to minor deviations which do not affect the price, quality, scope, or completion date of the PPP requirement or limits in any material way the responsibilities, duties, or liabilities of the bidder or any rights of the IA. The IA should not accept nor rank a Comparative Proposal if (i) the Comparative Proponent that submitted the Proposal is not qualified; or (ii) the Proposal is not responsive. The IA should prepare a Selection Memorandum detailing the bid evaluation process and the ranking of all responsive Comparative Proposals from Comparative Proponents. The Selection Memorandum shall also detail (i) The evaluation criteria as stated in the Comparative Proposal document; (ii) List of all Comparative Proponents submitting Comparative Proposals; (iii) List of those Comparative Proponents found to be qualified; (iv) List all Comparative Proposals deemed responsive in the order ranked.
- h. *Award and notice to Proceed.* Timelines and requirements for the award should follow those set in the Revised BOT Law IRR, including those as per Rule 11 of the Revised BOT Law IRR.

10.1.2.2 Negotiation

- 83. The Proponent can be assumed to have a vested interest in amending the general outlines of risk transfer provisions agreed in the PPP Contract once the more intense multiple-party negotiations commence on supplementary contracts. The proponent will likely have at its disposal a Negotiation Team, supported by technical, legal and financial advisors, who may, or may not, be present at the negotiation table but will be available for support functions. Together with the Negotiation team, they form what is commonly known as the Transaction Team. It is recommended that the IA adopt a similar approach to keep the playing field as level as possible. The IA’s transaction team may comprise experts in areas such as legal, financial, engineering, operation, and risk management. The **Transaction Team** could consist of a core **Negotiating Team** and a **Support Team**. The representatives from the IA and the PPP Center (PPPC) that were involved in evaluating the project proposal will continue to represent their respective institutions during negotiations.
- 84. The Transaction Team will review the value for money analysis done on the proposal and other evaluation parameters, including:
 - a. A Social Cost Benefit Analysis (SCBA), establishing that the proposed project meets threshold criteria established by NEDA and will be economically beneficial to the country;

- b. The feasibility study and corresponding investment appraisal, establishing the commercial viability of the project; a social and environmental impact report, identifying any major adverse social and environmental effects of the project in areas such as environment, health and safety of employees and community, gender opportunities, resettlement issues, concerns regarding indigenous peoples and, if applicable, affordability issues and willingness to pay for the services that are to be provided.
85. As part of due diligence, it is also essential to undertake scrutiny of the financial model and the preferred bidder's proposal to establish the reasonableness of the projected capital costs, operating costs, tariff levels, risks and other related aspects of the proposal;
86. The Transaction Team should develop a Negotiating Plan. This confidential plan should include at a minimum, identification of:
- a. **Non-negotiable items** identified as such by the approving body;
 - b. **Obstacles** that are likely to impede the successful negotiation of the project;
 - c. **Factors which have changed** since the unsolicited proposal has been received;
 - d. **A risk management strategy** that identifies, quantifies, and prioritizes the differences in the issues between the request for proposal (RFP) and the proposal;
 - e. **Parameters** that are negotiable, as agreed by the IA with the approving body, and the scope for variance;
 - f. **A negotiating strategy** with regard to technical specifications, particularly where these impact on project cost; (i) renegotiation options on specific items; and (ii) other items that may be specific to the particular project; and
 - g. **Agreement on a comprehensive range of performance indicators/measures** including reporting requirements (i) PPP Contract provisions; (ii) expected performance standards (Environmental and Social Impact Assessment (ESIA), related); and (iii) commercial objectives. This is to avoid contract disputes during the operational stage.
87. The Revised IRR of the BOT Law prescribes a maximum period of 180 days for the negotiation. During this period, the key to a successful negotiation is to keep the government's main objectives at the forefront, while at the same time maintaining flexibility in order to arrive at a contractual agreement that is acceptable to both the IA and the proponent. If by the end of 180 days there is little or no progress, the IA Transaction Team should consider breaking off negotiations.
88. Any decision to break off negotiations, however, should be made by the IA based on the recommendation by the Transaction Team. If the negotiations are successful and approval is extended by the IA, the *draft contract* will be updated and sent to the ICC for concurrence.
89. In PPP negotiations it is important to proceed as far as possible to meet the requirements of the private sector while at the same time ensuring the costs and benefits are retained and the optimal allocation of risk is achieved. Hence, the Transaction Team will aim to negotiate an agreed PPP Contract that will have no substantial shift of risk to the government from the parameters, terms and conditions set by ICC.
90. It is essential that the IA Transaction Team has:
- a. A negotiation plan;
 - b. A list of non-negotiable items;
 - c. A list of negotiable items with an ideal, and fallback position on each;

- d. A willingness to trade one negotiable item for another.
91. Once the contract has been awarded, the objective of the PBAC is to facilitate the finalization of a PPP contract that effectively leads to financial close. This involves some negotiation with the PPP proponent in fine-tuning key elements or clauses of the contract and in managing the interaction between not only the IA and the PPP Proponent, but also the shareholders and lenders of the PPP Company. The NGA Manual Chapter 5 provides details on the key clauses in a PPP contract while Chapter 7 provides a more thorough discussion on the issues that may arise before reaching financial close.
92. It is essential to establish any non-permissible variations to the government position for contract negotiations. The IA will have recommended, and ICC will have approved, which items are non-negotiable and should be identified as such. There remain a number of other items in the Request for Comparative Proposals which the proponent may not meet and which will form the basis of explanation, discussion and negotiation. For example, negotiations between the proponent and the government are often needed to clarify issues (usually key issues) that arise as a result of gaps or lack of clarity in the draft PPP Contract.
93. Where necessary, the IA Transaction Team should be able to establish the parameters for permissible variations, especially the upper limit. That position must be documented and approved by the IA before negotiations commence so the lead negotiator is able to confirm any contract variations with the successful bidder without having to seek approval for each variation. This makes for good practice, as negotiation is more likely to proceed smoothly without the negotiator having to obtain permission from others on the government side.
94. If negotiations are unsuccessful, the acceptance of the unsolicited proposal will be revoked.

10.2 Contract Management

95. Contract management takes place at Stage 4 of the PPP project process, starting shortly after the first ranked bidder is selected. It involves the whole-of-life administration of PPP agreements. The essence of contract management, as stated in Section 12.10 of the Revised IRR of the BOT Law, involves determining “whether the project is constructed, operated and maintained in accordance with the approved plans, specifications, standards and costs under the contract.” Contract management can only start after the contract is signed. However, during negotiations specific issues and discussions of intent must be determined to ensure that contract management is consistent with the agreement and the intent of the parties. After the agreement is signed, the contract management function therefore extends over six distinct phases:
- a. **Pre-Effective Date or Conditions Precedent Phase** – Under most PPP Contracts, the contract does not become effective and the contract is not in full force and effect, until a number of events occur. Generally, those events include signing a loan agreement between the Private Sector Lenders and the Project Proponent and signing Subscription Agreements by all Private Sector Investors or Shareholders of the PPP Project. Further, obtaining all land to be used under the project and obtaining Rights-of-Way by the IA is critical to achieving the Effective Date.
 - b. **Pre-Construction or Design Phase** – This phase entails designing the project, getting final approvals and payments for Rights-of-Way and land acquisition and scheduling construction mobilization. During this critical stage, the IA has a right to review and approve the construction design and should take an active role at the earliest stages to ensure that design approvals are achieved in stages thus eliminating late stage delays for limited engagement in the approval process.
 - c. **Construction Phase** – Begins with the mobilization of the Concessionaire’s Contract Management Team through to the Commissioning Phase of the Project. Immediately after the design is approved and the Construction Team is mobilized, the IA and the Concessionaire should meet to establish a Construction Management Unit that will comprise representatives of the Concessionaire and the IA.

- d. **Commissioning Phase** – Is the phase that begins as the Construction nears completion. Before the installation can be put into service it must be tested and its ability to operate according to the PPP Contract proven.
 - e. **Operations Phase** – This phase entails monitoring on-going operations after the facility is put into operation. During operation, the Concessionaire must provide services and invoice the customer for the services provided.
 - f. **Transfer or Turn-Over Phase** – This phase overlaps the Operations phase and occurs about 2 years prior to termination of the contract. In the event of termination prior to the end of the term of the agreement, additional and more expensive measures will need to be employed but the general emphasis of this phase is to inventory the facility and associated assets, ensure that the hand back and condition of assets is determined, and responsibility for remedial actions are assigned.
96. Throughout these six phases, the contract management goal is to ensure that the project proponent works continuously in the public interest and the value for money of service delivery is achieved. In this context, the contract management work will include: (a) evaluating the quality and effectiveness of the PPP project proponent's service offering, and its adherence to the contract provisions and minimum performance standards and specifications (MPSS); and (b) monitoring and evaluating the adequacy of the maintenance program extended to the assets under the control of the project company particularly in those cases where assets will be transferred to the government at termination or end of the contract.
97. The scope and content of the contract management function is defined at the time the tendering documents are drafted. These are formalized in the PPP Contract, which defines the basic and legal relationships between the parties and their rights and responsibilities.
98. The PPP contract should require the project proponent to provide periodic information on the progress of the project and enable the implementing agency (IA) to inspect and audit whenever necessary. It should also provide a provision to oblige the project proponent to carry out and submit technical surveys and other documents, when necessary, to aid in the audit. The data requirements that will support the contract management function of the IA should be set out clearly in the PPP contract.
99. The key principles associated with the contract management function are:
- 1. Continuous, coordinated and comprehensive monitoring;
 - 2. Avoid misunderstandings by maintaining key contract documents on a shared basis with the PPP project proponent;
 - 3. Termination should be a last option since an interruption in service delivery can be costly. Instead, discrepancies should be carefully documented, discussed with the project proponent and, as appropriate, remedies should generally take the form of liquidated damages; and
 - 4. The contract management duties should never intervene in the day-to-day management of the infrastructure facility.

10.2.1 Creating a Contract Management Team

100. A contract management team should be organized to ensure that the contract management effort has a clear authority and reporting lines for a variety of situations that may arise. The team should be proficient with the terms of the contract.
101. The contract management effort is a primary responsibility of the IA, specifically the IA's PPP unit. The IA, as implied in the Sections 12.10 and 14.3 of the Revised IRR of the BOT Law, is tasked to monitor the project's progress *vis-a-vis* the approved plans, specifications and standards and bring to the attention of the project proponent any deviation from or non-compliance for necessary corrective actions.

102. The PPP Center provides guidance and oversight to the IA and is responsible for the coordination and monitoring of PPP project arrangements authorized under the Revised IRR of the BOT Law (see BOT Law IRR, Section 4.1 and Executive Order 8 of 2010, Section 2). Its main function is to ensure that “the project complies with the Revised IRR of the BOT Law including the project proponent’s required environmental clearances from the DENR.” IAs are required to provide the PPP Center information on the progress or performance of the PPP project during the monitoring process. The PPP Center maintains a database of all PPP projects including the results of all contract management and lessons learned for the purpose of submitting suggestions for policy enhancements.
103. Aside from the IA and the PPP Center, the contract management team should include: (a) the regulatory body (e.g., Toll Road Regulatory Board for roads, etc.) which in certain sectors takes on the IAs’ role of monitoring proposed adjustments of tolls, fees, rentals and charges with the prescribed rate of return for the project (Section 12.18 of the Revised IRR of the BOT Law), (b) the DOF which has the primary responsibility of monitoring the financial obligations and contingent liabilities that may arise from the project, and (c) other agencies as may be deemed necessary.
104. The skills required for contract management will depend on the size and complexity of the project and may vary over the life of the concession. Below are core skills to be included in the team:
1. Design and construction;
 2. Business and product assurance;
 3. Facilities management;
 4. Safety and regulatory responsibilities;
 5. Environmental and social safeguards;
 6. Legal and regulatory; and
 7. Financial
105. In certain instances, external consultants would need to be mobilized to bridge the gaps in in-house knowledge and skills and provide the contract management team appropriate advice in their area of expertise. An independent specialist may be appointed to provide independent opinion on the achievement or progress of the PPP project *vis-à-vis* targets, objectives and safety and environmental safeguards.
106. Activities of the Contract Management Team should be checked at the outset by the Project Committee (see NGA Manual Part 2 Chapter 6 regarding the composition and duties of the Project Committee) and be audited from time to time to ensure their adequacy. It should also be emphasized that the PPP project proponent will be ‘monitoring’ the IA in order to ensure that the government also fulfils its contractual obligations.

10.2.2 Budget

107. Parts of the contract management activities are often identified at the outset and included in the cost of the PPP contract. Thus, the project proponent pays part of the costs of contract management. The contract management team must establish a budget for its proposed activities with the allocation of costs (as agreed in the contract) determined at an early stage.
108. Where the contract management team needs independent advice, technical surveys, dispute resolution, etc., the costs involved should be paid by the project proponent.¹⁷ It should be recognized however that these have cost implications on the project proponent. The financial

¹⁷ The procedure for hiring independent advice requires notifying the project proponent that the IA plans to hire an independent consultant in accordance with the terms of the agreement. The IA will advise the project proponent of the expected terms of reference of the consultant along with an estimated budget for the work to be performed in accordance with the terms of the contract. The IA shall procure the consultant through the normal IA procurement process provided, however, that the project proponent shall have the right to question the reasonability of the consultant rates and time estimates to ensure that they are consistent with the prior agreement of the parties and do not unreasonably financially disadvantage the proponent.

costs should be realistically assessed bearing in mind the skills level that will be needed as well as the requirement for independent and specialist advice.

10.2.3 Develop a Contract Administration Manual

109. A contract administration manual that (a) organizes all the necessary information – including timelines - regarding the contract and (b) sets the responsibilities and obligations of the different parties and the processes in managing contract terms should be prepared prior to financial close of the project. It should be designed to assist the contract management team in effectively assessing the performance of the PPP project. It is considered good practice to involve the project proponent in drafting the manual to ensure that the process of interfacing with them is mutually agreed upon and can be easily managed. The project proponent can also be included in any training or capacity building effort regarding the implementation of the manual to encourage better understanding between the parties.
110. The manual should include the provisions in the project agreement that identify:
1. Decisions required and their timing;
 2. Key activities to be undertaken, including the responsible entity; and
 3. Reporting and other performance standards to be met by the PPP project proponent.
111. The plan or manual can include the following activities and provisions:
1. Identification of all agreed MPSS during the entire life of the project, and the information needed to verify performance;
 2. Ground breaking and other key dates of scheduled activities by the project proponent and the IA;
 3. Penalties in the case of non-performance, as reflected in the PPP contract;
 4. Roles and responsibilities of each team member in monitoring and information provision;
 5. Cost bearing agreements between members of the contract management team;
 6. Affixing responsibility for preparation of all required reports;
 7. Identifying the mechanisms to use in benchmarking or testing, where relevant;
 8. Mechanisms to manage change mechanisms e.g., changes in law, regulation, or circumstances;
 9. Mechanisms for problem solving and resolving disputes;
 10. Contingency arrangements in case of failure, or default;
 11. Contingency plans for dealing with emergencies;
 12. Frameworks for independent auditing by the contract management team; and
 13. Public consultation requirements, as appropriate

10.2.4 Key Tasks of the Contract Management Team

112. In general, the contract management team is tasked to:
1. Set monitoring and reporting requirements that are comprehensive enough to enable adequate contract management and auditing by the IA (see NGA Manual Chapter 11 for discussion on Monitoring and Evaluation). This is best accomplished if the Contract Management Team is involved directly or indirectly in the contract negotiations that formalize these important contract attachments;
 2. Ensure that there is compliance with the provisions of the Revised IRR of the BOT Law, regulatory and legal framework, the project agreement and the lenders facility agreement;
 3. Verify that the service or infrastructure is delivered on time and is cost effective (i.e., delivered at a reasonable price, quality and value for money standard) and the project is clearly sustainable financially;

4. Resolve performance deficiencies and, as necessary, take effective action and/or implement contractual remedies, as needed, to address these; and
 5. Monitor the government support to the PPP project by anticipating, where possible, potential variations in the actual government direct and indirect (contingent) support relative to original estimates or mutual agreement to restructure the support.
113. The contract management team may also be involved in very specific tasks such as managing the resolution of disputes (discussed further in NGA Manual Chapters 10 and 12) between the IA and the project proponent, ensuring the proper transfer of assets in acceptable condition at project termination, and managing contract renegotiations (should this become necessary) during the operation of the contract.
114. Below are some of the specific tasks in contract management:
- a) **Pre-construction and construction stages.** The contract management team has important functions to perform in the pre-construction and construction stages of a PPP project. Their function during this period will be aided by understanding the provisions of the PPP contract that relate to:
 1. Rights of the contract management team to raise issues related to contractual failures and/or non-compliance;
 2. Land acquisition and/or planning issues;
 3. Construction implementation schedule, construction milestones, progress payments, procedures to follow for disbursement, liquidated damages for failure to comply;
 4. Integration of new facilities into existing facilities;
 5. Provisions related to site access;
 6. Delays or changes (variations or reopeners) to the construction program;
 7. Consequences of variations or reopeners, requested by the IA or the PPP project proponent;
 8. Procedures related to commissioning, including the determination of readiness for occupation/operation;
 9. Remedies related to construction defects; and
 10. Risks borne by the project proponent and/or the IA during the construction period.
 - b) **Managing and Monitoring Government of the Philippines (GPH) support.** The management and monitoring of the financial obligations of the IA in a PPP contract are vital especially where government support is provided to the project. The DOF is the main entity that will set conditions for such support under the government's PPP policy. The contract management team, with the support of PPP Center, will need to liaise with officials of DOF regularly on related issues including financial monitoring, auditing and reporting.
 - c) **Monitoring asset condition.** A key part of managing the financial aspect of a PPP contract is the identification, tracking and valuation of assets transferred and acquired under the contract. This activity is primarily concerned with the two of three types of contracts:
 1. *Concession Agreement.* At the end of a concession agreement, assets are transferred back to the IA. There is, therefore, a need to carefully monitor their condition at the termination of the contract, to ensure these are returned on the agreed terms; and
 2. *Lease or Operations and/or Maintenance (O&M) Contract.* Contracts of this kind may involve the IA handing over of assets to the project proponent at the start of the contract e.g., leasing of an existing port facility. These hand-over assets plus the assets built by the project proponent will be transferred back to the IA at the end of the contract. Asset monitoring and valuations will be needed throughout the duration of the contract to ensure that these assets are maintained according to the terms of the contract.

- d) **Alterations to Project Agreements.** PPP contracts, particularly those for concession PPPs, set out the contractual obligations for the project period, which can involve very long terms, e.g., 20, 25, 30 or more years. Over such a long period, changes would be inevitable. It is important to monitor variations and ensure it adheres to variations allowed under the Revised IRR of the BOT Law (see BOT Law IRR, Section 12.11):
1. There is no impact on the basic parameters, terms and conditions as approved by the Approving Body; or
 2. There is no increase in the agreed fees, tolls and charges or a decrease in the Agency/LGU's revenue or profit share derived from the project, except as may be allowed under a parametric formula in the contract itself; or
 3. There is no reduction in the scope of works or performance standards, or fundamental change in the contractual arrangement nor extension in the contract term, except in cases of breach on the part of the Agency/LGU of its obligations under the contract; or
 4. There is no additional Government Undertaking, or increase in the financial exposure of the Government under the project.
- e) **Asset Transfer.** Related to the length of the project period, one of the key objectives of contract management is to ensure that the explicit provisions for the transfer of assets are met, even though this event may not occur in the next 20-35 years. The contract would normally specify the required physical state of the project assets at contract end. For an existing infrastructure project (such as a power plant, port or an airport), the contract may require that the asset's condition is fit for the purpose and that no major rehabilitation or reconstruction works will be required for a defined period. Each sector/subsector will have different characteristics and conditions will vary. If major works are required at the end of the contract period, and the asset is still generating revenues, the government may consider the following options (i) Re-tender the asset to avoid expensive capital costs; (ii) Generate funds through a new, or follow-on, contract; and (iii) consider other options.
- f) **Dispute Resolution.** A crucial activity of the contract management team is to try to prevent disputes and, if they arise, explore ways to minimize serious impacts on the project/parties to the contract. A first priority (i.e., in terms of the simplest and least costly way to deal with disputes) is to avoid dependence on arbitration, or litigation.
115. Normally, in any construction contract, an independent consultant is appointed by the lenders of the project to monitor construction, report on progress and, in particular, attest that conditions for payment milestones have been met. In a PPP contract, the independent consultant would; be hired by the IA and the PPP project proponent; have an obligation to report to the lenders; and would be paid by the PPP project company (in some cases shared by the IA). Thus, the progress reports of the independent consultant would be of interest to the following parties:
1. The IA, enabling it to monitor activity; and
 2. The project proponent, which has been awarded by the IA the right to build and operate the facility, and lenders of the project, with the objective of documenting that the required progress has been met for payment milestones (thereby meeting preconditions for a further disbursement of loans to pay the construction contractor).
116. On very complex projects, it is usual to have more than one independent consultant. The project proponent, the lenders and the IA may hire one consultant each to represent them.

117. If the IA's consultant or the contract management team disagrees with the independent consultant's assessment of progress, and/or wants further clarifications before a disbursement is made, all steps should be made to avoid litigation using alternative dispute resolution (ADR) mechanisms. As instructed by Executive Order 78, Series of 2012, all PPP contracts should include provisions on the use of ADR such as conciliation and negotiation, mediation and arbitration. The parties can seek domestic or international ADR mechanisms and are thus given the freedom to choose the rules or procedures to be followed to resolve their dispute.

DRAFT

TECHNICAL NOTE 1: COMPUTING THE WEIGHTED AVERAGE COST OF CAPITAL

Financial institutions usually apply the WACC approach in analyzing the financial viability of the project as they decide on how much and in what form their exposure would be.

The WACC is the weighted average of the yields, net of tax on different sources of funds put up by the project proponent. This is determined by calculating the relative weights of the capital resources and multiplying them with the corresponding opportunity cost of capital for each of the capital resource. The WACC is mathematically represented in equation form by:

$$\text{WACC} = \frac{[P_e \times R_e] + [P_1 \times R_1]}{[1 - T_r]}$$

Where P_e = percentage of equity investment to total capital investment
 P_1 = percentage of loaned funds
 R_e = opportunity cost of equity funds
 R_1 = effective cost of loaned funds
 T_r = corporate tax rate in Philippines

The cost of debt is indexed on the Philippine Dealing System Treasury (PDST) Reference Rates, which have benchmark rates for 12 periods, i.e., 1,3 and 6 months, 1,2,3,4,5,7, 10, 20 and 25 years. The rates represent the risk free opportunity cost of funds, to which banks will add a spread for the risk premium. Current average spreads are at 3%.

Banks use the PDST-F index, which is the calculated average of the best 60% of firm bid rates posted by designated market-making banks for the original 12 benchmark tenors at 11:16 AM daily (see www.pdex.com.ph)

The cost of equity is based on the rate of return acceptable to the investor. It is usually estimated using the Capital Asset Pricing Model (CAPM). The formula for the CAPM is as follows:

$$\text{Equity return} = R_f + B (R_m - R_f)$$

Where:

- R_f = risk free rate
 B = beta for the security
 R_m = expected market return
 R_f = equity market premium

CAPM's starting point is the risk free rate, usually the 10-year government bond yield. Added to this is the premium that equity investors demand for risks they take on. The equity market premium consists of the expected return from the market as a whole less the risk free rate or return. This is then multiplied by the beta. The beta is the relevant measure of a stock risk. It measures the volatility of the stock vis-à-vis the movement up or down of the market as a whole. Should there be no related domestic stock, related stocks in other countries may be used adjusted by the Philippine country risk premium.

TECHNICAL NOTE 2: COMPUTING THE REQUIRED REVENUE OF A PPP PROJECT

The following are the steps in estimating the required revenues of the project to achieve financial viability:

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| 1 | On two excel spread sheets, two different calculations of equity | <p>Allocate 30% of the high and low project costs to equity and allocate disbursements of equity over the construction period¹⁸. Equity is normally disbursed on a pro-rated basis to the loan proceeds based on the construction “S” curve, as set forth in item 4.</p> <p>Two calculations of equity are needed, one for the high estimate of project cost on one excel model; and one for the low estimate of project cost on the second excel sheet.</p> |
| 2 | Future value of equity at the end of construction | <p>Three steps in the excel model(s):</p> <ol style="list-style-type: none"> a. Check with the IAs’ Transaction Advisers and / or PPPC on what constitutes a reasonable rate of return for the project, or similar projects that are being developed, for example 15%; b. To calculate the Future Value of equity as at the end of the construction, each equity disbursement must be compounded at the rate of 15% until the end of the construction period. All the components are then rolled up and then added up to arrive at a total value of PPP equity outstanding at the end of construction; c. Two calculations of future value of equity are needed, one for the high estimate of project cost on one excel model; and one for the low estimate on the other excel model. |
| 3 | <p>Calculate the approximate level of potentially distributable earnings needed by the project to be bankable at the end of the construction period. [This assumes no ramp up of earnings, and therefore no losses in the first year of operation, and is meant to be a rough approximation of revenues needed]</p> | <p>The formula here is simply to multiply the reasonable rate of return on equity, say 15% by the value of equity at the end of the construction period. Earnings = (E)t x .15</p> <p>WHERE (E)t = the full value of equity at the end of construction</p> <p>Two calculations of distributable dividends are needed: one for the high estimate of project cost; and one for the low estimate of project cost in the second model over each year of the operational period.</p> |
| 4 | Length of construction period | <p>▷Should fall in the range of 1-3 years, preferably less than three.</p> <p>▷Consider the “S” Curve of project cost expenditure:</p> <ul style="list-style-type: none"> - For 3-year construction: 25%, 50%, and 25%, respectively for years 1, 2 and 3. - For 2-year construction: 30%, 70%. <p>The drawdown of equity or debt (below) is done on a pro-rated basis. . For instance in a USD 100 million project with a three year construction, it would be assumed that 25%, or USD 25million will be disbursed in the first year, of which 30% will be equity and 70% will be debt; in the second year</p> |

¹⁸ A debt equity ratio of 70:30 is recommended for this analysis to be on the conservative side. Previous PPP projects’ debt-equity ratio ranged from 80:20 to 70:30.

| | | |
|---|--|---|
| | | USD 50 million will be drawn down, of which 30% will be equity and 70% will be debt, and so on. |
| 5 | Calculate the debt service requirements for 70% of project cost | <p>Five steps in the excel model (s):</p> <ol style="list-style-type: none"> Check with the IAs' Transaction Advisers and / or PPPC to determine what is an acceptable estimate for the long-term (LT) cost of debt funds in the market; Allocate disbursement of debt over the construction period as per the S curve, as explained in item 4; Calculate the rolled up interest for each disbursement during the construction period using the reasonable estimate of LT cost of funds; Arrive at the full value of debt including rolled up interest at the end of the construction period and allocate this sum in equal instalments over a seven year and ten year period for both, the high project cost scenario, and the low project cost scenario. This is the annual Debt Repayment instalment during the operating period for each of the two (7 and 10 year) operating periods; Annual Debt Repayment is $ADR=Dt/10$ or, for sensitivity purposes, $ADR=Dt/7$ <p>Where ADR = Annual Debt Repayment, and Dt = Total Debt, including rolled up interest, at the end of construction</p> <ol style="list-style-type: none"> Add interest payments during each year of the operating period on unpaid balances in both models, based on the reasonable estimate of LT cost of debt funds, i.e., for each year of operations, the sum of all previous ADR is deducted to arrive at the current debt outstanding and this is multiplied by the interest rate. This is referred to as the estimated "Interest Service." Two calculations of Annual Debt Repayment and Annual Interest Service will be required: one for the high project cost excel file; the other for the low project cost excel file for each of the 7 and 10 year debt repayment profiles. |
| 6 | Operating costs: fixed and variable | Estimate operating costs |
| 7 | <p>Calculate the required revenues</p> <p>The approach is not definitive as it is just a way to estimate imprecisely the range in the level of revenues sustainably required and the sources of business needed to meet those revenues</p> | <p>Add items 3, 5 and 6 for a rough approximation of the level of revenues needed for the first year of operations.</p> <p>There will be a high and low estimate, based on high-low project cost excel files for the 10-year financing and a separate high-low project cost estimate for the 7-year financing.</p> <p>The two files together define the approximate range in the level of revenues needed to commercially sustain the project, without taking inflation into account. The most stressful scenario is the high construction cost estimate over a 7-year financing; while the least stressful is the lowest construction cost estimate over a 10-year financing period. The issue now is to determine whether the project is capable of generating a level of revenues which falls within this range.</p> |

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DELIVERABLE INTERNAL REVIEW QM FORM

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