



**TEMASEK
FOUNDATION**

**Temasek Foundation – Singapore Cooperation Enterprise
International Technical Cooperation (Public-Private Partnership)
in the Philippines**

**In Partnership with Department of Health, University of the Philippines &
International Finance Corporation**

Programme Launch – Project Feasibility

24 July 2019

Important Notes

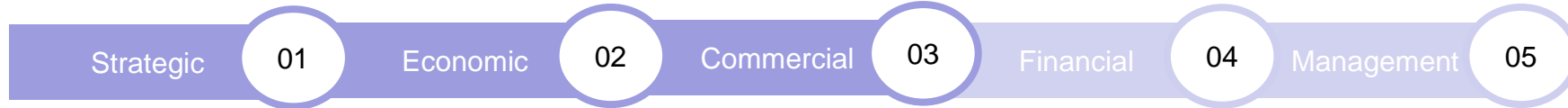
Table of Contents

1. What's in a feasibility analysis?
2. Legal & Institutional Feasibility
3. Technical Feasibility
4. Environmental & Social Feasibility
5. Financial Feasibility
6. Economic Feasibility
7. Fiscal Feasibility
8. Value for Money Analysis
9. Q&A

1

What's in a Feasibility Analysis?

Contents of a business case



Strategic case

01

- Needs assessment & alignment with larger development plans
- Shortlisting potential viable options
- Institutional capacity and capability to deliver

Economic case

02

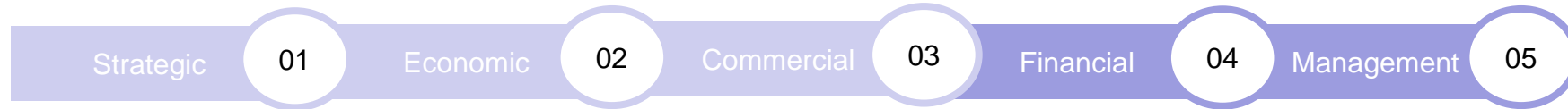
- Appraise real demand for infrastructure services based on sound appreciation of the underlying project drivers
- Analyse how an infrastructure project provides broader social, environmental and economic benefits
- Demonstrates the rationale for the project size, scope and appropriate service levels

Commercial case

03

- Test the technical feasibility of the project
- Define an initial base case and test feasibility by analysing scenarios

Contents of a business case (cont'd)



Financial case

04

- Develop comprehensive financial model and scenario analysis
- To guide risk & value-for-money analysis, including on issues impacting on structuring, bankability, and project financing for Capital Costs, periodic facility renewal, capital expenditures and Operation & Maintenance Costs

Management case

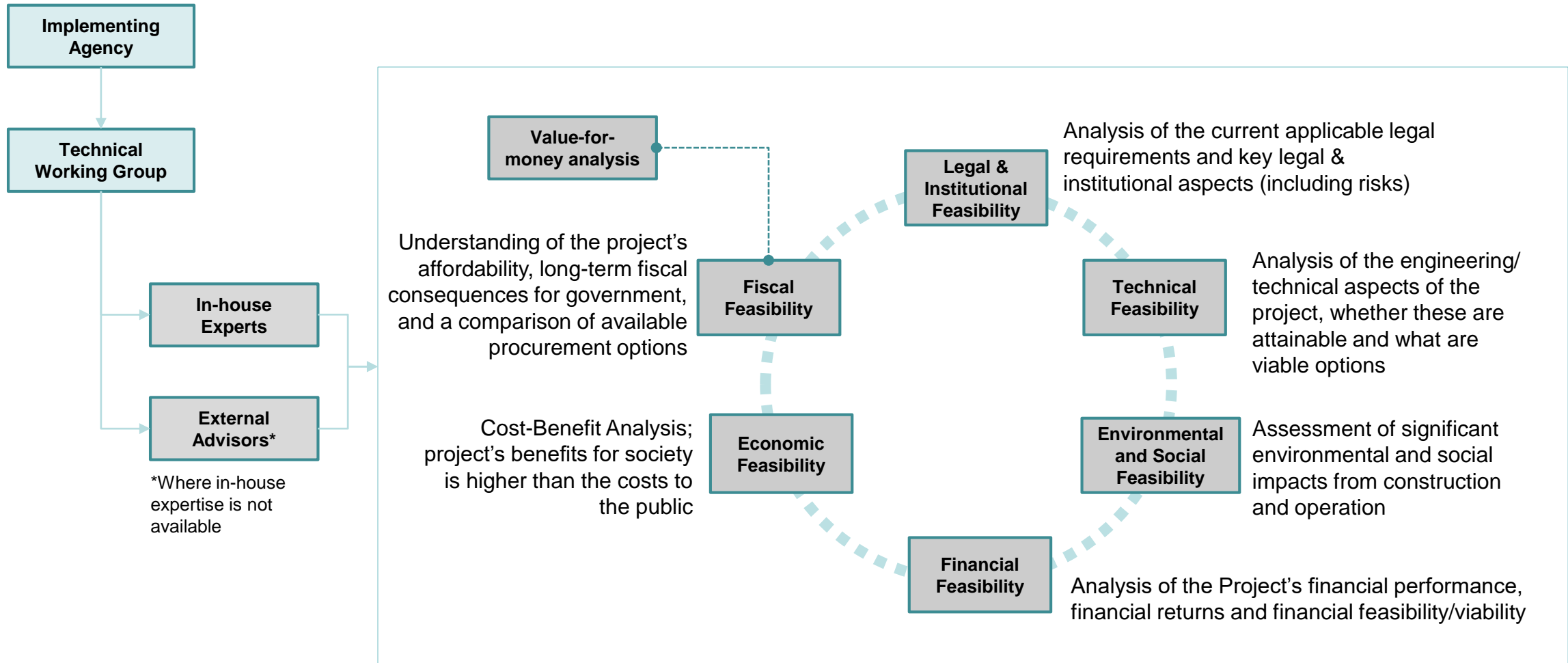
05

- Appraise the technical capacity of key staff required to create Project Management Offices for managing the outcomes, and cost control of the project

“

Your feasibility analysis will determine whether the project is sound. The results of which becomes the foundation for project development– PPP or otherwise.

Project feasibility analysis overview



2

Legal & Institutional Feasibility

Legal and institutional analysis

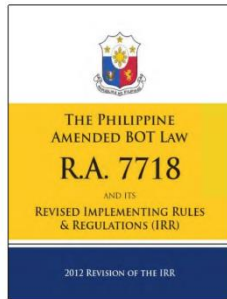
Ensures that the project is procured in accordance with the prevailing legal and institutional requirement while highlighting any legal red flags



PPP policies and regulations

PPP related laws and regulations such as:

- PPP policies
- PPP procurement guidelines
- PPP related sector laws and regulations



The PPP Center issues guidelines to PPPs – adopting these properly helps align projects with best practices



Sector laws, policies and regulations

Healthcare specific laws and regulations such as:

- Healthcare-related Republic Acts and Executive Orders
- Healthcare schemes such as PhilHealth
- Ownership/control of healthcare assets, specifically foreign ownership
- Land-related laws (e.g. legal classification of land, land-use, land acquisition)
- Property and labour laws
- Construction related laws and regulations

Legal and institutional analysis (cont'd)

Ensures that the project is procured in accordance with the prevailing legal and institutional requirement while highlighting any legal red flags



Permits and approvals

Project specific permits and approvals

- Approval of project
- Land procurement approvals
- Construction permits
- Bio-medical and hazardous waste permits
- License(s) to setup and operate medical facilities
- Permits related to radioactive material



Institutional environment

Analysis of relevant institutions and stakeholders

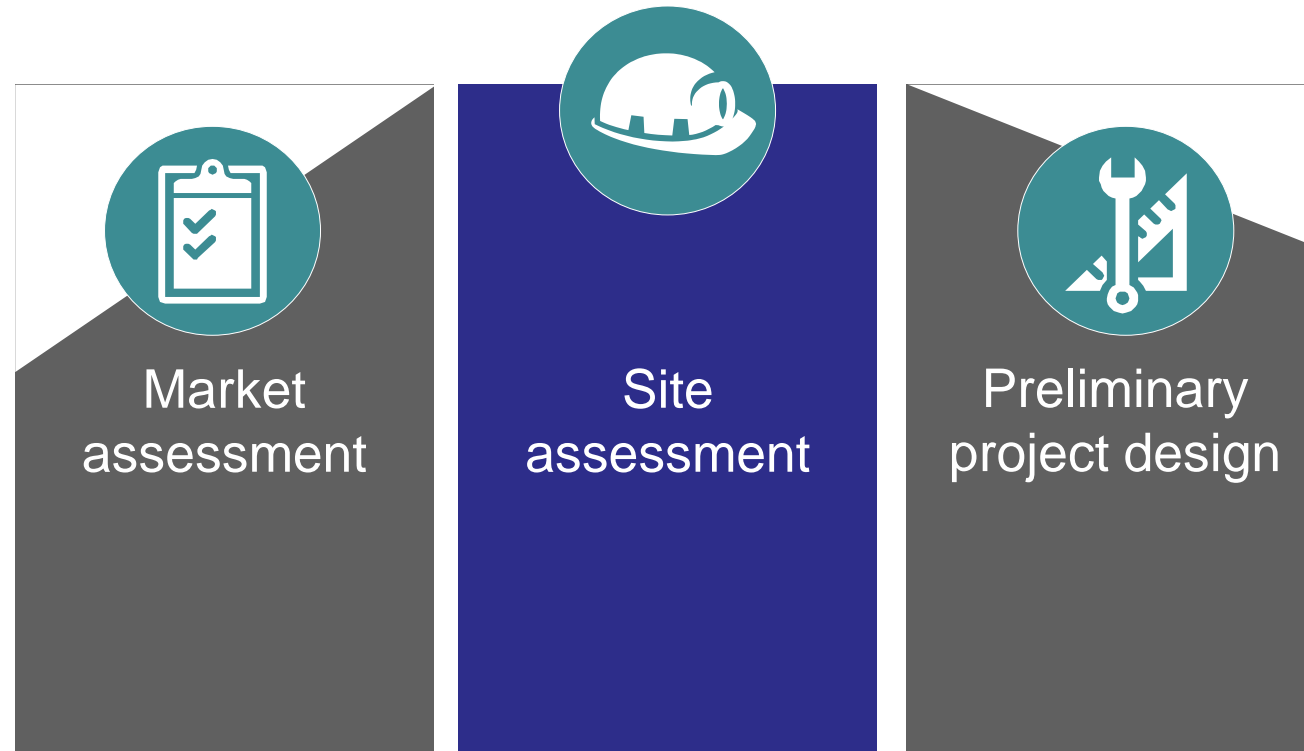
- Department of Health
- PPP Center
- NEDA
- Local Government Units (e.g. City government for permits and clearances)

3

Technical Feasibility

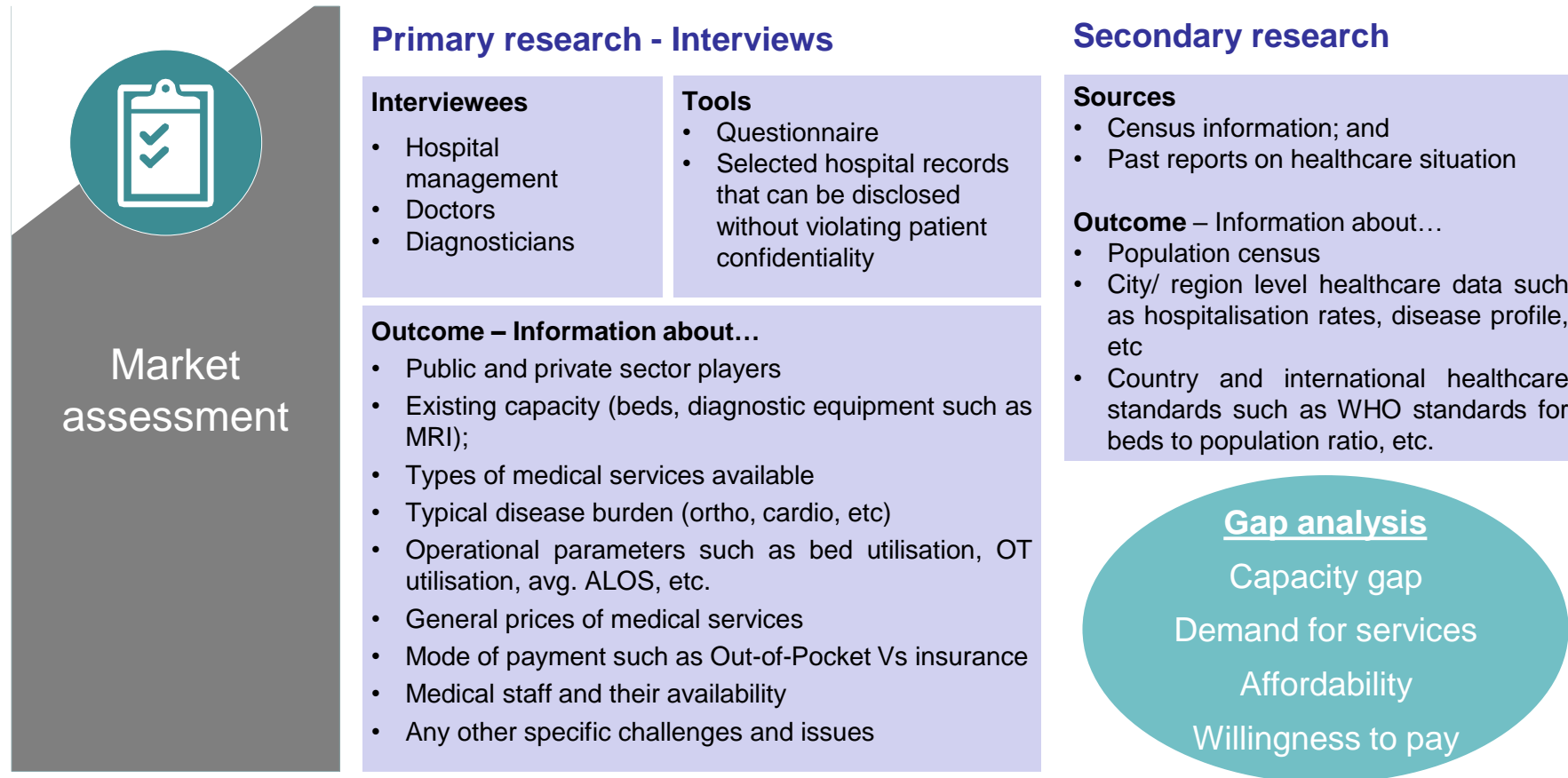
Contents of a Technical Feasibility

Technical assessments will be used to inform the potential design and characteristics of the proposed project



Market assessment

Primary and secondary research will help in estimating the gap in healthcare services



Source: APMG PPP Certification Guide, PwC Analysis

Site assessment

Understand site conditions to identify potential technical red flags and provide inputs for preliminary design of the project

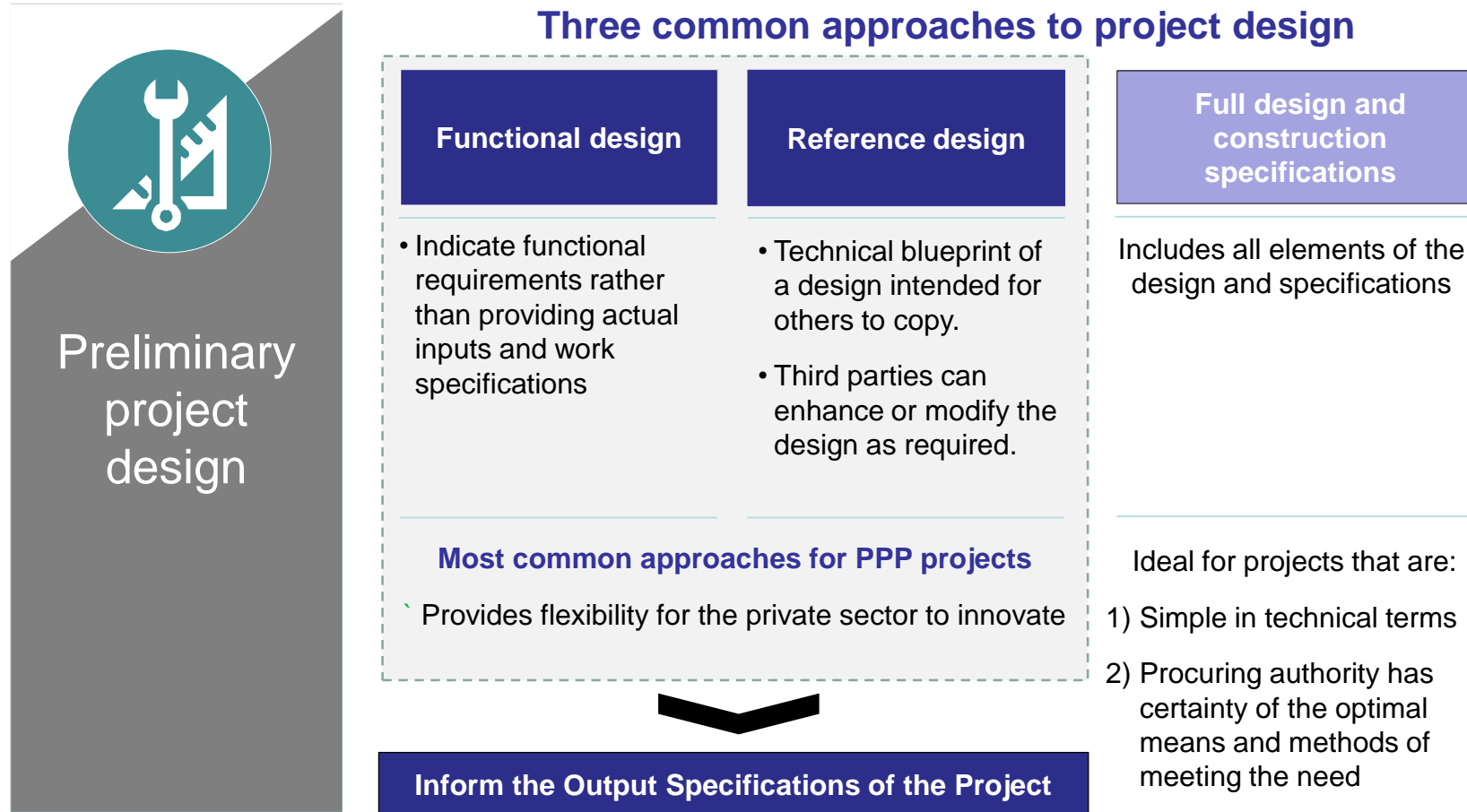


Site
assessment

- Assess the land area and its layout;
- Identify existing structures and encumbrances on the site;
- Evaluate access to the site and its impact on project's operations; and
- Preliminary assessment of ground conditions such as geotechnical, topographic and hydrological red flags.

Preliminary project design

The preliminary design should guide the Authority in outlining their requirements from the project and allow flexibility for the private sector to innovate



4

Environmental & Social Feasibility

E&S Feasibility

This exercise aims to identify and mitigate adverse environmental and social damages ahead of the project implementation



Identifying relevant
legal and regulatory
framework



High-level
Due Diligence to
identify possible
environmental and
social impacts



Initial cost estimation
of mitigation and/or
compensation for
environmental and
social issues

Identifying the legal and regulatory framework

Asking key questions help in answering specific environmental and social questions before the project starts



Identifying
relevant legal
and regulatory
framework

Determine and assess the country-specific environmental and social regulations to answer the following questions:

- ✓ What are the stages for environmental/social approval?
- ✓ What is the level of detail required in each stage of the Project?
- ✓ What is the content of the environmental assessment needed for approvals?
- ✓ What are sector-specific requirements?
- ✓ How long will the process take given the size and sector of the project?

Identifying possible environmental, social & health (E&S) impacts

Determining the project's environmental and social impact is key at the onset



High-level
Due Diligence to
identify possible
environmental
and social
impacts

Environmental - Field surveys/ site visits will help determine the project's potential environmental impact.

Concerns	Description
Baseline	Medical and hazardous waste (toxic, infectious, radioactive) management at the new facility
Potential Impact	<ul style="list-style-type: none"> Sanitary and medical wastes may have the potential to become breeding havens for disease vectors if not properly treated and disposed of; and Possible radiation leaks from types of treatments/ equipment (e.g. proton beam therapy) if specific construction materials are not used and safety procedures are not carefully adhered to.

Social and Health - Potential social and health concerns include:

Concerns	Description
Baseline	Existing inhabitants or illegal settlers on the Project Site, if the Project Site is situated in a high-density residential area, etc.
Potential Impact	<ul style="list-style-type: none"> Involuntary resettlement and relocation; and Noise generation during construction disrupting nearby communities.

Possible mitigation steps to minimise (or compensate for) E&S impacts may be dictated by:

- National E&S laws, regulations and policies;
- IFC's Performance Standards; and
- World Bank Group Environmental, Health and Safety Guidelines.

Cost estimation

The exercise aims to identify and mitigate adverse environmental and social damages ahead of the project implementation



Initial cost estimation of mitigation and/or compensation for environmental and social damages

Initial cost estimation should be incorporated in the project's financial feasibility analysis (as part of the project's cost). These can include but are not limited to:

Issues	Solution/Mitigation
Noise pollution during operations	Construction of noise barriers near the community areas to minimise noise
Tree cutting to clear the project area	Replanting of trees in another location to compensate for the cutting of the trees in the project area
Land preparation works	Natural vegetation management to control soil erosion after cutting ridges for project
Community settling on the project area	Community resettlements and monetary (or other forms) of compensation
Treatment of medical waste	Devise a medical and hazardous waste management plan that complies with safety regulation

5

Financial Feasibility

Financial Model – A tool

A tool to aid on determining the project's financial feasibility

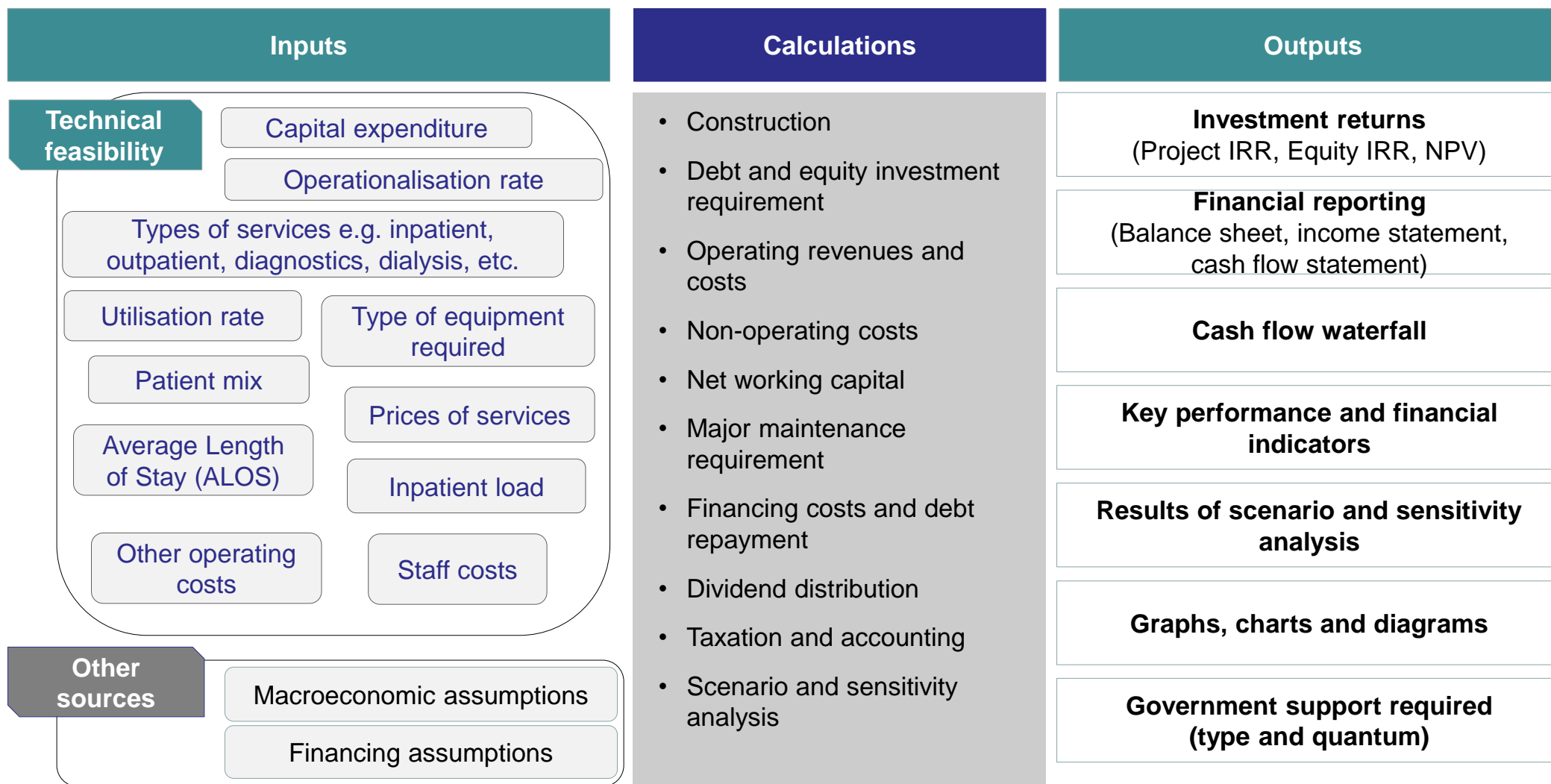
- The financial model incorporates all the expected private sector investments, the project's financing, project's operating results, and other components during the contract period.
- The financial model should reflect **the best information available** that will provide a good estimate of the project's financial situation.
- Required information will be informed by the project's feasibility studies (i.e. technical, legal, environmental and social)
- Financial models are typically built for and relied upon to support business decisions.

Uses of financial feasibility

The Financial Model will act as a base case that will assist in determining bankability, structuring and eventual evaluation of bids

- ✓ **To assess financial feasibility from a third-party point of view**
 - Whether the project is **bankable** from a **lender's standpoint**
 - Whether the project is **attractive** from an **investor's standpoint**
- ✓ **To assist with the project structuring and make the project financially and commercially feasible**
 - **Type of third party revenues:** is this needed or included/ how will the revenue be split;
 - Determine if **government support** is required; and
 - Determine the most **appropriate payment mechanism**
- ✓ **To be used as a benchmark to the bids that will be received during the procurement process**
 - The financial feasibility acts as the **base case** which all bids submitted will be compared to.

High-level structure of a financial model



Measuring financial feasibility

Using the output of the financial model

Lender's Perspective

Lender's concern is if the project has the capacity to repay its debt on the agreed schedule.

Lenders' criteria would include:

- Stability of project revenues e.g. average revenue per operating bed (ARPOB);
- Ability of stakeholders' to provide collateral; and
- Financial ratios:
 - Debt Service Coverage Ratio (DSCR)
 - Loan Life Coverage Ratio (LLCR)
 - Project Life Coverage Ratio (PLCR)

Investor's Perspective

- Financial returns;
- Net Present Value (NPV); and
- Project and Equity Internal Rate of Return (IRR)

Government's Perspective

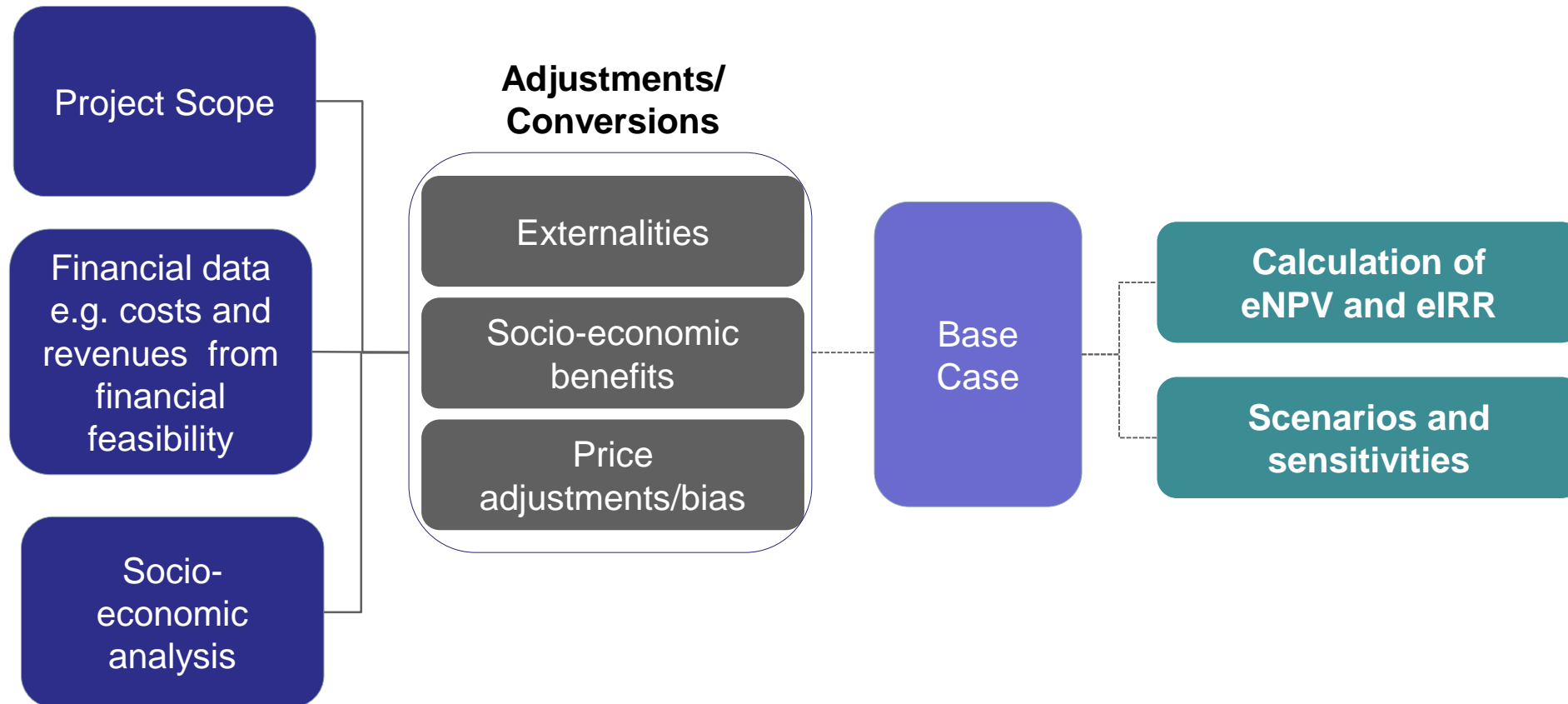
- Type of government support required for the project to make it financially viable;
- Amount of government support required; and
- Timing of government payments

6

Economic Feasibility

Economic feasibility – Cost-Benefit Analysis (CBA)

The exercise ensures that the project's benefits for society is higher than the costs to the public.



7

Fiscal Feasibility

Government support

Different forms of government's direct support to the project to achieve bankability or financial viability



Direct Grants

- Grants can be monetary or in-kind e.g. land
- Monetary grants can be given up-front or disbursed based on milestones or deferred e.g. annual payment post-construction



Public loans

- Used when there is insufficient capacity in the local debt market or the project is high-risk; and
- Can be advantageous due to more favourable terms (compared to private lenders) and can be on a subordinated basis



Operational Subsidy (For user pays PPP)

- User-pays projects may not be completely feasible on sole basis of user pays revenue; and
- Complementing user pays in the form of service payments based on availability or volume



Equity participation by Gov't

- Objectives:
- Direct control of day-to-day operations;
 - Share in the upsides of the project e.g. dividends or revenue share scheme; and
 - Make the project more commercial feasible by reducing overall net burden



Other types of support

- Contractual guarantees e.g. foreign exchange risk guarantees; and
- Tax incentives e.g. income tax holiday, reduced corporate income tax, etc.

Fiscal commitments of a PPP project

The government's total cash flow of commitments is the sum of direct liabilities and contingent liabilities identified during the feasibility stage

Direct liabilities

The Government knows that these payments will have to be made if the PPP project goes ahead.

- **Need** for payment commitments is **known**
- Some **uncertainty** on the **exact** value of the payments

Contingent liabilities

Those payments that will only be made if certain events occur. These can arise suddenly and unexpectedly when a trigger event transpires.

- Payment commitments whose **occurrence, timing** and **magnitude** depend on some **uncertain** future event
- **Outside the control** of government

Total cash flow of commitments

Examples of Direct and Contingent Liabilities

Direct Liabilities	
Upfront “Viability Gap” payments	An up-front capital subsidy (often paid out as construction progresses)
Availability payment	Regular payment over the life of the project. This is usually conditional on the availability of the service or asset at a contractually specified quality
Shadow tolls or output-based payments	A payment or subsidy per unit or user of a service (e.g. per vehicle km driven on a PPP road project)

Contingent Liabilities	
Guarantees on particular risk variables	An agreement to compensate the private party for loss in revenues should a particular risk variable deviate from a contractually specified level Example: Exchange rate guarantee
Compensation clauses	Example: A commitment to compensate the private party for damage or loss due to certain, specified, uninsurable force majeure events
Termination payments	A commitment to pay an agreed amount should the contract expire or its terminated due to default by public or private party.
Debt guarantees or other credit enhancements	A commitment to repay part or all of the debt used to finance a project in the event that the private borrowing does not repay it.

8

Value-for-money Analysis

Value for Money (VfM)

Does PPP procurement offer better value-for-money?

- PPP projects must generate VfM in order to obtain approval to proceed
- PPP projects must also be AFFORDABLE.....

Finance costs more than public sector borrowing

+

Increased bid costs

+

Private sector profit

Therefore, how can it offer value for money?

What is affordability?

Affordability means the ability to accommodate within the current and future budget of the government

Compare annual cost of fiscal commitment with:



Department/Sector-level – Annual budget of relevant sector/department

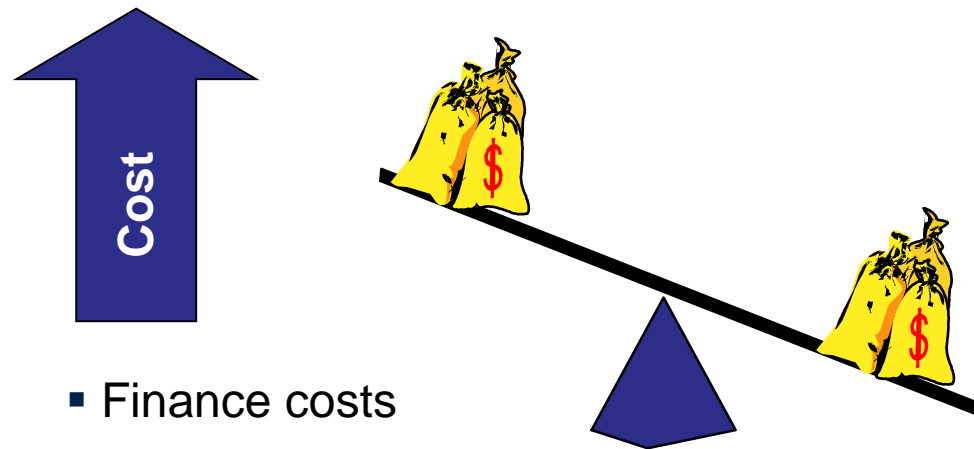


National-level – Government's existing liability portfolio and check the potential contribution to the total liability portfolio is recognised in the government's books



PPP Program-level – Portfolio-level PPP fiscal liabilities and check if there is nature/sector concentration of PPP projects which constitute systemic risk

How can a PPP Project offer VfM?

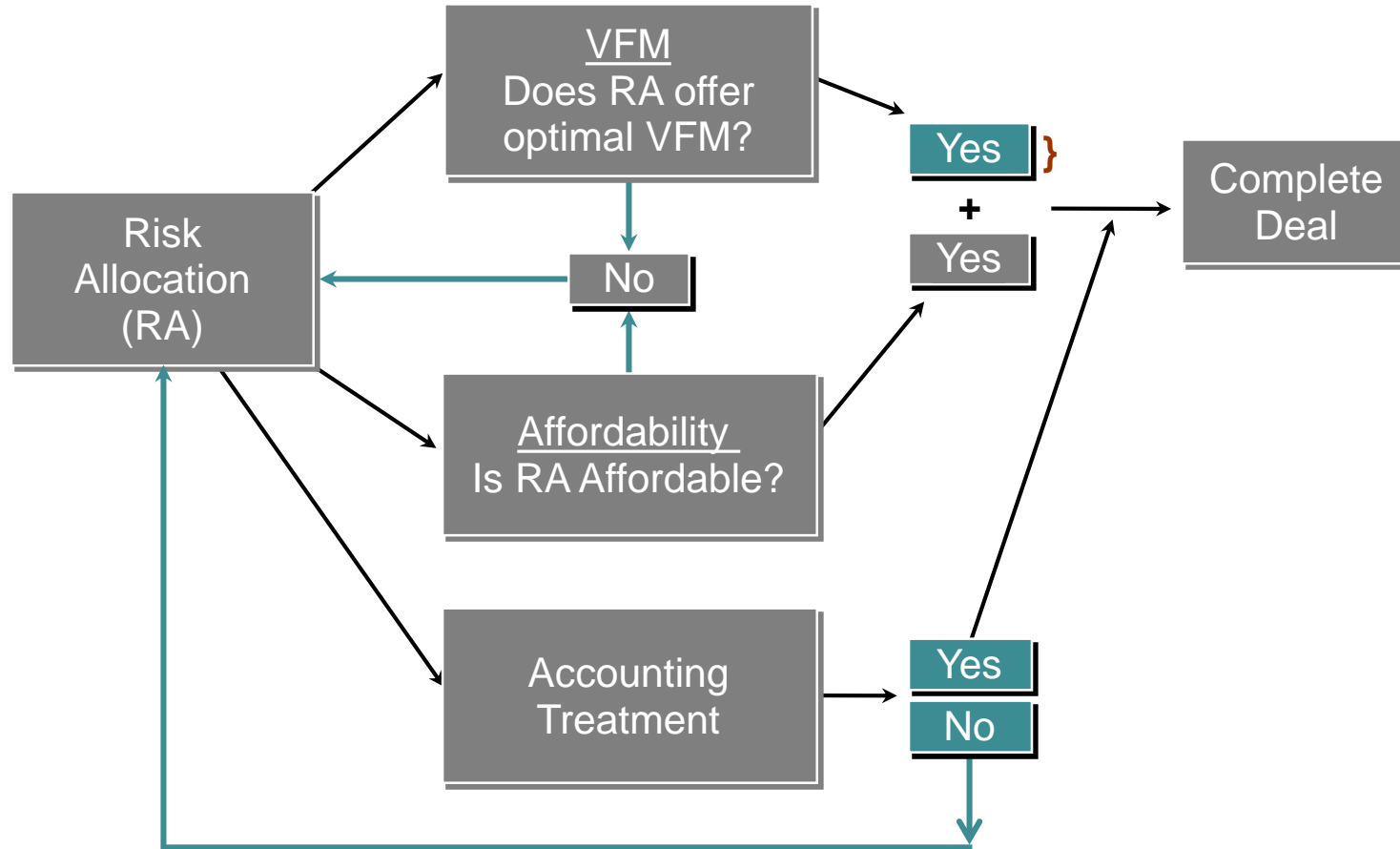


- Finance costs
- Profit
- Bid costs

- Optimum risk allocation
- Competition
- Innovation
- Minimum lifetime costs or “Whole asset life” benefits

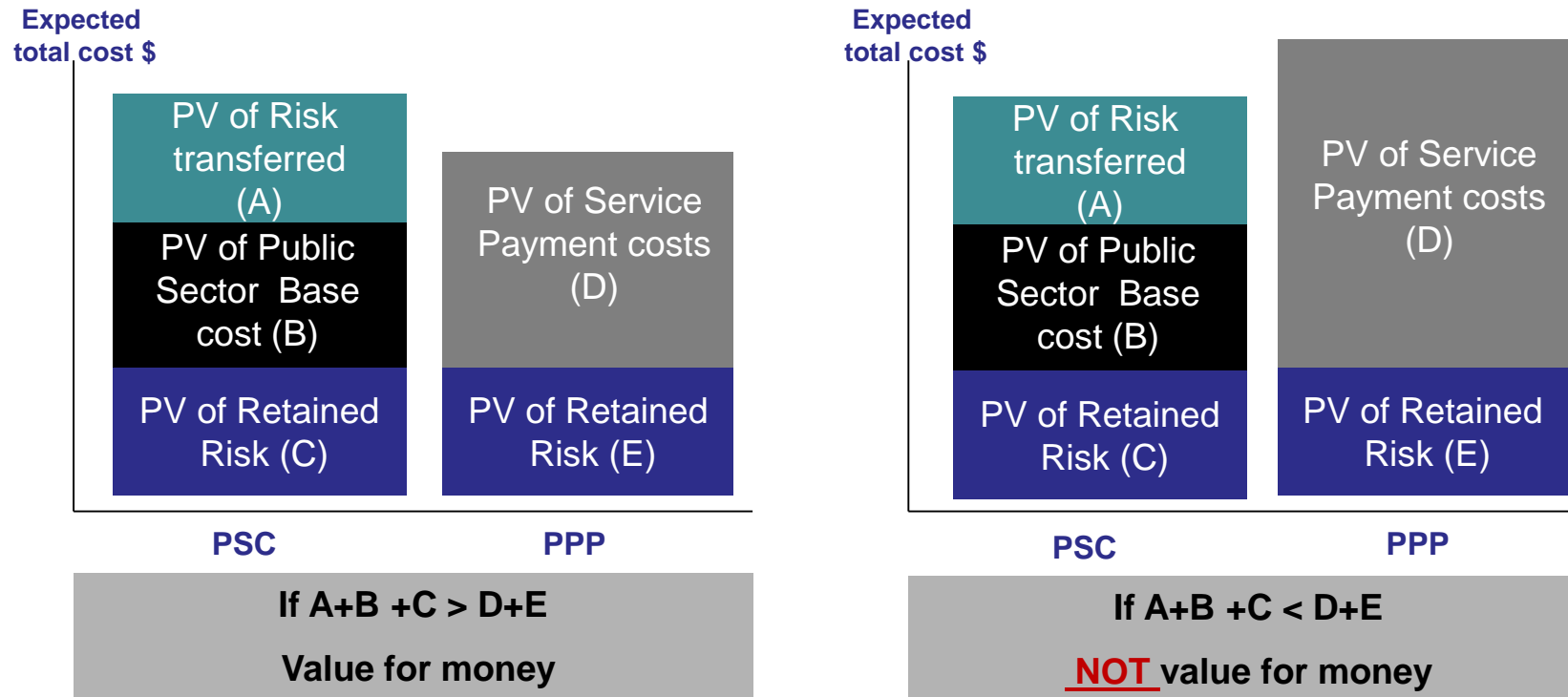
VfM Methodology

Risk, VfM, Affordability & Accounting



VfM Methodology

The principal method of determining VfM is an evaluation of the bidders proposal against a Public Sector Comparator (PSC).



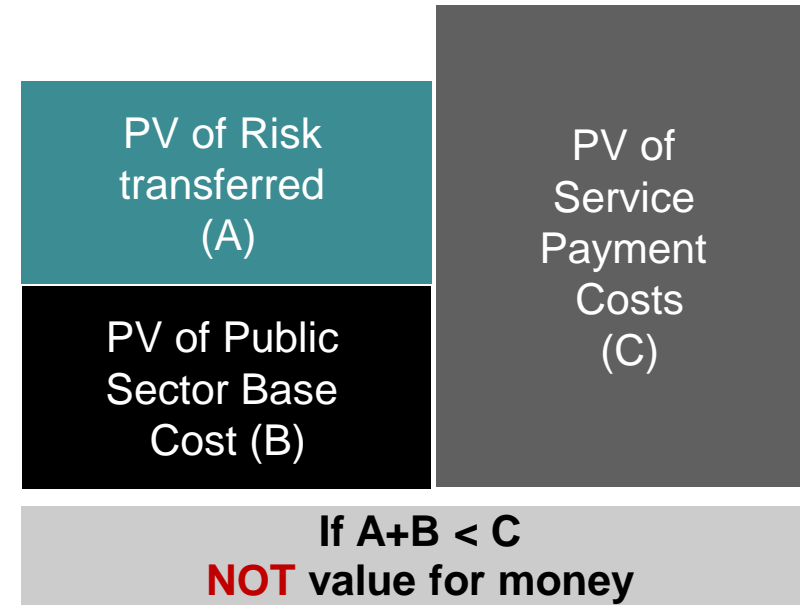
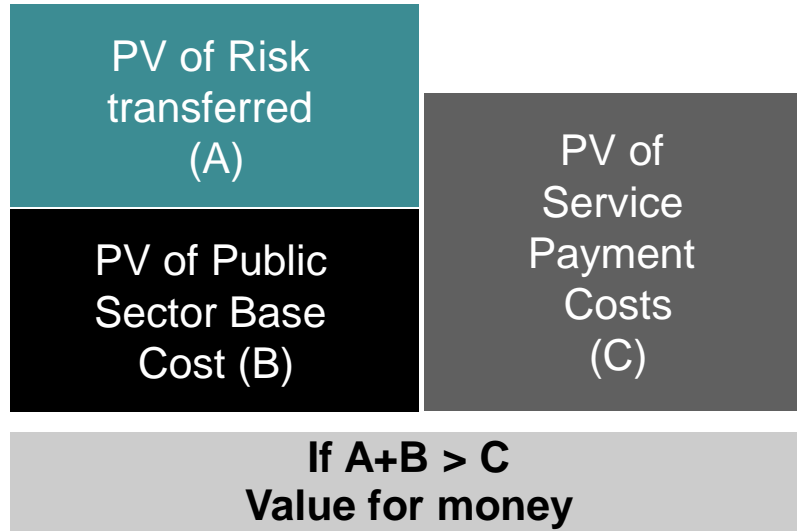
The PSC provides a risk-adjusted costing of the PPP scheme assuming that the public sector were providing the service and that the scheme was publicly financed.

VfM Methodology

Comparison of the Reference Project & PSC

	Reference Project	PSC
A test for...	Affordability	Value for money
Definition and purpose	<ul style="list-style-type: none"> • Annual cost of the PSC to government – how much can Gov't afford? • Gov't Payment to PPP Co (if applicable) 	<ul style="list-style-type: none"> • A public sector solution to the output specification • Provides a benchmark against which to judge whether PPP bids are VfM
Mandatory?	Yes – an affordability test is mandatory	Yes – unless the project is financially free-standing

Is VfM achieved?



Also consider:

- Confidence in PFI Solution
- Acceleration of benefits from PFI solution
- Wider policy objectives

Questions?

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