

5. Project feasibility, reviews and approvals

5.1. OVERVIEW

The previous chapter reviewed leading practices with respect to preparing infrastructure plans and translating them into a list of project ideas that can be taken through to project preparation and implementation. This chapter identifies frameworks, processes and mechanisms for translating identified project concepts into procurement-ready projects.

Translating a project need into a bankable project requires rigorous evaluation and appraisal of the feasibility of project implementation, and often requires a multi-stage evaluation - starting with a strategic case or concept definition and moving through to a pre-feasibility assessment and detailed feasibility evaluation. The G20 *Principles for the Infrastructure Project Preparation Phase* list out five critical aspects to consider for effective project preparation: project rationale, options appraisal, commercial viability, long-term affordability, and deliverability.

It is important for governments to establish holistic project preparation guidelines and standards for project feasibility evaluation, reviews and approvals through the various stages of feasibility evaluation and to build rigour in project preparation.

For instance, the Netherlands' Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT) facilitates a holistic and harmonised approach to project feasibility.

END-TO-END PROCESS AND GUIDELINES FOR PROJECT FEASIBILITY – Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT)

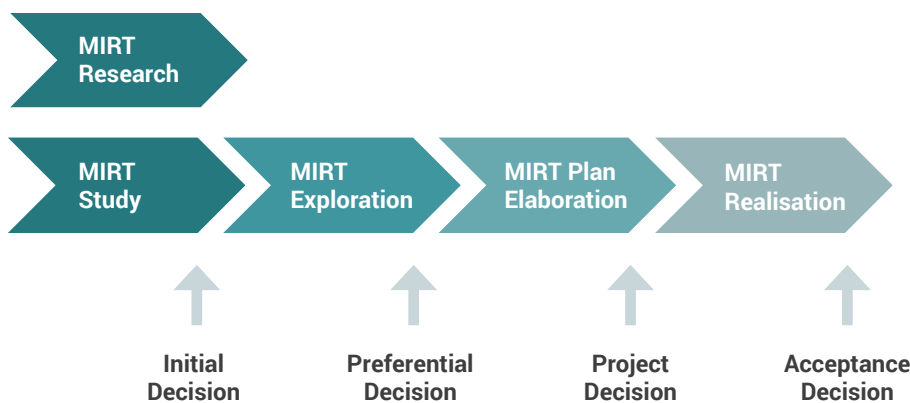
The Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT) framework provides a holistic and integrated framework and process to address project feasibility from the early concept definition stages to the final stages of approvals for infrastructure and water investments. Projects under MIRT can be either implemented through public financing or through PPPs on a Design-Build-Finance-Operate-Maintain (DBFOM) basis. In a MIRT track, parties work as the MIRT Committee in a phase-by-phase manner to substantiate the project, with each phase ending with a decision on the subsequent phase. The starting point is the Initial Decision to launch a MIRT Exploration, which stipulates stakeholder roles and requires identification of financing sources for 75% of the cost of the most obvious solution identified. As options are evaluated, the MIRT Committee may reach a Preferential Decision and the chosen option is documented with legal requirements and financing methods. At the Project Decision phase, the design is finalised to enable procurement at the Acceptance Decision stage.

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Project initiation and concept definition: The exploration phase of the MIRT framework follows a collaborative approach that requires project initiation through a series of political and administrative meetings that discuss the development needs, fixing strategic goals, and the initiatives to meet these goals. The exploration phases typically comprises the following activities: evaluating the strategic alignment of the proposed concept; options evaluation; and selection of the preferred alternative to undertake the detailed project study.

Project feasibility and structuring: The process of preparing detailed feasibility studies occurs in the 'plan elaboration' phase. Here, the identified solution at the end of the exploration phase is further detailed, evaluating the design, compliance with legal regulations, financial viability and cost benefit analysis, and the socioeconomic impact of the project. At this stage, the project study must culminate into a 'project decision', to move to procurement and funding approvals. Here, a final impression of planning, scope and budget is presented to the market.

Project approvals and processes: The Dutch Gateway Review Method is based on the Gateway Program in the United Kingdom. Since 2007, over 50 high-risk projects and programs in the Netherlands have been reviewed with very positive results. The Gateway Review is performed as a confidential peer review assessment and provides an independent view on the project progress. The MIRT project preparation framework is steered by good practice procedural guidance and tools, such as social cost benefit analysis, preparation of business cases, risk management, project governance, gateway reviews etc. The Ministry of Infrastructure and Water Management (MIWM) has also deployed a learning portal, with published guidance documents on the MIRT process, as well as a platform for practitioners to share their experiences and engage in discussions.



A structured approach to project feasibility evaluation typically involves three stages:

- **Early-stage pipeline screening and pre-feasibility assessment:** GCAs, especially in EMDEs, often lack capacity to translate infrastructure needs into well-defined project concepts that are strategically linked to development priorities. Frameworks and mechanisms to support GCAs through early stage concept definition and project screening are immensely useful in building a 'development-worthy' projects pipeline.
- **Standards for feasibility evaluation and Value for Money assessment:** Harmonised standards for carrying out feasibility assessments help build threshold standards and quality in project preparation. It is therefore important for governments to develop guidelines that define what constitutes good feasibility evaluation and build capacity in GCAs to develop a shared understanding of the same.
- **Periodic review and approvals:** Mechanisms to consistently build rigour and independence in project reviews and appraisals in a multi-stage manner can help to avoid missing key preparatory requirements early on and getting blindsided by critical challenges later in the project preparation process. An independent review process can help build quality project preparation and often contributes immensely to efficient project procurement and implementation.

Accordingly, this chapter is organised under three sections:

- **Project concept and pre-feasibility stage (Section 5.2)**
- **Feasibility stage (Section 5.3)**
- **Reviews, audit and approval (Section 5.4)**

5.2. PROJECT CONCEPT AND PRE-FEASIBILITY STAGE

5.2.1. Summary

At the very early stages, complete information on many elements of feasibility evaluation is not available. The key objectives of early stage project evaluation therefore are to:

- Ascertain the project need's linkage with overall development priorities identified in the long-term plans, and establish the boundaries and scope of the project;
- Spell out the envisaged service outcomes and access benefits in clear terms, and identify the range of technical options to address the service need; and
- Identify the information and level of project preparation efforts required to build a case and to establish different elements of the project feasibility.

Early stage project ideas and concepts are identified from strategic plans or from aspirational commitments made by political leaders. Passing these project ideas through early stage screening and pre-feasibility assessments helps to clarify the project concept, scope and boundaries. Such assessments also help with the evidence-based prioritisation of projects which have greater impact regarding the development priorities identified under long-term infrastructure plans. Key dimensions of this concept definition and pre-feasibility assessment cover market and demand assessment, technical options, normative estimates of capital costs and operating costs, potential revenue streams and an initial analysis of financing options for the project.

Governments should put frameworks in place for GCAs to translate long-term plans into clearly defined project concepts to aid decision-making, and to facilitate evidence-based screening at this stage, specifically with respect to strategic fit and related considerations.

5.2.2. Guidance

Key elements of the guidance framework under the project concept and pre-feasibility stage are summarised below:

- A. Planning processes and the ability of GCAs to populate the project pipeline with high-priority projects should be strengthened.
- B. A structured process and guidelines for early stage screening and project identification should be put in place.
- C. Independence in pre-feasibility and early stage evaluation is recommended.

A. Planning processes and the ability of GCAs to populate the project pipeline with high-priority projects should be strengthened.

Identification of early stage project concepts and their subsequent evaluation is effective when the process of preparing long-term plans to identify infrastructure gaps and medium- to long-term priorities are in place.

The practice of formulating such long-term plans should help ensure that projects are systematically prioritised based on an assessment of baseline service delivery and the gaps vis-à-vis the goals and priorities set in such long-term plans. For instance, in the case of urban water supply projects, the level of access deficit in terms of connection, duration of supply, volume of water supplied, and prevailing user charges can help GCAs in identifying and detailing specific project ideas that seek to accurately address gaps and access needs.

The central agencies that are charged with creating and tracking project pipelines need to engage with GCAs at national and sub-national levels to refine and build quality into project proposals. For instance, Infrastructure Australia works closely with subnational governments in building a projects pipeline that can be taken through the various stages of project evaluation and also maintains a well-updated Infrastructure Priority List (IPL).

IMPORTANCE OF SUB-NATIONAL PLANS AND EVIDENCE-BASED ASSESSMENT – Role of Infrastructure Australia

Australia has some very good practices that help in building a healthy pipeline of project concepts, which are then taken through a structured evidence-based process including multiple stages of preparation and evaluation to make them implementation-ready.

- **Sub-national plans which feed into the national project pipeline:** Australia's sub-national governments have a strong planning tradition in place, with long-term visions and strategy prepared at the state and regional levels. For instance, the 20-year Infrastructure New South Wales' State Infrastructure Strategy and Infrastructure Victoria's Infrastructure Plan are comprehensive plans prepared at the state level, while the Greater Sydney Region Plan 2018, Plan Melbourne 2017–2050, ShapingSEQ 2017 for the South East Queensland region and the 2017 Perth @ 3.5 million Strategy provide comprehensive sub-regional land use planning and infrastructure frameworks. All the plans identify projects and feed into the national projects pipeline tracked by Infrastructure Australia.
- **Infrastructure Australia's Infrastructure Priority List tracks projects at the conceptualisation stage:** Infrastructure Australia tracks and updates a pipeline of nationally significant projects – the Infrastructure Priority List (IPL). Projects and initiatives which aid in addressing nationally significant challenges are included in the national IPL and are given focused attention and debottlenecking to move forward. To support projects at the conceptualisation stage, Infrastructure Australia also permits 'initiatives' to be added to the IPL, which are essentially priorities that have been identified to address a nationally significant need, but require further development and rigorous assessment to determine and evaluate the most appropriate option for delivery.

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Projects are then evaluated in stages through a well-defined framework, the Assessment Framework, which details the process and criteria against which projects are evaluated.

- **Disclosure of information on the projects pipeline at multiple levels:** Australian governments regularly monitor and disclose details of ongoing and proposed infrastructure projects through multiple mechanisms. While state and national individual statutory authorities publish updates in their annual reviews, the National Infrastructure Construction Schedule is an online portal which also provides information on major infrastructure projects committed to by governments across the country in a dynamic, easy-to-use manner.

B. A structured process and guidelines for early stage screening and project identification should be put in place.

Governments should develop and disseminate very clear and relatively simple frameworks for early stage screening and project identification. In most countries, early stage screening and project identification is often the responsibility of GCAs and hence building their capacity to handle this task effectively is critical.

GCAs can create guidance tools and capacity building programs for early stage project evaluation and to form well-defined project concepts. For instance, the United Kingdom launched the Project Initiation Routemap in 2018 as a structured approach to support early stage project definition and conceptualisation.

It originated from the improvements in project performance achieved by the Highways Agency since 2006 through a review and staged improvements of their governance and program structure, supported by improved data and strengthening capability.

The Routemap is an aid to strategic decision-making. It supports the alignment of the sponsor and client organisation’s capability to meet the challenges during initiation and delivery of a project. It provides an objective and systemic approach to project initiation founded on a set of assessment tools that help determine the complexity and context of the delivery environment, and the capability of current and potential sponsors, clients, asset managers and the infrastructure market.

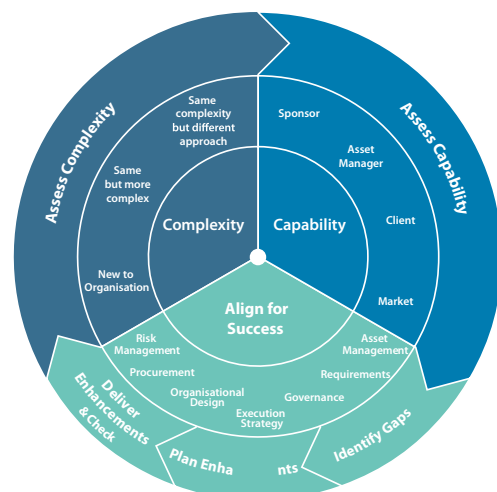
The Routemap contains detailed checklists to use during the initial assessment steps, advice on how to perform the gap analysis, and advice about what to include in the plans for an enhanced project environment. The components of the Routemap are:

- **Complexity Assessment:** through the Delivery Environment Complexity Analytic, a set of 12 factors that determine complexity.
- **Capability Assessment:** of the sponsor, asset manager, client, and market.
- **Align for Success:** covering governance; execution, organisation design, and procurement; risk management; and asset management.

STRUCTURED APPROACH FOR PROJECT INITIATION – The Project Initiation Routemap, the United Kingdom

The Project Initiation Routemap is a structured approach to setting up projects for success and is the IPA’s primary tool in supporting the initiation of projects across government. From 2018, all major projects are assessed for their need and suitability for applying the Routemap to guide conceptualisation. The Routemap is a response to the recognition that sponsors and clients of infrastructure projects have to establish an appropriate delivery environment, to avoid the causes of failure and to create foundations for project success.

Components of the Project Initiation Routemap



C. Independence in pre-feasibility and early stage evaluation is recommended.

As projects move from concept definition into the pre-feasibility level of evaluation, it may be useful to separate the project sponsor and feasibility evaluator or reviewer to build independence and expertise into project evaluation.

Where the GCA has strong capacity to undertake project preparation, such separation of project development and implementation roles can be done within the GCA by getting different departments to handle these functions. However, in some cases, it may be useful to have independent agencies handling early stage feasibility assessments.

For instance, Korea's approach to assign accountability for the conduct of pre-feasibility studies to an independent agency (see case example below) has led to positive outcomes. Two useful lessons emerge from the Korea experience which have implications for establishing systems for project preparation. Firstly, using an external agency, i.e. independent think-tanks, academic institutions, consultants or even a central project development agency, appears to bring benefits in terms of expertise and independence in project feasibility evaluation. Secondly, having multi-stakeholder reviews at different stages of the project evaluation process allows for greater rigour in evaluation, something that is discussed separately later in this chapter under the section on project reviews and approvals.

IMPACT OF RIGOUR IN EARLY STAGE EVALUATION – Pre-Feasibility Studies (PFS) by PIMAC, Republic of Korea

The Republic of Korea's project preparation framework has evolved rapidly since the 1997 Asian Financial Crisis, with emphasis on strengthening its public investment management processes to incorporate independent transparent reviews and a sharp focus on total cost management, including the use of robust quantitative frameworks for Value for Money analysis. While line departments largely drive project feasibility and implementation, setting up and vesting powers in PIMAC to conduct pre-feasibility studies has helped to augment capacity and create necessary guardrails to facilitate greater rigour and integrity in project preparation.

Pre-Feasibility Studies (PFS) for large-scale projects were introduced in 1999 and formalised in 2006 to improve rigour in project preparation. The PFS involves a short and brief evaluation of the projects as an input to the budget decision. All new projects with total costs amounting to 50 billion KRW (about US \$50 million) or more must have a PFS.

The PFS initiative was a response to the criticism against the feasibility studies prepared by line ministries. Prior to the establishment of the PFS program, projects were approved without a proper check on the project's viability or cost considerations. This is evidenced by a study undertaken of the feasibility studies prepared during 1994-1998, which found that all but one of the 33 projects had been evaluated as feasible. This, in turn, led to several concerns, including the selection of unviable projects, cost escalation and time delays. For instance, the baseline cost of the Seoul-Busan High Speed Rail (KTX) project had more than tripled from 5.5 trillion KRW (US \$5.5 billion) to 18.5 trillion KRW (US \$18.5 billion).

The PFS is undertaken by PIMAC at the request of the GCAs and/or the Ministry of Economy and Finance (MOEF) and must be completed within a period of six months. The PFS assigns analytical hierarchy process (AHP) weights to different facets of evaluation: economic analysis (35-50%), policy analysis (25-40%), and balanced regional development (25-35%). If the AHP score is ≥ 0.5 , a project is appraised as passing the pre-feasibility test.

The independent review process, with clear and transparent assessment criteria, has helped in the early identification of unviable proposals and has led to significant cost savings. With the introduction of the PFS and stringent guardrails, the share of projects deemed feasible fell in the period following the introduction of the PFS. About 434 of the 685 projects reviewed by PIMAC since then have been deemed feasible. The introduction of the PFS process is estimated to have enabled budgetary savings of KRW 141 trillion (US \$101 billion) to 2017.

5.3. FEASIBILITY STAGE

5.3.1. Summary

This stage involves a detailed evaluation of the project feasibility and seeks to comprehensively facilitate decisions regarding the investment and financing of projects. A full feasibility report typically addresses the following aspects²⁰:

- Project need and boundaries, service outcomes and demand projections
- Technical configuration and feasibility
- Social and environmental impacts
- Policy, legal, regulatory and institutional analysis
- Financial and economic feasibility
- Value for Money analysis and affordability considerations
- Government support requirements and implications for fiscal costs and contingent liabilities (FCCL)
- Project structuring and risk allocation
- Consideration of the use of a PPP form of procurement and the associated project implementation arrangements
- Broad terms of the bid process, documentation and contracting
- Market attractiveness and bidder interest
- Roadmap for implementation

5.3.2. Guidance

Key elements of the guidance framework under the feasibility stage are summarised below:

- A. Frameworks and guidelines should be implemented to facilitate comprehensiveness of the feasibility evaluation.
- B. The PPP model of implementation will need scrutiny and analysis of additional elements in the project feasibility evaluation.
- C. Framework Contracts on the use of consultants can help build efficiency.

A. Frameworks and guidelines should be implemented to facilitate comprehensiveness of the feasibility evaluation.

The use of frameworks and guidelines is a recurring theme in terms of leading practices for feasibility evaluation. Given the breadth and depth of issues that are typically evaluated at the detailed feasibility stage for infrastructure projects, the use of standard frameworks and the adoption of guidelines for the preparation of feasibility reports are crucial enabling aspects to improve scale and rigour in project preparation. Guidelines should, more specifically, cover the approach to each of the five critical aspects listed under the *G20 Principles for the Infrastructure Project Preparation Phase* – project rationale, options appraisal, commercial viability, long-term affordability, and deliverability.

A number of countries have put into place guidelines and templates for harmonising the project feasibility evaluation. For instance, the United Kingdom's Five Case Model enables a shared understanding of both the phases and dimensions of feasibility evaluation. Similarly, several countries, including Australia, Canada, South Africa, and Korea, have adopted similar guidelines and frameworks for feasibility evaluation.

²⁰ Illustrative coverage assuming implementation using the PPP model.

STRUCTURED FRAMEWORK FOR A MULTI-STAGE FEASIBILITY EVALUATION – Five Case Model, United Kingdom

The Five Case Model is the approach for developing business cases recommended by HM Treasury, the Welsh Government and the UK Office of Government Commerce (OGC) and has been widely used across government departments and public sector organisations for over a decade.

The Five Case Model provides discipline and a structure to arrive at the best possible decision for proposed infrastructure projects. In simple terms, the model has five cases and the purpose of each case is to address specific questions and provide evidence to satisfy the approver or funder, as shown below:

The Case	The Question	What the business case must demonstrate
STRATEGIC	Is the project needed	<ul style="list-style-type: none"> • Will it further the aims and objectives • Is there clear case for change
ECONOMIC	Is it value for money	<ul style="list-style-type: none"> • Has the range of options been considered • Is it the best balance of costs, benefits and risks
COMMERCIAL	Is it viable	<ul style="list-style-type: none"> • Is there a supplier who can meet our needs • Can we secure a Value for Money deal
FINANCIAL	Is it affordable	<ul style="list-style-type: none"> • Are the costs realistic and affordable • Is the funding available and supported
MANAGEMENT	Is it achievable	<ul style="list-style-type: none"> • Are we capable of delivering the project • Do we have robust systems and processes in place

The business case evolves as the project preparation for the project progresses along three stages:

- A *strategic outline case (SOC)* is prepared at the conceptualisation stage with the objective of ascertaining a strategic fit and making the case for change. At this stage, a shortlist of potential affordable options is identified, along with management capacity and capability to deliver.
- An *outline business case (OBC)* involves a detailed appraisal of options, determination of Value for Money, preparation for procurement, confirmation of funding and availability, and a detailed management plan for delivery.

- The *full business case (FBC)* is the final technical document at the outcome of the procurement process and provides a final check on affordability and Value for Money, the contract details, a full delivery plan and benefits realisation.

Individual central government departments and local governments undertaking non-major projects are not bound by project preparation guidelines provided by HMT. However, given the benefit of a standardised approach to project preparation, most departments have designed their internal project processes on the basis of the guidelines prescribed under the Five Case Model.

B. The PPP model of implementation will need scrutiny and analysis of additional elements in the project feasibility evaluation.

It is well understood that projects envisaged for implementation as a PPP require scrutiny of additional elements vis-à-vis those that are to be implemented under public procurement. There are two areas where the use of tools and frameworks can significantly help in informing decisions.

PPP project screening

PPP projects are typically more complex than similar publicly procured projects, and require substantial upfront project development expenses. There is, therefore, a need to understand a project as much as possible before making a decision to undertake expensive feasibility studies, project structuring and procurement.

Success in PPP projects is determined by a mix of factors and complete reliance on quantitative techniques to compare Value for Money against other procurement models has not fared well in the successful screening of projects. Many countries now adopt techniques that combine qualitative aspects and methodologies, often based on country specific policy drivers and areas of focus, with quantitative techniques to screen projects for the PPP model of implementation. Based on a review in partnership with the GI Hub and the OECD of screening practices and lessons learned across countries, the World Bank has developed a PPP Screening Tool (PST)²¹ for supporting governments in upstream project selection, with a view to optimise efforts on project preparation and to improve the success rate of projects that go through a bidding process.

²¹ The toolkit may be accessed at: <https://pppknowledgelab.org/tools/tools-assess-whether-implement-project-ppp#ppp-screening-tool>

PPP UPSTREAM PROJECT SELECTION SUPPORT – World Bank's PPP Project Screening Tool

The PPP Project Screening Tool (PST) is a user-friendly Microsoft Excel-based tool that can be applied by contracting authorities, PPP units and practitioners to evaluate a project's suitability for procurement through the PPP route. PST evaluates a project both from a qualitative and quantitative basis, and is flexible to the level of information available.

It is designed to be operated at the pre-feasibility study level of information along six dimensions, namely Strategic Suitability, Preliminary Feasibility, Risk Assessment, PPP Suitability (VfM, Market Appetite), Fiscal Affordability and Institutional Capability (details of these six dimensions can be found in the table on the following page). The tool is, however, flexible to be applied in situations where less information is available; e.g. at concept note stage. The tool has a list of questions across six substantive parameters, with some parameters evaluated based on a mix of qualitative and quantitative processes.

The scoring methodology is based on weighted scores to the responses provided. However, to prevent the manipulation of responses, controls are embedded in the tool to ensure scores are moderated if responses were manipulated. PST delivers a score and comments on the project's strengths and identified areas of improvement. In addition, it provides decision support in the form of identifying pre-requisite actions and potential deal-breakers, and provides other suggestions based on the project's strengths and weaknesses.

Strategic Suitability	Preliminary Feasibility	Risk Assessment	PPP Suitability	Fiscal Affordability	Institutional Capability
<ul style="list-style-type: none"> Alignment with government priorities Identification of service need Assessment of delivery options Scoping of project 	<ul style="list-style-type: none"> Technical Environmental Social Economic Financial Legal 	<ul style="list-style-type: none"> Market/demand Off-taxer Forex Environmental and social Delay in land acquisition Financing Design and construction Operation and maintenance 	<ul style="list-style-type: none"> VfM Market appetite 	<ul style="list-style-type: none"> Extent and nature of government fiscal support Quantification of fiscal support 	<ul style="list-style-type: none"> Institutional capacity Preparedness of contracting authority Project execution of contracting authority

Value for Money analysis

For many governments, the potential to achieve relatively greater value for money over other public procurement modes is often a guiding factor in the decision to implement projects using the PPP model. However, even in countries with well-established PPP programs, the approach to and use of this analysis is evolving, and is often the subject of debate. Countries trying to move to systematic VfM analysis face challenges in developing and implementing appropriate methodologies. Key lessons from a World Bank Institute study²² on VfM practices are summarised below:

- Governments need to strike the right balance between qualitative and quantitative approaches, particularly in new PPP programs, where there is very limited data available to inform assumptions for quantitative analysis, and in some cases, a lack of capacity to implement complex risk analysis;
- Governments should be realistic about the nature of quantitative VfM analysis. Quantitative analysis can be useful to inform decision-making, but should be understood and communicated more as a tool to consistently and systematically assess the combined result of a set of assumptions than as a scientific process that provides “proof” of VfM;
- Thorough risk analysis is crucial to successful PPPs. Whether or not quantitative VfM analysis is carried out, sound risk analysis is crucial to achieving value from a project both in its design and implementation and to avoid fiscal surprises;

- Better data is needed on PPP and major infrastructure investment project outcomes. Quantitative approaches to VfM analysis and risk analysis more generally could be improved significantly by more systematic collection of data on actual PPP project outcomes, and ex-post assessment of VfM achieved in practice; and
- Ultimately, VfM analysis should be integrated with overall public investment planning.

VALUE FOR MONEY ASSESSMENT – Republic of Korea

The Republic of Korea introduced the Value for Money (VfM) assessment after the introduction of its PPP Act in 2005. PIMAC is entrusted with the task for conducting the VfM test for unsolicited proposals, while for a solicited PPP project, the VfM test is done by a competent authority and reviewed by PIMAC. The VfM test is used to determine if a project is suitable to be implemented as a PPP and is done in both quantitative and qualitative terms. It is conducted in accordance with the *Guidelines for the Implementation of VfM Test/Review of Proposal for Unsolicited Build Transfer Operate (BTO) Projects*.

Under the quantitative assessment, the private finance initiative (PFI) is compared with the Public Sector Comparator (PSC). In a qualitative assessment, the allocation of risks (construction, operation risks, etc.), improvement of service qualities, and other effects and

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²² Value-for-Money Analysis - Practices and Challenges: How Governments Choose When to Use PPP to Deliver Public Infrastructure and Services. World Bank and PPIAF. 2013.

positive externalities, including promoting the financial market, are considered. When the quantification of project risk transfer is not satisfactory, those qualitative effects are not incorporated into the overall VfM assessment.

Objectivity, consistency, and independence, as well as professional expertise, are important elements in conducting VfM tests. The VfM test is carried out by a multi-disciplinary research team under a Project Manager from the Korea Development Institute (KDI), along with experts with relevant skills and expertise in demand forecasting, cost estimation, engineering and accounting. Five interim review meetings are held during the VfM test. The duration of each project's research should take up to six months and the same methodology and procedures are applied both to the VfM test and the Review of Proposal.

The VfM test sets the bottom line to meet the condition of 'VfM \geq 0' for project approval. VfM reports are used as an important reference when the tender evaluation committee conducts their work and provides useful information during the negotiation process. They are also used as reference when ex-post VfM tests are conducted.

C. Framework Contracts on the use of consultants can help build efficiency.

Project preparation in most countries involves the use of external experts and consultants, and it would be useful for governments to build efficiency, transparency and quality thresholds in the process of engaging consultants.

PPP units and central project development agencies in several countries have prescribed guidelines for the engagement of consultants for a variety of project preparation activities, including pre-feasibility and outline business case feasibility studies, full feasibility studies, and PPP transaction advisory.

EMDE countries in the early stages of PPP project preparation that do not have a vibrant domestic consulting market ecosystem tend to face significant challenges in attracting good experts and consulting firms to participate in one-off project development initiatives. A programmatic approach to PPP project development supported by a well-planned consultant engagement framework can help attract international consulting firms to invest in building local capacity and can potentially help in bridging the gap in the local consulting service provider ecosystem.

CONSULTANT EMPANELMENT AND USE OF FRAMEWORK CONTRACTS – The Philippines PPP Center

The Philippines PPP Center, under the PDMF, has established three panels of consultants (both international and national firms) that are pre-qualified under ADB procurement guidelines, namely the Panel of Project Preparation and Transaction Advisory Consultants with 22 members, the Panel of Probity Advisors with six members, and the Panel of Independent Consultants with 10 members. ADB procurement guidelines ensure that there is a quick and effective process for pre-qualification and selection of advisors.

The actual process of selection of consultants and/or transaction advisors is a two-stage process. The first stage comprises of pre-qualification, selection and retention of a panel of consulting firms under an indefinite delivery contract (IDC) facility for a duration of three years (which may vary each time depending on the discretion of the PPP Center).

The second stage of the process is the actual selection of an advisor or consultant from the panel on a competitive basis.

Under the guidelines, consultants for project preparation from the panel are invited to submit a simplified technical proposal. The project is awarded on the basis of the evaluation of the technical proposal, through a quality-based selection process with a fixed budget²³. The selected consultant is then responsible for pre-feasibility, project preparation and transaction execution. The guidelines also provide steps the PPP Center should adhere to for the evaluation of consultants.

²³ Method of procurement in which the cost of the budget is fixed. The consultant which achieves the highest technical score shall be invited to negotiate.

5.4. REVIEWS, AUDIT AND APPROVAL

5.4.1. Summary

A multi-stage review process precedes infrastructure project approvals in several of the countries studied. Although this is necessary given the complexity of infrastructure projects and the number of factors affecting investment decisions, if it is not handled well, it can often lead to administrative delays and increased costs and time for project preparation.

Therefore, there is a need to balance considerations of efficiency and rigour while formulating the review and approval processes underlying infrastructure projects. Further reviews may need to involve appropriate stakeholders taking the country context into account. A process audit should be embedded into infrastructure project preparation as a means to drive transparency, accountability and efficiency improvements.

Key elements of the guidance framework under project reviews, audit and approval are summarised below:

- A. With well-defined workflows, multi-stage reviews help build rigour and efficiency.
- B. Project reviews should involve all relevant stakeholders.
- C. PPP project preparation processes should be subject to audits to drive transparency and improvements.

5.4.2. Guidance

A. With well-defined workflows, multi-stage reviews help build rigour and efficiency.

The challenge of delays in decision-making during the course of infrastructure project preparation is real and needs to be tackled by developing streamlined time-bound processes along with the use of automation where feasible.

The SNI system in Chile is a good example of a rigorous multi-stage process which works on top of the online Integrated Project Bank (BIP). Similarly, in the United Kingdom, the Gateway Review process involves a comprehensive and mandatory peer review process at key decision points in the project lifecycle and is a leading practice that has been replicated in several other countries, including in the Netherlands and among the sub-national governments of Australia.

REVIEW AND APPROVALS WORKFLOW – National Investment System (SNI), Chile and the Gateway Review Process, the United Kingdom

National Investment System, Chile

Chile's National Public System of Investments (SNI), an advanced appraisal system, is a pioneer initiative in strengthening and standardising project approvals. It was created in 1975 and is jointly administered by the Ministry of Social Development (MSD) and the Ministry of Finance (MOF). As per Chile's Law Decree 20530, the capital budget submitted by the Ministry of Finance to congress should consider all projects assessed and approved in the SNI. The objective of the system is to identify the best projects offering the highest social return. The system allows the projects which are tracked on Chile's online project databank (BIP) to compete with each other for budgetary support. At each stage of appraisal, an Economic Technical Analysis Results (RATE) score is issued. Only projects attaining a socially recommended (RS) RATE score move to the next stage. Positives of the review process include:

- **A centralised project information system:** The BIP serves as a central repository of projects, discloses the RATE score assigned to the project at each stage, and aids the appraisal workflow.
- **Facilitates rigour in project evaluation:** The SNI undertakes an independent ex-post evaluation of projects following construction and during operations, where projects are reviewed on adherence to time, cost and the process standards envisaged.
- **Information on social prices:** MSD annually determines the social prices of labour supply, the currency and discount rate, and other prices commonly used in the Cost Benefit Analysis (CBA) or Cost Efficiency Analysis (CEA) to standardise the cost estimation process.
- **Guidance manuals:** The MSD has issued guidance manuals on the process of project preparation, methodology and tools for the CBA and/or CEA assessment, and these are updated regularly based on inputs from the ex-post evaluations of projects.

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The SNI system thus provides a platform for the independent appraisal of projects and reduces conflict of interest of the preparation and approval entities. The MSD undertakes the detailed appraisal, and checks the appropriateness of the methodology applied and the reliability of information used to calculate the RATE score.

Gateway Review Process, the United Kingdom

The UK has instituted a comprehensive and mandatory peer review process at key decision points in the project lifecycle to enhance the quality of project preparation and to set government expectations in project delivery. The Office of Government Commerce (OGC) Gateway Review™ process was introduced in 2000 after several project failures in the UK and the re-evaluation of the government's effectiveness in projects and program delivery. The Gateway Review process aims to deliver a 'peer review' of projects at critical stages in their lifecycle, to provide assurance that they can progress successfully to the next stage. The Gateway Review process covers six 'Gates', numbered from 0 to 5. These gateways cover aspects from strategic assessment of the program to examining the full business case of the project, as well as monitoring the operations of a project. Principles of the Green Book are incorporated in Gates 1 and 2. For all major projects, Her Majesty's Treasury approvals are required at Gates 1, 2 and 3. The standardised and structured approach of the UK's Gateway Review has been adopted in various other jurisdictions (with contextual fine-tuning), including in Australia and the Netherlands.

B. Project reviews should involve all relevant stakeholders.

The review process should be a multi-stakeholder process to ensure that all key issues in the project are dealt with comprehensively. In Korea, for instance, PIMAC, an independent think-tank, is charged with the review of full feasibility reports and conducting VfM analysis for PPP projects. Similarly, the MIRT framework in the Netherlands involves a wider set of stakeholders throughout the project preparation journey by bringing in project owners, citizens, other ministries and regional partners (provinces, municipalities, transport regions, district water boards, NGOs and businesses) during the course of project review and approval.

In Rwanda, given the sensitivity to increases in tariffs and user charges across infrastructure sectors, the utilities regulatory authority (RURA) is involved in decision-making, particularly with respect to tariff design and levels.

WIDER STAKEHOLDER INVOLVEMENT IN REVIEWS – Involvement of regulators in project reviews, Rwanda

In Rwanda, project approvals follow two distinct steps according to the type of project procurement as described below. A key aspect to note is that, in the case of PPP projects, the Rwanda Utilities Regulatory Authority (RURA) is consulted at the feasibility stage on user tariffs and the methods underlying their fixation and revision. RURA's recommendations also form a critical input in the approval of feasibility reports.

- For public investment projects, the project approvals are integrated as part of the planning and budgeting exercise for central government investment. The projects are assessed twice by the Public Investment Committee (PIC) or Local Governments Public Accounts Committee (LGPAC) during the project preparation lifecycle; first, by conducting a full feasibility study and second, in order to proceed with the tender. For sub-national projects, the Local Administrative Entities Development Agency (LODA) acts as a technical secretariat to LGPAC and assists in screening projects. The findings of the screening are submitted to LGPAC, which advises on investment priorities to the District Council (which has the authority for final project approval).
- For PPP projects, the projects are submitted to the Rwanda Development Board (RDB) for evaluation and registration in the PPP database. RDB forms a project-specific Technical Committee (TC) for review of the full feasibility report. The TC comprises representatives from the RDB, a project officer from the contracting authority, representatives from MINECOFIN (to review and provide approvals on fiscal commitment and contingent liability), RURA (which advises on tariffs where user tariffs are to be used), and other relevant ministries and agencies, including the Ministry of Justice.

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Further, the PIC also evaluates the feasibility report from an economic feasibility and strategic investment standpoint. Recommendations from the TC and PIC are submitted to the PPP Steering Committee for projects which are to be delivered using the PPP structure. In the case of local level projects, these are assessed by LGPAC twice, both at the pre-feasibility and full feasibility stage.

C. Project preparation is often subject to process audits to drive transparency and improvements.

A number of countries provide for process audits, generally post procurement, as a means to drive transparency, accountability and compliance with the legal framework and guidelines issued.

The purpose of the audit is to document non-compliance and deficiencies related to the project preparation process. The auditors should verify the key elements of the feasibility study carried out by the GCAs (including demand projections), the efficiency and effectiveness of project structuring, and the steps in project review and approval, including the basis of decisions and intentions. The audit process shall also review whether the GCA has considered different alternatives for implementing the project and selected the most appropriate set-up through a transparent and objective approach. Audits also potentially help in identifying process gaps which, when addressed, can drive efficiency.

An effective audit of the project preparation process, including early stage screening and feasibility evaluation stages, can be useful in mitigating project procurement and implementation risks and rationalising costs. For instance, the Federal Court of Accounts (TCU) in Brazil plays an important role in streamlining the audit process, which is a time-bound, pre-procurement audit process, for national priority projects under the Investment Partnerships Program (PPI).

AUDIT REVIEW OF PROJECTS – The Federal Court of Accounts (TCU), Brazil

Project preparation and approvals processes, especially in developing countries, are prone to litigation due to multiple factors, including corrupt practices, general lack of transparency, and variation in the interpretation of laws and guidelines.

This has been one of the major reasons for delay in project implementation in these countries. Under its Investment Partnerships Program (PPI), the Government of Brazil has created an institutional mechanism to ensure a time-bound audit review of each project prior to project bidding. The Federal Court of Accounts (TCU) conducts accounting, financial, budgetary, performance and equity audits and inspections to verify the legality and legitimacy of governmental actions, as well as the application of subventions, subsidies and exemptions. Under the PPI, the government targets a 90-day window for the TCU approval process.

In the case of the South Integration Highway project, the project studies were submitted for review by the TCU on 31 July 2017. The TCU undertook a detailed assessment of the processes followed by nine months of deliberation with the stakeholders, including the PPI Secretariat (SPPI), National Land Transport Agency (ANTT), the Planning and Logistics Agency (EPL), the Ministry of Transport, Ports and Civil Aviation (MTPA)²⁴ and the transaction advisor. The TCU analysed the parameters related to the concession plan (Law 10.233/2001), the road exploration plan and the technical, economic and environmental feasibility studies of the project. The draft projects agreements were also analysed and the compatibility of these documents with the economic and financial aspects of the studies was determined.

The TCU finally approved the project in May 2018 while providing guidance on specific actions to be taken up by ANTT before initiating the tender notice. Some of the key areas of suggested improvement included the provisions related to scope changes, obligations during contract extension, contractual penalties, criteria for undertaking technical studies, and the preparation of a plan of action to improve project supervision. The analysis of technical, economic and environmental feasibility studies contributed to the reduction of approximately R \$1.5 billion (US \$390 million) in terms of investments and operational costs.

²⁴ From January 1 2019, this ministry will be called the Ministry of Infrastructure.