

Australia

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Strong project preparation enabling framework at the sub-national level, ably supported by federal institutions

Australia's project preparation landscape aligns with its devolved constitutional set-up, with sub-national governments at the state level having established their own independent enabling frameworks to aid project development. These institutions assist and address all aspects of project preparation - setting policies and providing guidelines, drafting and monitoring long-term strategic plans and providing approvals, quality assurance, and capacity building support to contracting authorities within the state. These state level institutions are ably supported by those at the federal level: Infrastructure Australia (IA) to assist in the delivery of nationally significant projects; the Department of Infrastructure and Regional Development to provide policy advice and delivery support; the Department of Treasury to conduct independent reviews and appraisals of nationally significant projects, and the National PPP Working Group to ensure consistency and coordination across jurisdictions for PPPs.

Encouraging national collaboration for project development through overarching policies and coordination through the National PPP Working Group

To ensure uniformity across jurisdictions for project delivery, Australia's federal government has drafted national level PPP policies and guidelines, which are applicable for all PPP projects undertaken in the country. The National PPP Working Group, an inter-jurisdictional committee comprising representatives from the federal and all state governments, further promotes and advances coordination efforts. Through a collaborative approach, the committee works to improve the PPP processes and their implementation in Australia.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Dedicated agency to identify and support nationally significant projects from the initiation stage, through a well-defined framework

Infrastructure Australia evaluates projects for suitability and relevance, to be added to the pipeline of nationally significant projects – the Infrastructure Priority List (IPL). This evaluation is done through a defined framework, the Assessment Framework, which details the process and criteria against which projects are evaluated.

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.

Independent audit and long-term planning of country-wide infrastructure delivery landscape

Infrastructure Australia conducts a comprehensive audit of Australia's infrastructure needs and delivery landscape, through the National Infrastructure Audit (NIA). The NIA is undertaken every five years and is an exhaustive document which evaluates the existing infrastructure gap and estimates demand for infrastructure over a 15-year period. It also analyses the sectoral investment and regulatory climate, policy considerations, and other support mechanisms required to realise this demand. In response to this audit, Australia prepares a 15-year rolling plan, the Australia Infrastructure Plan, which provides a long-term strategic direction not only for project delivery, but also for the enabling framework for infrastructure development.



PROJECT APPROVALS AND QUALITY ASSURANCE

Adapting the UK's Gateway Review Process to an Australian context to enhance effectiveness and relevance

Australian state governments have adopted the United Kingdom's Office of Government Commerce (OGC) Gateway Review Process for quality assurance across all jurisdictions, adding modifications to enhance the outcome of the process and make it more relevant to the Australian context. For instance, the Department of Finance within the Government of Australia recommends a staged escalation within the review process called 'Enhanced Notification', which defines escalation actions based on specific triggers in project assurance. Further, the Government of Victoria has built upon the Gateway Review Process and added a series of additional project assurances and checks for high-value or high-risk projects.



PUBLIC MARKETING AND STAKEHOLDER ENGAGEMENT

Transparent disclosure of project development, with real-time reporting through government managed portals

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. Finally, The Australian and New Zealand Infrastructure Pipeline, a central portal developed through a joint initiative between the Australian and New Zealand governments, provides a forward view of public infrastructure activity across Australia and New Zealand.

Soliciting stakeholder support when designing long-term plans for infrastructure development

Unique to Australia's development planning framework is its extensive use of soliciting inputs from a wide range of stakeholders for its long-term strategic plans. Most of Australia's strategic planning documents welcome submissions and suggestions from industry associations, public interest groups, local government bodies and individuals. Planning authorities then work closely with these representatives to incorporate and address their concerns, prior to finalising the planning document.

2. Snapshot of project preparation activities

Australia's infrastructure development environment is amongst the most advanced and mature structures globally. It is defined predominantly by state level institutional and policy frameworks that are guided by overarching national frameworks and guidelines to provide consistency and coherency across all provinces.

INSTITUTIONAL FRAMEWORK

Infrastructure project preparation in Australia follows the country's federal system with each state having its own institutional framework to support project development. Typically, this comprises: (i) the state treasury department, to provide quality assurance, approve projects and prepare annual budgets for government expenditure; (ii) a state level PPP unit that establishes good practice guidelines for project

preparation; and (iii) a state level planning agency, which sets the long-term vision and strategic priorities for the development of the state.

Some states have also established specialised institutions to support project development. For instance, PPP projects in the state of Victoria are supported by the Office of Projects Victoria. The office provides guidance on technical scope, engineering design, project cost, and financial and contractual risks during project evaluation. In the state of New South Wales, the state treasury department has set up its Infrastructure and Structure Finance Unit, which specialises in providing commercial and financial advice to the state government on infrastructure projects with a cost of over approximately US \$70 million (AU \$100 million).

STATE LEVEL INSTITUTIONAL SET-UP FOR PROJECT PREPARATION – THE CASE OF VICTORIA

Infrastructure Victoria is an independent statutory body that guides decision-making on Victoria's infrastructure needs and priorities. It sets Victoria's long-term infrastructure strategies and monitors and reports on its progress. It has delivered a 30-year infrastructure strategy, which outlines the infrastructure challenges that need to be addressed to meet the state's long-term goals and the guiding principles by which the strategy was developed.

The Department of Treasury and Finance (DTF), Victoria is the relevant PPP authority as defined in the National PPP Guidelines. DTF is not responsible for direct project delivery but provides quality assurance for projects. DTF advises implementing agencies on developing project governance arrangements and also participates at all levels of governance at all stages of the PPP lifecycle. It also sets guidelines and makes policy recommendations on infrastructure investments and PPPs in the state.

The Partnerships Victoria team, housed within the DTF, provides a framework for developing contractual relationships through PPPs in the state. It serves as the first point of contact for PPPs in the state and plays a central role in coordination, advisory and facilitation of the procurement process for PPPs. The team also advises Victoria's Treasurer, who presides over the State's PPP policy and approves key PPP project milestones. The Partnerships Victoria team also serves as a conduit for communication between the private sector and government.

The Office of Projects Victoria provides an independent review of the engineering and technical design for projects that undergo the gateway review assurance process with the DTF.

The Office of the Victorian Government Architect provides leadership and strategic advice to government on elements of urban design.

At the national level, the state institutions are supported by the apex agency for nationally significant projects, Infrastructure Australia (IA). Established in 2008, Infrastructure Australia is an independent statutory body which takes a long-term, national approach to infrastructure planning.

Infrastructure Australia is mandated to perform the following functions:

- scope and deliver the national infrastructure audit every five years;
- undertake evaluations of project proposals that are nationally significant or where funding of more than AU \$100 million is sought from the Commonwealth;
- develop a regularly updated Infrastructure Priority List; and
- develop guidance materials for proponents to utilise in preparing initiative and project submissions.

Infrastructure Australia works in conjunction with three government bodies at the federal level – the Department of Finance, the Department of Infrastructure, Regional Development and Cities, and the National PPP Working Group.

The Department of Finance provides approvals for projects which are classified as nationally significant or where Commonwealth funding of more than AU \$100 million is provided. It also provides guidelines for the preparation of business cases for infrastructure projects.

The Department of Infrastructure, Regional Development and Cities is tasked with designing and implementing infrastructure programs in Australia, as well as developing policies and regulations to support their development.

The National PPP Working Group comprises representatives from national and state governments and leads the development of policy and process improvements for PPPs. It is tasked with ensuring value for money in the delivery of PPPs, improving the national PPP policy, guidelines and practices, and ensuring consistency and cooperation across jurisdictions in the application of PPPs.

PROJECT PREPARATION LANDSCAPE

Australia's project preparation landscape is concentrated at the sub-national level, with state institutions prescribing the overarching policy for project preparation in the state.

Project identification and concept definition.

Projects are typically conceptualised and planned by departments and agencies of the government (contracting authorities), based on the long-term development plan set by the commonwealth and state governments, such as Infrastructure Victoria's 30-year infrastructure strategy for the state of Victoria.

Project feasibility and structuring. Each state prescribes detailed guidelines on the overall process to be followed for the preparation of their PPP projects, with templates and toolkits available to assist project proponents through each of the stages. The project planning and preparation process in Australia follows two broad steps. Initially, a strategic case for the project is developed and then at the second stage a full business case is prepared for the investment approval. For contracting authorities who do not have the necessary funding support or in-house capabilities to conduct a full-fledged feasibility study, the state governments also provide external support. For example, Victoria's Department of Treasury and Finance provides project development support for high-risk projects, as well as those projects that have passed the strategic assessment stage but need additional funding for developing the full business case.

Project approvals and quality assurance. All public spending proposals must be approved by the respective state's treasury department. In some states, a separate committee to review public expenditure proposals has been set up within the state government. Typically, all projects undergo a gateway review process established at the state level, based on the UK's Gateway Review Process. Gateway reviews consist of a series of structured reviews that examine procurements at key decision points (or gates) in the project cycle and are used to improve on-time and on-budget delivery of major projects. These reviews are conducted by dedicated teams housed within the treasury departments of state governments.

State treasury departments have also mandated additional checks and balances for projects that have been designated as higher risk projects. For instance, the state of Victoria's High Value High Risk Framework requires that all project proposals must complete preparation of a full business case, require treasury approval for funding decisions, share risk mitigation plans for risks identified through the gateway reviews, and update the treasury department on a quarterly basis as part of the Major Projects Performance Report.

Mapping salient features of Australia's project preparation landscape

Evidence-based strategic planning and vision for infrastructure development at the national and sub-national level. Infrastructure Australia conducts a comprehensive national audit of Australia's key infrastructure and assesses future development needs to project demand for infrastructure over the next 15 years. On this basis, the Australian Infrastructure Plan is prepared on a rolling basis every five years, which encapsulates a reform and investment roadmap to achieve the vision. Projects and initiatives which aid in addressing nationally significant challenges are included in the national Infrastructure Priority List (IPL) and are given focused attention and debottlenecking to move forward. At the state level, long-term visions and strategy are prepared by state counterparts, such as the Infrastructure New South Wales's State Infrastructure Strategy for 20 years, and Infrastructure Victoria's Infrastructure Plan. These strategies and plans help in shaping the project pipeline. Long-term planning for infrastructure in Australia is also done at a regional level. For example, the Greater Sydney Commission released the Greater Sydney Region Plan in 2018, setting out a 2056 vision for a metropolis of three cities. Plan Melbourne 2017 – 2050 sets a long-term plan to make Melbourne 'more sustainable, productive and livable.' ShapingSEQ 2017 sets out a 25-year long-term land use plan for the South East Queensland region and in Western Australia the 2017 Perth @ 3.5 million strategy sets out a vision for 2050 based on sub-regional land use planning and infrastructure frameworks.

Using Infrastructure Australia's Assessment Framework to identify and deliver national priority projects.

Infrastructure Australia uses an Assessment Framework to evaluate projects and initiatives that are nationally significant to be included in the Infrastructure Priority List for expedited delivery.

The Assessment Framework recommends a five-stage process for decision-making, starting from project identification and prioritisation, initiative identification and options development, business case development, business case assessment and post completion review. This framework serves as an evidence-based development guide for projects that seek support from Infrastructure Australia.

Periodic auditing and review of Australia's overall infrastructure delivery landscape.

In 2015, the Commonwealth Government mandated Infrastructure Australia to prepare its first ever national audit (the National Infrastructure Audit), which is an independent assessment of Australia's infrastructure needs. The audit will be conducted every five years, and is aimed at providing recommendations on governance and policy reforms required to meet the infrastructure needs identified by the audit. One of the recommendations of the audit was to draft a 15-year Infrastructure Plan. Released by Infrastructure Australia in 2016, this is a rolling plan which provides a vision and roadmap to address existing infrastructure gaps in Australia, and lays out a comprehensive package of reforms focused on all aspects of infrastructure management – planning, delivery, investment and management. The plan identified four high-level aspirations for Australia – enhancing productiveness of its cities and regions, ensuring infrastructure markets are robust, efficient and well-regulated, developing sustainable infrastructure, and establishing a culture of robust and transparent decision-making and delivery across all infrastructure sectors.

Adopting UK's OGC Gateway Review Process for quality assurance. Infrastructure nodal agencies use the UK's Gateway Review Process for quality assurance for infrastructure projects, adapted and modified to suit Australia's institutional and strategic framework. These modifications support greater due diligence on review mechanisms. For instance, Infrastructure NSW has used the gateway process to develop the Investor Assurance Framework, a tiered approach to conducting assurance based on the risk of the project. Infrastructure Victoria has provided additional reviews for high risk projects through its High Value High Risk Framework and added design review to the gateway process through the Victorian Design Review Panel. The Department of Finance within the Government of Australia provides quality assurance through gateway reviews, as well as Implementation Readiness Assessments (IRA). IRAs essentially provide assurance on practical delivery matters for the project.

Extensive disclosure of project pipelines and status updates. Adequate project disclosure is one of the cornerstones of project preparation in Australia. Information on ongoing and proposed projects is easily accessible and provided across multiple portals, depending on the authority responsible for the project. Infrastructure Australia publishes an update on the IPL on an annual basis, as do state infrastructure bodies. Portals such as the National Infrastructure Construction Schedule and the Australia and New Zealand Infrastructure Pipeline provide details on government procured projects. Further, all business cases for appraisal by respective treasury departments are provided to the public for consultation prior to approval. Australian governments also routinely published post-completion reviews (PCRs) on web portals for public information.

Capacity development on project preparation by state institutions. Capacity development for project preparation is provided by the infrastructure bodies and treasury departments of the respective state institutions. These span the provision of guidance on the preparation of business cases, quality assurance, policy framework for fiscal management, and training support to build capacity amongst project proponents and reviewers.

CAPACITY BUILDING SUPPORT FOR VICTORIA'S PROJECT PREPARATION LANDSCAPE

The state of Victoria, through its apex agencies for project development, has released a series of guidance documents covering all aspects of project preparation, to streamline project development in a standardised manner.

Investment management standard (IMS) aids decision-making for project proposals at the strategic assessment case stage, based on a four-stage workshop method.

The asset management accountability framework details mandatory asset management requirements for government agencies in Victoria, along with general, best practice guidance on asset management.

The investment lifecycle guidelines provide practical assistance to proposing investment projects in Victoria.

Partnerships Victoria requirements build on Australia's national PPP guidelines to develop best practice standards for PPPs in Victoria.

The High Value High Risk (HVHR) Framework comprises a series of project assurance checks and processes for HVHR projects to increase the likelihood that they will achieve their stated benefits and be delivered successfully, on time and to budget.

Technical guidelines on project governance, economic evaluations, project risk, sustainability, project budgeting.

In addition, the DTF also delivers formal programs on capacity building through Partnerships Victoria. These formal programs range from workshops on the gateway review process and business case development, to a partnership with Melbourne University to offer programs facilitating leadership development for PPPs. The Government of Victoria is also establishing a state level Major Projects Leadership Academy, to provide high-quality training to ensure that the leaders of complex major projects are at the forefront of current project delivery thinking and are skilled accordingly.

3. Guidance for project preparation

Guidance	ASSESSMENT FRAMEWORK
Owner	Infrastructure Australia (IA)
Project development stage	Identification, feasibility and structuring
Details	<p>The Assessment Framework sets out the process Infrastructure Australia uses to consider initiatives and projects for inclusion on the Infrastructure Priority List, a list of national strategic projects. The framework provides information about how initiatives and projects are assessed by Infrastructure Australia, to enable contracting authorities to develop their submissions. The framework covers five stages: problem identification and prioritisation, initiative identification and options development, business case development, business case assessment, and post completion review. For each stage, the envisaged outputs, assessment to be undertaken, templates and checklists, and detailed technical notes are provided.</p> <p>Link for further details: https://infrastructureaustralia.gov.au/projects/make-a-project-assessment.aspx</p>
Guidance	NATIONAL PPP GUIDELINES
Owner	Department of Infrastructure and Regional Development
Project development stage	Overall PPP lifecycle
Details	<p>The National PPP Guidelines provide a unified national framework on key processes and requirements for the public and private sectors to undertake PPP projects. These guidelines apply across state, territory and national (Commonwealth) PPP arrangements.</p> <p>The guidelines comprise six volumes:</p> <ul style="list-style-type: none"> • Volume 1: Procurement Options Analysis • Volume 2 : Practitioners' Guide • Volume 3 : Commercial Principles for Social Infrastructure • Volume 4 : Public Sector Comparator Guidance • Volume 5 : Discount Rate Methodology Guidance • Volume 6 : Jurisdictional Requirements <p>In addition, there is a National PPP Policy Framework that details the scope and application of the guidelines across jurisdictions.</p> <p>Link for further details: https://infrastructure.gov.au/infrastructure/ngpd/index.aspx#anc_public-private</p>
Guidance	RISK POTENTIAL ASSESSMENT TOOL (RPAT) – RESOURCE MANAGEMENT GUIDE NO. 107
Owner	Department of Finance, Australian Government
Project development stage	Feasibility
Details	<p>The RPAT provides a standardised tool to evaluate project risk for public spending proposals. While it is not an exhaustive risk analysis model, it helps procuring authorities to determine a risk rating for a spending proposal, on the basis of which it is decided whether or not a proposal may be subject to an assurance review.</p> <p>Link for further details: https://www.finance.gov.au/assurance-reviews/risk-potential-assessment-tool/</p>

Guidance	GUIDANCE ON ASSURANCE REVIEW PROCESS – RESOURCE MANAGEMENT GUIDE NO. 106
Owner	Department of Finance, Australian Government
Project development stage	Approvals and assurance
Details	<p>This guide provides a high-level overview of each assurance process for infrastructure projects in the Commonwealth. It also outlines the circumstances and criteria that trigger each assurance process, the general timing that would apply, and where to seek further detailed information and assistance.</p> <p>The guidance comprises the following sections:</p> <ul style="list-style-type: none"> • Example list of documentation required for a review • Skills profile of an assurance reviewer • Handbook for conducting assurance reviews <p>Link for further details: https://www.finance.gov.au/assurance-reviews/guidance-on-assurance-reviews/</p>

Guidance	NATIONAL FRAMEWORK FOR TRADITIONAL CONTRACTING
Owner	Department of Finance, Australian Government
Project development stage	Overall project lifecycle
Details	<p>The National Framework for Traditional Contracting provides a best practice framework and commercial principles for delivering infrastructure through public procurement. It is intended for procuring authorities for project delivery, and central government departments when designing intra-jurisdictional guidelines and policies.</p> <p>The Framework comprises five documents:</p> <ul style="list-style-type: none"> • The Guide: Good Practice and Commercial Principles for Traditional Contracting • Guide 1: Project Definition and Tendering • Guide 2: Development of Project Budgets in Business Cases • Guide 3: Governance and contract management • Guide 4: Performance and continuous improvement <p>Link for further details: https://infrastructure.gov.au/infrastructure/ngpd/index.aspx#anc_public-private</p>

Guidance	INVESTMENT LIFECYCLE AND HIGH VALUE HIGH RISK FRAMEWORK
Owner	Department of Treasury and Finance, Government of Victoria
Project development stage	Overall project lifecycle
Details	<p>The investment lifecycle and High Value High Risk Framework (lifecycle guidelines) apply to all government departments in the state of Victoria and support the development of business cases for capital investments.</p> <p>The lifecycle guidelines provide practical assistance to those proposing investment projects in Victoria. They help shape proposals, inform investment decisions, monitor project delivery and track the benefits that projects achieve. They aim to provide practical guidance and tools that assist in the process of planning, proposing and delivering investments, in turn, promoting the best investment outcomes for the state.</p> <p>Link for further details: https://www.dtf.vic.gov.au/infrastructure-investment/investment-lifecycle-and-high-value-high-risk-guidelines</p>

Guidance INVESTMENT MANAGEMENT STANDARD	
Owner	Department of Treasury and Finance, Government of Victoria
Project development stage	Overall project lifecycle
Details	<p>The Investment Management Standard (IMS) Guide provides good practice to support the government to identify and select the investments that provide the most benefit to society. It is aimed at functioning as a key tool for decision-making for shaping new investment proposals, prioritising investments, developing a new policy, and monitoring and evaluating investment proposals and organisational outcomes. The Victorian State Government widely uses the IMS Guide, and it has been adopted (either wholly or in part) in many other jurisdictions, as well as by commercial, academic and not-for-profit organisations.</p> <p>Link for further details: https://www.dtf.vic.gov.au/infrastructure-investment/investment-management-standard</p>
Guidance ASSET MANAGEMENT ACCOUNTABILITY FRAMEWORK	
Owner	Department of Treasury and Finance, Government of Victoria
Project development stage	Overall project lifecycle
Details	<p>The Asset Management Accountability Framework details mandatory asset management requirements, as well as general guidance, for government agencies responsible for managing assets in the state of Victoria. It provides support and guidance on four stages of an asset lifecycle: planning, acquisition, operations and maintenance, and disposal.</p> <p>The framework applies to non-current (physical and intangible) assets of government departments and is mandatory for the following aspects: developing asset management strategies, governance frameworks, and performance standards and processes to regularly monitor and improve asset management. The requirements also include establishing systems for maintaining assets and processes for identifying and addressing performance failures.</p> <p>Link for further details: https://www.dtf.vic.gov.au/infrastructure-investment/asset-management-accountability-framework</p>
<p>NOTE: This section includes guidance from the national government and the state government of Victoria on a representative basis. All state governments have their own specific guidelines, and have not been included here. They can be easily accessed on the treasury department websites, linked here.</p>	
New South Wales	https://www.treasury.nsw.gov.au/projects-initiatives/public-private-partnerships/policy-guidelines-and-publications
Australian Capital Territory	https://apps.treasury.act.gov.au/infrastructure-finance-and-advisory/ppp
Northern Territory	https://treasury.nt.gov.au/homepage
Queensland	https://www.treasury.qld.gov.au/growing-queensland/project-procurement-and-advisory/ https://www.treasury.qld.gov.au/resource/project-assessment-framework/
South Australia	www.treasury.sa.gov.au/economy/national-initiatives-and-reforms/3rd-level
Tasmania	www.treasury.tas.gov.au
Western Australia	http://www.treasury.wa.gov.au/Treasury/Public_Private_Partnerships/PublicPrivatePartnerships/ www.treasury.wa.gov.au/cms/content.aspx?id=12659

4. Project case example: Regional Rail Link Project

PROJECT BRIEF

The Government of Victoria's Regional Rail Link (RRL) project was a large-scale revival project to remove bottlenecks in Melbourne's rail network and expand the regional rail network.

It involved the construction of 90 kilometres of new rail track, including dedicated regional tracks from the suburbs of West Werribee Junction to Deer Park and along the existing rail corridor from Sunshine to Southern Cross Station in Melbourne's Central Business District. The project also included the construction of two new platforms at Southern Cross Station; new train stations at Wyndham Vale, Tarneit and West Footscray; the upgrade of the Sunshine, Tottenham, Footscray, and Southern Cross Stations and the removal of two level crossings at Anderson Road in Sunshine. RRL was delivered through six works packages, consisting of three alliances, two design and construct (D&C) contracts and one franchisee-managed scope of works. In total, there were 16 organisations engaged directly through these agreements.

Jointly funded by the Australian Commonwealth and Victorian Governments, RRL was one of the most significant and complex infrastructure projects in Victoria, and the largest public transport development in Australia during its construction.

The RRL project demonstrates the superior project planning development practices in Australia – it was delivered eight months ahead of schedule and approximately AU \$600 million under budget, owing to meticulous planning, collaborative culture and persistent, ongoing communications with stakeholders. The project has also won numerous awards for implementation, including Infrastructure Project of the Year 2014 and Australian Construction Achievement Award 2015.

QUICK FACTS



VALUE
(IN US \$ BILLION)

2.69



STATUS

Operational



PROJECT OWNERSHIP

**Regional Rail Link
Authority**



SOURCE OF PROJECT
PREPARATORY FINANCING

Government budgets



SUPPORT AGENCIES

**Infrastructure Australia,
Department of Treasury and
Finance – Government of Victoria**

* Estimated Exchange Rate: A \$1 = US \$0.74 (as of December 2018)

PROJECT TIMELINE

1993 – Early-08	Pre-planning activities and options identification for RRL
Apr-08	Final version of the Eddington report on Investing in Transport released, proposing RRL as a solution for upgrading Melbourne's rail network
Dec-08	Government of Victoria releases the Victorian Transport Plan, identifying RRL as a key initiative for implementation
Dec-08 – Aug-09	Public consultations on the project undertaken in three phases
Early-09	Government of Victoria submits a proposal to Infrastructure Australia (IA), to seek Commonwealth funding for RRL
May-09	IA completed final assessment of priority projects for 2009, Commonwealth funding for RRL approved in the May budget
Jun-09	Special division within Department of Transport, Government of Victoria established to oversee delivery of RRL
Aug-09	Scheduled construction commencement date
Aug-10	Regional Rail Link Authority (RRLA), a special purpose entity to deliver the project, incorporated
July-11	Construction of major works commences
Nov-14	Construction completed
June-15	Project opened for operations

LEARNINGS FOR PROJECT PREPARATION

1. Adequate strategic planning for major, complex projects can simplify implementation.

The conceptualisation of the RRL project was anchored in a comprehensive plan for transport sector development in the state of Victoria. While the need to upgrade Melbourne's rail network was identified way back in 1993, the strategic rationale was built through a series of planning documents. In 2002, the Victorian Government released the Melbourne 2030 strategy, which helped in identifying the key challenge to be addressed – increasing public transport's share of motorised trips from 9% in 2002 to 20% in 2020, by developing a metropolitan train plan. This was followed in 2004 by the government's Linking Melbourne: Metropolitan Transport Plan, which further developed the 2002 report, diagnosing a number of rail network constraints which required attention. Subsequently, the concept that evolved into the RRL began as a recommendation in the 2008 report, Investing in Transport (also known as the Eddington report), commissioned by the state government to investigate solutions for Melbourne's rail constraints. In December 2008, in response to the Eddington report, the government released the Victorian Transport Plan. This was a 30-year integrated transport plan that replaced Meeting Our Transport Challenges, wherein the state government committed to the RRL proposed in the Eddington report.

Thus, the RRL was underpinned by a body of strong, sound policies, and a compelling need for services established during the planning process was instrumental in procuring the long-term commitment of the Victorian Government to support the project.

2. Effective stakeholder coordination is necessary for projects with inter-departmental involvement.

Owing to its scope, size and complexity, developing and implementing the RRL project involved extensive inter-departmental coordination. Delivery of the RRL project involved the following agencies:

- the Government of Australia, which provided part funding for the project through the Building Australia fund;

- the Department of Economic Development, Jobs, Transport and Resources (DEDJTR), the Government of Victoria, successor to the former Department of Transport (DOT) and the former Regional Rail Link Authority (RRLA), which led the planning and delivery of the RRL project;
- the Department of Premier and Cabinet, Government of Victoria, which provided a statewide government policy and leadership function for the project and liaised with the Australian Government;
- the Department of Treasury and Finance (DTF), Government of Victoria, which provided financial oversight and project scrutiny through its gateway review process and High Value High Risk (HVHR) Framework;
- Public Transport Victoria (PTV), which was the key coordinator and planner for public transport at the time of the RRL;
- VicTrack, the owner of Victoria's public rail assets and operator of the railway telecommunications and signaling equipment; and
- V/Line, the operator of the rail services on the RRL.

However, even in this complex stakeholder and delivery environment, the project was delivered well ahead of schedule and well under budget. A key driver of the success of RRL was the highly communicative and collaborative approach to construction adopted by works packages, rail operators, key stakeholders and RRLA. This created an environment in which all parties continually looked for opportunities to align on priorities, expedite the program, coordinate resources, share knowledge and innovations, and work together to find balanced solutions for all.

3. Focus on the management of public perceptions and expectations for efficient delivery.

A proactive approach to community and stakeholder engagement (including interface agreements with key stakeholders) helped ensure that all parties were kept informed of project progress and any issues were promptly addressed. Through July, August and September of 2008, the Victorian Government sought input from a wide cross-section of industry

and the community, including members of the public, community and neighbourhood groups, local councils, public transport operators, and investors and bankers. The government followed a meticulous approach to engaging with the community, through the use of a web forum, which attracted more than 200 participants across Victoria, forums hosted by the Minister for Roads and Ports, the Minister for Public Transport, the Minister for Regional and Rural Development and Members of the Parliament, and the Victorian Transport Summit hosted by the Premier of Victoria. The stakeholder consultation process resulted in more than 2000 individual comments and pieces of feedback, which helped shape not only the implementation of the project, but also the long-term strategic direction for Victoria's transport infrastructure.

4. For complex projects, characteristics of individual facets of work must be factored in, in the procurement plan.

The use of a coordinated procurement strategy helped deliver significant time and cost savings for the RRL project. Prior to construction, the Victorian Government developed a strategic procurement plan to identify the preferred packaging and procurement structure for the project. Owing to the conditions and risk profiles of the various works packages, a wide range of procurement models were used. The brownfield and greenfield sections of RRL provided a clear distinction for packaging and delivery model selection. The design and construct delivery model was considered most suitable for the greenfield works packages and the alliance delivery model best suited to brownfield works packages.

Of the six packages bid out by the RRLA, the station development one was procured through the franchisee works model¹, two packages which were greenfield in nature and involved laying of track lines and development of stations were procured through the design and construct model² and the remaining three, which were brownfield packages, tending to be more risky and complicated, were procured through the competitive alliance model³.

¹ In the franchisee model, the state government signs a project agreement with a franchise operator to deliver infrastructure works on behalf of the state.

² In the design and construct model, the state government undertakes limited design works and then invites potential suppliers to complete and construct the design.

³ In the competitive alliance model, the state government collaborates with one or more private sector parties to share risks and responsibilities during the construction phase of the project.

Brazil

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Role of the Investment Partnership Program (PPI) in streamlining project preparation

The PPI provides an institutional and regulatory framework to streamline the project preparatory processes for national priority projects. The program brings in high-level ownership, seamless coordination and quality assurance reviews to the project preparatory process, ensuring time-bound preparation.



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Establishment of a specialised entity to complement public sector capacity

The Brazilian Planning and Logistics Company (EPL) has been established as a specialised technical entity to provide guidance on long-term sectoral planning and drive efficiencies in the project planning and preparation process. EPL is also tasked with developing tools to strengthen public sector capacity and aid decision-making.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Strong framework for monitoring of the multi-year planning process and its integration with the budget

Brazil prepares a federal-level four-year plan – Plano Pluri Annual (PPA) - which outlines the government's strategic objectives, and the projects and programs to achieve said objectives. Adherence to the implementation of the PPA is ensured through a monitoring and reporting framework anchored by the Ministry of Planning, Development and Management (MP) (The MP will be integrated with the Ministry of Finance after 1 January 2019. The new ministry will be called the Ministry of Economy). The legal framework (the Budget Directives Law (LDO)) aligns the PPA with the annual budget.



PROJECT FEASIBILITY AND STRUCTURING

Federal support for project preparation at the sub-national level

The Ministry of Planning, Development and Management (MP), along with the Secretariat for Infrastructure Development, has established a federal fund (FEP), administered by Caixa Econômica Federal (CAIXA), a Brazilian Government-owned bank, for supporting the structuring and development of federal and sub-national concession projects and public-private partnerships. The fund pools in budgetary and multilateral funds to provide technical assistance to projects or to undertake project studies.



PROJECT APPROVALS AND QUALITY ASSURANCE

Quality accreditation to drive project quality

Under the PPI program, the Government of Brazil has initiated the process of quality certification of infrastructure projects and studies – The Accreditation Program for the Inspection of Infrastructure Projects – in collaboration with the National Institute of Metrology, Quality and Technology (Inmetro). The project is still at its early stages but is an important step in grading project preparation practices.

Upfront and time-bound audit by the Federal Court of Accounts (TCU) encourages clean and transparent practices in project preparation processes

Under the PPI program, a framework to facilitate upfront audit of the project preparation practices by TCU has been established. The early stage independent audit review of the project preparation process, documents and procurement documents helps in minimising risks and expediting project implementation.

2. Snapshot of project preparation activities

Brazil's project preparation is considered in the context of its recent successes in implementing coordinated institutional reform actions to strengthen public sector capacity in planning and implementing national priority projects.

This is specifically relevant in the context of a multi-institutional planning environment, which is common to other large-size developing countries. The Investment Partnerships Program (Programa de Parcerias de Investimentos, or PPI) of Brazil, launched in 2016, helped to streamline government actions through the centralisation of strategic actions by the government, optimising the governance of the project structuring process. Under PPI, Brazil established a high-profile institutional structure with clearly defined roles and responsibilities, which has facilitated the improvement of overall project quality while strengthening investor perceptions. Today, Brazil is one of the largest PPP markets in Latin America, with an investment of US \$386 billion in infrastructure from 1990 to 2017. Over 94% of total PPP investment in the Latin America and Caribbean region during the last decade was concentrated in only five countries, with Brazil (65%) leading the list followed by Mexico (11%). Brazil has categorised private sector financed projects as follows: Conventional concessions (which do not receive government guarantees or direct financial support, nor payments); sponsored concession PPPs (which include user charges, and payment of some form of compensation from the government); and administrative concession PPPs (which involve budgetary payments by the government).

INSTITUTIONAL FRAMEWORK

Project preparation activities are decentralised in Brazil, with federal and sub-national level Government Contracting Authorities (GCAs) undertaking the project preparation for their respective jurisdictions. The line ministries may operate through specific agencies for managing each sectoral aspect. For example, the Ministry of Transport, Ports and Civil Aviation¹ (MTPA) serves as the umbrella ministry, while operational management is effected through specified agencies like the National Land Transport Regulation Authority (ANTT), the National Agency for Waterway Transportation (ANTAQ) and the National Transport Infrastructure Department (DNIT).

At the federal level, the GCAs are supported in project preparation by public sector institutions including the Ministry of Planning, Budget and Management² (MP), the Brazilian National Bank of Economic and Social Development (BNDES) and specific line agencies under each ministry. The MP and the GCAs also prepare general guidelines of the steps to be followed in project preparation. For example, the MP's manual covering pre-feasibility studies for large-scale projects (published in 2005) provides guidance on the preparation and evaluation of pre-feasibility studies for line ministries and agencies, with the exception of the energy sector.

BNDES has played a catalytic role in supporting project preparation in major projects. BNDES has established a separate project development division with an objective to foster, structure and coordinate infrastructure projects, both public concessions and public-private partnerships (PPPs), at the federal, state and local government level. The Federal Court of Accounts (TCU) provides independent reviews of the project preparatory process and checks whether these processes are aligned with the extant rules and regulations.

To guide the GCAs in the execution of national priority projects, the government has created the Investment Partnerships Program (PPI) as a high-level institutional and regulatory framework with an objective to prioritise infrastructure projects and strengthen the role of the private sector in infrastructure projects. PPI focuses on facilitating collaboration between the public and private sectors in an environment of decreasing dependence on BNDES for infrastructure financing. Under PPI, two institutions were created within the federal administration: the PPI Council and the PPI Secretariat (SPPI). The PPI Council is the collegiate body that evaluates and recommends to the President of the Republic the projects that integrate the PPI, deciding, also, on the issues related to the execution of the contracts of partnerships. The Secretariat, linked to the Presidency of the Republic, supports ministries and regulatory agencies in planning, modelling and monitoring the portfolio of projects, preserving their political and regulatory competences.

¹ After 1 January 2019, the ministry will be called the ministry of infrastructure.

² The MP will be integrated with the Ministry of Finance after 1 January 2019. The new ministry will be called the Ministry of Economy.

HOW THE PPI PROGRAM STRENGTHENED THE INSTITUTIONAL AND PROCESS FRAMEWORK

On 13 September 2016, Brazil enacted Law No. 13,334 (the PPI Law), which introduced a new Investment Partnership Program (Programa de Parcerias de Investimentos, or PPI), which seeks to prioritise infrastructure projects and increase and strengthen the role of the private sector in infrastructure projects. The PPI program focuses on facilitating collaboration between the public and private sectors in an environment of decreasing dependence on BNDES for infrastructure financing. Under the PPI program, governments and parastatals could also access funding for technical assistance to develop concessions and PPPs.

The idea of creating the PPI led to the institutionalisation of a “one-stop shop” for the coordination of work (legal enforcement of other government entities involved in the delegation process) and communication with potential investors. This action allowed the centralisation of strategic actions by the government, optimising the governance of the project structuring process. The standard timeline of actions under the PPI program are:

- Feasibility studies – 9-12 months
- Public consultations – 45 days
- Federal Court of Accounts (TCU) analysis – 90 days³
- Bidding notice – 100 days
- Contract signature – 180 days

As of July 2018, more than 193 projects were qualified in the program, of which 105 projects of US \$60 billion were initiated, and the

remaining 88 projects with an aggregate value of US \$33 billion are currently under review. The PPI program has strengthened the federal governance architecture and the enabling environment for priority projects in the country. Some of the major impacts of the program include:

- **Seamless coordination between line agencies** – The program draws in multiple stakeholders, including line departments, project agencies, financing agencies and others, into separate working groups, to review project proposals. The SPPI has been able to promote seamless coordination between managers, oversight bodies, environmental agencies, parliament, judiciary and society. This is largely due to the clearly defined roles and responsibilities of each stakeholder leading to minimal conflicts.
- **Minimising project risks** – The PPI process has led to a specific flow of decisions for the prioritisation and follow-up of infrastructure projects, which has helped to minimise project risks. Additionally, the ownership of projects at the highest level, independent review arrangement and the upfront auditing has ushered in a level of legal certainty, predictability and transparency to the projects. This has been instrumental in improving investor participation in the priority projects.
- **Greater citizen participation** – The enabling legislation and institutional framework for PPI mandates that project preparation shall necessarily go through a mandatory public consultation process. The consultation process is designed to ensure wider outreach and that citizen comments are aggregated, tabulated and the key points incorporated, which is then communicated to the stakeholders.

While the project preparatory studies are generally conducted by the GCAs, in the case of specific projects under the federal flagship programs in the transportation and logistics sectors, the Brazilian Planning and Logistics Company (Empresa de

Planejamento e Logística, or EPL) has been established as a specialised technical entity to support the line departments and regulatory agencies in project planning, preparation and appraisal.

³ Increased from 60 days in accordance with Normative Instruction nº 81 issued by the Federal Court of Accounts (TCU).

EPL AND ITS ROLE IN STRENGTHENING PROJECT PREPARATION

The project preparation landscape in Brazil is dominated by the individual line ministries and the relevant agencies. While the national planning process brings in some level of alignment in project selection, project preparation is constrained by the absence of clear criteria for project appraisal and independent institutional review (technical and financial). The problem is more pronounced in the case of high value projects. The absence of an effective gatekeeping function for independent review of project studies may lead to suboptimal solutions in project identification and selection, prioritisation, appraisal and approval.

With an objective to address this gap in project appraisal and planning, the Government of Brazil established the Brazilian Planning and Logistics Company (EPL) in 2012, a public company to support the line agencies in project planning and preparation. EPL was established to streamline the long-term planning process for transportation and logistics in Brazil with the specific objective to facilitate multimodal transportation. EPL also administers studies, surveys, infrastructure construction, technology development and activities aimed at technology transfer. It works in coordination with the MTPA and the MP in policy development and strategic planning. The key areas of support include:

- **Preparation of the National Logistics Plan and multi-modal plans** – EPL is involved in the preparation of a multi-year National Logistics Plan (PNL) 2025 that provides a portfolio of projects and recommendations on a priority list of actions (infrastructure, services, regulatory and institutional) to debottleneck the sector. The PNL is prepared based on global best practices and simulates scenarios based on a dynamic four-step model, a tool that estimates inter-zonal traffic flows considering trip generation and distribution, modal choice and flow allocation.
- **Preparation of support studies for transportation projects** – EPL provides support to line departments in undertaking technical and financial studies for projects. EPL may hire

external transaction advisors for undertaking the project studies and ensure monitoring and quality review of the studies. In addition, EPL itself, with its own multidisciplinary staff, may undertake the study (which is what it did for the fuel terminal project in the Port of Santos). The EPL is being viewed by the government and the TCU as an important certifier of studies developed by third parties.

- **Driving innovation and quality assurance** – EPL has also brought in methodological and technological innovations to the project studies, including use of an updated transport matrix for viability assessments. EPL has brought credibility to the project review process and is developing an independent business case model for transport projects with technical assistance from KPMG. It has also received support from the UK Government and the Infrastructure and Projects Authority (IPA) in the past. Furthermore, EPL has entered into long-term arrangements with the International Finance Corporation (IFC) in providing technical and financial support for project preparation.
- **Streamlining data and information to support governance** – EPL is developing a logistics information system, called the National Transport and Logistics Observatory (ONTL). The ONTL, apart from acting as a centralised database of transport and logistics scenarios in the country, is expected to be an important tool for planning and project preparation.
- **Transparency in project preparation** – EPL mandates that detailed project information and project documents prepared by the GCA shall be uploaded in the project portal. Further, it also stipulates that every project should go through a public hearing process and disclosures with respect to the changes in the project studies post public hearing. The transparency in project disclosure and the superior public consultation standards prescribed by EPL provide a level of comfort to the TCU and prospective investors.

The cost of project studies for EPL may be reimbursed by the winning bidders in the case of PPP projects.

At the sub-national level, Brazil has created a specialised institutional framework for managing PPP projects. As an example, in the State of Sao Paulo, the PPP State Program has the Public-Private Partnerships Management Board (PPPMB), linked to the Governor's Office, as the highest decision-making body of the state's PPP State Program. It consists of up to eight members and the President and Vice-President are nominated by the Governor. It is supported by a technical committee comprised of members of the: (i) Public-Private Partnership Units (UPPP – technical secretariat); (ii) Companhia Paulista de Parcerias (CPP – leads the review committee and advises on financial structuring); and (iii) the PPP Contracts Monitoring Committee (PPPCMC – monitors the implementation of PPP contracts). In addition, the sector bodies and General State's Attorney (PGE) have important responsibilities in the development of PPPs.

PROJECT PREPARATION LANDSCAPE

Project preparation activities are decentralised in Brazil, with the line ministry and their agencies responsible for project preparation at both the federal and sub-national level. A snapshot of the project preparation landscape is summarised below:

Project conceptualisation and planning. The overall infrastructure planning process at the federal level is guided by: Pluri Annual Plan (PPA – a four-year plan), the Budget Directives Law (LDO – annual) and the Annual Budget (LOA). The PPA is prepared by the Strategic Planning and Investments (SPI) of the Ministry of Planning, Budget and Management (MP) and provides a long-term pipeline of projects. The LDO is a link between the PPA and the LOA (the final law which establishes the annual budget). The LDO is prepared by the MP and the Secretary of the Federal Budget (SFB) as part of the budgetary process. Apart from the PPA, multi-year plans are also prepared by the planning departments in each line ministry, such as the National Transport Infrastructure Department (DNIT), or by specialised planning agencies (like EPL).

Project feasibility studies and structuring. The project studies are prepared by the individual line ministries and agencies. The project studies are managed by specialised agencies based on the nature of project procurement. For example, in the case of road sector projects, EPL acts as a certifier and initiator of project preparation for concession projects, while DNIT is responsible for initial preparatory studies for public sector projects. The project studies start with the preparation of a concept paper for seeking in-principle approvals, holding stakeholder consultations, and conducting pilot studies etc., for inclusion in the PPA. The MP recommends that a pre-feasibility study is conducted for large-scale projects and has also published a guidance document on the steps for preparing a program or project pre-feasibility study. Subsequent to the approval of the concept paper and pre-feasibility study, the line departments initiate the full-scale feasibility and technical studies. Each sub-element of the project feasibility study (like technical, financial, environmental etc.) is defined by specific norms⁴ prescribed by the respective line departments or agencies. For example, in the case of road transport projects, DNIT norm EB-101 applies for technical and/or economic feasibility, and IS239 and IS-201 norms for traffic studies provide guidance on feasibility studies for road projects. In the case of highway investments, the norms are based on HDM-4 software⁵, which covers appraisal methodologies, forecasts of network conditions and prioritisation criteria.

⁴ These norms define the main points to be considered when preparing a program or project's pre-feasibility study, to be submitted for evaluation by the Monitoring and Appraisal Commission (CMA-MF/CC).

⁵ HDM-4 is a software package and associated documentation which serves as the primary tool for the analysis, planning, management and appraisal of road investment decisions.

Project preparatory financing. Brazil has a multitude of options for project preparatory financing. This includes budgetary allocations, BNDES grants, and independent facilities by multilateral entities (like the World Bank, IFC, and the Inter-American Development Bank (IADB)). The government has also established technical and financial assistance to sub-national governments (in the structuring of concession projects and PPPs) under the Supporting Fund to Partnerships Structuring (FEP). This fund is governed by a Fund Participation Council (CFEP), which includes representatives of the MP, citizen groups, and the sub-national government. The fund is administered by Caixa Econômica Federal (CAIXA). The fund is mandated to contribute around 70 to 80% of the project preparation cost, while the rest shall be distributed by the sub-national government entity. It is expected that US \$47 million will be contributed to FEP by 2019 to fund infrastructure project preparation.

Project approvals and quality assurance. The project appraisal responsibilities vary according to the nature of the project:

- In the case of projects under the PPA, the Monitoring and Appraisal Commission (CMA-MF/CC), assisted by a Technical Chamber (CTMA), is responsible for appraising and selecting projects and defining appraisal methodologies. The MP provides overall guidance to the commission in undertaking the review process.
- In the case of projects under the PPI program, project approval is provided by a project-specific granting authority which includes GCAs, line ministries, the PPI Council and SPPI, and BNDES. The project studies shall then be approved by the TCU before bidding is initiated.

TCU – ENSURING TRANSPARENCY AND INTEGRITY IN PROJECT PREPARATION

The credibility of the project preparation process is an important factor in driving sustainable development. Brazil, under the PPI program, has created independent time-bound processes to ensure that projects are prepared according to norms and the technical and financial studies have been prepared objectively.

The 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 is targeting a 90-day⁶ window for the TCU approval process.

⁶ In accordance with Normative instruction nº 81 issued by the Federal Court of Accounts (TCU) recently.

3. Guidance for project preparation

Guidance	ACCREDITATION OF PROJECT STUDIES
Owner	Secretariat PPI (SPPI)
Project development stage	Project accreditation by independent quality examiners
Details	<p>The Secretariat of the Program of Investment Partnerships (SPPI), together with the National Institute of Metrology, Quality and Technology (Inmetro), has prepared The Accreditation Program for the Inspection of Infrastructure Projects. The certification program is under development and is expected to cover project feasibility studies, technical studies and execution of infrastructure projects to be evaluated by specialised entities and which will receive, based on technical requirements, a quality seal.</p> <p>Currently, there are already eight bodies, designated by Inmetro, able to certify projects and works, and the expectation is to increase this number in the coming months from the launch of the accreditation.</p> <p>Link for further details: https://www.ppi.gov.br/government-creates-quality-seal-for-infrastructure-undertakings</p>

Guidance	CENTRALISED INFORMATION REPOSITORY TO AID PLANNING
Owner	Empresa de Planejamento e Logística (EPL)
Project development stage	Project accreditation by independent quality examiners
Details	<p>The National Transport and Logistics Observatory (ONTL) is developed by EPL as a centralised repository of information on logistics and transportation which will serve as a planning and decision-making tool for the line departments and agencies. The ONTL also develops studies with statistical bases, maintaining a set of periodical publications, such as logistics bulletins, logistic diagnosis and geographic data of the transport sector.</p> <p>EPL also provides a transport cost simulator, which provides updated transport costs for the different modes (road, rail and waterways) and commodity groups (agricultural solid bulk, non-agricultural solid bulk, liquid bulk, general loads and general container loads).</p> <p>Link for further details: https://www.ontl.epl.gov.br/</p>

Guidance	INTEGRATED ENVIRONMENTAL MANAGEMENT SYSTEM
Owner	National Agency for Water Transportation (ANTAQ)
Project development stage	Project accreditation by independent quality examiners
Details	<p>The Environmental Performance Index (IDA) is an instrument for monitoring and controlling environmental management in port facilities. The IDA allows for quantifying and simplifying information to facilitate a better understanding of port environmental issues for the public and decision-makers.</p> <p>Given the diversity of indicators and the complexity of environmental issues in the port sector, the IDA is built using a multicriteria analysis methodology, considered the most appropriate to address and assess problems of environmental performance. The methodology applied is the Hierarchical Analysis Process (AHP).</p> <p>The indicators that make up the IDA are chosen based on specialised technical literature, applicable environmental legislation and good practices observed in the global port sector. The IDA reviews projects across 38 indicators, which are then classified and weighted according to the degree of importance of each one. The following link provides the classification and distribution of indicator weights.</p> <p>Link for further details: http://portal.antaq.gov.br/index.php/meio-ambiente/indice-de-desempenho-ambiental/estrutura-e-indicadores/</p>

4. Project case example: South Integration Highway Project

PROJECT BRIEF

The South Integration Highway project is a landmark highway concession project planned under the PPI framework.

The project ownership was with the respective line agency, the National Land Transport Agency (ANTT). The project planning and preparatory studies were led by Empresa de Planejamento e Logística (EPL) and supported by the Ministry of Transport, Ports and Civil Aviation (MTPA) and the PPI Secretariat (SPPI). The project provides major connectivity among urban centres with an aggregate length of 467.62 km. The project comprises of the BR-101, BR-290, BR-386 and BR-448 highways, which connect the most important economic points of the State of Rio Grande do Sul. The existing road network infrastructure is insufficient to meet current demand and, consequently, imposes barriers to the development of the region.

The project studies were procured through the Expressions of Interest Procedure (PMI) and covered detailed traffic studies, engineering studies, detailing of the operational model, and economic and financial studies. The annual maximum daily volume (VDMA) is forecast as 17,561 vehicles in the third year and 35,323 vehicles in year 30. The concession period is 30 years and the concessionaire will be responsible for developing the infrastructure and providing recovery, operations, maintenance, monitoring, expansion of capacity and maintenance of the network service level.

The concession auction was held on 1 November 2018 by the federal government, through ANTT, which led to the shortlisting of the successful concessionaire through the competitive bid process.

QUICK FACTS



VALUE
(IN US \$ BILLION)

2*



STATUS

Under construction



PROJECT OWNERSHIP

ANTT



SOURCE OF PROJECT
PREPARATORY FINANCING

**PMI (financed by
winning bidder)**



SUPPORT AGENCIES

MTPA, SPPI, EPL, TCU

*Estimated exchange rate BRL/US \$ = 0.26 as of 7 December 2018

PROJECT TIMELINE



Jun-15	MTPA calls for the preparation of studies through PMI
Jul-15	Selection Committee (EPL, ANTT and MTPA) to review the project preparation
Dec-16	Selection of studies presented by Triunfo Participações e Investimentos (TPI)* and approval by the Ministry of Transport
2017	Further detailed review by the technical unit (ANTT, MTPA, EPL and PPI)
Jan to May-17	Public hearing
Aug-17	Submission to TCU for approval
May-18	Final approval by TCU
Jul-18	Notice for auction
Nov-18	Concession auction
Jan-19	Scheduled signing of the concession agreement

LEARNINGS FOR PROJECT PREPARATION

1. Multi-institutional coordination and independent technical review

The project preparation process in Brazil is dominated by the line departments and agencies and was constrained by the absence of a clear criteria for project appraisal and independent institutional review (technical and financial). Realising the importance of an independent review arrangement for major projects, the Government of Brazil established clear processes for strengthening project review under the PPI framework, and also through EPL, to assist the line departments and agencies with an independent assessment of the projects.

The South Integration Highway project was identified as a national priority project under the Government of Brazil's PPI program. The PPI program has been designed adopting best practices in project preparation. The project review drew upon multiple institutional stakeholders across multiple stages (prior to TCU review); reviews were completed by EPL (independent review), and by the Permanent Commission of Road Concessions – CPOR (ANTT, MTPA, EPL and SPPI). Based on TCU's project review documents, the multi-stage review process by the institutions led to project quality improvements and savings of around US \$1 billion in the total capex budget.

2. Independent and time-bound audit of processes leading to transparency in project preparation

Project preparation and approvals processes, especially in developing countries, are prone to litigation due to multiple factors including corrupt practices, general lack of transparency, or variation in the interpretation of the laws and guidelines. This has been one of the major reasons for delay in project implementation in these countries. Under the PPI program, the Government of Brazil has created an institutional mechanism to ensure time-bound audit review of each project prior to project bidding.

In the case of the South Integration Highway project, the project studies were submitted for review by TCU on 31 July 2017. TCU undertook a detailed assessment of the processes, followed by nine months of deliberation with the stakeholders, including SPPI, ANTT, EPL, MTPA and the transaction

* Operator of infrastructure facilities through concessions.

advisor. TCU analysed the parameters related to the concession plan (Law 10.233 / 2001), the concession contract, the road exploration plan and the technical, economic and environmental feasibility studies of the project. The draft project agreements were also analysed, as well as the compatibility of these documents with the economic and financial aspects of the studies.

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 improvement suggested include the provisions related to the inclusion of additional scope, 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)⁷ in terms of investments and operational costs.

3. Extensive public consultations during the preparation process

Under the PPI program, extensive public hearing must be undertaken and comments from the public must be incorporated before project finalisation. The consultation is a very important phase of the project preparation process and has brought transparency and quality improvement to the studies. The PPI program mandates at least 45 days of consultations, which should cover a wide cross section of the project-affected population. The public consultations shall be driven by the individual line ministries and agencies with SPPI providing overall guidance and coordination.

The public hearing phase in the South Integration Highway project was between January 2017 and May 2017. It involved more than 90 days of intense participation by the general public and the state government, who received over 600 suggestions and contributions to the bidding and concession agreement, the Highway Exploration Program and feasibility studies.

4. Project studies strengthened by project ownership at the highest level

The Manifestation of Interest Procedure (PMI) is wherein the public sector is allowed to receive and validate project development studies prepared by the private sector. The PMI procedure is adopted predominantly in cases of gaps in technical or financial resources for procuring consultants. Under this approach, the public sector will release an expression of interest (the PMI) for private sector participants to prepare the feasibility studies for a given project and deliver them to the public sector for consideration. The biggest risk with respect to the PMI procedure is regarding the reimbursement of costs. The guiding principle in Brazil is that if there is reimbursement required, it will come from the winning bidder. However, the country's track record in converting PMI studies to projects is low. Specifically, regarding PPPs, from 163 PMIs initiated between 2010 and 2014, only 14% were successfully tendered.

The preparatory studies for the South Integration Highway project were procured through the PMI procedure, pursuant to the Public Call Notice in June 2015. The studies presented by Triunfo Participações e Investimentos (TPI), the current shareholder of the BR-290 / RS concession, were taken up for review by EPL and the SPPI, and approved by MTPA on December 2016. The technical capacity of the agencies (especially EPL and SPPI) and the project ownership at the highest level have been critical factors of comfort for the transaction advisor. The cost of reimbursement for the feasibility studies (approximately US\$ 2 million) shall be paid by the winning bidder.

⁷ Exchange rate: BRL/US \$ =0.26 as of 7 December 2018

Canada

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Decentralised planning process with strong collaboration between provincial levels and the national government

Canada's project preparation landscape is driven by collaboration between the federal and provincial governments. Both levels of government work closely to identify and plan Canada's infrastructure development needs, as well as to prepare overarching policies and guidelines for project development.

An outcome of this approach is the federal government's long-term infrastructure planning document, the Investing in Canada Plan, which is being implemented through Integrated Bilateral Agreements (IBAs) executed between the federal and provincial governments. Through these agreements, provinces identify projects that are in alignment with program outcomes identified for each funding priority in the Investing in Canada Plan. IBAs are monitored by Oversight Committees established between Infrastructure Canada, the federal department for public infrastructure, and representatives from both the federal and provincial or territorial governments.

Specialised agencies to assist in project planning and lead procurement for major projects

- In Canada's institutional set-up, provinces and territories are responsible for leading project development. Some of these provinces have set up apex agencies, which provide specialised capabilities to plan and procure projects, bringing in vast experience of managing multiple complex projects. To further streamline project development, these agencies have also developed standardised documents and tools for use by project proponents. Today, these agencies are focused on complex infrastructure delivery and support to municipalities to build capacity to develop a program of viable PPPs.

Distinct institution to oversee environmental assessments, functioning as a centre of expertise

The federal government's Canada Environmental Assessment Agency supports project development by conducting environmental assessments for projects that require federal support. It functions as a centre of expertise for environmental assessments, providing project proponents with tools to aid in conducting

environmental impact assessments and undertaking training initiatives to help agencies understand the legal requirements and processes to conduct environmental assessments.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Integrated planning for infrastructure development, supported by legal mandates and project identification guidelines

Central to Canada's infrastructure development landscape is the focus on preparing multi-year pipelines with a long-term strategic vision for infrastructure development. These pipelines are prepared by the federal, provincial and territorial governments, and are typically steered by specialised agencies, such as Infrastructure Canada at the federal level. The planning activities are further supported by a strong legislative framework, which makes the drafting of long-term plans mandatory for government agencies. Case in point, Ontario's Infrastructure for Jobs and Prosperity Act 2015 requires the Government of Ontario to prepare infrastructure development plans at least every five years, with the planning horizon spanning at least 10 years. Further, the act also provides the initial criteria to identify projects to be included in the plan.



PROJECT APPROVALS AND QUALITY ASSURANCE

Adopting a risk-based, dynamic framework for project approvals and monitoring

Infrastructure projects typically require approvals of the respective Treasury Boards in the jurisdiction, at the pre-feasibility as well as the feasibility stage. However, the criteria for projects which require approvals varies across implementing agencies or ministries and is communicated on an annual basis by the Treasury Board. The criteria are defined factoring in two aspects - the project risk (through aspects such as cost and complexity), as well as the agency's history in undertaking and managing projects. By factoring in the agency's performance in previous years, approvals processes are made more efficient, allowing for Treasury Board oversight where it is required most.

2. Snapshot of project preparation activities

Canada's project preparation landscape has emerged as one of the best globally, for its consistency, comprehensiveness and ability to prepare projects that are bankable. While the federal government provides institutions to support project preparation, it is the provincial governments who drive infrastructure creation and PPP project pipeline development in the country, along with setting the overarching policies and regulations within the province.

INSTITUTIONAL FRAMEWORK

In Canada's decentralised federalist system, the sub-national governments have jurisdictional responsibility for planning and providing infrastructure in key sectors such as transportation, housing, water and waste, and energy services. Typically, project planning and preparation is led by the respective provincial line ministries and local government bodies, who are responsible for project identification, development and implementation. The fiscal impact of undertaking capital infrastructure projects is managed by the Treasury Board's Secretariat of each province, who provide key approvals for project implementation.

A number of provinces in Canada have also established their own apex agencies for project development; these include Alberta's Advisory Committee on Alternative Capital Financing, Partnerships British Columbia, Infrastructure Ontario, and Saskatchewan's SaskBuilds. These apex agencies often function as centres of expertise for procuring major capital projects. Through these agencies, the provincial governments manage the creation of a pipeline of feasible projects, use standardised project preparation processes and foster collaboration with the federal, as well as municipal governments.

STATE LEVEL APEX AGENCIES FOR PROJECT PREPARATION

Partnerships British Columbia provides advisory support to government agencies on planning, procuring, and delivering infrastructure projects, along with leading procurement processes for complex infrastructure projects in British Columbia. It also undertakes capacity building initiatives on business case development and project procurement, under its Stakeholder Engagement Plan. Since its inception in 2002, Partnerships British Columbia has participated in 52 projects with a cumulative capital investment of approximately US \$13.4 billion.¹

Infrastructure Ontario (IO) is a crown agency established through the enactment of the Ontario Infrastructure and Lands Corporation Act 2011. It functions primarily as an implementing agency for infrastructure development in the province of Ontario, serving as an interface between the public and private sectors. It delivers results through four business divisions:

- Through its *Major Projects* division, IO manages the procurement for all major infrastructure projects in the province. Through the Alternative Financing and Procurement (AFP) approach, Infrastructure Ontario focuses on PPPs which are paid for by the public sector, rather than through charges levied on users. To assist the procurement of AFP projects, IO helps project owners with project structuring, design and output specifications, implementing the complete procurement process and overseeing the construction of the project.
- The *Real Estate Services* team is responsible for asset planning, facilities contract management and real estate advisory services.

continued...

¹ Exchange Rate: CA \$ 1 = US \$ 0.75 (as of December 2018)

- The *Infrastructure Lending* arm provides long-term loans for infrastructure development.
- The *Commercial Projects* division draws on IO's in-house expertise and provides support to the government on large commercial transactions.

Alberta's **Advisory Committee on Alternative Capital Financing** advises the Ministry of Treasury Board on alternative capital financing options, and the feasibility and desirability of proposed PPP projects. The Government of Alberta has also established an independent committee, the **Government of Alberta P3 Committee**, to provide recommendations and guidance on all aspects relating to PPPs, including policy development, standards and guidelines, and project selection.

SaskBuilds has been set up by the **Government of Saskatchewan** to provide a central focus within the government to coordinate infrastructure planning and delivery. SaskBuilds is responsible for developing an integrated infrastructure plan for the province, providing support and guidance to the ministries for implementation of the plan and leading the procurement of large-scale, priority projects.

The provincial institutions are, in turn, further supported by national agencies, who play a central role in policy development and provide strategic inputs to define the project preparation landscape for all states. These institutions include:

Treasury Board Secretariat (TBS), Government of Canada

The TBS in the Government of Canada sets the overall policy on fiscal and expenditure management for the nation. It reviews spending proposals by federal authorities, to assess strategic relevance, value for money and compliance with existing rules and policies. The TBS is also responsible for monitoring government programs and projects for effectiveness and efficiencies, providing information to the parliament on a periodic basis through its Quarterly Reports. To streamline project development in Canada, the TBS has issued a series of directives and has developed tools which help departments to identify and plan departmental expenditure plans, undertake project risk assessment, evaluate and measure departmental capacity to undertake projects, and structure and procure projects.

Infrastructure Canada

Infrastructure Canada works closely with all levels of the government to enable investments in social, green, public transit and other core public infrastructure in Canada. It develops policies, delivers programs and fosters knowledge sharing about public infrastructure in Canada. Infrastructure Canada is also responsible for drafting Canada's long-term vision for infrastructure development, the Investing in Canada Plan, to achieve the identified national objectives and targets.

Canada Infrastructure Bank (CIB)

The CIB was established in 2017, after the phasing out of the PPP Canada institution. PPP Canada had been established in 2008 to improve the delivery of infrastructure projects across all provinces, and to develop tools to assist project preparation and support the procurement of complex projects. Having fulfilled its mandate of establishing PPPs as an effective mechanism of infrastructure development, the Ministry of Infrastructure and Communities within the Government of Canada announced its dissolution in 2017.

CIB was established as part of the Government of Canada's Investing in Canada Plan. In addition to structuring projects, the CIB is also expected to invest in or lend to infrastructure projects, and receive and process unsolicited proposals from the private sector. This, therefore, goes beyond the earlier mandate of PPP Canada, which had been focused on granting funds and providing PPP delivery expertise, since the CIB will function as a procuring authority and an investor, as well as a centre of expertise for all aspects of PPPs.

The CIB has been actively engaging with project proponents and investors with the objective to attract private and institutional investors to new infrastructure opportunities in Canada.

Canada Infrastructure Bank – Driving Canada's Investing in Canada Plan

The CIB has been established to help coordinate the different levels of government (federal, provincial and municipal), to identify a pipeline of projects and potential investment opportunities, to provide low-cost financing for new infrastructure projects, and to act as a centre of expertise on infrastructure projects involving private sector investment.

The CIB will be an important institution in establishing a prosperous and solid foundation for Canada's new infrastructure, focusing on projects that wouldn't otherwise come to market, and establishing a strong and stable pipeline. It will not only complement Canada's PPP efforts, but also help to ensure better use of public funding for a broader range of new projects. While the CIB has a pan-infrastructure focus, it has identified green infrastructure, public transit, and transport and trade as focus areas for the near term. It has the objective of identifying opportunities that provide the greatest economic, social and environmental returns.

The Bank is also being established to act as a centre of expertise on infrastructure projects involving private sector investment and to help identify a pipeline of projects and potential investment opportunities. The CIB shall work between public sector project sponsors or procurement agencies and private sector sponsors. The projects considered (including solicited and unsolicited proposals) shall pass a public interest test to ensure that the project is aligned with the relevant governments' priorities and policies and contributes to economic growth and sustainability. The CIB puts strong emphasis on promoting unsolicited project proposals, market development ideas and other innovative investment requests. The CIB is also working on an inventory of Canadian infrastructure project proposals – content provided by project proponents but managed by the CIB – which is expected to launch by mid-2019².

² For more information on the Canada Infrastructure Bank, please refer to the Global Infrastructure Hub's Guidance Note on National Infrastructure Banks and Similar Financing Facilities (available on the GI Hub website in 2019).

Canada Environmental Assessment Agency

The Canada Environmental Assessment Agency functions as a centre of expertise for environmental assessments within the Government of Canada. It manages the environmental assessments for projects that require environmental assessment at the federal level³, as well as providing platforms and funding support to undertake public consultations on environmental assessment. Owing to Canada's increasing focus on undertaking infrastructure development in a sustainable manner, the agency also conducts capacity building initiatives to assist the federal government agencies in meeting their obligations for environmental assessment and management.

Economic regulators governing infrastructure in Canada

Canada has established independent regulators responsible for maintaining efficiency, affordability and quality in infrastructure services in the country. The regulators have been established at both national and provincial levels depending on the level of delegation of the sectors. Key regulatory agencies include: for the energy sector, the Canadian Energy Regulator at the national level and the provincial electricity regulators like the Ontario Energy Board, the Alberta Utilities Commission etc.; for air, rail and marine transport, the Canada Transportation Agency; and for the water sector, provincial water regulators like Ontario Water Resources Commission and inter-jurisdictional water boards like the Ottawa River Regulation Planning Board, Prairie Provinces Water Board etc. The regulatory agencies play an important role in project preparation in Canada, with responsibilities ranging from setting and reviewing user tariffs, ensuring transparency and quality standards for planning, public engagement and safety, risk allocation between the government and the private partner, dispute resolution and managing sectoral risks. The regulators also ensure that the project preparation studies and approval are aligned with the specific act and rules governing the sector.

PROJECT PREPARATION LANDSCAPE

Canada's project preparation landscape is defined at the sub-national level, with provincial institutions prescribing the overarching policy for project preparation in the province.

Project identification and concept definition.

Project identification is led by integrated planning at the national and sub-national level. Infrastructure planning and project identification in Canada is guided by long-term perspective plans at all tiers of the government. At the federal level, the Investing in Canada Plan is a 12-year planning document for infrastructure development in the country that identifies US \$135 billion of investments across five priorities – public transit, green infrastructure, social development, trade and transportation, and rural and northern communities.

Central to this plan are the integrated bilateral agreements (IBAs) that are signed between the federal and provincial governments. These IBAs function as collaborative documents, establishing the terms and conditions through which infrastructure funding would be delivered to the provinces and territories over the period. Planning for projects under IBAs requires provinces and territories to develop and submit multi-year plans that identify potential projects. With emphasis on the outcomes within IBAs, and with predictable, long-term funding, the provinces and territories can structure their investments in a way that achieves meaningful long-term results. In response to the Investing in Canada Plan, provinces and territories have also, in turn, identified their long-term priorities for infrastructure development through exhaustive provincial plans, using, as a reference, the priorities identified in collaboration with the federal government.

³ There are two types of Environmental Assessment conducted under the Canadian Environmental Assessment Act, 2012 – an environmental assessment by a responsible authority is conducted by the Canada Environmental Assessment Agency, and an environmental assessment by review panel is conducted by a panel of individuals appointed by the Minister of Environment and supported by the Agency.

Integrating planning at the sub-national level: The case of Ontario

To further integrate planning, provinces use the Investing in Canada Plan, as well as strategic plans made by other sub-national governments. Ontario's Long-Term Infrastructure Plan 2017 has been prepared based on a suite of plans created by the provincial governments in Ontario, such as the Greater Golden Horseshoe (2017), the Provincial Policy Statement (2014) and the Greenbelt Plan (2017), as well as other plans that are under consideration, such as Metrolinx's draft 2041 Regional Transportation Plan.

Legal framework to mandate infrastructure planning and guide project identification. Canada's legal framework provides sound support to the overall infrastructure planning process, by requiring all governments to prepare long-term strategic plans which are tabled before the respective parliaments. These regulations are mandated by the Treasury Boards at the federal and provincial level. They require governments to prepare plans that cover: audit of the existing infrastructure facilities in the country or province, estimate of the demand for infrastructure over the long-term (at least 10 years), and a strategy to be adopted by the government to meet these requirements. Case in point is Ontario's Infrastructure for Jobs and Prosperity Act 2015, which in addition to mandating the long-term infrastructure planning in the province, also provides the criteria by which projects are screened and prioritised for inclusion in these plans.

Project feasibility and structuring. All governments (federal and provincial) have drafted and mandated specific requirements to undertake project feasibility studies within their jurisdiction. Typically, Treasury Boards of the governments provide guidance and tools that aid project proponents to develop project documents for approval from the Treasury Boards.

PREPARING PROJECT PROPOSALS: THE CASE OF ALBERTA

Under Alberta's PPP Framework and Guidelines, all PPP projects must undergo an Initial Assessment stage, wherein the implementing agency undertakes a preliminary study to assess the PPP suitability of a project, in line with the criteria for Capital Projects defined by the Alternative Capital Financing Office (ACFO). Typically, the ACFO works in collaboration with the implementing agency to undertake the initial study.

After completion of a successful initial assessment, the implementing agency must prepare an Opportunity Paper. The Opportunity Paper is an in-depth analysis of the project and includes: overview and description, strategic alignment, business case and operational impact assessment, preliminary project risk assessment, preliminary cost-benefit analysis and value for money assessment, and details on the preliminary project schedule and team. Depending on the outcome of the initial assessment and other factors such as project size, complexity, and timing etc., some projects could skip the Opportunity Paper stage and proceed directly to the Business Case stage.

The business case is the detailed feasibility stage, which expands on the Opportunity Paper and details the project risks, value for money analysis, project structure and procurement methodology. It serves as an information document for construction approval from the Treasury Board.

In addition to the feasibility study, provincial governments place significant importance on the preparation of a 'value for money report', which evaluates the cost savings of undertaking a project through the PPP route, vis-à-vis traditional procurement. This value for money analysis is based on the 'whole of life cost approach' and should incorporate all costs expected to be incurred over the entire life of the project.

Project approvals and quality assurance. While the approval process for PPPs varies across provinces, almost all provincial PPP projects require provincial Treasury Board approval prior to implementation. Prior to making a submission to the board, projects must be reviewed and approved by the Deputy Head of the ministry responsible for the proposal.

Depending on the specific limits set by the federal government, projects may also require approval from the federal Treasury Board. These limits are typically decided based on an organisation's capability and prior record of undertaking projects of a similar size and complexity. To manage the fiscal impact of PPPs, the federal government mandates all provincial departments to prepare a Capital Plan, which is a three-year estimate of the expenditure to be incurred by the department. This Capital Plan needs to be ratified and approved by the federal Treasury Board, and then presented to the parliament.

Prior to the federal Treasury Board undertaking a detailed review of the project proposal, all proposals are processed for a quality check, to ensure requirements of the board have been incorporated. This quality check is performed by a senior official of the Policy Center in the Treasury Board, and it evaluates the quality of the proposal along four metrics: authoritative review, complete and relevant content, accurate and precise information, and appropriate early engagement with the secretariat, as required.

PROJECT APPROVALS AND MONITORING: THE CASE OF BRITISH COLUMBIA

British Columbia's Capital Asset Management Framework details the project approval process that must be followed for all provincial governments who are involved in the management of public assets. All proposed projects must undergo a strategic options analysis (SAO), which focuses on the services that need to be met and the identified option to achieve them. The decision to undertake an SAO rests with the implementing agency, depending on the perceived complexity and risks of the project. For projects that require an SAO, the Treasury Board reviews the findings and provides the necessary capital approvals to process to the full feasibility analysis at the business case stage. Specific projects require an additional Treasury Board approval at the business case stage as well.

The limits for these approvals are communicated to the ministries on an annual basis by the Treasury Board, set out in the 'Letter of Expectations', and take into account the size and risks of the project, as well as the agency's delivery and management track record.

Typically, as part of the consolidated capital planning process, all implementing agencies must prepare a capital plan which identifies and estimates the capital expenditure to be incurred by the agency during the year. These capital plans are reviewed and approved by the Treasury Board, for consistency with provincial objectives and fiscal prudence.

The performance of the agencies with respect to the capital plans is closely monitored and assessed by the Treasury Board, using a risk-based approach to oversight. Degrees of rigour in approval requirements, monitoring, reporting and other checks and balances will increase in proportion to the cost, complexity and level of risk associated with capital projects or decisions.

3. Guidance for project preparation

Guidance	PROJECT COMPLEXITY AND RISK ASSESSMENT TOOL
Owner	Treasury Board Secretariat, Government of Canada
Project development stage	Project approvals and processes
Details	<p>The Project Complexity and Risk Assessment Tool supports implementing agencies to accurately determine the level of risk and complexity of a project, for the purposes of project approval and expenditure authority. It comprises 64 questions across six dimensions – project characteristics, strategic management risks, procurement risks, human resource risks, business risks, project management integration risks, and project requirements risks.</p> <p>Link for further details: https://www.canada.ca/en/treasury-board-secretariat/services/information-technology-project-management/project-management/project-complexity-risk-assessment-tool.html</p>
Guidance	ORGANIZATIONAL PROJECT MANAGEMENT CAPACITY ASSESSMENT TOOL
Owner	Treasury Board Secretariat, Government of Canada
Project development stage	Project approvals and processes
Details	<p>The Organizational Project Management Capacity Assessment Tool is a forward-looking assessment of an organisation's capacity to manage and deliver the planned portfolio of projects identified in its departmental investment plan over a minimum five-year horizon. It rates the organisational capacity to manage projects across five scoring classifications by evaluating criteria in each of the following project knowledge areas: organisational integration, core project management, supporting project management. To reflect the relative importance of one knowledge area versus another, relative weightings have been defined for each assessment category.</p> <p>Link for further details: https://www.canada.ca/en/treasury-board-secretariat/services/information-technology-project-management/project-management/organizational-project-management-capacity-assessment-tool.html</p>

Guidance	GUIDELINES TO IMPLEMENTING BUDGET 2011 DIRECTION ON PUBLIC-PRIVATE PARTNERSHIPS
Owner	Treasury Board Secretariat, Government of Canada
Project development stage	Overall project lifecycle
Details	<p>The Guidelines to Implementing Budget 2011 Direction on Public-Private Partnerships provides a policy direction for PPPs in Canada, by:</p> <ul style="list-style-type: none"> • Creating a common understanding of what is meant by P3s^{*1} in the federal context and providing resources for federal organisations considering P3s; • Providing advice on screening considerations for federal organisations in line with the Budget 2011 policy direction; • Outlining other policy considerations for P3s, including the key policy objective of ensuring value for money; and • Outlining considerations for federal organisations in assessing value for money. <p>Link for further details: http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=25576</p>

Guidance	PPP FRAMEWORK AND GUIDELINES
Owner	Treasury Board, Government of Alberta
Project development stage	Overall project lifecycle
Details	<p>Alberta's Public-Private Partnership Framework and Guideline is a guide for assessing and procuring PPP projects. The Framework and Guideline outlines Alberta's principles for PPPs and the assessment and procurement frameworks for PPP projects. It is designed to assist the Government of Alberta public servants and elected officials with assessing potential PPPs and delivering them in accordance with established practices in the province.</p> <p>Link for further details: http://www.infrastructure.alberta.ca/alberta-p3-framework-and-guideline.docx</p>

^{*1} The term 'P3' is commonly used in Canada and the United States instead of 'public-private partnership'.

Guidance	MANAGEMENT FRAMEWORK: ASSESSMENT PROCESS
Owner	Treasury Board, Government of Alberta
Project development stage	Project approvals and processes
Details	<p>The Management Framework: Assessment Process document is a guide to Alberta Infrastructure and Transportation's approach to assessing and approving public-private partnerships for capital infrastructure projects. It outlines the overall assessment and approval procedures, roles and responsibilities of various stakeholders, policy governing the document, factors or criteria to be evaluated, and disclosure guidelines.</p> <p>Link for further details: http://www.infrastructure.alberta.ca/Content/doctype309/production/ait-p3-assessmentframework.pdf</p>

Guidance	CAPITAL ASSET MANAGEMENT FRAMEWORK
Owner	Government of British Columbia
Project development stage	Overall project lifecycle
Details	<p>The Capital Asset Management Framework describes government objectives and policies for planning and managing publicly-funded capital assets such as schools, hospitals and highways. It covers the following:</p> <ul style="list-style-type: none"> • the roles and responsibilities of various levels of government involved in capital asset management; • minimum standards agencies for planning and managing assets; • the province's policy approach to oversight, including the approval and reporting requirements that may apply, based on agencies' or projects' risk profiles; • capital-related budget processes; and • standards for both alternative and traditional asset procurement. <p>Link for further details: https://www2.gov.bc.ca/gov/content/governments/services-for-government/internal-corporate-services/camf</p>

Note: All provinces have their own specific guidelines, which have not all been included in this snapshot.

* Estimated Exchange Rate: CA \$1 = US \$ 0.75 (as of December 2018)

4. Project case example: Abbotsford Regional Hospital and Cancer Center Project

PROJECT BRIEF

The Abbotsford Regional Hospital and Cancer Center (AHCC) project was designed to upgrade the existing Matsqui-Sumas-Abbotsford (MSA) Hospital in Abbotsford. It includes a state-of-the-art 300-bed facility, along with a specialised cancer treatment centre operated by the BC Cancer Agency.

It was developed on a finance-design-build-operate-maintain model, with the public sector – the Fraser Health Authority (FHA) and the Provincial Health Services Authority (PHSA) – responsible for providing clinical services. The private partner, Access Health Abbotsford (AHA), was responsible for construction, maintenance and facility management services, including housekeeping, food, laundry, and linen services.

The AHCC project was a pioneer for healthcare PPPs in British Columbia – it was the first major healthcare project to be implemented on a PPP basis in the province. Given its successful implementation, on time and on budget, the project has won numerous prestigious awards, including the Project Finance North American PPP of the Year (2005), the Canadian Council for PPPs (CCPPP) 2005 National Award for Innovation and Excellence, and the CCPPP Silver Award for Infrastructure (2008).

Partnerships British Columbia worked closely with the project proponents and the private partner to manage project procurement and delivery.

QUICK FACTS



VALUE
(IN US \$ MILLION)

266.25*



STATUS

Operational



PROJECT OWNERSHIP

**Abbotsford Hospital and
Cancer Centre Inc.**



SOURCE OF PROJECT
PREPARATORY FINANCING


Government budgets



SUPPORT AGENCIES

**Partnerships British
Columbia**

PROJECT TIMELINE



1990 – 2001	Pre-planning activities for the projects
2001	Preparation and approval of the business case as a traditional procurement project
Early 2002	Evaluation for PPP suitability, revision of business case and cost estimates
Nov-02	Approval of Finance-Build-Operate-Maintain model for the project
Jan-03 – 2004	Procurement process
2004	Commencement of construction
Aug-08	Facility open to operations

LEARNINGS FOR PROJECT PREPARATION

1. Clarity on the project need and focus on the expected outcomes helps to strengthen project proposals.

The origin of the AHCC project was the outcome of intensive pre-planning exercises conducted between 1990 and 2001, focused on identifying the outcomes to be expected from the project. The brief of the project, as identified in FHA's Strategic Plan was precise – to deliver a publicly owned, high quality and well-maintained hospital and cancer centre. The business case of the project involved identifying specific outputs, thereby providing a strategic vision to the project, with at least 80% of the output specifications clearly defined at the planning stage itself. These outputs later helped define the monitoring and success criteria for the project, as well as the metrics for the performance-based incentive payment system for AHA. The output specifications were designed in close consultation with the health authority representatives, and included clinical and non-clinical outcomes, design and technical specifications and requirements for facilities management.

2. Using a unique and bespoke governance structure to monitor project development and construction.

A governance and management structure was put in place to guide project development, procurement and construction, which was subsequently streamlined as project development progressed. The governance structure involved the following entities:

- Ministry of Health Services (MHS), which approved the project scope and budget.
- Ministry of Finance, which approved funding for the project.
- The Project Advisory Committee, comprising members from MHS, FHA, and PHSA. The committee had a significant role in shaping project planning, ensuring that all clinical and service needs identified at the beginning were taken into account. The committee was disbanded at financial close of the project.

- The Hospital Construction Committee, established in 2003, comprised of members of local legislative assemblies (MLAs) and representatives from the Regional Hospital District (RHD). The committee served as an important channel of communication with the community, relaying information and seeking feedback on matters impacting the general public.
- The Partnerships BC Project Team, to manage the procurement process and assist in post-implementation monitoring. Key members of the team were seconded to Partnerships BC from FHA, bringing in knowledge of previous planning processes and health authority facility requirements. Going forward, the project team will also work closely with the MHS and health authorities to undertake high-level oversight of the project, conducting periodic reviews at five-year intervals to establish whether the agreement is functioning as envisaged and the expected benefits have been realised.

3. Incorporating global best practices and stakeholder feedback to build capacity for project development.

Given the limited experience of successfully completing large healthcare projects in British Columbia, the AHCC project widely incorporated learnings from the UK's Private Finance Initiative (PFI) model for healthcare PPPs, which had seen success in encouraging private investment in the UK's healthcare market. The output-based contract form with a performance-based payment mechanism was adopted for AHCC's contract. In the PFI model, the private party also owns the facility for the entire concession period. However, to protect public interest, Partnerships BC modified this structure, instead using a licensing mechanism that kept the ownership with the public sector, with the license giving the private partner specific rights under the contract.

Further, the entire project development process involved a collaborative approach between the ministry, health authorities and private sector partners. Feedback from the investors was sought at an early stage during the project development and on a continuous basis thereafter, up to procurement. Subsequently, the project documents developed as a result of this project actually served as model documents for other PPPs in British Columbia.

4. A specialised and expert agency to manage procurement in a transparent, competitive manner.

Partnerships British Columbia managed the entire procurement process, leveraging on its experience and expertise of procuring complex capital projects. It was involved in the development and implementation of a new and unique four-stage procurement process, which was also reviewed and tailored to factor in market feedback. For instance, Partnerships BC made a concurrent release of the request for proposal (RFP), as well as a draft form of the project agreement to identify and resolve potential deal breakers early during the procurement process. Further, it also ran multiple bilateral and information sharing platforms, to assist the private sector in preparing their proposals.

Partnerships BC also engaged directly with the MHS and the health authorities (FHA and PHSA) in structuring the project and defining procurement objectives. To standardise project documents, Partnerships BC collaborated with a wide array of national and international advisors, including Partnerships UK, legal firms from the UK and Australia, and global consulting organisations to provide advice on the RFP and project agreement.

Chile

1. Noteworthy practices for project preparation



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Capacity building initiatives to strengthen social project evaluation skills of public officials

The Ministry of Social Development (MSD), which is responsible for appraising the projects and ensuring quality in project preparation, also offers various courses for public officials in social project evaluation. In order to build the technical capacity of public officials at all levels of government, MSD has been undertaking capacity building initiatives in social project preparation and the evaluation of public employees through the following courses: i) training on the Integrated Project Bank (BIP) database; ii) a course on the Preparation and Social Evaluation of Projects; iii) a course on the Logical Framework Applied to the Formulation of Investment Initiatives; iv) an advanced course on Project Preparation and Evaluation; and v) a Diploma in Project Preparation and Evaluation.



PROJECT APPROVALS AND QUALITY ASSURANCE

Modern appraisal system for public projects with standard appraisal methodologies

Chile's National Public System of Investments (SNI), an advanced appraisal system, is a pioneer initiative in strengthening and standardising project approvals. The system is jointly administered by the Ministry of Social Development and the Ministry of Finance. The SNI applies standard methodologies, including inputs published by the Ministry of Social Development, for project review to enable selection of the project with the largest social net present value. The SNI has also developed standard procedures and guidelines for project appraisal. This aids with the standardisation of project presentation formats and the comparison between projects under similar categories. It also allows projects to be evaluated using techniques which are widely validated and accepted by professional economists.

Centralised publication of social prices to enhance project preparation and appraisal

The Ministry of Social Development annually determines the social prices of labour supply, the currency and discount rates, and other inputs used in appraisal methodologies, such as cost-benefit analysis (CBA) and cost efficiency approach (CEA). The availability of input costs to the project planners helps to provide a level of standardisation in project estimates and fiscal implications.



PROJECT MARKETING AND STAKEHOLDER ENGAGEMENT

Centralised online system for project information to ensure transparency in communicating with stakeholders

The Integrated Project Bank (BIP) is an online information platform to enhance project disclosure. The files in the BIP contain information on the projects, which can be updated by the project promoter. Additionally, information on the project appraisal undertaken by the Ministry of Social Development is updated online. This system ensures transparent communication between the Ministry of Social Development and the project promoter. It also acts as a central repository for a historical analysis of the costs and demands of various types of projects, thereby providing better estimates of these variables for future evaluations.

2. Snapshot of project preparation activities

Chile is a Latin American pioneer in promoting best practices in project preparation. It was one of the early countries to pass a law on concessions, to introduce the Least Present Value of the Revenues (LPVR) as a bid variable, and to establish a comprehensive public investment management system. Chile's toll road projects (starting in the early 1990s) are considered to be one of the earliest successful programs implemented using the PPP model.

In July 2014, Chile launched the Infrastructure, Development and Inclusion Agenda – Chile 30-30, a national development strategy to raise the average per capita income in Chile to US \$30,000 by 2030 and increase investments in public infrastructure from 2.5% to 3.5% of gross domestic product (GDP). Under the plan, Chile envisaged to invest US \$28 billion in public and private infrastructure projects over the period 2014–2021. The plan involves two main investment streams; an estimated US \$10 billion in new concession projects until 2020, and US \$18 billion in a range of public infrastructure projects and programs until 2021.

One of the unique elements of the project preparation environment in Chile is the much acclaimed National Investment System (SNI), which provides a rigorous framework and standardised methodology for project evaluation for public investments. Chile's project preparation environment has evolved, learning from the challenges of the past. For example, with an objective to manage PPP investments in line with the government's fiscal priorities, it has strengthened the cost-benefit analysis (in the design stage of PPP proposals), established a National Infrastructure Fund (with a pool of US \$9 billion and expected to operationalise in the coming years) and introduced institutional reform (a Ministry of Finance officer with veto power was permanently assigned to the Ministry of Public Works to further ensure the financial viability of projects).

INSTITUTIONAL FRAMEWORK

Chile has established an effective institutional structure with a separate role for the public agencies promoting the project and for institutions in charge of project review and independent appraisal. Project preparation activities are decentralised in Chile, with the line agencies and publicly owned companies (referred to as Government Contracting Authorities (GCAs)) responsible for project preparation at both the federal and sub-national levels. The GCAs in Chile are responsible for planning, implementing and supervising projects and are supported by other public institutions, including the Ministry of Public Works (MOP), the Coordination of Public Works Concessions (the PPP Unit within MOP), the Ministry of Social Development (which undertakes project appraisal from a social point-of-view), the Ministry of Finance (the gatekeeper of public finances which reviews projects from a government liability perspective) and the national congress (which has the final approval for the federal expenditure budget).

The Ministry of Public Works (MOP) is the implementing authority for infrastructure projects and its experience and capabilities in preparing and executing projects has been instrumental in delivering high-quality infrastructure in Chile. The ministry is responsible for roads, highways, bridges, tunnels, airports, and water resources. The ministry is supported by a special unit called the *Coordination of Public Works Concessions (CC)*, created to streamline project preparation and implementation for concession projects and staffed with specialised legal, environmental and engineering experts. It is responsible for producing detailed design and engineering studies during the tendering and supervision of public works concessions, and for managing the bid process.

The projects prepared by the GCAs are reviewed by the *Ministry of Social Development (MSD)* (previously known as the Ministry of Planning). The ministry is responsible for setting national priorities, appraising infrastructure proposals and creating bids. The MSD, along with the *Ministry of Finance (MOF)*, is responsible for managing the National Investment System (SNI)¹. The MSD is also responsible for: (i) regulating the procedures for preparing and appraising projects which apply for public funding; (ii) developing and managing an information system for all investment initiatives; (iii) developing project preparation and appraisal methodologies, including the determination of social prices; and (iv) training public officials in project preparation. Further, where the project seeks state funding, the Sub-secretariat for Social Assessment in the MSD (through its Social Evaluation and Investment Division), evaluates the pre-investment studies of such projects.

The Ministry of Finance (MOF) acts as the gatekeeper of public finances and ensures the alignment of projects with national fiscal priorities. To ensure PPP programs are aligned with fiscal priorities, a representative from MOF with veto power is permanently assigned to MOP to assess the financial viability of projects.

PROJECT PREPARATION LANDSCAPE

A snapshot of the project preparation landscape is summarised below:

Project conceptualisation and planning. Project preparation activities are initiated by the GCAs, which are responsible for the generation of the project idea at both the federal and sub-national level. While Chile does not have an integrated long-term national plan, individual line ministries have prepared long-term sectoral strategies and plans. For example, the Ministry of Public Works has prepared an Infrastructure, Development and Inclusion Agenda – Chile 30-30, which provides a medium- to long-term strategy for infrastructure development and determines the sectoral policies and objectives. Other key sectoral plans include the National Strategy for Water Resources (2012-2025), Regional Plans for Infrastructure and Water Resources (2014-2021), and the National Energy Strategy (2012–2030).

Project studies and appraisal process. The project studies and appraisal process is guided by the National Investment System (SNI), which provides a set of norms, techniques and procedures governing the public investment process. The objective of the SNI is to improve the quality of public investment in Chile by selecting projects with the largest social net present value (NPV). Projects can be submitted to SNI throughout the year. Projects in SNI undergo a multi-stage evaluation process depending on their size and complexity. Generally, the larger and more complex projects go through concept, pre-feasibility, feasibility and detailed technical design phases. The steps in project studies and appraisal are summarised below:

- *Initial review* – GCAs present the project outline, along with the justification for the project, social appraisal of the project (generally a cost-benefit or cost-effectiveness analysis), and the pre-feasibility funding application form to the Integrated Project Bank (BIP). The BIP provides a record of all project proposals in a standardised format and tracks project development from the initial proposal through to ex-post project evaluation. Upon submission of the project proposal, the project is assigned a unique project ID within BIP. The project is reviewed to determine whether it meets the general project admissibility criteria. At this stage, MOP assesses the completeness of information and includes the project in the SNI.

¹ The National Investment System (SNI) refers to a set of norms, techniques and procedures which govern the public investment process. It is a model of consistent and transparent investment appraisal, with the objective to improve the quality of public investment.

- *Pre-feasibility and feasibility* – After the creation of the project profile, the project ID enters the SNI system, where it goes through various stages of project appraisal. The GCAs prepare a pre-feasibility study and submit and seek approval through the SNI system. In the case of PPP projects, the Coordination of Public Works Concessions (CC) assists the GCAs in environmental, sociological, and engineering matters. The project alternatives are ranked according to their social benefits and the top ranked alternatives are selected for further study. During the feasibility stage, detailed appraisal on cost-benefit analysis (CBA) or cost-effectiveness analysis is conducted, followed by a detailed design and technical appraisal of the project, including engineering and construction studies. The MSD, through an investment analyst², conducts the techno-economic, social, legal, and market appraisals at both the pre-feasibility and feasibility stage. At each stage, an Economic Technical Analysis Results (RATE) is issued. The projects that attain a socially recommended (RS) RATE are moved to the next stage. Proponents of projects that lack project information or are objected to for technical reasons can provide additional information and present a revised version of the project to the SNI within ten working days. The projects which pass the appraisal process by MOP in SNI are shared with MOF for presentation to the congress for the budget.

Project preparatory financing. The projects are largely financed through budgetary allocations. The projects may also be funded under the National Regional Development Fund (FNDR), which provides a sustainable source of project preparatory financing. However, only the projects which have been approved as Socially Recommended (RS) by the competent authorities shall be supported under the FNDR facility.

Capacity building in project appraisal methodologies.

Chile has developed its capacity and processes for CBA appraisal using sophisticated estimation techniques, such as shadow pricing, the application of various estimation assumptions and methods for different types of projects, and the standardised use of social discount rates and conversions for various expense and profit values. The MSD appoints a special project investment analyst (generally engineers or economists), who reviews the project studies within a fixed time constraint. The public employees preparing projects in the promoting institutions have a variety of professional backgrounds. In order to build the technical capacity of public officials at all levels, MSD has been undertaking capacity building in social project preparation and evaluation of public employees in the following courses: i) training on the Integrated Project Bank (BIP) database; ii) a course on the Preparation and Social Evaluation of Projects; iii) a course on the Logical Framework Applied to the Formulation of Investment Initiatives; iv) an advanced course on Project Preparation and Evaluation; and v) a diploma in Project Preparation and Evaluation.

On average, 500 public officials are trained annually. The MSD finances the training and has a budget of approximately US \$800,000 annually.

² The project analysts involved in appraisal are usually engineers or economists. The public employees preparing projects in the promoting institutions have a variety of professional backgrounds. MSD undertakes capacity building of public employees in project preparation and appraisal.

SNI – NATIONAL INVESTMENT SYSTEM

Chile has had success in the systematic appraisal of public investment projects. The appraisal system of public investment started in 1975, with the establishment of the National Investment System (SNI), jointly managed by MSD and MOF via the budget office. MSD is responsible for ex-ante project appraisal and ex-post evaluation, as well as systematic data collection and reporting, while the MOF (through the budget office) sets the public budget. All projects proposed by the public sector entity must go through SNI. The SNI is also supported by specific policy and regulatory directives. 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 SNI. This approach has contributed to the quality of project preparation with the project being evaluated by both MSD and MOF.

The objective of the system is to identify the best projects offering the highest social return. The system allows the projects within the BIP to compete with each other for resources in the annual budget. The key institutional characteristics of SNI which facilitate quality project preparation include:

- **A centralised project information system:** The BIP serves as a central repository of project ideas in the country. It also provides information on the steps in the project appraisal and the RATE score assigned at each stage of project preparation. This information serves as guidance for the project preparation authorities in the design and preparation of future projects.
- **A continuous process of improving project estimates and methodologies by comparing them with the information collected ex-post evaluation of projects:** The SNI undertakes an independent ex-post evaluation of projects, which helps in refining and strengthening the existing system and making it more robust. The ex-post evaluation is conducted at the following stages: i) following the completion of construction; and ii) during project operations. The projects are reviewed on their adherence to the time, cost and process standards envisaged.
- **A centralised publication of social prices to ensure that projects are evaluated against the same benchmarks:** MSD annually determines the social prices of the labour supply, the currency and discount rate, and other prices commonly used in the CBA or CEA analysis, which brings standardisation to the project cost estimation process across projects.
- **Guidance manuals for project preparation:** The MSD has prepared guidance manuals in its portal on the process of project preparation and the methodology and tools for the CBA and/or CEA assessment across sectors. The guidance manuals and tools are fairly robust and updated regularly based on inputs from the ex-post evaluations of projects. The availability of guidance documents standardises the project preparation process across departments and across projects.
- **Independent and transparent project appraisal standards:** The SNI system provides a platform for the independent appraisal of projects and reduces conflict of interest by separating the project preparation entity and the approval entity. The role of the project preparation entity (GCA) is to submit the project information in the SNI, which is later reviewed by the approval entity (MSD). The MSD undertakes the detailed appraisal, and checks the appropriateness of the methodology applied and the reliability of information used to calculate the RATE. The RATE score shall determine whether the project will be approved or not.

3. Guidance for project preparation

Guidance	NATIONAL INVESTMENT SYSTEM (SNI)
Owner	The Ministry of Social Development
Project development stage	PPP project lifecycle
Details	<p>The SNI is a modern appraisal online database system jointly managed by the Ministry of Social Development (MSD) and the Ministry of Finance (MOF), which evaluates projects requiring public resources. The SNI has developed standard procedures and guidelines for project evaluation and appraisal to aid with the standardisation of project presentation.</p> <p>Link for further details: http://sni.ministeriodesarrollosocial.gob.cl</p>
Guidance	PROJECT INFORMATION SYSTEM (BIP)
Owner	The Ministry of Social Development
Project development stage	PPP project lifecycle
Details	<p>The BIP, the Integrated Project Bank administered by the Ministry of Social Development (MSD), covers the investment initiatives that apply for state funding. The files in BIP contain information on the project, which can be updated by the project promoter. Further, all observations and recommendations made by MSD on the project, for example the RATE assigned, can be seen online. It also acts as a central repository for a historical analysis of the costs and demands of various types of projects.</p> <p>Link for further details: https://bip.ministeriodesarrollosocial.gob.cl</p>
Guidance	RULES INSTRUCTIONS AND PROCEDURES PUBLIC INVESTMENT (NIP)
Owner	The Ministry of Social Development
Project development stage	PPP project lifecycle
Details	<p>The Ministry of Social Development has published guidance manuals on the procedures to be followed in the public investment process. These manuals guide public sector institutions in undertaking investment initiatives and the process of project preparation – from project conception to project approval. The Ministry of Finance (MOF) and Ministry of Social Development (MSD) also publish specific guidelines and methodologies on various sectors, social pricing on various sectors, and support tools for the investment initiative.</p> <p>Link for further details: http://sni.ministeriodesarrollosocial.gob.cl/evaluacion-iniciativas-de-inversion/evaluacion-ex-ante/normas-instrucciones-y-procedimientos-inversion-publica-nip/</p>

4. Project case example: The National Reconstruction Plan of Chile

PROJECT BRIEF

The National Reconstruction Plan of Chile was a program launched and led by the Ministry of Housing and Urban Development (MINVU) a few months after the massive earthquake in 2010. Chile was struck by an 8.8 magnitude (Richter scale) earthquake on 27 February 2010. It displaced more than 12.8 million people (75% of the total population) leading to economic losses of US \$30 billion (approximately 18% of the Gross National Product of Chile). The disaster affected more than 900 cities and towns in six regions, and damaged 220,000 family homes scattered in more than 23,000 settlements, including isolated locations.

The MINVU proposed a reconstruction plan, aligned with the regular government programs, to support the reconstruction and repair of all housing structures. The plan was conceived for the period 2010-2014 for a total budget of US \$2.5 billion. It was structured across three lines of action: i) Housing Reconstruction Program; ii) Emergency Camps Assistance and Social Condominiums Program; and iii) Territorial, Urban and Historic Heritage Reconstruction Program. This reconstruction plan was conceived of as a driver for national unity and a blueprint for the future development of the country.

The plan was monitored at the highest political office in the country (by the President of Chile) and involved extensive preparatory actions. The project is a good example of the benefits of long-term planning, inter-governmental coordination, post-disaster preparatory actions, and stakeholder management. The reconstruction plan is a very interesting case due to its innovative approach in planning and quality assurance. The plan facilitated the construction of more than 94% of the total housing units during the period 2010-2014.

QUICK FACTS



VALUE
(IN US \$ BILLION)

2.5*



STATUS

Ongoing



PROJECT OWNERSHIP

MINVU



SOURCE OF PROJECT
PREPARATORY FINANCING

**Central and state
governments**



SUPPORT AGENCIES

**Government of Chile,
MINVU, SERVIU,
SEREMI****

* Initial budget of the reconstruction plan

** SERVIU (Service of Housing and Urban Development) and SEREMI (Regional Secretary) are branches of MINVU.

PROJECT TIMELINE

- Feb-10 The earthquake and tsunami affected 75% of Chile's population and destroyed 220,000 homes
- Mar-10 Establishment of the Inter-ministerial Committee for medium- and long-term plans and the National Emergency Committee for immediate action plans
- Mar-10 Creation of innovative planning instruments (Strategic and Sustainable Reconstruction Plans (PRES), Urban Regeneration Plans (PRU))
- Mar-10 Announcement of the Housing Reconstruction Program driven by MINVU
- Apr-10 Initiation of registry preparation
- May-10 Allocation of subsidies
- Jul-10 The register of disaster victims to ascertain the subsidy requirements was closed by this date to districts under 10,000 inhabitants
- Jul-10 Initiation of construction
- Aug-10 Closure of registry of disaster victims

LEARNINGS FOR PROJECT PREPARATION

1. Program designed to include tailor-made structures to drive universal impact

The housing construction program was designed to address the housing needs of every section of the population. The plan has been designed and structured in three phases: the immediate plan (restoration of basic services), the winter emergency plan (to address the immediate shelter requirements before the onset of the winter season following the earthquake) and the reconstruction plan, which ensures that priority needs are addressed upfront. The plan was also structured across three lines of action³ and provided flexibility of choice for the project-affected population. While the program was largely a subsidy-driven program, it also allowed SERVIU⁴ to drive the redevelopment of social housing units. The project beneficiaries were provided with the flexibility to select among the choices made available: subsidies for repairing works, subsidies for the construction of a new house on an existing or new site, or application for social housing units. The beneficiaries (especially landowners) also had the flexibility to select pre-fabricated home designs.

These non-exclusionary provisions provided the necessary flexibility in the project design and ensured that every section of the population was covered under the program.

2. Multi-stage assessment in a time-bound manner drives project selection for support

One of the biggest challenges of a post-disaster recovery program is the trade-off between timeliness in delivery and quality in appraisal. Chile's National Reconstruction Plan managed this challenge rather effectively. Project planning and preparation was channelled through the SNI system. The approach to project review and selection varied according to the program component – housing reconstruction, social condominiums, or city reconstruction. For example, in the case of the social condominium program, MINVU undertook three levels of preparatory studies – technical, economic and social – to gauge the extent of the damage and to identify project beneficiaries. The technical studies involved technical assessment of the damage and were conducted by external expert

³ i) Housing Reconstruction Program, ii) Emergency Camps Assistance and Social Condominiums Program and iii) Territorial, Urban and Historic Heritage Reconstruction Program

⁴ There are two branches of the Ministry of Housing and Urban Development (MINVU) in the regions: the SEREMI (Secretaría Regional Ministerial / Regional Secretary) branch represents the minister and has political responsibilities, while the SERVIU (Servicio de Vivienda y Urbanismo / Service of Housing and Urban Development) implements ministry policies and programs.

firms. Economic studies were prepared by the SERVIU technical team and an external company to prepare an economic evaluation of repair versus reconstruction using 2010 standards. Social studies were led by the local government to assess the social conditions of the affected families. Each of the studies were backed by a transparent framework for selection. Following the completion of the studies, 6,415 homes were selected for social condominium reconstruction. The schemes were also completed using trusted developers who were certified by MINVU.

3. Decentralisation in planning and the establishment of empowered cross-departmental teams to accelerate decision-making and drive action

The National Reconstruction Plan is an example of effective collaboration between the central and local governments, especially in a post-disaster scenario. The plan was backed by policy and regulatory reforms which provided greater decentralisation in planning and implementation. Local governments played an active role in supporting preparatory studies (social condominium projects), collating baseline information (for subsidy planning) and in end-to-end planning and execution (territorial/urban reconstruction). Further, the MINVU regional team of the affected area, namely SERVIU, was given authority by MINVU to act as a real estate development mediator and to devise strategy regarding the reconstruction of social condominiums.

In order to achieve the immediate and winter action plans, the President of the Republic established an *Inter-ministerial Emergency Committee* and an *Inter-ministerial Reconstruction Committee* to coordinate the implementation of the project plans. The Inter-ministerial Emergency Committee focused on the emergency stages and rehabilitation, such as aiding the wounded, searching for missing people, burying the deceased, and re-establishing the normal supply of basic services, such as food, electricity, water, communication and land transportation systems. This committee promoted integrated planning and coordination with the Ministries of Public Works, Internal Affairs and Regional Development, Education, Health, Finance, Economy and Social Development. The Reconstruction Committee was focused on medium- and long-term coordination efforts, such as the encouragement of private contributions and donations to the reconstruction fund. The committees met regularly and drove early reconstruction planning, which helped to avoid duplication of work by the corresponding ministries during implementation of the plan.

4. Innovative tools for private sector collaboration in reconstruction

The urban regeneration programs under the plan were largely the responsibility of the local governments. The government introduced innovative tools to facilitate private sector involvement in project planning and implementation. The National Reconstruction Plan introduced new planning instruments, such as the Strategic and Sustainable Reconstruction Plans (PRES), Urban Regeneration Plans (PRU) and Coastal Edge Master Plans (PRBC), which served as tools to promote active private sector participation in infrastructure planning and implementation. The National Reconstruction Plan provided for mechanisms to arrange and finance the master plans during the emergency phase, based on public-private partnership agreements between municipalities, regional governments, companies and social organisations, in which the MINVU acted as guarantor.

Under these initiatives, the private sector played an active role in preparing the master plan for the regions. The plan preparation was funded by corporate funds, multilateral assistance, and private donations. For example, in the Biobio province of Chile, 27 master plans (nine PRES and 18 PRBC) were developed with private sector assistance, while 110 master plans (PRU) were developed with United Nations Development Programme (UNDP) assistance. The master plan served as a guidance for project prioritisation.

ENSURING QUALITY AND A GREATER PRIVATE SECTOR ROLE IN PLANNING POST-DISASTER RECONSTRUCTION – THE CASE OF THE CITY OF CONSTITUCIÓN, CHILE

The city of Constitución (in the Maule region), was one of the most affected coastal cities in the aftermath of the earthquake and tsunami. The city had a population of more than 53,000 at the time of the disaster. The reconstruction plans for the city started with the preparation of a Master Plan – the Strategic and Sustainable Reconstruction Plans (PRES) Constitución. The Master Plan was prepared through a private initiative led by a local private sector company (Arauco), which entered into an agreement with the MINVU and local and provincial authorities. The MINVU provided overall guidance on the proposed outcome of the plan. The preparation of the master plan was financed by Arauco and private sector donations, and developed within a 90-day timeframe.

The project was prepared by an expert team led by Elemental (an architectural firm) and included Tironi Associates (which provided assistance with stakeholder consultation), ARUP (an international engineering firm), Marketek consulting, Talca University, Foundation Chile (a technology think-tank) and other academic and research institutes. The plan was developed through an active citizen participation process and the final Master Plan document (including a list of prioritised projects) was finalised through a public referendum. The Master Plan included a portfolio of 28 projects aggregating US \$6 billion. The transparency in preparation, ownership by the government stakeholders, and the onus on public consultations helped allay local concerns about the role of the private party in the preparation of the plan.

5. Prioritising the preparation of integrated and coherent baseline information – a critical tool for faster decision-making

The MINVU realised that an effective and integrated information database (on the extent of the damage) was critical to aid decision-making and designing of the plan. The initial estimates of damage provided by the National Emergency Office (ONEMI)⁵ was considered to be unreliable. Therefore, the MINVU conducted an extensive time-bound study to estimate the damage levels across the following categories: Coast; Urban Adobe; Rural Adobe; SERVIU Social Housing; and Private Housing. After studying the data, MINVU arrived at a number of 195,950 homes eligible for subsidies. To confirm these numbers with the actual demand, MINVU conducted a “demand census”, inviting the affected population to enrol in the register of disaster victims to apply for reconstruction plan subsidies.

Also to ensure accuracy of the data captured in the register of disaster victims, the technical staff from the Municipal Works Office visited affected families to certify the extent of damage to their homes. This method ensured accuracy of the data captured and also ensured that only those in need received benefits.

6. The reconstruction plan provided the affected families with a pivotal role in the design and implementation of the plan

The MINVU's objective was to provide construction subsidies to the affected parties to build an entirely new house, or to build a house on a beneficiary's existing block of land. To apply for a construction subsidy for the construction of a pre-designed project on the beneficiary's own site, disaster victims owning the land had to apply directly to SERVIU (Housing and Urban Development Service) and choose one of the pre-designed projects. The initiative not only accelerated the reconstruction process but also provided families with the opportunity to choose their home and become relevant stakeholders in the reconstruction process. As per the Ministry of Internal Affairs and Public Safety (MISP) report dated 2014, 97% of the people surveyed had knowledge of the plan's existence and 63% were informed about the projects involved in the plan. This clearly illustrates the robust stakeholder engagement undertaken by MINVU and other agencies.

The MINVU also invited builders to bid on the construction of housing solutions on dispersed sites for a fixed sum of money. This measure benefitted applicant families as it created competition amongst the bidders, which offered better home solutions, such as additional floor space, better furnished houses and extra rooms.

⁵ This database was populated based on the information provided by mayors and military emergency authorities.

China

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Systematic institutional framework at the national and sub-national levels for project development

China's institutional framework for project preparation is designed to be complete and methodical at each tier of the government.

At the national level, the Ministry of Finance (MoF) leads the effort to organise and coordinate PPP projects by developing PPP-related policies and carrying out the planning and administration of PPP projects. Along with the sub-national finance departments, the MoF is responsible for PPP project identification and screening, budget management, value-for-money evaluation and fiscal affordability assessments.



PROJECT APPROVALS AND QUALITY ASSURANCE

Assessment of project proposals by government agencies and external experts

Project plans in China undergo comprehensive review by the National Development and Reform Commission (NDRC) and other relevant government agencies, depending on their primary roles in the institutional set-up. The site selection reports are reviewed by experts and the local planning departments. Further, environmental impact assessment (EIA) reports are evaluated by environment protection departments within the relevant level of government for their inputs and approval. Major projects at the national level may also undergo thorough due diligence by NDRC-authorized companies, like the China International Engineering Consulting Corporation (CIECC).



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Using PPP pilot projects as examples to build local capacity and set benchmarks for preparation and procurement

As the apex body for PPP-related matters, the Ministry of Finance (MoF), with significant assistance from the China PPP Center, undertakes extensive PPP project development capacity building exercises and initiatives at the national and various sub-national levels. To demonstrate the PPP approach, the MoF has promoted PPP pilot projects that serve as a benchmark and reference for national and sub-national implementing agencies. These pilot projects are intended to function as 'path finders', forming replicable and scalable implementation examples. The China PPP Center encourages all local governments to improve on the implementation of these pilot projects and supervise the full project lifecycle, along with periodically disclosing relevant information on the project.

2. Snapshot of project preparation activities

Towards the second half of the 1990s, China started investing immensely in their public infrastructure, to support the steady economic growth during the period. While it started using the PPP model to deliver public infrastructure in the nineties, the Chinese Government has, since 2014, largely and widely adopted the PPP concept.

To support this level of infrastructure investment, project planning and preparation activities had to be thoroughly undertaken by the government and its supporting agencies at both the national and sub-national levels.

INSTITUTIONAL FRAMEWORK

Project preparation activities in China are decentralised and are largely driven by the line ministries and their counterparty agencies at the sub-national levels. The State Council, the National Development and Reform Commission (NDRC), the Ministry of Finance (MoF) and the line ministries play a crucial role in public infrastructure project development at the national level. NDRC and its local counterparts are also tasked with approving or rejecting project proposals within their jurisdictions. At the sub-national level, the institutional set-up mirrors that of the national level, with a planning commission within each government supported by various departments such as finance, urban construction, environmental protection, and communications.

National Development and Reform Commission (NDRC)

NDRC is the national planning commission in China, housed under the State Council, the administrative body of the central government. It is primarily tasked with developing, executing and monitoring the five-year national plans, which provide a strategic foundation for the formulation of the regional plans and annual plans of ministries, which, in turn, drive infrastructure development in China. NDRC also organises and coordinates the implementation of these plans. The commission houses dozens of departments and offices that are responsible for various functions, ranging from adjusting the prices of key commodities to formulating large regional development plans. It extends its authority down to the provincial, prefectural and municipal levels through the local Development and Reform

Commissions. NDRC is also the apex approval body, under the supervision of the State Council and with the coordination of other governmental agencies, for large-scale infrastructure projects undertaken at the national and sub-national level.

Ministry of Finance (MoF)

The MoF is the national fiscal executive agency of the central government which administers fiscal policies and the central budget. It is tasked with handling fiscal policies, taxation regulations and government expenditure for the state. The MoF leads the effort to organise and coordinate PPP projects in China by developing PPP-related policies and carrying out the planning and administration of PPP projects in consultation with other government agencies, such as the NDRC and the line ministries. It also conducts PPP-related policy research, consultation and training. To support economic planning, the MoF formulates and supervises the implementation of medium-term and annual budget plans, and oversees the implementation of fiscal policies and central government expenditure.

The MoF, along with the sub-national finance departments, is responsible for PPP project identification and screening, budget management, value-for-money evaluation and fiscal affordability assessments.

As the apex body for PPPs in China, under the supervision of the State Council and with the coordination of other governmental agencies, MoF also undertakes various initiatives to build local government capacity for PPP project development. MoF is promoting PPP pilot projects to act as demonstration projects, which will serve as a basis to determine related benchmarks and references for PPP projects in China. So far, it has rolled out four batches of PPP demonstration projects. It also conducts training workshops on PPP policy interpretation, project management and risk control, and enhancing government capacity building. To augment international coordination and cooperation, it has collaborated with multilateral institutions, such as the World Bank and the Asian Development Bank (ADB), and government PPP agencies in advanced PPP markets such as the UK, Canada, the Republic of Korea and Australia, in order to replicate their best practices within China's PPP context.

China PPP Center (CPPPC)

CPPPC, which is under the MoF, is primarily responsible for PPP-related policy research, consultancy and training, capacity building, financial support, information collection and other matters. Its responsibilities in project preparation include:

- Drafting of PPP operational and contract guidelines, and establishing standardised PPP project processes;
- Assisting the governments in screening suitable industries for PPPs, selecting appropriate PPP models, and carrying out the selection of PPP demonstration projects;
- Providing consultancy and training in technical support to the government in project identification, evaluation, bidding, procuring, and contract management with respect to PPP projects;
- Organising training sessions to improve the operational capacity of PPP personnel;
- Collecting PPP-related theories and case studies within China and abroad to help identify best practices; and
- Developing cooperation and communication with respect to PPP-related activities with international organisations and institutions.

PROJECT PREPARATION LANDSCAPE

Project identification and concept definition.

Potential public infrastructure projects are identified by each tier of the government's relevant sectoral agencies, such as energy, transport (e.g. heavy rail, expressways, highways, seaports, airports, bridges, etc.), municipal works (e.g. tap-water plants and distribution, wastewater, solid waste, metro, light rail, etc.), environment protection, water conservation, agriculture, forestry, science and technology infrastructure, sports, tourism, affordable housing, healthcare, elderly care, education, culture, social security, and governmental infrastructure, etc. These agencies identify projects based on the national and sub-national plans.

Project feasibility and structuring. The approach to the planning of infrastructure projects is dominated by the agencies at the relevant level of government responsible for project identification, as they are responsible for infrastructure policy formulation and project planning. The project preparation steps involve a concept proposal, pre-feasibility study, feasibility study, detailed engineering design, appraisal and final approval. There are dedicated technical institutions to assist project preparation in China, typically the planning and engineering design institutes of individual line ministries or local governments.

The project feasibility study results in the preparation of a draft plan for project approval, which comprises the project proposal, site selection report, EIA and the feasibility study report.

The project proposal mainly consists of the preliminary judgement regarding the project's viability and it relies on the technical and economic appraisal of infrastructure projects and the preliminary analysis of the project site, size, investment estimates and fundraising.

As part of the Administrative Measures for Direct Investment Projects in the Central Budget, the project developer is mandated to submit a feasibility study report, along with the project proposal to the NDRC when applying for the central investment budget, to serve as the primary basis for making an investment decision. The feasibility study report should include field investigations to learn about the land use status in the project area and to gather local information related to natural, economic and social conditions, a detailed proposed project plan and design, including the site selection, land occupation, construction scale and other technical parameters, and predictions of the impact of the project construction on the economy, society and ecological environment.

For PPP projects, the relevant sectoral agencies at each tier of the government will prepare the project implementation program, which is similar to a business case document. This involves preparing a project overview, a basic framework for risk allocation, project operation methods, a transaction structure, a contract system, a supervision framework and the selection of procurement methods. Further, the governmental sectoral agency will then appoint an expert or a third-party professional organisation to prepare the value-for-money evaluation report for the proposed project. The relevant finance department, along with the governmental sectoral agency, will jointly review the value-for-money evaluation report in alignment with the project implementation program. If the project passes the value-for-money assessment, the finance department then prepares the fiscal affordability assessment for the project. The MoF's increasing focus on fiscal affordability has developed in the recent past, to ensure that all project proponents optimally incorporate and value the total costs of undertaking PPPs. Thereby, the fiscal affordability assessment mechanism for PPP projects was established to efficiently and effectively prevent and control fiscal risks arising from the implementation of PPPs. The mechanisms assist in identifying and measuring the financial expenditure of PPP projects, evaluating the effect of their implementation on annual financial expenditures in current and subsequent years, and providing the basis for the fiscal management of PPP projects.

After the PPP project passes the fiscal affordability assessment, the administrative body of the local government under whose jurisdiction the project sits will approve the implementation of the project and commence the procurement process.

Project approvals and quality assurance. Approval on the feasibility study report from the NDRC, or the relevant DRC, forms the core activity of the final approval stage. NDRC, or the relevant DRC, provides the approval after the assessment of the draft plan and the completion of departmental reviews, based on project compliance with the relevant laws and regulations. The assessment of the draft project plans is undertaken by multiple agencies, depending on their scope and jurisdiction. The site selection report of the project plan must be assessed by the relevant local planning departments, who could, in turn, appoint experts for an independent review. The EIA report is evaluated by the relevant environmental protection department for their inputs on the EIA and its approval. Finally, the project developer submits the project plan to the NDRC, or the relevant DRC, for their inputs until the review of the EIA, land use and site selection is completed. The final approving authority for sub-national projects depends on the size of investment.

3. Guidance for project preparation

Guidance	
GUIDELINES FOR THE ADMINISTRATION OF FINANCE FOR PPP PROJECTS	
Owner	Ministry of Finance
Project development stage	Throughout the project lifecycle
Details	<p>These guidelines, circulated by the MoF in September 2016, task the finance departments at all levels of government with arranging PPP project preparation, budgetary funding, procurement, budgetary expenditures and revenues, and performance management etc. For PPP project preparation, these guidelines put the responsibility of the preparation of the project implementation program, which is similar to a business case document, with the authorised project implementing agency, while the finance department is tasked with the responsibility to review the value-for-money evaluation, in collaboration with the relevant governmental implementing agency, and the fiscal affordability assessment. These guidelines provide the basis for evaluating a project for its PPP viability, procurement and fiscal budget management of projects.</p> <p>Link for further details: http://www.cpppc.org/en/Guidelines/4699.jhtml</p>
Guidance	
OPERATIONAL GUIDELINES FOR PPP MODE (FOR TRIAL IMPLEMENTATION)	
Owner	Ministry of Finance
Project development stage	Throughout the project lifecycle
Details	<p>These guidelines were circulated by the MoF in November 2014 to promote and apply the private-public partnership (PPP) model in a standard manner. The guidelines apply to regulating activities, such as the identification, preparation, procurement, implementation and transfer of PPP projects conducted by the government agencies, private and/or commercial partners and other participants. They provide the government agency responsible with the basic steps to be performed for the above activities. They also provide the basic structure of the project implementation program that is to be prepared by the project implementing agency.</p> <p>Link for further details: http://www.cpppc.org/en/Guidelines/4049.jhtml</p>
Guidance	
GUIDANCE FOR THE FISCAL AFFORDABILITY ASSESSMENT OF PPP PROJECTS	
Owner	Ministry of Finance
Project development stage	Project appraisal
Details	<p>These guidelines, circulated by the MoF in April 2015, promote the orderly implementation of PPP projects by guaranteeing effective performance of contractual obligations by the government, and effectively preventing and controlling fiscal risks. The fiscal affordability assessment refers to activities to identify and measure the budgetary expenditure of PPP projects and evaluate the implementation of projects in the current and subsequent years, to provide the basis for the fiscal management of PPP projects. This, along with the value-for-money assessment, is a critical step in identifying whether the project can be implemented as a PPP. The finance departments at various levels of government are tasked with reviewing the fiscal affordability assessment.</p> <p>Link for further details: http://www.cpppc.org/en/Guidelines/4050.jhtml</p>

Guidance	GUIDELINES ON REGULATING THE PROJECT DATABASE OF THE NATIONAL PPP INTEGRATED INFORMATION PLATFORM
Owner	Ministry of Finance
Project development stage	Project disclosure and monitoring
Details	<p>These guidelines, circulated by the MoF in November 2017, provide the necessary conditions to be satisfied by a PPP project in order to be included in the Project Management Database of the National PPP Integrated Information Platform. This platform improves the overall quality of project database management. The provincial finance departments are responsible for project database management at their level. To identify and eliminate unqualified projects that do not meet the specified criteria, the finance departments at various levels set up special working groups.</p> <p>Link for further details: http://www.cpppc.org/en/Guidelines/6078.jhtml</p>

Guidance	GUIDELINES FOR VALUE-FOR-MONEY (VFM) EVALUATIONS OF PPP PROJECTS
Owner	Ministry of Finance
Project development stage	Project appraisal
Details	<p>These guidelines, circulated by the MoF in December 2015, guide the project implementing agencies in the preparation of PPP VfM evaluations, and assist the finance departments at various levels in reviewing the PPP VfM evaluations in a well-regulated and orderly way. VfM evaluations are carried out during the project preparation stage to judge whether a project can be implemented through the PPP route or through traditional procurement. These guidelines provide basic information regarding the preparation of VfM evaluations, qualitative evaluations, quantitative evaluations, evaluation reports and public disclosures. They also provide the basic structure of the VfM evaluation report.</p> <p>Link for further details: http://www.cpppc.org/en/Guidelines/4023.jhtml</p>

4. Project case example: Hangzhou International Airport (HGH)

PROJECT BRIEF

Hangzhou International Airport (HGH) is situated in Xiaoshan in the Hangzhou municipality, the capital of Zhejiang Province.

The airport covered an area of 484 hectares (ha) in Phase I and was expanded to about 998 ha in Phase II. HGH is considered as one of the main international airports in the Yangtze River Delta region in Eastern China and is one of the top 10 busiest airports in the country. During the period 2007-2012, passenger traffic in HGH more than doubled, increasing with an annual average growth rate of 19.4% per annum in the decade 2003-2012.

The construction of HGH can be divided into three phases: Phase I was completely operational in December 2000, Phase II was completely operational in December 2012, and Phase III is scheduled to be operational in 2035.

Project preparation of HGH commenced in 1992 with an Environmental Impact Assessment (EIA), site selection and a feasibility study. After two years of planning, site selection was complete and Xiaoshan was selected as the final location for HGH. The EIA and feasibility study reports were approved in 1997. For Phase II of the project, a review was conducted by the environmental protection and land administration departments, and the expansion was approved by NDRC in 2007.

QUICK FACTS



VALUE
(IN US \$ BILLION)

1.6*



STATUS

Phase I and II Operational



PROJECT OWNERSHIP

**JV between Airport
Authority Hong Kong and
Zhejiang Province Airport
Administrative Co.**



SOURCE OF PROJECT
PREPARATORY FINANCING

**National government
budget**




SUPPORT AGENCIES

**DDRC, Departments of Planning,
Land Administration and
Environmental Protection**

* Phase 2 expansion project cost; 1 CNY = US \$0.15, DDRC – Department of Development and Reform Commission of Zhejiang Province

PROJECT TIMELINE



1992	Commission of project preparation for the airport. This involved an Environmental Impact Analysis (EIA), site selection and feasibility study report (FSR).
1994	Site selection was completed and Xiaoshan was chosen as the location for HGH.
1997	Approval for the EIA and Feasibility Study Report. Phase I of HGH was launched.
2000	Phase I of HGH was completely operational.
2005	Planning of Phase 2 started with a review conducted by the Environment Protection and Land Administration Departments
2007	NDRC provided its approval for the expansion of the airport and construction was commissioned
2012	Phase II of HGH was completely operational

LEARNINGS FOR PROJECT PREPARATION

1. Simplified yet robust institutional framework led to extensive project preparation

The planning and decision-making are the responsibility of the Department of Decision and Reform Commission (DDRC) of Zhejiang Province, with assistance from other government departments, such as the Department of Planning, Land Administration and Environmental Protection. The project preparation involved the preparation of a project proposal, which mainly established whether the project was a viable investment. Further, technical and economic assessments were performed, along with a preliminary analysis of the project, site, size, investment estimates and fundraising. In addition to the project proposal, a project site selection and environmental impact assessment (EIA) were completed as a part of the preparation stage. Further, the project developer submitted a Feasibility Study Report (FSR) to the DDRC as the preliminary basis on which the project investment decision was made. This fast-tracked the project's preparation and led to its completion within the specified time and budget.

2. Strong quality assurance mechanism to ensure that the streamlined project preparation activities were high quality

Project proposal, site selection, environmental impact assessment and the feasibility study report are the main project preparation deliverables that are undertaken by experts with professional qualifications from planning and design institutes. The project proposal underwent a stringent external review, which was then submitted to the DDRC for their inputs on the feasibility report and operability of the project. After the project proposal was approved by the DDRC, the draft plan was reviewed by the departments of planning, land administration and environmental protection. Similarly, the EIA report was reviewed by the environmental protection department. Also, the project developer received feedback from the urban and rural planning department for site selection before the project plan was approved by the DDRC. Further, the project developer submitted the feasibility study report to the DDRC for its approval until the review of the EIA, land use and site selection was completed. The FSR assessment is performed by reputable agencies with professional qualifications that also conduct the technical and economic assessments.

3. Encouraging capacity development for project planning and implementation through long-standing partnerships

Given the size, complexity and duration of the project, it was critical for project proponents to build know-how on airport construction and management. To this end, HGH entered into a strategic partnership and joint venture with the Hong Kong International Airport prior to commencement of Phase II of its expansion. The aim of establishing the joint venture was to build the capacity of HGH and its staff in all areas of airport management and service concepts. The joint venture between HGH and Hong Kong Airport Authority was established in 2006, for a 30-year period, through the investment of equity capital in HGH's management institution – Hangzhou Xiaoshan International Airport Co. Ltd.

India

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Programmatic approach to project development through specialised institutions established by the government

Specialised sectoral institutions, set up by national and sub-national governments, help to streamline and standardise project development in their respective sectors. These institutions also liaise extensively with development agencies to help strengthen capacity for project preparation. Over time, these institutions have evolved to house capabilities for developing projects within their sectors and provide advisory support to other government agencies in their sector.

Dedicated entity within the Prime Minister's Office to fast-track national strategic projects

In response to project implementation delays in India, the Project Monitoring Group (PMG) was set up under the Prime Minister's Office (PMO) to provide an efficient and transparent mechanism to monitor and fast-track the implementation of strategically important infrastructure projects. The progress of all projects tracked by the PMG is also published on a real time basis on a dedicated portal maintained by the PMO.

Strengthening enabling frameworks for project preparation at the sub-national level through nodal agencies and project development funds

In order to support project preparation activities at the sub-national level, various state governments in India have instituted nodal agencies through the enactment of legislative frameworks. These agencies help strengthen the capacity of state infrastructure development institutions. Further, some states have also set up dedicated project development funds to fund project preparation activities. These funds are in partnership with international development institutions, such as the World Bank, Germany's Kreditanstalt für Wiederaufbau (KfW), and the Japan International Cooperation Agency (JICA), and thus function to bring in international project development standards for projects at the state level.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Long-term strategic plans at the sector level, tied to implementation through government supported multi-year schemes

Individual line ministries at the national level have defined long-term visions and goals for infrastructure development within each sector. These long-term plans are then implemented through multi-year schemes with defined project pipelines, thereby supporting project identification and prioritisation in alignment with the sector's strategic priorities.



PROJECT FEASIBILITY AND STRUCTURING

Use of standardised sectoral toolkits for the quantitative evaluation of PPP projects

India's Ministry of Finance (MoF) has designed sector specific toolkits that aid in quantitatively evaluating PPP projects at the pre-feasibility and feasibility stages. These toolkits are easily available on a dedicated portal managed by MoF and cover four aspects of project preparation – project screening, financial viability, value for money analysis, and project structuring. Further, model concession agreements (MCAs) prescribed for each sector help to standardise risk allocation and mitigation in PPP projects.

2. Snapshot of project preparation activities

India's project preparation framework is steered by its line ministries and sub-national governments, who are adopting a streamlined and systematic approach to project development.

States in India are critical for infrastructure development. While at the national level, there is a focus on developing key infrastructure sectors like national highways, telecommunications, power, railways and airports, the development of other sectors like water and sanitation, health, and education are shared and often vested in the state governments. Improving the maturity of India's project preparation activities has placed it well amongst the emerging infrastructure and PPP markets around the world.

INSTITUTIONAL FRAMEWORK

Project preparation activities in India are decentralised and are largely driven by contracting authorities. Line ministries, state and local governments at the sub-national level are responsible for their own project preparation.

The Department of Economic Affairs (DEA), the apex agency for project development in India, is housed within the Ministry of Finance (MoF). The Infrastructure Policy and Finance (IPF) division of the DEA is responsible for analysing public investment proposals for infrastructure projects, and handling all matters related to non-PPP projects of the line ministries. The IPF division of DEA also hosts a specialised team under the central PPP Cell section, which functions as the nodal point of contact for PPPs in India. It is responsible for: (i) drafting the national PPP policy and programs; (ii) managing the India Infrastructure Project Development Fund (IIPDF) for PPPs; (iii) undertaking capacity building programs; (iv) appraising and approving national PPP projects; (v) managing and approving financial support for PPPs under the Viability Gap Funding (VGF) scheme; and (vi) liaising with development institutions through technical assistance programs to build local capacity for project development.

The Department of Expenditure, also housed under the Ministry of Finance, is the nodal department for overseeing the public financial management system at the national level and overseeing matters related to the state finances. It is responsible for pre-sanction appraisal of major schemes or projects and overseeing the expenditure management of the central line ministries.

The National Institution for Transforming India (NITI Aayog), the premier planning unit, provides directional and policy inputs for infrastructure and PPP development in India. Through its Project Management Unit (PMU), NITI Aayog aims to support project preparation at the sub-national level, helping states identify, screen, prioritise, and develop PPP projects for implementation. On the policy front, it has also been tasked with preparing the three-year action plan, along with the seven-year strategy and 15-year vision document for the development of the country.

Role of the Project Monitoring Group (PMG) to fast-track national projects

In order to efficiently implement infrastructure projects, the government established the Project Monitoring Group (PMG) in 2013, to monitor and fast-track stalled public infrastructure and PPP projects. PMG is an institutional mechanism set up under the Cabinet Secretariat, reporting directly to the Prime Minister's Office, to resolve a variety of issues at both central and state levels required for faster commissioning of large-scale public infrastructure and PPP projects.

The processes followed by PMG are available on their website (<https://esuvidha.gov.in/>) with the objective of achieving transparency and efficiency. This helps in fast-tracking the entire process of approvals by enhancing communication between the investor and the government. PMG has also initiated the process of accepting applications for forest and environmental clearances online. After the success of PMG at the national level, a similar kind of mechanism has been implemented by states like Odisha, Uttarakhand, Rajasthan and Uttar Pradesh to address the issues faced by infrastructure projects within their states.

At the national level, India has also established specialised contracting authorities that focus on infrastructure development in specific sectors. While these institutions are associated with the line ministries, and owned by the central government, they work as independent entities, carrying out most of the project preparation and development activities on their

own or by hiring external consultants and advisors. To strengthen project preparation, these institutions develop a set of standardised guidelines and frameworks for projects that fall within their jurisdiction. Most of these specialised institutions have been tasked with running a large-scale, long-term, national level program.

Empowered sector-specific public institutions to drive infrastructure investment – The case of the National Highways Authority of India (NHAI)

NHAI was established in 1988 with a mission to develop, maintain and manage national highways in India. It has been mandated to develop 125,000 km of national highways under schemes like the National Highways Development Project (NHDP) (50,000 km) and Bharatmala (75,000 km). It has been instrumental in mobilising private funding for the development of highways and has pioneered the transition in infrastructure financing from traditional public procurement to PPPs within a very short period.

In the mid-nineties, PPPs in the highways sector received a lukewarm response from the private sector, owing to poor project preparation and a lack of standardised contractual frameworks. NHAI was among the first to introduce model concession agreement (MCAs) for national highways, under the Build-Operate-Transfer (BOT) model. Subsequently, NHAI has standardised

MCAs for different modes of project execution, thus improving efficiency and transparency on the sharing of risks. Concurrently, NHAI has also developed and maintained a standardised set of procedures to be followed while undertaking project preparation activities. NHAI also routinely hires external consultants or experts to prepare quality project preparation documents. To enable quality assurance, NHAI undertakes independent reviews of project feasibility studies, through a specialised team within NHAI or through the empanelment of peer consultants.

As the apex agency for national highways projects in India, NHAI also routinely undertakes market consultation exercises, to glean feedback from developers, investors and bankers on the challenges faced for national highway projects and redressal mechanisms to be explored.

As of today, NHAI has awarded more than 610 projects out of which approximately 300 projects were undertaken using the PPP model.

At the state level, the State Public Works Departments (State PWDs), divisions of the state governments, undertake the majority of the infrastructure planning and developing activities. Some states in India that have an explicit legal framework for private investment in public infrastructure are Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Orissa, etc. Apart from State PWDs, states have also established contracting authorities that focus on the development of state highways, irrigation, urban development and other infrastructure. For example, the development and maintenance of state highways is usually undertaken by state road development corporations. To streamline project preparation at the state level, most states have enacted state-specific legislation for PPPs, and instituted nodal agencies for project planning and development. These nodal agencies also provide financing support for project preparation. For instance, the State of Gujarat's Gujarat Infrastructure Development Board (GIDB) plays a pivotal role in project structuring and planning. It is a focal point organisation for infrastructure development in the state, mandated under the Gujarat Infrastructure Development Act.

At the municipal level, infrastructure development activities are undertaken by municipal corporations. Some metropolitan towns and tier 1 cities¹ have established their own development authorities to plan and develop infrastructure within their administration. For example, the Mumbai Metropolitan Region Development Authority (MMRDA) is responsible for planning, the formulation of policies and programs, implementing projects, and directing investment in the Mumbai metropolitan region.

PROJECT PREPARATION LANDSCAPE

Project preparation financing. Funding for project preparation activities is largely through budgetary allocations and internal resources of contracting authorities. For PPP projects, the national government provides funding support through the India Infrastructure Project Development Fund (IIPDF). Established in 2008, the IIPDF is a revolving fund with an initial amount of approximately US \$15 million funded by the Government of India to support the process of preparing projects that are viable and bankable. IIPDF can be utilised for the preparation of feasibility studies, environmental impact studies, project structuring, and for funding a portion of the cost of hiring consultants and transaction advisors. The fund can finance up to 75% of the total project development costs to the sponsoring authority. Upon successful bidding, the project development costs would be reimbursed to the successful bidder and in case of failure in the bidding process, the sponsoring authority would be liable to refund the amount of financial assistance provided.

To empower project development activities at the state level, many states have also established their own project development funds. To illustrate, the Government of the State of Tamil Nadu has set up the Project Development Grant Fund (PDGF) for supporting project preparation in the urban infrastructure sector. The fund has been financed by development agencies such as the World Bank, KfW and JICA. The PDGF is used to provide grants to carry out consultancy assignments, to operate and manage resource mobilisation programs, and to implement capacity building, development and training. The Government of Orissa has also established a state level project development fund, in partnership with KfW, to finance project preparation and the development of bankable projects. In addition to funding project feasibility studies, it also supports the preparation of city development plans and pre-feasibility studies for infrastructure projects.

Project conceptualisation and planning. Currently, the NITI Aayog in India has undertaken the preparation of a national level infrastructure development plan for India. Apart from this, individual line ministries and departments or other contracting agencies in India prepare long-term strategic plans and visions for each sector. Projects are then identified and

¹ Tier 1 cities are cities with a population of 100,000 people or more.

prioritised based on their alignment with the sectoral strategic priorities. For instance, the Ministry of Railways has established a Vision 2030, which defines, in quantitative terms, the key developments in the rail sector targeted for the period of 2018 - 2030. Typically, these long-term plans are then programmed through multi-year centrally sponsored schemes and initiatives, such as Bharatmala for the development of national highways, Sagarmala for the development, upgrade and modernisation of ports, Pradhan Mantri Awaas Yojana (PMAY), an affordable housing scheme, and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and SMART City Mission, which are combined schemes for water supply, sanitation, urban development and housing. Each of the line ministries then include their financing proposals to execute the identified and approved public investment projects (non-PPP projects) in the Demand for Grants document, which forms the input for preparation of the central annual budget by the Ministry of Finance.

Project feasibility and structuring. For public investment projects, a concept paper is prepared at the project formulation stage for seeking in-principle approvals, holding stakeholder consultations, conducting pilot studies etc. Project preparation commences with the preparation of feasibility study reports and includes a Detailed Project Report (DPR), pilot experiments and studies for schemes, and the preparation of environmental management and social management plans.

The Ministry of Environment, Forest and Climate Change (MoEFCC) has made Environment Impact Assessments (EIAs) mandatory for infrastructure projects. All infrastructure projects are classified under two categories, A and B, on the basis of locational aspects, impact on human health, and natural and man-made resources. Category A projects are approved by MoEFCC, while Category B projects are approved by the sub-national Environment Impact Assessment Authority. Further, under the Right to Fair Compensation and Transparency in the Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR 2013), procuring authorities are mandated to conduct Social Impact Assessments (SIAs) of major infrastructure projects within six months of the project start date.

To aid in PPP project preparation and decision-making, a series of detailed guidance papers and a PPP Structuring Toolkit has been developed by the DEA. These guidance papers aid in improving the quality of PPP projects being developed and cover the entire lifecycle of PPP projects. Further, DEA's PPP Guide for Practitioners also assists the project implementing agencies and authorities to develop their capacity for undertaking PPP projects.

Project approvals and quality assurance. After preparation of pre-investment documents, inter-ministerial consultations are held to appraise project proposals. Project proposals are appraised and approved by the Public Investment Board (PIB) or the Delegated Investment Board (DIB), depending on the project size and complexity.

PROJECT APPRAISAL		PROJECT APPROVAL	
Cost (US \$ mn)	Appraisal by	Cost (US \$ mn)	Approval by
< 15	Financial Advisor	< 15	The Secretary of the Administrative Department
15 – 75	DIB chaired by the Secretary of the Administrative Department	15 – 75	The minister in-charge of the Administrative Department
> 75	PIB chaired by the Secretary, Department of Expenditure	75 – 150	The minister in-charge of the Administrative Department and the Finance Minister
		> 150	Cabinet or Committee of the Cabinet

For projects costing less than US \$15 million, the projects are appraised by the Standing Finance Committee (SFC) or the Expenditure Finance Committee (EFC).

3. Guidance for project preparation

Guidance	PPP TOOLKIT
Owner	Ministry of Finance (MoF)
Project development stage	Overall PPP process
Details	<p>The PPP Toolkit is a web-based resource, designed to help improve the quality of PPP projects that are developed in India and also assist in improving decision-making for infrastructure PPPs. This toolkit covers five sectors, namely highways, water and sanitation, ports, municipal solid waste management and urban transport.</p> <p>The toolkit is for use by PPP practitioners across India in both the public and private sectors. It has been designed with a focus on helping decision-making by project officers at the central, state and municipal levels. However, other users, including PPP practitioners in the private sector, are also likely to find the material useful. It should be used as a learning tool and as a resource guide for best practice in PPPs.</p> <p>The toolkit is further divided into three modules:</p> <ol style="list-style-type: none"> 1) Project background module: The module provides explanatory and reference material about PPPs. It is a refresher course on important PPP concepts and mainly useful for people who are fairly new to PPPs. 2) PPP process module: This module describes the process of developing a PPP through four phases, from identification of potential PPP projects to preparation and clearance, to procurement and on to management of PPP contracts during the operational life of the project. 3) Tools and resources module: This module contains a set of decision-making tools to help PPP practitioners at important stages of the PPP process. This module also contains downloads and links to other PPP resources and a set of 15 case studies detailing the PPP project experience in India. <p>Link for further details: https://www.pppinindia.gov.in/toolkit/</p>

Guidance	PPP GUIDE FOR PRACTITIONERS
Owner	Ministry of Finance (MoF)
Project development stage	Overall PPP process
Details	<p>This guide is built for PPP practitioners within the government and its different tiers across the country, to assist them in conceptualising, structuring and implementing projects via the PPP route. This guide will serve as a manual for practitioners to develop projects through the appropriate PPP framework, improving the quality of PPP projects in the country.</p> <p>The PPP Guide is divided into 17 modules mainly focusing on key takeaways, best practices, case studies, PPP concepts, etc.</p> <p>Link for further details: https://www.pppinindia.gov.in/documents/20181/33749/PPP+Guide+for+Practitioners/</p>

Guidance	NHAI WORKS MANUAL
Owner	National Highways Authority of India (NHAI)
Project development stage	Project feasibility and structuring
Details	<p>The NHAI Works Manual details the project preparation and approval processes followed by NHAI for the implementation of public investment projects, as well as PPP projects.</p> <p>This manual details the contents and the parameters to be focused on while preparing the pre-feasibility study, feasibility study, preliminary project report, and Detailed Project Report for both public investment projects and PPP projects.</p> <p>This manual also details the quality assurance mechanisms, such as peer consultant reviews and proof consultant reviews, to be followed in order to maintain the quality of the project preparation documents.</p> <p>Link for further details: http://www.nhai.org/Doc/Manual/NHAI%20Works%20Manual%202006_new.pdf</p>

Guidance	APPRAISAL AND APPROVAL OF PUBLICLY FUNDED SCHEMES AND PROJECTS
Owner	Ministry of Finance (MoF)
Project development stage	Appraisal and approvals
Details	<p>The Appraisal and Approval of Publicly Funded Schemes and Projects provides a systematic process to be followed for the formulation, appraisal and approval of publicly funded schemes and projects. The guidance document lists the project preparation documents that are required along with their general structure. It also highlights the institutional arrangement for the appraisal and approval of schemes and projects, along with the delegation of appraisal and approval responsibilities in the case of projects with a lower total cost. Further, the documents also provide the timeframe required for the appraisal and approval of publicly funded schemes and projects.</p> <p>Link for further details: https://www.finmin.nic.in/sites/default/files/GuidelinesAppraisal_Approval_Schemes_Projects_0.pdf</p>

Guidance	GUIDANCE FOR FORMULATION, APPRAISAL AND APPROVAL OF CENTRAL SECTOR PPP PROJECTS
Owner	Ministry of Finance (MoF)
Project development stage	Appraisal and approvals
Details	<p>The Guidance for Formulation, Appraisal and Approval of Central Sector PPP Projects provides the detailed process to be followed for the appraisal and approval of PPP projects. It describes the institutional structure, along with details of the responsibilities of the entities involved. It also describes the structure of the memorandum required to be prepared for the PPP Appraisal Committee in order to obtain its 'in-principle' and final approval. Further, this document also specifies the time required for various steps under the appraisal and approval procedure for PPP projects. It also describes the delegation of appraisal and approval responsibilities in the case of PPP projects with lower costs.</p> <p>Link for further details: https://www.pppinindia.gov.in/documents/20181/21751/PPPAAC_GuideLines_2013.pdf</p>

Guidance	MODEL CONCESSION AGREEMENTS
Owner	National Highways Authority of India (NHA), Ministry of Shipping
Project development stage	Project structuring
Details	<p>Standardised contractual documents, such as sector-specific Model Concession Agreements (MCAs), which lay down the standard terms relating to the allocation of risks, contingent liabilities and guarantees, as well as service quality and performance standards, have been developed by various central ministries in India.</p> <p>These documents help to structure projects and provide standardised guidance on project risk identification, allocation and mitigation mechanisms at the preparation stage.</p> <p>Link for further details: https://www.pppinindia.gov.in/standardized-bidding-documents</p>

4. Project case example: Delhi Metro Rail Corporation (DMRC) – Delhi Mass Rapid Transit System (MRTS) Phase I

PROJECT BRIEF

The Delhi MRTS project was one of the largest metro projects and the second MRTS in India after the Kolkata Metro. It is considered a good example for public sector infrastructure projects in India, mainly because the project finished within the stipulated time and budget. Delhi MRTS has been profitable since the start of its operations and is among very few metros worldwide that do not depend on government subsidies.

Delhi MRTS was proposed to cover the entire city, along with the adjoining areas like Gurugram, Noida, Ghaziabad etc., with a total network of about 405 km. The construction was divided into four phases spread over a duration of more than 20 years. Delhi MRTS was important for the city of Delhi, as it would alleviate Delhi's ever-growing transport congestion and vehicle pollution.

The Government of India (GoI) and the Government of the National Capital Territory of Delhi (GNCTD) established a 50:50 joint venture firm named Delhi Metro Rail Corporation Limited (DMRC) in 1995 for the purpose of constructing Delhi MRTS. Phase I of the Delhi MRTS project of 65 km in length was sanctioned by the Union Cabinet in September 1996. Delhi MRTS started its operations in 2002 with an eight km line (the red line) connecting Shahdara and Tis Hazari (Phase I).

Delhi MRTS Phase I was constructed with a total investment of US \$2.1 billion at an average cost of US \$32 million per km. Extensive pre-investment activities were undertaken by Rail India Technical and Economic Services Ltd. (RITES), an engineering services company and Government of India enterprise, during the project development phase. RITES was, in turn, supported by financing from the Japan International Cooperation Agency (JICA), who funded around 60% of the total project cost of Phase 1 in six tranches, starting from 1997. The rest of the funding was mainly secured from the GoI and GNCTD.

QUICK FACTS



VALUE
(IN US \$ BILLION)

2.1*



STATUS

Operational



PROJECT OWNERSHIP

GoI and GNCTD



SOURCE OF PROJECT
PREPARATORY FINANCING

GoI and GNCTD



SUPPORT AGENCIES

**RITES, Delhi Development
Authority (DDA), JICA**

*Estimated Exchange Rate: Rs. 1 = US \$0.014 (as of December 2018)

PROJECT TIMELINE

- 1989 Preparatory activities for developing the MRTS system were commissioned by GNCTD and GoI
- 1991 Preparatory activities completed by RITES
- 1994 Central cabinet provided their go-ahead for the Delhi MRTS and directed GNCTD to take up preparation of DPR in July
- 1995 RITES finalised the DPR in May
- 1995 DMRC, a joint venture between GoI and GNCTD, was established in May
- 1996 The union cabinet sanctioned the Delhi MRTS Phase I in September
- 1998 Construction was commissioned in October
- 2002 Commercial operations for part of Delhi MRTS Phase I
- 2006 Delhi MRTS Phase 1 was fully operational

LEARNINGS FOR PROJECT PREPARATION

1. Strong leadership, along with the necessary institutional support and enabling framework, allows for smooth progress of the project

For the successful implementation of large and complicated infrastructure projects, it is critical to have strong leadership and vision. The majority of credit for the successful implementation of the Delhi MRTS goes to strong leadership under the management of DMRC, who developed capabilities for completing projects on time and within budget through a culture of punctuality, integrity, professional competence and social responsibility.

2. An independent and effective institutional setting

DMRC was established as a joint venture (JV) between the GoI and GNCTD, where neither the central nor the state governments had majority control. The management of DMRC had complete freedom, which allowed them to make decisions free from compulsion, and depended on the government only for funding and land acquisition. This institutional setting proved effective in minimising interference from politicians and bureaucrats.

In the initial phase of the project's implementation, a Japanese firm, Pacific Consultants International, and its JV were appointed as a general consultant to provide a team of international and Indian experts. Due to political interference, DMRC was urged to withdraw their association with the Japanese firm but DMRC defended its decision. This decision helped in the initial phase of the project, as the selected consultant team not only acted as a bridge between DMRC and JICA, but also provided the necessary technical and management expertise and knowledge of tunnelling technologies, management ethos and value for time, leading to capacity building of the DMRC staff and thus reducing the dependence on international experts in the subsequent phases of Delhi MRTS.

3. Collaboration with international institutions for capacity development during the initial phase of Delhi MRTS

Collaboration with the Japanese experts and cross-learning was an integral part of the project design. DMRC engineers were encouraged to learn tunnelling technologies, management ethos and value for time, along with other management techniques from their Japanese counterparts. To strengthen their own technical expertise and human resources, DMRC made sure that its staff members were central to the project and did not rely overly on the general consultants. Starting with Phase I, DMRC planned to reduce their dependence on the external experts in subsequent phases by deploying their own personnel in consulting services and allowing them to obtain relevant technical experience from the start. DMRC established a training institute to pass on technical expertise from its own personnel to the implementers of new metro projects in India. DMRC also began to disseminate its knowledge and expertise through consulting work on new projects in India and abroad. These efforts allowed DMRC to effectively accumulate technical expertise and systematically leverage it to establish a strong reputation for itself.

4. Effective stakeholder coordination

For the necessary land acquisition, DMRC submitted the amount required for resettlement and compensation to the GNCTD and the required processes were carried out by the land acquisition officer of the government. Further, it was also important to have project engagement and interactions with the local authorities and other agencies especially during the planning and construction of underground sections of the MRTS. Before the ground was excavated, a complicated network of water supply and sewerage pipes had to be shifted or diverted. Cooperation, involvement and communication with other government agencies in charge of these utilities was important in getting their buy-in and participation. To improve and increase collaboration with these government agencies, DMRC also recruited retired personnel from the said agencies. Due to this, DMRC ensured that grievances from various stakeholders were minimised and the project timelines were adhered to.

5. Availability of adequate and sustained project preparation financing

GNCTD commissioned RITES Ltd. to conduct the project preparation activities for the integrated multi-modal MRTS for Delhi. As the project preparation activities for Delhi MRTS were funded by GNCTD and were carried out by a Government of India enterprise, extensive project preparation activities were undertaken to study the viability of the project. The DPR for Delhi MRTS had around 50 technical reports, 101 tender packages and 2,066 drawings. These reports addressed various aspects of the proposed Delhi MRTS.

Indonesia

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Domestic infrastructure financing institutions created by the Ministry of Finance are introducing good practices in project preparation with a 'learning-by-doing' approach

Indonesia has created specialised financing institutions that are championing the adoption of good project preparation by working closely with national and sub-national agencies to help them address existing roadblocks to infrastructure development in Indonesia. Together, these institutions aim to develop a pipeline of bankable infrastructure projects in a market where the government counterparty capacity is still not fully developed.



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Sustained capacity building programs in partnership with development institutions

Faced with the challenge of weak institutional capacity at various tiers of the government, these agencies have designed several programs in line with global standards. These initiatives are not limited to formal programs, but also involve more informal support and guidance to help develop projects. The Development Finance Institutions (DFIs) have partnered with international development agencies and academic institutions to customise global knowledge in project preparation and project management that could be practically implemented in Indonesia given its existing constraints.



PROJECT APPROVALS AND QUALITY ASSURANCE

Defined four-step land acquisition process to minimise delays in land acquisition

To address one of the most complex project development activities, Indonesia has reformed its land acquisition law that mandates a four-step process for acquiring land for development. Each stage of the process is detailed with the activities to be performed, which institution is responsible, and the requirements to proceed to the next stage. Within the framework, the maximum duration for land acquisition is capped at 583 days, eliminating the possibility of any further delays in project development due to land acquisition hurdles. The law has progressed in addressing the hurdles in land acquisition to an extent, and needs to be followed by effective implementation to realise more benefits.



PROJECT MARKETING AND STAKEHOLDER ENGAGEMENT

Public consultations are mandated for all PPP projects at the feasibility stage

To address concerns of inadequate stakeholder consultation in project preparation, public consultations and market sounding are now mandatory for all PPP projects, at the pre-feasibility (Outline Business Case) and the feasibility (Full Business Case) stages. This helps to resolve as many stakeholder issues as is practically possible in the project preparatory cycle.

2. Snapshot of project preparation activities

INSTITUTIONAL FRAMEWORK

Indonesia's progression in project preparation has been founded more on learning-by-doing, based on its own challenges.

While Indonesia's PPP regulations date back to 2005 (they have since been replaced by new presidential regulations in 2015), not many PPPs, apart from the electricity independent power producers (IPPs)¹ and a few toll roads, could take off in the first few years of the program. Inadequate project preparation, land acquisition delays, lack of long-term project finance and perceptions of high-risk regarding Indonesia's infrastructure sector were some of the major issues impacting the progress of PPPs in the early years. The heightened risk perception was formed in large part by a lack of policy coordination between the various government ministries and agencies.

Recognising the need to plug the gaps in its enabling policy and institutional environment, Indonesia has systematically implemented a series of initiatives in the last decade. Key amongst these have been the creation of PT Sarana Multi Infrastruktur (SMI), a Ministry of Finance (MoF) backed institution to advise and lend to infrastructure projects, the Indonesia Infrastructure Guarantee Fund (PT Penjaminan Infrastruktur Indonesia (PII), or IIGF), a MoF backed institution to provide guarantees on government counterparty contractual obligations, and Indonesia Infrastructure Finance (PT IIF), which is a donor supported financial institution to provide long-term project finance. These institutions have become operational in the past few years and their key focus has been to support the government in developing a project pipeline that could be supported by their downstream financial products. It has been the concerted effort of these infrastructure finance institutions that has made progress in recent years in undertaking good project preparation and helping projects achieve commercial and financial close. Good practices in project preparation are being infused through project preparation assistance provided by the infrastructure finance institutions, who have been supported by international development partners, such as the World Bank, the International Finance Corporation (IFC) and the Asian Development Bank (ADB).

Each institution has clearly defined roles and responsibilities, stipulated in the presidential regulations enacted to establish these institutions.

In recent times, the MoF has established its own Project Development Facility (PDF) that is seeking to prepare its first set of PPPs as per international standards. The MoF is receiving technical assistance from the World Bank and the Government of Canada. To facilitate coordination and early identification of prospective PPP projects, a Joint Office has been established in the Ministry of Planning (BAPPENAS).

Ministry of Finance (MoF)

The MoF has been championing policy support to PPPs, including their project preparation and financing, in Indonesia. The MoF has adopted a two-pronged approach in promoting PPPs. Firstly, at the ministry level, the MoF has a special directorate – the Directorate of Government Support and Infrastructure Financing Management², which provides policy and approvals on government support mechanisms. The government policy places emphasis on high standards of project preparation to obtain best value for money for the government. The respective policies for viability gap funding (VGF) and guarantees stipulate that PPP projects will only be eligible for government support if they are well-prepared PPP projects, as per MoF project preparation standards, and where the PPP procurement has been competitively undertaken. Recently, the directorate has also established its own project development facility (PDF)³ to assist government contracting agencies in hiring transaction advisors and undertaking feasibility studies and PPP procurement. The PDF is in its early days, and in the process of establishing its standard operating procedures, as it seeks to prepare its first set of PPPs.

Secondly, the MoF has established key infrastructure finance institutions to scale up financing. As mentioned previously, these institutions are adopting international good practices to prepare projects. The IIGF and the SMI are fully government owned, while the IIF has a diversified ownership.

² More information can be obtained at <http://www.djppr.kemenkeu.go.id/ppp>

³ The legal basis for the PDF in Indonesia is based on the Presidential Regulation No. 75 of 2014 on Acceleration of Prioritized Infrastructure Provision, the Minister of Finance Regulation No. 265/PMK.08/2015 on Facilities for the Project Preparation and Transaction Advisory of PPP Projects, and the Minister of Finance Regulation No. 129/PMK.011/2016 on Amendment of Minister of Finance Regulation No. 265/PMK.08/2015.

¹ The Ministry of Energy and Mineral Resources supervises the procurement and contracting of electricity IPPs under its sector regulations and these projects do not go through the national level PPP process.

Together through these two approaches, MoF is seeking to improve the quality of project preparation and streamline government coordination, thereby addressing the two critical roadblocks faced by infrastructure projects in Indonesia.

PT Indonesia Infrastructure Guarantee Fund (IIGF)

In response to the global financial crisis and to crowd-in private investment, a separate guarantee fund, IIGF, was established in 2009 and became operational in 2010. The IIGF extends guarantees⁴ to PPPs in relation to assuring government counterparty contractual obligations under the PPP agreement. To date, IIGF has issued guarantees to eighteen PPP projects. A key requirement for IIGF guarantees, as stipulated in government regulations, is that the project needs to be prepared to international standards and must be competitively procured. With the assistance from the World Bank, IIGF, through its standard operating procedures, has strengthened its project preparation functions, including environmental and social safeguards management to help the guaranteed projects meet international standards. The IIGF also operates its own project preparation assistance facility, wherein it provides technical assistance for and closely supports government agencies with project preparation and open procurement. In addition, the IIGF Institute provides PPP-related capacity building to various government stakeholders to help strengthen their implementation.

PT Sarana Multi Infrastruktur (SMI)

PT SMI is a wholly-owned entity of the MoF with a mission to act as a catalyst for infrastructure investment in Indonesia. PT SMI finances both publicly and privately funded projects and has its own capital base, as well as other lines of credit provided by international development partners to finance infrastructure. As part of its mandate, PT SMI assists

government agencies in their project development activities by supporting the preparation of business cases, providing funding assistance for project preparation, conducting capacity building and creating an ecosystem of cooperation for infrastructure development. PT SMI also provides active assistance to the MoF in managing their PDF and in supporting government agencies on project preparation.

PT Indonesia Infrastructure Finance (IIF)

PT Indonesia Infrastructure Finance was established in 2010 as a private non-bank financial institution, under an initiative of the Government of Indonesia, in cooperation with the World Bank, the Asian Development Bank (ADB) and other international multilateral agencies. It is focused on investing in commercially viable infrastructure projects in Indonesia and it encourages private sector engagement in the country's infrastructure development. By virtue of its reputable shareholders⁵, the IIF functions to high standards of corporate governance and project preparation. For instance, the IIF's Social and Environmental Management Systems comply with performance standards of the World Bank, the IFC and the ADB. Accordingly, it imposes these high standards on its supported projects.

Indonesia Ministry of National Development and Planning

As the apex planning agency in Indonesia, BAPPENAS plays the dual role of a planning and monitoring institution and a think-tank to further good practices on project preparation in the country. BAPPENAS is primarily tasked with preparing and monitoring the national long-term and medium-term development plans for Indonesia. At present, BAPPENAS is focusing on introducing international good practices in project selection and preparation. BAPPENAS prepares and documents the PPP project list for Indonesia through its annual publication of the PPP Book. The PPP Book comprises a project pipeline developed as a result of screening by BAPPENAS from the proposed project pipelines submitted by the Ministers, Heads of Institutions and Heads of Regions. The PPP Book provides a transparent view on the evolving PPP pipeline in Indonesia, listing out projects which are ready to move to the procurement stage, as well as those still under development.

⁴ The risks covered include: approvals and licensing delays, delays in land acquisition, change in law, break of contract, revenue and pricing risks, government counterparty payment risks, expropriation, force majeure, termination payments risk etc., as long as these risks are contractually taken on by the relevant government counterparty. IIGF guarantees can be extended to up to 25% of IIGF's net worth into a PPP project. When providing the guarantee, IIGF will charge both an upfront and annual underwriting fee. In case a guarantee is invoked, IIGF will make payments as per a due process specified in its operations manual and then have a recourse to the future budget allocations available to the concerned government counterparty agency. Under the recourse mechanism, the MoF will reimburse IIGF for the amount of the guarantee called and paid, and MoF in return will recoup the money from the budgetary allocations available with the concerned government counterparty agency.

⁵ The shareholders are PT SMI (30%), ADB (19.99%), IFC (19.99%), Kreditanstalt für Wiederaufbau (KfW) (15.12%) and Sumitomo Mitsui Banking Corporation (14.9%).

Committee for the Acceleration of Priority Infrastructure Delivery (KPIIP)

KPIIP functions as the point of contact to facilitate coordination in debottlenecking efforts for National Strategic Projects and Priority Projects. It plays a central role in monitoring, coordinating, and speeding up the deliveries of strategic and priority PPP projects, sometimes commissioning or amending the pre-feasibility studies to prepare them for the market. Led by the Coordinating Minister for Economic Affairs as the Chairperson, representation from all major institutions in Indonesia enables KPIIP to aid the acceleration of priority project development.

State Asset Management Agency (LMAN)

LMAN was established in 2015 by the Ministry of Finance, to facilitate the financing of land for infrastructure projects and speed up the process of land acquisition in Indonesia. It provides funding for land acquisition for nationally significant PPP projects, in addition to performing the function of a land bank by acquiring land required for the construction of priority projects. The LMAN also runs and maintains a registry of land parcels and manages a revolving fund for land acquisition for PPP projects in toll roads, rail infrastructure, ports and dams. While LMAN funded land acquisition up to approximately US \$1 billion⁶ for toll road projects in 2017 alone, its budget for 2018 was more than double, at approximately US \$2.5 billion.

PPP Joint Office

Set up in 2016, the PPP Joint Office is to function as the 'coordinating or clearing house' for PPP projects, prior to being sent for approval to the MoF. The office comprises members from KPIIP, BAPPENAS, MoF, Ministry of Home Affairs, Indonesia Investment Coordinating Board, National Public Procurement Agency, and the IIGF. The aim of establishing the PPP Joint Office is to encourage cross-sector and cross-agency coordination for project implementation. It comprises middle management-level representatives from all major governmental institutions, with each member of the office tasked with a specific role and authority, depending on the scope of its functions.

PROJECT PREPARATION LANDSCAPE

Project preparation activities in Indonesia are decentralised, with government contracting authorities (GCAs) entrusted with the responsibility of project development. GCAs perform this function under the umbrella of the national PPP policies and regulations.

The overall infrastructure project preparation process in Indonesia spans three broad phases:

- **Planning phase**, which includes project identification and selection, and establishment of a priority project list. GCAs identify and conduct preliminary studies on projects that help to meet Indonesia's long-term development goals. During the preliminary study stage, a project is to be evaluated based on its strategic rationale, compliance with existing regulations and a broad value for money assessment accompanied by revenue arrangements (in the case of PPPs). Projects that are deemed viable proceed to the preparation stage.
- **Preparation phase**, which involves the preparation of a preliminary pre-feasibility study (Outline Business Case (OBC)), and the preparation of a project readiness assessment (Final Business Case (FBC)). At OBC stage, the project undergoes a series of quantitative studies to evaluate its viability in terms of financial and economic value, and risk analysis and mitigation. At the FBC stage, the project must fulfil all requirements of the pre-feasibility study including follow-up issues, approval of the PPP by stakeholders through public consultations and market sounding, and certainty on whether government support is required.
- **Transaction phase**, which follows the completion of preparatory activities marked by a final business case report and drafting the business entity procurement plan.

How does the institutional set-up in Indonesia aid in accelerating project development activities?

It is well acknowledged that Indonesia's GCAs do not have strong institutional capacity in PPPs and this has impacted the pace of PPPs in reaching financial close. Efforts of the past few years are being invested in developing standardised processes and guidance to address their capacity issues.

- **Defining overarching goals to assist project conceptualisation.** Indonesia's long-term and medium-term development plans, RPJPN⁷ and RPJMN⁸, prepared by BAPPENAS, serve as guiding posts for GCAs to draft their strategic plans and conceptualise projects. While the RPJPN has a long-term outlook of 20 years, the RPJMN takes a medium-term view of every five years within the

⁶ Exchange rate, IDR 1 = US \$ 0.00007 (as of December 2018).

⁷ Rencana Pembangunan Jangka Panjang Nasional (Long-term Plan).

⁸ Rencana Pembangunan Jangka Menengah Nasional (Medium-term Plan).

20-year period and allows separate governments to set their own priorities in the process of national economic development. Each RPJMN defines the target for the provision of basic infrastructure in transparent, quantitative terms; for instance, the latest RPJMN 2015–2019 targets that Indonesia should have 100% access to clean water from the 70% baseline in 2014. These clearly defined targets help the GCAs to work towards a common goal.

- **Using multi-criteria analysis to screen and prioritise projects objectively.** To include projects from GCA strategic plans in the PPP Book, BAPPENAS follows a multi-criteria process. Each project is evaluated on factors such as technical and economic rationale, demand sustainability, support from stakeholders, compliance with laws and regulations, conformity with the national development plan, spatial planning, value for money, potential revenues, and project financing scheme. While this process is not institutionalised for GCAs, BAPPENAS also provides ad-hoc assistance to GCAs in screening projects based on their level of readiness and benefits to society in accordance with the development plans.
- **Enhancing capacities of GCAs to undertake project preparation in line with global standards.** The MoF supported Development Finance Institutions (DFIs) in Indonesia aid in capacity building for GCAs through formal programs and informal assistance. The IIGF has created a learning academy called the IIGF Institute, which provides training on PPPs through its General Active Learning Program (GALP), an online learning tool. It has also collaborated with the University Network for Indonesia Infrastructure Development (UNIID) and the Indonesian College of Infrastructure Network (JPII) to organise the Indonesia Infrastructure Roundtable (IIR), which is a series of discussions on the preparation of business cases for infrastructure projects. Similarly, PT SMI conducts capacity building and socialisation activities, as well as Focus Group Discussions (FGD), which involve the local governments, investors, and other relevant ministries. Further, by providing technical project preparation assistance and advisory support for projects, these DFIs help to build GCA capacity by playing an active role in encouraging the acceleration of prioritised, strategic, national and regional infrastructure development. Through continued support and liaising with international development institutions, these DFIs are transmitting international good practices to infrastructure in Indonesia via a learning-by-doing approach.

PT SMI's project preparation assistance in practice

1. Assistance to the Ministry of Communications and Informatics to prepare bid documents, and transaction advisory on the Palapa Ring Project.
2. Providing inputs for the optimisation of technical schemes and the government funding structure for the West Semarang Water Supply Project.
3. Preparing the pre-feasibility study for the Median Transportation Project and advisory to increase the feasibility and bankability of the project.
4. Cooperation with development institutions such as the Japan International Cooperation Agency (JICA) and the ADB for feasibility studies for the Dr. Pirngadi Regional Hospital Medan PPP Project and the Suramadu Bridge Toll Road PPP Project.

- **Providing standardised guidance documents to streamline project preparation.** Drawing from its expertise in appraising project risks to issue guarantees, the IIGF has published a best practice standard on risk allocation. This guidance document provides 1) a risk category and 2) a risk allocation matrix to be used as a reference by GCAs in preparing the risk allocation of the PPP project, to enhance the implementation of the risk management framework for both economic and social infrastructure PPP projects. As the apex agency for project planning in Indonesia, BAPPENAS has also issued guidelines on preparing outline business cases, which provides detailed steps to be followed by GCAs in each procurement stage, namely (i) planning (identification, budgeting, categorisation), (ii) preparation (pre-feasibility study, government support, guarantees), and (iii) transaction (market sounding, public tender, agreement, financial close).

- **Ensuring availability of adequate funding to undertake project preparation activities.** To assist financing of project preparation activities, PT SMI manages two funds:
 - PPP Project Development Facility (PPP-PDF): The PPP-PDF provides funding to assist GCAs to prepare the feasibility studies and to assist with transaction advisory until the project reaches financial close. Priority PPP projects, as well as non-priority projects that have completed market sounding and can demonstrate investor interest, are eligible for assistance under this scheme.
 - Regional Infrastructure Development Fund-Project Development Facility (RIDF-PDF): This is a grant targeted at local governments in Indonesia to undertake project identification and preparation activities. Budgeted at US \$3 million for a period of five years⁹, the fund was established in cooperation with the Government of Switzerland and the World Bank.
- **Addressing proximate factors that lead to bottlenecks in project implementation at the preparation stage.** Indonesia's legal and regulatory framework provides for mechanisms to address challenges that affect project implementation. To mitigate risks arising from land acquisition, Law No. 2 of 2012 clearly defines the responsibilities of sectoral ministries and regional governments to aid with land acquisition. Delays in the land acquisition process are addressed by capping the time period for the complete process at 583 days. The law also permits the private sector to procure the land first and then claim reimbursement from the government through the LMAN, instead of waiting for approvals from the annual budgetary process. Through these interventions, the land acquisition law has been a step forward in addressing the major land acquisition hurdles faced by infrastructure projects in Indonesia. The law is currently faced with implementation issues, so ongoing government support will be critical to realise the full benefits of this law. Further, Presidential and BAPPENAS regulations mandate that all PPP projects must include public consultations, to be carried out at the planning stage by the respective GCAs. The aim of undertaking these consultations is three-fold: (i) explore compliance with social norms and environmental norms in accordance with the provisions of the environmental legislation; (ii) receive input on community needs related to the PPP; and (iii) ensure PPP readiness.

⁹ PT SMI received a grant of US \$3 million over five years, however the overall size of the loan to the RIDF-PDF was US \$100 million.

3. Guidance for project preparation

Guidance	RISK ALLOCATION GUIDELINES
Owner	Indonesia Infrastructure Guarantee Fund (IIGF)
Project development stage	Feasibility study and project structuring
Details	<p>IIGF's risk allocation guidelines provide a risk category checklist which can be used to identify risk events for PPP projects.</p> <p>This checklist is further elaborated upon through comprehensive sector-specific risk allocation matrices for all PPPs within the following sectors: water supply, waste management, roads, electricity, energy conservation, oil and gas, rail transportation, bus rapid transit, seaport, airports, telecommunication, urban infrastructure, health, public housing, education, sport facilities, tourism and correctional facilities.</p> <p>The risk matrices identify the risk events within each risk category and provide a guide to risk allocation based on the PPP structure, along with suggested mitigation strategies.</p> <p>The guidelines function as a key reference for the GCAs in developing PPP contracts, and for investors and financiers in assessing their investment and PPP financing opportunities in Indonesia.</p> <p>Links for further details 2017 version in English: https://www.iigf.co.id/media/kcfinder/docs/risk-allocation-guideline-2017-tanpa-sambutan.pdf (2017 version in English) 2018 version in Bahasa Indonesia: http://www.iigf.co.id/media/kcfinder/docs/final-20180305-acuan-alokasi-risiko-bahasa-2018-clean-newlogo.pdf (2018 version in Bahasa Indonesia)</p>

Guidance	PROCEDURAL GUIDELINES FOR PPPs
Owner	BAPPENAS
Project development stage	Planning, feasibility study, procurement
Details	<p>BAPPENAS Regulation No. 4 of 2015 specifies procedural guidelines for PPP arrangements and the responsibilities of PPP nodes, PPP teams and procurement committees established under regional governments and sector ministries.</p> <p>These guidelines define the role of GCAs and PPP nodes, the stages of PPP implementation and institutional responsibilities at each stage, activities to be performed at the pre-feasibility and feasibility stages, structure of the outline and final business cases, forms of government support, and procedures for unsolicited proposals.</p> <p>Link for further details: http://kpsrb.bappenas.go.id/data/fileregulasi/PPP%20REGULATION%20(ENGLISH%20version).pdf</p>

4. Project case example: Umbulan Water Supply Project

PROJECT BRIEF

The Umbulan Water Supply System project was initiated in the 1980s to meet the growing needs of clean water distribution in the East Java province of Indonesia.

Structured as a Build-Operate-Transfer (BOT) scheme, with a concession period of 25 years, the project involves the construction of the production system, the transmission pipeline and offtake for five regencies and cities. Once operational, the water supply system is expected to deliver 4000 litres per second of clean water through a 93-kilometre water supply pipeline.

While the project was originally planned and conceptualised by the Government of East Java Province up to 40 years ago, with multiple studies and tendering processes carried out between 1988 and 1999, it was tendered successfully only in 2010.

The Umbulan Water Supply System project is a flagship PPP project of Indonesia, being the first to receive viability gap funding from MoF, and the first water sector PPP project in Indonesia guaranteed by the IIGF. The history of this project demonstrates the evolution of experience in Indonesia's PPP market. Through cohesive efforts by the Government of Indonesia and its institutions, the existing challenges in the project were mitigated, and the project was made bankable.

QUICK FACTS



VALUE
(IN US \$ MILLION)

157*



STATUS

Under construction



PROJECT OWNERSHIP

**Government of
East Java Province**



SOURCE OF PROJECT
PREPARATORY FINANCING

PDF through the MoF



SUPPORT AGENCIES

PT IIGF, PT SMI, KPPIP

* Estimated Exchange Rate: IDR 1 = US \$0.00007
(as of December 2018)

PROJECT TIMELINE

○	Feb-11	Market sounding
○	July-11	Pre-qualification tender followed by consultations with prospective bidders
○	Aug-11	Announcement of pre-qualification result
○	Nov-11	Assignment to PT SMI for project development support
○	Feb 12 – Sep 15	Issuance of bidding document and amendment(s) Designing of project structure Project feasibility studies by PT SMI
○	Feb-13	Submission of application for guarantee to IIGF
○	Feb-16	Bid award
○	Jul-16	Signing of contractual documents (including the guarantee agreement)
○	Dec-16	Financial close
○	July-17	Construction commences
○	Mid 2019	Estimated commercial operations date

LEARNINGS FOR PROJECT PREPARATION

1. Commitment from a strong project champion can help to mitigate challenges and streamline the decision-making process.

The most critical challenge being faced by the Umbulan Water Supply System project was coordination amongst its many stakeholders, especially considering that the project's geographical coverage includes five different regencies and cities in the province. Compounding the coordination issues were the externalities to which the project was subject – accommodating lower tariffs to make clean water affordable to the users, managing poor financial conditions, a lack of capacity in regional entities to plan and manage such a project, lack of an adequate regulatory framework, and no prior experience of PPP projects in the water sector, to name a few.

Addressing these roadblocks required the presence of a strong project champion, which was provided through KPPIP, once the project was designated as a national strategic priority project. Functioning as a debottlenecking facilitator, KPPIP led coordinated efforts involving the Ministry of Finance, the Ministry of Public Works and People's Housing, PT SMI, the Province of East Java, and the five municipalities. For instance, the issue of increased project costs for the water supply system, which was at a stalemate, was resolved through the enactment of a contract, wherein the central, provincial and district governments agreed to share the increased costs of installing the system.

2. Supporting mechanisms through government institutions help to make the project feasible, bankable and fiscally acceptable.

The Umbulan Water Supply System project serves as a flagship project to demonstrate how support from Indonesia's institutional framework led to the successful commencement of project construction.

Recognising the limited capacity of the GCA to undertake project preparation activities that could meet the standards of the investor community, PT SMI was tasked with supporting the preparation of the OBC and FBC stages. The results of the feasibility study were then 'road tested' by PT SMI, with international financial institutions to identify and address residual issues. PT SMI later also partnered with the IFC to function as a transaction advisor.

The MoF provided funding for project preparation through the PDF, along with supporting the project feasibility process through the provision of viability gap funding.

The IIGF, mandated to evaluate the project for the provision of a government guarantee, also provided assistance with finalising the PPP scheme and technical design, undertaking public consultations, and assistance to execute contractual agreements between the various stakeholders. IIGF also worked closely with the GCA to formulate a joint risk mitigation plan, factoring in environmental implications, which was implemented in 2017.

The Ministry of Public Works and Housing (PUPR) was also involved in the planning and preparation of the feasibility study and the contractual arrangements between the water supplier and the municipal water companies (PDAMs).

3. Augmenting and streamlining GCA capacity to prepare projects through the use of international consultants and advisors.

To address the lack of capacity within the GCAs to prepare project feasibility studies at par with global standards, the project proponents and PT SMI involved a panel of international and national advisors to strengthen the business case. With the IFC as its transaction advisor, the project was also supported by Mott MacDonald as the international technical advisor, Norton Rose as the international legal advisor and ABNR Law Firm as the national legal advisor, in addition to other notable local firms and individual experts as reviewers.

Further, the Provincial Government of the East Java Province also established a steering committee and technical team within itself, to work closely with PT SMI and the pool of advisors to prepare the feasibility study. Assistance from the Indonesia Infrastructure Initiative (IndII), a joint cooperation with the Australian Department of Foreign Affairs and Trade (DFAT), was also sought for the feasibility studies conducted in 2009, prior to procurement.¹⁰

4. Responding to market feedback to enhance the attractiveness and marketability of the project.

Under the initial project structure, the bidding process was carried out between 1988 and 1999, wherein three bidders were shortlisted. However, the project did not achieve financial closure due to inadequate financial feasibility. Responding to feedback from the shortlisted bidders and the investor community, the Government of Indonesia approved government fiscal support, through a VGF scheme and the IIGF guarantee, to make the project financially viable. Consequently, prior to its procurement in 2011, the project proponents also conducted one-on-one consultations with prospective bidders.

¹⁰ In 2018, the Indonesia-Australia Infrastructure Partnership/ Kemitraan Indonesia Australia Untuk Infrastruktur (KIAT) replaced IndII in providing technical assistance to the Indonesian Government to support infrastructure development (<https://www.kiat.or.id/home>).

Kenya

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Early involvement of multilateral institutions is key to the establishment of an effective enabling environment for project development

The Government of Kenya is introducing a legal and institutional framework, consistent with international good practice, with the support of multilateral institutions to build an effective enabling environment for project preparation. The World Bank's Infrastructure Finance and PPP (IFPPP) project was instrumental in building upstream support to PPP institutions and developing an initial pipeline of PPP projects. Under the IFPPP project, the Government of Kenya created an enabling environment to channel private finance to infrastructure projects (the PPP Act 2013 and the PPP guidelines). While multilateral assistance has facilitated creation of a favourable enabling environment and improved public sector capacity, consistent and targeted efforts are still required to yield sustainable outcomes.



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Dedicated team within the Government Contracting Authority (GCA) to support project planning and preparation

Recognising the gap in the internal capacity of the GCAs, the Government of Kenya established dedicated PPP nodes within each GCA to drive broader PPP agenda planning, preparation, and implementation of PPP projects, and the coordination of funds for project preparation. The PPP node brings in external expertise, as well as strong project ownership within the GCA (each member of the PPP node is of the same rank as a head of department). The GCA also establishes a dedicated project appraisal team during the project appraisal and planning stage, which includes a member of the central PPP Unit.



PROJECT APPROVALS AND QUALITY ASSURANCE

Clearly defined framework for Fiscal Commitment and Contingent Liability (FCCL) to facilitate the early identification of fiscal risks

The National Treasury of Kenya, in association with the World Bank, prepared the FCCL guidelines and technical manual for managing fiscal liability risks in PPPs. The FCCL assessment is undertaken twice during the PPP lifecycle, once at the feasibility stage and again during the negotiation stage. The tool is managed by the Public Debt Management Office (PDMO) in the National Treasury. The PDMO also publishes periodic updates of FCCL commitments, such as quantum and term length, contingent liabilities classified by category or sector, the reasons for undertaking contingent liabilities in the Annual Debt Report, and the Medium-Term Debt Management Strategy. The government's recent initiatives to strengthen the FCCL Framework represent a strong appreciation of the impact of the fiscal risks of PPP projects, especially in lower and lower-middle income economies.

2. Snapshot of project preparation activities

Kenya is one of the largest and fastest growing economies in Africa, and it transitioned to a lower-middle income economy¹ in 2014.

Kenya has embarked on a sustained campaign to scale up its infrastructure to meet its mission of becoming an upper-middle income economy, as per its long-term development plan – “Vision 2030”. To meet the objectives of this plan, the government has undertaken a series of reforms aimed at improving institutional capacity, empowering sub-national governments, diversifying project finance and continuously strengthening the enabling framework for project preparation and implementation.

Some of the major reform actions over the past decade include the 2010 Constitution of Kenya, which created a decentralised system of governance, the PPP Act 2013 and the PPP regulations for national and sub-national governments, and the recent Draft Public Investment Management (PIM) Guidelines of 2018, which promote efficiency in project preparation and review. The 2010 Constitution of Kenya introduced a devolved system of government aimed at better service delivery and started a systematic process of strengthening the capacity of sub-national governments to plan and deliver infrastructure. The reform initiatives facilitated a surge in infrastructure investment, as well as greater private sector participation in projects. As per the Global Infrastructure Hub’s InfraCompass², total investment in the infrastructure sector in Kenya for the period 2011-2015 stood at US \$20.376 billion, with US \$2.946 billion (14% of total investment) contributed by the private sector.

INSTITUTIONAL FRAMEWORK

Project preparation activities at the national level are led by relevant sector ministries and agencies, and at the sub-national level by the relevant county departments and their agencies, referred to as the Government Contracting Authorities (GCAs) henceforth. The GCAs are required to set up a PPP node, which is a dedicated team formed within the GCA, headed by an Accounting Officer (AO), to aid with the planning, preparation and implementation of PPP projects. The PPP node also coordinates with external stakeholders, such as multilateral development banks (MDBs), and is involved in the promotion of projects. The GCAs are assisted at each stage of project

preparation by a range of institutions in providing project guidance, capacity building, project review and approval, and project marketing.

At the federal level, the National Treasury (NT) serves as the apex agency for project preparation. The NT provides guidance on project planning, provides independent review and approval of federally funded projects, and manages the fiscal implications of a project. The NT championed the preparation process of Vision 2030, which sets out the long-term strategic direction for infrastructure in Kenya and the outcomes envisaged. The NT is also responsible for the overall monitoring of projects and the medium-term plans of the line departments. In the case of PPP projects, the NT, through the Cabinet Secretary for Finance, oversees the operation of the PPP Unit (housed within the NT) and PPP Committee. The National and County Treasuries are also allocated the task of reviewing project concept notes up to a certain threshold, approving the feasibility study, and including the project in the pipeline for national and country level projects, respectively. As the main agency responsible for the management of public debt, guarantees and financial obligations at the federal level, the NT continuously monitors the fiscal risk associated with PPP projects.

While the GCAs and the NT form the key institutions in public infrastructure project preparation, the institutional structure is more diverse for PPP projects. Under the PPP Act 2013 and the PPP regulations, the government has established a separate central PPP Unit within the NT to drive PPP project and program preparation and implementation, and a PPP Committee to review and grant approval for PPP projects. The PPP Committee is an inter-ministerial committee chaired by the NT, responsible for PPP policy formulation, project approvals, monitoring and evaluation. The PPP Committee includes members from the line ministries, the Attorney General’s office, and four independent members appointed by the Cabinet Secretary. The central PPP Unit, established as a specialised unit within the NT, serves as the secretariat and technical arm of the PPP Committee and oversees the country’s PPP program. The PPP Unit was also strengthened through the secondment of international experts with an established track record in managing PPP programs.

The Government of Kenya has also created capacity at the GCA level with the establishment of a PPP node, and a project appraisal team within the GCAs to support and complement the internal capacity of GCAs in project preparation. The project appraisal

¹ World Bank country classification

² <https://infocompass.gihub.org/>

teams are dynamic teams formed for each project to undertake the appraisal of the specific project. The GCA also requests the central PPP Unit to nominate a representative for the project appraisal team to assist in project preparation. The project appraisal team assists the GCA project nodes in the preparation of project studies, such as project concept notes, pre-

feasibility and feasibility studies. The PPP node follows a dynamic structure, wherein the team membership is revamped according to the needs and priorities of the projects. To ensure accountability at the highest level within the GCA, each member of a node, except for the accounting officer, is of the same rank as a head of department.

LEVERAGING MULTILATERAL ASSISTANCE TO STRENGTHEN THE PPP ENABLING ENVIRONMENT IN KENYA

The Government of Kenya collaborated with the World Bank in February 2013 under the Infrastructure Finance Public-Private Partnerships (IFPPP) project to work towards the establishment of a stable, predictable and transparent investment environment, along with a pipeline of finance-worthy projects. The US \$40 million program is aimed at three key areas of development: i) enabling environment; ii) project pipeline; and iii) project financing. As of September 2018³, the program is supporting more than 71 projects at various stages of development. Key program outcomes are summarised below:

i) Institutional reform and capacity building support – After the enactment of the PPP Law in 2013, the IFPPP established well-functioning PPP institutions by strengthening the central PPP Unit and creating more than 57 PPP nodes⁴. Under the IFPPP project, hands-on, skill-based and project-based training was offered to strengthen the capacity of the PPP Unit staff and the project teams. Separate programs were conducted for a select group of officials under the APMG's PPP Certification Program⁵.

ii) Dedicated facility for project preparation – The government established a separate project development fund – the Project Facilitation Fund (PFF) – to support project preparatory studies for PPP projects. The PFF was established as a multi-purpose fund to provide financial assistance to:

- support GCAs in the preparation, appraisal and tendering phases of their PPP projects;

- support the activities of the PPP Unit in the delivery of its mandate;
- extend viability gap funding to PPP projects; and
- provide a source of liquidity to meet any contingent liabilities arising from a PPP project

The World Bank has also developed a detailed operational manual for the fund.

iii) FCCL Management Framework – The Public Debt Management Office (PDMO), a department within the National Treasury, manages a progressive two-stage Fiscal Commitment and Contingent Liabilities (FCCL) Framework, which is built on both quantitative and qualitative (option pricing model and Monte Carlo Simulation⁶) methodologies to evaluate risks arising from PPPs. The FCCL assessment is undertaken in two stages: i) feasibility stage to review risk allocation, affordability and sustainability; and ii) negotiation stage prior to contract award to review the variation in risks between GCA estimates and market feedback. The PDMO is required to publish all PPP FCCLs in the Annual Debt Report and the Medium-Term Debt Management Strategy.

iv) Transparency and disclosure – The program has strengthened the enabling environment by emphasising the development of transparency and disclosure practices. The PPP disclosure portal provides considerable literature on the existing PPP processes and all non-confidential information related to PPP projects. The PPP Unit is mandated to act as a central repository of PPP projects and undertake continuous monitoring and comparative assessment (ranking) of PPP projects.

³ PPP Program status report, PPP Unit Kenya <https://pppunit.go.ke/wp-content/uploads/2018/10/Kenya-PPP-Pipeline-Status-Report-September-2018.pdf>

⁴ As of June 2017, <https://www.gtai.de/GTAI/Content/DE/Trade/Fachdaten/PRO/2017/07/Anlagen/PRO201707075012.pdf?v=1>

⁵ The APMG PPP Certification Program is an initiative of the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank (IDB), the Islamic Development Bank (IsDB), the Multilateral Investment Fund (MIF), the World Bank Group and the Public-Private Infrastructure Advisory Facility (PPIAF), to provide infrastructure practitioners with a definitive credential demonstrating alignment with international PPP good practice.

⁶ The Monte Carlo Simulation is a technique used to understand the impact of risk and uncertainty in financial, project management, cost, and other forecasting models.

PROJECT PREPARATION LANDSCAPE

Project preparation activities are decentralised in Kenya, with the line ministries and their agencies and departments responsible for project preparation at both the federal and sub-national level. The steps in project preparation vary between PPPs (guided by the PPP Act 2013) and publicly financed projects. A snapshot of the existing project preparation landscape is summarised below:

Project conceptualisation and planning. The project identification and planning framework in Kenya is guided by a hierarchical planning process managed by the National Treasury (NT). At the federal level, the NT prepared Vision 2030, which sets out long-term development objectives to transform Kenya into “a newly-industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment”. Vision 2030 is implemented through five-year plans (the current plan is the Medium-Term Plan III (2018-2023)), which provide medium-term reform actions and a pipeline of programs and projects to be implemented. The national level plans are complemented by county level plans.

PPP project preparation. The steps in project preparation for PPP projects are guided by the PPP Act 2013 and the PPP guidelines. After the project conceptualisation stage, the GCAs initiate the preparation of project pre-feasibility and feasibility studies. The GCAs submit a list of potential PPP projects along with the pre-feasibility report or a project concept note to the central PPP Unit, which undertakes independent screening and decides on the PPP suitability of the proposal (utilising the standard PPP Screening Tool ⁷ by the World Bank) to finalise a list of projects amenable to the PPP approach. The approved project pipeline is disclosed in the project disclosure portal and the PPP project pipeline report is available on the PPP Unit’s website.

During the feasibility stage, the project appraisal team of the GCAs are responsible for project feasibility studies, with the assistance of external transaction advisors. The feasibility stage requires detailed assessments of socioeconomic impact, financial viability or bankability, affordability, market and risk identification. The PPP projects are assessed and approved, hierarchically, by the PPP Unit, the PPP Committee and the National Cabinet. The feasibility report is submitted to the PPP Unit for approval. The PPP Unit submits the feasibility report to the PDMO within the National Treasury for FCCL approval. The National Treasury, through its PDMO division, conducts an assessment of fiscal risk and contingent liabilities of a project and forwards the recommendations to the PPP Committee for its consideration. In the case of state-owned enterprises (SOEs), to ensure the quality of projects, the feasibility study is reviewed by the Project Committee of that SOE and approved by the Board. The feasibility study is thereafter submitted to the Cabinet Secretary for the line ministry or County Executive Committee member for the relevant county department and forwarded to the Cabinet Secretary, National Treasury or County Executive Committee Member for Finance for independent review and concurrence.

Public investment projects. The public investment projects are largely implemented by the GCAs, which are reviewed and incorporated by the National Treasury as part of the budget preparation process. The project concept notes are submitted during the annual budget cycle, which are reviewed by the NT for linkage to national plans and priorities. Kenya has recently embarked on a comprehensive reform process to strengthen the public investment management framework with the introduction of the Public Investment Management (PIM) Guidelines 2018 (Draft).

⁷ <https://pppknowledgehub.org/tools/tools-assess-whether-implement-project-ppp#ppp-screening-tool>

DRAFT PUBLIC INVESTMENT MANAGEMENT (PIM) GUIDELINES – STRENGTHENING THE PUBLIC INFRASTRUCTURE APPRAISAL PROCESS

The Draft PIM Guidelines⁸ have been recently developed by the National Treasury of Kenya to streamline the use of government resources on projects at the national and county level as part of the reform efforts in public finance management. The PIM Guidelines are expected to play a strong role in strengthening the quality of project preparation, especially for the major publicly financed projects.

The existing public investment management system is constrained by the absence of an effective quality assurance framework, leading to sub-optimal project selection and structuring. There are no standard manuals or procedures outlined for project studies, appraisal or selection, leading to unstructured appraisal and review processes. The absence of an independent review system further constrains the quality of project preparation. Beside environmental assessments carried out by the National Environment Management Authority (NEMA), there is no independent review to challenge project design, assumptions, justifications and costing etc. Further, the administrative overheads (associated with the budget preparation process) and information asymmetry severely restrict the capacity of NT to act as a gatekeeper in project selection. In some cases, the feasibility studies were conducted after the project had been approved, while in other cases, new projects have been misrepresented as ongoing projects to avoid rules which limit new projects.

To address these challenges in public investment planning, the NT introduced the Public Investment Management (PIM) Guidelines 2018 (Draft). The PIM Guidelines bring in standardised processes (national and county level) for the entire project management cycle, including planning, identification, feasibility assessment, approval and budgeting. The guidelines shall be supported by capacity development of the NT and the GCAs. The NT shall be supported by a dedicated PIM unit to support the monitoring and enforcement of the PIM Guidelines. The GCAs shall be supported by Project Committees (dedicated teams within the GCAs) in undertaking the review and appraisal of project preparation documents (such as project concept notes and feasibility studies), followed by submission and coordination with the NT. The project committee shall include the following members: head of the GCA, members

of the planning, GCA and finance departments, and four expert members (with expertise in the project domain). The guidelines also stipulate that the cost of a feasibility study shall not exceed 0.5% of the total project cost and mandate the Accounting Officer to take special permissions from the NT in case the value exceeds this amount.

The investment cycle, as reflected in the Draft PIM Guidelines 2018, comprises of a five-stage process: (i) project identification and planning; (ii) project feasibility and appraisal; (iii) project selection and budgeting; (iv) project implementation, monitoring, and evaluation; and (v) project reporting and disclosure. The guidelines provide a unified process of initiation and preparation of project studies. They also provide standard templates for concept notes and feasibility reports. Projects go through a multi-stage approval based on the size of investment as follows:

- i) Project cost up to Ksh. 100 million⁹ – Only project concept notes need to be prepared. The concept notes shall be prepared internally by the GCAs and approved by the Project Committee.
- ii) Projects above Ksh. 100 million – Concept note and feasibility reports need to be prepared. The concept notes must be reviewed by the NT before initiating the feasibility stage. The involvement of the NT at the concept stage will improve the screening process and assure greater project quality, especially in high-value projects. The National and County Treasuries will be responsible for approving the feasibility report and the inclusion of the project in the pipeline of projects at both the national and county level.
- iii) The project shall also be re-appraised in cases where a project has been in the pipeline for more than three years without budget provision, a change in project scope, an increase in project cost of more than 25% of the original cost, or force majeure.

The interventions envisaged under the PIM Guidelines are expected to strengthen the project preparation standards in Kenya. Some of the immediate outcomes of the guidelines will include strengthening the quality of the project pipeline, mitigating project risks, the standardisation of project preparation processes, improving public sector capacity (in the GCAs and the NT) to plan and deliver on large-value projects, and strengthening transparency and accountability for the portfolio management of public investment projects.

8 The draft version of the guidelines was uploaded to the National Treasury portal for citizen's comments in September 2018.

9 Approximately US \$978,000, as of December 2018.

3. Guidance for project preparation

Guidance	FRAMEWORK FOR THE MANAGEMENT OF FISCAL COMMITMENTS AND CONTINGENT LIABILITIES (FCCL)
Owner	National Treasury of Kenya
Project development stage	Project feasibility and appraisal
Details	<p>The FCCL Framework was prepared in assistance with the World Bank under the IFPPP project. The FCCL Framework comprises FCCL guidelines and the FCCL technical manual. The FCCL guidelines provide a description of the assessment and approval of FCCLs associated with PPP projects. The FCCL technical manual's objective is to provide a detailed description of the FCCL Framework and methodologies for quantifying risks, and illustrate the use of the long-term fiscal planning tool and template for the project risk matrix.</p>
Guidance	PROJECT DISCLOSURE
Owner	PPP Unit, National Treasury of Kenya
Project development stage	Project marketing
Details	<p>The "Project Disclosure Portal" was launched in 2018 by the Government of Kenya with support from the World Bank, as a push to improve transparency of information on PPP projects. The portal is a digital platform that provides information on multi-sectoral projects at various stages of the PPP lifecycle. It serves as a marketing and stakeholder awareness tool, which provides the rationale for choosing the PPP model as the procurement method, the rationale for unsolicited proposals, scope, project estimated costs, likely sources of revenue and associated project documents. The PPP Unit is responsible for managing the portal.</p> <p>Link for further details: https://pppunit.go.ke/</p>

4. Project case example: Nairobi – Nakuru Mau Summit Highway

QUICK FACTS



VALUE (IN US \$ MILLION)

700



STATUS

**Procurement stage –
RFP evaluation**



PROJECT OWNERSHIP

**Kenya National Highways
Authority (KeNHA)**



SUPPORT AGENCIES

**KeNHA, Government
of Kenya, Intercontinental
Consultants and
Technocrats Pvt. Ltd.**



SOURCE OF PROJECT
PREPARATORY FINANCING

**World Bank funding
through the IFPPP project**

PROJECT BRIEF

The Nairobi – Nakuru Mau Summit Highway is a brownfield project, involving the expansion and improvement of a two-lane road into a four-lane dual carriageway from Rironi in Nairobi to Mau Summit in Nakuru County.

The stretch of road is strategically important to the country and forms part of an international corridor connecting land-locked countries, such as Uganda, Rwanda, Burundi, South Sudan and the Democratic Republic of Congo, to the Port of Mombasa. Considering that this stretch of road was amongst the most dangerous roads on the planet (according to the World Health Organisation), the project studies aimed to re-design the highway to improve the safety, quality and capacity of the road.

The project is being implemented by the Ministry of Transport and Infrastructure, represented by the Kenya National Highway Authority (KeNHA). It is part of the first-mover PPP program, supported by the Kenya Infrastructure Finance Public-Private Partnership (IFPPP) project, which financed the project studies. Feasibility studies included technical studies, financial feasibility, a preliminary environmental and social impact assessment, and a resettlement action plan.

The Government of Kenya (GoK) will levy tolls on users and compensate private players through availability payments.

The Intercontinental Consultants and Technocrats Pvt. Ltd. and its consortium were appointed as transaction advisors to assist KeNHA in the preparation of the project studies, bid management and financial closure of the project. The project has been designed under a 30-year Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT) arrangement. The private concessionaire shall be responsible for the construction, operation and maintenance of the highways, separated into the following segments:

- i) widening of 175km of the A8 highway between Rironi and Mau Summit and turning it into a four-lane dual carriageway, including operation and maintenance;
- ii) strengthening of 58km of the A8-South highway between Rironi and Naivasha, including operation and maintenance; and
- iii) operation and maintenance of 12.43 km of the A8 highway between Gitaru and Rironi.

The concessionaire will be compensated by KeNHA through availability payments linked to performance. The government shall hire a toll operator through a separate contract.

PROJECT TIMELINE

2010	The National Transport Policy identified several policy initiatives for the road sector in Kenya
2012	Kenya Infrastructure Finance Public-Private Partnership (IFPPP) project launched
2013	PPP Act enacted
Feb-15	Intercontinental Consultants and Technocrats Pvt. Ltd. and its consortium hired as transaction advisors
Nov-16	Feasibility study approved and RFQ for the project launched
Feb-17	RFQ submission
July-17	RFP documents issued
April-18	RFP close date
2019	Scheduled financial close

LEARNINGS FOR PROJECT PREPARATION

1. Multilateral assistance was key in the planning and development of the project

The project was developed as one of the strategic roads under the first-mover PPP program for the road sector in Kenya and was supported by the World Bank-assisted IFPPP project launched in 2012. The multilateral assistance program has helped: i) strengthen the enabling environment for project preparation; ii) develop internal public sector capacity; iii) provide project preparatory financing; iv) strengthen the quality assurance standards; and v) facilitate consultations with investors and private stakeholders.

The broader objective of the IFPPP project was to facilitate the establishment of an effective enabling environment for project preparation and identify ways to increase private investment. The PPP Act 2013 and the guidelines developed under the IFPPP project formed the guidance for the transaction advisors, as well as KeNHA, in undertaking the project studies and review. The program also supported the strengthening of internal public sector capacity in KeNHA and the PPP Unit through specific hands-on, skill-based and project-based training. The preparatory studies for the project were financed by the World Bank facility, which helped KeNHA to hire quality transaction advisors to undertake the project studies. The World Bank is also playing an important role in engaging with the potential investors to expedite financial close.

2. Project structuring to facilitate the deepening of local financial markets

The depth of the financial markets is often cited as an important indicator of the maturity of a PPP market, as well as the quality of the project preparation in a country, especially because of the high-quality standards prescribed by the financial markets. The project was developed as part of a broader objective to draw in long-term finance from local investors to finance the project under the Maximizing Finance for Development (MFD) approach¹⁰. Under the approach, the project and broader ongoing engagement aim to promote capital market solutions to crowd-in local financiers into infrastructure PPP projects to create a fiscally sustainable way to finance PPPs.

¹⁰ The Maximizing Finance for Development (MFD) approach is the World Bank Group's approach to systematically leverage all sources of finance, expertise, and solutions to support developing countries' sustainable growth, in line with the Sustainable Development Goals (SDGs).

In line with this approach, the project structure and the preparatory documents included specific incentives for the provision of local currency financing for the project, such as the provision of the availability payment model and positive scoring for bidders who indicate a lower proportion of the availability payment indexed to foreign currencies. Additionally, the World Bank's International Development Association (IDA) Payment Guarantee and possible Loan Guarantee to backstop the availability payment of the GoK for the project improved the attractiveness of the project to local institutional investors.

3. Communicating the government's strong commitment towards the project to the market participants and incorporating their feedback to enhance project bankability

The project received strong commitment from the Government of Kenya, due to the project's alignment with the national and sectoral plans, as well as its categorisation under the first-mover PPP program. The government's strong commitment to the project is manifested in the support mechanisms and risk management practices promoted under the project structure. The central PPP Unit and the project agency (KeNHA) undertook active market engagement during the feasibility and procurement stages, which helped them identify the key areas of concern with respect to project structure and risk allocation. The inputs received during the early stages, related to the technical, financial, key risk allocation and legal aspects of the project, were also communicated through separate one-on-one Competitive Dialogues (CD) with each bidder during the bidding process.

Two specific areas of government intervention include the management of foreign exchange risk and toll collection risk, which were critical to drive investor participation. The government provided upfront support to undertake local currency inflation risk, exchange rate risk and local currency interest rate risk on the roads PPP projects through the payment mechanism in the concession agreements. Being one of the earliest toll road projects in the country, the project also had substantial toll risks. The local

investors who were consulted flagged concerns associated with the enforcement of toll collections and the general demand risks. To address these concerns, the Government of Kenya established a multiple level structure for supporting debt repayment: i) a ring-fenced National Toll Fund will be created to collect the tolling revenue from road PPP projects; ii) the deficit between the toll revenue and service payments shall be filled by the GoK; and iii) the World Bank's IDA and payment guarantee. The government also made it clear that it was committed to levying the toll on users and no free alternative routes would be offered.

4. Standardisation of project preparation processes to rationalise project preparation costs, and use of parameters for assessing project design options

The Ministry of Transport, Infrastructure, Housing and Urban Development, through its first-mover road PPP program, identified five strategic priority road sector projects. One of the objectives for choosing various projects under a single program was to standardise project preparation to enhance public sector capacity and rationalise project preparation costs. Therefore, all the projects were structured as availability projects with no transfer of revenue risk to the private party. Further, a standardised risk allocation and tender documents were prepared with the necessary project-specific variations.

During the feasibility stage, the international consultant undertook a comparative assessment of around twelve alternative alignments through subjective parameters including lifecycle cost, engineering challenges, resettlement impact, environmental sensitivity, and land acquisition need. The alignments were given scores based on each of the parameters as follows: 0-10: Low; 10-20: Medium; 20-30: High; and 30-40: Very High. The alignment with the maximum aggregate score and that which offers the lowest land acquisition was considered for the final design.

Korea

1. Noteworthy practices for project preparation



ENABLING ENVIRONMENT FOR PROJECT PREPARATION

Clearly defined policy framework for government support, and managing market promotion and fiscal risk trade-off in projects

The Government of Korea (GoK) has introduced a range of interventions to support private sector investment in infrastructure. Key support products which aid quality project preparation include the granting of land expropriation rights to the concessionaire, a risk sharing scheme, bonus evaluation points for unsolicited proposals, and compensation of the proposal costs of unsuccessful bidders. While there have been cases of excessive risk transfer to the government in the past, the GoK has been able to evolve through lessons learned to establish clarity and transparency in scheme designs.



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Establishment of a specialised entity for the independent review of project studies

The Government of Korea established the Public and Private Infrastructure Investment Management Center (PIMAC) within the Korea Development Institute (KDI) to serve as an independent reviewer of project studies and advise the line agencies on project implementations. PIMAC acts as a gatekeeper for projects, a capacity building agency and a centre of research. PIMAC enhances the efficiency and transparency of public and private investment preparation and procurement, and also provides consulting services and research to improve related policies and analytical tools.



PROJECT APPROVALS AND QUALITY ASSURANCE

Development and periodic review of quality assurance tools

Project preparation in the Republic of Korea (Korea) is aided by a wide array of tools (largely owned by PIMAC) that are relevant to each stage of project preparation. Key tools for project assessment include the Pre-Feasibility Study (PFS), Re-assessment Study of Feasibility (RSF), Value Engineering (VE) and Re-assessment of Demand Forecast (RDF). The tools were strengthened through a learning-by-doing approach.

VFM check and transparency in managing unsolicited proposals

While unsolicited proposals globally have faced several challenges due to concerns regarding competition and transparency, Korea has been able to make reasonable strides, backed by a positive policy framework. The Government of Korea initiated actions to strengthen the unsolicited project proposal procurement landscape, including a mandatory Value for Money (VFM) assessment for all unsolicited projects (to promote transparency in project selection and early assessment of risks), incentivising the project proponents during bid evaluation, and compensating the losing bidders for the cost of preparing their project bid.

2. Snapshot of project preparation activities

The Republic of Korea (Korea) is considered a pioneer in implementing institutional and process reforms to improve the quality of project preparation.

Korea's focus on project preparation has evolved since the Asian financial crisis of 1997, with greater impetus laid on strengthening public investment management processes. Korea has a long history of private participation in infrastructure starting in the late 1960s. The early period of private investment (1968 to 1994) was characterised by largely piecemeal interventions, which supported about 93 projects costing US \$2.7 billion in private investment. The first major phase of PPPs in Korea started in 1994 with the

initiation of the Private Participation in Infrastructure (PPI) program by the Korean Government under the Promotion of Private Capital in Social Overhead Capital Investment Act. However, the program achieved limited success, especially with the onset of the Asian financial crisis of 1997. The second phase of PPPs in 1999 and the third phase in 2005 were more successful, with a considerable number of projects executed as PPPs, especially in the social infrastructure and transport sectors. The evolution of Korea's PPP framework demonstrates the importance of maintaining a balance between investor demand and fiscal discipline.

EVOLUTION OF INFRASTRUCTURE INVESTMENT MANAGEMENT IN KOREA

Although Korea has sought to put in place institutions to manage infrastructure investments since the mid-1970s, including the creation of the now obsolete Economic Planning Board (EPB) for investment planning and the Deliberative Committee (IPDC) for investment reviews, the major transformational reforms happened in 1994, with the introduction of the Total Project Cost Management (TPCM) system and the Private Capital Inducement Act (PPP Act). Under TPCM, the Ministry of Economy and Finance (MOEF) closely monitors expenditure on large-scale projects. However, the introduction of the PPP Act did not translate into large investments, owing to limited risk evaluation, lack of government support, limited staff experience, inadequate process rigour and limited budgets.

Following the Asian financial crisis, the Korean Government introduced a slew of measures (in 1999) to improve the public budgeting system and removed some of the constraints to the PPP model. Accordingly, the Enforcement Decree of the Budget and Accounts Act established that a

separate Pre-Feasibility Study (PFS) undertaken by the Public Investment Management Center (PIMA) for large projects be made mandatory. In addition, a new PPP law, 'The Act on Private Participation in Infrastructure', was adopted. The Private Infrastructure Investment Center of Korea (PICKO), was created to provide project preparation support, including the preparation of feasibility studies, project reviews, and evaluation. While PICKO was focused on reviving private sector investment, PIMA was created to ensure quality control and independent reviews for large public investment projects.

Momentum in the development of infrastructure picked up further post-2005, following a second amendment to the PPP Act. PICKO and PIMA were merged to form the Public and Private Infrastructure Investment Management Center (PIMAC) under this Act. Since then, the PPI Act 2005 and the PPI Act Enforcement Decree 2005 have provided the overarching legal framework for both public and private infrastructure investments. The PPP Basic Plan and the PPP Implementation Guidelines provide the framework for project preparation and implementation.

INSTITUTIONAL FRAMEWORK

The Republic of Korea has a unified framework for the project preparation of public and private projects. Project preparation takes place largely in the respective line ministries, with the Ministry of Economy and Finance (MOEF) acting as the apex institution for infrastructure preparation. The Public and Private Infrastructure Investment Management Center (an affiliate of the Korea Development Institute (KDI)) serves as a think-tank and capacity development agency providing technical support and guidance for line departments and the MOEF in managing project preparation, procurement and implementation.

Under the PPP Act, a PPP Review Committee (PRC) is organised and managed by the MOEF. The PRC considers matters concerning the establishment of major PPP policies and key decisions in the implementation of large-scale PPP projects. The PRC is composed of the Minister of Economy and Finance (chair), vice ministers of the line ministries in charge of implementing PPP projects, and private sector experts with knowledge and experience in PPP projects.

PROJECT PREPARATION LANDSCAPE

A snapshot of the project preparatory landscape in Korea is summarised below:

Project conceptualisation and planning. At the beginning of every year, line departments prepare a medium-term (five-year) project plan, based on which MOEF finalises its National Fiscal Management Plan (NFMP). The NFMP serves as the planning and fiscal management reference document for line departments to prepare their respective annual budget plans. NFMP 2017-2021 envisages an aggregate expenditure of KRW 2270 trillion (US \$2 trillion), with government spending on infrastructure estimated at KRW 16-20 trillion (US \$14-18 billion).

Project feasibility studies and structuring. This stage may involve multiple agencies, depending on the nature of project assistance. While feasibility studies are managed largely by the line departments, PIMAC plays a significant role in the case of PPP projects and preparatory studies for large projects. In the case of large projects¹, MOEF approval is required before initiating the feasibility study. This MOEF approval is based on the recommendation of the Pre-Feasibility Study (PFS) report by PIMAC. In the case of a PPP project, PIMAC undertakes an independent assessment of the line department feasibility studies through a Value for Money (VFM) assessment. Based on the VFM assessment results, MOEF and PIMAC suggest alternate financing models for maximising benefits. Between 1999 and 2017, PIMAC conducted VFM tests for more than 526 projects and the PFS test for 685 projects.

¹ Projects where the total project cost is more than KRW 50 billion (US \$44 million) and which require central assistance of more than KRW 30 billion (US \$27 million).

Project appraisal and review. The project appraisal and review follow distinct paths under a unified framework for PPPs versus public sector projects. The case for implementing a unified framework has been built based on the successful experiences of the United Kingdom (UK) and Australia. The project selection and structuring of PPPs or projects procured traditionally are determined by the VFM considerations under each model. In this regard, the Government of Korea established a unified and transparent framework for project appraisal based on the independent assessments undertaken by PIMAC. The objective of the study is to compare the VFM levels across both procurement options and select the one with the better value for money. The assessment also helps in the early identification of risks, leading to better project structuring. In the case of solicited projects using public financing, these are part of the budget plan of the line department, subject to approval from MOEF. In the case of solicited projects using the PPP model, project approval is provided by the PPP Review Committee (PRC), chaired by MOEF, where the project size is greater than KRW 200 billion (US \$178 million) or the central government subsidy exceeds KRW 30 billion (US \$27 million). In other cases, the line departments approve the project and notify MOEF and PIMAC. Under the unified framework, PIMAC supports Government Contracting Authorities (GCAs) in two phases: (a) the decision to proceed (outcome of the Pre-Feasibility Study); and (b) the decision to implement, including the choice of PPP versus public investment (according to the outcome of the VFM assessment).

- Pre-Feasibility Studies (PFS) for large-scale projects were introduced in 1999 and formalised in 2006 to improve rigour in project preparation. To be completed within a timeframe of six months, the PFS assigns analytical hierarchy process (AHP) weights to different facets: 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 feasible. 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. Between 1994 and 1998, 32 of 33 large projects were approved as feasible. Following the introduction of the PFS and stringent guardrails, 434 of the 685 projects reviewed by PIMAC were deemed feasible. The process is estimated to have enabled budgetary savings of KRW 141 trillion (US \$101 billion) to 2017.
- Value For Money assessment – The Competent Authority uses VFM assessment reports as the basis to make a judgement on whether to move forward with the PPP project. The VFM assessment is strongly controlled by PIMAC and supports decision-making at three stages: (i) decision to invest; (ii) decision to implement by PPP; and (iii) formulation of a PPP alternative to present a best practice for implementation. The VFM assessment reports are an important input for the tender evaluation and in negotiations.

Financing project preparation. Project preparatory activities for public and private projects are largely financed by budgetary allocations at the central and sub-national level. In the case of unsolicited projects using PPP financing, the project plan is prepared by the private sector, while the project review is undertaken by PIMAC.

PIMAC – BUILDING QUALITY AND RIGOUR IN PROJECT PREPARATION

The project preparation landscape in Korea has historically been the responsibility of individual line ministries and the relevant agencies. The absence of an independent review process with clear and transparent assessment criteria led to a considerable drain on resources due to unviable proposals. It is within this context that the Government of Korea established PIMAC as a gatekeeper for the independent assessment of projects. MOEF's role in the project preparation

process reflects a process of continuous learning. Created to enable comprehensive and systematic management of both traditional public investment and PPPs, MOEF has progressively adopted tools to strengthen quality assurance standards: Total Project Cost Management (TPCM) in 1994, the Pre-Feasibility Study (PFS), Re-assessment Study of Feasibility (RSF) and Performance Evaluation (PE) in 1999 (post Asian financial crisis), Value Engineering (VE) in 2000, and the Re-assessment of Demand Forecast (RDF) in 2006.

continued...

During this process, PIMAC has supported MOEF by providing rigorous research on enhancing methodologies and tools for quality assurance standards and conducting project appraisals including PFS, RSF, and RDF on large-scale infrastructure processes. The tools were updated periodically by incorporating lessons learned and best practices from project cases.

PIMAC is organised along three divisions, namely: (i) the public investment division, which conducts and manages PFS, supports policy research on public investment management, and manages the Reassessment Study of Feasibility (RSF); (ii) the public-private partnerships division, which formulates PPP Annual Plans and develops PPP guidelines, conducts evaluations of PPP projects, undertakes research on PPPs, and supports the financing and refinancing of PPPs; and (iii) the policy and research division, which supports research on project evaluation methodology, and undertakes capacity building and training, international relations, infrastructure database management, state-owned enterprise (SOE) project appraisal, and assessment of tax expenditure projects.

MOEF and PIMAC have spearheaded the implementation of multiple policy and process interventions to improve the quality of project preparation and thereby reduce wasteful expenditure, including the following:

- *Independent review process for project approval:* PIMAC provides an independent review for project preparation by conducting various studies and evaluations, including the PFS, RSF, RDF and feasibility study and VFM analysis for PPP projects. While the PFS provides an initial filter for project selection, the RSF and RDF reformulate and independently check outcomes of feasibility studies and demand forecasts. PIMAC assembles a multi-disciplinary expert team, along with its in-house staff, for these evaluations. The review leverages PIMAC's multi-sectoral internal know-how and brings in expertise from external experts, including university professors (such as for transportation demand analysis), and private engineering firms (for cost estimation).
- *Stakeholder engagement in project development:* PIMAC's PFS studies are guided by a transparent stakeholder engagement process and follow a 'Five Meeting Rule'. The Five Meeting Rule includes: i) a Progress Check meeting; ii) a KDI 1st Check meeting; iii) a MOEF 1st Check meeting; iv) a KDI 2nd Check meeting; and v) a MOEF 2nd Check meeting. The review includes participation by the MOEF, line departments, PIMAC and field specialists from the private and public sector.
- *Mapping guidelines for preparatory activities:* PIMAC has formulated guidelines for all major project appraisal and approval processes, including feasibility and VFM test guidelines, preparation of Request for Proposals (RfP), tender evaluation, Build Transfer Lease (BTL) project management etc. In a bid to standardise output quality, PIMAC has also prepared standard output specifications by facility (school, military housing, and integrated school facilities), and standard guidelines for PFS in general, for the road and railway sectors.
- *Risk allocation frameworks and cost management:* PIMAC has revised risk-sharing mechanisms, incorporating lessons from the former Minimum Revenue Guarantee scheme, to enhance private interest while rationalising government support. PIMAC also undertakes resource (cost and time) reviews for large projects at each stage of the project lifecycle under its Total Project Cost Management framework.
- *Capacity building program:* PIMAC offers periodic capacity building programs for line ministries, local government officials and technical staff. This includes domestic programs sponsored by PIMAC and the MOEF and global programs by multilateral agencies, and is aimed at inculcating best practices from PPP processes globally.

The efficacy of Korea's policy framework and project preparation processes is reflected in its infrastructure delivery outcomes. From 1999 to 2017, a total of 712 PPP projects have been initiated and the total investment amount of PPP projects was recorded at KRW 108 trillion (US \$66 billion).

3. Guidance for project preparation

Guidance GENERAL GUIDELINES FOR PRELIMINARY FEASIBILITY STUDIES	
Owner	MOEF
Project development stage	Project pre-feasibility stage
Details	<p>The “General Guidelines for Preliminary Feasibility Studies” (hereinafter “General Guidelines”) have served as a basic manual for conducting all preliminary feasibility studies and include the methods and standards for doing so. They comprehensively suggest theoretical and practical ground rules concerning the evaluation of public investment projects. They also serve as a basic manual for standard guidelines in studies on different sectors, such as roads, railroads, ports, culture and tourism, and water resources. Originally studied and established by KDI PIMAC, these guidelines have been owned and managed by MOEF since 2017.</p> <p>Link for further details: https://www.kdi.re.kr/kdi_eng/kdicenter/general_guidelines_for_pfs.pdf http://www.law.go.kr/admRulSc.do?tabMenuId=tab107#liBgcolor12 (in Korean)</p>
Guidance SECTOR-SPECIFIC GUIDANCE ON PRE-FEASIBILITY STUDIES	
Owner	KDI PIMAC
Project development stage	Project pre-feasibility stage
Details	<p>PIMAC, which leads the preparation of pre-feasibility studies in Korea, has prepared sector-specific guidelines for the preparation of pre-feasibility studies in accordance with the General Guidelines for Preliminary Feasibility Studies. It examines the efficiency and appropriateness of a project by reviewing its economic and policy feasibility, as well as investment priorities and optimal investment timing, amongst others. The sectoral coverage is fairly diverse and includes culture and tourism, airports, ICT, medical facilities, roads, railways, ports, dams, and water.</p> <p>The role of PIMAC in Preliminary Feasibility Studies also includes the development and revision of policies and methodologies, as well as the construction of the PFS database.</p> <p>Link for further details: http://pimac.kdi.re.kr/guide/rguide_list.jsp</p>

Guidance	RE-ASSESSMENT STUDY OF FEASIBILITY
Owner	MOEF
Project development stage	Project studies and during implementation
Details	<p>The Re-assessment Study of Feasibility (RSF) is undertaken for projects which have utilised higher than expected cost or time resources, leading to concerns over the validity of the original feasibility study. While the RSF is generally initiated for projects which are in the implementation stage, there are instances when the RSF may be conducted during the preparation stage as well (mainly due to the delay between the finalisation of the PFS/feasibility study and project approval).</p> <p>The purpose of the RSF is to prevent budget waste and to improve fiscal management efficiency by transparent and fair decision-making through the objective and neutral investigation of the validity of a large-scale government project.</p> <p>Link for further details: http://pimac.kdi.re.kr/guide/vguide_list.jsp http://www.law.go.kr/admRulSc.do?tabMenuId=tab107#liBgcolor1 (in Korean)</p>

Guidance	GUIDELINES FOR TOTAL PROJECT COST MANAGEMENT (TPCM)
Owner	MOEF
Project development stage	Project studies and approval
Details	<p>The purpose of these guidelines is to enhance the efficiency of fiscal spending by reasonably adjusting and managing, by each project phase, total project costs of large projects funded with the national budget or funds under Article 50 of the National Finance Act and Articles 21 and 22 of the Enforcement Decree of the same Act.</p> <p>The term “total project cost” in these guidelines means all costs and expenses during the lifecycle of the project. The TPCM guidelines cover the following phases:</p> <p>Phase I – Project Conception</p> <p>Phase II – Preliminary Feasibility Study</p> <p>Phase III – Feasibility Study and Establishment of Basic Plan</p> <p>Phase IV – Basic Designing</p> <p>Phase V – Engineering Design</p> <p>Phase VI – Awarding and Execution of Contracts</p> <p>Phase VII – Construction</p> <p>The guidelines include general directions on each of the project assessment tools utilised by line GCAs and/or PIMAC, including PFS, RSF, and RDF.</p> <p>Link for further details: https://www.kdi.re.kr/kdi_eng/kdicenter/guidelines_for_tpcm.pdf http://www.law.go.kr/admRulSc.do?tabMenuId=tab107#liBgcolor1 (in Korean)</p>

4. Project case example: Seoul – Jemulpo Tunnel

PROJECT BRIEF

The Seoul-Jemulpo tunnel project is a 7.53 km-long road tunnel project implemented on a Build-Transfer-Operate (BTO) basis below Jemulpo Road, which starts at the Shinwoel Interchange in Seoul. The existing road stretch was constrained by limited space for road widening, which led to environmental concerns, and high fuel wastage, adding to the overall strain on the city's economy.

The Seoul Metropolitan Government (SMG) is responsible as a competent authority for this US \$400 million² project. The project concessionaire was selected through a competitive bidding process. A special purpose vehicle (SPV), Seoul Tunnel Company Limited and others. The project concessionaire was a consortium led by Daelim Industrial Company Limited and others. The proposed tunnel, strategically located in a high-density corridor connecting major cities like Seoul, Incheon and Gyeonggi, was expected to serve more than 60,000 cars while cutting down travel time. The tunnel project will enable the previous congested motorway route to be transformed into a more eco-friendly space which is more accessible to local residents, and includes two to four traffic lanes, parks and bicycle routes. The project shall also include the provision of exclusive green spaces and incorporate neo-urban designs to facilitate placemaking³.

The project was initiated by an unsolicited proposal in 2007 from the private sector to build the underground tunnel. A consortium, led by Daelim Industrial Co., Ltd., was chosen as the preferred bidder for negotiations in 2011 after obtaining the necessary administrative approvals. The project is under construction and will be opened to traffic in 2020.

QUICK FACTS



VALUE (IN US \$ MILLION)

400



STATUS

Under construction



PROJECT OWNERSHIP

**Seoul Metropolitan
Government;
Seoul Tunnel
Company Limited**



SOURCE OF PROJECT
PREPARATORY FINANCING

**Primarily private sector
(unsolicited proposal)**



SUPPORT AGENCIES

KDI PIMAC

² The project cost was KRW 455 billion; Exchange rate considered is 1 KRW = US \$0.00089 as of 7 December 2018

³ Placemaking is a multi-faceted approach to the planning, design and management of public spaces.

PROJECT TIMELINE

Jul-07	Project studies submitted by private player
2008	Value For Money tests undertaken by KDI PIMAC
Jan-11	Notice for Proposal announcement
2011	Selection of preferred bidder for negotiations
2012	Negotiations for concession agreement by KDI PIMAC
2014	Signing of concession agreement
2015	Approval of detailed implementation plan and design including Environmental Impact Assessment (EIA)
2020	Expected completion of project

LEARNINGS FOR PROJECT PREPARATION

1. Establish transparent procedures to facilitate unsolicited proposals in BTO projects

Korea follows a unified framework for project preparation, with solicited and unsolicited proposals reviewed independently by PIMAC. This helps with adherence to expenditure controls and ensures that the full life costs of PPP projects are taken into account at the project approval stage. Learning from the fiscal challenges arising out of the Minimum Revenue Guarantee scheme, the government introduced rules mandating the preparation of feasibility studies for unsolicited proposal projects.

The project preparation of the Seoul-Jemulpo Tunnel project passed through multiple review stages. Following submission of the project proposal, PIMAC conducted a VFM assessment, undertaken in 2008. As part of the VFM assessment, PIMAC reviewed the cost-benefit analysis of the project, potential government payments, and comparison of the PPP route vis-à-vis public sector financing. Based on the results of the VFM test, the competent authority (the Seoul Metropolitan Government) undertook the decision to move forward with the project as a PPP.

2. Clearly define roles for project stakeholders

Korea has established well-defined roles for each stakeholder in the project preparation stage. The key project preparation stakeholders in the Seoul-Jemulpo Tunnel project include the project proponent (private company), the project owner (the Seoul Metropolitan Government), the apex agency (the MOEF), an independent reviewer (PIMAC) and the Ministry of Environment (for the Environmental Impact Assessment). The steps in project preparation were as follows:

- Preparation of project studies by the project proponent;
- Submission of project studies to the project owner/competent authority;
- Project owner, through the MOEF, requested PIMAC to initiate the Value For Money assessment;
- Results of the VFM assessment and specific recommendation on the project structure (including implementation as a PPP) shared with the MOEF and project owner;
- Announcement of RFPs by the competent authority assisted by PIMAC;

- Selection of preferred bidder and negotiations with the bidder by PIMAC;
- Finalisation of the concessionaire and contract award; and
- Application and approval of detailed implementation plan by the project owner/competent authority.

The sequence of project preparation steps indicates clearly demarcated roles for each stakeholder and project disclosure at each stage, which contributed to the overall efficiency and transparency of the project.

3. Incentivise the unsolicited project proponent during project implementation

Korea has established an innovative mechanism to incentivise the project proponent in the case of unsolicited project proposals. Under this mechanism, there is specific weighting for project proponents using bid evaluation criteria. According to the existing practices, the USP proponent can receive a bonus of up to 10% (of the total evaluation points) if the proposal is not amended by the public agency, and a bonus of up to 5% (of the total evaluation points) if the proposal is amended by the public agency. The level of bonus points shall be decided during the VFM stage.

For this project, the project proponent was awarded a preferential score of 0.5% of total points (50 points in the 1000-point evaluation scale). Additionally, the project proponent was also given a pass-through in the first stage of evaluation and automatically shortlisted for the technical and financial evaluation at the second stage.

4. Maintain independence in project evaluation through the bid process

The Seoul Metropolitan Government initiated a Request for Proposal to allow third party bidders to submit their proposals for the project, which brought transparency to the procurement process, as well as a fresh perspective to design and implementation. Proposals were strongly evaluated on the technical capabilities of the bidders. The bidders' perspective on the preparatory documents were sought and incorporated into the final design and implementation plan. The proposal evaluation was undertaken across two phases – Phase 1 (Pre-qualification) and Phase 2 (Detailed evaluation). During Phase 1, the bidders were reviewed to ensure basic technical qualifications and adherence to the rules stated in the bid documents.

The second stage evaluation is a multi-criteria evaluation with weightings for:

- the construction plan (210 points);
- operational plan (160 points);
- traffic model assessment (150 points);
- creativity in planning and citizen engagement (80 points);
- proposed toll levels (200 points); and
- government subsidy required (200 points) – for a total of 1000 points.

The Seoul Metropolitan Government was supported by a dedicated team to benchmark global best practices in construction management and comparisons of evaluation criteria, scope of work, fee structures, team organisation, scoring of proposals, quality management, safety programs and site supervision practices. The multi criterion evaluation methodology and the phased approach undertaken by the stakeholders were important inputs to strengthening the Detailed Engineering and Design Plan for Implementation (DEDPI).

Following the execution of the concession agreement in 2014, the private and public stakeholders collaborated to strengthen the design, environmental assessments and the citizen engagement processes. While the timing of this collaboration may not be an ideal preparatory practice, especially with the risks associated with environmental approvals, it led to the unintended benefit of greater ownership of the private player and reduced time between the approval of the DEDPI and construction.

5. Innovative citizen engagement methods to improve project branding and equity

With the implementation of the underground tunnel, the Seoul Metropolitan Government (SMG) initiated an innovative idea to transform the existing expressway into an eco-friendly space for citizens. The idea was promoted by the SMG in the Seoul Urban Design competition in 2013 under the theme "Towards Urban Integration". For the competition, the SMG requested design proposals from the citizens on the eco-friendly regeneration of the expressway, Jemulpo-gil, and the adjacent blocks in the west region of Seoul. The initiative helped to discover innovative elements in the project design, and also generated favourable brand equity for the project and its impact on the environment.

Mexico

1. Noteworthy practices for project preparation



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Programmatic approach to project planning and implementation

Mexico promotes a programmatic planning approach, which has helped to create quality in institutions, processes, and financing of infrastructure projects, especially in the core sectors of energy and transport.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

National plans supported by formal agreements for national government–local government coordination

The “Agreements of Coordination Framework” are agreements between national and state/municipal governments, aimed at the alignment of the municipal plans with the national plans and vision, and the promotion of coordination between agencies.



PROJECT PREPARATION FINANCING

Establishment of the National Infrastructure Fund (FONADIN) to support infrastructure financing, preparation and implementation

The role of FONADIN in providing a strong enabling environment for project preparation in Mexico is catalytic. Its functions include coordinating the identification of infrastructure needs and project pipelines, providing advisors to structure projects, project preparation facility support for studies, independent appraisal of feasibility studies and arms-length decision-making. FONADIN focuses on PPPs in highways, ports, airports, the environment, urban mass transportation, water and tourism.



PROJECT MARKETING AND STAKEHOLDER ENGAGEMENT

Robust project transparency standards

The “Mexico Projects Hub” is a unique project marketing tool that provides a snapshot of all the projects in the country at various stages of planning and implementation. The digital platform is considered first of its kind, with detailed information on projects, details of the project lifecycle, and reference documents.

2. Snapshot of project preparation activities

Project preparation activities are decentralised in Mexico, with federal and sub-national level Government Contracting Authorities (GCAs) undertaking them for their respective jurisdictions. While the federal government drove the infrastructure agenda historically, Mexico has embarked on greater decentralisation over the last two decades with the share of sub-national (state) investment in infrastructure increasing from 20% of total investment in the 1990s to around 40% in the 2010s. Mexico's project preparation is categorised by strong public sector capacity, established guidelines, and globally accepted disclosure practices.

Mexico has seen private investment in infrastructure pick up during the late 1980s in sync with Mexico's economic diversification from an oil-dependent economy and falling oil revenues. The country has seen active private participation in infrastructure since the 1990s, starting with the toll roads program, and subsequently expanding to other infrastructure sectors.

The National Infrastructure Fund (Fondo Nacional de Infraestructura, or FONADIN) was established in 2008 to accelerate private participation in Mexico's infrastructure. FONADIN has been instrumental in providing high-quality project preparatory assistance and financing for infrastructure. Today, Mexico is one of the leading economies in Latin America with an established framework for PPP project preparation reflected in a high scoring of 81 out of 100 for 'Preparation of PPPs' under the World Bank's *Procuring Infrastructure PPPs Report 2018*.

INSTITUTIONAL FRAMEWORK

The GCAs at each level of government are responsible for planning, implementing and supervising projects. Project preparation activities are supported by other public institutions, including the Secretariat of Finance and Public Credit (SHCP), the Investment Unit in SHCP, FONADIN/specific sectoral agencies/trusts, the National Development Bank for Public Works and Services (BANOBRAS), the congress (which has final approval for the federal expenditure budget) and the Center of Studies for the Preparation and Evaluation of Socioeconomic Projects (CEPEP) (which provides preparatory financing and project evaluation support).

Among the agencies, the role of FONADIN, in providing a strong enabling environment for project preparation and its established track record in supporting project preparation and implementation, especially in the transportation sector, stands out as a replicable model.

GCAs play a central role in project preparation and are involved in the preparation of the project studies for approval by the relevant authorities. The GCAs are required to prepare a five-year project roadmap, which must be aligned to the national plan. The Investment Unit of SHCP is responsible for the review and approval of project studies (including the cost-benefit analysis and value-for-money analysis) undertaken by the GCAs.

FONADIN's role in project preparation includes the financing of preparatory studies, providing support to sectoral plans and building rigour in project identification, project evaluation, appraisal and approval processes. FONADIN supports both economically viable projects and projects that may be less economically viable but have a desired social impact.

FONADIN also provides financing and technical support through advisors for the planning, design, construction and final transfer of projects developed through private sector participation. FONADIN focuses on PPPs in sectors such as highways, ports, airports, environment, urban mass transportation, water and tourism.

Mexico has followed a programmatic approach to project planning, especially in the transport and energy sectors, which has yielded transformational service delivery impact. Specific programs are designed to meet the medium- to long-term objectives laid out under the national and sectoral plans. The programmatic approach has also created institutional capacities, either within the existing department or external to the departments (for example, FONADIN and PROTRAM), and streamlined the project preparation and review processes. Select examples include the toll road program, renewable energy program, and urban mass transit program.

MEXICO'S REFORMS AND RENEWABLE ENERGY SUCCESS

Mexico's renewable energy program is shaped by its General Climate Change Law, which affirms Mexico's commitment to increase clean energy generation to 35% of total generation capacity by 2024 and 50% by 2050. The solar program benefitted from reforms enacted in 2014, which introduced competition in generation and helped to create an independent grid operator (CENACE), enabling customers to purchase power directly from generators.

Three long-term auctions managed by SENER during 2016 and 2017 have created renewable capacity of 20 TWh with an investment of US \$9 billion. Together, these auctions helped Mexico to procure power at internationally low prices; solar power at US \$19.70/ MWh and wind power at US \$17.70/ MWh.

PROJECT PREPARATION LANDSCAPE

Project preparation activities are championed by the GCAs, which are actively involved in project preparation from conception to procurement.

Project conceptualisation and planning. The National Development Plan (NDP) and the national infrastructure program, prepared by SHCP, serve as guidance documents for infrastructure development. The GCAs prepare sectoral plans in line with the NDP. Mexico has also established an "Agreements of Coordination Framework" that formally binds the federal government and the sub-national governments to promote alignment in project planning and promote greater coordination among sub-national government agencies.

The project prioritisation in the NDP is based on various considerations including socioeconomic benefits, impact on extreme poverty, regional development, and alignment with other investment programs and projects.

Project studies and structuring. While project feasibility studies are largely handled by GCAs, project structuring involves multiple stakeholders, including the project financing entities (FONADIN, Investment Unit of the SHCP, Federal Mass-Transit Support Program (PROTRAM) etc.). In the case of PPPs, the Investment Unit under the Ministry of Finance issues guidelines applicable to PPP projects in terms of registry, social cost-benefit assessment, convenience and value-for-money as a PPP.

Project appraisal and review. With respect to PPPs, the GCA prepares a business case for the project, which includes cost-benefit analysis, feasibility assessment, environmental and social assessment and value-for-money analysis. In the case of viable projects, the GCA is only required to get a binding opinion from the Investment Unit.

On the other hand, if the projects require federal budgetary support, specific approvals are required from the Investment Unit of the SHCP. All projects that would require support from the government budget at the federal level are reviewed and approved by the Inter-ministerial Commission of Public Spending, Financing and Divestiture for incorporation into the federal budget, which is then approved by the congress.

Project preparatory financing. Mexico does not have a national level project preparation facility. Preparatory studies are either financed under the respective budgets of GCAs at the federal and sub-national level, multilateral development facilities (including the Inter-American Development Bank (IDB) and the World Bank) or from project preparation funds managed by FONADIN.

Project disclosure. The "Mexico Projects Hub" serves as a database of investment projects and assists domestic and international investors to identify investment opportunities in Mexico. The Investment Unit of the SHCP also maintains a portfolio of investment programs and projects, which captures information on all projects under various stages of preparation. The procurement-specific aspects of projects are managed through an online portal called "Compranet", which promotes transparency, market competition and efficiency in the procurement of PPPs.

FONADIN'S ROLE IN STRENGTHENING PROJECT PREPARATION

The federal government established Mexico's National Infrastructure Fund (Fondo Nacional de Infraestructura, or FONADIN,) which is managed by the National Development Bank of Mexico (Banco Nacional de Obras y Servicios Públicos or BANOBRAS), the country's leading lender to infrastructure. FONADIN is an independent trust fund responsible for coordinating the financing and development of infrastructure projects (especially PPPs) in highways, ports, airports, the environment, urban mass transportation, water and tourism.

Currently, FONADIN is one of the most important conduits for PPPs in Mexico. FONADIN provides financing and technical support for the planning, design, construction and final transfer of projects developed through private sector participation. FONADIN was capitalised by transferring assets from the Fund for Support of Rescue of Highway Concessions (FARAC) and Infrastructure Investment Fund (FINFRA). As of the end of 2016, FONADIN has cumulatively supported 117 projects with almost US \$8 billion in investments, of which 44% was non-refundable, mobilising a total of US \$25 billion, mostly in highways (51%).

FONADIN has played a catalytic role, primarily in transportation project preparation, through (i) the financing of preparatory studies, (ii) providing support to sectoral plans and (iii) building rigour in project evaluation, appraisal and approval processes.

Prior to its establishment, government agencies faced several challenges in project preparation, such as:

- limited focus on national plans and a multi-year planning horizon;
- quality constraints on feasibility studies, leading to arbitrary traffic forecasts (overstating traffic numbers) and stress on public finances;

- absence of standardised guidance and weak oversight processes, which led to quality challenges in project preparation;
- institutional capacity constraints in the public sector to undertake adequate project preparation, including limitations in appropriate design, cost and demand forecasts, as well as weak appreciation of risk issues and their management;
- most preparatory activities being driven largely through inadequate budgetary allocations, as there was limited access to project preparation financing and technical assistance facilities;
- limited appreciation of project preparation. Originally the objective was to maximise PPP participation. However, there was an inadequate focus on the preparatory aspects, leading to many of the projects not achieving financial close. Furthermore, inadequate time was provided for advisors appointed to undertake project due diligence and feasibility assessments; and
- absence of a specialised entity that had the right resources and could enhance project preparation quality.

FONADIN provides financing for preparatory studies for infrastructure projects through two facilities: (i) recoverable or part-financing (for profitable projects) through a credit line for up to three years, covering 70% of the project preparation costs, and (ii) non-recoverable support (for socially important but less profitable projects) through grants, covering up to 50% of expenses.

The following conditions should be met by the project to seek project preparation funding from FONADIN: (a) have private participation; (b) be procured through competitive bidding; and (c) have a partial or full source of repayment.

continued...

Key highlights of FONADIN's interventions include:

- **Support to the National Infrastructure Program**—one of the major objectives of FONADIN is to support the implementation of the multi-year National Infrastructure Program, which is a six-year roadmap for infrastructure development prepared by SHCP. FONADIN provides technical and financial support for line departments and agencies in preparing the sectoral plans and project planning.
- **Strengthening sectoral focus through targeted programs**—many of FONADIN's projects are under major sectoral programs that incorporate PPPs in Mexico. These include the toll roads program (PROMAGUA), the water operators' modernisation program (PRORESOL), a municipal solid waste program, and the federal urban mass transportation program (PROTRAM).
- **Approval process and quality control**—FONADIN's detailed operational guidelines elaborate on eligibility criteria, project preparation, quality review and approval processes, such as:
 - *Project preparation*: FONADIN's Business Unit supports GCAs to identify and prepare projects. This covers all activities related to identifying projects and conducting the studies required, including pre-feasibility studies, feasibility studies and project structuring.
 - *Project review*: The Studies and Technical Evaluations Unit reviews the financing proposals prepared by Business Units, requests changes, makes adjustments, and issues a technical report, which it submits to FONADIN's Sub-Committee for Evaluation and Financing.
 - *Project approval*: The Technical Committee reviews the technical and financial aspects of the project, considers the observations and recommendations by the Sub-Committee for Evaluation and Financing, and approves or rejects the project.
 - *Enhancing institutional capacity for project preparation*—FONADIN has a multi-tier project oversight, review and approval system with a judicious mix of government representation, banking and financial sector expertise, as well as subject-matter private sector expertise. For instance, the Sub-committee on Evaluation and Financing is chaired by the Ministry of Finance and comprises of members including the Director of the Public Credit Unit and Investment Unit in the Ministry of Finance, three representatives of the private sector who specialise in infrastructure (two must come from academic institutions and one from a civil society organisation), and one representative each from BANOBRAS, the Ministry of Public Administration and the division of BANOBRAS that manages the FONADIN trust.

FONADIN has supported over 50 studies for various programs and projects authorised to receive financing for preparatory studies and transaction advisory support. These include projects across several sectors including highways, the environment (including energy and waste management), urban transport, water, airports, ports, gas pipelines, and other social sectors including hospitals.

FONADIN's website reports an authorised financing of over US \$320 million in preparatory studies for infrastructure projects.

3. Guidance for project preparation

Guidance	PPP MANUAL
Owner	Secretariat of Finance and Public Credit (SHCP)
Project development stage	Project preparation and approval
Details	<p>The PPP Manual provides overall guidance on the steps to carry out a PPP project. It serves as a guide to the public and private sector stakeholders on the methodologies to be followed, and the key steps in project documentation that must be followed by each entity involved in project preparation.</p> <p>It sets rigorous risk-assessment standards and describes in detail the steps in the preparation and presentation of i) the socioeconomic evaluation, ii) the eligibility criteria, iii) the risk analysis, iv) the public-private comparator and v) Value for Money analysis.</p> <p>Link for further details: https://www.gob.mx/shcp/documentos/manual-con-las-disposiciones-para-determinar-la-rentabilidad-social-y-la-conveniencia-de-llevar-a-cabo-un-proyecto-app</p>

Guidance	MEXICO PROJECTS HUB
Owner	BANOBRAS
Project development stage	Project marketing and disclosure
Details	<p>The Mexico Projects Hub is an initiative of the Mexican Government, managed by the National Bank for Public Works and Services (BANOBRAS). The Projects Hub is a web-based platform providing information on infrastructure and energy projects that require financing from the private sector. The platform also allows the user to browse information on projects according to their needs and access a factsheet of every project in the platform, including its status and additional data provided by the sponsors. Likewise, the user can access additional information to have a broader understanding regarding the way projects are implemented in Mexico, as well as domestic and foreign documents related to planning, procurement and the execution procedures of infrastructure projects and their legal framework.</p> <p>The overall aim of this platform is to increase potential domestic and foreign investors' awareness of the country's infrastructure, thereby encouraging long-term financing for infrastructure.</p> <p>Link for further details: https://www.proyectosmexico.gob.mx/en/home/</p>

4. Project case example: Transport Integrated System (SIT) OPTIBUS – Leon

PROJECT BRIEF

Transport Integrated System (SIT) Optibus is one of the earliest mass transit projects in Leon, Mexico. The project was developed as part of the broader Transport Master Plan of 1998 and is an example of close coordination between the local and federal government.

In a bid to strengthen the public sector capacity of local governments, the Government of Mexico established a Directorate of Mobility, under the Municipality of Leon, to drive the project planning, regulation and monitoring. The project was prepared and implemented in five phases (to date), starting in 2003. The operations under the first phase were managed through 13 different concession agreements, including a centralised fare collection (Pagobus) activity and an operational management activity. The project was implemented across four distinct phases:

- **Phase 1** of 26 km completed in 2003; Serves approximately 39% of the city's transport users
- **Phase 2** of 4 km completed in 2010; Serves approximately 60% of the city's transport users
- **Phase 3** of 5 km completed in 2016; Expected to serve approximately 80% of the city's transport users
- **Phase 4** of 5 km completed in 2016-17; Expected to serve approximately 85% of the city's transport users (523,000 trips per day)

While the project preparation practices during Phase 1 and 2 reflected the success in integrating the stakeholders into a single unit, the subsequent phases were prepared with higher levels of scrutiny and a favourable enabling environment (post PROTRAM).

The case study tracks the project preparation activities during the first phase and its evolution across the subsequent phases.

QUICK FACTS



VALUE
(IN US \$ MILLION)

60



STATUS

Operational



PROJECT OWNERSHIP

Municipality of Leon,
SEDESOL



SOURCE OF PROJECT
PREPARATORY FINANCING

Budgetary funds,
GEF, PROTRAM



SUPPORT AGENCIES

PROTRAM, World Bank,
SEDESOL

PROJECT TIMELINE



1993	Transport State Law 1993 – Decentralisation of transport functions
1994	Transport Coordination Entity (TCE) – partnership of 13 bus companies
1995	Route reorganisation study
1997	Establishment of the Directorate of Transport of the Municipality of Leon
1999	Technical team appointed to undertake project studies – LOGITRANS as technical consultants
2002	Construction of Phase I
2003	Operations of Phase I
2006-07	Initiation of preparation of Phase II under retroactive financing by Global Environment Facility
2009	Establishment of PROTRAM under FONADIN
2010-14	Preparation of Phase III and Phase IV studies under PROTRAM
2010	Initiation of Phase III studies
2016	Operation of Phase III and IV

LEARNINGS FOR PROJECT PREPARATION

1. Integrated approach to project planning

The project identification and phasing were undertaken based on a comprehensive assessment of mobility patterns in the city and long-term considerations. While the Integrated Transport Plan of 1988 (Plan Integral de Transporte Urbano de León – PITUL) served as the mobility plan for Phase I and II, the Integral Sustainable Mobility Master Plans (Plan Integral de Movilidad Urbana Sustentable – PIMUS) served as the guidance for subsequent phases. The PIMUS preparation was grounded in a comprehensive analysis of the existing mobility systems, including road networks for public and non-motorised transportation and parking facilities in a specific planning area, in order to define strategies which prioritise and promote sustainable transportation.

The Municipality of Leon went a step ahead in mobility planning with the preparation of a vision for sustainable mobility under the Vision 2040 – Strategic Plan for Urban Territorial Planning.

2. Strengthening public sector capacity and clarity in delegation of powers, accountability and targeted capacity building actions.

Appreciating the need to create capacities for project management, the Government of Mexico initiated a range of actions including institutional reform actions and capacity building initiatives.

- *Institutional reform* – The project preparatory actions highlighted the need for project management by the local government instead of a state or federal entity. The State Transport Law 1993 started the decentralisation of transport activities to local government, followed by the agreements for the transfer of functions in 1995. Finally, the State Transport Law 2002 provided clear operational control for the local governments in transport planning, regulation and control. The Government of Mexico also established a separate Directorate of Mobility of the Municipality of Leon (within the Secretariat of Sustainable Development of the municipality) to strengthen the capacity of the local government in project planning and implementation. The staff of the secretariat include technical, environmental and social sector experts.

- *Capacity building* – The project preparation was also supported by targeted capacity building initiatives across each of the phases. The capacity building initiatives in Phase 1 were facilitated by the Municipal Planning Institute IMPLAN (established in 1994) and targeted programs for technical training. During the subsequent phases, the government also leveraged the World Bank Global Environment Facility (GEF) and PROTRAM funds to provide specific training for the local government staff and other civil servants in project planning and technical understanding.

3. Stakeholder engagement to facilitate private sector ownership

The bus transport model prior to the implementation of the BRT system faced several challenges due to the prevalence of “hombre-camion” models¹, wherein private bus ownership was dispersed, leading to management challenges, negative externalities, oversupply and unfavourable working conditions. The transformation of the individual companies into consolidated transport companies led to the professionalisation of operations. Specific routes were consolidated, and each private stakeholder became a shareholder in the new entity. The consolidation of transport stakeholders has been one of the critical reasons for the success of the network. The success of the model can be attributed to the clear and transparent selection process to facilitate the transformation in ownership, and the leadership and trust associated with the key officials in the Secretariat of Social Development (SEDESOL) and local government.

4. Quality of external consultants critical to the success of specialised projects

The Leon BRT system was one of the first mass transit systems in Mexico and hence, the local capacity and understanding of the technical aspects of the project was limited. The initial route reorganisation studies conducted in 1995 by the departments were largely inadequate in meeting the requirements of a mass transit system. Consequently, in 1999, Brazil-based consultant LOGITRANS was selected as the technical consultant to undertake the detailed technical design and operational planning. The consultants brought in deep expertise and knowledge of developing BRT systems in other countries including the Curitiba, Brazil and TransMilenio, Colombia. The project was also able to engage a high-quality advisory team for the subsequent phases, supported by dedicated funding under PROTRAM and GEF, which helped to attract quality transaction advisors for project preparation.

5. Programmatic approach to project preparation with strong appraisal standards and a dedicated source of funds helps drive economies of scale and project quality

Learning from the success of BRT projects in Leon, Guadalajara and Mexico City, the Government of Mexico established a country-wide plan to scale up mass transit projects, with the establishment of PROTRAM under FONADIN. The feasibility and technical studies under Phases 2, 3 and 4 were supported by PROTRAM (Phase 2 studies were retroactively financed by GEF), by leveraging its own funds, as well as funds from GEF. A programmatic approach (under PROTRAM) helped strengthen the project preparatory environment and also helped in scaling up mass transit projects in Mexico.

¹ A transport model whereby bus facilities are highly fragmented and owned by private individuals.

MEXICAN FEDERAL MASS TRANSIT PROGRAM (PROTRAM)

Learning from the initial success of select mass transit projects, the Government of Mexico created a Federal Mass Transit program (PROTRAM) in 2009 within FONADIN to drive scale and efficiency of the sector in line with its objective of low-carbon growth. PROTRAM's role includes the financing of preparatory studies and investing in mass transit projects through grants and loan guarantees.

PROTRAM ensures quality in project preparation through the following areas of assistance:

- **Strong guidelines for project selection**—PROTRAM follows strict eligibility criteria for project preparation and implementation. In the case of project preparation, the projects selected have to be aligned with the Integral Sustainable Mobility Master Plan (PIMUS). The projects supported by PROTRAM should also meet climate change considerations and emission standards. Additionally, the project concept note must include a preliminary assessment of supply and demand analysis and cost-benefit analysis, commitment to private sector participation, and minimum population criteria.
- **Availability of a dedicated and sustainable source of project preparation financing**—PROTRAM is funded by national toll road revenues and financed partly by MDB loans from the World Bank and the Inter-American Development Bank. The program supports the development of project preparatory studies including mobility planning, demand-supply assessment, and technical studies for project preparation. PROTRAM offers grants to sub-national governments to cover up to 100% of study costs and 50% of infrastructure costs for public transport projects that meet certain criteria (the city must have a population of at least 500,000).
- **Superior quality assurance standards**—The project appraisal and review standards for the approval of project studies, set by PROTRAM, are stringent and involve multiple stakeholders. PROTRAM is supported by the Center for Sustainable Transport Mexico (CTS-Mexico), which serves as the technical arm of PROTRAM, in charge of reviewing the technical and financial feasibility studies, project designs and other preparatory documents. PROTRAM undertakes a two-stage approval process – the first stage review is conducted by the Consultative Working Group (GTC) in PROTRAM, followed by final approval from FONADIN's Technical Committee (CT). The GTC analyses projects from the technical, social, environmental, and financial viewpoints to determine the basic feasibility of projects presented to PROTRAM by the cities. The GTC involves representatives from SHCP, the Secretariat of Communications and Transportation (SCT), the Secretariat of Social Development (SEDESOL), the Secretariat of Environment and Natural Resources (SEMARNAT), BANOBRAS, and FONADIN, who participate as consultant advisers. The detailed process of approval is provided in the fund guidelines.
- **Institutional strengthening**—Support in capacity building initiatives for the local government related to planning, regulation and administration of integrated urban public transport systems.

The Mexican Government has also established a National Urban Transport Transformation Program (UTTP), to focus on other types of urban transport projects, including non motorised transport, such as bicycle and pedestrian projects. As of April 2017, the PROTRAM pipeline included 42 mass transit projects, which included 19 projects with authorised financial support, eight projects under evaluation and 15 projects in the preparation phase.

The detailed guidelines are provided in the following portal: http://www.fonadin.gob.mx/wp-content/uploads/2016/08/Lineamientos_Programa_Transporte.pdf

Netherlands

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Distinct agencies to oversee the design of policy for infrastructure development and its implementation

In the Netherlands, the policy and implementation functions are housed under separate distinct entities. While the Ministry of Infrastructure and Water Management (MIWM) oversees the drafting of policies for infrastructure development, project preparation and procurement is undertaken by Rijkswaterstaat, the implementing agency of MIWM. Rijkswaterstaat is responsible for the construction and maintenance of the main roads network, the waterway network and major water systems.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Using a broad-based approach to identifying and conceptualising projects

Under the Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT), project initiation entails incorporating all aspects of spatial planning and mobility management to design solutions to the country's infrastructure challenges. As an illustration, to address the daily tailbacks problem on a major motorway in the Netherlands, the MIWM explored solutions such as promoting the use of cycling in the province and building an express bicycle connection along the motorway.



PUBLIC MARKETING AND STAKEHOLDER ENGAGEMENT

A project development framework that centres on increasing stakeholder collaboration and cooperation

Active stakeholder engagement is central to the MIRT framework for project development. All stages of the MIRT process encourage a collaborative approach to project preparation, from project initiation in the 'exploration phase', which is supported by conducting multiple stakeholder consultations through political and administrative meetings, to ensuring that stakeholders provide input to the feasibility of the project under the 'plan exploration phase'.

Transparent disclosure of projects under development through the MIRT portal

The MIRT framework mandates that all projects are actively monitored by the MIWM, with updates published on a real time basis on the MIRT platform and also published in MIWM's annual MIRT Overview document. Furthermore, all decisions taken for MIRT projects are presented to the Lower House of Parliament on a periodic basis, along with progress updates on project development.

2. Snapshot of project preparation activities

INSTITUTIONAL FRAMEWORK

Public administration in the Netherlands is divided across four tiers: central government, the provinces, the municipalities and the water authorities. Project preparation is considered to be a joint effort of the different tiers of the Dutch public administration framework, in which each tier has a clear responsibility brought together under a unified framework.

Project preparation and development in the Netherlands is governed by procuring authorities, which include local governments, municipalities, and port authorities, amongst others. At the central government level, two agencies oversee and coordinate project development in infrastructure: the Ministry of Infrastructure and Water Management (MIWM) and the Ministry of Finance (MoF).

At the sub-national level, the project preparation and implementation responsibility is managed across the provinces, municipality and water authority.

Ministry of Infrastructure and Water Management (MIWM)

The MIWM oversees policy, implementation and inspection of infrastructure development in the Netherlands. To aid the development of policies, the MIWM houses three directorate-generals, responsible for designing overarching policies for development in the areas of mobility, water management, aviation and maritime affairs and the environment, as follows:

- The Directorate-General for Mobility and Transport (DGB) focuses on the continued development of the network quality of airways, waterways, railways, the road network, harbours and ports.
- The Directorate-General for Spatial Development and Water Affairs (DGRW) looks at integrating spatial development and mobility with the infrastructure and spatial planning vision.
- The Directorate-General for the Environment and International Affairs (DGMI) is responsible for monitoring the environmental impact of policies, projects and programs in the Netherlands.

The MIWM is also assisted by a host of support agencies in infrastructure development, which include:

- Rijkswaterstaat, which is the executive agency of the MIWM responsible for the main road network,

the main waterway network, and the main water systems. It also undertakes project development and implementation on behalf of the MIWM.

- The Netherlands Environmental Assessment Agency (PBL), which contributes to political and administrative decision-making by conducting outlook studies, analyses and evaluations commissioned by the MIWM, other national bodies, and international agencies.
- The Knowledge, Innovation and Strategy Directorate (KIS), which leads the knowledge management and capacity building functions of the MIWM.
- The Council for the Environment and Infrastructure, which is the primary strategic advisory board for the Dutch government and parliament in matters relating to the physical environment and infrastructure. It provides independent advice to the MIWM and the parliament on matters relating to long-term policy for infrastructure development.

Ministry of Finance (MoF)

MoF is responsible for financial-economic policy in the Netherlands, the management of government finances and policy concerning the financial markets. It prepares the annual national budget and presents it to the parliament for approval, which outlines the planned expenditure of all ministries for the ensuing year.

PROJECT PREPARATION LANDSCAPE

The responsibilities for project preparation are decentralised to the respective line departments and sub-national entities, and the Ministry of Finance is responsible for establishing the policy on budget execution, including the normative Design-Build-Finance-Operate-Maintain (DBFOM) policy, monitoring application of the budget execution policy, and providing guidance on cross-project issues.

For large infrastructure projects, the Netherlands has adopted a unique collaborative approach, namely The Multi Year Programme for Infrastructure, Spatial Planning and Transport¹ (MIRT) framework, developed by the MIWM. MIRT comprises infrastructure projects and programs in which the national and regional governments collaborate to find a common solution to specific problems, after conducting analysis from different perspectives and development objectives.

¹ Meerjaren Programma Infrastructuur, Ruimte en Transport

ADOPTING A PROBLEM ORIENTED APPROACH UNDER MIRT – AN EXAMPLE

While a typical solution to tackle the daily tailbacks on a section of the motorway near a big city would be to upgrade the motorway, the Netherlands adopts a more holistic approach. MIWM consults the respective province, the municipalities, and the regional business community, asking about their plans for the area. The province has conducted a mobility analysis of the region and knows that the tailbacks are mainly caused by local commuter traffic. Additionally, the municipality has launched a 'Move Yourself to Health' program and aims to encourage residents to cycle. Together, the parties arrived at a joint ambition: improving mobility between the residential area and the business park and improving residents' health. Following an exploration of several solutions, they decided to implement a solution that involves an express bicycle connection to the business park, in combination with agreements with employers regarding the promotion of cycling and flexible working hours and influencing the behaviour of motorway users in order to improve traffic circulation. The package offers a solution to both accessibility and health issues. In addition, it contributes to the sustainability goal of MIRT, namely to reduce CO₂ emissions.

The MIWM is a participant in all MIRT tracks (project or program). However, other ministries and regional partners may also participate or launch MIRT tracks. Such regional partners may be the provinces, municipalities, transport regions, or district water boards. NGOs and businesses may also participate by providing input to solutions.

In the MIRT framework, the country is divided into five regions², with the central and local governments jointly designing the Area Agenda for each MIRT region. The Area Agenda presents a coherent vision for development in the area. Annually, administrative consultations take place between the central and local governments for discussion on current projects in the region and for making financial and/or administrative agreements where necessary.

² Noord (North), Oost (East), Zuid (South), Zuidwest (South West) and Noordwest (North West) regions

The MIRT process for project preparation

In a MIRT track, the parties work phase-by-phase to substantiate the task in increasingly concrete terms. The MIRT program requires a project to go through four primary phases, with each phase ending with a political-administrative decision – MIRT Study, MIRT Exploration, MIRT Plan Elaboration and MIRT Realisation.

The starting point for every MIRT track is the Initial Decision to launch a MIRT Exploration. MIRT projects can be either implemented through public financing or through PPPs on a standard DBFOM basis. Each year, the MIRT is presented to the Lower House as an appendix to the budget of the MIWM and this provides the necessary political and fiscal commitment to the MIRT. The steps in project preparation are detailed below.

Project initiation and concept definition. The project initiation and concept definition is covered under the 'Plan Study' and 'Plan Exploration' phases of the MIRT framework. The MIRT study phase is conducted to develop a clear and common description of the needs, issues and necessities that the envisaged project must solve. This provides for a common starting ground for the involved stakeholders in the MIRT process of assessment. This phase ends with the Initial Decision, which relates to the choice on whether to conduct a MIRT Exploration. The Initial Decision also stipulates the role to be played by each of the stakeholders and requires that financing sources for 75% of the cost of the most obvious solution are identified.

The exploration phase of the MIRT framework follows a collaborative approach that requires project initiation to start with a series of political and administrative meetings. These meetings are aimed at discussing the development needs of an area, fixing the strategic development goals and the initiatives to meet these goals. Thereby, discussion, collaboration and consensus between important stakeholders is set as a requirement for starting a new project concept. The exploration phases typically comprise the following activities: evaluating the strategic alignment of the proposed concept, options evaluation to assess the benefits and impact of each alternative on the economy, environment and society, and selection of a preferred alternative to undertake the detailed project study. As options are collectively evaluated, the MIRT committee may reach a Preferential Decision to serve as a recommendation for the next phase – Plan Elaboration.

Project feasibility and structuring. The process of preparing detailed project studies under the MIRT framework is governed by the Plan Elaboration phase. At this stage, the identified solution at the end of the exploration phase is then 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 in a Project Decision to move to procurement and funding approvals. The essence of the project decision is that a final impression of the planning, scope and budget is presented, before the market is approached in the realisation phase.

Project approvals and processes. The Dutch Gateway Review Method is based on the Gateway Program in the United Kingdom. It is housed in the Bureau Gateway in the Ministry of Interior and Kingdom Relations. Since 2007, over 50 high risk projects and programs have been reviewed with very positive results. This is part of the Dutch Government's initiative to improve the management and delivery of high-risk projects by providing an independent confidential assessment and improving the capability of project management skills in government via actively sharing lessons learned. Typical project level gateway reviews include:

- *Gateway 1 - Purpose and justification* is performed at the start of a project to confirm its rationale.
- *Gateway 2 - Preparation and Procurement Stage* is executed once the project approach is firm and seeks to examine whether the project's rationale and the intended results are still demonstrable and desirable.
- *Gateway 3 - Realisation Stage* is executed as soon as the suppliers are formally approached and seeks to verify whether the intended approach will be successful in this realisation phase.
- *Gateway 4 - Readiness for implementation* is performed before the project team transfers its result to the line organisation(s) or just before the implementation phase.

The Gateway Review is not mandatory and is usually performed as a confidential peer review assessment at the request of a manager. The Gateway Review provides an independent view on the current progress of the project or program including observations and recommendations.

How has the MIRT framework streamlined project preparation in the Netherlands?

Good practice guidance on project preparation. Through the former PPP Knowledge Centre, the Netherlands has developed a knowledge base of good practices in developing large infrastructure projects. This know-how has evolved into the sophisticated framework of the MIRT. MIRT project preparation 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. that have contributed to successful project execution.

Prescribing a wide base approach for project evaluation. Complex projects benefit greatly from an integrated region-oriented approach to decision-making that cuts sectoral barriers. Through the prescribed Consultations Committee, MIRT helps to bring in varied perspectives on spatial functions, such as transport, residential and commercial development, flood risk management, and environmental impact, into the decision-making process for a project.

Enhanced ownership by all stakeholders.

A consultative approach to project development can often fail unless it is complemented by allocating responsibility for implementation. The MIRT framework requires that all stakeholders involved in the consultation are responsible for ensuring the feasibility of the project by providing financial resources wherever required and enabling implementation through legal and policy interventions. This furthers the broad-based approach, as inputs from multiple stakeholders must be accompanied by 'an intention to work things out together, from start to finish.'

A multi-layered decision-making approach. The MIRT process prescribes a funnelling approach to decision-making, with decisions being taken at multiple phases of project preparation and implementation. For each phase, the framework specifies the nature of the decision to be taken and the process to be followed. This multi-layered approach allows for less optimal solutions to be filtered, along with compelling the Consultations Committee to re-evaluate project decisions at each stage.

Increased transparency and accountability. The MIRT Overview, published on an annual basis as an annexure to the budget, is an informative publication on the state of affairs and the planning of government projects and programs in the MIRT framework. Furthermore, all decisions taken by the Consultations Committee for an area are presented to the House of Representatives, along with progress updates on site visits by members of the committee. MIRT also requires that all projects have a clear vision and well-articulated goals and success factors to enhance understanding.

Creation of a pipeline of bankable projects. Under the five-year planning horizon of MIRT, a pipeline of projects is developed. As projects are filtered through each of the decision stages, the quality of projects in the pipeline is increasingly strengthened – allowing for only viable projects to reach the realisation stage. Information on the project pipeline and its progress is kept updated on the MIRT portal. The phased decision process also provides for reasonable predictability in the planning for the projects in the pipeline.

Extensive capacity building initiatives to coach practitioners on the framework. MIWM has 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. The ministry also conducts intensive courses on the framework, open to civil servants as well as private experts, along with knowledge meetings and masterclasses on various aspects of the framework.

Gateway review process for quality enhancement. The Dutch Gateway Review process also provides an opportunity for government project managers to enhance the quality of their project preparedness.

3. Guidance for project preparation

Guidance	MULTI-YEAR PROGRAMME FOR INFRASTRUCTURE, SPATIAL PLANNING AND TRANSPORT
Owner	Ministry of Infrastructure and Water Management (MIWM)
Project development stage	Overall project lifecycle
Details	<p>To improve the infrastructure project development process, the MIWM has developed an investment program called MIRT (Multi-Year Programme for Infrastructure, Spatial Planning and Transport). MIRT is an integrated program for the preparation and decision-making process of infrastructure projects. The MIRT program has rules, procedures and a framework—‘rules of the game’ in order to direct how a project initiative that needs state funding should be developed and how decisions on project initiatives should be made.</p> <p>The MIRT program requires a project to go through four primary phases, with each phase ending with a political-administrative decision – MIRT Study, MIRT Exploration, MIRT Plan Elaboration and MIRT Realisation.</p> <p>Link for further details: Overview (in English): https://www.government.nl/binaries/government/documents/leaflets/2018/02/07/the-dutch-multi-year-programme-for-infrastructure-spatial-planning-and-transport-mirt---summary/107287_MIRT_ENG_WEB.pdf</p> <p>Link for further details: Detailed guidance (in Dutch): https://www.leerplatformmirt.nl/over+mirt+nieuw/handreikingen/default.aspx</p>

4. Project case example: Afsluitdijk project

PROJECT BRIEF

The Afsluitdijk (Cut-off Dike) project is a causeway redevelopment plan that was implemented through the PPP model.

The Afsluitdijk is a 32 km-long, 90-metre wide major causeway in the Netherlands stretching from Den Oever on Wieringen in the North Holland province, to the village of Zurich in the Friesland province. The dike was constructed between 1927 and 1933, after the devastating floods of 1916, and over the last 85 years has been a check on the sea level rise and flooding. The dike sluices discharge surplus water from the IJsselmeer Lake to the Wadden Sea at low water levels.

The redevelopment project (of the dike) was initiated in the context of rising sea levels and climate change challenges leading to revised design and structural considerations and enhanced safety standards. The key activities under the project scope include the strengthening of the causeway structure, and guards and sluices (including the lock complexes at Den Oever and Kornwerderzand), increasing the capacity to store and drain water, improvement of the A7 motorway and creating an eco-friendly space for recreational activities.

Rijkswaterstaat is responsible for the overall management of the project. The renewal project was initiated in 2012 and achieved financial close in May 2018. The concession is for a Design-Build-Finance-Maintain (DBFM) contract covering a period of 25 years. The concessionaire for the project is a consortium called Level, which includes BAM PPP PGGM, Van Oord Aberdeen Infrastructure Partners, and the Rebel Group (as financial adviser). The project construction is expected to be completed by 2022.

QUICK FACTS



VALUE
(IN US \$ BILLION)

1.785*



STATUS

Pre-construction



PROJECT OWNERSHIP

Rijkswaterstaat



SOURCE OF PROJECT
PREPARATORY FINANCING

Budgetary allocation



SUPPORT AGENCIES

De Nieuwe Afsluitdijk**

* Budget set aside for the project, Exchange Rate: €1 = US \$1.14 (as of December 2018)

** De Nieuwe Afsluitdijk is a cooperation between the provinces of Noord-Holland and Fryslân and the municipalities of Hollands Kroon, Südwest-Fryslân and Harlingen (along with citizens, and private sector stakeholders).

PROJECT TIMELINE

2005-06	Initial study to assess the safety need of the Afsluitdijk
2007	Initiation of project "Future Afsluitdijk"
2008-09	Joint market reconnaissance by Rijkswaterstaat and local governments – four integral visions and two reference designs identified
2010	Preliminary environmental impact assessment, cost effective analysis of the initial designs
2011	Decision on preferred design under the Afsluitdijk master plan
2013	Plan elaboration and initiation of preparatory documents
2016	Launch of tender for procurement
2017	Finalisation and approval of all the phases of the integration plan
2018	Selection of preferred bidder – commercial and financial close
2023	Scheduled completion of construction

LEARNINGS FOR PROJECT PREPARATION

1. Establishing an integrated project vision maximising service delivery impact

While project preparation practices in most countries are initiated and prepared by the line departments in isolation and are generally targeted at the specific area of concern, the Netherlands, aided by the MIRT approach, facilitates integrated planning elements into the project concept. In the case of the Afsluitdijk project, the Rijkswaterstaat expanded the project objective beyond "improved flood protection standards" to include multiple other smaller sub-projects in line with the aspirations of the citizens. This integrated approach to project planning was detailed under the Afsluitdijk Master Plan, which outlined the strategies for sustainable development of the dike, potential for tapping renewable energy, improvement of service delivery standards and leveraging the unique spatial quality of the region for creating active recreational spaces for the local community. The project also gave due importance to renewable energy projects, especially considering that the primary project objective was driven by climate change considerations (rising sea levels or flooding).

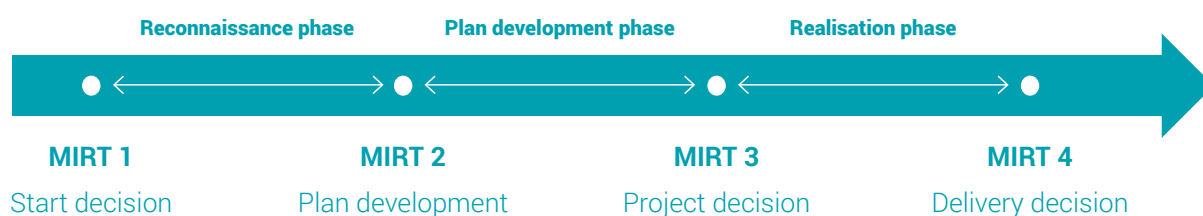
In line with the Master Plan objective, the Rijkswaterstaat, along with De Nieuwe Afsluitdijk, designed multiple components under five broader categories:

- i) Safety – Redevelopment of Afsluitdijk, and strengthening of Den Oever and Kornwerderzand locks
- ii) Water management – Increase the capacity to drain water, solar energy pumps
- iii) Economic activity – Tourist facilities, 'Icon Afsluitdijk', convention centre
- iv) Sustaining Nature – Initiatives for a passage for fish at Den Oever
- v) Renewable energy – Blue energy system³, tidal and solar energy, electric pumps

³ Blue Energy is the technique by which energy is extracted from the difference in the salt concentration of salt and fresh water.

2. Stage-wise planning phase under the broader MIRT framework

The project planning and implementation for the Afsluitdijk project was guided by the MIRT framework and was divided into four stages of decision-making. While the early reconnaissance was undertaken during the period 2008-09, the detailed plan development was initiated in 2012.



The plan development phase for the Afsluitdijk project was further sub-divided into a seven-phase process:

- Phase 1 – Environmental impact report (2013)
- Phase 2 – Draft integration plan, environmental impact report and other design plans (2015)
- Phase 3 – Government integration plan and review of appeals against the plan (2016)
- Phase 4 – Review of the draft decision on the permit/licence on the basis of the Nature Conservation Act (2017)
- Phase 5 – Appeal against the Amendment Decree on the permit/licence issued (2017)
- Phase 6 – Supplement to the government integration plan⁴ (2017)
- Phase 7 – Appeal against the government integration plan and finalisation (2018)

Each phase of development was initiated through a separate notification, followed by the development of a plan sub-component and stakeholder consultations and a specific notification indicating the end of the phase. The preparatory documents at each phase of development were made available for citizen inputs and comments. The project phasing also provided for flexibility in design mid-way through the process.

⁴ Updated to include the spatial integration of solar panels, increasing the passage width of the locks on Kornwerderzand and more space for the construction of pump buildings.

3. Flexibility in project design and implementation for the bidder

While the Rijkswaterstaat's "Rijksinpassingsplan Afsluitdijk" (government implementation plan) serves as the blueprint for project implementation, the government also provides some flexibility in planning and implementation through the introduction of an innovative planning concept – "Oplossingsruimte" (Solution space). The innovative plan provides guidance on the maximum space allotted, general spatial requirements and the conditions for implementation. Under this overall guidance, the bidders were provided the flexibility to provide a detailed elaboration of the design and implementation plan. This gives the concessionaire the space for creativity and the possibility to develop cost-effective design solutions within the overall implementation plan boundaries. Because of this, there is a greater chance of an innovative and more functional design.

The boundaries of the solution spaces are also strengthened through the planning process, starting from an initial rough definition and then tightening along the way. The concept does not lead to dilution of the design or Environmental Impact Assessment (EIA) standards. This innovative structure ushered in a new approach to PPP and relationship management between stakeholders, especially Rijkswaterstaat and the concessionaire.

4. Stakeholder engagement integrated to each phase of project preparation

One of the stand-out factors in the Afsluitdijk project preparation is the range and depth of the consultation process. The regional authorities and the Rijkswaterstaat initiated open consultations with public and private parties to attract as many new ideas as possible. The strategy was aimed at getting 'more value' out of the dike by developing integrative ideas which could add new functions.

The public consultation process was divided into two distinct phases – initial reconnaissance and market survey (joint market reconnaissance by Rijkswaterstaat and regional governments during 2008-09) and the plan development stage (anchored by Rijkswaterstaat with active support from regional governments during 2013-17). Starting with the Afsluitdijk Master Plan, each stage of project preparation involved extensive stakeholder consultations. The consultations during the reconnaissance phase laid the foundation for the wider project design, especially the expansion

of scope beyond "flood protection" functions. The consultations during the plan development phase were designed such that Rijkswaterstaat focused on strengthening the core components (the reinforcement of the dike) and aligned the public consultations with this focus, while the consultations surrounding the other project components were championed by the regional authorities (organised under 'De Nieuwe Afsluitdijk' / New Cutoff Dike).

The consultations during the plan development phase were led by Rijkswaterstaat and incorporated the highest standards in transparency and accountability. More than 17 rounds of stakeholder consultations were conducted during the plan development phase. The project documents and consultation minutes were uploaded in the "Platform Participatie"⁵ portal.

5. Local government and local community ownership backed by innovative citizen engagement methods crucial to sustain project momentum

The initial reconnaissance for the project anchored by a partnership between local government and Rijkswaterstaat brought in ideas for the integrated redevelopment of the dike. The phase also involved a contest to pool-in innovative designs for redevelopment and rejuvenation of the dike and nearby areas. Rijkswaterstaat received inputs from eight consortia on a coherent integral vision on the development of the Afsluitdijk and its surrounding area, including spatial design and technical, legal and financial feasibility. The designs reflected a multifunctional transformation of the Afsluitdijk, combining water safety with nature, sustainability, energy production and tourism. The initial reconnaissance phase helped build promising new ideas and generate favourable brand equity for the project, especially with the local community.

However, the financial crisis and the subsequent government budget restrictions led to the government prioritising and focusing on the redevelopment of the dike. Backed by the strong brand equity generated during the reconnaissance phase, the provinces and municipalities joined together under the program 'De Nieuwe Afsluitdijk' (The New Afsluitdijk, DNA) to drive the broad vision for Afsluitdijk. The DNA played an active role in the development of design and implementation of the project components and also raised funds for project preparation and implementation.

⁵ Link to the portal – <https://www.platformparticipatie.nl/projectenlijst/Afsluitdijk/index.aspx>

The Philippines

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Strong and effective institutional framework, with well-defined and clearly demarcated responsibilities

The Philippines has established a robust institutional set-up to enable effective project development, with each institution playing a specific role. The National Economic and Development Authority (NEDA) is the central planning body of the Philippines that determines the broad socioeconomic parameters for national and sub-national development projects. The NEDA Board, or its Executive Committee, approves large-scale strategic infrastructure projects. The PPP Governing Board, as the overall policy-making body for all public-private partnership (PPP) related matters, helps to create an enabling policy and institutional environment for PPPs in the Philippines. The PPP Center, as an attached agency of NEDA, assists not only during the project preparation activities, but also during the implementation stage of PPP projects.



PROJECT PREPARATION FINANCING

Partnerships with international development agencies to fund project preparation activities and build local capacity

To support project preparation activities for PPP projects, a dedicated project preparation fund, the Project Development and Monitoring Facility (PDMF), has been established, which is managed by the PPP Center. The PDMF is a US \$102 million revolving fund, co-financed by the Government of the Philippines and the Government of Australia through the Asian Development Bank (ADB). The ADB also provides technical assistance and funding support through the Infrastructure Preparation and Innovation Facility (IPIF), a US \$100 million loan to assist the Department of Transport and the Department of Public Works and Highways for undertaking project development. These funds also assist the implementing agencies and the PPP Center to undertake capacity building initiatives like training, process guidelines and good practice manuals for national and local government agencies.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Systematic approach for the preparation of a project pipeline and mapping of project outcomes to the national socioeconomic targets

The Philippines follows a systematic approach to prioritising infrastructure projects, ensuring the appropriate allocation of limited government resources. The NEDA compiles a list of prioritised projects under the Public Investment Program (PIP) at the national level. A subset of the PIP is the Three-year Rolling Infrastructure Program (TRIP), comprising all publicly funded infrastructure projects, which in turn forms the basis for finalising the government's national budget.

Further, projects are evaluated for strategic relevance and mapped to the long-term economic development plan through a defined quantitative framework, known as the Results Matrix.



PROJECT APPROVALS AND QUALITY ASSURANCE

Interdepartmental coordinated support for the evaluation and appraisal of PPP projects

To evaluate PPP project proposals in the Philippines, an interdepartmental committee, the Investment Coordination Committee (ICC), is formed, to bring in cross-functional expertise for project appraisal. The ICC has two levels: the ICC-Technical Board (TB) and the ICC-Cabinet Committee (CC). ICC actions are elevated to the NEDA Board for confirmation. The ICC-TB evaluates all aspects of a PPP project with specific emphasis on each agency's technical expertise. The ICC-TB recommendation is elevated to the ICC-CC for approval. The ICC-TB is composed of senior representatives from the following agencies: NEDA (Chairperson), Department of Finance International Finance Group (Co-Chairperson), and the DOF Corporate Affairs Group, Office of the President, Department of Budget and Management, Department of Trade and Industry, Department of Agriculture, Bangko Sentral ng Pilipinas, Department of Environment and Natural Resources, Department of Energy, and the PPP Center (Members). Other government agencies are invited to participate in the ICC-CC and TB deliberations, as necessary.

2. Snapshot of project preparation activities

During the period 1980 – 2009, the Philippines suffered from underinvestment in infrastructure.¹ To address this, one of the steps taken by the Government of the Philippines was to overhaul the enabling framework for project development and delivery, to support and encourage private investment in infrastructure. The establishment of the Philippines PPP Center along with the Project Development and Monitoring Facility (PDMF) has been central to this transition.

Recognising the contribution of sound project preparation in the implementation of complex infrastructure programs on a large scale, the Philippines has also partnered with international development agencies, such as the Asian Development Bank (ADB) and the Governments of Australia and Canada, to establish dedicated funds for financing and building capacity for project preparation. At the national level, funding for project preparation is supported by the Project Development and Monitoring Facility (co-financed by the Government of the Philippines and the Government of Australia through the ADB for PPP project development), the Project Development and Related Studies Fund (a special purpose fund established under the 2018 General Appropriations Act with an allocation of US \$30 million), and the Infrastructure Preparation and Innovation Facility (a technical assistance loan from the ADB to the Department of Public Works and Highways and the Department of Transportation to strengthen project preparation in the transport sector). These initiatives are encouraging a systematic approach to project identification, assessment, prioritisation and preparation.

INSTITUTIONAL FRAMEWORK

Project preparation activities in the Philippines are decentralised and largely driven by implementing agencies, such as national government agencies (NGAs) and departments, government-owned and controlled corporations (GOCCs) and local government units (LGUs). The National Economic and Development Authority (NEDA) and the PPP Center, in turn, support the implementing agencies, at the national level.

NEDA

NEDA, established in 1972, is the Philippines' central socioeconomic planning body that formulates policies, plans and programs to set the broad socioeconomic parameters for national and sub-national level development. It is responsible for reviewing, evaluating and monitoring infrastructure projects in line with the national development plan. It prepares the Philippines Development Plan (PDP), a six-year plan that details the socioeconomic targets of the national government, and consolidates the Public Investment Program (PIP), a rolling list of priority programs and projects (PAPs) to be executed by the implementing agencies. NEDA also collaborates with regional development councils (RDCs) to prepare the Regional Development Plan (RDP), which adds a spatial dimension to the national development plan by identifying the regional contributions to socioeconomic targets. At the national level, the NEDA Board, which is chaired by the President of the Philippines, serves as the final approving authority² for large-scale public investment and PPP projects in the Philippines.

The NEDA Board, with the assistance of the seven cabinet-level interagency committees³, plays a central role in planning and preparing infrastructure development projects in the Philippines: the Development Budget Coordination Committee (DBCC), the Investment Coordination Committee (ICC), the Committee on Infrastructure (INFRACOM), Social Development Committee (SDC), Committee on Tariff and Related Matters (CTRM), Regional Development Committee (RDCom), and the National Land Use Committee (NLUC).

Development Budget Coordination Committee: The DBCC is responsible for approving the macroeconomic assumptions and economic policy directions for the preparation of the annual national government budget

¹ On average, infrastructure investment as a percentage of the country's gross domestic product (GDP) was 2.1%, and infrastructure development was not on par with the needs of the growing population.

² Pursuant to Section 2.6 – Approval of Projects, of the Revised Implementing Rules and Regulations of Republic Act 7718 – Build Operate Transfer (BOT) Law.

³ <http://www.neda.gov.ph/functions-and-organizations/>

and for the requirements of the PDP. It also advises the President on the approval of the annual government expenditure program and allocating government budget for capital outlay for infrastructure development.

Investment Coordination Committee: ICC reviews the fiscal and monetary implications for major capital projects (MCPs)⁴ and reports the status of these directly to the President. It also reviews and evaluates specific MCPs with respect to technical, financial, economic and social feasibility and submits its recommendation to the NEDA Board for confirmation.

The ICC Technical Board (ICC-TB) cautiously reviews and evaluates public investment programs and proposals and refers the meritorious ones to the ICC Cabinet Committee (ICC-CC) for approval. ICC-TB primarily focuses on advising a project proponent on the various options available in implementing and financing a program or project prior to sending it to the ICC-CC for final approval. The ICC Cabinet Committee (ICC-CC) is the highest executive branch of the ICC that approves the MCPs and presents decisions to the NEDA Board for final approval. A certification of ICC approval is necessary for a project's requirements to be included in the annual budget.

Committee on Infrastructure: INFRACOM advises the President and the NEDA Board on policy and planning matters concerning infrastructure development. It also functions as a coordinating agency and makes recommendations to the President regarding government policies and aligning national development strategies to infrastructure projects and programs.

PPP Center

The Government of the Philippines, by virtue of the *Executive Order No. 8* series of 2010, as amended by *Executive Order No. 136* series of 2013, mandated the PPP Center to facilitate the implementation of the PPP program and projects in the country. The PPP Center, which is the main driver of the PPP program, serves as the central coordinating and monitoring agency for all PPP projects in the Philippines. It champions the country's PPP program by enabling implementing agencies in all aspects of project preparation, managing the PDMF, providing project advisory and facilitation services, and monitoring and empowering agencies through various capacity building activities.

The PPP Center provides technical assistance to national government agencies (NGAs), government-owned and controlled corporations (GOCCs), government financial institutions (GFIs),

state universities and colleges (SUCs), and local government units (LGUs), as well as to the private sector, to help develop and implement critical infrastructure and other development projects. The PPP Center also advocates policy reforms to improve the legal and regulatory frameworks governing PPPs in order to maximise the potential of the infrastructure and development projects in the country.

Through Executive Order No. 136, the PPP Center acts as the Secretariat of the PPP Governing Board. The Board is the overall policy-making body for all PPP-related matters, including the PDMF. It is responsible for setting the strategic direction of the Philippines PPP program and creating an enabling policy and institutional environment for PPPs.

As part of its mandate to further develop PPPs in the country, the PPP Center also undertakes various initiatives to educate and train the implementing agencies on the general principles and processes of PPPs. It conducts training and workshops on the fundamentals of PPPs for both the NGAs and the LGUs. At present, there is an increasing emphasis by the PPP Center on improving the capacities of LGUs, through the Center's Local PPP Strategy. This strategy is focused on assisting LGUs in using the PPP model as a means to improve their project delivery of public services. The PPP Center has also developed knowledge products, such as the NGA PPP Guidebook, that have been made available to the GCAs. Further, the technical assistance granted to NEDA and the PPP Center by development agencies also contributes to strengthening the PPP program via capacity building initiatives. The PPP Center supports the pre-investment activities through the PDMF to create a pipeline of viable PPP projects.

Project Facilitation, Monitoring and Innovation Task Force (PFMI)

Under the 'Build Build Build' initiative of the government, 75 flagship infrastructure projects have been identified by INFRACOM and the ICC from the PIP. These flagship projects represent the major capital undertakings of the government in the medium-term. NEDA has established the PFMI in order to initiate policies and processes to address bottlenecks and gaps in the project cycle of the Infrastructure Flagship Projects (IFPs) i.e. project identification and preparation, appraisal, funding and budget allocation, procurement, implementation and post-evaluation. The PFMI task force is composed of representatives from the major economic and infrastructure agencies.

⁴ MCPs are projects costing more than US \$9.5 million [Exchange rate: PHP 1 = US \$0.019, as of December 2018]

PROJECT PREPARATION LANDSCAPE

Project identification and concept definition. The Philippines follows a systematic and comprehensive approach to identifying and budgeting infrastructure programs and has set up two public expenditure management (PEM) systems: the Public Investment Program (PIP) and Three-year Rolling Infrastructure Program (TRIP), which provide a pipeline of infrastructure programs and projects to be implemented in the medium-term horizon.

- **Public Investment Plan:** The PIP is a six-year programming document accompanied by the Philippines Development Plan (PDP) and the Results Matrix (RM). The PIP serves as an instrument that strengthens the linkages between planning, programming, budgeting, monitoring and evaluation for better public resource allocation. It also helps to create a pipeline of projects and programs (PAPs) to be reviewed and processed by the ICC and the NEDA Board. The Core Investment Programs/Projects (CIP) is a subset of the PIP and serves as a project pipeline of big ticket PAPs for the ICC and NEDA Board. To include and prioritise PAPs in the PIP, NEDA follows a three-tier multi-criteria framework, covering prioritisation at the implementing agency level (Tier 1) and at the NEDA Secretariat level (Tier 2), and validation at the Planning Committee level (Tier 3).
- **Three-year Rolling Infrastructure Program:** The TRIP is a subset of the PIP and comprises all nationally funded infrastructure projects. Implementing agencies are required to specify the different stages of the projects that are listed under the TRIP, so that readily implementable projects are prioritised for the budget over those under development. The TRIP enables the programming and monitoring of project development to ensure that the government's targeted spending on infrastructure projects is achieved.

The TRIP is prepared with an aim to ensure that the agencies' annual budget ceilings are optimised and are used to fund priority PAPs. All the agencies submit their respective TRIPs to the NEDA, which reviews agency TRIPs and prepares a consolidated TRIP, which is presented to INFRACOM for approval before submitting it to the Department of Budget and Management (DBM). Here, the DBM, along with the DBCC, determines the optimised spending levels and hard budget ceilings of the agencies. Finally, the DBM, in consultation with all the agencies, prepares the National Expenditure Program (NEP), the final budget document of the Government of the Philippines.

Project feasibility and structuring. Given the country's institutional set-up for project development, project feasibility studies and structuring are driven entirely by implementing agencies. While the guidelines mandated by ICC on project evaluation provide a benchmark for the aspects to be covered during the feasibility stage, these are only applicable for the large-scale infrastructure projects that require ICC approvals. For smaller projects, implementing agencies have derived their own requirements and processes, which vary between departments. For instance, the Department of Public Works and Highways requires that project proponents (which could be the regional and district offices of the department or local government units) prepare and submit detailed feasibility studies at the project initiation stage itself, which, in turn, undergoes a two-stage vetting process within the department. The Department of Transport mandates that all feasibility studies must include the following aspects - description of product, beneficiaries, proposed annual budget, demand analysis, target population, market growth rate, supply chain, traffic flow, and site visit.

Project approvals and processes. The Investment Coordination Committee (ICC) of the NEDA Board is the agency responsible for the evaluation and review of project proposals. In the case of public investment programs, there are three levels of ICC involvement: the ICC Secretariat accepts the proposal and sends an acknowledgement to the implementing agency, the ICC-Technical Board (ICC-TB) appraises, evaluates and recommends the project to the ICC-Cabinet Committee (ICC-CC) for the first level of approval which endorses the project to the NEDA Board for final confirmation. In the case of PPP projects, the project proposals are reviewed by the PPP Center for its commercial viability and bankability, finance structuring, and value for money to the government, and are subsequently endorsed by the ICC-TB.

Given its prior history with PPPs which have experienced challenges in achieving financial close, as a standard process, most PPPs in the Philippines undertake extensive engagement with the private sector at the structuring and procuring stage. This engagement has included market soundings in relation to potential projects, one-on-one meetings with prequalified bidders, and the provision of project information through virtual data rooms. Further, the PPP program in the Philippines has centered on a comprehensive public communication strategy. Under the Guidelines on Public Consultation and Engagement for PPP Projects mandated by the PPP Center, all implementing agencies are required to develop a consultation plan for each project, which will identify the stakeholders to be engaged with, the timing, and the platforms to be used for the public engagement. These guidelines also mandate that all projects must complete a public consultation exercise prior to submitting proposals to the ICC for approval.

To aid and support independent quality assurance of project proposals and government capacity building, the Asian Development Bank (ADB), along with the Governments of Australia and Canada, supported a technical assistance program, wherein 'twinning partnerships' were established between officials in the PPP Center and their best practice counterparts in other countries. The first among these twinning partnerships was with the Government of New

South Wales (NSW) in Australia. This partnership entailed peer-to-peer exchanges, technical advice and knowledge sharing lectures and workshops, roundtable discussions, and dialogues and site visits to successful PPP projects in NSW.

Financing mechanisms for project preparation. Due to government budget constraints at both the national and local levels, adequate funding for project preparation is not usually budgeted for. Often budget constraints have led to an absence of international expertise in project preparation and have impacted the quality of the preparation. Therefore, as a response to such issues, the national government is encouraging the setting up of independent project preparation facilities that provide demand drive assistance to merit-worthy projects. For example, the NGAs can access PDMF for PPP projects, and the Project Development and Other Related Studies (PDRS) Fund for public investment projects. In some cases, international development agencies have extended financing to set up technical assistance facilities to conduct project preparation activities and capacity building. At the sub-national level, the Project Technical Assistance and Contingency Fund (established by the Municipal Development Fund Office under the Department of Finance) has been established to provide funds for preparation and submission of feasibility studies, and detailed engineering designs for project implementation.

SUPPORTING PROJECT DEVELOPMENT FINANCING IN THE PHILIPPINES

1) Project Development and Monitoring Facility (PDMF)

PDMF is a revolving fund with a total investment of US \$84 million⁵ from the Philippines Government and US \$18 million from the Australian Government through the ADB. The Japan International Cooperating Agency (JICA) has also provided assistance via studies and training courses.

PDMF is under the administration and management of the Philippines PPP Center and its funding is an integral part to the PPP Center's operations and at the core of the PPP Center's ability to deliver on its mandate. The aim of setting up the PDMF is to provide funding and facilitate preparation and monitoring of PPP projects. It provides financing to engage external consultants and transaction advisors to assist implementing agencies in their pre-investment activities for potential PPP projects and develop a pipeline of viable, bankable projects. PDMF can also be tapped by implementing agencies for probity advisory during the bid process, and engagement of independent consultants to monitor the implementation of PPP projects.

Following the approval of assistance by the PDMF Committee for a specific PPP project, the PPP Center sets up a Special Bids Awards Committee, which is tasked with the selection of consultants, and the Project Study Committee/Project Monitoring Committee/Project Implementation Committee⁶, which evaluate the deliverables of consultants and advisors, ensuring quality outputs.

One of the key features of the PDMF is the establishment of 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 the selection of consultants and transaction advisors is a two-stage process. The first stage comprises of the 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. The selected consultant is then responsible for pre-feasibility, project preparation and transaction execution; probity advisory; and/or monitoring of project implementation.

2) Infrastructure Preparation and Innovation Facility (IPIF)

In order to fast-track the implementation of the 'Build Build Build' program, the ADB has provided a technical assistance loan of US \$100 million for the Philippines IPIF.

IPIF is a technical assistance loan provided by the ADB that will directly support the Department of Public Works and Highways (DPWH) and the Department of Transport (DoTr) to deliver more effective and higher quality infrastructure projects. The benefits of this facility involve effective identification, analysis and planning for infrastructure gaps in the roads, urban transport, urban water, sanitation and flood management sectors. This facility will enable the departments to engage international expertise for the preparation and implementation of complex and priority infrastructure projects.

3) Project Development and Other Related Studies Fund (PDRS)

The PDRS fund can be utilised by the NGAs, GoCCs, LGUs, and the state universities and colleges (SUCs) for the preparation of pre-feasibility studies, feasibility studies, options analysis, value analysis, formulations of sector plans and other related pre-investment activities for infrastructure projects that are reflected in the PIP, Regional Development Investment Program (RDIP), Three-year Rolling Infrastructure Programs (TRIP), or Master Plans.

There is a select set of criteria based on parameters such as sector relevance, total project costs, government entity, scale of impact, and project timeline, which are taken into consideration while screening, prioritising and evaluating eligible proposals for funding. Depending on the above criteria, the NEDA Board Committee on Infrastructure (INFRACOMM) will approve the final list of prioritised projects.

⁵ As of December 31 2018.

⁶ Project Study Committee for project preparation services, Project Monitoring Committee for probity advisory services, and Project Implementation Committee for Independent Consultant services

3. Guidance for project preparation

Guidance	PPP CENTER MANUAL OF OPERATIONS
Owner*	PPP Center
Project development stage	Project preparation
Details	<p>The PPP Center Manual of Operations is a guidebook that provides the guidelines for effective performance and completion of core tasks and responsibilities of the PPP Center. The manual mainly focuses on the PPP Center's selected core processes, such as project preparation, management of the Project Development and Monitoring Facility (PDMF), project appraisal, monitoring and evaluation, and conducting training and capacity building activities for NGAs and LGUs in PPP project preparation and development.</p> <p>Link for further details: https://ppp.gov.ph/transparency/ppp-center-operations-manual/</p>
Guidance	PDMF GUIDELINES
Owner	PPP Governing Board
Project development stage	Project preparation financing
Details	<p>The PDMF Guidelines provide the detailed process to be followed by the Implementing Agencies (IAs) in order to apply for PDMF support for project preparation activities, the process to be followed for the recruitment of consultants and management of consultants' contracts funded by the PDMF and the overall management of the PDMF fund. This document specifies the project preparation activities and documents that can be prepared using the PDMF fund, and the IAs and projects that are eligible to obtain PDMF support.</p> <p>Link for further details: https://ppp.gov.ph/pdmf-guidelines/</p>
Guidance	GUIDANCE ON THE IDENTIFICATION, SELECTION AND PRIORITISATION OF PPP PROJECTS
Owner	PPP Governing Board
Project development stage	Project identification and prioritisation
Details	<p>The guidance on the identification, selection and prioritisation of projects intends to institutionalise the criteria and process in the identification, selection and prioritisation of PPP projects using the Multi-Criteria Analysis (MCA) approach. This approach can be useful to determine potential PPP projects and ensure the generation of a credible list of projects that have a higher potential of implementation via the PPP route.</p> <p>Link for further details: https://ppp.gov.ph/wp-content/uploads/2018/07/PPPC_GUIDE-Identification-Selection-Prioritization-20150325.pdf</p>

* Guidance Owner is the governing authority which approves issuances for implementation.

Guidance	
GUIDELINES AND PROCEDURE FOR THE FORMULATION OF THE 2017-2022 PUBLIC INVESTMENT PROGRAM (PIP)	
Owner	National Economic and Development Authority (NEDA)
Project development stage	Project identification and prioritisation
Details	<p>The guidelines and procedure for the formulation of the 2017-2022 Public Investment Program (PIP) provides a framework and process for the formulation of the PIP, which is an accompanying document of the Philippines Development Plan (PDP) and the Results Matrix (RM). These guidelines provide the procedure to be followed and the parameters to be considered by the IAs to identify and prioritise their individual programs and projects (PAPs), and the role of the NEDA Secretariat and the Planning Committee (PC)/Subcommittee (SC) in the preparation of the final PIP.</p> <p>Link for further details: http://www.neda.gov.ph/wp-content/uploads/2018/10/PIP-2017-2022-01.pdf</p>
Guidance	
GUIDELINES AND PROCEDURE FOR THE FORMULATION OF THE THREE-YEAR ROLLING INFRASTRUCTURE PROGRAM	
Owner	Department of Budget and Management, NEDA
Project development stage	Project identification and prioritisation
Details	<p>The guidelines and procedure for the formulation of the Three-year Rolling Infrastructure Program are prepared to guide all the implementing agencies in the development and updating of the TRIP. This guidance document specifies the procedure and parameters to be considered by the individual IAs for identifying and prioritising their individual programs and projects. Using the consolidated TRIP, the program or project will be submitted to the DBM by INFRACOM for the determination of spending levels for the approval of DBCC and consideration in determining the agency's budget ceilings. This shall then form the basis for the list of infrastructure PAPs that are to be included by DBM in the National Expenditure Program (NEP).</p> <p>Link for further details: http://www.neda.gov.ph/policy-guidelines-and-procedures-for-the-formulation-of-the-three-3-year-rolling-infrastructure-program-trip/</p>
Guidance	
GUIDELINES ON PUBLIC CONSULTATION AND ENGAGEMENT FOR PPP PROJECTS	
Owner	PPP Governing Board Philippines
Project development stage	Stakeholder consultation
Details	<p>These guidelines institutionalise the consultation and engagement of the public, with the goal of improving transparency in the development and implementation of PPP projects and overall infrastructure development. This guidance stipulates the responsibilities of the individual participating institutions, such as the IAs and the PPP Center. It provides the process to be followed, the communication platform to be used and the time when the stakeholder consultations should take place.</p> <p>Link for further details: https://ppp.gov.ph/wp-content/uploads/2018/07/PPPC_GUIDE_Public-Consultation-Engagement-20160621.pdf</p>

4. Project case example: Mactan - Cebu International Airport (MCIA) Passenger Terminal Building

PROJECT BRIEF

Mactan Cebu International Airport (MCIA) is located on Mactan Island in the Cebu province of the Central Visayas area in the Philippines. Apart from being the second largest airport in the Philippines in terms of domestic passenger traffic, it is also a gateway for various tourist destinations in the Visayas Islands.

Cebu is among one of the fastest growing provinces in the Philippines and a major contributor to the nation's economy. The Mactan-Cebu International Airport has emerged as a major gateway to the Philippines, with the passenger traffic more than doubling over the past four years. The existing airport at Mactan was unable to cope with the surge in passenger traffic. As a result, in late 2014, India's GMR Infrastructure and the Philippine company Megawide Construction took over the operations of the airport and were appointed to build the second passenger terminal building. The construction of the second terminal began in July 2015 and was completed within three years.

The existing terminal building, which has a capacity of 4.5 million passengers annually, had been operating at over-capacity, with almost seven million passengers using the airport facility in 2013. Upon completion of this project, the overall capacity of the MCIA will increase to 12.5 million passengers annually.

The Mactan-Cebu International Airport passenger terminal development was one of the priority projects of the new government after it made major infrastructure reforms post 2010. It was one of the few initial PPP projects that procured funding from the newly set up mechanism, the Project Development and Monitoring Fund (PDMF), for its project preparation and appointment of external consultants and experts.

QUICK FACTS



VALUE
(IN US \$ MILLION)

390



STATUS

Operational



PROJECT OWNERSHIP

MCIAA* and Department of Transport (DoTr)



SOURCE OF PROJECT
PREPARATORY FINANCING

Project Development and Monitoring Facility (PDMF)



SUPPORT AGENCIES

PPP Center, NEDA

*Mactan – Cebu International Airport Authority

PROJECT TIMELINE

2008	MCIAA announcement regarding terminal expansion plan to address the increasing passenger traffic
2011	PDMF funds were provided and external consultant was hired for project preparation-related studies
2012	Feasibility study was completed with assistance from international expertise from India
2012	Market sounding exercises were conducted with the stakeholders
2012	Project submitted to NEDA for final approval
2012	Project was approved by the NEDA Board
2014	GMR Infrastructure secured a 25-year concession to develop and operate MCIAA
2015	Commencement of the construction of the second passenger terminal
2018	MCIAA new passenger terminal completely operational

LEARNINGS FOR PROJECT PREPARATION

1. Institutional readiness and clearly demarcated responsibilities for the institutions involved leads to faster project preparation, evaluation and approval

Institutional readiness is considered to be a primary success factor for achieving quality project preparation within a timely manner. The implementing agency, in this case the Department of Transportation (DoTr), as the proponent of the project, was responsible for carrying out all the project preparatory activities. The PPP Center was responsible for financing the project preparation activities for the project through the newly set up PDMF mechanism. The NEDA Board was responsible for providing the final approval for the project, once all the project preparation activities were satisfactorily performed. This clear demarcation of responsibilities, along with institutional readiness for implementation, ensured the commitment of the implementing agency in pursuing the project and hence, led to a faster transition of the project from the preparation to the implementation stage.

2. Availability of dedicated financing mechanisms to carry out project preparation activities

Funding the project preparation activities is considered to be a major hindrance in carrying out a high-quality full-fledged pre-investment study. Availability of a dedicated project preparation fund, in this case, the PDMF, helped the DoTr to utilise the expert services of external consultants in order to carry out the project preparation activities. In the case of complex and priority projects like the MCIA, the use of external consultants has helped the project to carry out the project preparation activities diligently and within the specified timelines, which contributed to the delivery of a high-quality PPP project. The integrated support package of the PDMF mechanism across the project's whole lifecycle made the project preparation processes for the MCIA more efficient.

3. Quality assurance mechanisms of the PDMF resulted in high quality and extensive project preparation

Following the signing of the Technical Assistance Agreement (TAA) between the PPP Center and DoTr, the PPP Center initiated the selection of consultants for project preparation from its list of reputable consultants established under the PDMF. A Special Bids and Awards Committee (SBAC) was created to carry out the selection of consultants for the preparation of PPP projects. A Project Study Committee (PSC), consisting of representatives and technical experts from the PPP Center and the DoTr, was also created. It was mandated to review the Terms of Reference (ToR) and bidding documents for the selection of consultants. The PSC was also tasked to review and evaluate the consultant's deliverables for the project preparation (e.g. the Feasibility Study Report) and to likewise endorse payments to the consultant. The quality assurance mechanisms helped ensure the completeness and correctness of project preparation documents.

4. The PPP Center performed stakeholder consultation on a large scale to provide high-grade services

During the course of project development, the PPP Center, in partnership with the DoTr, undertook targeted market-sounding initiatives and consultations to gather insight, suggestions, opinions and comments from the stakeholders and other industry representatives on the proposed projects. Several public consultations were initiated by the PPP Center and the DoTr, wherein interested parties and stakeholders from local and international business communities were invited. In May 2012, a consultation program was conducted at the PPP Center, wherein senior representatives from international airports were also invited to participate.

Rwanda

1. Noteworthy practices for project preparation



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Specialised entity mandated to strengthen and complement local government capacity

The Local Administrative Entities Development Agency (LODA), set up in 2013, supports local governments across various aspects of project preparation including harmonisation of central and local planning, project coordination and appraisal, financing project preparation studies, preparation of guidance documents and in capacity building of local entities. The project screening and appraisal is performed by the Local Government Project Advisory Committee (LGPAC), a high-level committee with representatives from the Ministry of Finance and Economic Planning, the Ministry of Local Government, other line ministries and key ministers from provinces.

Establishment of Single Project Implementation Units (SPIU) in line ministries to complement public sector capacity

The Government of Rwanda, through the cabinet resolution of February 2011, facilitates the establishment of project implementation units within the contracting authority, staffed by external experts (mobilised from the private sector) to augment project preparation capacity, quality assurance and marketability during project preparation.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Integration of multi-year project pipeline planning with the budgeting process

All contracting authorities (both at the national and local level) prepare and disclose three-year project pipelines, which are integrated with the budgeting process. This builds better ownership and sustainability of the multi-year planning process.

A results-based planning framework for effective, continuous and transparent monitoring

The planning framework under the Seven-Year Government Plan provides an equitable focus on governance, justice and economic parameters with clearly defined outcomes, which are monitored continuously and disclosed annually on the government portal.



PROJECT FEASIBILITY AND STRUCTURING

Early-stage tariff validation by the Rwanda Utilities Regulatory Authority (RURA)

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 are critical for the approval of feasibility reports.



PROJECT APPROVALS AND QUALITY ASSURANCE

Multi-factor project appraisal at the highest levels of government

Rwanda has established high-level committees for project appraisal and monitoring, especially for PPP projects. The Steering Committee (PPP SC) is the final approval authority of PPP projects and is composed of permanent members, including ministers of the Ministry of Finance and Economic Planning (MINECOFIN) and the Ministry of Infrastructure (MININFRA), the CEO of the Rwanda Development Board (RDB), and the head of the contracting authority as a non-permanent member. Appraisal checks include a suitability check by the RDB, an affordability check by RURA, a fiscal assessment by MINECOFIN and an alignment check (with national priorities) by the Public Investment Committee (PIC).



PROJECT MARKETING AND STAKEHOLDER ENGAGEMENT

Clearly demarcated role of the RDB in project marketing

The RDB is a specialised agency involved in Rwanda's investment promotion through its investment promotion and implementation division. Within the RDB, another division, the Strategic Investment Division, currently functions as the central PPP Unit and assists the contracting authority with project preparation. The RDB's strong brand equity and relationship with private investors helps in improving the marketability of projects. The RDB, being an empowered institution directly reporting to the President of Rwanda, helps in streamlining decision-making for project preparation.

2. Snapshot of project preparation activities

Rwanda has initiated several reforms to strengthen its project preparation landscape and to establish a positive enabling environment to drive infrastructure delivery. Rwanda has consistently updated its legislative and regulatory framework to accelerate the delivery of infrastructure projects. The National Public Investment Policy 2009 was a major reform which helped improve efficiency and efficacy of public investment projects and increased alignment between public and private investment initiatives. Although recent and yet to be fully tested in terms of implementation, Rwanda has also strengthened its regulatory framework for PPP project preparation with the adoption of the PPP Law in May 2016, and PPP Guidelines in June 2016.

Rwanda has also recently adopted a comprehensive National Investment Policy¹. The objective of this policy is to achieve the country's strategic development goals by transforming the National Public Investment Policy into a National Investment Policy, which addresses both public and private investment. It is intended to lay the groundwork for balancing new public investment projects and potential divestiture needs with options to strengthen private sector participation. The Government of Rwanda has also prepared standardised documents, tools, and templates for use and reference in the PPP project cycle process, complementing the PPP policies and legislation.

As per the Global Infrastructure Hub's InfraCompass², total investment in infrastructure in Rwanda stood at US \$2.294 billion in the last five years, with US \$1.386 billion (60% of the investment) contributed by the private sector. 12 PPP projects involving an estimated US \$814 million in investment have reached financial closure since 1990³. The HQ Peat-fired Power Plant was the biggest project in Rwanda's history at US \$345 million and reached financial closure in 2017.

INSTITUTIONAL FRAMEWORK

At the national level, project preparation activities in Rwanda are led by line ministries and their respective contracting authorities (CAs), with CAs being responsible for the planning, structuring and procurement of projects. Although Rwanda does not have a centralised project preparation facility to finance project preparation, an array of national agencies and entities support the various aspects of project preparation, including the Ministry of Finance and Economic Planning (MINECOFIN), the Public Investment Committee (PIC), the PPP Steering Committee (PPP SC), the Rwandan Development Board (RDB), the Regulatory Authority (RA), the Local Administrative Entities Development Agency (LODA), the Local Administrative Entities Development Agency (LGPAC) and the District Council.

A brief overview of the role of each of the stakeholders involved in project preparation is summarised below:

- MINECOFIN was formed in 1997 by the merger of the Ministry of Finance and Ministry of Planning to improve coordination between the functions of finance and planning. MINECOFIN is responsible for preparing the long-term vision documents, medium-term strategies and annual plan. It is also an apex agency playing a critical role in project appraisal and approval, including activities such as (i) fiscal risk assessment and (ii) alignment with national priority plans through the Public Investment Committee (PIC)⁴. During the project preparation cycle, PIC evaluates projects twice; it approves the initiation of the feasibility study and conducts the feasibility report. PIC is chaired by high-level representatives from MINECOFIN and key spending ministries. Each sector ministry has a planning department that works closely with the National Planning, Development and Research Department in MINECOFIN to ensure sector prioritisation. MINECOFIN is assisted by an in-house Single Project Management Unit.

¹ Draft National Investment Policy 2017, prepared by MINECOFIN

² https://infracompass.gihub.org/ind_country_profile/RWA

³ <http://ppi.worldbank.org/snapshots/country/rwanda>

⁴ PIC is housed within MINECOFIN.

SINGLE PROJECT MANAGEMENT UNIT – COMPLEMENTING PUBLIC SECTOR CAPACITY IN PROJECT PREPARATION

The Government of Rwanda, through the cabinet resolution of February 2011, facilitated the establishment of Single Project Management Units (SPIUs) in line ministries and public agencies. SPIUs create capacity for the design and implementation of projects earmarked for fast-track achievement of targets in the national vision and sectoral strategies. The SPIUs, staffed by external experts often from the private sector, seek to augment project preparation capacity, strengthen quality assurance and improve marketability and information dissemination during project preparation.

The SPIUs collaborate with other institutions, development partners and other consultants to prepare proposals, to prepare plans for project implementation, to plan budgets and to negotiate local funds etc. The SPIU staff may be individual consultants or firms, and they help to implement systems and processes to ensure effective project management. SPIUs are required to conduct regular programmatic and financial supervision of the projects to ascertain if project activities are aligned with the approved plan, budget lines and timeframes. The SPIUs are also vested with the role of engaging with external stakeholders (including multilateral development banks (MDBs), financial institutions and private sector players) and engaging in timely information dissemination, including through participation in seminars and consultations.

- The Rwanda Development Board (RDB) was established in 2009 to coordinate and promote national economic development in the country. It is a specialised agency, which serves as a central PPP Unit through its Strategic Investment Division (SID). The RDB's role also includes the preparation of PPP guidelines and undertaking an independent screening (pre-feasibility study) for suitability for delivery as a PPP. In the feasibility stage, it forms a project-specific technical committee to review the feasibility study. It assists the CA throughout the overall project lifecycle by assisting with project preparation, marketing the project, functioning as a lead negotiator in PPP project agreements, and following up on the realisation of investments. Thus, the RDB is the highest investment promotion authority in the country.
- PPP Steering Committee – The PPP Law designates the PPP Steering Committee responsible for the approval and oversight of a PPP project. It is the final approval authority for PPP projects. The Steering Committee is composed of permanent members (Ministers of MINECOFIN and MININFRA, and the CEO of the RDB) and non-permanent members, including the head of the contracting authority.

At the local government level, the Ministry of Local Government (MINALOC) acts as the apex ministry and oversees the functioning of local authorities. Local governments in Rwanda are structured across four tiers: 30 districts (Akarere), 416 sectors (Imerenge), 2,148 cells (Utugari) and 14,837 villages (Imudungu). The districts are responsible for identifying and monitoring projects according to strategic guidelines set by the ministries. The District Council is the key decision-maker for projects in respective districts and the final approval authority for locally-funded projects. While the project preparation and implementation activities are largely driven by the respective local governments, LODA acts as an important intermediary in complementing local government capacity. Further, the Local Administrative Entities Development Agency (LGPAC) advises on the quality and relevance of ongoing and new projects that meet the requirements for implementation at the local level. With regards to PPP projects, LGPAC is involved at the project identification and screening stages. This committee is chaired by the central government entity MINECOFIN.

LODA – AGENCY TO SUPPORT THE TECHNICAL CAPACITY OF LOCAL GOVERNMENT ENTITIES IN PROJECT PREPARATION

The Local Administrative Entities Development Agency (LODA), set up in 2013, is an agency within MINALOC. It acts as an intermediary to support the preparation and implementation of local government projects. It also serves as a technical secretariat of LGPAC to advise on the quality of infrastructure projects. Among the multitude of roles played by LODA in complementing and strengthening local government capacity, noteworthy practices include:

1) Harmonisation of central and local planning –

LODA organises consultations among central and local governments to coordinate and harmonise districts' capital projects with sector ministries. In addition, new and ongoing development projects are reviewed by LODA and presented to the Local Government Projects Advisory Committee for further guidance. All local projects are reviewed by a joint technical team comprised of MINALOC, LODA, MINECOFIN and LGPAC to ensure quality.

2) Support in feasibility studies – LODA publishes simplified feasibility assessment guidelines for smaller local government projects with a value below US \$1 million. It also publishes templates with a standard reporting format for the detailed feasibility study. LODA provides the framework for the Environmental and Social Impact Assessment (ESIA) for local government projects. To assure the

quality of local government projects, LODA also establishes a Validation Committee, or a working group, with staff from local contracting authorities to validate the results of the feasibility study before it is presented for review.

3) Project preparatory financing assistance – LODA's funding is largely driven by budgetary grants channelled through MINALOC. It receives grants under specific multilateral programs and provides preparatory financing for national priority projects.

4) Project coordination and appraisal – LODA, in collaboration with MINECOFIN, carries out an initial screening of all submitted projects and presents its findings and recommendations to LGPAC and District Councils for final approval. For projects to be funded using the central budget, LODA, in association with MINECOFIN, holds consultations with each district to finalise the budget and arrive at a final allocation for each district. The projects for which financing is approved are presented to LGPAC for quality assurance and then a prioritised list is submitted to the District Council for final approval.

5) Undertaking capacity building – LODA undertakes capacity building for local administrative entities involved in project preparation, in assistance with MDBs, on issues such as the environmental and social framework, land acquisition and resettlement, and other topics relevant for project management.

PROJECT PREPARATION LANDSCAPE

Project preparation activities are decentralised in Rwanda, with the line ministry and their agencies responsible for project preparation at both the federal and sub-national level. A snapshot of the project preparation landscape is summarised below:

Project conceptualisation and planning. Project planning in Rwanda is guided by strategic and vision documents, including the National Vision 2020, the Economic Development and Poverty Reduction Strategy (EDPRS 2), the National Medium-Term Strategy for Development, sector-specific strategic plans, and the government development program (Seven-year Government Program). The projects are identified by the Contracting Authorities (which may be line departments and/or state-owned entities). In the course of the budget planning and approval processes, the CAs submit projects for a three-year horizon, and the project pipeline prepared is integrated into the national-level three-year investment program – the Public Investment Program (PIP). The project pipeline, after the due approval process, is also updated in the Public Investment Management System, which serves as a credible pipeline of projects ready for feasibility or investment funding.

Project studies and structuring. The National Investment Policy 2017 provides a unified process of initiation and preparation of project studies. Project requests for studies (pre-feasibility and feasibility) are submitted with a project profile document (PPD), which includes basic project information, and an additional concept note describing the design of the requested project (full-feasibility or investment) to PIC. Projects go through screening and appraisal based on the size of investment, as follows:

- Screening only is undertaken for projects below 750 million Rwandan francs (US \$840,000⁵);
- Full feasibility only is conducted for projects between 15 billion and 750 million Rwandan francs (between US \$17 million and US \$840,000); and
- Both pre-feasibility and feasibility studies are conducted for projects above 15 billion Rwandan francs (above US \$17 million).

The pre-feasibility study is carried out internally by the CA and the screening of the pre-feasibility study is undertaken by PIC at the central level and LGPAC at the local level. In the case of PPP projects, the pre-feasibility studies are submitted to the RDB for a PPP suitability check and then the RDB's recommendation is submitted to PIC for approval to conduct the full feasibility study. The request for the full feasibility report is submitted by the CA according to MINECOFIN's standard planning and budgeting guidelines and the full feasibility report is screened by PIC at the central level and LGPAC at the local level. Project preparation is largely financed through annual budgetary allocations or is supported by specific MDB-led programs (including African Development Bank and World Bank programs).

Project approvals. Project approvals follow two distinct steps according to the type of project procurement:

- In the case of 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 PIC or 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, 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).
- In the case of PPP projects, the projects are submitted to the 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 CA, representatives from MINECOFIN (to review and provide approvals on fiscal commitment and contingent liabilities), RURA (which advises on tariffs where user tariffs are to be used), and other relevant ministries and agencies, including the Ministry of Justice. 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 SC 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.

⁵ Exchange rate: RWF 1 / US \$0.0011 as of 7 December 2018

3. Guidance for project preparation

Guidance	PPP GUIDELINES
Owner	Rwandan Development Board (RDB)
Project development stage	Project preparation and approval
Details	<p>The PPP manual provides an overview of the procedures to be followed and approvals required for implementation of a PPP project. It serves as a guide to the public and private sector stakeholders on the institutions involved in the project preparation process and their roles, and also the key steps within the project documentation that must be followed by each entity.</p> <p>To ensure quality in project preparation and the standardisation of project documents, it also provides i) the template for the pre-feasibility report, ii) a detailed methodology of the PPP project screening tool used by the RDB to assess PPP suitability, iii) a template for the feasibility report, iv) a checklist for the feasibility study, v) a model template for testing the impact of Fiscal Commitment and Contingent Liability (including the format for comparison between PPP and traditional procurement provision), and vi) a long-term fiscal planning tool.</p> <p>Link for further details: http://rdb.rw/wp-content/uploads/2018/08/PPP-Guidelines.pdf</p>

Guidance	GUIDELINES FOR COMMISSIONING AND MANAGING FEASIBILITY STUDIES
Owner	Local Administrative Entities Development Agency (LODA)
Project development stage	Project preparation and approval for local government projects
Details	<p>The guideline is published for local government entities involved in the preparation of feasibility studies. The documents primarily enhance the quality of local development projects at the district level. The guideline details (i) the concept of feasibility studies, (ii) the detailed appraisal dimension for feasibility studies, (iii) guidance on the scope and content of a feasibility study, and (iv) practical example(s) of conducting a simplified feasibility assessment aiming at basic services provision, and a more comprehensive feasibility study for a revenue generating project.</p> <p>Link for further details: http://loda.gov.rw/fileadmin/user_upload/documents/2014_PRO/Documents/1_LODA_FS_Guidelines_2015.pdf</p>

4. Project case example: Kigali Bulk Water Supply Project

PROJECT BRIEF

The Kigali Bulk Water Supply project is one of sub-Saharan Africa's first water PPPs.

The project aims to deliver around 40 million litres of treated groundwater per day (40% of Kigali's daily water demand) extracted from the Nyabarongo River to Kigali city. The PPP project company (the SPV) shall sell water to the national water utility, the Water and Sanitation Corporation (WASAC), which will distribute water to end-users. The project is aligned with the Government of Rwanda's *"Economic Development and Poverty Reduction Strategy"* with a commitment to achieve universal access to water by 2020.

In September 2010, the Government of Rwanda (GoR) retained the International Finance Corporation (IFC) as lead advisor to develop and structure the project, and to handle the competitive tendering of the project. Subsequently in 2011, the Public-Private Infrastructure Advisory Facility (PPIAF) provided institutional strengthening and capacity building around the transaction, to ensure GoR's ability to manage the project over the long-term. Although the project was successfully bid out in October 2014, financial closure took time and was completed only in November 2017. As the first of its kind in Rwanda, there was little precedent in terms of templates and benchmarks etc., resulting in this long cycle time between award and financial closure.

The project is a tripartite contract involving the stakeholders WASAC, Ministry of Infrastructure (MININFRA) and the SPV Kigali Water Limited (incorporated by Metito Utilities Limited). The project is structured as a 27-year PPP Build-Operate-Transfer (BOT) contract with a 2.5-year construction period. The SPV Kigali Water Limited will be responsible for the design, construction, operation and maintenance of the new treatment plant. It will also develop the water transmission infrastructure. However, the responsibility to maintain and operate the water distribution network and the sale of water to end-users will remain with WASAC, which is the sole off-taker of water from this project.

QUICK FACTS



VALUE (IN US \$ MILLION)

60*



STATUS

Under construction



PROJECT OWNERSHIP

Ministry of Infrastructure



SOURCE OF PROJECT
PREPARATORY FINANCING

**IFC (project studies), PPIAF
(capacity building)**



SUPPORT AGENCIES

**WASAC/EWSA, IFC, external
advisors (Mott MacDonald,
Green Clean)**

* Source: Private Participation in Infrastructure Database, the World Bank

PROJECT TIMELINE



2008	Economic Development & Poverty Reduction Strategy 2008 envisaged 100% water supply to all by 2020
Sep-10	IFC was hired as transaction advisor to assist the CA in project preparation
Jan-11	Technical team appointed to undertake project studies
2011	PPIAF was engaged to undertake institutional capacity building of the Energy, Water and Sanitation Authority (EWSA) ahead of project procurement
Oct-13	Decision to split (EWSA) into two public companies: Rwanda Energy Group Ltd (REG) and the Water and Sanitation Corporation Ltd (WASAC)
Dec-13	RFQ stage undertaken
Aug-14	WASAC was established under Law N° 87/03 dated August 2014 to manage water and sanitation services in Rwanda
Oct-14	RFP undertaken and preferred bidder selected
Mar-15	Concession agreement signed
Nov-17	Financial closure achieved
Jan-18	Construction commenced
Jan-20	Scheduled commercial operation of the project

LEARNINGS FOR PROJECT PREPARATION

1. Dedicated source of funds and transaction advisor to support project preparation

In September 2010, the GoR retained IFC as transaction advisor to assist in the preparation, design, and implementation of private sector participation in the project. IFC's transaction advisory was supplemented with support from the Infrastructure Development Partnership Fund (DevCo), and the Public-Private Infrastructure Advisory Facility (PPIAF). IFC hired Mott MacDonald Ltd. as the technical consultant for the assignment. The technical team brought in a pool of experts across multiple domains including a water supply engineer, a hydrologist, a hydrogeologist, a water treatment specialist, an environmental expert, a sociologist, a PPP support expert, a PPP reviewer and a legal and regulatory specialist. The external experts were also supported by a liaison officer and local support team manager based out of Rwanda. The IFC, along with the consultants, carried out the assignment in two phases:

- **Phase 1:** Detailed due diligence to assess the feasibility of the project and inform the preparation of a Strategic Options Report (SOR) in Phase 2. This stage also included the identification of the most appropriate location for the project components, as well as a demand assessment to determine the size of the plant. During the due diligence stage, the detailed legal, financial, technical and environmental assessments of the project were conducted to assess the feasibility of the proposed project and to inform the preparation of a Strategic Options Report (SOR). The SOR included an assessment of water supply and demand to ensure that an optimal solution for the long-term needs of Kigali was identified, and recommended a PPP BOT structure, which best suited the development objectives of the government, while ensuring the bankability of the transaction.
- **Phase 2:** Detailed project structuring and the competitive selection of investors to implement the PPP. This involved consultations with prequalified bidders, preparing tender documents, preparing responses to bidders' queries and issuing bid bulletins.

2. Institutional reforms and capacity building to ensure project sustainability

The preparation of the Kigali Bulk Water Supply project also reflects the need to streamline public sector institutional design, not just to meet the project objectives but also from a strategic perspective to meet the National Vision. Undertaking the complex task of revamping the water supply network in a major urban centre required clear accountability and operational flexibility from the CAs. The structure of EWSA was found to be unviable to undertake a complex PPP project of this scale. To increase the transparency and quality of operations, GoR decided to split EWSA into two separate utilities – the Rwanda Energy Group Ltd. (REG) and the Water and Sanitation Corporation Ltd. (WASAC), with WASAC tasked with the management of the project.

The IFC team also mobilised funding from PPIAF to support capacity building for the water utility and the water sector reform process. PPIAF has provided two phases of support to help establish and strengthen a credible off-taker for the Kigali Water Supply Project:

- **Phase 1:** Institutional support to the Energy, Water, and Sanitation Authority (EWSA) to strengthen its ability to oversee and implement the Kigali Bulk Water Supply project. This included i) recommending an organisational structure that would allow EWSA to improve its financial, technical, operational and commercial performance; ii) technical support to EWSA to develop a more comprehensive understanding of the distribution network and its operational performance, in order to provide strategic recommendations to improve network monitoring and reduce the non-revenue water rate; and iii) capacity building for government officials to improve their understanding of PPPs.

- **Phase 2:** GoR also introduced several initiatives to empower the newly formed institution under the PPIAF program, including the development of a strategic business plan and an investment plan. This enabled the successful tendering of the Kigali Bulk Water Supply project, providing comfort to potential bidders that the GoR was committed to the sustainable provision of water and sanitation services, and that WASAC would be able to serve as an effective off-taker and counterparty to the project. PPIAF's institutional strengthening and capacity building support helped create a conducive environment for the development and tendering of the Kigali Bulk Water Supply project.

3. Alignment with the national vision helps to drive project ownership at the highest level

The national vision and strategic plan – Vision 2020 and the Economic Development and Poverty Reduction Strategy 2008 (EDPRS) – clearly identify inadequate access to safe drinking water as one of the key reasons for poverty in Rwanda and outline the objective for targeting universal access to water and sanitation. The Kigali Bulk Water Supply project is aligned to the national vision. The project is also one of the first PPP projects in bulk surface water supply in sub-Saharan Africa. The uniqueness of the project and its alignment with the national vision has ensured project ownership at the highest levels of government, which was a critical success factor in project preparation. The RDB and WASAC, along with IFC, were able to create an environment of close coordination between the government, lenders, private partners and other stakeholders, which was essential in determining the project's scope, alignment with broader water access goals, and ascertaining water affordability implications.

4. Flexibility in project structure and risk transfer

The project financing structure continuously evolved during the project development stage to accommodate changes in the project and cost structure. Some of the key challenges have been summarised below:

- **Managing the credit risk of WASAC** – One of the key challenges faced was to manage the credit risk of the newly reorganised entity WASAC as an off-taker, which had implications for its credit standing. WASAC's credit risk was mitigated by structuring multiple layers of cash reserves to improve the credit profile of the project.
- **Managing the tariff impact on end-users** – The involvement of DevCo, the specialist PPP advisory facility operating through the Private Infrastructure Development Group (PIDG), and implemented by the IFC, provided funding to help structure the transaction and its competitive tender. The Emerging Africa Infrastructure Fund (EAIF) worked with Metito Utilities Ltd. (Metito) to refine the financing model, and they identified a need for subsidies to make the project viable for all parties – EAIF and the African Development Bank (AfDB) as commercial lenders, Metito as equity investor, and the off-taker with its tariff affordability objectives. As a result, the PIDG Technical Assistance Facility provided crucial viability gap funding to reduce upfront costs and allow the government to expand the number of people connected to a reliable water supply without raising tariffs. This combined support gave the developer, Metito, and the Rwandan Government the necessary assurance and security to proceed with an innovative plan that was affordable for all parties, including end-users.
- **Mitigating the fiscal risk of the project** – The original scope of the project included production and distribution infrastructure such as pumping stations, reservoirs and piping, and other infrastructure to deliver clean water to the local population. In a bid to reduce the fiscal impact of the high infrastructure construction cost, the project structure was revised, with the concessionaire responsible for bulk water supply and transmission, and WASAC responsible for distribution infrastructure (with a separate concessional loan from the AfDB).

South Africa

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

Establishment of active financial markets and a vibrant ecosystem of quality transaction advisers

The widening of financial markets and the deep expertise of financial stakeholders in managing infrastructure investments has been one of the critical factors for success in project preparation. The high-quality standards prescribed by the financial community have also facilitated the availability of a steady pool of transaction advisers for project preparation.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Multi-dimensional and integrated framework

South Africa's planning approach seeks to integrate geospatial planning with medium-term sector and departmental plans that are contextualised in the medium-term expenditure framework. Infrastructure development comes under the National Development Plan, a long-term multi-sectoral plan, along with the National Infrastructure Plan, which aims to coordinate high priority projects in a geospatial context. Infrastructure implementation is provided by the medium-term plans such as the User Asset Management Plan, Annual Performance Plans, Five-Year Strategic Plans, the Infrastructure Programme Management Plan (IPMP), and the Medium-Term Expenditure Plan (MTEF). Implementation of the pipeline is closely monitored and reported by the National Treasury and the Government Technical Advisory Centre (GTAC).



PROJECT APPROVALS AND QUALITY ASSURANCE

Strong quality assurance for planning and monitoring of large infrastructure projects under BFI

The Budget Facility for Infrastructure (BFI) is a reform to the budget process that supports the execution of national priority projects by establishing specialised structures, procedures and criteria for committing fiscal resources to public infrastructure spending.

The objective of the facility is to address shortcomings in the planning and execution of infrastructure projects and help the government to build a pipeline of projects, through robust project appraisal, effective project development and execution, and sustainable financing arrangements.

Strong gatekeeping and good practice guidance by National Treasury

National Treasury performs stringent checks at key stages of the project preparation process. The National Treasury's PPP manual provides a systematic guide to project preparation, which has become a best practice guide for PPP practitioners across Africa. The National Treasury provides comprehensive guidance to drive quality assurance in project preparation. Its portal serves as a single point of disclosure for all of the guidance documents.

Restructuring of the PPP unit and empowerment of GTAC as an effective technical and financial intermediary for project preparation

GTAC's role as an independent appraisal and advisory unit has strengthened the independence of and transparency in the project approval process in South Africa. The dedicated project development account managed by GTAC has also ensured the availability of quality Project Officers and a Transaction Advisory team for driving quality of project preparation.

2. Snapshot of project preparation activities

South Africa has adopted a systematic approach to project planning and preparation that has delivered great success in crowding-in private investment in infrastructure.

South Africa plans and executes capital projects exceeding ZAR 300 billion (US \$22 billion) on an annual basis. The successful implementation and management of the projects are due to a strong foundation in the country's project preparatory environment. Private investment in infrastructure emerged in the second half of the 1990s with the appointment of an inter-departmental task team to create an enabling environment for PPPs (in 1997). South Africa has emerged as a successful model for PPPs because of the effective implementation of marquee projects and the establishment of a sound PPP-specific regulatory framework to manage risks and secure returns for private investors.

INSTITUTIONAL FRAMEWORK

Project preparation activities in South Africa are largely driven by the Government Contracting Authorities (GCAs), which include individual line ministries, sectoral agencies, and state-owned enterprises (SOEs). The GCAs prepare their long-term project plans, which provide an active pipeline of projects for implementation. These include the Strategic Plan (five-year plan), the Annual Performance Plan and the Annual User Asset Management Plans. The GCAs are guided and assisted in project preparation by national level public institutions, such as the National Treasury, the Presidential Infrastructure Coordinating Commission (PICC) and the Government Technical Advisory Centre (GTAC).

As per the cabinet's mandate, the PICC plans and coordinates the National Infrastructure Plan (NIP). The NIP presents the PICC's spatial mapping of infrastructure gaps and development priorities through 18 Strategic Integrated Projects, each comprising several infrastructure components and programs, to support economic development and address service delivery in the poorest provinces. The PICC is driven by the highest level of political office, which helps bring in a greater degree of harmonisation in perspective planning and coordination across the government.

The National Treasury of South Africa leads infrastructure financing policy and expenditure management at the national level. It is involved in long-term project planning, such as the National Development Plan 2030, and appraisal and treasury approvals of individual projects. The National Treasury also leads on policy formulation and guidance on project preparation, and monitors progress of GCAs through their Annual Performance Plans.

The PPP and Transaction Advisory Unit of GTAC, an agency of National Treasury, supports PPP project preparation and implementation in South Africa. GTAC aids with public finance management through professional advisory services, program and project management, and transactional support. GTAC also provides support to the National Treasury in the appraisal of capital projects, including PPPs, prior to treasury approvals.

PROJECT PREPARATION LANDSCAPE

South Africa follows a structured approach to project preparation, championed largely by the line departments and agencies. The focus of the Government of South Africa continues to be on promoting solicited proposals. In the case of unsolicited proposals (USPs), South Africa's National Treasury USP framework accepts USPs for projects featured on the government's list of priority projects but makes innovation a core element of its evaluation criteria. For a USP to be considered, it must involve innovative design, project development and/or management, or a new and cost-effective method of service delivery. A snapshot of the project preparatory landscape is summarised below:

Project conceptualisation and planning. The New Growth Path and the National Development Plan (NDP) 2030, prepared by the National Treasury, serve as vision documents, while the National Infrastructure Plan (NIP), championed by the PICC, focuses on geospatial planning and coordination amongst various government agencies to fast-track strategic projects. The line departments prepare five-year strategic plans and annual asset management plans, which form the core planning documents and inputs to the budget document. Based on the project plan, the National Treasury finalises a three-year Medium-Term Expenditure Framework (MTEF), which serves as the guidance document on the government's fiscal situation.

Project feasibility studies and structuring. Project preparation is largely performed by the line departments. The line departments may be supported by international development partners and the private sector. The National Treasury's Standard for Infrastructure Procurement and Delivery Management (SIPDM) provides the benchmark for the preparation of concept notes, and pre-feasibility or feasibility reports.

Project appraisal and review. The project appraisal and review are done through a multi-institutional framework to ensure high quality project preparation. The project appraisal process covers financial analysis (lifecycle cost and Internal Rate of Return (IRR)),

economic analysis (Cost-Benefit Analysis (CBA) and cost-effectiveness analysis), risk assessment, sensitivity analysis, and review of the implementation and procurement plans.

The project guidance and approval process is structured according to the following project categories:

- Centrally-funded projects (as outlined in the capital planning guidelines);
- Large and/or strategic projects (as outlined in the Budget Facility for Infrastructure (BFI)); and
- PPP projects (as outlined in the PPP manual).

BUDGET FACILITY FOR INFRASTRUCTURE – REFORM TO SUPPORT NATIONAL PRIORITY PROJECTS

The Budget Facility for Infrastructure (BFI) is a reform to the budget process that creates a specialised institutional framework and processes to support the planning and implementation of national priority projects. The facility is established and managed jointly by the National Treasury, the Presidential Infrastructure Coordinating Commission (PICC) secretariat, and the Departments of Planning, Monitoring and Evaluation (DPME) and Economic Development (EDD). The facility has also established the Joint Technical Committee (JTC), comprised of senior officials from the National Treasury, the PICC secretariat and the DPME, which manages the detailed technical assessment process.

Projects submitted to the facility undergo a rigorous independent appraisal on their technical merits. The technical parameters of assessment include value-for-money, socioeconomic rationale, affordability, risk profile and readiness

for implementation. The facility prepares a recommendation report for the Medium-Term Expenditure Committee (MTEC) and the Ministers' Committee on the Budget (MINCOMBUD), which decides on the allocation of budget. The project sponsor is also engaged on the draft recommendations report before it is presented to MINCOMBUD.

The objective is to build a pipeline of infrastructure projects and programs, where approvals are sought at each stage of project development, starting with initial concept documents. The process of project identification is linked to the budget preparation process. Under the BFI cycle, project proposals are invited at different levels of project development (concept, pre-feasibility, feasibility) for review. Project sponsors will be notified of the decision at each gate.

For the financial year FY 2018-19, the BFI received 64 large infrastructure project submissions. Of these, 38 projects that met submission requirements were assessed.

The Treasury follows a four-stage review process for PPP projects at the following stages:

- Completion of the feasibility study (Treasury approval I);
- Preparation of the bid documents (Treasury approval IIA);
- Evaluation of bids (Treasury approval IIB); and
- Conclusion of negotiations (Treasury approval III).

Where the project has been supported by one of the project preparation facilities (PPFs), then it would also need to be approved by the respective project facility donors prior to the treasury approvals.

STATE-OWNED ENTERPRISES – LEADING QUALITY ASSURANCE IN INFRASTRUCTURE PLANNING

State-owned enterprises (SOEs) are independent entities partially or wholly owned by the government. South Africa is reported to have over 700 SOEs that together account for an estimated 76% of the country's infrastructure investment. Some of the major SOEs include SANRAL (roads), TRANSNET (rails, ports and pipelines), PRASA (passenger railways), ESKOM (power), ALEXKOR (mining), DENEL (military equipment), SAFCOL (forestry), Trans-Caledon Tunnel Authority, Rand Water, and the Development Bank of Southern Africa ((DBSA) project financing). These SOEs promote a programmatic approach to project preparation, although fiscal challenges and credit limitations within SOEs have constrained infrastructure investment more recently.

SOEs in South Africa have created internal capacities and strong quality assurance standards for project approval, which has helped in scaling up project delivery. For example, TRANSNET is a freight and logistics company responsible for pipelines, ports, and rail transport infrastructure and operations in South Africa. TRANSNET has established a multi-year planning framework (Long-term Planning Framework – LTPF), which defines TRANSNET's long-term port, rail and pipeline infrastructure capacity investment plans. The LTPF is based on a 30-year integrated freight demand forecast (Freight Demand Model, Transportation Model, and Market Share Model) and is closely aligned with the government's National Development Plan. This plan is updated on an annual basis. Project preparation is guided by extensive review processes across four major phases:

- FEL 1 – Master planning and concept development;
- FEL 2 – Pre-feasibility study;
- FEL 3 – Feasibility study and detailed engineering;
- FEL 4 – Procurement and construction management.

The detailed guidelines of each phase are provided in the 'Project Life Cycle Process Gate Review Manual'. While South Africa has been facing some fiscal challenges driven by the credit constraints of SOEs, the process and service delivery model framework established by the SOEs is an efficient "model for infrastructure delivery".

Financing project preparation. Financing for project preparation comes from three sources:

- *Budgetary allocation within the respective line agencies and SOEs*, including SANRAL, TRANSNET, PRASA, ESKOM, SAFCOL, Trans-Caledon Tunnel Authority, Rand Water, and DBSA.
- *Government budget-supported project preparation facilities.* These include the Project Development Account, which sits under the National Treasury to support the preparation of PPP projects targeting private investment. In addition, there is the newly created Budget Facility for Infrastructure (BFI), which supports the execution of national priority projects by establishing specialised structures, procedures and criteria for committing fiscal resources to public infrastructure spending. Often public entities in South Africa have not adequately budgeted for project planning and preparation. Therefore, these facilities seek to bridge the funding gap. The aim is to support quality public investments through robust project appraisal, effective project development and execution, and sustainable financing arrangements.
- *Multiple other project preparation facilities at the national and regional levels.* For example, the Infrastructure Investment Programme for South Africa¹ (IIPSA) is a collaboration between the Government of South Africa and the European Union (EU) to promote key infrastructure projects in South Africa and the Southern African Development Community (SADC) region. Similarly, the DBSA Project Preparation Fund, which is sponsored by DBSA under the National Treasury, finances the preparation of bankable infrastructure projects in South Africa and the SADC region. Beyond this, there are other autonomous international project preparation facilities that contribute to project preparatory financing in South Africa.

¹ The Development Bank of Southern Africa (DBSA) has been appointed as the Secretariat and Fund Manager to implement the IIPSA program and invites project proposals from eligible public entities and private entities with a public service mission to apply for IIPSA Grant Funding for the financing of infrastructure investment projects in support of long-term financing by participating DFIs. This funding can take the form of technical assistance or direct investment grants. Although the DBSA is the implementing agent, an IIPSA Project Steering Committee that comprises the National Treasury, Department of Economic Development, Department of Public Enterprises and the Department of International Relations and Cooperation will make the final funding decisions regarding the IIPSA program.

GTAC AND THE PROJECT DEVELOPMENT ACCOUNT (PDA) FACILITY

In 2012, the Government of South Africa split the regulatory functions of the PPP Unit (in the National Treasury) from its advisory role, which was then transferred to the Government Technical Advisory Centre (GTAC). Since this transfer of responsibilities, GTAC has been providing technical support and advice to national and provincial departments (or municipalities) in getting a PPP project through all stages of Treasury approvals (or for municipalities – “Views and Recommendations”); while the Infrastructure Finance Unit in the Budget Office is now responsible for the regulatory function and for recommending project approvals to the Deputy Director General of the Budget Office.

The Project Development Account (which is a revolving fund) is a dedicated project preparation facility under the National Treasury utilised by GTAC to finance technical assistance for all projects including PPPs, NDP projects etc. These functions include technical consulting services, specialised procurement support for high impact government initiatives and advice on the feasibility of infrastructure projects. In all instances of PPP-related financing support, funds are paid to advisors in accordance with the terms of the contract between the implementing authority and the advisor. In non-grant funding instances, disbursed funds will be recovered from the successful private party bidder when the PPP reaches financial close, as a ‘success fee’, which is part of the procurement conditions for the project. The Evaluation/Investment Committee appointed by the Head of GTAC shall decide whether the funds allocated to the project are recoverable or not.

PDA provides financial assistance for hiring both project officers and transaction advisors. A project officer reports directly to the accounting officer of the sponsoring department and manages the implementation of the transaction advisor’s terms of reference to ensure compliance with Treasury Regulation 16².

The project officer is then procured, followed by the procurement of the transaction advisor. A Project Steering Committee (PSC) is thereafter created, composed of senior departmental officials, particularly those who will ultimately be involved in implementing the PPP. One of the tasks of the transaction advisor is to undertake capacity building with the departmental PSC members so that they will be able to implement the project once approved. The transaction advisor will then conduct a feasibility study, the elements of which include: a needs analysis, an options analysis, project due diligence, a value assessment, and an economic valuation and procurement plan. Upon conclusion of the feasibility study, it is submitted to the Budget Office for approval.

Apart from providing project development funds, one of the main objectives of the PDA facility is to drive the public entities to define medium-term planning objectives and earmark funds for planning and preparation. The PDA facility has supported project preparation activities in more than 33 projects across multiple sectors. Examples of projects where PDA funding was used are listed below:

- ***The National Department of Health–Biovac vaccine distribution program.*** In South Africa, the provinces are responsible for the distribution of all pharmaceuticals, including vaccines procured for them by the National Department of Health. Vaccines are particularly vulnerable to variations in temperature and the passage of time. In 2003, subsequent to a PDA partially-funded feasibility study, a PPP was entered into between the National Department of Health and Biovac, a developer of vaccines and pharmaceuticals, for the distribution of vaccines procured by the State to all nine provinces. The distribution agreement is scheduled to expire on 31 December 2018.

continued...

² Treasury Regulations for Departments, Trading Entities, Constitutional Institutions and Public Entities, published in GN 740 GG 23643 of 25 May 2002 (the “Treasury Regulations”), issued in terms of the Public Finance Management Act, 1999 (the “PFMA”), as amended.

- **Province of the Western Cape. Chapman's Peak toll road.** The Chapman's Peak toll road PPP agreement was entered into on 31 May 2003 with the private party contracted to construct and maintain a toll road from Cape Town to the Cape Point National Park area. In February 2009, the province applied for PDA funding for consultants to negotiate suitable amendments to the PPP agreement, which was causing difficulties among the residents along the toll road route. On 25 July 2009, the parties signed an amendment to the PPP agreement, negotiated by the consultants, which resolved the major resident-stakeholder issues. This project illustrates how the creation of the PDA provides an alternative source of funding for the resolution of any operational problems that may arise during the implementation of a PPP agreement.
- **Free State Province Universitas and Pelonomi Hospitals.** In 2000, the Province of the Free State's Department of Health undertook the assessment of a possible PPP project, whereby the province would obtain the services of a private sector medical services provider at its Pelonomi Hospital, located in an underprivileged area of Bloemfontein, by pairing it with another hospital also located in Bloemfontein, but in a wealthier area. Transaction advisors funded by the PDA were appointed in 2002, and a PPP for 26 years was thereafter executed between the Free State Department of Health and a private sector medical services provider. The agreement was that the service provider would redevelop and upgrade certain aspects of Pelonomi Hospital, use its wards and theatres, and generate revenue therefrom, while at the same time, providing world-class medical services to former Pelonomi patients at Universitas Hospital.
- **Gauteng Province Cradle of Humankind World Heritage Site.** The Cradle of Humankind World Heritage Site in Gauteng Province is the source of many hominid fossils. It is currently the site of much research regarding our hominid ancestors, with the discovery of Homo Naledi being announced recently. Much of the site is under the control of South Africa's University of the Witwatersrand (Wits), located in Johannesburg. In 2001, the province initiated PPP processes, partially financed by the PDA, with the understanding and cooperation of Wits. A cooperation agreement was executed by the province and Wits in 2003, followed by the signing of a PPP agreement with Maropeng a l'Africa (MAL) for the design, construction, maintenance and operation of the Interpretation Centre at the site.

3. Guidance for project preparation

Guidance	FOUR-STAGE TREASURY APPROVAL PROCESS
Owner	National Treasury
Project development stage	Quality assurance
Details	<p>Modules 1-4 (out of nine modules) of the PPP Manual systematically guide public and private parties through the phases of PPP project preparation for national and provincial governments. Each module of the PPP Manual is issued as a National Treasury PPP Practice Note, as per the 1999 Public Finance Management Act. The PPP Manual should be read together with the South African National Treasury's Standardised Public-Private Partnership Provisions. The manual draws on South African project experience to date and on best international practice and sets rigorous risk-assessment standards by which the government will make affordable project choices that best leverage private investment for quality public services.</p> <p>Module 1 (Regulations for PPPs) and Module 2 (Code of good practice for Black Economic Empowerment (BEE) in PPPs) deal with the enabling environment for project planning and delivery. Module 3 provides the steps in the PPP inception phase, including the hiring of transaction advisors and arranging of preparatory financing for the subsequent module.</p> <p>Module 4 (PPP Feasibility Study) explains in detail how an institution should carry out a feasibility study to decide whether conventional public sector procurement or a PPP is the best choice for the proposed project.</p> <p>Link for further details: https://www.gtac.gov.za/Publications/1160-PPP%20Manual.pdf</p>
Guidance	BUDGET FACILITY FOR INFRASTRUCTURE (BFI)
Owner	National Treasury, Presidential Infrastructure Coordinating Commission (PICC) and Department of Planning
Project development stage	Quality assurance
Details	<p>The Budget Facility for Infrastructure (BFI) is a reform to the budget process that supports the execution of national priority projects by establishing specialised structures, procedures and criteria for committing fiscal resources to public infrastructure spending. As directed by the Cabinet, the National Treasury is working jointly with the Presidential Infrastructure Coordinating Commission (PICC) secretariat, the Department of Planning, Monitoring and Evaluation (DPME) and the Economic Development Department (EDD) to establish the facility. The aim is to support quality public investments through robust project appraisal, effective project development and execution, and sustainable financing arrangements.</p> <p>The objective of the facility is to address shortcomings in the planning and execution of infrastructure projects and help the government to build a pipeline of projects. The facility shall put a mechanism in place to improve the rigour of planning and budgeting for large infrastructure projects through standardised appraisal methodologies that ensure that full lifecycle costs of projects are planned, adequately budgeted and provided for in future budgets.</p> <p>Link for further details: http://www.treasury.gov.za/publications/guidelines/Infrastructure%20Guidelines%20Final%20May%202018.pdf</p>

Guidance	INFRASTRUCTURE DELIVERY MANAGEMENT SYSTEM (IDMS) AND STANDARD FOR INFRASTRUCTURE PROCUREMENT AND DELIVERY MANAGEMENT (SIPDM)
Owner	National Treasury
Project development stage	Project planning
Details	<p>The government's Infrastructure Delivery Management System comprises three core systems, namely a planning and budgeting system, a supply chain management system, and an asset management system, all of which have forward and backward linkages. These core systems are located within portfolio, program and project management processes, as well as operation and maintenance processes. Collectively these processes and systems, together with a performance management system, establish the institutional system for infrastructure delivery. The SIPDM (a component of the government's IDMS) establishes control frameworks (through a stage-gate review process) for the planning, design and execution of infrastructure projects and infrastructure procurement.</p> <p>Link for further details: http://www.treasury.gov.za/legislation/pfma/TreasuryInstruction/Annexure%20A%20-%20Standard%20for%20Infrastructure%20Procurement%20and%20Delivery%20Management.pdf</p>

Guidance	CAPITAL PLANNING GUIDELINES
Owner	National Treasury, GTAC
Project development stage	Quality assurance
Details	<p>Capital planning guidelines provide guidance on how infrastructure programs and project proposals should be planned, appraised and evaluated before significant funds are committed. The guidance encourages a lifecycle evaluation process, which is analytically robust. The National Treasury evaluation process recommendations are made to the Medium-Term Expenditure Committee (MTEC), which in turn advises the Ministers' Committee on the Budget (MINCOMBUD) on projects that should be allocated funding.</p> <p>The guidelines bring together the key principles involved in deciding whether a project is good, and worth the government's investment. A 'funnel' through which projects can be sifted is set out and includes: (1) assessing projects for alignment with the country's strategic considerations; (2) whether there is truly demand for the project; (3) whether it represents the most cost-effective option; (4) whether it is affordable; and (5) whether it is likely to be implementable.</p> <p>Link for further details: https://www.gtac.gov.za/Publications/Appraisal_of_Infrastructure_Guideline_Revised.pdf</p>

Guidance	GTAC PROGRAMME AND PROJECT MANAGEMENT (PPM) TOOLKIT
Owner	National Treasury, GTAC
Project development stage	Project management
Details	<p>This toolkit provides a practical approach to the management of projects. The Programme and Project Management (PPM) Toolkit is designed to simplify the processes required to manage a project successfully from beginning to end. It defines project management in simple terms and provides the necessary documentation, tools and templates required to make the project a success throughout different phases. The National Treasury, through GTAC, took the initiative to roll-out the PPM Framework, Guides and Toolkits in all national departments and the nine provinces. The Project Management Body of Knowledge (PMBOK) approach was adopted as a basis for the development of the Programme and Project Management Framework. The material is customised to suit the South African public sector and is available to all in the public sector.</p> <p>Link for further details: https://www.gtac.gov.za/knowledge-products/ppm-toolkit</p>

Guidance	USER GUIDE FOR BUDGET FACILITY FOR INFRASTRUCTURE (BFI) FINANCIAL MODEL
Owner	National Treasury
Project development stage	Project appraisal and review
Details	<p>The BFI Financial Model has been designed to appraise the affordability of any infrastructure project proposal submitted to the BFI. It provides the financial information required for any submission made by sponsors to the BFI, such as budget statements and Risk-Sensitivity Analysis. The user guide is designed to aid the user of the BFI Financial Model in setting up the model and to guide them through where and how to populate the model with data. In addition, this guide explains the use of output sheets and scenarios.</p> <p>Link for further details: http://www.treasury.gov.za/publications/guidelines/2018%20Large%20Strategic%20Infrastructure%20User%20Guide.pdf</p>

4. Project case example: Renewable Energy IPP Procurement (REIPPP) Programme

PROJECT BRIEF

The REIPPP Programme was a landmark initiative by the Department of Energy (DoE) to rapidly scale-up grid connected renewable energy generation through private participation. The REIPPP Programme was implemented against the historical backdrop of several failed initiatives to contract Independent Power Producers (IPPs), owing to institutional shortcomings, capacity gaps and weak incentive structures. To overcome these limitations and to run the REIPPP Programme as a sophisticated, multi-project, multibillion-dollar international competitive bidding process for renewable energy, the DoE co-opted and took the assistance of the National Treasury's PPP Unit to manage the process. A small team of technical staff from the DoE and the PPP Unit established a project office, known as the DoE IPP unit, which effectively functioned outside the departmental structure and acted as a facilitator for the REIPPP Programme.

Since inception, the REIPPP Programme has received private sector investment of US \$14 billion and created 36,528 job years³. Overall, 44% (i.e. 6,422 MW) of the total targeted renewable energy capacity of 14,725 MW, has been procured from 112 IPPs. More than 3,776 MW of electricity generation capacity from 62 IPP projects have also been connected to the national grid. The challenge for the government now is to provide timely grid connectivity to the renewable energy IPPs.

QUICK FACTS



VALUE
(IN US \$ BILLION)

15



STATUS

Five bid windows*



PROJECT OWNERSHIP

IPP Office, DoE



SOURCE OF PROJECT
PREPARATORY FINANCING

National Treasury PDF**



SUPPORT AGENCIES

PPP Unit NT, DoE, ESKOM

³ The equivalent of a full time employment opportunity for one person for one year.

* Does not include the small projects IPPP program; ** National Treasury Project Development Facility; Preparatory actions leading up to the first round auctions supported by DBSA

PROJECT TIMELINE

1998	White Paper on Energy Policy
2003	White Paper on Renewables and Integrated Energy Plan
2006	Electricity Regulation Act 2006
2008	Inter-Ministerial Committee on Energy to unblocking hurdles in scaling up energy sector; Strategic commitment of leadership to drive private sector investment in renewable energy
2009	Renewable Energy Feed-in Tariffs (REFITs) policy
2010	Integrated Resource Plan 2010-2030
2010	Establishment of IPP office in DoE
2010	Memorandum of Agreement (MOA) signed by DoE, NT and DBSA for ZAR 80 million (US \$11-12 million)* assistance for consultants, a project office, and capacity building
2011	Electricity regulations on new generation capacity
2011	Informal consultations with potential developers, lawyers and financial institutions on existing policy; Review of international tender processes in India, Brazil, Germany, France, Spain and elsewhere
2011	Launch of Renewable Energy Independent Power Producer Procurement (REIPPP) Programme
2012	National Development Plan 2030

BID WINDOWS

Bid Window 1	<ul style="list-style-type: none"> • 4 November 2011 • 28 bidders • 1425 MW
Bid Window 2	<ul style="list-style-type: none"> • 5 March 2012 • 19 bidders • 1040 MW
Bid Window 3	<ul style="list-style-type: none"> • 19 August 2013 • 17 bidders • 1457 MW
Bid Window 3.5	<ul style="list-style-type: none"> • 31 March 2014 • 2 bidders • 200 MW
Bid Window 4	<ul style="list-style-type: none"> • 18 August 2014 • 26 bidders • 2205 MW

* Average exchange rate of US \$1 = ZAR 7 in 2010

LEARNINGS FOR PROJECT PREPARATION

The success of the REIPPP Programme is an outcome of the government's leadership and vision, meticulous planning and detailing, and structural and operational interventions. The preparatory work involved in creating and implementing the program has been extensive.

1. Multi-year planning horizon for infrastructure backed by consistent and coordinated policy and reform actions is central to the success of transformational projects

The success of the REIPPP Programme entails a resilient political vision for the country and sectors reflected in the multi-year planning framework, backed by a strong political will to achieve the vision's objectives. The consistent and coordinated policy actions to initiate regulatory and institutional reforms and operationalise the recommendations of the Integrated Energy Plan, the Integrated Resource Plan, and the White Paper on Energy and Renewables remains the foundation of the project's success. Each element of success is discussed below:

- A multi-year capital investment planning framework that is consistent with development priorities. The sectoral planning documents (the Integrated Energy Plan 2003 and the Integrated Resource Plan in 2010) were aligned with the nation's commitment to reducing its carbon footprint. The initial impetus to the program was provided in the White Paper on Energy Policy in 1998 (which promoted a greater role for the private sector and diversification of energy sources), and the White Paper on Renewables in 2003 (which envisaged 10,000 MW of energy from renewables).
- The government also created the necessary legal and regulatory framework for implementing the REIPPP Programme. The Electricity Regulation Act [No.4 of 2006] facilitated the establishment of an energy regulator (Section 3), the licensing of activities (Section 7), an estimation of new generation capacity across sources, the tendering procedure and the promotion of private sector participation (Section 34), and regulations on new generation capacity (Section 35). Specifically, Sections 34 and 35 of the Act set the framework for the REIPPP Programme.

2. Programmatic approach to project preparation through an empowered institution and sectoral focus

Realising the need for a dedicated establishment to design and implement the REIPPP Programme project preparation process, the Government of South Africa established a separate IPP office within the DoE in 2010, to drive project management. The DoE and National Treasury (NT) entered into a Memorandum of Agreement (MoA) with the Development Bank of Southern Africa (DBSA) to facilitate the establishment of this IPP office. The clarity in accountability, the operational independence of the project unit and its arms-length position with the government departments helped to minimise procedural overheads, as well as bureaucratic restrictions, driving project scale. The unit also focused on ensuring sustained capacity building initiatives including training, case studies and communications programs.

3. Strong program champion supported by a resourceful and dynamic team

The REIPPP Programme team was headed by a dynamic officer from the National Treasury PPP Unit with deep expertise in project appraisal. Several other key stakeholders were also drafted into the team early in the program planning phase. Giving autonomy to this management team helped streamline program management. The management team included experts from the legal, technical, banking and financial sectors to create a resourceful and dynamic project team. The team's private sector experience and familiarity with management in private sector circles facilitated the engagement process. The team also created an entrepreneurial/start-up type of work culture, which was received favourably by the private sector players, as well as the bankers. The quality of the management team and its dynamic leadership were key to driving private sector trust, especially when the general outlook towards PPPs was muted⁴.

⁴ A host of factors contributed to this sentiment and included (i) policy uncertainty, (ii) limited government support, (iii) cancellation of several PPP contracts, especially in social sector projects like prisons, and iv) negative public opinion over PPPs.

4. Access to an independent high-quality team for evaluation

The team was supported by a high-quality private advisory team of private domestic and international advisers, including international reviewers (legal, technical and governance), project management consultants, legal support, and a financial and technical evaluation team. The primary reason for access to such a high-quality team was the availability of a dedicated project financing facility. The project team received technical assistance from the expert teams from Spain and Denmark under the bilateral assistance program. The DoE IPP office also had a large number of transaction advisers with strong national and international expertise. The opportunity to imbibe learnings from the European counterparts, as well as the availability of quality advisers, have been highlighted as critical success factors for project preparation in South Africa. The table below provides a snapshot of consultants and transaction advisers, among many others, providing technical, legal and financial assistance to the DoE IPP office.

REIPPP PROGRAMME EVALUATION CONSULTANTS

International Reviewers: Legal: Linklaters (UK), Technical: Tony Wheeler Consulting (UK), and Governance: Ernst & Young

Project Management: SPP Project Solutions

Legal Evaluation: Bowman Gilfillan, ENS Africa, Ledwaba Mazwai and Webber Wentzel

Technical Evaluation: Mott MacDonald

Financial Evaluation: Ernst & Young (EY) and PwC

Source: South Africa's Renewable Energy IPP Procurement Programme: Success Factors and Lessons May 2014 (PPIAF)

5. Availability of adequate and sustained project preparation financing

The REIPPP Programme was backed by dedicated financing for project preparation and capacity building. Some of the sources include: (i) the National Treasury (made available through DBSA) approximately US \$7.5 million; (ii) technical assistance financing from bilateral donor agencies (Denmark, Spain, and the UK), and multilateral agencies (US \$6 million from the World Bank through the Global Environment Facility); and (iii) self-financing through bidder registration fees and project development fees of 1% of the project cost

(transferred to a project development fund, which is managed by the DoE). The multiple financing sources have ensured the sustainability of the program and helped it to remain off the formal government budget after the first round. The availability of dedicated funding for the process ensured that high quality private advisory assistance was available for the DoE IPP office in planning the process. The cost of preparing a bid and taking it to financial close for the first round of auctions is estimated at around ZAR 25 to 30 million (US \$3-4 million) and was supported by the National Treasury, the World Bank and DBSA.

6. Continuous engagement with the market participants helped shape the program design

The team made continuous engagement with the private sector players and bankers a priority, to ensure that the program design was aligned with the prevailing market environment. This also helped to allay general concerns related to the PPP model during this period. Design factors, including the signing of the PPA early on, and implementation arrangements, were an outcome of this effective engagement process. One of the unique elements of the program was that the bidders were expected to come with lenders already locked in, which helped in incorporating the lenders' concerns into the program design.

7. Strengthening baseline information and high governance standards to aid private sector interest

To aid with the significant risk of delivery transferred by the program to the private sector, the South African Government created information disclosure systems to enable private sector decision-making. The government had already taken initiatives to provide base information regarding renewable energy sources like solar and wind energy, which would serve as guidance for the prospective private sector partners. Some of the key initiatives include:

- The Solar Data and Resource Mapping study conducted by the Southern African Universities Radiometric Network (SAURAN)
- Wind Atlas for South Africa (WASA I) under the DoE, the Global Environmental Facility (GEF), the United Nations Development Programme (UNDP) and the Danish Government

Further, transparency and high standards of professionalism in program management, adherence to timelines, and high standards of quality assurance led to the program's credibility and resulted in high participation by the private sector.

United Kingdom

1. Noteworthy practices for project preparation



EXISTING ENABLING ENVIRONMENT

IPA's role as a centre of excellence for project preparation

The Infrastructure and Projects Authority (IPA) defines the overarching framework for project preparation in the United Kingdom (UK). Guidance designed by IPA serves as the standards for contracting authorities to develop projects. IPA also undertakes quality assurance reviews for major projects, and supports capacity development and delivery support.



PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Institutionalising capacity enhancement through multiple interventions

Capacity development initiatives are central to the UK's project preparation landscape and are undertaken at the apex level by IPA. These are further supported by individual departments who conduct their own training and apprenticeship programs, aligned to the specific needs of the department.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Multi-year plans and pipelines used to support an overarching long-term vision, and progress monitored by IPA to help strengthen accountability

The UK's National Infrastructure Assessment (NIA) provides a 30-year strategic vision for infrastructure development in the country. The vision is realised through the annual National Infrastructure Plan (NIP), a four-year pipeline of prioritised projects. Implementation of these pipelines is closely monitored and reported by IPA.



PROJECT IDENTIFICATION AND CONCEPT DEFINITION

Systematic processes to aid conceptualisation of major projects

IPA supports early stage project planning by providing tools that help identify major projects, to verify the holistic fit and synergy with overarching government policies. For example, the early development pool for major projects is monitored and reviewed by IPA, providing assurance for project development at the initiation stage. Further, the Project Initiation Routemap provides guidance on a structured approach to identifying and defining projects.



PROJECT FEASIBILITY AND STRUCTURING

Multi-dimensional approach to developing business cases, mapped to a comprehensive review process

Her Majesty's (HM) Treasury's Five Case Model encourages contracting authorities to evaluate project feasibility through five interdependent lenses. As the feasibility study progresses across different stages, the Office of Government Commerce's (OGC) Gateway Review process provides a 'peer review' mechanism to ensure that they can progress to the next stage.



PROJECT APPROVALS AND QUALITY ASSURANCE

Defined framework for quality assurance with requisite support tools

The UK's quality assurance framework is comprehensive, providing varying levels of scrutiny depending on project complexity, such as the IPA gateway review series for major projects, project validation reviews for early stage assurance for major projects, and project assessment reviews, which are tailored to the specific needs of a particularly complex project. These reviews can be conducted through HM Treasury panel meetings, and/or an expert team under the Major Projects Review Group could be commissioned.

2. Snapshot of project preparation activities

The UK has often been regarded as a pioneer of project delivery globally, providing a useful learning opportunity for developing countries embarking on the implementation of large projects.

Through its Private Finance Initiative (PFI), launched in 1992, the UK has delivered £56 billion of private sector capital investment in over 700 projects over two decades. Today, the government is implementing one of its most ambitious policy agendas ever – the current Government Major Projects Portfolio (GMPP) includes 143 projects worth over £455 billion (= US \$586 billion), across 17 departments. These projects are increasingly diverse in their nature, objectives and complexity: ranging from capital intensive infrastructure projects like High Speed Two (HS2) – a new high speed rail network linking the south and north of the UK – to major transformations like the Her Majesty (HM) Courts Reform, which will modernise the way people interface with the courts service.

INSTITUTIONAL FRAMEWORK

Project preparation activities in the UK are decentralised, with each line department and local government being responsible for their own project preparation as procuring authorities. Procuring authorities plan, structure and procure projects, and pay for the infrastructure services, either by collecting user charges or through their government budgets. Activities for project development are funded through the federal or local government budgets. Quite often, for major projects, special agencies are created that are provided with separate budgets.

For example, Crossrail Limited has been incorporated by Transport for London (TfL) to plan and implement the new railway lines in London. Once completed, the railway lines will be handed over to TfL for operations. Similarly, HS2, the railway linking London, Birmingham, the East Midlands, Leeds and Manchester, is being developed by High Speed Two (HS2) Limited, a company established by the UK Government.

To guide the above-mentioned implementing agencies, the government has created two unique institutions; the Infrastructure and Projects Authority (IPA) and the National Infrastructure Commission (NIC). The IPA, reporting to Her Majesty's Treasury (HMT) and the Cabinet Office, has been formed to oversee general policy on project delivery and quality assurance of specific business case proposals.

Established in 2015 by the merger of Infrastructure UK (IUK) and the Major Projects Authority (MPA), IPA has a long history of managing and delivering major infrastructure projects through its founding institutions.

A merged IPA combines expertise in delivery, assurance and financing, helping to manage major infrastructure projects within one government entity – thus defined as 'the UK Government's **centre of expertise for infrastructure and major projects**'.

The IPA does not implement projects but instead focuses on the overall project delivery system, which includes the projects, people and processes that together create the right environment for successful delivery. It is part of a wider institutional framework for infrastructure planning and delivery. To help shape a vision for the future for the UK's economic infrastructure, the Treasury has created the National Infrastructure Commission (NIC). The NIC has prepared its first National Infrastructure Assessment (NIA) in 2018, which analyses the UK's long-term economic infrastructure needs, outlines a strategic vision over the next 30 years and sets out recommendations for how the identified needs should be met. The NIA will be tabled in Parliament and the NIC will monitor progress on the government's implementation. The NIC is a unique entity that has independent experts and industry leaders as its commissioners. Although funded by the Treasury, it functions at arm's length and provides independent advice and progress monitoring.

PROJECT PREPARATION LANDSCAPE

The HMT and IPA provide a variety of support tools to guide project preparation in the UK. While these are binding only on major projects that require HMT approval or projects that also solicit an independent review from IPA, most line agencies have aligned their project preparation activities in line with the best practice guidelines prescribed by HMT and IPA.

Project identification and concept definition.

Project identification at the line ministry and local government level is guided by the long-term vision for development prepared by the NIC, under the NIA. Typically, ministries have established dedicated teams that lead project conceptualisation activities.

Procuring authorities identify projects that meet national priorities, which are integrated through two long-term plans prepared by the IPA – the National Infrastructure and Construction Pipeline (NICP) and the National Infrastructure Delivery Plan (NIDP). The NICP unites planned public and private investments across all economic sectors, providing clarity on the infrastructure spending expected to be achieved over a five-year period. The NICP also tracks the progress of nationally significant projects identified in the earlier plans, and is updated on an annual basis. The NIDP builds on the NICP, detailing on how the UK Government aims to support the delivery of infrastructure projects identified under the NICP, with a dedicated pipeline of housing and social infrastructure projects. To support project identification, the UK's project preparation framework provides a multitude of tools:

The Early Development Pool (EDP) for major government projects and programs (in the GMPP):

Institutionalised by IPA, the EDP includes projects that could potentially join the GMPP in the future. Inclusion of nationally significant projects in the EDP enables IPA to provide hand-holding support at the project initiation stage itself.

The Project Initiation Routemap (PIR)

The PIR is a best practice guideline prescribed by IPA, which provides a structured approach to identifying and conceptualising projects through a collaborative approach with IPA. From 2018, all major projects are assessed for their need and suitability for applying the routemap to guide conceptualisation.

Stage 0 of the Five Case Model

The Five Case Model is a thinking framework recommended by the HMT, which defines a structured approach to developing business cases. Stage 0 of the Five Case Model outlines a method to help identify projects that verify the strategic necessity of the project or program.

Project feasibility and structuring. All line agencies must prepare business cases for their spending proposals. These cases are prepared according to a model which views proposals from five interdependent dimensions, prescribed by the Green Book of HMT – known as the Five Case Model. These five dimensions are: strategic, economic, commercial, financial and management. The business case evolves as the project preparation for the project progresses. For projects, a strategic outline case is prepared at the conceptualisation stage, thereafter an outline business case is prepared at the pre-feasibility stage, which

is followed by a more comprehensive full business case and its updates prior to implementation. Individual central government departments and local governments undertaking non-major projects are not bound by project preparation guidelines provided by HMT. However, recognising the benefit of a standardised approach to project preparation, most of these departments have designed their internal project processes on the basis of those for major projects.

Project approvals and quality assurance. The Her Majesty's Treasury (HMT) recommends specific guidelines for independent review of all new major projects requiring HMT and IPA approvals:

OGC Gateway Review™

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 reevaluation of the government's effectiveness in projects and program delivery.

Major Projects Review Group (MPRG)

Sponsored by HMT, the IPA coordinates the MPRG, which is an independent group of experts from the government and private sector. The MPRG challenges projects on deliverability, affordability and value for money at key points in the HMT approvals process and as required at other key decision points during a project's lifecycle.

IPA Quality Reviews

In addition, the IPA has enhanced the quality review process with a range of different independent assurance reviews. Depending on the project cost and the department's track record of executing projects of similar complexity, these reviews range from formal gateways to more bespoke 'critical friend' reviews.

HOW IS IPA MAKING A DIFFERENCE IN PUBLIC SECTOR PROJECT DELIVERY?

The IPA, including its predecessor entities such as the MPA and IUK, have contributed remarkably to enhancing the project preparation ecosystem in the UK. Major contributions include:

- **Setting project standards and good practice guidance:** This includes documentation related to all major aspects of project preparation and project evaluation, such as project initiation routemaps, independent assurance methodology and other technical guidance documents and templates.
- **Infrastructure delivery support:** IPA has a team of commercial specialists that provide direction to the government and its agencies on all aspects of infrastructure delivery. The specialists can be deployed alongside the senior leaders and project teams to strengthen client capability. IPA also provides HMT and the Cabinet Office with commercial advice on business case approvals for specific projects.
- **Training and leadership development:** Based on the recognition that great project leaders deliver great projects, IPA has partnered with Oxford Saïd Business School to create the Major Projects Leadership Academy (MPLA). MPLA aims to improve the ability of senior civil servants to lead major projects and is regarded as the gold standard for project leadership training. It improves senior civil servants' ability to lead major projects with the aim of creating a cadre of world-class project leaders. Over 400 professionals have enrolled in the MPLA, and 250 have graduated to date. The MPLA received a Silver Award from the European Foundation for Management Development (EFMD) for their Excellence in Practice Awards, in the category of professional development. In addition, there are other project leadership training, apprenticeship and future leaders' programs that have been launched by IPA.
- **Project leadership development:** The IPA plays an important role in equipping project leaders with the right skills, training and capabilities to deliver infrastructure projects. In 2017, the IPA launched the Project Delivery Capability Framework (PDCF), which outlines a common language for the profession and defined career paths to help manage their careers. This framework is now being used by all major departments to help drive professionalism. In addition, the Government Online Skills Tool (GOST) supports the rollout of PDCF by allowing individuals to assess their skills and competencies against any project role, and to identify appropriate development options. It is currently being used by over 4,000 project professionals across government, and this number will grow following full rollout.
- **Independent quality assurance:** IPA uses independent experts for peer review and quality assurance of projects at critical stages, against a clear set of project standards. During 2017-18, the IPA conducted 230 independent assurance reviews on the Government Major Projects Portfolio (GMPP) projects. The IPA has created an assurance review pool of over 1,600 independent assurance reviewers from across government and industry.
- **Performance review:** The IPA undertakes the Infrastructure Performance Review to identify ways the government, working with industry, can improve the quality, cost and performance of UK infrastructure, building on the Infrastructure Cost Review 2010–2014. At the upstream end, the IPA supports the preparation of the National Infrastructure Development Plan, which brings together all of the government's infrastructure delivery priorities over the next five years; and the National Infrastructure Construction Pipeline, which is a forward-looking pipeline of planned projects and programs in economic and social infrastructure and housing.

3. Guidance for project preparation

Guidance	THE GREEN BOOK, FIVE CASE MODEL
Owner	Her Majesty's Treasury (HMT)
Project development stage	Feasibility study
Details	<p>The Five Case Model guidance provides an approach to preparing business cases for infrastructure projects. All major projects must design rationales for undertaking a project through dimensions defined in the Five Case Business Model – strategic, economic, commercial, financial and management. The business case, along with the impact assessment reports, are required to be put through a long-list option analysis for delivery, followed by a short-list appraisal on the principles of cost-benefit analysis.</p> <p>Link for further details: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/469317/green_book_guidance_public_sector_business_cases_2015_update.pdf</p>
Guidance	GATEWAY REVIEW PROCESS
Owner	Office of Government Commerce (OGC)
Project development stage	Quality assurance
Details	<p>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, HMT approvals are required at Gates 1, 2 and 3.</p> <p>Link for further details: https://www.gov.uk/government/publications/ogc-gateway-review-0-strategic-assessment-guidance-and-templates</p>
Guidance	INTEGRATED ASSURANCE AND APPROVALS PLAN
Owner	Infrastructure and Projects Authority (IPA)
Project development stage	Quality assurance
Details	<p>These guidelines define the assurance options to be undertaken for a major project, such as: Project Validation Review (PVR) for a major policy initiative; OGC Gate 0 for major programs whose individual project components may not be considered 'major'; OGC Gates 1 – 5 for major projects being delivered through a standard methodology; and Project Assessment Review (PAR), which is tailored to a project's needs. Depending on the project cost and the department's track record of executing projects of similar complexity, major projects must seek assurance from the HMT Spending Team and IPA through one of these routes, at various stages of the project.</p> <p>Link for further details: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/638198/guide_to_implementing_integrated_assurance.odt</p>

Guidance PROJECT INITIATION ROUTEMAP	
Owner	Infrastructure and Projects Authority (IPA)
Project development stage	Project initiation
Details	<p>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.</p> <p>Link for further details: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/529311/</p>
Guidance PROJECT DELIVERY CAPABILITY FRAMEWORK	
Owner	Infrastructure and Projects Authority (IPA)
Project development stage	Institutional capacity development
Details	<p>The framework provides a description of the job roles, capabilities and learning initiatives for professionals involved in project delivery. Using this framework, project delivery professionals can map their career path, identify the skills required to deliver their job, and chart out and monitor a course for development through learning initiatives.</p> <p>Link for further details: https://www.gov.uk/government/publications/project-delivery-capability-framework-for-civil-servants</p>
Guidance GOVERNMENT ONLINE SKILLS TOOL	
Owner	Infrastructure and Projects Authority (IPA)
Project development stage	Institutional capacity development
Details	<p>The GOST has been developed alongside the Project Delivery Capability Framework (PDCF). It helps project delivery professionals to assess their current skill set, identify what skills they need for future career aspirations, and build a development plan to support different types of learning, including on-the-job learning and continuous professional development.</p> <p>Link for further details: https://www.gov.uk/government/publications/project-delivery-capability-framework-for-civil-servants</p>
Guidance EARLY ASSESSMENT AND SIFTING TOOL	
Owner	Department of Transport
Project development stage	Appraisal
Details	<p>The Early Assessment and Sifting Tool is a decision support tool developed to evaluate and appraise options for infrastructure development. It provides decision-makers with relevant, high-level information to help them form an early view of how options perform and compare.</p> <p>Link for further details: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4474/east.xls</p>

4. Project case example: Thames Tideway Tunnel

PROJECT BRIEF

The Thames Tideway Tunnel is an interceptor sewer being constructed in central London to control the 39 million tonnes of untreated sewerage that flows in to the Thames River on an annual basis.

The project was conceptualised in 2000 as a response to the European Commission's Urban Waste Water Treatment Directive, which required the UK to address its non-compliance with the directive's requirements. The sewer tunnel runs 25 kilometres long, from Acton in West London to Abbey Mills in East London, intercepting 34 combined sewer outflows (CSOs).

The project was successfully bid out in 2016, and is privately financed by the Bazalgette consortium, supported by the UK Government's fiscal support package, to mitigate the project risks and make the project viable for private financing.

The planning of this project is a reflection of the UK's inter-agency coordination. The Department of Environment, Food & Rural Affairs (DEFRA), responsible for the overall policy on water and sewerage in the UK, worked closely with Thames Water, a private company responsible for sewerage infrastructure in London, to develop a solution for the overflows. While Thames Water undertook the planning, design and tendering of the project, it was also supported by IUK (later IPA)¹ owing to its major project status.

The Water Services Regulatory Authority (Ofwat) was the independent economic regulator to determine the charges to be borne by the customers of Thames Water for funding the tunnel construction.

Further details on the project can be found on:

<https://www.tideway.london/> and

https://github-webtools.s3.amazonaws.com/umbraco/media/1602/gih_showcaseprojects_thames-tideway.pdf

QUICK FACTS



VALUE
(IN US \$ BILLION)

5.4*



STATUS

Under construction



PROJECT OWNERSHIP

Thames Water



SOURCE OF PROJECT
PREPARATORY FINANCING

**Thames Water internal
accruals**



SUPPORT AGENCIES

IPA, DEFRA

¹ IUK merged with the MPA in 2015 to become the IPA. For the purpose of this case study, the terms IUK and IPA have been used interchangeably, noting that all capabilities of the IUK to support and appraise projects were moved under the IPA umbrella.

*Estimated Exchange Rate: £1 = US \$1.29 (as of November 2018)

PROJECT TIMELINE

○	Mar-00	Thames Tideway Strategic Study commissioned
○	Mar-05	Report on Thames Tideway Strategic Study completed and presented
○	Dec-06	Thames Water publishes detailed analysis on shortlisted options
○	Mar-07	DEFRA announced selection of preferred option
○	Aug-10	Thames Water Needs Report ratifies selected option
○	Sep-10	First round of public consultations launched; IUK commences support to DEFRA
○	Nov-11	Second round of public consultations launched
○	Oct-12	Final round of public consultation ends
○	Nov-12	Infrastructure market participant consultations launched
○	Dec-12	Project enters the GMPP
○	Feb-13	Thames Water submits planning application
○	Sep-13	Preparation of strategic business case; Assurance review 1 by IUK
○	Apr-14	Tender of shortlisted contractors by Thames Water for construction contracts
○	Sep-14	Preparation of outline business case; Assurance review 2 by IUK
○	Sep-14	Ministers grant Development Consent for the project
○	Aug-15	Ofwat granted Bazalgette Tunnel Limited a regulatory licence; Government Support Package agreed; project achieved financial close.
○	Dec-15	Preparation of full business case; Assurance review 3 by IUK/IPA
○	Jan-16	Construction work commences
○	2023	Planned commencement of operations

LEARNINGS FOR PROJECT PREPARATION

1. Support from IUK / IPA for project development

The Thames Tideway Tunnel is not a government project and would therefore not normally be subject to IPA oversight and monitoring. However, given the scale and nature of the project, it was decided that IPA would provide oversight and assurance for the set-up of the project.

IPA provided regular support to the project from its conception in April 2012, when the project was admitted to the GMPP. The areas of assistance provided by IPA included:

- Providing direct support in designing the delivery structure and contingent financial support package by the Government of the UK to make the project attractive for private financing.
- Independent quality assurance reviews with specialist periodic inputs, in line with the OGC Gateway Review Process.
- Assistance on policy-related matters, including acquiring ministerial approval and passing of the National Policy Statement of Waste Water, a critical legislation for parliamentary approval of the project.
- Continued support to DEFRA through long-term secondment for providing expert input.

2. Independent options analysis to choose the best option for delivery

Aligned to IPA's Five Case Model, a series of studies were commissioned in three phases to identify potential solutions to London's sewer outflow challenge. These studies, conducted by a team of inter-departmental expert groups, ensured that a comprehensive appraisal of a broad range of options (including the most cost-effective combination of measures), using cost-benefit analysis, was carried out in accordance with HMT's Green Book guidance.

- ***The Thames Tideway Strategic Study (2000-2005).*** In this first phase, Thames Water commissioned a task force chaired by an independent expert to conduct the Thames Tideway Strategic Study. To identify options, the task force drew on the views of numerous stakeholders, including the Environment Agency, DEFRA, the Greater London Authority and Ofwat. The study identified eight possible options and further conducted feasibility and cost-benefit analysis for each of these.

- *The Thames Tideway Advisory Group (2005-2006)*. Building on the options identified under the Strategic Study, DEFRA commissioned a working group to evaluate the findings of the report. The working group further shortlisted three options for detailed evaluation, on the basis of which the existing full tunnel option was identified as the most suitable solution.
- *The Needs Report (2009-10)*. Thames Water's Needs Report further ratified that the Tideway Tunnel continued to remain the most cost-effective solution for achieving the statutory environmental obligations.

3. Clarity in outcome translating to defined objectives

The Thames Tideway Tunnel project was designed to meet a specific set of clearly defined goals – to reduce the sewage pollution being discharged into the River Thames, in line with European Commission directives for environmental conservation. To support this, DEFRA's departmental strategic objectives were translated in to specific criteria on the basis of which identified options for project delivery were evaluated. These objectives defined the measures for minimum satisfactory performance for the sewer tunnel, derived from the negative effects likely to eventuate in the absence of a solution.

To select the optimal solution for the problem, the lowest-cost solution, which met all three criteria, was selected.

The criteria has now evolved into a defined framework for monitoring the project progress and outcome by independent technical assessors empaneled by DEFRA.

4. Extensive public-private engagement at the planning stage

Thames Water carried out two extensive public consultations to refine the route for the Thames Tideway Tunnel. The first round of public consultation took place between September 2010 and January 2011, and the second between November 2011 and February 2012. It also conducted a third targeted consultation on four specific sites between June 2012 and July 2012. Thames Water subsequently revised its plans and submitted its planning application for a Development Consent Order (DCO) to the Planning Inspectorate on 28 February 2013.

5. Strong leadership team comprising trained project managers

Thames Tideway Tunnel's project team was supported by a long-term secondment from IPA to provide ongoing expert input to overcome the challenges in project development. Further, several members of the project team, including the Senior Responsible Officer, were graduates of the government's Major Projects Leadership Academy (MPLA). The experience of the project team in dealing with major projects within IPA and supported training helped shape their approach to management of the project, particularly in the areas of public engagement and stakeholder management.

6. Applied learning from past experiences

While cost estimates for the tunnel increased progressively from 2007, owing to changes in scope and design, experience from the Lee Tunnel, a similar project in the UK, was used to bring about better understanding and rationalisation of cost estimates. Further, the project benefitted significantly from IPA's experience in dealing with similar large-scale projects under Crossrail and High Speed Rail 2, ensuring more detailed upfront planning than is usual for a PPP project at the pre-commissioning stage itself. For instance, unlike the traditional design and build approach for PPP projects, detailed design plans for the project were developed prior to commencement of the tender procedure, under the oversight of Ofwat.