

1. Introduction

1.1. BACKGROUND

The G20 has had a long-standing commitment to promoting sustainable infrastructure development as a key mechanism for supporting economic growth, in both developed countries and emerging markets.

As part of this commitment, the G20 Infrastructure Working Group (IWG) identified, in 2018, the key elements for infrastructure growth under a strategic roadmap, “*Developing infrastructure as an asset class*”, organised under three overarching pillars: (i) *improving project development*; (ii) *improving the investment environment for infrastructure*; and (iii) *promoting greater standardisation*. The first of these pillars, i.e. **improving project development**, is particularly crucial and involves enhanced efficacy of upstream activities in the infrastructure project lifecycle to make projects ‘procurement-ready’.

In July 2018, the G20 Finance Ministers and Central Bank Governors endorsed the *G20 Principles for the Infrastructure Project Preparation Phase* developed by the IWG, which identifies five principles to be considered while creating infrastructure project pipelines, namely *project rationale, options appraisal, commercial viability, long-term affordability, and deliverability*. The G20 has also welcomed the work of the Multilateral Development Banks’ (MDB) *Infrastructure Cooperation Platform*, which has prepared guidance on good practices to inform MDB approaches on and efficiency of support for project preparation.

The G20 has recognised that, for these steps to be effective, a robust institutional framework is necessary to build the foundation of quality project preparation. While governments the world over have attempted to strengthen their project preparatory activities by using frameworks, specific guidance, structured processes, capacity building initiatives and financing mechanisms, there is a strong need for continued support in this regard.

The **Global Infrastructure Hub (GI Hub)**, created as an initiative of the G20 to facilitate knowledge sharing and multi-institutional coordination to help increase the flow and quality of global infrastructure development, is committed to support initiatives to build capacity for effective infrastructure project preparation.

It has led the development of this *Reference Tool on Governmental Processes Facilitating Infrastructure Project Preparation* (hereinafter referred to as ‘reference tool’). The information contained in both the G20 Principles for the Infrastructure Project Preparation Phase and the MDB’s Infrastructure Cooperation Platform was used to inform the preparation of this reference tool, and **the tool has been designed to support the operationalisation of the project preparation principles endorsed by the G20**.

This reference tool follows an intermediate publication, the *Initial Report – National¹ processes facilitating project preparation illustrated by country examples*, published by the GI Hub in August 2018, which provided a high-level perspective on the current global infrastructure project preparation landscape, its challenges and possible approaches to solutions. It distilled lessons learned for effective project preparation processes from national (and sub-national) perspectives and was intended to provide a holistic assessment of important leading practices from the lens of country-level governance and implementation.

This reference tool is intended as a guidance document for governments and practitioners involved in infrastructure project preparation. It is built on a detailed review of critical success factors underlying successful project preparation, which have been distilled from an extensive analysis of prevailing leading practices globally through a country-lens perspective. The reference tool is designed to be complementary to the *G20 IWG Principles for the Infrastructure Project Preparation Phase* and the *Guidance Note on Project Preparation Facilities (PPF): Structure and Operations* prepared under the Project Preparation Workstream of the MDB Infrastructure Cooperation Platform, so that national governments may be better placed to utilise the Principles.

¹ Available at <https://www.gihub.org/resources/publications/initial-report-national-processes-facilitating-project-preparation/>. Title of final reference tool since changed to governmental processes, instead of national processes, to take sub-national processes into account.

1.2. INFRASTRUCTURE PROJECT PREPARATION CONTEXT

Global infrastructure needs are massive

The GI Hub's *Global Infrastructure Outlook* estimates that **US \$94 trillion** will be needed by 2040 to meet global infrastructure needs. In terms of regions, Asia will require the lion's share of this investment, with over half of the global investment needed, followed by America, Europe and Africa. The roads and power sectors will continue to demand the highest share of investment need, followed by water and other forms of transport.

Meeting these investment needs will entail increasing the overall average spend on infrastructure from **3.0%** of global GDP at present, to **3.5%** of global GDP by 2040, and considerably more as a percentage of GDP in many developing countries. However, with global public debt having grown sharply in the last decade (doubling from 2008-levels for most regions in the world), governments are fiscally stretched to be able to make the sharp increment in investment required. Fostering and tapping private sector investment into infrastructure, including through the public-private partnership (PPP) model, to augment resources and complement public spending has therefore become extremely critical. Refer to *Exhibit 1.1*.

While tackling the infrastructure gap requires prioritised project pipelines and well-prepared, bankable projects, capacity to drive effective project preparation at the national and sub-national levels is also crucial and has been woefully inadequate.

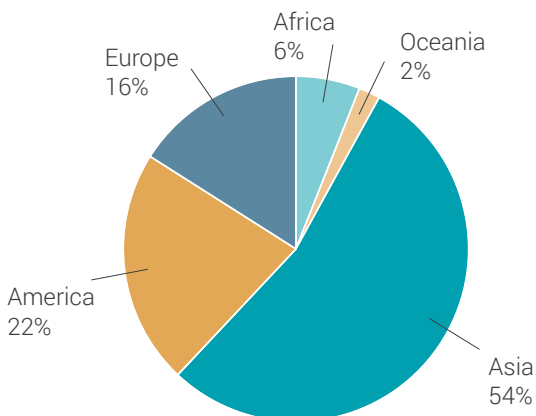
In most cases, demand for infrastructure does not directly result in project implementation and service delivery – an array of inhibiting factors, including unclear policies, poor project fundamentals, inadequate risk-adjusted returns, and lack of institutional capacities to develop and deliver the project, often derail implementation.

Project preparation, which spans activities from conceptualisation and feasibility analysis to deal structuring and transaction support, is integral to creating bankable projects. Inadequate support at the project preparation stage can result in critical projects being scrapped prior to implementation or increasing the cost of implementation to a prohibitive degree. Quality project preparation is thereby an essential step to translate the demand for infrastructure into effective project development and service delivery.

Yet, despite the critical need for project preparation, many countries, especially many emerging markets and developing economies (EMDEs), are often ill-equipped to translate their infrastructure gaps into well-identified and prioritised project pipelines. Even when such project pipelines have been identified, the capacity to undertake follow-up activities in upstream project preparation, in terms of policy, institutional

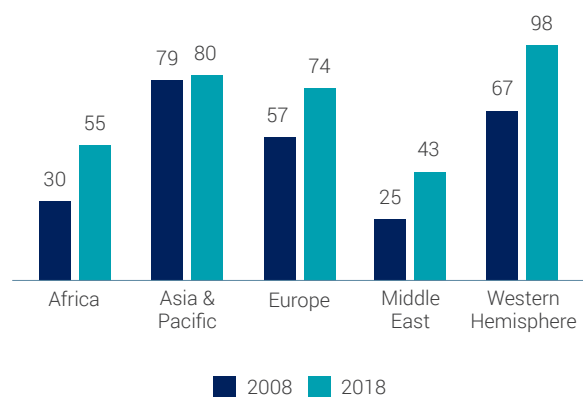
Exhibit 1.1 Infrastructure requires massive investment in the context of growing fiscal challenges

Global infrastructure need by 2040 - US \$94 trillion



Source: *Global Infrastructure Outlook, GI Hub*

Government debt to GDP – Global trends



Source: *International Monetary Fund*

strength, and frameworks and processes, are often inadequately developed. As a result, infrastructure needs are not translated into bankable projects that can deliver infrastructure services efficiently.

This capacity gap is further highlighted as governments seek to attract private infrastructure investment, with significant differences emerging among countries both regionally and in terms of income groups, regarding the maturity of project preparation processes.

Project preparation is thus becoming an increasingly critical enabler of infrastructure development and as noted earlier, has been identified as a key pillar in the G20's strategic roadmap to develop infrastructure as an asset class.

There have also been several MDB-led efforts towards creating project preparation facilities (PPFs), especially in Asia and Africa, that have sought to address the capacity and financing challenges of project preparation. Initiatives include the creation of technical templates or checklists on specific aspects of project preparation (e.g. The Sustainable Infrastructure Foundation's SOURCE², the World Bank's PPP Screening Tool³ etc.).

² Available at <https://public.sif-source.org/>

³ Available at <https://pppknowledgegelab.org/tools/tools-assess-whether-implement-project-ppp#ppp-screening-tool>

Exhibit 1.2 Project preparation – Global and regional deficit

A study conducted by the World Bank Group (WBG)⁴, the *Procuring Infrastructure PPP Report 2018*, assessed the strength of regulatory frameworks and institutional arrangements to prepare, procure and manage infrastructure projects in 135 economies. This study highlights significant regional and income group differences in the maturity of project preparation activities. Among high-income countries surveyed, project preparation activities received an average score of 63 (out of 100), lower than the scores for procurement, contract management and the management of unsolicited proposals. Middle-income and lower-income countries received lower scores on average for project preparation, ranging from 48 (out of 100) for upper-middle income countries, 44 (out of 100) for lower-middle income countries, to 39 (out of 100) for low-income economies.

The top five ranked countries under the framework are the UK (96), Australia (94), Lithuania (92), Canada (90) and Colombia (90).

The report clearly establishes that the gap in project preparation is larger in lower-income countries. On the regional front, while high-income OECD countries scored an average of 65 on project preparation, regions such as Latin America and the Caribbean received only the median score of 50, while South Asia has shown improvement with a slightly higher score of 57. Regions such as Sub-Saharan Africa and the Middle East and North Africa scored considerably lower than their peers for project preparation. However, there are some exceptions (i.e. India, South Africa and the Philippines, who score higher in their income groups).



⁴ Procuring Infrastructure Public-Private Partnerships Report. 2018: <http://pubdocs.worldbank.org/en/256451522692645967/pdf/PIP3-2018.pdf>

⁵ ECA – Europe and Central Asia; EAP – East Asia and Pacific; LAC – Latin America and Caribbean; MENA – Middle East and North Africa; OECD – Organisation for Economic Co-operation and Development; SAR – South Asia; SSA – Sub-Saharan Africa

1.3. ABOUT THE REFERENCE TOOL

1.3.1. Objectives and scope

The reference tool is intended to provide guidance on early-stage activities within the infrastructure project development cycle, and the enablers required to create a conducive environment to prepare sustainable, bankable and procurement-ready infrastructure projects.

The tool specifically seeks to address the challenges faced by governments in early stage project preparation that constrain their ability to prepare well-structured and bankable infrastructure projects. This includes aspects relating to (i) infrastructure planning, project screening, and prioritisation; (ii) project concept definition and feasibility evaluation covering outline business case (OBC) studies, pre-feasibility studies, and detailed feasibility studies; and (iii) project reviews and approvals to initiate project procurement. In addition, a conducive enabling environment, in terms of policy support, capacity of public institutions, and effective mechanisms for stakeholder engagement, is also critical and forms the focus of this reference tool.

The reference tool accordingly does not cover aspects relating to "project transacting" (i.e. the procurement process), given that a number of tools are already available to support this process. Also, much of the challenge occurs prior to projects reaching the point of procurement. This reference tool accordingly seeks to synthesise lessons and practices from global, national, and sub-national level experiences in these areas to support governments in making project preparation more effective.

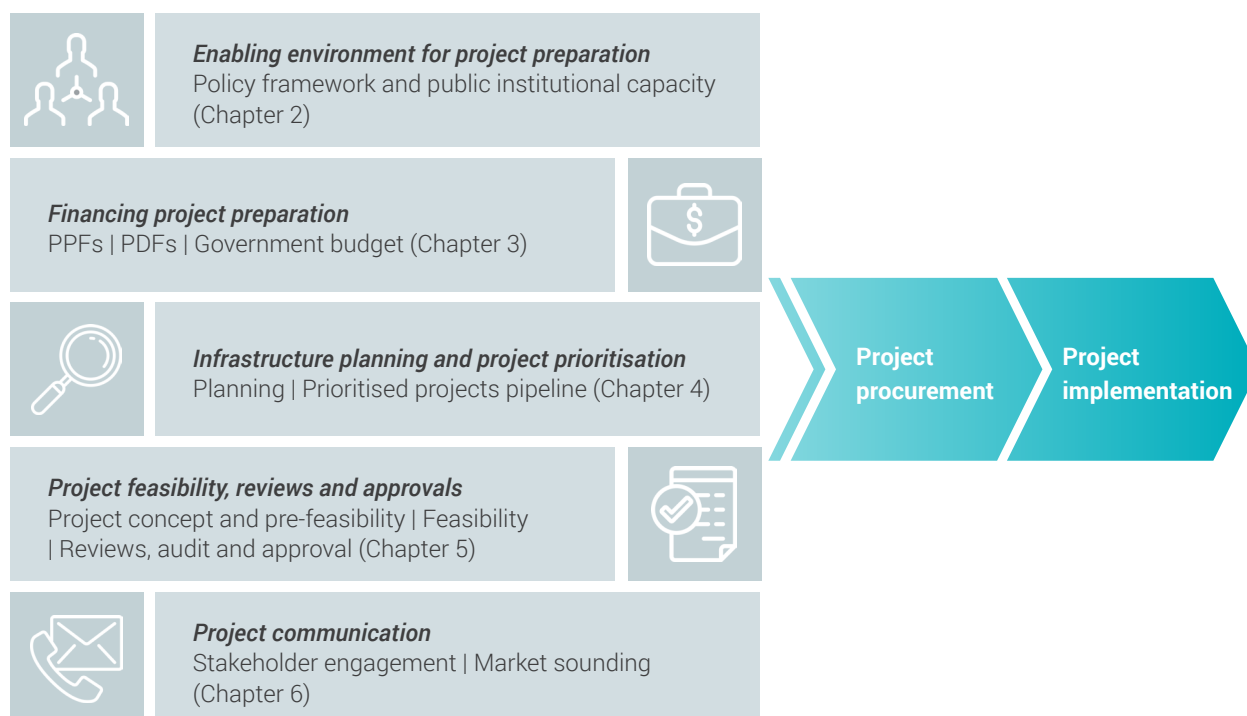
1.3.2. Organisation and coverage

The building blocks and organisation of this reference tool are captured in *Exhibit 1.3* below.

The reference tool is organised in six chapters that provide guidance on leading practices with respect to each of these building blocks of early-stage project preparation, as described below:

- **Chapter 1: Introduction** (this chapter) details the background and context underlying this reference tool, its scope and coverage, and a snapshot of the methodology used for its preparation.

Exhibit 1.3 Infrastructure project lifecycle, enablers and focus modules of this reference tool



- **Chapter 2: Enabling environment for project preparation** discusses the ingredients needed to create a conducive climate for infrastructure development, in terms of policy support and public institutional arrangements necessary to drive project preparation. This chapter also seeks to identify the specific policy and institutional enablers necessary to attract and scale-up private sector participation in infrastructure.
- **Chapter 3: Financing project preparation** addresses the critical aspect of financing for project preparation and identifies the approaches and mechanisms that can be adopted to identify, ring-fence and direct financing towards various aspects of project preparation. The chapter discusses the role of MDB-led initiatives to set up Project Preparation Facilities (PPFs) and their role in supporting governments in project preparation. The chapter also provides guidance on the structures and use of dedicated Project Development Funds (PDFs), which have become increasingly popular, especially in supporting project preparation for projects being executed using the PPP model. However, project preparation for infrastructure is often driven by government budgets through government contracting agencies (GCAs) and this chapter also discusses approaches to improve effectiveness of such budgetary financing of project preparation.
- **Chapter 4: Infrastructure planning and project prioritisation** provides guidance on formulating infrastructure plans and translating them into prioritised project pipelines. The chapter discusses the approaches and processes adopted by governments in preparing multi-year infrastructure plans. It also details the mechanisms and tools available to move from aggregate plans to a screened list of projects, which can then be evaluated for implementation.
- **Chapter 5: Project feasibility, reviews and approvals** discusses the typical steps involved in moving from a pipeline of identified projects through project preparation review and evaluation, starting with project concept definition, outline business case (OBC) or pre-feasibility, and detailed feasibility stages. The mechanisms to impart independence and rigour in the review and appraisal of projects through the various stages of feasibility evaluation are also discussed in this chapter.
- **Chapter 6: Project communication** addresses the critical aspect of comprehensive stakeholder management and adequate market sounding prior to project procurement. It recognises that even well-structured projects can fail if diverse stakeholder inputs and concerns are not adequately addressed through the various stages of the project development lifecycle. This chapter provides a framework and tools for mapping and managing stakeholders through the various stages of project preparation. Further, it also provides guidance on the criticality and approach to expose projects to a broad-based market sounding, and to elicit and factor in feedback on the acceptance of the proposed project design, scope and structure.

In addition to the main guidance provided through these chapters, the reference tool provides useful additional information in the form of the following appendices:

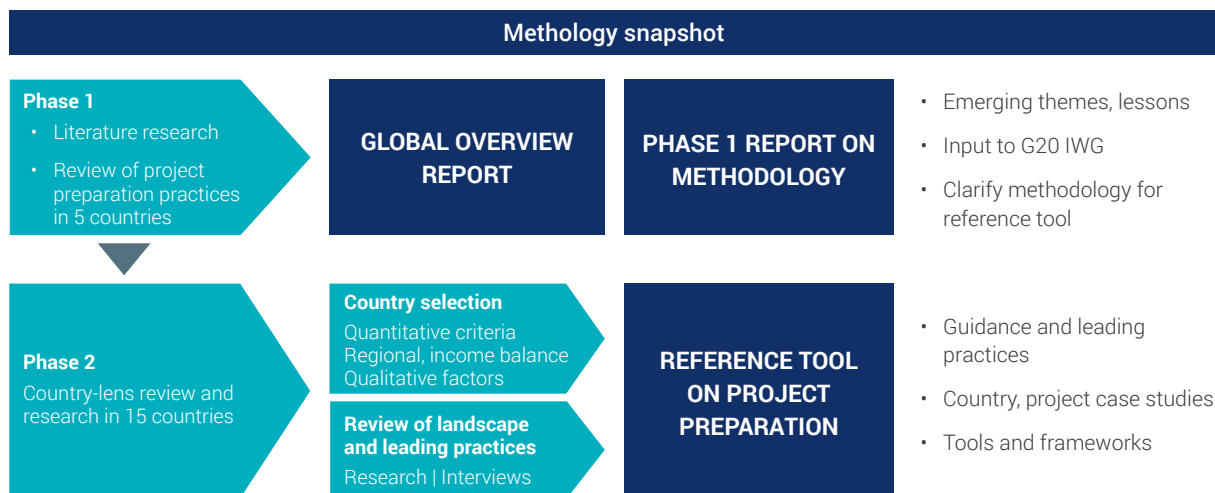
- **Appendix A: Country cases** presents an overview of the infrastructure project preparation landscape in 15 diverse countries from across the globe. The cases start with a snapshot of leading practices in these chosen countries and trace the project preparation landscape in these countries in terms of key policies, institutions and important project preparation outcomes achieved. In addition, Appendix A includes:
 - **Project cases**, which take select infrastructure project case studies from around the world and seek to distil lessons that governments can draw from these experiences in terms of practices for effective project preparation. These cases are interspersed with information on their development costs, timelines and underlying practices and seek to help illustrate application of the concepts covered in the main chapters of the reference tool.
 - **Tools and frameworks**, which summarise the scope and functionality of some useful guidance frameworks and tools already in use across countries globally. These tools and frameworks have been selected based on a review of country-level practices and when applied, taking country-specific contextual factors into account, can potentially help governments to accelerate capacity development for project preparation.

The detailed methodology is presented in **Appendix B**, along with additional relevant reading and a list of organisations which supported the preparation of this tool in **Appendices C and D** respectively. The consultant team is presented in **Appendix E**.

1.4. METHODOLOGY

A snapshot of the methodology involved in preparing this reference tool is captured in *Exhibit 1.4* and further explained below. *Appendix B* of the reference tool sets out the detailed methodology.

Exhibit 1.4 Infrastructure project lifecycle, enablers and focus modules of this reference tool



The preparation of the reference tool was conducted in two phases:

Phase I Global Overview Report and finalising the methodology for reference tool preparation

Phase I involved the following steps:

1. **Desk research on infrastructure project preparation and review of best practices:** Existing literature and information on infrastructure project preparation and best practices were reviewed to develop an understanding of the global guidance currently available and the gaps. This included a review of frameworks available from MDBs, activities of external project preparation facilities (PPFs) and overall infrastructure investment needs and gaps globally.
2. **Review of the project preparation landscape and practices in five countries:** This involved a review of the project preparation landscape in terms of enabling policies, institutions and frameworks and processes in place for infrastructure project preparation in five countries, namely Mexico, the Netherlands, South Africa, the Republic of Korea, and the United Kingdom.

3. **Preparation of Global Overview Report:** The Global Overview Report, published as the *Initial Report – National processes facilitating project preparation illustrated by country examples* by GI Hub in August 2018, provided a high-level perspective on the current infrastructure project preparation landscape, its challenges, and possible approaches to solutions, building on steps 1 and 2 above. It reviewed leading practices and distilled lessons for effective project preparation processes from national (and sub-national) perspectives from the five countries and provided a holistic assessment of important leading practices from the lens of country-level governance and implementation.
4. **Preparation of the Phase I Report:** The Phase I Report built on the findings from the preparation of the Global Overview Report and clarified the detailed methodology for Phase II of the exercise, i.e. the preparation of the reference tool.

Phase II country-lens review

Phase II involved the following steps:

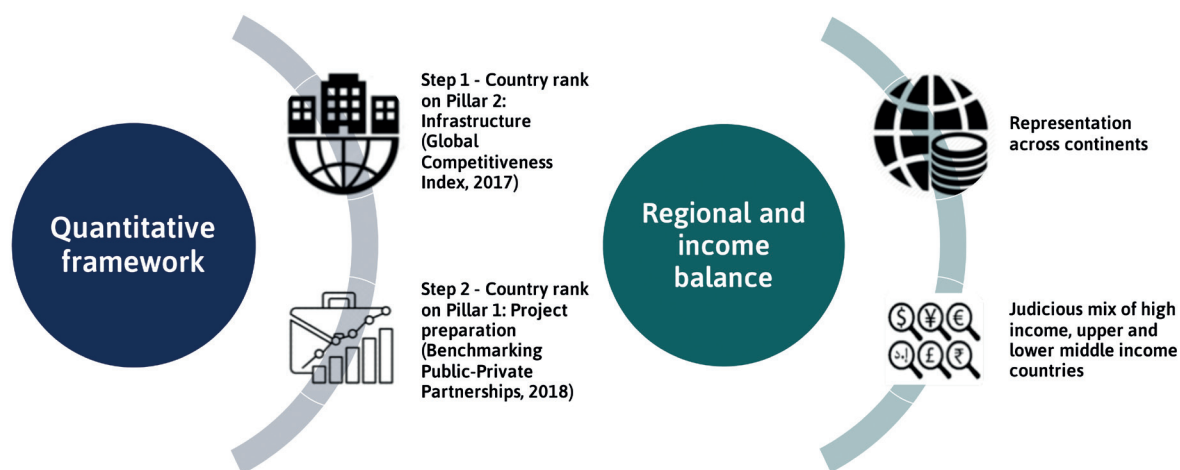
1. **Selection of countries:** The identification of countries for review for the preparation of the reference tool was done through the application of the following filters:
 - **Quantitative criteria and regional and income assessment:** The quantitative framework applied a two-factor criteria for the shortlisting of potential countries: i) *Country rank on Pillar 2: Infrastructure (Global Competitiveness Index, 2017)* and ii) *Country score on Pillar 1: Project Preparation (World Bank's Procuring Infrastructure Public-Private Partnerships, 2018)*. The first level of shortlisted

countries was refined to provide adequate coverage across regions and income groups, to ensure greater adaptability of the reference tool.

- **Qualitative factors:** The shortlisted countries from Stage I were reviewed based on the uniqueness of programs, projects, processes, and elements of good practices in project preparation, to identify the final list of countries, providing for a balance of countries across income, demographics and geographic regions.

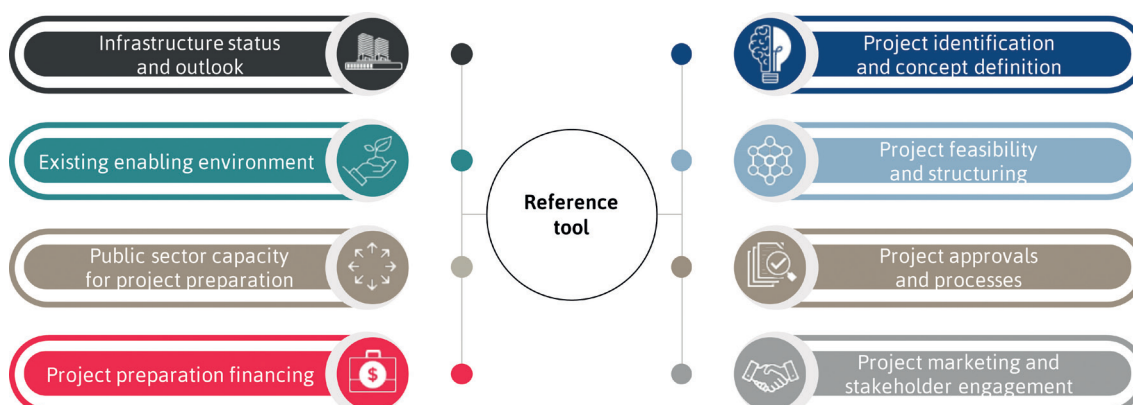
Fifteen countries were selected following this process, namely Australia, Brazil, Canada, Chile, China, India, Indonesia, Kenya, Mexico, the Netherlands, the Philippines, Rwanda, South Africa, the Republic of Korea, and the United Kingdom.

Exhibit 1.5 Framework for country selection



2. **Research:** Following the selection of countries, a detailed review of the project preparation landscape and practices for each of these countries was completed to identify leading practices and lessons to be distilled to develop the reference tool. The research was conducted along eight themes, identified below:

Exhibit 1.6 Themes for country-lens research



3. **Consultation interviews:** The research stage was followed by stakeholder interviews to validate country profiles and case studies. The interviews were also used to capture qualitative insights on country-level practices and to distil inputs for the reference tool in terms of key leading practices.
4. **Creation of reference tool:** As a final step, the reference tool was compiled. The guidance in the chapters has been structured taking into account real experiences from across the globe and feedback from GCAs and other stakeholders. In addition, as noted above, the reference tool has benefitted from the material contained in both the *G20 Principles for the Infrastructure Project Preparation Phase* and the MDB's *Infrastructure Cooperation Platform*, with the tool being designed to support the operationalisation of the project preparation principles endorsed by the G20. While detailed country and project cases studies are provided as a separate section, these have also been interspersed in the main chapters, along with the guidance material, to provide relevant practical insights for better readability and practical application.

1.5. ACKNOWLEDGMENTS

The GI Hub has developed the reference tool under its mandate to develop and promote leading practices in global infrastructure development.

The GI Hub engaged CRISIL Risk and Infrastructure Solutions Limited (CRIS), a leading infrastructure consulting firm and a subsidiary of CRISIL Limited, one of the world's foremost providers of credit ratings, advisory and research, and a 100% subsidiary of S&P Global. CRIS led the preparation of the reference tool, with close engagement with the GI Hub team, led by Morag Baird and Stephanie Barker.

The reference tool also incorporates contributions from various governments, government agencies, multilateral agencies, and private organisations, who took time to assist the project team in collecting data, preparing case studies and providing commentary on issues related to infrastructure project preparation.

The primary data gathering was supported by a full literature review of existing leading practices on the topic of infrastructure project preparation, as well as other unpublished guidance and inputs provided by GI Hub. As noted, this included both the *G20 Principles for the Infrastructure Project Preparation Phase* and the MDB's *Infrastructure Cooperation Platform*.

Support and contributions from other international and bilateral organisations have also informed the development of the reference tool, most notably from the World Bank, and other such institutions.

The reference tool has been finalised with inputs and contributions from government officials in over 15 countries, who have helped to inform the final development of this product.