3. Project preparation
Key findings

1. The lack of a bankable investment-ready pipeline of infrastructure projects is often considered one of the major bottlenecks in attracting private capital to infrastructure.

2. The bankability of an infrastructure project is mostly determined at the project preparation stage.

3. In almost all regions there is a need to improve project preparation capability. This is particularly the case in low-income countries.

4. Our report attempts to explore the channeling of funds to emerging economies to improve project preparation through the lenses of PPFs, which play an important role in supporting project preparation to develop bankable and investment-ready projects, providing both technical support and funding for this important project stage.

5. For this Infrastructure Monitor 2021 report, the GI Hub analysed a sample of 130 global PPFs operating across all regions. Our analysis indicates that PPFs are mainly active in developing countries and are mostly led by MDBs and IOs. Africa, the region with one of the lowest infrastructure project preparation scores, has the highest number of active PPFs. Almost 80% of the PPFs support project preparation in the energy sector.

6. Project preparation costs have always been significant, and they have only increased in recent years as the result of new requirements related to sustainability, regulation, inclusion, and technology, among others.

7. With preparation costs not being included in project budgets, countries facing fiscal constraints exacerbated by the pandemic, and project preparation costs increasing, PPFs are facing a resources dilemma.

8. Recent years have seen significant innovation in the way PPFs are providing support, with increasing cooperation and co-funding of project preparation to ensure sustainability and support more projects. This is especially valuable because project preparation costs have increased in recent years.
The lack of a bankable, investment-ready pipeline of infrastructure projects is one of the major bottlenecks in attracting private capital to infrastructure.

- Investors consider that the lack of a bankable and investment-ready pipeline of infrastructure projects is one of the major bottlenecks in attracting private capital to infrastructure. Unsurprisingly, enabling an investment ready pipeline has consistently featured as a top priority of G20 Presidencies.

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**Key things that governments should do to promote private investment in the infrastructure industry, according to European infrastructure investors**

- Educating the public about private investment infrastructure
- ‘Unblocking’ planning approval processes
- Providing a pipeline in high quality infrastructure assets
- Tax stability
- A willingness to underwrite contracted risks
- Cleverly packaging and structuring deals
- Stabilising regulatory environments

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**Pillars and work streams of the G20 Roadmap to Infrastructure as an Asset Class**

- Contractual Standardisation
- Financial Standardisation
- Project Preparation
- Bridging the Data Gap
- Financial Engineering, Risk Allocation & Mitigation
- Regulatory Frameworks & Capital Markets
- Quality Infrastructure
The bankability of an infrastructure project is mostly determined at the project preparation stage, which is complex...

Project preparation is complex and involves several stages. Institutions have varying definitions of project preparation, but it is generally considered to span activities from conceptualisation and feasibility analysis to deal structuring and transaction support (GI Hub, 2019).

### Project preparation stages

**INITIAL PLANNING**

- **Project definition**
  - Identifying and prioritising projects
  - Identifying project outputs and champions
  - Conducting pre-feasibility studies
  - Preparing action plans and terms of reference

- **Project feasibility**
  - Conducting environmental, technical, social and economic studies
  - Performing financial modelling

- **Project structuring**
  - Structuring project finance
  - Designing legal entities
  - Evaluating public vs. private options
  - Marketing project and assessing private sector interest

- **Transaction**
  - Developing and conducting bid processes
  - Drafting contracts
  - Negotiating legal and financial terms

**IMPLEMENTATION**

- Project is a priority
- Feasible project
- Bankable project
- Project financed and awarded

Source: Brown et al. (2020).
... and requires considerable financial resources and time.

- Project preparation requires considerable financial and time resources. The burden is even higher considering that these costs are not usually included within the estimated investment amount and need additional funding.

- Project preparation costs have increased substantially over the past two decades driven by the increasing complexity of infrastructure projects. As new issues emerge, requirements for infrastructure projects have increased (e.g. new regulations, environmental factors, social issues, governance and technology), leading to increased project preparation costs.

- There is greater understanding of the advantages of investing in the project preparation stage of many components that were not properly considered in the past. Project preparation costs have increased due to the higher investment in this pre-investment stage to avoid future inefficiencies.

In general, project preparation takes 3-8 years, with 6 years being the average. But, it can take up to 14 years if projects are not properly planned.

Project preparation costs can average up to 10% of the project cost (% of total project cost)

- Developed countries: 3-5%
- Developing countries: 5-10%

Source: IMF (2020)

Source: GI Hub (2019)
Current project preparation capability is weak ...

- While information to assess infrastructure project preparation is scarce, a few reports that analyse some dimensions can be used as project preparation proxies.
- The GI Hub’s InfraCompass (GI Hub, 2020) assesses eight drivers of infrastructure quality. One driver, ‘planning’, assesses a government’s ability to plan, coordinate, and select infrastructure projects.
- The InfraCompass analysis shows that planning is better in high-income countries. North America has the highest score, while the Middle East and Africa have the lowest scores.
- Nonetheless, planning still has room for improvement within all regions.
... with a need to improve project preparation capability in almost all regions, particularly in low-income countries.

- The World Bank Benchmarking Infrastructure Development 2020 report (World Bank, 2020) assesses the quality of regulatory frameworks to develop large infrastructure in four stages of a project cycle including preparation.
- Results show that project preparation is better for traditional public investments (TPIs) than for PPPs. This holds for country income groups and world regions.
- Infrastructure project preparation is better in high-income countries for TPIs and PPPs. Oceania and Western Europe are the best performers for TPIs, while North America is best for PPPs. The Middle East and Africa scores are the lowest for TPIs and PPPs.
- Despite some countries performing better than others, project preparation is a dimension that still has room for improvement across all regions and income groups, particularly for low-income countries.

Note: World Bank assesses the quality of regulatory frameworks worldwide to develop large infrastructure projects (through both public-private partnerships and traditional public investments) in different stages of a project cycle, including its preparation (which is analysed above), procurement, contract management and unsolicited proposals.
PPFs play an important role in supporting project preparation to develop bankable and investment-ready projects.

- The lack of bankable, investment-ready projects is a barrier to attracting greater private sector investment in infrastructure, particularly in emerging economies.
- Governments often lack the capacity and resources for project preparation.
- Our report attempts to explore the channeling of funds to emerging economies to improve project preparation through the lenses of PPFs, which provide technical and/or funding support in the project preparation stage to develop bankable and investment-ready projects.
- Very few PPF initiatives were in place before 2000. Since 2000, their creation grew exponentially. Over 80% of the existing MDB-led PPFs were created after 2015 (GI Hub, 2019) mainly to fund and support project preparation.
- In 2011, the G20 High Level Panel on Infrastructure raised concerns about the existence of numerous PPFs and their small size, and recommended restructuring for more sustainable and impactful operations.
- For this Infrastructure Monitor 2021 report, the GI Hub collated detailed data for 130 PPFs operating across all the regions to analyse the scope, size, and progress of PPFs worldwide through a comprehensive review of published information.

Source: GI Hub calculations based on the PPF sample.
Note: Due to missing values related to creation year, information includes 78 out of the 130 PPFs identified.
PPFs provide technical support and funding for the project preparation stage.

- The PPFs studied for this report provide technical support and funding for the project preparation stage.

- Of the 130 PPFs studied, 59% are engaged in providing technical and funding support, while 41% are focused on providing funding and financing support for project preparation.

- Recent years have seen significant innovation in the way PPFs are providing support, with increasing cooperation and co-funding of project preparation. This is especially valuable because project preparation costs have increased in recent years.

**Scope of PPF support for project preparation**

- **Technical and funding support**: 59%
- **Only funding support**: 41%

**Funding support by type**

- **Grants**: 52%
- **Loans**: 18%
- **Guarantees**: 14%
- **Equity**: 11%
- **Concessional loans**: 7%

**Technical support by type**

- **Project feasibility**: 27%
- **Project identification**: 24%
- **Project structuring**: 20%
- **Transaction support**: 19%
- **Undefined**: 15%
- **Others**: 13%

Source: GI Hub calculations based on information published by the sample PPFs. Note: Results add over 100% because PPFs provide more than one type of technical and financial support. *Very few grants include some contingencies.*
Africa, the region with one of the lowest infrastructure project preparation scores, has the highest number of active PPFs.

- PPFs provide support in every region in the world.
- The majority of PPFs have a region-specific focus, while 36% focus in more than one region.
- Currently, PPF support focuses mostly on infrastructure projects in Africa (44%). This focus is possibly related to Africa currently having the weakest scores for project preparation.

- A larger number of PPFs does not necessarily translate into better outcomes. Despite having fewer PPFs, a greater number of projects receive PPF support in Oceania than in other regions.
- Although the support provided by PPFs within Eastern Europe is limited, the projects supported have a much larger average value than in other regions.
- Although Asia has the second highest number of active PPFs, the projects supported have a significant smaller average value than in other regions.
- PPF support lags in the Middle East, which together with Africa, has one of the lowest project preparation scores.

PPFs by region, 2020

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of PPFs</th>
<th>Projects supported to date</th>
<th>Average value of projects supported to date (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>58</td>
<td>58</td>
<td>783</td>
</tr>
<tr>
<td>Asia</td>
<td>54</td>
<td>54</td>
<td>43</td>
</tr>
<tr>
<td>Latin America</td>
<td>50</td>
<td>50</td>
<td>545</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>25</td>
<td>25</td>
<td>2,850</td>
</tr>
<tr>
<td>Middle East</td>
<td>18</td>
<td>18</td>
<td>53</td>
</tr>
<tr>
<td>Oceania</td>
<td>106</td>
<td>106</td>
<td>201</td>
</tr>
<tr>
<td>Western Europe</td>
<td>44</td>
<td>44</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: GI Hub calculations based on information published by the sample PPFs.
Note: 48% of the PPFs in the sample support two or more regions. Oceania includes Melanesia, Micronesia and Polynesia. Reliability of insights on projects’ volume and value is constrained by data availability. Only 48% of the PPFs reported the number of projects supported as well as regional presence, and just 32% reported the value of projects supported as well as regional presence.
Almost 80% of PPFs support project preparation in the energy sector, while only a few support project preparation in the social and telecommunication sectors.

- PPFs provide support across all infrastructure subsectors, but some sectors receive greater attention than others.
- About three quarters of PPFs support multiple sectors.

- More than half of all PPFs are mandated to support the energy, transport, and water sectors, and almost 80% support project preparation in the energy sector.
- Although only 15% of PPFs provide support for project preparation within the social sector, the projects supported are, on average, much larger than in other sectors.
- Only 13% of PPFs provide support to project preparation within the telecommunication sector. However, they support a greater number of telecommunication projects versus other sectors.

### PPFs by sector, 2020

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of PPFs</th>
<th>Projects supported to date</th>
<th>Average value of projects supported to date (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>458</td>
<td>124</td>
<td>458</td>
</tr>
<tr>
<td>Transport</td>
<td>387</td>
<td>129</td>
<td>387</td>
</tr>
<tr>
<td>Water</td>
<td>628</td>
<td>62</td>
<td>628</td>
</tr>
<tr>
<td>Waste</td>
<td>395</td>
<td>68</td>
<td>395</td>
</tr>
<tr>
<td>Social</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Telecom</td>
<td>239</td>
<td>279</td>
<td>239</td>
</tr>
<tr>
<td>Undefined</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Source: GI Hub calculations based on information published by the sample PPFs.

Note: PPF support to a sector was considered if the sector was included in the PPF mandate. 77% of the PPFs in the sample support more than one sector. Reliability of insights on projects’ volume and value is constrained by data availability. Only 60% of the PPFs reported the number of projects supported, as well as sector of operations, and just 32% reported the value of projects supported as well as sector of operations.
PPFs are mostly led by MDBs.

- Among the studied PPFs, most are primarily led by MDBs (53%) and international organisations (27%) to provide support in EMDEs.
- Governments typically lack the capacity and resources for project preparation, and they often budget for infrastructure investments without including project preparation costs. These fiscal restrictions (which are being exacerbated by the pandemic) explain why project preparation is increasingly being handled by MDBs through PPFs.

- Besides leading a majority of the PPFs, MDBs support much larger projects than the PPFs led by other organisations because MDBs serve as a finance source in most cases.
- The proximity to the market and investors allows PPFs led by national organisations to support a greater number of projects than other types of PPFs.

Source: GI Hub calculations based on information published by the sample PPFs.
Note: Results add over 100% because some PPFs are co-led by two or more organisation types (22%). Reliability of insights on projects’ volume and value is constrained by data availability. Only 60% of the PPFs reported the number of projects supported as well as lead organisation and just 32% reported the value of projects supported as well as lead organisation.

### PPFs by lead organisation type, 2020

<table>
<thead>
<tr>
<th>Number of PPFs</th>
<th>Projects supported to date</th>
<th>Average value of projects supported to date (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDBs</td>
<td>53%</td>
<td>2,919</td>
</tr>
<tr>
<td>International</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>13%</td>
<td>56</td>
</tr>
<tr>
<td>Regional</td>
<td>12%</td>
<td>51</td>
</tr>
<tr>
<td>Non-profits</td>
<td>9%</td>
<td>253</td>
</tr>
<tr>
<td>Bilateral</td>
<td>8%</td>
<td>57</td>
</tr>
<tr>
<td>Private</td>
<td>1%</td>
<td>45</td>
</tr>
<tr>
<td>Not available</td>
<td>1%</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>66</td>
</tr>
</tbody>
</table>

(MDBs = Multilateral Development Banks, PPFs = Project Preparation Facilities, EMDEs = Economies in Transition and Low-Income Countries).