G20 Principles for the Infrastructure Project Preparation Phase
Prepared by the Infrastructure Working Group

The introduction of robust and transparent infrastructure planning and pipelines, improved business cases and project stage gate controls, and the development of business case methodologies have led to more productive infrastructure being built.

The following **Principles for the Infrastructure Project Preparation Phase** could be considered when preparing national and regional infrastructure projects. The Principles consist in a list of critical aspects to consider under the following dimensions:

- Project rationale
- Options appraisal
- Commercial viability
- Long-term affordability
- Deliverability

These 5 key dimensions and their respective headline questions present a way to achieve a high standard of business case development. The G20 is clear that to be effective, these Principles are expected to be more effective when supported by sound governance and public leadership, implemented in a transparent and accountable manner, and sponsored from the outset by government bodies (such as ministries, development agencies, centralised or specialised authorities, etc., according to the country framework) at different levels of administration with the capacity to move through the entire process.

The idea behind these Principles is that every infrastructure project or programme will benefit from having a reasonable and structured justification (i.e., business case analysis) or proposition to explain why it is needed and how it can be taken forward. The systematic implementation of good business case analysis can help bridge the infrastructure gap by building a pipeline of projects that are bankable and that satisfy investor requirements. It helps to create delivery confidence by ensuring and demonstrating that projects have been scoped robustly and planned realistically from the outset and over the entire life-cycle, with the associated risks taken into account.

A good business case methodology provides a framework for thinking around three issues:

- where are you now?
- where do you want to get to?
- how are you going to get there?

and provides:

- a structured format to allow government authorities at all levels to develop its proposals and explain and justify any project or programme;
- a framework to enable an approving body to decide whether or not to allow the project or programme to go forward;
- a process for preparing projects for market; and
- a record of transparent decision-making.

The implementation of these Principles can be greatly supported by project preparation tools and instruments that are already operational. Given the increasingly digitalized global economy and the importance of good access and quality of infrastructure data, a multilateral online infrastructure project preparation software platform can be particularly instrumental for improving consistency, quality, transparency and accountability of business case analysis. A compendium of existing resources for project preparation support is provided in Appendix I.

PROJECT RATIONALE

Underpinned by sound governance and public leadership, the **Project Rationale** establishes the need for the project, placing it within an overall strategic context and outlining the project scope and objectives. In short, it should present the "case for change".

Critical Issues to address are:

- Establish the rationale for the project and place the project within an overall strategic context, e.g. national, regional and local long-term plans. This should confirm project sponsors and government parties on their role.
- Outline the project scope and objectives, and the problems the project aims to solve or the benefits it should bring.
- Define the key risks, constraints and dependencies relating to the project e.g. Have planning, external approvals and issues related to cross-border projects been taken into account.
- Define the positive and negative externalities generated by the project, as well as potential linkages and alignment with other infrastructure projects and sectors, regional planning and other programs, networks and national and local policies.

OPTIONS APPRAISAL

The **Options Appraisal** should demonstrate that all relevant options have been considered involving the relevant stakeholders (including the private sector) at the national, regional and local level, and that social cost benefit analysis (SCBA), social cost effectiveness analysis (SCEA) or multi-criteria decision analysis (MCDA) has been conducted in an appropriate manner on a further short list (derived from all relevant options) to determine the option which offers best value for money over the entire life-cycle of the project (including its maintenance), taking externalities into account. In addition, for Public-Private Partnership (PPP) infrastructure projects, it should demonstrate that using private finance optimises value for money for the government, by comparing it to the same solution using public capital.

Critical Issues to address are:

- Have you established critical success factors against which you can test your options?
- Have you considered all relevant options to create a long list and short list?
- Have you subjected your short list to SCBA (if cost and benefits can be converted into monetary value) or SCEA (if benefits cannot be valued or the information required is too difficult to determine) in order to establish a preferred option? If comprehensive MCDA is instead used, does it incorporate SCBA or SCEA as an input and if not are there grounds for not performing them (lack of information, large pipeline of projects and insufficient resources to perform the analysis, etc.)?
- Are all the key modelling assumptions clearly articulated, backed up by sound sources and reflective of market conditions?
- Are cost and schedule estimates in line with the required output specifications and based on established national/international benchmarks? Are social and environmental costs monetised where possible?
- Have risks been identified and quantified and a reasonable adjustment made for "optimism bias"?
- Have you tested resilience against natural disasters and other force-majeure risks?
- Have you tried to take account of non-financial risks and benefits in your short list evaluation?
- Have all relevant stakeholders been addressed, including the private sector and affected local communities?
- Does the project help achieve universal access to basic services, such as electricity and energy, water and sanitation, waste removal, transport, housing, health care and education?
- How does the project improve accessibility and inclusiveness for the most disadvantaged social groups?
- Do you have a robust justification for your preferred option?
- What are the weights one should attribute to the different aspects above in order to derive the preferred option?

COMMERCIAL VIABILITY

Showing Commercial Viability involves demonstrating that the project is feasible and deliverable for investors and contractors as well as the government and citizens, that the supplier market has been tested and that the procurement strategy and contract is well developed with an appropriate risk allocation.

Critical Issues to address are:

- Have you reviewed different contract options and chosen the one which offers best value for money? Is the contract bankable? In case it is not and the project targets low income users, carries positive social externalities or is viable from a socio-economic perspective, do these factors justify public sector support?
- Have you tested that the proposal is commercially feasible and that the supply market is likely to be interested in it?
- What is your procurement strategy?
- Do you have a risk matrix which allocates risks to the party best able to manage them? Is this risk allocation stated in the contract?

LONG-TERM AFFORDABILITY

Long-term affordability analysis should ascertain the likely life-cycle costs, adequate and affordable maintenance funding and financing of the project. Accordingly, it should (a) demonstrate that the project is affordable and cost effective over its life, taking account of the public funding allocated to the project and allowing contingencies for unexpected occurrences; and (b) make clear what amounts are funded from public sources and what amounts are sought by way of other funding sources or are payable by users of the facility. Debt sustainability and transparency of project financing will also be taken into consideration.

Critical Issues to address are:

- Have you accurately assessed the project costs?
- Have you accurately assessed all project revenues?
- Have you identified finance and funding sources?
- Have you built relevant financial models?
- Have you performed a sensitivity analysis over the estimated financial results and rate of return?
- Are credit enhancement and risk mitigation products available to support project financing?
- Are there readily available and affordable mechanisms for interest rate and foreign currency hedging, if necessary for the project?
- Have you tested affordability from a macroeconomic/fiscal sustainability perspective?

DELIVERABILITY

Deliverability analysis should demonstrate that arrangements are in place to ensure the successful delivery and maintenance/operational management of the project, respecting existing environmental and social safeguards. It should show that the project is properly staffed and resourced over its lifetime, with appropriate governance arrangements, advisers and timetable, so that it can be procured on time and successfully operated as well as monitored.

Critical Issues to address are:

- Have you put in place project management and governance arrangements?
- Do you have a risk management plan, including an environmental and social risk assessment and its corresponding mitigation plan?
- How is responsibility assigned or delegated amongst the public sector and shared with private partners? How can each institution help with the project preparation?
- What is your assurance and approval structure?

- What advisers will you appoint and have you considered this expense in the budget?
- What project management methodology will you use?
- Do you have a detailed project plan and timetable?
- Are conflict assessment and resolution mechanisms in place?