Multilateral Development Banks' Reference Note

Translating Quality Infrastructure Investment (QII) Principles into Procurement Practice

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Acronyms

BAFO	Best and Final Offer
BIM	Building Information Modelling
BTO	Build Transfer Operate
DB	Design Build
DBO	Design Build Operate
GBV	Gender Based Violence
HIV/AIDS	Human Immuno-Deficiency Virus / Acquired Immuno-Deficiency Syndrome
HOP	Head of Procurement
KPI	Key Performance Indicator
MDB	Multi-lateral Development Bank
PPP	Public-private Partnership
QII	Quality Infrastructure Investment
RFP	Request for Proposal
SEA	Sexual Exploitation and Abuse
VfM	Value for money

Executive Summary

Building quality infrastructure projects provides broader returns on investments which include supporting social and economic development. As such, procurement intersects with other broader policy objectives. The economic impacts of high-quality infrastructure projects include better services to citizens, job creation, technological innovation, human capital strengthening, and stimulating increased confidence in private sector investors to help narrow the infrastructure investment gap.

Strategic, upstream procurement planning and implementation contributes to effective public investment management, helps create fiscal space through more efficient use of resources, and supports the achievement of global commitments such as those related to the Sustainable Development Goals and Climate Change.

The concept of Value for Money (VfM) in modern infrastructure procurement encompasses long-term social, environmental and economic benefits in terms of contributions to well-being, improved environmental outcomes and enhanced economic activity.

The Heads of Procurement (HoPs) of the Multilateral Development Banks (MDBs) comprising:

1. African Development Bank
2. Asian Development Bank
3. Asian Infrastructure Investment Bank
4. Black Sea Trade and Development Bank
5. Caribbean Development Bank
6. Central American Bank for Economic Integration
7. Council of Europe Development Bank
8. European Investment Bank
9. European Bank for Reconstruction and Development
10. Inter-American Development Bank
11. Islamic Development Bank; and
12. World Bank

are advancing a procurement modernization agenda that further supports sustainable, quality infrastructure investment representing best VfM and delivers improved social, environmental and economic outcomes for their Borrowers.

Procurement, along with integrity and environmental and social standards, provide the policy and practice frameworks that support quality in the delivery of large infrastructure projects. Strategic procurement is critical to delivering good QII. It is the enabler that drives the

successful delivery of outcomes, while managing a range of construction-based risks (schedule, cost, quality) as well as social, environmental and economic impacts. It involves designing, through robust strategic analysis, the best procurement approach that is fit-for-purpose, proportionate and tailored to the individual QII project.

Other factors that impact QII include: optimal design, VfM, choice of commercial model, incentive-based payment mechanisms, innovation and value-engineering, relationship management, good governance, proactive contract management and sound, informed decision making.

Successful procurement of QII means looking beyond the traditional short-term economic parameters (e.g. construction costs) and making decisions based on the life-cycle cost as well as the social, environmental and economic impacts of the facility. It provides access to development benefits to all members of affected communities, especially women, children, persons with disabilities, youth, and disadvantaged groups, and can have an indirect positive impact on debt sustainability by increasing efficiencies, reducing costs and leveraging private sector financing.

The MDBs' HOPs are committed to supporting the delivery of QII. To move this agenda forward, inspired by the QII Principles, MDBs will operationalize the agreed success factors (which reflect the QII Principles) to inform practice in accordance with the individual polices, mandates and resources, the HoPs will continue to focus on critical procurement success factors that enable effective Quality Infrastructure Investment (QII).

Five Procurement Success Factors

The five procurement success factors are based on the QII Principles. They include:

Success Factor 1: Economic efficiency

QII Principle: **Raising economic efficiency in view of life-cycle cost**	MDB procurement supports economic efficiencies through establishing a strategic procurement function and using strategic procurement approaches in individual QII projects. This is enabled through the application of proportionate, fit-for-purpose procurement processes, VfM, life-cycle costings, pricing and cost mechanisms and managing abnormally low tenders. It also includes fostering innovation, contractor development and strategic use of technology, as appropriate.

Success Factor 2: Environmental sustainability

QII Principle: **Integrating environmental considerations in infrastructure investments**	MDB procurement emphasizes the identification, avoidance, mitigation, management and adaptation of environmental risks and issues at all stages of procurement. This covers the period from needs identification, the design of the infrastructure, through construction, completion, operation and disestablishment.

Success Factor 3: Resilience

QII Principle: **Building resilience against natural disasters and other risks**	MDB procurement supports resilience through strengthened capacity to design increased resistance to risks (such as the impacts of climate change, earthquake, terrorism, cyber-security) and capacity for recovery. This involves anticipating unexpected, disruptive negative events and responding adaptively to these disruptions whilst maintaining control over the process and desired outcomes. For QII this means, optimal long-term design, taking into account risk avoidance, containment, mitigation and recovery. This is achieved through sound risk analysis, proactive management, and accountable and auditable decision-making processes.

Success Factor 4: Social sustainability

QII Principle: **Integrating social considerations in infrastructure investment**	MDB procurement supports the development and implementation of procurements that are socially sustainable by ensuring that: 1. those involved in undertaking the procurement (e.g. the borrower, contractor, supervising engineer, etc.), avoid and mitigate the adverse impacts on affected people and communities throughout all stages of the procurement; and 2. access to benefits created by the infrastructure is provided to all members of affected communities, including all vulnerable groups.

Success Factor 5: Good governance

QII Principle: **Strengthening infrastructure governance**	MDB procurement supports good governance in QII projects through the application of policies, procedures, systems and processes that are suitable, proportionate and provide sufficient oversite and probity, and in particular that address: 1. anti-corruption and other prohibited practices; 2. openness and transparency; 3. fair access, equality and equity; and 4. indirect positive impact on debt sustainability.

This paper discusses key considerations related to each of the five success factors and different procurement approaches implemented by the MDBs, as applicable under their respective policies, that emphasize fit-for-purpose, strategic procurement to achieve optimal VfM.

MDBs will utilize the QII principles outlined in this paper to inform their practice. A separate reference note is being prepared, by OECD, that will cover more in-depth environmental and social aspects and issues related to QII, including those outside the procurement process.

I. QII Success Factors

Background

The Heads of Procurement (HoPs) of the Multilateral Development Banks (MDBs) collaborate to develop operational approaches that support the delivery of sustainable, "Quality Infrastructure Investment" (QII) representing best value for money (VfM) with integrity and ensuring sustainable social, environmental and economic outcomes.

To move this agenda forward, in accordance with each MDB's individual mandates, policies and resources, the HoPs adopted a strategic procurement approach centered around common principles (e.g. VfM, fit for purpose, transparency, economy, efficiency, etc.) and utilizing a broad range of options and methods to deliver the five procurement success factors discussed below. These success factors have universal application to all QII procurements. However, the importance of each success factor and how they are applied in practice will vary depending on the circumstances of the project.

The success factors highlight the critical importance of several environmental and social considerations, as they relate to procurement strategy. However, there are many other essential aspects which warrant a deeper discussion. Therefore, a separate reference note is being prepared by OECD that will cover these aspects (including those outside the procurement process, such as land acquisition, treatment of indigenous peoples, and borrower's stakeholder engagement including grievance redress). Given that MDBs' environmental and social safeguard policies have evolved in an iterative manner, accompanied by a deliberate effort to harmonize them, there are many similarities. The Heads of each MDB's safeguards unit hold bi-annual meetings to ensure close coordination in operations and seek areas of future policy harmonization among them, including, where appropriate, harmonization in relation to principles, standards and practice.

Success Factor 1: Economic efficiency

QII Principle: **Raising economic efficiency in view of life-cycle cost**	MDB procurement supports economic efficiencies through establishing a strategic procurement function and using strategic procurement approaches in individual QII projects. This is enabled through the application of proportionate, fit-for-purpose procurement processes, VfM, life-cycle costings, pricing and cost mechanisms and managing abnormally low tenders. It also includes fostering innovation, contractor development and strategic use of technology, as appropriate.

The procurement function, including processes, systems and resources, fundamentally affects a public organization's ability to achieve economic efficiency which, in turn, contributes to greater effectiveness in delivering QII objectives. An effective procurement function also affords public organizations, as the largest procurers in most markets, significant leverage to drive positive changes in the construction industry and help establish a better built environment which, in turn, further enhances VfM for taxpayers.

Moving from a tactical to a strategic procurement function requires:

1. classification of procurements into expenditure categories such as engineering consultancy services, construction, information technology etc.;
2. market analysis of these key categories;
3. evaluating these categories and market findings against a "risk / value" matrix to identify the strategic categories for prioritization;
4. planning how each of these strategic categories will be optimized;
5. expenditure analysis projecting future demand and budget requirements;
6. strategic alignment of procurement processes with the purchasing organization's policy objectives and strategic goals and the government's overarching policy objectives and strategic goals;
7. process simplification (eliminating unnecessary steps/bottlenecks and redesigning processes to be fit-for-purpose and continuously improved);
8. strategic use of technology and innovative solutions for both design and implementation (e.g. AI, blockchain, BIM[1], drones to aid inspections, IT systems, e-procurement);

[1] Building Information Modeling (BIM) is a shared knowledge resource (through specialist software) that records information about a facility. This information forms a reliable basis for decisions during the infrastructure's life-cycle i.e. from design, build, and use, through to demolition. Current BIM software is used by organizations that plan, design, construct, operate and

9. maximization of human capital through future needs projections, employee development and succession plans, and strategic management of employee turnover and future hiring decisions.

A strategic procurement function provides an agile platform to develop bespoke, fit-for-purpose procurement approaches in high-value, high-risk infrastructure projects and deliver greater economic efficiency.

The key aspects of economic efficiency in QII procurement include:

1. Value for Money (VfM)

VfM involves the effective, efficient, and economic use of resources. In individual procurements, this requires the evaluation of relevant costs and benefits, along with an assessment of risks, non-price attributes (including quality, fitness for purpose and sustainability), and life-cycle costs.

VfM may be assessed using a Request for Proposal approach to market. Appropriate criteria need to be developed for a specific procurement, prioritizing them as applicable to the project's characteristics and operating environment by assigning suitable weightings, and applying them objectively in evaluating each tender.

Abnormally low tenders pose a significant risk to VfM and it is important to identify and manage them during evaluation.

An abnormally low tender may be identified:

1. when compared with the borrower's cost estimate for the contract (if there is no ability to compare to market prices);
2. when compared with other substantially responsive tenders;
3. when it does not appear to provide margin for profit; and/or
4. when the low price cannot be explained, for example by:
    a. the economy of the selected constructions method, or
    b. the technical solution chosen.

maintain diverse physical infrastructures, such as water, electricity, gas, communication utilities, roads, railways, bridges, ports and tunnels.

Use of BIM goes beyond the planning and design phase of the project, extending throughout the building life cycle, supporting processes including cost management, construction management, project management and facility operation.

The "digital construction" approach provided by BIM is seen as a way to improve productivity rates as it helps leverage a vast volume of data for more informed, streamlined, and agile decision-making. This contributes to a more efficient use of limited public resources, less cost overruns, and higher quality results.

Introducing a BIM approach can greatly improve economic efficiencies and all aspects of facilities management. A BIM approach also facilitates close collaboration between contractor and borrower and supports the philosophy of working jointly to find solutions to problems and drive additional value throughout the construction phase.

Management of an abnormally low tender typically involves seeking clarification from the tenderer by asking for a justification and evidence of costs, assessing the tenderer's response and, if the response does not justify the costs, rejecting the tender.

2. Life-cycle cost

Life-cycle cost, a critical consideration in determining overall VfM, refers to the total cost of ownership over the anticipated life of an infrastructure facility including the direct financial costs and the environmental, social and economic costs. A life-cycle cost approach ensures that not only constructions costs, but also costs associated with planning, design, commissioning operations, maintenance, renewal and rehabilitation, depreciation and cost of finance and replacement, decommissioning and disposal costs are assessed as part of tender evaluation and considered during the decision to award the contract. Ensuring appropriate standards of quality during operation and maintenance contributes to optimizing life-cycle costs.

A focus on life-cycle costs ensures that all costs and benefits associated with infrastructure design and use are considered over the life time of an asset. This facilitates design decisions based on both capital and revenue costs, by taking a holistic view on investment decisions, especially those that have a longer pay-back period. This can result in both reduced cost and improved performance of the asset. Examples included improved energy efficiency, infrastructure that require less frequent maintenance, use of sustainable materials and operational standards.

While not usually considered at the tender evaluation stage, important factors related to overall infrastructure cost include pre-construction activities such as land acquisition, especially where different design and construction approaches impact the physical footprint of the built infrastructure.

3. Price and cost mechanisms

Selecting the most appropriate costing mechanism is important to positively incentivize tenderers, optimally manage cost risks, and be able to assess life-cycle costs. While pricing and costing mechanisms will vary depending upon risks and the commercial model, in infrastructure projects they typically include:

1. Lump-sum;
2. Schedule of rates;
3. Performance-based costing;
4. Target fee; or
5. Cost-plus with appropriate bonus clause and cost ceilings.

4. Value engineering to improve function and/or reduce cost

Value engineering is systematic approach that analyses infrastructure design, systems, equipment, construction materials and project delivery with the aim of reducing un-necessary cost while ensuring asset quality, reliability and performance meet or exceed borrower expectations. It is a methodology used to improve all elements of QII by evaluating all components involved in construction to establish if better value or alternative solutions can be used instead of the planned approach. It may be used to solve problems, or improve design and functionality, while removing unwanted costs and improving overall VfM.

Value engineering can positively drive innovation in construction through the consideration of substitute materials, alternative construction methods, innovative technologies, and by addressing issues related to transportation, site limitations, planning and organization, costs, and profits. Value engineering can deliver benefits such as reduced life cycle costs, quality improvements, more efficient use of resources, and reduction of environmental and social impacts.

Value engineering is most effective when applied from the beginning of a project as this ensures all stages of the project cycle are considered. It integrates effectively with an approach that involves close, collaboration between the borrower, design engineer/consultant and contractor by leveraging considerable collective knowledge and helping to balance the competing demands and risks of each stakeholder. Early integration of value engineering helps to ensure that impact on completion dates and overall cost don't outweigh the savings offered.

5. Contractor development

Large infrastructure projects can benefit from an active contractor development program. Such programs can be established at government, ministry and/or purchasing agency level. Benefits include increasing competition, closer alignment with a borrower's policy objectives, driving continuous improvement and closer borrower/contractor working relationships that foster an environment of effective communication leading to quicker and better-informed decisions, especially during construction.

Such a program can also support contractors to make incremental and/or step changes in their management and delivery methods to improve their performance. For example, areas for improvement can include delivery methods, materials, construction timetables, best practice systems for health and safety, quality management, environmental management, and social impacts (especially labor market participation, equality, prevention of Gender-based Violence and Sexual Exploitation and Abuse).

Contractor development also contributes to advancing public policy objectives in infrastructure projects (e.g. by adopting different approaches that could increase awards to certain target groups for socio-economic development such as women-owned business, or

the number of women in the workforce, or the number of young people in the workforce, upskilling through more investments in training and certification of workers, preventing employment of child labor, paying a fair living wage and harmful forms of labor and protecting other labor standards).

Success Factor 2: Environmental sustainability

QII Principle: **Integrating environmental considerations in infrastructure investments**	MDB procurement emphasizes the identification, avoidance, mitigation and management of environmental risks and issues at all stages of procurement. This covers the period from needs identification, the design of the infrastructure, through construction, completion, operation and disestablishment.

Effective identification and management of environmental risks and impacts greatly improves QII's outcomes. MDBs have clearly expressed their environmental standards, but ensuring these requirements are understood and delivered by contractors requires embedding environmental considerations throughout the procurement process, where appropriate.

Incorporating environmental considerations

In procurement terms, quality and environmental aspects are closely linked to resource optimization (e.g. optimizing the life of the infrastructure facility leading to less overall consumption of resources). An eco-efficient facility will generally use less energy, offer lower running costs and avoid or decrease greenhouse gas emissions. Aspects of the facility and related consumables should also be recyclable, where possible. Components which do not contain hazardous substances will not require expensive disposal. Aging facilities can be replaced by more energy efficient and environmentally clean alternatives.

Procurement can make a significant contribution to the policy goals of sustainable development and efficient resource use by ensuring that the main contractor, supervising engineer/consultant, and sub-contractors achieve optimum environmental performance.

Effective sustainable procurement seeks to incorporate a number of safeguards and checks in the procurement process that assist in guarding against adverse environmental impacts and drives sustainable results and positive contractor behaviors.

Procurement planning to manage environmental risks

Procurement strategies should plan how best to manage environmental aspects from the outset. These aspects can be addressed through actions that include:

1. incorporating identified environmental risks and issues into qualification and selection criteria, technical specifications, standards, KPIs, and contractual obligations;
2. using the right procurement approach to create the right incentives for contractors and consultants;
3. incentivizing the right companies to participate and tender (i.e. companies that are committed to practicing sustainable construction/design, and that have strong track records in this field or model their behavior towards more environmentally sustainable

practices, where they have not yet achieved a strong track record, but are keen to work towards this);

4. requiring tenderers/proposers to submit, as part of their tender, Environmental Social Health and Safety Management Strategies and thorough Implementation Plans to manage the key risks of the project. The suitability of these strategies and plans should be assessed as part of the tender evaluation, addressed during pre-contract discussions, as appropriate, and become part of the Contractor's Environmental and Social Management Plan, which needs to be accepted as a condition for mobilization;
5. ensuring that evaluation criteria address environmental performance, including understanding the requirements, and capacity to implement them, as appropriate;
6. selecting key contractors and consultants that have environmental and sustainability credentials, including international certification, and track record and demonstrate ongoing compliance with relevant environmental laws, regulations, guidelines and standards;
7. linking payments to environmental performance; and
8. applying penalties for breaches of environmental obligations.

This approach ensures that contractors consider their environmental obligations and integrate them into their methodology for design, construction, operation and how the facility will be used.

Contractors' performance

Contractors in compliance with these requirements positively affect environmental performance by:

1. reflecting consistently environmental risks/impacts assessments, management frameworks and plans;
2. understanding the environmental impacts, costs and benefits at each stage in the life cycle of the facility;
3. supporting pollution prevention and management;
4. promoting biodiversity conservation and sustainable management of living natural resources;
5. ensuring efficient energy and water use;
6. preventing, and controlling waste;
7. applying the environmental requirements to primary suppliers where appropriate, including environmental audits and ongoing performance management;
8. driving sustainability down the supply chain; and

9. identifying the best management options that are technically and financially feasible.

Success Factor 3: Resilience

QII Principle: **Building resilience against natural disasters and other risks**	MDB procurement supports resilience through strengthened capacity to design increased resistance to risks (such as the impacts of climate change, earthquake, terrorism, cyber-security) and capacity for recovery. This involves anticipating unexpected, disruptive negative events and responding adaptively to these disruptions whilst maintaining control over the process and desired outcomes. For QII this means, optimal long-term design, taking into account risk avoidance, containment, mitigation and recovery. This is achieved through sound risk analysis, proactive management, and accountable and auditable decision-making processes.

Large, complex infrastructure projects are subject to many risks that can disrupt works and jeopardize implementation. This negatively impacts time schedules and costs. It can also result in damage to local communities and environments. Traditional infrastructure procurement can lack resilience[2] to such risks as well as the ability to recover quickly from the disruption.

Events can be both man-made or natural, such as: delays in obtaining materials, accidents on site, labor disputes, delays in obtaining permissions, pollution of local drinking water, fire, requirement for additional ground works, climate change, flood, hurricanes, earthquakes etc. Understanding resilience risks and being able to design the infrastructure to withstand them, and/or to quickly respond to and recover from them, is critical for QII.

Good procurement incorporates robust risk analysis, systems and processes, and proactive management that supports resilience (e.g. decisions on how and where to invest to mitigate risks and recover from natural/man made disruptions).

Resilience requires the capacity for both resistance (e.g. to climate change) and recovery. It relies on proactive efforts that require all involved parties to prepare for possible events. Resilience can involve evading a risk entirely (avoidance) or delaying the time between onset and impact (containment) and reducing the impacts once the risk occurs (mitigation).

A proactive, well-considered resilience approach will optimize design, reduce delays, costs, and negative social and environmental impacts. It will also establish an accountable and auditable decision-making process.

[2] Increasingly, resilience focuses on environmental sustainability and requires infrastructure design to address climate resilience, including extreme weather, drought, sea level rise, etc. While normally addressed accordingly under environmental policies, it is presented separately in this paper only for ease of discussion of specific procurement aspects.

Project preparation

During project preparation much can be done to identify the types of risks that need to be considered as part of project design (e.g. climate change), and those that could jeopardize implementation (e.g. construction in an earthquake zone). The nature of the environment, works, the complexity of the construction, and the difficulty of the site must be reviewed and reported on before procurement starts. Once identified, the likelihood of occurrence and the magnitude of impact need to be analyzed, and risk strategies and plans developed. This information is normally captured in a risk register and is used to inform design and implementation plans.

Assigning specific risks to individual parties at the outset provides for a degree of accountability. However, regular and comprehensive risk reporting, the examination of these reports, and the assessment of risk management performance are required to hold the parties to account.

Project design

At this stage, the strategic risk analysis discussed above is incorporated into the design risk. Some types of risks can be avoided or mitigated through good project design. This may involve the actual design of the facility, the method of construction, or selection of the most suitable site. Consideration of risk avoidance may also involve value engineering to improve design, delivery or impacts. Design should estimate the expected longevity of the infrastructure, the impacts of climate change (e.g. increased flooding/extreme events) and address the infrastructure's resilience to natural disasters (e.g. hurricanes, floods, earthquakes, tsunami, coastal erosion). At the design stage, additional risks can occur where the design is incomplete, or poorly estimated, knowledge of technical conditions is limited, or there is inaccurate information on materials, or poor selection of alternative materials.

Construction

Many risks are associated with construction activities including when latent design risks materialize. Construction risks which may impact resilience include, for example: poor construction planning and management, delays in scheduled implementation, poorly trained workforce, weather (including extreme climate events), and ground conditions.

During construction, the ongoing assessment of emerging risk and their avoidance, mitigation or management must be part of routine activities. Included in these activities is the identification of risk associated with any contract change/variation. Good practice requires the supervising engineer to request the contractor to prepare an appropriate risk assessment (including environmental, social and health and safety risks) to accompany each change/variation request. The supervising engineer should only approve the change/variation if adequate measures are in place to avoid or mitigate the risk inherent to the change. The risk register should be continuously updated to provide a useful audit trail of emerging risks,

showing how they were dealt with and the associated cost. A requirement to provide regular and immediate (for most severe risks) risk reporting should be part of the contract.

Success Factor 4: Social sustainability

QII Principle: **Integrating social considerations in infrastructure investment**	MDB procurement supports the development and implementation of procurements that are socially sustainable by ensuring that: 1. those involved in undertaking the procurement (e.g. the borrower, contractor, supervising engineer, etc.), avoid and mitigate the adverse impacts on affected people and communities throughout all stages of the procurement; and 2. access to benefits created by the infrastructure is provided to all members of affected communities, including all vulnerable groups.

Socially sustainable communities are accessible, inclusive and connected and provide a good quality of life to each member of the community. Large infrastructure projects, by their nature, can create a risk of adverse social impacts for local communities. Unless there is a systematic procurement approach to identifying and managing these risks, there can be significantly negative impacts on individuals and/or barriers to some community members in accessing the infrastructure's social development benefits.

These risks and benefits can emerge at any stage of the procurement (e.g. during construction, operation and/or disestablishment). Risks include threats related to:

1. community safety (e.g. traffic hazards, landslides, pollution);
2. human security (e.g. crime and violence);
3. health and safety (e.g. communicable and non-communicable diseases, HIV/AIDS, contaminated drinking water);
4. Gender Based Violence (GBV), and Sexual Exploitation and Abuse (SEA);
5. prejudice and discrimination towards disadvantaged or vulnerable individuals in providing access to development benefits;
6. child labor, forced labor, and other forms of harmful labor practices; and
7. cultural heritage.

Inclusive sustainable development requires that development benefits are accessible equitably to all members of the community. Positive outcomes for individuals include:

1. economic development (e.g. employment opportunities);

2. improved living conditions (depending on the nature of the infrastructure, this could mean, for example, affordable energy, rapid transit to market/cities, accessible health care services, etc.);
3. social capital (e.g. training, education and upskilling);
4. social justice (e.g. equality, access to a complaints mechanism, labor rights); and
5. community resilience (including human adaptation).

Managing social sustainability through a strategic procurement approach involves:

1. leveraging information included in social impact assessments, strategies and management plans to inform the qualification and selection criteria (including use of past contract performance), contract requirements, KPIs and conditions for payment;
2. requiring tenderers to submit, as part of their tender, Environmental, Social, Health and Safety Management Strategies and Implementation Plans to manage the key risks of the project that will result in a contractually enforceable implementation plan.
3. applying health and safety standards to prevent accidents, and improve working conditions;
4. promoting social inclusiveness, non-discrimination, labor market participation and equal opportunity (including increased access for all vulnerable individuals or groups) in the tender process;
5. advancing gender sensitivity, training the workforce and introducing a Code of Conduct and other minimum standards and requirements to minimize the risks of GBV and SEA;
6. improving health outcomes by raising awareness of communicable disease prevention;
7. preventing child labor, forced labor, and other forms of harmful labor and requiring compliance with minimum labor standards;
8. engaging with stakeholders and openly disclosing information;
9. requiring access to a grievance redress system both at the project level and for the contractor; and
10. in high risk environments, leveraging third party monitoring arrangements, as appropriate.

Success Factor 5: Good governance

QII Principle: **Strengthening infrastructure governance**	MDB procurement supports good governance in QII projects through the application of policies, procedures, systems and processes that are suitable, proportionate and provide sufficient governance oversite and probity throughout all stages of the procurement, and in particular that address: 1. anti-corruption and other prohibited practices; 2. openness and transparency; 3. fair access, equality and equity; and 4. indirect positive impact on debt sustainability.

Failure to establish and apply a strong governance framework for QII projects can lead to inefficient investment strategies, delays, disputes, loss of VfM, reputational risk, lack of trust in public institutions, and missed opportunities to leverage the private sector for capital and innovative solutions.

An appropriate governance framework should encompass systems and procedures that ensure appropriate oversight from inception through to delivery of the infrastructure. The key elements of this framework include:

1. appropriate procurement policies and procedures that include strategic planning, and agile control mechanisms;
2. clear definition of roles, responsibilities and delegation, and the appointment of qualified individuals to these roles;
3. effective management of conflict of interest;
4. zero tolerance for fraud, corruption and other prohibited practices;
5. prompt and fair payment per the agreed contract; and
6. systematic supervision and review processes to monitor governance risk and overall performance.

For the purposes of this paper, four pillars underpin good governance of QII:

1. anti-corruption;
2. openness and transparency;
3. fair access to and equitable treatment of all prospective tenderers/contractors; and
4. indirect positive impact on debt sustainability.

Anti-corruption

Corruption and lack of accountability undermine integrity in procurement and are major threats to QII. The best private sector companies are unlikely to tender in a corrupt environment, leaving the borrower with poorer quality alternatives. Unethical practices can occur at any time in the procurement cycle. A strong anti-corruption policy statement, a robust sanctions regime, grounded on rigorous due process, and systematic oversight, control and enforcement are required to support QII

Traditional public procurement models have often followed an excessively prescriptive approach. Excessive detail in procurement regulations and a high-risk aversion approach hinder sound, professional judgment. While an excessively prescriptive approach will reduce inconsistent application of rules, it can foster an adversarial relationship with the market, and a create a cost premium on procedural compliance over the achievement of substantive results. This has led governments around the world and MDBs to begin refocusing regulatory systems on standards, principles, and performance rather than on strict compliance with regulated procedures.

As public procurement emerges as a driver of growth, efficiency, and innovation, a strategic approach to markets to build trust through collaborative contracting models needs to be carefully balanced and integrated with effective risk management and corruption prevention. and the trust of society in the government requires a broader effort to strengthen Public Financial Management, greater openness, fairness, transparency, institutional capacity, collaboration with all stakeholders, and strategic use of technology.

The procurement regulatory environment should create a level playing field for businesses, with transparent, easily accessible laws and regulations enabled by efficient complaints review mechanisms. Transparent planning processes, qualification and evaluation criteria, contract conditions, and performance monitoring combine to help drive improved quality and prevent waste and corruption. To achieve the intended procurement results, laws and regulations need to be complemented by institutional capacity, a professional procurement workforce, and effective enforcement.

A strong focus on anti-corruption and ethics will result in poorly performing and badly behaving contractors no longer being successful in winning tenders.

A number of risk mitigating measures, including the engagement of an independent probity auditor, can be used when undertaking negotiated approaches to manage integrity risks. Integrity management can also be aided by innovative technologies - for example, geo-tagging of contract implementation activities can interface with social media, allowing any citizen to flag integrity issues, while supporting continued citizen engagement at all stages of the project and procurement cycle.

Openness and transparency

Openness and transparency help mitigate the risks of fraud and corruption and are key components in building accountability and trust in public procurement, encouraging the best suppliers to participate through strong assurance that they will be treated fairly. Openness and transparency allow scrutiny by civil society of public procurement decisions and impacts.

Open access to information covers everything from the publication of contract opportunities, availability of tender information and documents, information on procurement decisions, and publication of contract awards.

Openness also means a broader exchange of new ideas and innovative approaches with the market. A range of civil society shareholders can get involved at the procurement planning stages. Using a Request for Proposal (RFP) process and outcome/output or performance-based specifications allows contractors to present alternative solutions so that Borrowers can harness cutting-edge market expertise.

Transparency ensures openness and publicity at the various stages in the process, enabling potential and actual tenderers, and other interested parties, to observe progress and ascertain that the process has been transparent, impartial and fair. Some MDBs undertake additional due diligence seeking greater disclosure of information relating to successful tenderers (e.g. identifying who is the ultimate owner and beneficiary of the contract award decision). Transparent processes allow tenderers to request clarification of the tender documents, seek debriefings, and if needed submit complaints. Effective complaint resolution is best facilitated by use of standstill periods after the notification of intention to award the contract (so that complaints can be determined before a legally binding award is made).

Internet-based technologies and smart phone applications are also becoming increasingly important tools in facilitating open and transparent public procurement.

Fair access and equitable treatment of all prospective tenderers/contractors

Open access to contract opportunities is the preferred approach to large infrastructure procurement. This means openly publishing opportunities (preferably with electronic means and/or publication with broad industry circulation) and ensuring that eligibility criteria are fair and reasonable to incentivize the broadest possible participation of qualified contractors. All eligible potential and actual tenderers should be subject to exactly the same conditions for submission and evaluation of tenders. This leads to non-discriminatory procurement processes as contractors receive equal and satisfactory information at the same time, their tenders are evaluated using the exact same methodology, and no contractor is advantaged or disadvantaged through procedural processes.

Debt sustainability

MDBs are committed to supporting Borrowers to achieve their development goals without creating future debt problems. This involves analysis of a country's capacity to finance its policy objectives and service the ensuing debt, without compromising its current and future economic stability.

Large infrastructure projects offer opportunities to positively impact debt sustainability by harnessing private sector funding and by selecting the right commercial model (e.g. generating income through road tolls or rent from leasing the facility to a third party to run). This can lessen the amount that a borrower needs to finance or produce income streams to offset the cost of finance.

Procurement strategy needs to be part of the business case for public investments from the early stages of project design and funding decisions and reviewed collaboratively by a broad range of project stakeholders. By identifying the best approach to procuring capital assets as well as services, and by supporting every aspect of the project implementation through its delivery and evaluation, the procurement function is key to meeting both policy and agency objectives in every major capital investment plan.

The commercial model needs to be the right choice not only for the procurement, but also in relation to the borrower's current and future vulnerability to debt sustainability. In this way, strategic procurement offers an opportunity to take a long-term view in the development of a borrower's large-scale infrastructure projects.

Effective procurement analysis and planning drives a holistic assessment of costs, benefits and risks on a project. This type of approach can lead to commercial models that involve the contractor assuming higher levels of risk (e.g. where the contractor is responsible for the build, operation and maintenance) and greater incentives to manage risks associated with cost overruns. This also means that the contractor has longer term exposure in the eventual infrastructure and in these models, the contractor is more likely to design and construct with longevity, sustainability and long-term total-cost in mind. All these benefit the Borrower's bottom line.

The use of performance-based specifications that typically define the outcomes or outputs required from QII also act as a strong driver to optimize investment by helping to ensure contractor proposals are focused on delivering the function of the infrastructure at optimum cost, therefor helping to maximize the return on the investment. Equally the consideration of sustainability and whole life costs should help avoid unintended investment consequences, where borrowers are afflicted with additional debt in tackling environmental and social consequences of construction activities such as pollution, waste and carbon emissions.

Private sector investment plays a significant role in major infrastructure projects. Public-Private Partnerships (PPPs) models, such as Build, Operate and Transfer (BTO), leases and concessions, can add value when used appropriately and where an experienced private sector partner (with

strong infrastructure planning and implementation skills) is selected. Analysis of the project, desired outcomes, procurement priorities, risk assessment and allocation, and market conditions inform the selection of the appropriate commercial model.

However, risks associated with PPPs include:

1. the usually higher costs of service to clients and/or beneficiaries due to private operators seeking to maximize profits. This can raise affordability issues, especially in a development context; and
2. underestimating the reach of PPP decision, which can have a higher economic impact than traditional large infrastructure investments.

While PPPs can help reduce debt, care should be exercised to ensure that they are not used to bypass budgetary and fiscal controls by ensuring that all direct liabilities (e.g. shadow tolls) and contingent liabilities (e.g. guarantees) are properly accounted. Long-term definition and assessment of all fiscal commitments generated by PPPs should be clearly address by the regulatory framework. Regulations should also require a thorough appraisal of proposed PPPs to ensure that only quality projects are brought to the market. Additional critical areas include a strong contract management framework, especially important due to the long-term nature of PPPs and likely need to renegotiate some aspects, and clear requirements for ensuring openness and transparency[3].

[3] According to a 2017 benchmarking study by the World Bank (Procuring Infrastructure PPPs), only 23% of 82 economies surveyed publish PPP contracts and very few publish it online.

II. STRATEGIC PROCUREMENT TO DELIVER QII SUCCESS FACTORS

MDBs have flexibility in applying the five success factors to inform their procurement practices in accordance with their individual polices, mandates and resources. The use of a strategic procurement approach provides a framework for this application. This section defines strategic procurement and describes how the application of a strategic procurement leads to the development of fit-for-purpose, proportionate, procurement approach that is tailored to the needs and risks of the individual project.

Definition of strategic procurement

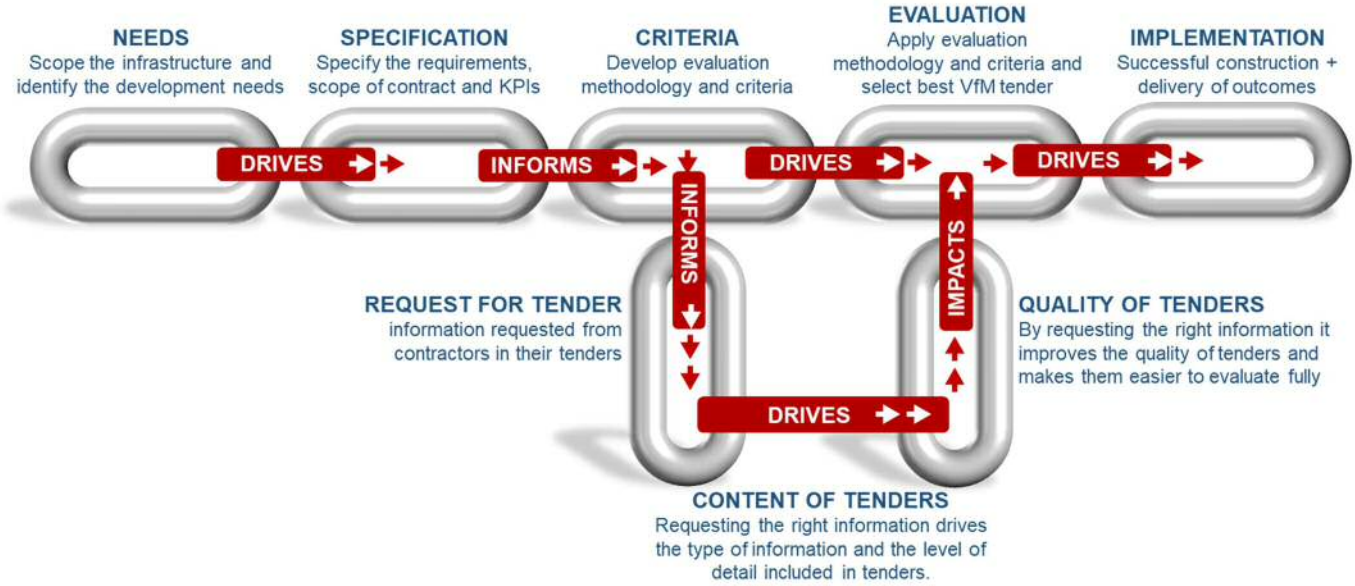
In the context of QII, strategic procurement is the systematic approach to designing, planning, constructing, managing, maintaining, and where appropriate decommissioning, large infrastructure facilities through the application of robust analysis and sound decision making. Strategic procurement is the operating environment that supports the delivery of the QII success factors discussed in this paper. Strategic procurement results in a procurement approach and methodology (including the choice of commercial model) that is proportionate and fit-for-purpose, and individually tailored to the particular circumstances of the project (e.g. scope, size, complexity, value, country environment and Borrower capacity, social and environmental vulnerabilities and other risk factors).

Undertaking strategic procurement starts with information gathering, comprehensive needs identification, and market research and analysis to determine the best procurement approach (i.e. the best combination of procurement processes and methodologies). A review of contract implementation, deliverables and costs should be done upon completion of the contract to help inform the design and implementation of future QII.

Well-designed procurement strategies increase the likelihood of the best contractors submitting quality tenders which, in turn, increases the chance of achieving successful, sustainable outcomes. Procurement strategy ensures that there continues to be a competitive, globalized market that is capable of delivering quality infrastructure projects.

Each stage of the procurement process, when executed well, leads to benefits that impact the next stage in the chain. The quality of analysis and thinking at each stage adds cumulative value, that ultimately impacts the overall success.

Diagram 1. The value chain - drivers that impact successful QII procurement



Engaging the market

Understanding the relevant market is critical to develop an appropriate procurement strategy. Pre-market engagement improves procurement planning of large infrastructures and helps shape the market conditions needed to deliver the best solution. Pre-market engagement allows borrowers to:

1. communicate their needs and requirements to contractors, and to openly and transparently discuss possible solutions to deliver the qualify infrastructure required;
2. improve their understanding of market capacity, capability and trends, including new and emerging technology, and innovative solutions;
3. improve market readiness to tender;
4. motivate the best contractors to tender; and
5. increase trust and credibility with contractors, helping borrowers become customers of choice.

The purpose of pre-market engagement is to inform the specification of requirements, help identify the best procurement approach, and attract the right level and type of contractor participation. It is particularly useful for innovative types of infrastructures where there is no developed market, or when there appears to be limited market interest, especially where there is an incumbent contractor.

In undertaking pre-market engagement, it is essential to ensure probity. Borrowers must avoid being "captured", or locked-in to one solution before going to market. The appointment of an

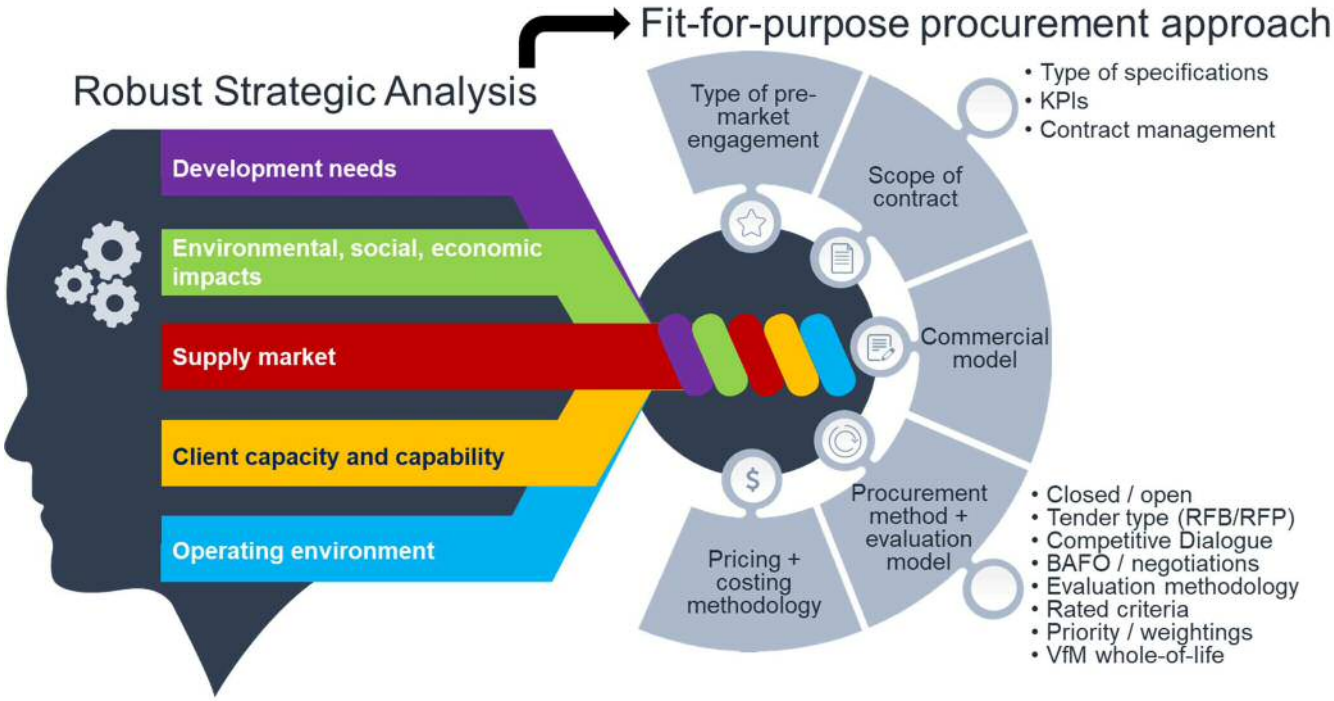
independent probity assurance provider at the outset guards against such risks. Effective pre-market engagement involves:

1. being fair, open and transparent;
2. minuting discussions and meetings, and making these publicly available afterwards;
3. taking appropriate measures to ensure the integrity of the process; and
4. giving equal access to all contractors and ensuring equal treatment (e.g., providing identical information to all interested contractors at the same time.)

In some cases, pre-market engagement may take the form of "reverse marketing". This involves the buyer marketing themselves to potential suppliers, e.g. a borrower encourages potential contractors to enter the market and tender for opportunities that they had not planned to, either because they were not aware of the opportunity, or they did not consider it as attractive. The negative impacts of a poor approach to market include:

1. an infrastructure design based on rigid, conformance-based specifications;
2. an adversarial approach to relationship management, rather than collaborative approach;
3. the unfair allocation of risk to the contractor; and
4. a penalty based-contract, rather than an incentive-based contract.

Diagram 2. QII strategic analysis leading to a fit-for-purpose procurement approach



Incentives

Modern infrastructure procurement practice is to take a collaborative approach that encourages the contractor to innovate, initiate value engineering and consider long-term implications in their work, design, construction and operation. This is best achieved by creating incentives (rather than penalties). Where contractors have long-term exposure in the eventual infrastructure (i.e. is responsible for build, operations and maintenance) they are more likely to design and construct with longevity, usability and long-term total cost in mind.

Used appropriately, incentive-based payment mechanisms drive quality delivery. For example, performance-based contracts incentivize contractors to deliver to the highest standard and improve productivity and efficiency. The can link to incentive mechanisms/payment decisions. Incentives can also be used to encourage innovation.

Working relationships

Developing effective working relationships with the contractor, civil engineer and stakeholders is especially important in large infrastructure projects. Openness and transparency between parties are fundamental. Parties must have a common understanding of the needs, deliverables and outcomes, and agree an evaluation framework that applies reasonable, realistic and measurable performance indicators across a range of factors, including not only the construction schedule and budgeting, but also such additional factors as impacts on local communities and the environment, health and safety measures (including accident prevention), skills transfer and local economic activities.

Collaboration

Depending on the nature of the contract, the Borrower may wish to develop a close partnership or invest less time and resources in managing this relationship. For large QII the borrower normally appoints a contract management team. The relationship between the contract manager/management team and contractor is governed by the applicable contractual arrangements. These normally include a contract management plan, works schedule and operational and communication reporting and protocols.

Across all these relationships the Borrower should develop a systematic approach to streamline information flows, effect good communications and apply robust reporting systems. This involves identifying critical interactions and monitoring the progress of the work. PPP type arrangements normally provide frameworks that enhance collaboration at operational and project overview and governance levels.

Managing delivery

Successful delivery of the borrower's development needs and the project objectives involves a controlled, systematic approach throughout implementation. Poor risk management

preparation can lead to ongoing sub-standard delivery. Actions taken to proactively manage these risks include:

1. Start-up implementation: A contract management team needs to be formed and staffed with sufficient resource and capability relative to the size, scope, value, complexity and importance of the contract. Systems and management methodologies need to be put in place. Staff who will manage the contract need to become familiar with the contract requirements and management plan, methodologies and systems.
2. Control: Performance should be monitored through regular reporting, to ensure that the contract is being delivered as per the requirements and to check that the management control system is efficient and effective. Meetings should be organized in line with contract specifications to prevent avoidable loss, or delay without consuming excessive time. Actions and agreements resulting from meetings should be properly documented. This helps minimize the opportunity for contract variations and budget creep. Anything outside the scope of the contract should not be provided by the contractor without prior costing and agreement.
3. Variations and change requests: It is essential that deviations and modifications are agreed as per the contractual change procedure. They must be properly authorized and recorded. borrowers should have a complaints or disputes procedure in place.
4. Monitoring: Borrower's staff should monitor contractor activity to ensure that all work is carried out in accordance with the specifications and KPIs. This prevents losses to the borrower and subsequent contractor claims.
5. Performance management: KPIs should be recorded in the contract and monitored. The contractor's achievements against KPIs must be based on actual delivery and results. This also helps to ensure that the contractor performs sufficient work to avoid subsequent safety or competence claims, incidents or other inefficiencies. Invoicing and payment should also be adequately verified in accordance with contract terms.
6. Communication: It is critical that internal and external contract information is reported and communicated in a productive, consistent, confidential and timely manner. Reporting problems should be quickly acted on (e.g. timeliness, completeness, correct format, etc.) Good, clear communication is essential to adequate performance control.
7. Contract management meetings: Inefficient and ineffective contract management meetings may frustrate performance control and cause avoidable conflict between the parties and frustrate the overall communication process. A contract management meeting schedule and structure should be in place from the onset.
8. Adaptive management: Adaptive management focuses on learning and adapting, through partnerships between the borrower, the contractor, supervising engineer, affected communities and other stakeholders. It requires a systematic approach for improving resource management by learning together from management outcomes and

agree on sensible trade-offs to meeting emerging issues with respect to time, quality, and cost.

Procurement approaches

Examples of approaches to procuring QII that are used internationally and by some MDBs include:

1. Competitive Dialogue**:** an interactive multistage market approach option that allows for dynamic engagement with short-listed tenderers. Competitive dialogue may be appropriate when the borrower does not want to use conformance specifications, or when there is no solution currently available on the market, or when there are several alternative solutions that could work. It allows the borrower and short-listed tenderers to discuss and further refine the detailed technical, legal and commercial arrangements required to deliver the infrastructure. It may also be appropriate where due to the nature and complexity of the infrastructure, the borrower is not objectively able to define their requirements or adequately specify the legal/financial/contractual arrangements. Competitive Dialogue has been used for PPPs, but its application need not be restricted to this methodology.
2. Best and Final Offer (BAFO): A multi-stage procurement process. After the first stage, which determines which tenders meet the borrower's requirements, the next stage involves providing those tenderers an opportunity to submit their Best and Final Offer. BAFO is appropriate when the procurement process may benefit from tenderers having a final opportunity to improve their offers, including by reducing prices, clarifying or modifying their offers, or providing additional information. It is normally particularly effective when markets are known to be highly competitive and there is strong competitive tension amongst suppliers.
3. Negotiations: When using a RFP approach, negotiations with the preferred proposer on aspects such as: terms and conditions, price, social and environmental aspects and innovation, can optimize the parts of the deal without altering the minimum requirements set out in the procurement documents.

Public-Private Partnerships

In some instances, Public-Private Partnerships (PPPs) may be the appropriate approach to take to deliver QII. This choice will depend on the results of the market analysis, the choice of commercial model and the readiness of the market. Advantages of PPPs may include:

1. better infrastructure solutions than a wholly owned public facility;
2. risks are fully appraised early to determine project feasibility and the selection of the most appropriate commercial model;
3. faster project completion and reduced delays; and

4. where the contractor has long term exposure and risk in the eventual infrastructure (i.e. is responsible for build, operations and maintenance) then they are motivated to design and construct with longevity and long-term total-cost in mind.

Some disadvantages include:

1. possible increased costs to the borrower because of higher financing charges;
2. limiting the competitiveness of the opportunity when seeking a cost-effective partner;
3. costs and benefits to the borrower can be complex to determine, depending on the commercial model (e.g. the assumed risks, the level of competition, the level of complexity and scope of the project); and
4. the construction expertise often lies heavily on the contractor, leaving the borrower at an inherent disadvantage.

While open competition remains the preferred approach and all key procurement principles apply to PPP procurement, processes need to be supported by and tailored to the specific business cases for the investment including:

1. strategic (a clearly identified priority investment);
2. economic (adequately justified on the basis of sound economic analysis as best way to achieve VfM);
3. financial (fiscal sustainability supported by rigorous analysis of project costs and risks including residual fiscal risk);
4. management (adequate institutional capacity to prepare, procurement and manage the project); and
5. commercial (commercial viability likely to attract good quality sponsors and lenders by providing robust, reasonable financial returns).

Unsolicited proposals with solutions offered to potential Borrowers may be considered when they bring new technical and managerial expertise to construction, maintenance and operation of large infrastructure projects. However, this approach presents challenges in striking a balance between benefitting from innovation, and the need for transparency and competition. There is no global unified view on treating unsolicited PPPs, and some countries have established procedures that encourage them, while others do not permit them at all.

Generally, enabling factors include clear consistency with investment priorities, a solid business case (as discussed above) showing good VfM, and desirable innovation which can be scaled up. A clear policy framework handling unsolicited proposals is critical to evaluate them ensuring total transparency, mitigating potential reputational risk, and maintaining overall competitive pressure. Some approaches followed by different jurisdictions to evaluate unsolicited proposals include:

1. Swiss challenge: open process where the proponent can match the winning tender;
2. tender premium: proponent receives a bonus in an open tendering process;
3. developer fee: proponent's development costs are paid by either the Borrower or the winning tenderer;
4. open book: a contract is signed with the proponent, who receives a defined return and must conduct an open tender process to obtain best value; or
5. development manager: proponent develops the project and conducts the tender process – where it cannot tender – and receives a fee from the winning tenderer.