

Industry Agenda

Africa Strategic Infrastructure Initiative

A Principled Approach to Infrastructure Project Preparation Facilities

In collaboration with The Boston Consulting Group

June 2015



Contents

Foreword	4
Foreword: General Electric, Africa	5
Foreword: Development Bank of Southern Africa	6
Executive Summary	7
1. The Project-Preparation Challenge	9
2. Principles of Success for Infrastructure Project Preparation Facilities	10
2.1 Clear Objectives and a Focused Strategy	11
2.2 Self-Sustainable Financing Model	13
2.3 Excellence in Portfolio Management	16
2.4 Cost-Efficient and Value-Adding Advisory Services	19
2.5 Stringent Governance and Accountability	21
3. Design Considerations for Infrastructure Project Preparation Facilities	23
3.1 Strategic and Operational Aspects	23
3.2 Financial Aspects	25
4. Conclusion	27
Appendix	28
Contributors	28
Endnotes	31
Bibliography	32

List of Figures

Figure 1: Principles-of-Success Framework for IPPFs

Figure 2: Illustration of Typical Business Models with Various Recovery Types, and the Related Incentives

Figure 3: The Project-Preparation Cascade

Figure 4: Strategic and Operational Design Options for an IPPF

Figure 5: Summary of Potential IPPF Funding Sources, Roles and Benefits (Non-Exhaustive)

Figure 6: Potential High-Level IPPF Financial Structure

List of Abbreviations

A50	Africa50 Project Finance	PIDG	Private Infrastructure Development Group
A50PD	Africa50 Project Development	PPP	Public-Private Partnership
ADB	Asian Development Bank	PSP	Development Programme of the AEP of BNDES
AEP	Project Development Division of BNDES	PV	Project Vehicle
AfDB	African Development Bank	SADC	Southern African Development Community
Africa50	Africa50 Platform of the African Development Bank	EPC	Engineering, Procurement and Construction
AP3F	Asia Pacific Project Preparation Facility	GDP	Gross Domestic Product
ASII	African Strategic Infrastructure Initiative	ICA	Infrastructure Consortium for Africa
AUC	African Union Commission	IDB	Inter-American Development Bank
BNDES	Brazilian Development Bank	IDFC	Indian Infrastructure Development Financing Company
Col	Conflict of Interest	IFI	International Financial Institution
DBSA	Development Bank of Southern Africa	IISS	International Infrastructure Support System
EBP	Project Structuring Company of the AEP of BNDES	IPPF	Infrastructure Project Preparation Facility
EPC	Engineering, Procurement and Construction	LDC	Least Developed Country
GDP	Gross Domestic Product	MDB	Multilateral Development Bank
ICA	Infrastructure Consortium for Africa	NEPAD	New Partnership for Africa's Development
IDB	Inter-American Development Bank	OPPP	Office of Public–Private Partnership of the Asian Development Bank
IDFC	Indian Infrastructure Development Financing Company	PAP	PIDA Priority Action Plan
IFI	International Financial Institution	PE	Private Equity
IISS	International Infrastructure Support System	PIDA	Programme for Infrastructure Development in Africa
IPPF	Infrastructure Project Preparation Facility	PIDG	Private Infrastructure Development Group
LDC	Least Developed Country	PPP	Public-Private Partnership
MDB	Multilateral Development Bank	PSP	Development Programme of the AEP of BNDES
NEPAD	New Partnership for Africa's Development	PV	Project Vehicle
OPPP	Office of Public–Private Partnership of the Asian Development Bank	SADC	Southern African Development Community
PAP	PIDA Priority Action Plan		
PE	Private Equity		
PIDA	Programme for Infrastructure Development in Africa		

Foreword

Infrastructure development is widely recognized as a critical enabler of economic activity within and across national borders. Well-planned and structured infrastructure projects are a prerequisite for regional integration. But preparing infrastructure programmes to attract private investment can be a complex and demanding challenge, especially in the African context.

This challenge is particularly acute in Africa due principally to a shortage of appropriate capabilities and capacities. While there is abundant private-sector interest in financing bankable projects – over \$60 trillion globally from institutional investors – the available preparation resources are insufficient to advance projects to a bankable stage; hence the pipeline of well-prepared projects is scarce, limiting investment opportunities. Responding to this paradox requires the private sector to take a role in the early stages of project preparation. Doing this effectively and efficiently, using a principled approach, will contribute to unleashing trillions for necessary infrastructure projects.

We are pleased to introduce this third report as an outcome of the World Economic Forum Business Working Group on Infrastructure in Africa, a project under the Global Strategic Infrastructure Initiative. The Africa Strategic Infrastructure Initiative was launched in 2012 in collaboration with the African Development Bank, NEPAD Agency and the African Union, and has been supported for three consecutive years by The Boston Consulting Group as project adviser.

Project Preparation Facilities: A New Principled Approach outlines a new model of a sustainable Infrastructure Project Preparation Facility (model IPPF). It may serve as a reference guide, as it also provides a wealth of considerations for the design of an IPPF and a series of best practices to introduce new models of partnerships during project preparation. Each IPPF is designed according to distinctive circumstances, implementation constraints and specific strategic and operational aspects. Once these are tackled, three financial aspects should be addressed: 1) sustainable sources of funds, 2) attracting investors and setting appropriate expectations, 3) providing exit options for investors. The report illustrates the different principles and design options through a series of case studies from Infracore Africa, TIMU Energy Holdings, Africa50 Project Development, and the Brazilian Development Bank (BNDES). The key success factors of the IPPF can be applied to Africa and beyond, albeit with some adaptation.

We would like to thank the many World Economic Forum partner companies that have generously contributed their expertise and perspectives, in particular the members of the Business Working Group with Co-Chairs Patrick Dlamini, Chief Executive Officer, Development Bank of South Africa, and Jay Ireland, Chief Executive Officer, General Electric Africa: ABB, Absa Capital, Acciona, A.P. Møller-Maersk AS, Agility, ArcelorMittal, Arup, BT, Construction Product Company, Diageo Plc, Eskom, Etisalat Group, First Bank Nigeria, Flour Mills of Nigeria, HSBC, IDC of S. Africa, International Container Terminal Services Inc., Investec Asset Management, Oando Plc, Old Mutual, Orrick, Phillips, Prudential Plc, Sasol Limited, SNC-Lavalin, Standard Bank, Standard Chartered, Telkom SA, Transnet, UBS, United Phosphorus Ltd, World Bank, Yara. We would further like to thank the many organizations which have served as experts in the Business Working Group: Africa Capacity Building Foundation, Harith Partners, Mo Ibrahim Foundation, the International Finance Corporation, the NEPAD Business Foundation, The Office of Gordon & Sarah Brown.

Our special thanks go to the Chair and Co-Chairs of the Global Strategic Infrastructure Initiative of the World Economic Forum: Gordon Brown, Chair of the Global Strategic Infrastructure Initiative and Prime Minister of the United Kingdom (2007-2010); Uwe Krüger, Chief Executive, WS Atkins plc; Michel M. Liès, Group Chief Executive Officer, Swiss Re; Arif M. Naqvi, Founder and Group Chief Executive, The Abraaj Group; Doug Peterson, President and Chief Executive Officer, McGraw Hill Financial; Danny Truell, Chief Investment Officer, Wellcome Trust; Kim Fejfer, Chief Executive Officer, A.P. Møller-Maersk Group; John Beck, Executive Chairman, Aecon Group.

Richard Samans

Member of the Managing Board

Pedro Rodrigues de Almeida

Head, Basic and Infrastructure Industries

Alex Wong

Head, Global Strategic Infrastructure Initiative

Elsie Kanza

Head of Africa

Foreword: General Electric, Africa

The General Electric Company (GE) has been privileged to be part of the African Strategic Infrastructure Initiative (ASII) and the Business Working Group. The ASII provides a framework for business-driven initiatives to accelerate investment in infrastructure – essential for the region to continue its rapid growth and to take advantage of the strong global financial and investment interest in developing opportunities in Africa.

GE is investing in Africa and is excited about Africa's future. We are undertaking major investments in the development of manufacturing and assembly facilities related to power, oil and gas, and transportation. We are supporting supplier development programmes so that small and medium-sized enterprises can grow and become multipliers for jobs and opportunity in the region.

We believe that the World Economic Forum's focus on a practical approach to accelerating infrastructure for regional integration has been very constructive. At the World Economic Forum Annual Meeting 2012, leaders agreed that it was time to push forward with regional infrastructure programmes and endorsed the development of proposals for the management of transnational infrastructure programmes. GE was privileged to lead the preparation of the *African Strategic Infrastructure Initiative: Managing Transnational Infrastructure Programmes in Africa* report (published in May, 2014). The current report, *A Principled Approach to Infrastructure Project Preparation Facilities*, integrates early-stage project-development financing into the toolkit.

Existing facilities for early-stage project development are not sufficient in quantity, and do not enable full participation of private-sector financing to meet the needs for the range of infrastructure projects that are in view – such as for the PIDA PAP portfolio. Our own experience in early-stage project development convinces us that if properly structured, IPPFs could in fact grow significantly and help accelerate the development of bankable projects. This report develops a set of proposals for structuring IPPFs, and we believe they should be explored further.

As Co-Chair on the ASII with Development Bank of Southern Africa Chief Executive Officer Patrick Dlamini, we would like to thank all of the partners that have driven this forward, such as the World Economic Forum, AUC, AfDB and NEPAD Agency. All of the members of the Business Working Group have provided strong and continued support for this programme. We also owe special thanks to the Boston Consulting Group team for providing ongoing project management support for this programme. The ASII and Business Working Group forum have engendered a dialogue between the private and public sectors that has helped focus on critical bottlenecks to investment in regional programmes and set out a path forward to convert intentions to opportunity. We look forward to continued progress on this initiative and are pleased to be a part of it.

Jay Ireland

Chief Executive Officer, GE Africa



Foreword: Development Bank of Southern Africa

The African Strategic Infrastructure Initiative (ASII) originated in 2012 with the vision to provide a business-driven initiative to accelerate the implementation of the Priority Action Plan (PAP) of the Programme for Infrastructure Development in Africa (PIDA). A joint-initiative of the World Economic Forum with the African Development Bank (AfDB), the African Union Commission (AUC) and the New Partnership for Africa's Development (NEPAD) Planning and Coordinating Agency as the overall coordinating agencies of PIDA, ASII had three clear objectives, as agreed at the World Economic Forum Annual Meeting 2013 in Davos-Klosters:

- Establish a best practice framework for improved infrastructure delivery in Africa
- Enable the public sector to benefit from objective, transparent and informed inputs from the private sector, as well as help inform and shape policies
- Provide a model that can be replicated across Africa and other continents, to create an enabling environment for private-sector involvement in the development of infrastructure on the continent

The progress ASII has made since 2012 is simply remarkable. This initiative has made a significant contribution to the understanding of the infrastructure investment environment in Africa. Some successful outcomes include the publication of the report entitled *African Strategic Infrastructure Initiative: Managing Transnational Infrastructure Programmes in Africa – Challenges and Best Practices* in May 2014 and, recently, the successful Central Corridor Presidential Round Table Investor Forum held in Dar es Salaam, Tanzania in March 2015. Both these outcomes inform investors about the challenges and opportunities available to them, and provide a replicable model that could be adapted to different contexts when selecting priority projects for Africa. In short, it facilitates a collaborative process between governments, private sectors and development finance institutions.

We know that in Africa the challenges to prepare and originate projects are many and require significant investment at the early project stage, when private investors have not come on board yet. Traditionally, project preparation falls under the ambit of international finance institutions and governments. As risk is high at this stage of the project, it is difficult to ensure early private-sector involvement, especially for transnational and regional projects. However, our need for early-stage project financing is enormous with the PIDA PAP portfolio, whose implementation is estimated at \$75 billion, while preparation costs alone are estimated to be around 1-4% of total project costs in developed infrastructure markets (World Economic Forum, 2013b).

This publication on Infrastructure Project Preparation Facilities (IPPFs) is one that will definitely create more debate – and, hopefully, will ensure the origination of an effective model for early-stage project financing.

As Co-Chair on the ASII with General Electric Chief Executive Officer for Africa Jay Ireland, we need to acknowledge the different partners, such as the World Economic Forum, AUC, AfDB and NEPAD Agency, for this great initiative. In addition, we are grateful for the valuable input from our fellow Business Working Group members in their unflinching support for this programme. A special thanks to the Boston Consulting Group team for providing ongoing project management support for this programme.

I encourage us to review, debate and reach consensus on an action plan for the successful implementation of IPPFs in Africa.

Patrick Dlamini

*Chief Executive Officer and Managing Director,
Development Bank of Southern Africa*

Executive Summary

Much-needed infrastructure projects often struggle to progress beyond the concept stage. The reasons for the continued struggle are multidimensional, as project preparation is a costly, lengthy, complex and risky undertaking. In Africa, preparing bankable projects is particularly challenging, largely owing to a shortage of appropriate capabilities and capacities, insufficiently enabling regulatory environments, inadequate project governance and limited financial resources. Without sufficient funds to pay for high-quality project preparation, projects rarely get off the ground enough to reach tender, let alone implementation.

Since governments suffer from constrained public budgets, multilateral institutions and donors have acted as a major source of preparation funding for infrastructure projects. However, these traditional sources cannot fully meet the high financial requirements by themselves, as recently acknowledged in a report by the World Bank (2013). Until now, the private sector has understandably been cautious about getting involved during these critical early stages of a project. This hesitancy highlights a paradox within infrastructure financing: while there is plenty of private-sector interest in financing bankable projects, the available project-preparation resources are insufficient to advance the projects to a bankable state; thus the pipeline of well-prepared projects is meagre, and investment opportunities are limited.

Attempts to address the early-stage financing gap include the efforts by development banks and donors to create Infrastructure Project Preparation Facilities (IPPFs), which provide funds for project preparation and development. While these initiatives have made progress possible, some of them have not survived or have proved inefficient, and very few have achieved the scale to make the necessary impact.

Hence the need for a new approach to IPPFs. Such an approach is one that aligns and optimizes the objectives, strategy and portfolio management of an IPPF, and enables it to operate effectively, efficiently and sustainably. The

approach should also extend the sources and types of financing available during the early stages – beyond the usual public sources – to include private and impact investors. Furthermore, to ease the bottlenecks during project preparation, the approach should not only leverage the private sector's financial resources but also tap into its expertise through closer public-private collaboration.

In response to these issues, in partnership with industry experts, the World Economic Forum identified five key principles of success for IPPFs, based on best practices observed globally. The principles are:

- Clear objectives and a focused strategy
- A self-sustainable financing model
- Excellence in portfolio management
- Cost-efficient and value-adding advisory services
- Stringent governance and accountability

Incorporating these five principles into the IPPF design should produce very positive results, including a higher project success rate, the greater efficiency and sustainability of IPPFs and, ideally, greater scale. However, the design of any IPPF would be heavily dependent on the underlying circumstances and strategic objectives. With certain instruments and structuring aspects, such as tiered participation rights and the earmarking of funds, an IPPF's design could also facilitate the participation of a variety of investors.

While project-preparation financing does tend to pose a serious challenge, there are also other issues that governments should continue to engage and remedy – issues such as institutional coordination and agencies' capacity, which must be enhanced if the project pipelines are to flow more smoothly. A better-prepared pipeline of projects should produce benefits for many stakeholders: better value for users, reduced project risks for investors, and increased opportunities for private-sector businesses via contracts for constructing and/or operating the new assets. In sum, the upshot would be better planned and new infrastructure assets, with abundant positive implications.





1. The Project-Preparation Challenge

Governments have widely recognized the importance of infrastructure as an enabler for economic development and social progress. Several studies have shown that an increase in infrastructure assets will boost gross domestic product (GDP).¹ Simulations suggest that if all African countries were to catch up with Mauritius in infrastructure, per capita economic growth in the region could increase by 2.2 percentage points.² Inspired by this positive correlation between infrastructure investment and economic performance, many governments have articulated and developed clear infrastructure visions and long-term plans. Witness, for example, the ambitious programme of the African Union Commission (AUC) – the Programme for Infrastructure Development in Africa (PIDA). It consists in a pipeline of 51 mega-programmes within the water, energy, information and communications technology, and transport sectors, with an estimated investment value of \$75 billion up to 2040. It aims to enhance regional economic integration across the continent.

Unfortunately, vision and planning are not sufficient, and many of the programmes envisioned by governments are not moving ahead. Among the many reasons for this failure – weak regulatory frameworks, uncondusive institutional environments, limited local capacity, and so on – one of the most prominent, and potentially quickest to resolve, is the inadequate preparation of projects towards bankability and tender, i.e. the failure to package and structure projects for financial, technical, legal and environmental feasibility.

Governments and development banks do attempt to solve the many complexities of project preparation and thereby to enhance the pipeline of bankable projects. In particular, they have made additional money available to pay for the complex and lengthy project-preparation process and consequently have supported and created many IPPFs.³ Unfortunately, many of these IPPFs have suffered from various limitations, and have made only a modest impact on the vast challenges. For example, a study conducted by the Infrastructure Consortium for Africa (2012), with an initial analysis of 67 facilities, identified 17 core facilities that could be classified as IPPFs, of which only 12 were operational at the time.⁴ These existing African IPPFs have an early-stage financing capacity of barely \$0.2 billion, while the PIDA portfolio faces early-stage costs of \$3.1 billion⁵ – implying a preparation-financing gap of about \$2.9 billion.⁶

In addition, some of the existing IPPFs have no clear strategy or long-term planning: they often simply distribute funds without setting objectives appropriately, and rarely add value in the form of providing additional advice or developing extra capacity within public agencies. In

addition, IPPFs rarely leverage private-sector expertise – expertise that could significantly improve the design of projects or help in stress-testing assumptions during project development.

Most IPPFs do not recover preparation expenses and therefore face the risk of discontinuing operations when their initial funding is depleted; so there is little opportunity for internalizing long-term experience gained or scalability. In addition, they are typically dependent on donor funding or public funds (often one-off contributions), and the governments, donors and development bank funds involved are all subject to budget constraints that – according to a recent report by the World Bank – represent a serious obstacle to the implementation of PIDA.⁷ Finally, as IPPFs are often public-dominated, they are subject to bureaucratic and lengthy processes, which further inhibit a project's development.

Given the risks and uncertainties of project preparation, the private sector has understandably been hesitant to get involved during the early stages of a project. Hence the paradox within infrastructure financing: while there is plenty of private-sector interest in financing bankable projects, the available project-preparation resources are insufficient to advance the projects to a bankable state; thus the pipeline of well-prepared projects is meagre, and investment opportunities are limited.

This report, mindful of the complexity and limitations of project preparation and existing IPPFs, proposes a new-principled approach to the challenges of financing the preparation of infrastructure projects. It also provides a wealth of considerations for the design of an IPPF. It should serve as a reference guide, to introduce and enable new models and partnerships during project preparation. The target audience of the report includes both private- and public-sector decision-makers involved in the development and financing of infrastructure projects.

The remainder of the report is structured in two main parts. The first section (chapter 2) introduces and discusses the principles of success for an IPPF. The second section (chapter 3) raises various strategic, operational and financial-design considerations that could enhance private-sector participation during project preparation. Throughout, the report presents case studies of IPPFs that have informed and guided the recommendations.

2. Principles of Success for Infrastructure Project Preparation Facilities

This section describes in detail the five key principles for improving IPPFs, as developed in multistakeholder consultation by the World Economic Forum and its partners from governments, development banks, infrastructure industries and the financial services industry. The five principles, when incorporated into the design and operations of an IPPF, improve utilization of the limited resources available for project preparation, help to tap into additional sources of funding, and help to make the preparation more efficient and sustainable.⁸ The principles of success for IPPFs (illustrated in Figure 1) are as follows:

- Clear objectives and a focused strategy (chapter 2.1)
- A self-sustainable financing model (chapter 2.2)
- Excellence in portfolio management (chapter 2.3)
- Cost-efficient and value-adding advisory services (chapter 2.4)
- Stringent governance and accountability (chapter 2.5)

Figure 1: Principles-of-Success Framework for IPPFs



2.1 Clear Objectives and a Focused Strategy

The strategic objectives of an IPPF are often not clearly defined, or are misaligned with those of various stakeholders. This lack of focus causes a suboptimal allocation of preparation resources and inhibits certain funders from contributing across projects, sectors and countries. An ideal IPPF would allow no space for ambiguity, and would have clearly defined strategic objectives – for example, a broad objective to develop the renewable-energy sector, or a specific objective to create a transport corridor that would strengthen regional integration.

Such clear strategic objectives would be reflected within the IPPF's strategy. The strategy would differentiate the IPPF, and would define the resource allocation accordingly (i.e. to the specific sector, project type, project size and geography) in order to ensure that proficiencies are created and embedded. For example, the strategy might leverage privileged relationships and exceptional transport-sector expertise to become “the project-preparation facility of choice” for transport projects in a region. In that way, it could achieve scale synergies and embed experience for the long term.

In defining a strategy, the IPPF also needs to decide whether to target financially attractive project developments, or rather those that are economically important but

financially unviable. IPPFs that are sponsored publicly and/or by development banks should concentrate on the latter type, or on those that are only marginally feasible financially, in order to avoid crowding out the private sector. Furthermore, the IPPF strategy would need to define whether to focus on solicited and/or unsolicited project-development processes. For solicited project development, the IPPF's focus would typically be on the public sector whenever it seeks access to expert skills and funds for planning, pre-feasibility studies and transaction advisory. In case of unsolicited project development, the IPPF would lead a private-sector development effort in cooperation with government where required.

Another important consideration is the IPPF's stance on recovery, i.e. the business model and type of payback envisioned – for example, whether to operate not-for-profit with an “Aid Organization model” and no-cost recovery, or perhaps to opt for a “Venture Capital model”, owning an underlying equity stake in the project and expecting preparation-cost recovery with variable margins (see further details in chapter 2.2).

For a good example of an IPPF with a clearly defined vision and strategy, and aligned success criteria and business model, consider the case of InfraCo Africa, as detailed in the box below.



Case Study: InfraCo Africa



InfraCo Africa was established in 2004, as a privately managed company, by the Private Infrastructure Development Group (PIDG).⁹ It develops infrastructure projects in Africa that balance the interests of host governments with those of private investors and lenders.¹⁰ So far, InfraCo Africa has completed eight projects, mobilizing \$2 billion of investment and providing infrastructure services to 13 million people. It has a further 16 projects under development.

The strategic objective of InfraCo Africa is to improve the lives of the poorest people by catalysing economic development in Africa. It uses donor capital to address market failures relating to private-sector infrastructure development, and mobilizes investment by demonstrating that commercially viable deals are possible. InfraCo Africa does this in three ways:

1. By financing teams of project developers and by providing on-the-ground experienced support
2. By investing directly in a project where a local developer requires additional early-stage financing and would benefit from the experience and financial leverage that InfraCo Africa can bring
3. By investing in projects at financial close to demonstrate commitment and build the confidence of other investors and lenders

InfraCo Africa operates according to a clearly defined strategy that explains its scope and activities and ensures appropriate focus:

- Geographic scope: InfraCo Africa prioritizes projects within least developed countries (LDCs), other low-income countries and fragile countries in Sub-Saharan Africa. Recent investments have been made in Cape Verde, Ghana, Kenya, Nigeria, Senegal, South Sudan, Uganda and Zambia.
- Sector scope: InfraCo Africa deals mostly with energy and power projects (about 60%), transport (about 25%), and water and other projects (about 15%).

“Success” for InfraCo Africa and its funders means not simply achieving financial returns but also having a sustainable development impact. Success is measured against a framework of criteria agreed with PIDG and InfraCo Africa’s donors to ensure sustainable impact. Examples include:

- Mobilization of finance: InfraCo Africa aims to mobilize \$15 of investment for every \$1 spent on project preparation and development.
- “Additionality”: InfraCo Africa’s involvement in a project

should bring something extra, whether in relation to financing, design innovation, or host-government capacity and policy.

InfraCo Africa receives financing from the Governments of the Netherlands, Switzerland and the United Kingdom through PIDG. Over the medium term, InfraCo Africa aims to be financially sustainable: it recovers development expenses from the private sector at the point that private investment is mobilized, so that funds can be reinvested into new development projects. To develop projects successfully, InfraCo Africa leverages its in-house teams and makes strategic use of external advisers for technical, legal, financial and environmental capacity when required.

One exemplary project from InfraCo Africa is the Kalangala Infrastructure Services Project on Bugala Island in Uganda – an isolated, poor rural community highly reliant on fishing and agriculture. The project included the development, construction and maintenance of two roll-on-roll-off ferries for passengers and vehicles, an upgrade of the island’s 66-kilometre (41-mile) main road, improved solar-powered water-supply systems, and a hybrid solar-diesel energy system. The scale and complexity of the proposed programme required a blend of skilled project structuring and innovative private financing. It was only through the involvement of InfraCo Africa and eleQtra (its principal developer) that the requisite financing of \$44.5 million could be raised. As a result, the project has had a great positive impact on the island’s community. The improvement to dilapidated infrastructure has given the islanders easier access to the mainland, thereby enhancing their ability to sell fish and crops, import building materials, access health services and develop as a tourist destination. It also demonstrates how InfraCo Africa actively assists governments to expand their repertoire of skills through empowerment and enablement. In the innovative Kalangala example, InfraCo Africa became the first private-sector water supplier in Uganda, and the first private company to be granted a licence to “own and operate” ferry services and a shadow road-toll payment structure.

Whatever the IPPF’s objectives and strategy, they should be reflected within its financial model (chapter 2.2), and its approach to portfolio management (chapter 2.3). Given how important it is to optimize project-preparation funds, the IPPF will also need to ensure that it has the correct skills for cost-efficient and value-adding advisory services (see chapter 2.4), and that it has the appropriate structure and governance in place (chapter 2.5).

2.2 Self-Sustainable Financing Model

One of the main criticisms of existing IPPFs is their lack of financial sustainability – a shortcoming attributable to two factors: heavy reliance on grants and public funds, and inadequate recovery mechanisms for project-preparation expenses. Accordingly, an IPPF should endeavour to recover project-preparation costs from the project owner or incoming concessionaires, ideally with a reasonable margin to offset losses from unsuccessful projects. (An alternative to preparation-expense recovery is the institutionalization of regular “top up” funds for the IPPF by donors and government.)¹¹

As mentioned in chapter 2.1, serious consideration should be given to the IPPF’s model and recovery type; i.e. the business model and the type of payback envisioned. The three main options are: (1) to operate not-for-profit with an “Aid Organization model” and no-cost recovery; (2) with a “Social Business model” and simple at-cost recovery for preparation expenses only; (3) with a “Venture Capital model” that requires recovery-plus-return (a margin), or involving an underlying equity stake in the project and expecting preparation-cost recovery with variable margins. The various expense-recovery types influence incentives differently, in terms of optimizing preparation costs, refining the quality of the project preparation and serving the public interest. Figure 2 illustrates three typical models, with five recovery types and a relative assessment of incentives.

Figure 2: Illustration of Typical Business Models with Corresponding Recovery Types, and the Related Incentives
For the “no-recovery” type (where no expenses are recovered), the “at-cost” type (where the project expenses are simply

Model	Recovery Type	Recovery Amount	Indicative Relative Assessment	
			Preparation Cost & Quality Optimization Incentive	Public Interest Incentive
Aid	No recovery	- None		
Social Business	At cost	\$ Preparation cost		
	Cost plus	\$ + k% Prep. cost + fixed margin		
Venture Capital	Variable performance	\$ + p*k% Prep. cost + variable margin		
	Equity plus	\$ + I + R Prep. cost + initial investment + return		

Legend: Relatively lowest Relatively lower Moderate Relatively higher Relatively highest

Note: \$ = Preparation cost k = constant p = performance metric I = Initial investment R = Return

Source: World Economic Forum

recovered as incurred), and the “cost-plus” type (where a fixed margin is paid on top of preparation expenses), the IPPF has a limited incentive to optimize preparation costs and quality, but would have higher public interest incentives.

In the “variable-performance” type (where recovery includes preparation costs and a variable margin), the margin could depend on predetermined performance indicators for project-quality design – indicators such as high consumer benefits and/or high internal rates of return, for example. One of the risks here is that the IPPF may manipulate the business-case or model assumptions, especially when the underlying project-performance metrics (p) are defined too narrowly, which lowers the incentive of public interest.

Finally, in the “equity-plus” recovery type, the preparation costs could be converted into equity.¹² The IPPF would either retain an equity stake or sell off some (or all) of the equity to a sponsor upon financial close. With such an equity stake, the IPPF would invest preparation costs in the hope of developing the project to a viable tender, so the IPPF would have strong incentives to optimize preparation costs and quality as well as to increase investors’ appetite for the project. The risk here is that public welfare may suffer: to increase the equity value and private-sector interest, the IPPF would be tempted to design the project and the related concession to be as lucrative as possible, which could involve, for example, unreasonably high user-charges, to the detriment of the public. That said, this potential conflict can be mitigated in many ways, including formal public scrutiny.

In all the recovery types mentioned, an IPPF has an incentive to shorten the period of preparation, in order to convert effort into benefit as soon as possible. Note, however, that the form of repayment – cash vs equity – could also make a difference on incentives. With equity, the IPPF’s interests are typically aligned with those of the incoming investors, as the IPPF continues to have “skin in the game”. The IPPF would participate in the asset’s upside potential (and its downside risk), and if it held equity for an extended period, it would earn a steady income during the asset’s operation phase. Moreover, the IPPF might find it easy to sell, at a later date, the equity stake of an already operational asset. One drawback to the equity-based recovery model is its negative effect on the IPPF’s cash flow; funds would be locked in for an extended period. Cash recovery, in contrast, allows the IPPF an immediate preparation-expense recovery, though it reduces the long-term alignment of incentives with incoming investors.

To address the diverging incentives on the one hand and, on the other, to balance the form of recovery with the IPPF’s specific cash-flow and return requirements, the best solution in some cases might be a hybrid recovery solution for the IPPF.

For an example of an IPPF that aims to recover preparation expenses with yield for its investors, while taking an equity stake (the “Venture Capital model” and “variable-performance” recovery type), consider the case of TIMU Energy Holdings. This commercially-oriented IPPF is profiled in the box below.



Case Study: TIMU Energy Holdings



TIMU Energy Holdings, a platform with multi-investor support, mobilizes private-sector investment into renewable-energy infrastructure projects in Africa.¹³ TIMU has a clear positioning as a commercial vehicle for project development, with “variable-performance” and/or “equity-plus” recovery types in relation to a “Venture Capital model”.

TIMU provides equity investment during project development, and thus funds the development of projects from the feasibility stage onwards, and recovers preparation costs plus a margin upon financial close. The margin is levied on the preparation expenses, and depends on project characteristics and negotiated agreements. (Typically, it amounts to three times the preparation expenses.) TIMU retains equity only on a discretionary per-project basis. It has the option of selling its interest as required, in order to maintain a balanced and favourable cash-flow position. If it retains equity ownership, it earns additional returns from operations over an asset’s economic lifetime. TIMU reinvests a discretionary portion of these returns “evergreen” into new projects in order to maintain an appropriate scale of operations, continue to build expertise and ensure its own financial sustainability.¹⁴ TIMU offers investors venture-capital-like appreciation in order to attract private-sector investors into its fund. (TIMU

receives no capital contributions from governments.)¹⁵ All shareholders hold the same types of shares, have the same source of income and value creation, and are therefore exposed to the same risks. Via its portfolio of energy projects, TIMU offers risk diversification for early-stage development costs, and thereby reduces exposure to unsuccessful projects. Excluding the potential benefit of redeploying capital, it is assumed that every \$1 of project-development financing invested by TIMU will be able to mobilize approximately \$33 of investment into the project being developed.¹⁶

TIMU realizes efficiencies and achieves high-quality project preparation, structuring and financial engineering. It does so by retaining deep sector expertise and by cultivating privileged relationships with governments, developers, development-finance institutions and lenders that specialize in renewable energy. The operating model aims to reduce rework and wastage, and to shorten the time required for preparation.¹⁷ For the preparation of bankable business cases, TIMU readily supplements its internal experts with specialized technical consultants as appropriate.



One good method for an IPPF to recover preparation expenses is to “lend” convertible preparation debt to the project vehicles, and then be repaid after successful preparation and financial close.¹⁸ If the preparation costs (debt) cannot be repaid immediately, the costs can be converted into equity; in other words, investors or the IPPF will enjoy the potential upside of conversion into equity, while protecting themselves against the downside by means of cash flow from the recovery of preparation costs at financial closure. This equity position could potentially be sold to another developer or held for the long term (i.e. it acts as collateral for preparation-cost recovery).

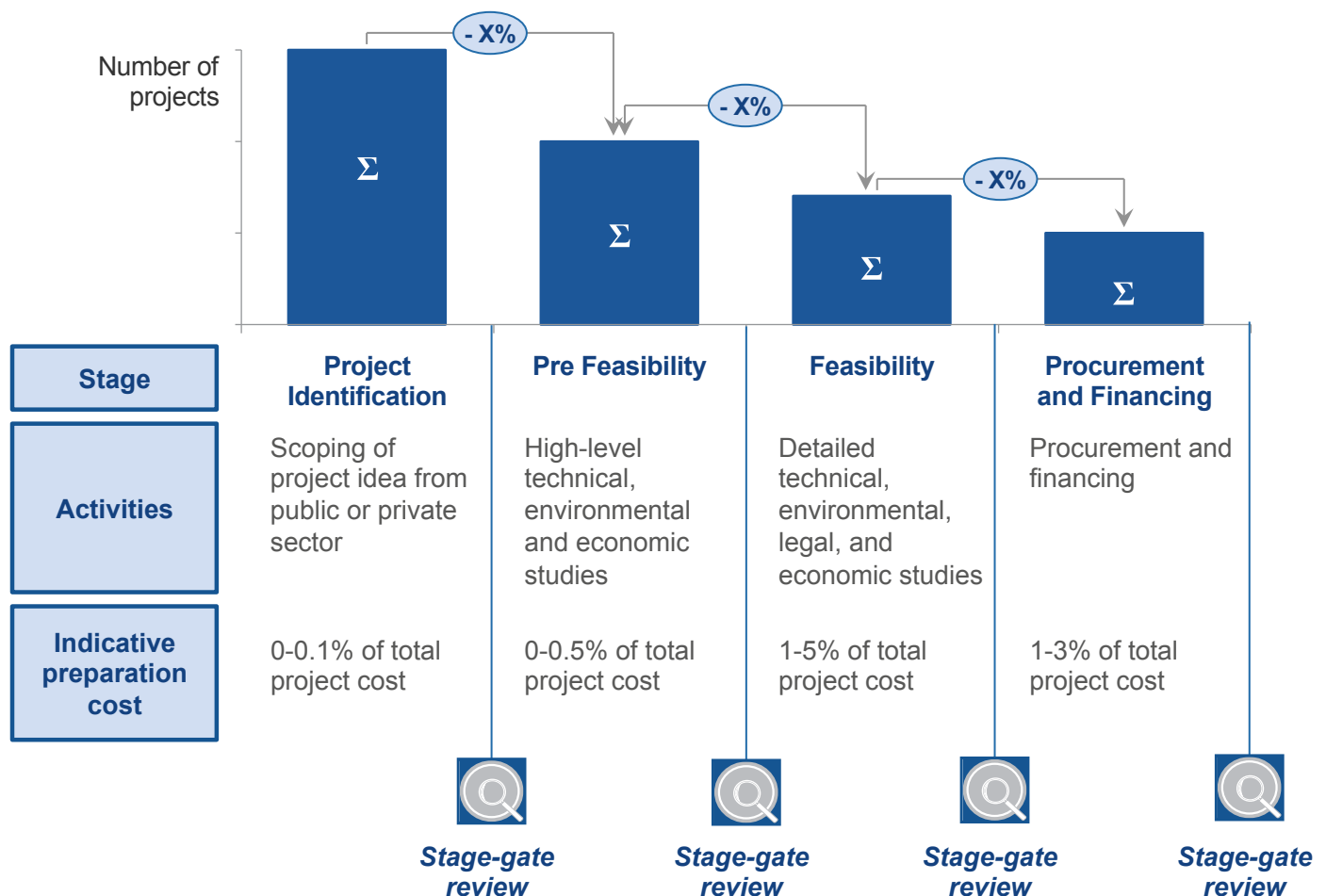
2.3 Excellence in Portfolio Management

Given the high-risk nature of project preparation, some projects in the portfolio will probably fail to reach tender and/or financial close. So an IPPF requires a strategy to minimize such failures, as well as a portfolio of projects that can absorb and offset losses by securing adequate returns from successful projects (particularly those based

on the “Social Business” and “Venture Capital” models). The portfolio needs to be optimized, and the main instruments for that purpose are strategic asset allocation, smart project selection and active portfolio management. Accordingly, an IPPF needs exceptional expertise in portfolio planning and capital allocation, and in project due diligence, as well as in performance measurement and project monitoring.

The challenge is to allocate funds optimally and apply a complete-portfolio approach to project-preparation investing. In that context, every potential investment would be evaluated in terms of its contribution to the total portfolio and its likelihood of proceeding to tender. The evaluation must be in line with the IPPF’s specified objectives and strategy, and must mitigate risks as far as possible. The variables to be considered include (but are not limited to) time to delivery, required development investment, the cash-flow profile, estimated success rates, the project risk factors and the IPPF’s operating costs.

Figure 3: The Project-Preparation Cascade



Source: World Economic Forum

To optimize a project's preparation and avoid wasting project-preparation resources, an IPPF should adopt a "cascade approach". Full project preparation involves many aspects – detailed technical design, analyses of environmental and social impact, and economic studies – so the preparation process should be split into a number of stages (see Figure 3.) At each stage, the studies should become more detailed – and thus more expensive. To minimize rework and wastage, a project idea should pass a stage-gate review only if it meets predefined criteria (aligned to standardized sector-specific requirements). Some project ideas will fail the stage-gate reviews, so the overall number of candidate projects in the portfolio will decrease at each preparation stage.¹⁹ The main benefit of such a cascaded approach is that unfeasible projects are identified early in the process, which avoids wasting project-preparation resources. Stage-gate reviews also ensure that stakeholders, including local agencies, understand what a project requires to be viable and to progress.

An essential part of portfolio management is the close monitoring of each project in the IPPF's portfolio. That requires a continuous loop of communication and flow of information, and is formalized in regular project-status reviews and reports. The monitoring reveals any deviations from budgetary or scheduling norms, and allows rapid corrective action to be taken. It also provides frequent updates on key emerging risks, and on preparation-team performance. Based on the monitoring results, the IPPF should be flexible in reassessing the individual projects, especially when conditions change or new information comes to light. An IPPF would also be required to actively monitor its cash and project positions relative to its investment policy and strategy; it will seldom be able to time precisely the full deployment of all the fund's capital, and there may be a long delay between the commitment to prepare a project and the actual completion of the underlying transaction. For an example of how to actively manage a preparation portfolio, consider the Africa50 Platform from the AfDB, as described in the box below.



Case Study: Africa50 Project Development



Africa50 Project Development (A50PD) was established by its sponsor, the AfDB, as an equity-investment vehicle devoted exclusively to developing and investing early risk capital in infrastructure projects in Africa. It is a for-profit enterprise, seeking to provide attractive risk-adjusted returns to its shareholders, while investing in and developing a portfolio of sustainable, socially responsible projects.

A50PD is one part of the Africa50 Platform, which is a separate incorporated company – legally and financially independent from AfDB – with a commercial structure, and its own rules and procedures. The other part of the Africa50 Platform is Africa50 Project Finance (A50 – again sponsored by AfDB), which is a permanent debt-investment vehicle (with additional capacity to make equity investments) and is focused entirely on bankable, readily prepared and easily developed infrastructure projects in Africa.

The most striking virtue of the Africa50 Platform is the complementarity of its two business lines (A50PD and A50), which makes it a one-stop shop for projects.²⁰ While A50PD supports project development and ensures a steady flow of well-structured deals, A50 can provide finance to the readily structured projects. Through its relationship with African governments and the AfDB, A50PD expects to have privileged access to the PIDA portfolio as well as to other strategic regional and national projects. In addition, the Africa50 Platform provides a unique partnership platform at all stages of the project cycle, stimulating business opportunities for a wide range of project participants. For the project-development stage, the platform enables collaboration among numerous interested parties: engineering firms, transaction advisers, strategic investors, contractors, equipment manufacturers and African governments.

A50PD has its own investor pool and is ring-fenced from the A50 balance sheet. A50PD has \$100 million capital committed from AfDB over several years, with an additional \$400 million planned from African governments and strategic investors. This development capital of \$500 million, together with co-development agreements, enables the preparation of projects with capex of up to \$100 billion.²¹ But to develop bankable projects requires more than early risk capital: it also requires expertise in complex engineering, social, environmental, economic, financial and legal matters. Accordingly, A50PD plans to establish a preferred group of experienced legal, technical and financial advisers (which will be pre-qualified on the basis of expertise and will undergo periodic re-evaluation).

A50PD aims to minimize the number of failed projects and to shorten the project-development phase from its current average of 7-10 years to 3-4 years. Such failures and delays are to a large extent due to government bottlenecks and restrictive regulatory environments. Following AfDB's recent successes in overcoming early-stage obstacles to infrastructure projects, A50PD will build on that by mobilizing political support for necessary reforms, and deploying skilled experts to work alongside governments. By doing so, A50PD can substantially reduce project-development risk.

A50PD's key responsibilities include project selection and asset allocation, to ensure that projects within the portfolio are of high quality: the idea is that A50PD will commit resources only to projects that meet certain screening criteria. When assessing projects, A50PD invokes three key tests:

1. Commercial viability and potential
2. Potential for regional and national transformation
3. Economic viability, as well as environmental and social sustainability

A50PD limits losses by utilizing a “stop-loss” mechanism for each project. This means that when the preparation costs of a project reach a specified threshold fraction of the total estimated capex, development will be halted in order to restrict losses and reduce the impact on the portfolio. In addition, a Management Investment Committee reviews projects on a regular basis to ensure that the risk-reward profile continues to conform to the risk appetite.

To achieve financial sustainability, A50PD replenishes development funds by various means at financial close. A50PD either receives a success fee or is compensated by the sale of shares in the project company. The success fee should be roughly twice the preparation costs to offset unsuccessful projects in the portfolio. In certain cases, A50PD may act as an adviser to early-stage project developers, and receive payment when a given project reaches certain pre-agreed milestones. In addition, A50PD expects that costs will be shared by host governments during the early stage, and by private-sector developers as the project progresses.

2.4 Cost-Efficient and Value-Adding Advisory Services

Another key role for IPPFs is to ensure that project preparation is conducted to a high standard, at reasonable cost, and within a reasonably short time. To reduce wastage of resources and achieve efficiency gains, it would help to adopt an operating model with lean processes and a strong central function to facilitate portfolio-wide collaboration and synergies. If possible, the IPPF should leverage the capacities and resources of its host organization – a development bank or fund manager, say – such as communication specialists and compliance experts in the procurement and legal departments. (Care is needed, however, to avoid getting entangled in any possibly over-bureaucratic processes of the host organization.) For example, the Africa50 Platform opted to be incorporated as a separate legal entity from AfDB, with its own lean processes and leadership, but it has an agreement that gives it access to the bank's expertise and resources as and when required. Additional cost-efficiencies could be achieved by outsourcing various non-essential services, with negotiated agreements through professional procurement – especially if scale is achieved. And by adopting standardized templates, tools, systems and requirements where appropriate, an IPPF could make additional savings without sacrificing quality.

As the model IPPF strives for cost- and process-optimization, it would need to accept and adapt to innovative approaches and technology. New digital platforms, for example, can improve knowledge sharing and cooperation, and might reconfigure project-preparation methods in the future. Consider, as one example among many, the project-preparation platform being developed by the International Infrastructure Support System (IISS) of the Sustainable Infrastructure Foundation, in partnership with a large group of regional and international development banks. IISS is an online project-development tool that, with the help of sub-sector-specific templates, accelerates and enhances project preparation by collecting, harmonizing and sharing information on projects. Such tools can serve either as an input into the project-selection process or as a means of updating and attracting potential investors throughout the preparation process.

Although efficiency in project preparation is obviously important, IPPFs should be careful not to prioritize efficiency over quality. Resources spent on project preparation usually turn out to be money well spent, as a well-prepared project pipeline offers an impressive value proposition. For governments, an improved pipeline increases the number

of viable infrastructure projects that proceed to completion, and a well-designed project typically reduces construction costs, overruns and eventual operational costs in the long term. But better-prepared projects also have benefits for other stakeholders: better value for users, reduced project risks for investors and increased opportunities for private-sector businesses.

As for adding value to projects, the IPPF needs to have the expertise, experience, networks and knowledge to ensure project preparation of a high quality (see chapter 2.5).²² Success for an IPPF depends crucially on having the right staff – suitably skilled personnel that are ready, willing and able to deliver on the defined strategy and objectives. IPPFs typically have low brand profiles and are small, making it difficult to attract the right talent; top talent tends to favour longer-term or tenured employment. One way to nurture an IPPF early on, as it establishes scale and a reputation, is to second expert staff temporarily – from private companies, development banks and government agencies. Such experts can help to build credibility and sustainability.

The required workforce would include strategy and policy advisers, project due-diligence analysts, risk-management analysts, managers with expertise in business development and government relations, and specialists with relevant know-how in technical, environmental and social feasibility studies. To maintain morale and encourage staff to excel, the IPPF would need to provide adequate remuneration, customized compensation systems, performance incentives, and interesting projects paired with career prospects and development opportunities. Motivated in this way, the staff would contribute to a culture of cost-conscious and high-quality project preparation, and hence to the sustainability and credibility of the IPPF itself. With competent and motivated staff, the IPPF could also contribute significantly to the enablement of the public sector. (This knowledge sharing and embedding of technical expertise should not be underestimated, given the capacity and skills constraints within much of Africa, as in other developing regions of the world.) As an example, the ADB's Office of Public Private Partnership, as part of its 2012-2020 operational plan, has created the Asia Pacific Project Preparation Facility (AP3F) to support capacity building among others for the region (see the text box below).



The Office of Public–Private Partnership (OPPP) was established in September 2014 to enhance the role of the ADB in supporting and enabling governments of its member countries to secure greater private investment and generate economic growth in the region. OPPP provides transaction advisory services to its clients in order to deliver bankable public-private partnership (PPP) projects, and coordinates and supports PPP-related activities in the ADB. The transaction advisory services are fee-based and provided by ADB over the entire range of activities associated with the development and implementation of PPP projects. With a dedicated team of transaction advisers with vast infrastructure finance experience, ADB possesses a unique ability to provide advice on project conceptualization, structuring, marketing and negotiation while firmly rooting transactions on public policy imperatives.

Furthermore, the newly established AP3F is an ADB-wide project-preparation platform, with contributions from donors, managed by OPPP and coordinated by regional departments.²³ AP3F is designed to help member states better manage the burden of capacity development, policy reform, and project-preparation and structuring activities that both protect and promote national interests while meeting market requirements with a pipeline of “ready-to-finance” infrastructure investments.

In addition to skilled staff, an IPPF should build privileged and long-standing relationships with particular sector-specialist advisers, which will help to optimize the quality of feasibility studies, thanks to enhanced data quality, understanding and experience within the sector and/or country.

Another effective means of securing value-adding advisory services is to establish a Technical Advisory Committee for the project-preparation process. This committee would consist of independent experts from academia, from the public sector and from the private sector – including some from investor companies, if appropriate. (Any candidate would need to pre-qualify as sufficiently competent and reputable.) The committee's role is to provide technical input on the project design, and to put forward alternative solutions during the review of the proposed package. The committee should also contribute to the stage-gate review process, which determines if projects succeed to the next level. A note of caution: such a committee may not always be cost-efficient and meaningful, and it could prove difficult and divisive. Still, for contentious or large-scale projects, the committee would usually be a useful and viable option.

Lastly, as mentioned in chapter 2.1, government can solicit project development from the IPPF to support the downstream technical, legal and financial services involved in project preparation and execution. However, the IPPF could also provide upstream programme management – starting with sector planning and investment prioritization and sector reform to help government actually establish a pipeline of priority projects and contribute to the development of a conducive enabling investment environment for the project's eventual implementation. It can do this not only by supporting public agencies, but also by systematically encouraging robust policies and frameworks – for instance, to facilitate private-sector participation – at both the sector and regional levels.²⁴ An instructive example here is the Indian Infrastructure Development Financing Company (IDFC), India's leading integrated infrastructure-finance company. Through its not-for-profit wholly-owned subsidiary IDFC Foundation, it stimulates thought leadership and advocates action for the sustainable and efficient development of infrastructure, and promotes good governance, in furtherance of IDFC's mission of nation building.

2.5 Stringent Governance and Accountability

A prerequisite for any competent IPPF is a stringent governance structure to avoid conflict of interest (Col). The IPPF would also need mechanisms to oversee the public agencies involved in the project-preparation processes, and make them accountable for and committed to getting the projects to financial closure.

One of the key incentives for private-sector parties to participate in project preparation is the opportunity of securing business later on – perhaps by providing goods or services during the construction phase, or by winning the concession to operate the asset. So private-sector engagement in the project-preparation process can all too easily lead to Cols, generally when the time arrives for tendering. The Col could take either of two forms. During the project preparation, the company might obtain information that gives it an undue advantage in the

tendering process. Or else the company might be able to influence the technical design in a way that increases its chances of winning the tender or that maximizes its profits while the contract is in force – for instance, by shifting undue risks to the public sector.

The IPPF should address the Col problem proactively within its structure and processes. Several ways of reducing the risk exist. One key requirement is to erect fail-safe Chinese walls between IPPF investors and the IPPF itself. The IPPF could also, for example, target a wide variety of IPPF investors, and thereby limit the influence of any one stakeholder on the project. Alternatively, it could restrict the investor base, and allow only financiers to participate (rather than construction, equipment or operating companies). The Brazilian Development Bank has adopted a mix of these strategies, as mentioned in the box below.

Case Study: Brazilian Development Bank



The Brazilian Development Bank (BNDES) has a mission to foster sustainable and competitive development in the Brazilian economy, particularly by generating employment while reducing social and regional inequalities. In line with that mission, it created a Project Development Division (AEP), which aims to provide better-prepared projects to the market, via its subdivisions.²⁵

First, the Project Structuring Fund is designed to confirm the enabling environment for particular sectors and to strategically identify infrastructure projects. Its work has included reviews of the airport sector, for example, and improvements to relevant regulatory frameworks. The effect is to lay the foundations for the successful preparation and structuring of individual projects going forward.

Second, the Project Structuring Company (EBP) concentrates on developing and structuring PPPs or concessions – on behalf of government agencies – for infrastructure projects such as airports, highways, ports, public transport, sewage and social facilities. By conducting thorough project preparation, EBP mobilizes adequate public support and entices private investors. EBP also supports the preparation of tender documents and oversees the procurement procedure, including the required market interaction, auction and contracting. Project developments are funded via a success fee paid by the winner of the auction.

EBP has also succeeded in securing private money; several large banks active within the Brazilian market are contributors to its capital base. Note that BNDES has relevant controls in place to mitigate the resulting Col problem and restrict undue influence. For a start, EBP investors consist only of international and local banks. Construction companies and operators are excluded, as they might have an interest in influencing the technical design or technology for the project. The banks might have potential Col themselves, being in the project-finance business, but because there are so many of them, the playing field is reasonably level. In addition, EBP is separated by strict Chinese walls from BNDES and the project-finance divisions of other banks, so the sharing of privileged information is avoided. Moreover, BNDES has a technical agreement with EBP to guarantee that the public interest is taken into account. The project-preparation team is made accountable to a board of directors and to fiscal and audit councils, and has stringent reporting protocols in place.

From its varied and numerous activities, the AEP has acquired a track record of considerable success. By the end of 2014, the number of projects structured was 35, with an estimated capex of \$28 billion. The majority of projects were structured within two years. Some 72% of them reached financial closure, and the majority had more than three competitive proposals at auction.

Regarding the problem of “unequal access to information” during the tender: one solution is to establish a data room where all potential bidders – whether or not they were involved in the project preparation – can access the same information (i.e. information yielded by the project-preparation process). This information sharing will help to level the playing field for all participants in the bidding.

One further approach, finally, is to incorporate anti-COI measures in the standard procurement rules. The rules should ensure a fair and transparent procurement process, of course, but should not be unduly restrictive. They should not, for example, routinely exclude a number of IPPF investors or project-preparation sponsors from participating during tendering; such a restriction would discourage private-sector companies from engaging in project preparation in the first place.

Despite precautions, the tendering process can still be susceptible to corruption. Corruption in the construction industry specifically is a severe problem throughout the world, and is particularly prevalent in developing countries where public institutions are weak and transparency rankings are low. IPPFs are not immune to this problem, but they can contribute to the solution: they provide an additional layer of review; they apply extra pressure – through having many stakeholders anxious for the project’s

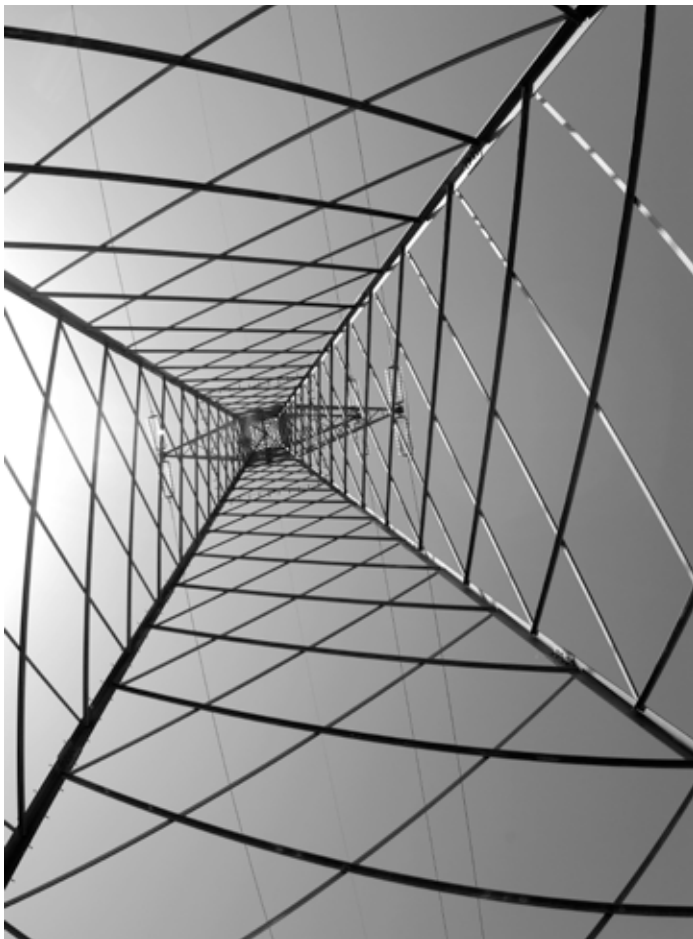
success – on project sponsors and host governments to behave ethically; and they continuously educate public officials on the benefits of transparent and fair processes for project development. By systematically discouraging corruption in these ways, IPPFs should help to boost the private sector’s confidence in the tender process.

One serious risk is that projects will fail to reach tender, or that tenders will be aborted, because of public-sector inefficiencies. Such inefficiencies are perhaps inevitable – priorities change, and officials may not take the necessary ownership to ensure that prepared projects proceed. But IPPFs can at least minimize this vulnerability, and foster the commitment and accountability of implementing agencies and governments to the IPPF and to the projects being prepared. Numerous initiatives are available for creating buy-in. Here are some examples that have been successfully adopted:

- A special coordinating body rallies and communicates with all relevant public-sector agencies.
- A requirement is imposed on implementing agencies to sign off on projects that have passed stage-gate reviews, before the projects can proceed to the next milestone.
- A requirement ensures that agencies have “skin in the game” by obliging them to make a minimum contribution (often 25%) to the project-preparation expenses.

3. Design Considerations for Infrastructure Project Preparation Facilities

The previous section outlines the principles of success for any IPPF. But each IPPF is unique and will have a unique design and structure, with details varying according to the IPPF's distinctive circumstances, implementation constraints and specific strategic objectives. So this section of the report outlines the strategic, operational and financial aspects involved in designing a particular IPPF. Numerous options are discussed, but the list is far from exhaustive – the structural complexities of IPPFs are almost endless.



3.1 Strategic and Operational Aspects

As mentioned, the creators of an IPPF face a multitude of strategic and operational design options. Figure 4 lists many of these options, grouped into various categories or “dimensions” related to each of the principles of success. (The categories and options are far from complete: the list is for illustrative purposes only.) The highlighted options are those that are probably most appropriate for a new IPPF with private-sector involvement.

The creators need to make deliberate decisions on each dimension and, for some dimensions, they can select more than one option. Care is needed, however, as there may be interdependencies or “knock-on” effects. Consider an IPPF aiming to involve the private sector, for instance: for the first principle (“Clear Objectives and a Focused Strategy”) and its first dimension (“Objective”), the favoured option would be a Venture Capital model – i.e. recovering project-preparation expenses with a margin. That decision would then affect the decisions on the next two dimensions (“Target sector” and “Geographic scope”). The favoured sector, in this case, would be a commercial one (for example, energy) and the favoured geography would be the country or region best suited to PPPs. Once the sector and region have been selected, the IPPF’s creators would then make reasonable assumptions about the remaining dimensions – project type, investment horizon, sources of funds, and so on. To leverage private-sector expertise and private finance, the IPPF would set about establishing an optimal Technical Advisory Committee, and would need to choose the members very carefully, and decide on the best way of rewarding them for their expertise.

No matter how well designed an IPPF may be, its success remains heavily dependent on the enabling environment in which it operates. So it is crucial for partners to collaborate closely, and maintain mutual support and trust. Other factors, too, must be maintained uninterrupted: sufficient public-sector capacity, stable legal and institutional frameworks, and support from the government.

Figure 4: Strategic and Operational Design Options for an IPPF

Principles	Illustrative Dimensions	Illustrative Options				Non-exhaustive	
Clear Objectives and Focused Strategy	Objective	Not-for-profit (Aid)	Social	Venture Capital	...		
	Target sector	Selective		All	...		
	Geographic scope	Municipal	National	Trans-national	Global	...	
	Project type	Brownfield		Greenfield		...	
	Project stage	Concept	Pre-feas	Feas & Des	Fin Close	Execution	...
	Investment horizon	< 3 yrs	3 - 7 yrs		> 7 yrs	...	
	Source of funds	Private	Public	IFI	Donors	...	
Self-Sustainable Funding Model	Prep. cost recovery	None	At cost	Cost +	Variable	Equity +	...
	Cost recovery type	None	Monetary	Equity option	Mon + Equity	...	
	Expected return	0 %	0 - 20%		> 20%	...	
Excellence in Portfolio Management	Project size (Capex)	Small (< \$250m)	Medium (\$250-750m)	Large (> \$750m)		...	
	Max dev. contribution	< 25%	< 50%	< 75%	100%	...	
	Success rate target	0 - 33%	34 - 66%		> 67%	...	
Cost-Efficient and Value-Adding Advisory	Scope of services	Funding	Advisory	Funding & Advisory		...	
	Technical services	In-house capability	Outsourced	Strategic partners		...	
	Technical committee	Independent		Investor-nominated		...	
Stringent Governance and Accountability	New vs. existing org	Existing organization		New organization		...	
	Separate legal entity	Yes		No		...	
	Hosting of org	Independent org	Development bank	Ministry		...	
	

Source: The World Economic Forum

Once the key strategic and operational design options have been selected, the detailed financial structuring can begin. If the intention is to tap private-sector financing alongside other sources – international financial institutions (IFIs) and donors, for example – that will involve certain requirements or enablers within the structure. The following subsection describes a mechanism for mobilizing private funds for project preparation.



3.2 Financial Aspects

To benefit from both public-sector and private-sector resources, the IPPF's financial structure needs to be appropriately conducive, attracting their interest and satisfying their various objectives, risk appetites and expectations. In essence, the IPPF is a platform that pools and blends funds to finance infrastructure preparation and development.

Source of funds

The IPPF could invite investment from governments, IFIs, donors, commercial banks, institutional investors and other qualifying investors, including contractors and operators. No particular groups need be excluded from participation. Figure 5 summarizes the different sources of investment for an IPPF, their roles, and the benefits that their participation could offer.

Figure 5: Summary of Potential IPPF Funding Sources, Roles and Benefits (Non-Exhaustive)

	Examples	Potential Role			Potential Benefits
		Social investor	Fin. investor	Project developer	
Public sector	Government — Central & local governments — Regional orgs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	— Improved infrastructure and economic development — Long-term savings
	International Financial Institutions — MDBs — Regional Dev. Banks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	— Improved infrastructure and economic development — Reduced reliance on public funds
	Donor Community — National donors — Impact investors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	— Improved infrastructure and economic development — Reduced reliance on public funds
Private sector	Commercial Banks — International banks — Local banks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	— Improved pipeline for financing — Lower financing risks
	Institutional Investors — Insurance firms — Pension funds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	— Improved pipeline for investing — Higher long-term returns
	Other Investors — PE Fund managers — Private investors	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	— Improved pipeline for investing — Higher long-term returns
	EPC/Contractors/Suppliers — EPC contractors — Equipment suppliers (e.g. locomotives)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	— Improved pipeline for bidding — New-business opportunities
	Users — Key off-takers (e.g. mining companies) — Other companies	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	— Benefit from the use of the infrastructure asset — Lower logistics costs

primary role secondary role

Source: World Economic Forum

Attracting investors and setting expectations

For any new IPPF, a key challenge is to attract investors to provide the necessary resources. After all, a new IPPF would lack a track record, and would usually be viewed as a high-risk venture with a questionable risk-return profile. To offset such shortcomings and perceptions, and to signal to other investors that the IPPF is credible, the trick is to secure anchor investors. For many recent IPPF initiatives, governments and/or development institutions have fulfilled that role, supporting the set-up and contributing directly through seed funds.

In addition, IPPFs need to set investors' expectations appropriately, which requires correct messaging and

communication. Investors should understand that project preparation is a high-risk venture; it has many complexities and requires a long-term perspective; returns are not as simple as a dividend and can be hard to quantify. But there are particular advantages in contributing to an IPPF. First, the development of infrastructure assets has many social and broader economic benefits, which are well aligned with the objectives of sovereign wealth funds, local pension funds and impact investors. Second, by enhancing the pipeline of projects reaching tender, the IPPF provides additional business opportunities for construction and engineering companies, equipment providers and infrastructure operators, and hence provides an additional source of returns, beyond the financial returns from the IPPF itself.

Furthermore, an IPPF could earmark funds for specific projects: that would help to attract impact investors, local municipalities, relevant companies and development organizations to participate, if these investors tend to concentrate on particular regions or types of projects.

Different investors will have different reasons for investing in the IPPF and different risk appetites and return expectations, so another promising way of attracting investors is through a tiered financing and risk-sharing structure. Consider a simplified example, involving three classes of participation rights:

- A. Senior tranche
- B. Junior tranche
- C. Grant tranche

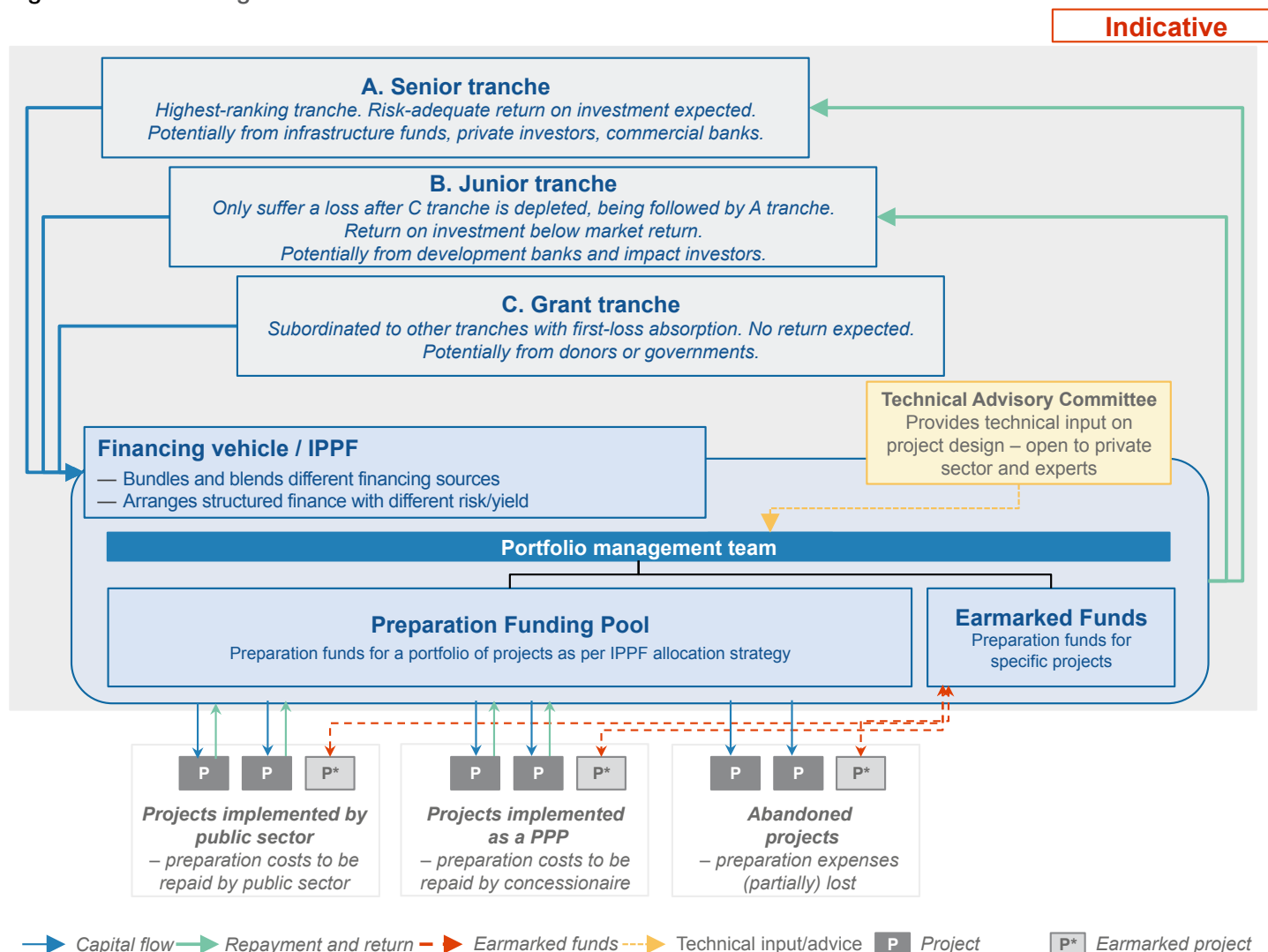
The C tranche, or Grants, would be subordinated to all other investors and so would be best suited to donor institutions and governments. It would correspond to an “Aid Organization model”. It would not expect any return or cost recovery, and would serve as a buffer for losses to the B and A tranches – a form of risk mitigation as first-risk capital. Such a first-loss protection mechanism would perform an important function: protecting investors from financial losses up to a predefined amount, thereby enabling the IPPF to attract private and additional funds to the B and A tranches.

As for the B tranche, or Junior tranche, it is a second-loss tranche, subordinated to the senior rights of the A tranche. Its investors would include development banks, sovereign wealth funds, and impact and social investors. It would correspond to a “Social Business model”, requiring project-cost recovery with little or no margin – that is, it would have a lower return requirement – and would suffer a net loss only once the C tranche capital is depleted.

As for the A tranche, or Senior tranche, it will attract private investors – such as banks and infrastructure funds – requiring a risk-adjusted return. It would correspond to a “Venture Capital model”, requiring projects to recover preparation cost with a risk-adjusted margin on financial closure. The two layers of “protection buffers”, offered by the C and B tranche capital, would be key enablers to attracting private money.

Beyond the risk mitigation provided by the IPPF, additional risk-mitigating instruments or sureties for particular projects could be provided by governments and/or development banks. These include partial payment guarantees for off-takers, partial credit guarantees, or undertakings to expedite permits during project preparation.²⁶ Figure 6 shows the high-level financial structure of an IPPF such as the one just described.

Figure 6: Potential High-Level IPPF Financial Structure



Source: World Economic Forum²⁷

Distribution payments from an IPPF are unlikely early on: instead, early returns would tend to be reinvested, as it is particularly important for an IPPF to build a critical mass of projects under preparation and to develop a track record. Assuming, however, that the IPPF's completed projects do succeed and that the IPPF has sufficient cash flow for its pipeline of uncompleted projects, distribution payments will be feasible, though the IPPF decision-makers would need to decide very shrewdly on the timing and size, and ensure that such a distribution rate is sustainable. The funds for such payments would come from one or more of the following sources: income from the recovery of preparation expenses; additional margins charged for project preparation, earned at financial close; realized capital gains of equity in developed projects; and, any dividend earned from equity in operating assets.

Investor exit options

Investing in infrastructure, especially from the preparation stage, requires patient money but, even so, investors will expect a clear explanation of their options to exit the IPPF. Exit options can take various forms: repurchase by the IPPF, secondary sale to other investors, flotation, repayment at fund closure, and (in the worst case) involuntary exit by way of liquidation.

The repurchase option would depend on whether the IPPF is liquid or not. This criterion is particularly difficult for an IPPF to meet, given the illiquid nature of infrastructure development. Consequently, the IPPF constitution would typically define an initial lock-in period, to help it manage its cash-position levels and to scale up. However, the projects being prepared could potentially be sold to other project developers, which could provide some reasonable liquidity to the IPPF.

The most likely and suitable exit strategy would tend to be a secondary sale of the investors' shareholdings to another investor. A major difficulty here is to determine a valuation for the shares, as the appraisal process is expensive and time-consuming, and project development is by its nature subject to high uncertainty.

As for flotation, it is generally very unlikely, given how expensive and lengthy it tends to be. To justify a flotation, an IPPF would need to be mature, have a track record of successfully prepared projects, and have a large portfolio of projects not only under preparation but also under operation.

4. Conclusion

A lack of well-prepared projects is a major obstacle to infrastructure development in emerging and developing countries, and hence to their general economic development. In Africa, for example, the infrastructure shortfall involves the sacrifice of about 2% of GDP growth per annum. Even a modest increase to the pipeline of well-prepared projects would impact beneficially on local economies, improving the welfare of communities and boosting the investment opportunities available to the market. Unfortunately, existing IPPFs – with their budget constraints and operational issues – often lack the ability to deliver these benefits. The hope is that this report will help to increase that ability. If IPPF creators adopt the principles of success outlined here and optimize the strategic, operational and financial aspects of each IPPF's design, then IPPFs have a more sustainable and promising future.

The five principles of success for IPPFs can be summed up as: clear objectives and a focused strategy; a self-sustainable financing model; excellence in portfolio management; cost-efficient and value-adding advisory services; and stringent governance and accountability. These principles should underlie and inform the design of each IPPF in all its aspects – strategic, operational and financial. The design will vary from IPPF to IPPF, according to such factors as region, sector and targeted sources of funding.

IPPFs should aim to increase private-sector financing in project preparation, but also to leverage private-sector expertise to improve project preparation. When these private-sector resources are combined with public-sector support, the chances of successful project preparation are greatly enhanced. That in turn enhances the prospects for full-scale sustainable infrastructure development, and all the consequences of that for economic growth and social progress around the world.

Appendix

Contributors

Project Team

World Economic Forum

Benji Coetzee²⁸

Project Manager, African Strategic Infrastructure Initiative, Infrastructure & Urban Development Industries (2014-2015)

Fabian Barthel²⁸

Project Manager (2013-2014), African Strategic Infrastructure Initiative, Infrastructure & Urban Development Industries

Reuben Coulter

Associate Director, Africa

Vangelis Papakonstantinou

Project Manager, Global Strategic Infrastructure Initiative, Infrastructure & Urban Development Industries

Editors

World Economic Forum

Alex Wong

Senior Director, Head of Business Engagement (Geneva)

Elsie Kanza

Senior Director, Head of Africa

Pedro Rodrigues de Almeida

Director, Head of Basic Industries

Adviser and Knowledge Partner

The Boston Consulting Group

Philipp Gerbert

Senior Partner, Global Head of Infrastructure

Adam Ikdal

Senior Partner and Managing Director, Head of Sub-Saharan Africa

Armin Lohr

Partner and Managing Director, Head of Infrastructure Middle East

Christoph Rothballer

Expert Project Leader, Infrastructure

Initiative Co-Chairs

Development Bank of Southern Africa

Patrick Dlamini

Chief Executive Officer and Managing Director

General Electric

Jay Ireland

Chief Executive Officer, GE Africa

Initiative Partners

African Development Bank

Donald Kaberuka

President

Alex Rugamba

Director, Regional Integration and Trade

Shem Abraham Chalo Simuyemba

Chief Infrastructure Economist

Zakhele Mayisa

Principal Infrastructure Finance Officer, Regional Integration and Trade

African Union Commission

Elham M.A. Ibrahim

Commissioner for Infrastructure and Energy

Aboubakari Baba Moussa

Director, Infrastructure and Energy

Maurice Niaty-Mouamba

Consultant, Transport Engineering

NEPAD Planning and Coordinating Agency (NEPAD Agency)

Ibrahim Assane Mayaki

Chief Executive Officer

Adama Deen

Head, Infrastructure Strategic Business Unit (ISBU), Office of the CEO

Elsabeth T. Tedros

Senior Investment Officer, Infrastructure Strategic Business Unit (ISBU), Office of the CEO

Africa Strategic Infrastructure Business Working Group Members

A.P. Møller-Maersk South Africa

Lars Reno Jakobsen

Senior Vice-President, Africa Region

ABB South Africa

Nthabiseng Dube

Director, Government Relations

Absa Bank

André Kruger

PPP Financing Specialist, Public Sector

Absa Capital

Raj Shah

Head, Sovereign and Public Sector Clients, Sub-Saharan Africa

Absa Group

Colin King

Principal, Project Finance

Acciona

Luis Castilla

Chief Executive Officer, Acciona Infrastructure

African Rainbow Minerals

Imrhan Paruk

Executive, Corporate Development

Agility

Geoffrey White

Chief Executive Officer, Africa

Deanne Vries

Senior Vice-President, Africa

Charlie Gassoub

Vice-President, Aviation Services

ArcelorMittal

Chifipa Mhango

Chief Economist, Africa

<p>Arup Richard Deh Associate Director, Business Development</p>	<p>JSE Geoffrey Rothschild Director, Marketing and Member of the Board of Directors</p>
<p>Barclays Africa Group Stephen van Coller Chief Executive, Corporate and Investment Banking</p>	<p>Kreditanstalt Für Wiederaufbau Bankengruppe Volker Widerhold Director</p>
<p>Development Bank of Southern Africa Patrick Dlamini Chief Executive Officer and Managing Director Rieaz (Moe) Shaik Group Executive: International Financing Division Mohan Vivekanandan Group Executive: Strategy Mohale Rakgate General Manager: Project Preparation Unit Alvino Wildschutt Specialist, Infrastructure Programmes Michele Ruiters Sector Specialist, Regional Programmes Nomcebo Khoza Principle Investment Officer</p>	<p>Oando Mobolaji Osunsanya Managing Director</p>
<p>Diageo Ahamed Ish Director, Customer Service, Logistics and Planning Development</p>	<p>Old Mutual Ralph Mupita Chief Executive, South Africa and Emerging Markets</p>
<p>First Bank of Nigeria Adenrele Oni General Manager, South Africa</p>	<p>Jurie Swart Head, Infrastructure</p>
<p>Onche Ugbabe Chief Strategy Officer</p>	<p>Orrick Herrington & Sutcliffe Pascal K. Agboyibor Partner</p>
<p>Flour Mills of Nigeria John Coumantaros Chairman</p>	<p>Power Africa Andrew Herscowitz Co-ordinator</p>
<p>Frontline Development Partners Arun Kumar Assistant Vice-President, Corporate Finance</p>	<p>Prudential Matthew Farnum-Schneider Managing Director, Group Chief Executive's Office</p>
<p>GE Africa Nils Tcheyan Director, Government Affairs and Policy, Africa Tim Schweikert President and Chief Executive Officer, GE Transportation Africa</p>	<p>Royal Philips Juan Jacques Dongen Chief Executive Officer, Africa</p>
<p>General Electric Sukhin Bhandari Project Development Leader, Transportation</p>	<p>Sasol Martin Ginster Principal Specialist, Environment</p>
<p>HSBC Bank Andrew Dell Chief Executive Officer, Africa</p>	<p>SNC-Lavalin Ziad Awad Senior Vice-President and Head, Middle East and Africa</p>
<p>Fred Chima Regional Head, Global Capital Financing, Africa</p>	<p>Standard Chartered Bank David J. Law Managing Director and Regional Head, Wholesale Banking, Middle East, North and Southern Africa</p>
<p>Industrial Development Corporation of South Africa Geoffrey Qhena Chief Executive Officer</p>	<p>Alan Sproule Director, Project Finance Africa</p>
<p>Vivian Ramathuba Project Manager, Strategic High Impact Projects</p>	<p>Telkom Galetlene Juliana Rasethaba Chief, Corporate Governance</p>
<p>Peter Lekhethe Business Development Manager</p>	<p>The Standard Bank Group Simpiwe K. Tshabalala Joint Chief Executive Officer Ntlai Moshiah Head, Power and Infrastructure</p>
<p>Investec Asset Management Francois Van der Spuy Head, Private Markets</p>	<p>Transnet Mervin Chetty General Manager, Africa Strategy</p>
	<p>Sunday Kapesi Manager Business Development</p>
	<p>UBS Sean Bennett Country Head and Chief Executive Officer</p>

UPL
Jaidev R. Shroff
Chief Executive Officer

Yara International
Sean Cleene
Senior Vice-President, Global Initiatives, Strategy and Business Development

Experts to the Africa Strategic Infrastructure Business Working Group

Central Corridor Transit Transport Facilitation Agency
Rukia Shamte
Permanent Secretary

Deutsche Gesellschaft für Internationale Zusammenarbeit
Winfried Zarges
Sector Manager

East African Community
Philip Wambugu
Director, Infrastructure

Richard Sezibera
Secretary-General

European Investment Bank
Eva Romer
Head, Africa Infrastructure Trust Fund

Harith General Partners
Orville Cachia
Investment Director

InfraCo Africa
Alex Katon
Executive Director

NEPAD Business Foundation
Lynette Chen
Chief Executive Officer

Heinrich Böll Foundation
Nancy Alexander
Director, Economic Governance Program

Infrastructure Consortium for Africa
Michael Kane
Infrastructure Officer

International Finance Corporation
Ram Mahidhara
Portfolio Manager, Infrastructure, ICT, and Natural Resources, Sub-Saharan Africa

Linda Munyengerwa
Senior Investment Officer, Infrastructure, Sub-Saharan Africa

Mo Ibrahim Foundation
Nathalie Delapalme
Director, Research and Policy

Southern African Development Community
Remigious Makumbe
Director, Infrastructure and Services

Mapolao Mokoena
Senior Programme Officer-Transport

The African Capacity Building Foundation
Emmanuel Nnadozie
Chief Executive Officer

The World Bank
Yonas Mchomvu
Transport Specialist

The World Bank
Philippe Dongier
Country Director, Tanzania, Burundi and Uganda

Experts to the Africa Strategic Infrastructure Business Working Group on the report

Africa50
Tas Neside Anvaripour
Director, Business Development Department

Brazilian Development Bank
Fernando Tavares Camacho
Head, Public-Private Partnerships

Bruno Rodrigues
Administrator

Harith General Partners
Sollie Nortje
Head, Project Development

InfraCo Africa
Alex Katon
Executive Director

The World Bank
Andrew Roberts
Senior Operations Officer, Africa Region Integration Department

Elegtra
Richard Parry
Partner

Jones Pohl Group
Walter Jones
Managing Director

Sustainable Infrastructure Foundation
Christophe Dossarps
Executive Director

TIMU Energy Holdings
Herbert Pohl
Director and Chief Investment Officer

Endnotes

1. In a sample of advanced economies, an increase of 1% of GDP in investment spending raises the level of output by about 0.4% in the same year, and by 1.5% four years after the increase (IMF, 2014).
2. Catching up with Korea's level would increase economic growth per capita by up to 2.6% per year. In a number of countries – including Cote d'Ivoire, Democratic Republic of Congo and Senegal – the impact would be even larger (World Bank, 2015).
3. IPPFs are institutions with funds specially demarcated for project preparation. IPPFs are not homogenous and vary on several parameters, such as host organization, type of financing provided, sector, geography and project-stage focus (ICA, 2014).
4. Infrastructure Consortium for Africa (2012).
5. Preparation costs are estimated as follows: 10% of implementation costs for projects that are currently in stage 1 of the PIDA classification (early concept proposal), 5% for projects that are in stage 2 (feasibility/needs assessment), and 2% for projects that are in stage 3 (structuring and promotion to obtain financing). For projects in stage 4 (implementation and operation), no further preparation expenses are assumed. The cost estimate of \$3.1 billion assumes that all projects in the portfolio of the PIDA PAP will be implemented, regardless of their economic viability (AfDB, 2013).
6. From an initial analysis of 67 sources, ICA (2012) identified 17 core facilities that could be classified as IPPFs, of which only 12 were operational at the time. IPPF commitments grew from \$10 million in 2005 to over \$80 million in 2010. As of 2012, these 17 IPPFs had \$190 million remaining for project-preparation financing, which was not earmarked for specific projects (ICA, 2014).
7. World Bank (2013).
8. These principles serve as indicative guidelines only and should not be regarded as absolute.
9. PIDG is a multi-donor organization committed to improving access to infrastructure, boosting economic growth and reducing poverty by facilitating private-sector investment.
10. Refer to <http://www.infracoafrica.com/about.asp> for more information on InfraCo Africa.
11. An example of such an IPPF is the Philippines Project Development and Monitoring Facility, which receives contributions from the Australian and Philippine Governments. The Australian Government grants are administered by the Asian Development Bank (ADB).
12. In some cases, the IPPF might have to make an upfront equity buy-in (I_0) in order to secure permission to prepare and develop a project.
13. Among the shareholders of TIMU Holdings are Jones Pohl Group and Harith Partners.
14. "Evergreen" refers to reinvesting capital into new greenfield projects from existing cash flows.
15. It is only at financial close that government support and/or financing is expected.
16. TIMU approximates development costs at 6% of project value, of which up to 50% is financed by TIMU (i.e. 3% of project value), allowing for an expected project-finance ratio of 1:33. As TIMU will redeploy capital, the real ratio is much higher still, as the same dollar gets invested multiple times.
17. Development time is expected to be up to three years (12-24 months on feasibility, 6-12 months on documentation and procurement).
18. A convertible note is a hybrid, part debt and part equity: it functions as debt until, at some point in the future, it may convert to equity at a predefined rate. Convertible debt is typically secured from the same investors and venture capitalists that fund equity deals, and is usually used for smaller rounds of financing at the early stages.
19. During the first stage, the *project-identification stage*, the project idea is scoped and an initial desk-based feasibility assessment is completed. Only the most promising project ideas continue to the next stage, the *pre-feasibility stage*, where high-level technical, environmental and economic studies are completed. If the project passes the subsequent stage-gate review, it moves into the *feasibility stage*, where detailed studies are made. At the final stage-gate review, the project may proceed into implementation, where the financing is secured and the procurement is arranged. In the early stages, the number of discontinued projects would be much greater than in the later stages.
20. The Africa50 Platform aims to leverage its capital base in an efficient way: it targets an investment-grade rating that allows access to capital markets providing market-responsive, innovative financing services. This integrated approach is expected to increase the flow of infrastructure-project deals while also increasing the speed of delivery.
21. The assumption is that project-preparation costs are ~2% of total development capex.
22. Technical advice for benchmarking and best practices could be provided by a Technical Advisory Committee.
23. AP3F will start operations in 2015.
24. See *Strategic Infrastructure: Steps to Prepare and Accelerate Public-Private Partnerships*, World Economic Forum report (May, 2013).
25. Apart from the two subdivisions discussed here, there is a third subdivision, the Brazilian PSP Development Programme (PSP). It is managed by the International Finance Corporation, with resources from the Inter-American Development Bank (IDB) and BNDESPar (the investment arm of BDNES). PSP's focus is on structuring innovative projects, involving long-term contracts, in sectors where private companies are absent. Much of the work consists in helping to develop new institutional and business environments.
26. Additional measures to mitigating political and regulatory risks can be referred to within the World Economic Forum report *Mitigation of Political & Regulatory Risk in Infrastructure Projects* (2015).
27. The figure is for purposes of illustration only and is not representative of the actual size of the respective tranches.
28. Sourced from the Boston Consulting Group.

Bibliography

- African Development Bank Group (2013), "Multinational PIDA Capacity Building Project". NEPAD, Regional Integration & Trade Department and AfDB General Counsel and Legal Services Department, [http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Multinational - Programme for Infrastructure Development in Africa Capacity Building Project - Appraisal Report.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Multinational_-_Programme_for_Infrastructure_Development_in_Africa_Capacity_Building_Project_-_Appraisal_Report.pdf).
- B20 (2013), "B20-G20 Partnership for Growth and Jobs – Recommendation from Business 20". Russian Union of Industrialists and Entrepreneurs, http://www.b20russia.com/B20_WhiteBook_web.pdf.
- G20 Development Working Group (2014), "Assessment of the Effectiveness of Project Preparation Facilities in Asia: Final Report", <https://g20.org/wp-content/uploads/2014/12/assessment-effectiveness-ppfs-in-asia-15092014.pdf>.
- Global Infrastructure Basel (2014), "Unleashing Private Capital Investments for Sustainable Infrastructure Greenfield Projects: Scoping Study regarding the Early Stage Project Preparation Phase". GIB Foundation, http://www.gib-foundation.org/content/uploads/2014/05/Scoping-Study-for-the-Early-Phase-Project-Preparation-Phase_.pdf.
- Infrastructure Consortium for Africa (2012), "ICA Annual Report 2012: Infrastructure Financing Trends in Africa". ICA, http://www.icafrica.org/fileadmin/documents/Annual_Reports/ICA%20_AnnualReport%202012.pdf.
- Infrastructure Consortium for Africa (2014), "Concept Paper: Effective Project Preparation for Africa's Infrastructure Development". ICA, 2014 Annual Meeting: Cape Town, http://www.icafrica.org/fileadmin/documents/Publications/Effective_project_preparation_in_Africa_ICA_Report_31_October_2014.pdf.
- International Federation of Consulting Engineers (2004), "FIDIC Policy Statement: Conflict of Interest". FIDIC, http://fidic.org/sites/default/files/fidic_policy_coi.pdf.
- International Monetary Fund (2014), "The Time Is Right for an Infrastructure Push". IMF Survey Magazine: IMF Research, <http://www.imf.org/external/pubs/ft/survey/so/2014/RES093014A.html>
- Lu, Kevin and Justin Lin (2013), "To Finance the World's Infrastructure, We Need a New Asset Class". The World Post, http://www.huffingtonpost.com/kevin-lu/world-bank-global-infrastructure-facility_b_4078840.html.
- World Bank (2006), "Consulting services manual 2006: a comprehensive guide to the selection of consultants at the World Bank". World Bank, <http://siteresources.worldbank.org/PROCUREMENT/Resources/csm-final-ev3.pdf>.
- World Bank (2011), "Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers". The World Bank, <http://go.worldbank.org/1KKD1KNT40>.
- World Bank (2013), "Transformation through Infrastructure". World Bank Group, <http://siteresources.worldbank.org/INTINFRA/Resources/Transformationthroughinfrastructure.pdf>.
- World Bank (2014), "Strong, Sustainable and Balanced Growth: Enhancing the Impact of Infrastructure Investment on Growth and Employment". World Bank Group, <http://siteresources.worldbank.org/EXTSDNET/Resources/infrastructure-background-note-G20.pdf>.
- World Bank (2015), "Fact Sheet: Infrastructure in Sub-Saharan Africa". The World Bank Group, <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21951811~pagePK:146736~piPK:146830~theSitePK:258644,00.html>.
- World Economic Forum (2013a), "Strategic Infrastructure: Steps to Prepare and Accelerate Public-Private Partnerships". World Economic Forum, http://www3.weforum.org/docs/AF13/WEF_AF13_Strategic_Infrastructure_Initiative.pdf.
- World Economic Forum (2013b), "Strategic Infrastructure in Africa: A business approach to project acceleration". World Economic Forum, http://www3.weforum.org/docs/AF13/WEF_AF13_African_Strategic_Infrastructure.pdf.
- World Economic Forum (2014), "Accelerating Infrastructure Delivery: New Evidence from International Financial Institutions". World Economic Forum, http://www3.weforum.org/docs/WEF_AcceleratingInfrastructureDelivery_2014.pdf.
- World Economic Forum (2014), "African Strategic Infrastructure Initiative: Managing Transnational Infrastructure Programmes in Africa – Challenges and Best Practices". World Economic Forum, http://www3.weforum.org/docs/WEF_AfricanStrategicInfrastructure_Report_2014.pdf.
- World Economic Forum (2014), "Impact Investing: A Primer for Family Offices". World Economic Forum, http://www3.weforum.org/docs/WEFUSA_FamilyOfficePrimer_Report.pdf.
- World Economic Forum (2014), "Infrastructure Investment Policy Blueprint". World Economic Forum, http://www3.weforum.org/docs/WEF_II_InfrastructureInvestmentPolicyBlueprint_Report_2014.pdf.
- World Economic Forum (2015), "Mitigation of Political & Regulatory Risk in Infrastructure Projects". World Economic Forum, http://www3.weforum.org/docs/WEF_Risk_Mitigation_Report_2015.pdf.





COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The World Economic Forum is an international institution committed to improving the state of the world through public-private cooperation in the spirit of global citizenship. It engages with business, political, academic and other leaders of society to shape global, regional and industry agendas.

Incorporated as a not-for-profit foundation in 1971 and headquartered in Geneva, Switzerland, the Forum is independent, impartial and not tied to any interests. It cooperates closely with all leading international organizations.

World Economic Forum
91–93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel.: +41 (0) 22 869 1212
Fax: +41 (0) 22 786 2744

contact@weforum.org
www.weforum.org