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Effective Project Preparation for Africa's Infrastructure Development

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List of Acronyms

ACP	African, Caribbean and Pacific Group of States
ADA	Austrian Development Agency
AFD	Agence Française de Développement [French Development Agency]
AfDB	African Development Bank
AICD	African Infrastructure Country Diagnostic
AIIM	African Infrastructure Investment Managers
AUC	African Union Commission
COMESA	Common Market for Eastern and Southern Africa
DBSA	Development Bank of Southern Africa
DFI	Development finance institution
DFID	Department for International Development, United Kingdom
DOE	Department of Energy, South Africa
EAC	East African Community
ECOWAS	Economic Community of West African States
EIB	European Investment Bank
EPC	Engineering, procurement and construction
EU	European Union
GDP	Gross domestic product
GIB	Global Infrastructure Basel
GIF	Global Infrastructure Facility
IAIDA	Institutional Architecture for Infrastructure Development
IBRD	International Bank for Reconstruction and Development
ICA	Infrastructure Consortium for Africa
ICT	Information and communication technology
IFC	International Finance Corporation
IIPDF	Indian Infrastructure Project Development Facility
IsDB	Islamic Development Bank
IPP	Independent power producer
IPPF	Project preparation facility
KfW	Kreditanstalt für Wiederaufbau [German Development Bank]
MDB	Multilateral development bank
MDC	Maputo Development Corridor
NEPAD	New Partnership for Africa's Development
NIF	Nigerian Infrastructure Fund
ODA	Official development assistance
PAP	Priority action plan
PDF	Project development facility
PE	Private Equity
PIDA	Programme for Infrastructure Development in Africa
PIDG	Private Infrastructure Development Group
PIM	Project information memorandum
PPIAF	Public-Private Infrastructure Advisory Facility
PPF	Project preparation facility
PPFN	Project preparation facilities network
PPP	Public private partnership
PPU	Project preparation unit
RE	Renewable energy
RECs	Regional economic communities
REIPPP	Renewable Energy Independent Power Producer Procurement
SADC	Southern African Development Community
SDI	Spatial Development Initiative
SOE	State owned enterprise
TAF	Technical Assistance Facility
VC	Venture Capital
WEF	World Economic Forum

1. INTRODUCTION

“The key problem is not a lack of funding, as might be expected, Instead, it is the lack of packaged, bankable projects – which in turn points to a need for more and better project preparation.” (PPIAF)

The lack of a strong pipeline of well-prepared, bankable projects has been widely recognized as one of the key constraints to infrastructure development in Africa. ‘Project preparation’ is a process which comprises the entire set of activities undertaken to take a project from conceptualization to actual implementation. The level of complexity and therefore cost of preparation varies according to the project size, sector, target beneficiaries, rural or urban focus, and various other parameters. Recent estimates by the NEPAD-IPPF show that project preparation can be up to 10-12% of the total project costs for large regional projects in Africa. The continent is grappling with resource constraints, both financial and of technical capacity for undertaking project preparation. Hence, enhancing the effectiveness of project preparation requires an analysis of factors influencing demand and supply of project preparation financing. On the demand side, there is a need to assess the institutions involved in project preparation, so that efficiencies can be reaped through better utilisation of the current resources available for project preparation; on the supply side there is a need to understand how to mobilise the requisite resources to enhance the capacity for systematic project preparation.

The objective of this paper is to raise both the demand and supply side issues, as well as to propose recommendations for addressing these concerns for the deliberation of the ICA Annual Meeting 2014. The paper is organised as follows:

- Section 1 provides an introduction and lays out the objectives of the paper;
- Section 2 explains the project preparation process and identifies the project preparation financing gap;
- Section 3 presents an overview of the complex institutional landscape of project preparation with particular emphasis on the roles of national governments, regional economic communities and project preparation facilities;
- Section 4 assesses the various sources and forms of financing which can be leveraged for the early, mid and late stages of project preparation;
- Section 5 analyses how private sector financiers can be incentivised to become meaningful partners in the project preparation process, with reference to South Africa’s experience with the Renewable Energy IPPP project and the N4 toll road project; and
- Section 6 concludes.

2. BACKGROUND AND CONTEXT

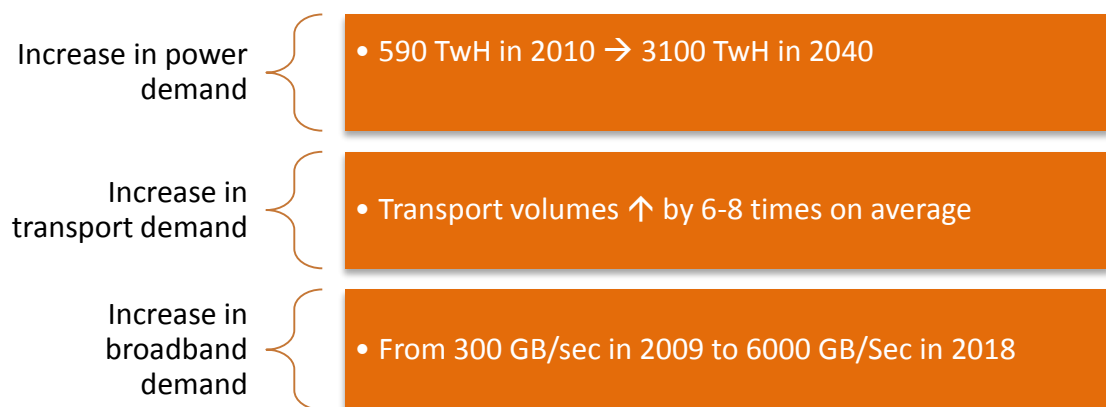
2.1. THE AFRICAN INFRASTRUCTURE DEFICIT

Infrastructure development is commonly understood to mean the development of assets in the transport, water and sanitation, power, and telecommunications sectors. It also includes the development of social infrastructure in the education and health sectors. It assists in unlocking the economic growth potential of a country in three key ways¹:

1. Increase in productivity: Infrastructure assets, such as roads, electricity, water, and telecommunications services are essential inputs for both the private and public sectors. The availability of reliable infrastructure assets can increase returns and levels of investment and therefore accelerate economic growth.
2. Diversification of the economy and development of new markets: Infrastructure assets assist in linking disparate parts of a country which helps businesses access new customers and develop new markets, driving both productivity and economic growth.
3. Human Capital: The creation of social infrastructure such as schools and hospitals can assist in effective human capital formation, leading to enhanced labour productivity and skills.

Africa has the lowest infrastructure endowment amongst all developing regions in the world². NEPAD has noted that Africa will be negatively affected by infrastructure shortages in light of growing demand in the next two decades, as depicted in Figure 1. It has been estimated that investments in infrastructure could raise Africa's GDP by up to 2% per year.³ Hence, the African Infrastructure deficit acts as a key constraint in Africa's development.

Figure 1: Estimated Infrastructure Demand in Africa



Source: NEPAD (2008)

Africa is currently facing a severe lack of a financing to meet this infrastructure deficit, thereby resulting in a 'funding gap'. This has become another major constraint to infrastructure development on the continent. Various estimates have been calculated to determine this funding gap and are presented in Figure 2.

¹ World Bank. 1993. *The Contributions of Infrastructure to Economic Development*.

² World Bank. 2008. *Making Sense of Sub-Saharan Africa's Infrastructure Endowment: A Benchmarking Approach*.

³ ICA and PEI. 2011. *Infrastructure Investor Africa – An Intelligence Report*.

Figure 2: Estimates of the African Infrastructure Funding gap

2006 - 2015	US\$ 48 Billion	Annual estimate for Africa's overall current requirement by AICD
2012 - 2020	US\$ 7.5 billion	Annual estimate for 16 PIDA PAP projects by NEPAD
Until 2040	US\$ 360 billion	Estimate of PIDA's long term implementation by NEPAD

Source: NEPAD (2008) | World Bank (2008)

2.2. THE PROJECT PREPARATION PROCESS

This paper defines '*project preparation*' as a process which comprises the entire set of activities undertaken to take a project from conceptualisation to implementation. The primary aim of the project preparation process is to develop a project idea to the point where it attracts financing. This involves producing a suite of project documents which demonstrate bankability and thus motivate financier interest.

The Infrastructure Consortium of Africa⁴ (ICA) presents project development in six phases; activities undertaken may be overlapping and are not necessarily linear. This six phase project development cycle is presented in Figure 3, and is grouped into the early, middle and late preparation stages. The first five phases up to and including transactions support constitute the project preparation process.

The level of complexity and therefore cost of preparation varies according to the project size, sector, target beneficiaries, rural or urban focus, and various other parameters. Project preparation cost can be measured as proportion of capital expenditure or total project costs. Several estimates of these metrics are available in the literature.

At a *global level*, some of the estimates of project preparation costs are as follows:

- GIB (2014) reports that on average, project development represents about 3-5% of the project costs, going up to 10% in emerging frontier markets.⁵
- PPIAF (2009) finds that, for infrastructure PPPs, project preparation forms about 3-4% of investment costs for projects under US\$ 100 million, and about 2% for projects costing more than US\$ 500 million.⁶
- UNEP (2011) estimates that, typically, project preparation is about 5% of total project costs, for low carbon technology infrastructure projects.⁷

⁴ ICA. 2012. *Assessment of Project Preparation Facilities for Africa*. [ICA (2012)]

ICA. 2006. *Project preparation Guide*. [ICA(2006)]

⁵ GIB. 2014. *Unleashing Private Capital Investments for Sustainable Infrastructure Greenfield Projects*, pp. 14 [GIB (2014)]

⁶ ICA and PPIAF. 2009. *Attracting Investors to African Public-Private Partnerships: A Project Preparation Guide*, pp. 41.

⁷ UNEP. 2011. *Catalysing Early Stage Investment*. [UNEP (2011)]

Figure 3: The project development cycle

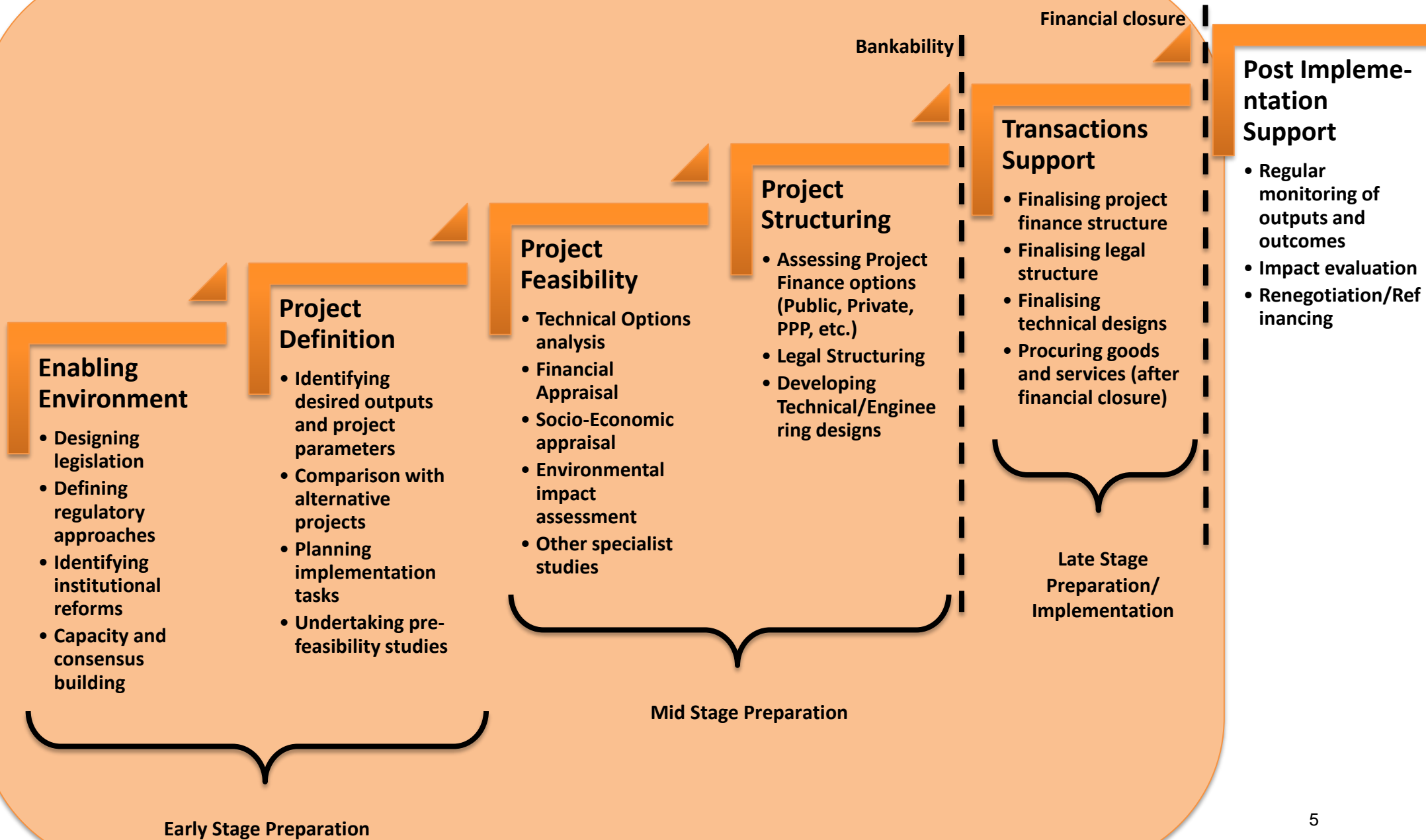
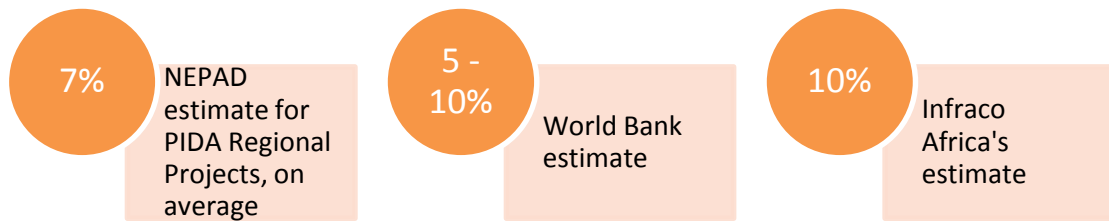


Figure 4: Project preparation costs as a proportion of capital expenditure for Africa

Source: ICA (2012); NEPAD-IPPF (2014)

Note: These estimates could correspond to different years.

Figure 4 shows estimates of project preparation costs as a proportion of capital expenditure for *Africa* only. More recent estimates by indicate that the preparation cost for large, regional projects, such as those in the PIDA pipeline, can be between 10-12% of total project cost⁸. By applying the NEPAD average of 7% to the infrastructure funding gap (Figure 2), estimates of the 'project preparation financing gap' are obtained (Figure 5).

Figure 5: Estimates of the project preparation financing gap

2006 - 2015	US\$ 3.36 Billion	Annual estimate for Africa's overall current requirement by AICD
2012 - 2020	US\$ 0.52 billion	Annual estimate for 16 PIDA PAP projects by NEPAD
Until 2040	US\$ 25.20 billion	Estimate of PIDA's long term implementation by NEPAD

Source: Genesis estimation

2.3. PROJECT PREPARATION FACILITIES

Infrastructure project preparation facilities (PPFs) are institutions with funds specially demarcated for use in the early, mid or late stages of project preparation. PPFs are not homogenous and vary according to several parameters such as host organisation, type of financing provided, sector, geography, project stage focus and whether support is provided to PPP projects.

From an initial analysis of 67 sources, ICA (2012) identified 17 core facilities which could be classified as PPFs, out of which only 12 were operational at the time. PPF commitments grew from US\$ 10 million in 2005 to over US\$ 80 million in 2010. As of 2012, these 17 PPFs had US\$ 190 million remaining for project preparation financing, which was not earmarked for specific projects. This pales in comparison to the project preparation financing gap estimated in Figure 5 above.

PPFs are not a one stop shop and focus their support on specific project stages, with the early stage receiving the least attention from PPFs in Africa. Most PPFs, particularly those focussed on PPPs, lend the most amount of support to the mid-to late stages which involve lower risk. The World Bank's PPIAF, exceptionally, provided 40% of its total support to phase 1 activities.

⁸ NEPAD-IPPF Oversight Committee. 2014. *Africa50-Information Note*. [NEPAD-IPPF (2014)]

Certain key structural features of PPFs hinder the efficacy of PPFs. A detailed review of these challenges can be found in Appendix 1, with a summary of recommendations below.

1. Unsustainable funding models: The majority of financing provided for project preparation is through grants, resulting high levels of sunk costs for PPFs. Therefore, innovative models of cost recovery must be explored in order to have sustainable PPFs.
2. Limited and unsystematic financing for project preparation: PPFs are facing severe financing constraints and this limited funding pool hampers their overall project delivery capability. Hence, there is a need to leverage increased financing for PPFs.
3. Paucity of specialist facilities: PPFs which have a defined focus are able to develop 'core competencies' and thus have an advantage over more generalized facilities.⁹ Specialisation based on one or more of these parameters should be encouraged as it would allow for economies of scale and institutional cross-learning.
4. Bureaucratic administration of facility funds: A majority of PPFs are hosted by MDBs, regional development banks, or donors and their operations are heavily influenced by the institutional structure of the host. There is a need to streamline bureaucratic procedures at PPFs.
5. Lack of involvement in early stage project preparation: Most PPFs only get involved in the mid to late stages of the project preparation process. It is necessary to focus PPFs wards the early stage to maximise their development impact.
6. Paucity of project appraisal and managerial capacity: ICA (2012) finds that there remains a severe skills gap in at least 5, and a moderate skills gap in 4 of the 14 PPFs assessed. Most PPFs have underestimated the challenges involved with the wider role that their management may be called upon to play in project preparation, when driving tasks in each phase. There is, therefore, a need to build the internal capacity of PPFs.¹⁰
7. Lack of transparency: Although the ICA Fund Finder has eased the process of obtaining information about 13 core PPFs, there is still a vast amount of information on detailed eligibility criteria, and funding priorities in terms of sectors, countries and grant sizes which is difficult to obtain. Further, it remains difficult to obtain explanations from facilities on the reasons for the rejection of an application. Hence, PPFs should find ways to engage with their applicants to provide feedback on improving future applications.

In order to bridge the project preparation financing gap, interventions are required on both the demand and supply side. On the demand side, there is a need for assessing the institutions involved in project preparation, so that efficiencies can be reaped through better utilisation of the current resources available for project preparation. On the supply side there is a need to understand how to mobilise the requisite resources, both in terms of technical capacity as well as financing to enhance the capacity for systematic project preparation. An assessment of the demand side issues follows in the next section.

⁹ ICA (2012)

¹⁰ ICA (2012), p. 71

3. UNDERSTANDING THE INSTITUTIONAL LANDSCAPE OF PROJECT PREPARATION

Project preparation is a complex process and involves inputs from several key stakeholders such as governments, domestic and international financiers and technical specialists, as well as specialised PPFs. Each of these institutions has a distinct role in the project preparation process, and may be involved in one or more stages.¹¹ The roles of three key institutions - national governments, RECs and PPFs - are discussed below.

3.1. CRITICAL ROLE OF GOVERNMENT AND POLITICAL SUPPORT FOR PROJECT PREPARATION

National governments are required to play a central role to undertake infrastructure development. The role of project sponsor is often played by line ministries or government departments. Bureaucrats within these departments are expected to drive the project preparation process and coordinate inputs from various parties to the project. While undertaking technical studies may be beyond their resource capacity, it is expected that the sponsor will anchor critical activities in the project preparation process, including:

- Reviewing and creating enabling policy and legislation for undertaking the project, such as PPP and procurement policies;
- Soliciting political support for the project within the government;
- Liaising with other government departments and ministries that need to be involved in the project;
- Engaging non-governmental institutions including PPFs, technical consultants and sector specialists to fill gaps in the project preparation process;
- Reviewing and providing approval for technical work undertaken by advisers on the project;
- Engaging with financiers from the public and private sector, as well as the donor community, to bring the project to financial close;
- Formulating and undertaking an implementation and monitoring plan.

Over and above the implementation capacity of government agencies and the bureaucracy, **political commitment is the key to a successful project preparation process**, as it assists in:

1. Minimising political risk: Typically, infrastructure projects involve a high level of resource investment from governments, both in terms of funding and bureaucratic capacity. Further, this resource investment has a long gestation period as preparation and construction can span between 10 to 15 years.¹² This requires consistent political commitment so that all stakeholders understand that the project is a government priority.

¹¹ Institutions involved in project preparation and their roles are discussed in depth in Appendix 2.

¹² NEPAD-IPPF (2014)

2. Leveraging project preparation financing: Financiers, from both the public and private sector, prefer working with governments that have clear political priorities and buy-in for particular projects, so that the political risk associated with their investment is minimised.
3. Building consensus in regional projects: Political commitment is even more critical in the case of regional infrastructure projects. Several countries must put their combined weight behind a project for consensus building, steering project preparation, and for securing financier interest, as the political risk is compounded in such projects.

Hence, strong political commitment at the level of the national government, and equally strong bureaucratic support within the sponsor government agency, are necessary conditions for successful project preparation. For regional infrastructure projects, the situation is complicated by certain inherent institutional considerations, particularly with regard to balancing regional and national interests.

3.2. COMPLEXITIES IN REGIONAL LEVEL PROJECT PREPARATION

Project preparation is complicated in regional projects on account of two key factors:

1. Inherent complexities at project level: Regional projects have certain characteristics which result in making their preparation relatively arduous, in comparison with projects involving a single country. For instance, the involvement of multiple national governments can make it difficult to establish clear ownership of the project and for external parties to identify which government to approach. These inherent complexities are summarised in Table 1 alongside suggested recommendations, and are discussed in further depth in Appendix 3.
2. Misalignment of regional and national level priorities: While regional organisations think of a bigger picture regional development plan, national governments could be concerned with the gains and losses to be incurred by their citizens, particularly the poor. Such regional versus national trade-offs could cause national support to wane.

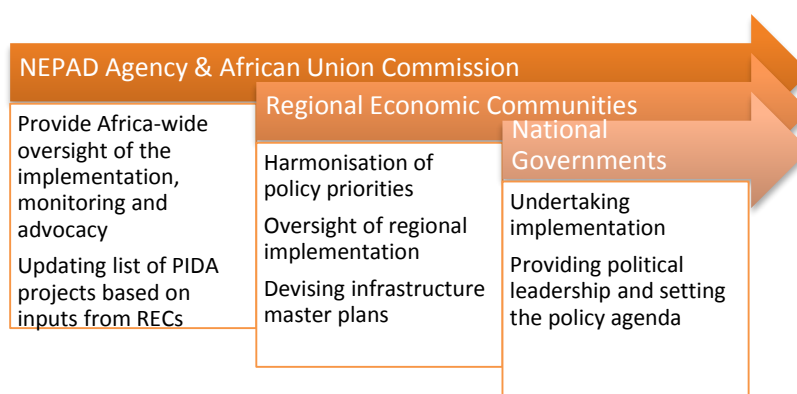
It is envisaged that the development of mega, regional infrastructure projects in Africa will largely be centred on the PIDA list of projects, with priority accorded to the PIDA PAP. PIDA sees integrated, continental infrastructure as the primary means to unlock economic growth and trade competitiveness in Africa.¹³

¹³ NEPAD. 2008. *Programme for Infrastructure Development in Africa: Interconnecting, integrating and transforming a continent*. [NEPAD (2008)]

Table 1: Inherent complexities of regional projects

Inherent complexity of regional projects	Suggested recommendation
Differing policy priorities	Increased focus on aligning national policy priorities for regional infrastructure projects in accordance with PIDA projects, as well as updating the list of PIDA projects to reflect national concerns regularly
Disharmony in legal and regulatory regimes	Following a 'regulation by contract' approach in the short term at the project level
Coordination failure in the absence of formal institutional mechanisms	Regular stakeholder engagement by using convening power of the PPFN, NEPAD Agency the ICA and the RECs
Differing technical and institutional capacity for project preparation	Each country makes differentiated contributions in accordance with its capacity. Cost recovery mechanisms can be instituted for repayment of investments made in project preparation so that all countries are incentivised to invest and there is no free riding on common resources.

As per the Institutional Architecture for Infrastructure Development in Africa (IAIDA) governing PIDA, RECs are the link between PIDA project implementation at the national level and their monitoring and advocacy at the continental level (Figure 6). Further, the RECs are meant to guide future selection of PIDA projects through their infrastructure master plans, which are informed by national priorities. Effective regional project preparation therefore requires that RECs become the regional level coordinators for project preparation.

Figure 6: Institutional Architecture for Infrastructure Development

Source: NEPAD (2008)

National governments and RECs often encounter resource constraints, both in terms of financing and technical capability, when attempting to undertake project preparation. PPFs, discussed below, step in to bridge this resource gap.

3.3. ROLE OF PROJECT PREPARATION FACILITIES

PPFs bridge resource gaps, both by providing technical expertise as well as ring-fenced financing for project preparation, particularly in the mid-to-late stages of preparation. Further, while there is a need to harness multiple sources of financing to bridge the overall project preparation financing gap, the

case for providing systematic financial support to PPFs lies in their comparative advantage over other institutions which can also become project preparation specialists. These advantages include¹⁴:

- Flexibility in disbursement of financing: PPFs can provide unlinked support to project sponsors and implementers, and can use innovative and flexible means of cost recovery, even if grant funding is limited.
- Openness to project ideas: PPFs have been found to be largely ‘demand-led’ when it comes to project origination, taking the views of national and regional stakeholders into account, when choosing which project ideas to support.
- Ability to work directly with the private sector: If not hosted by governments or MDBs, PPFs have the flexibility to engage directly with the private sector and to incorporate their skills and financing to develop project ideas.
- Economies of scale in the project preparation process: They allow for institutional learning to be transferred across projects and for funds to be aggregated, thereby reducing financing costs.

3.4. RECOMMENDATIONS TO ENHANCE THE EFFECTIVENESS OF PROJECT PREPARATION IN AFRICA

In light of the institutional landscape of project preparation discussed above, two recommendations to enhance the efficiency of the project preparation process are provided. Firstly, the ultimate responsibility of taking a project through the preparation process should be borne by the national government, while the RECs provide oversight. Secondly, the newly formed project preparation facilities network should play a coordinating role between the various PPFs to enhance their efficiency.

3.4.1. National ownership of the project preparation process

Discussions with several stakeholders have suggested that one of the shortcomings of project preparation in Africa is the lack of clarity over roles and responsibilities amongst stakeholders. Hence, based on the observations in sections 3.1, 3.2 and 3.3 and in line with the IAIDA structure shown in Figure 6, a framework to enhance the effectiveness of the project preparation process is proposed. This is presented in Figure 7. The main features of this model are as follows:

1. National Ownership: As noted in section 3.1, political and bureaucratic support from national governments, in their capacity as project sponsors, is a necessary condition for undertaking project preparation. Further, when grant funding is provided by donors or PPFs and the government makes no contribution, there is reduced urgency to reach milestones.

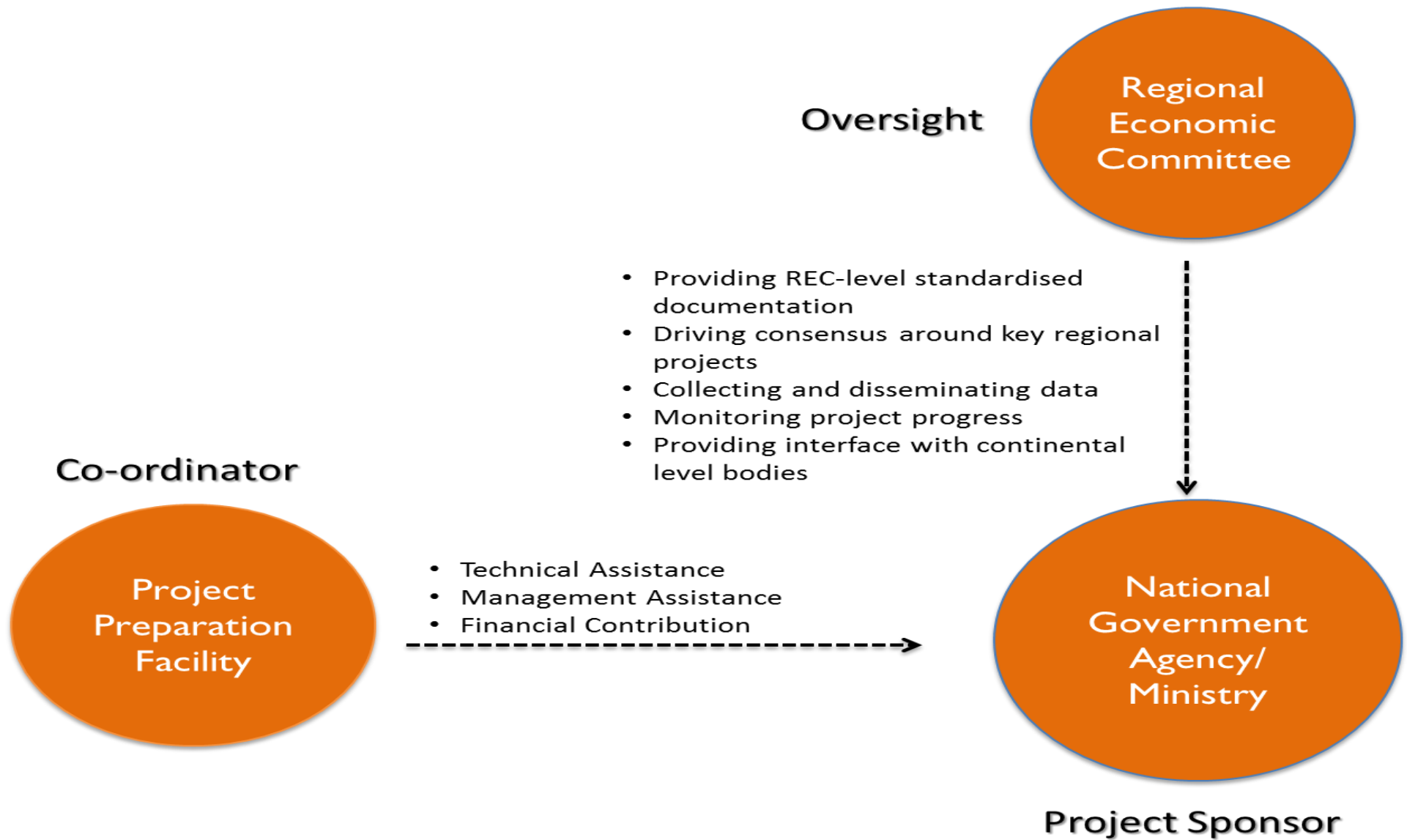
Hence, the project preparation process should be anchored by the relevant line ministry/agency in the government. National ownership is strengthened where the project sponsor contributes to preparation costs, as the sponsor becomes directly accountable for the spending outcomes. Further, this serves as a strong signal of its commitment for investors and the private sector. Hence, a financial and/or in-kind contribution by national governments is preferable. National-level ownership and accountability should be accompanied by national governments institutionalising project preparation within government departments. For cross-border regional-level projects, it is envisaged that the RECs would provide oversight and coordination across

¹⁴ ICA (2012), p. 36

countries, but the anchor of project preparation would continue to be the national government agencies in the respective countries.

2. Oversight from RECs: In line with the role envisaged by the IAIDA (see section 3.2), it is recommended that the RECs be involved in providing oversight of the project preparation process, but not participate in its technical aspects. The specific ways in which RECs can support the project preparation process are as follows:
 - 2.1. RECs should produce standardised templates, and guidance documents, such as standardised procurement documents (EOI, RFP, RFQ) for PPP projects, and guidelines for feasibility studies, amongst others. These can be used by national governments and PPFs across the region and contribute to the setting of uniform REC-level standards for project documentation across countries in the region.

Figure 7: Framework of national ownership for project preparation



- 2.2. RECs should strive to build consensus between all stakeholders around priority regional infrastructure projects, which can form part of the regional infrastructure master plan so that a pipeline of priority projects can move into preparation with the full political support of the countries involved.
 - 2.3. Given the challenges associated with obtaining accurate project information, RECs can lead data and information collection efforts for gathering key details on regional priority projects including project sponsors, stakeholders involved, project components, estimated costs, potential risks, etc. This information can be disseminated on an online knowledge sharing platform such as the NEPAD Agency's Virtual PIDA Information System, for use by national governments and PPFs.
 - 2.4. RECs should monitor progress of regional projects by liaising with national level project preparation units and national agencies that are at the forefront of the process.
 - 2.5. The RECs form a key link in the institutional architecture between national governments at one level and continental bodies such as the AUC at another level. Hence, they should build high-level consensus about priority projects and represent the concerns of national governments at these forums.
3. Co-ordination from PPFs: Although national governments assume the ownership of the project preparation process, they may lack the skills and experience to undertake project preparation, particularly for large, complex projects. In this framework, it is envisaged that PPFs shall assist national governments throughout the project preparation cycle by providing technical and managerial assistance as well as financial resources. Specific ways in which they can assist include:
- 3.1. In the early stage, PPFs can add value by guiding the national governments on legal and regulatory issues, refining the scope of the project and undertaking stakeholder engagement.
 - 3.2. In the mid-stage, PPFs can either undertake the feasibility study, or assist in the selection of a technical consultant. The PPF staff (or their nominated experts) can also provide oversight of the feasibility study for maintenance of quality standards.
 - 3.3. In the late stage, PPFs can assist national governments in liaising with public and private sector financiers, appointment of transaction advisors as well as in dealing with legal and regulatory issues.

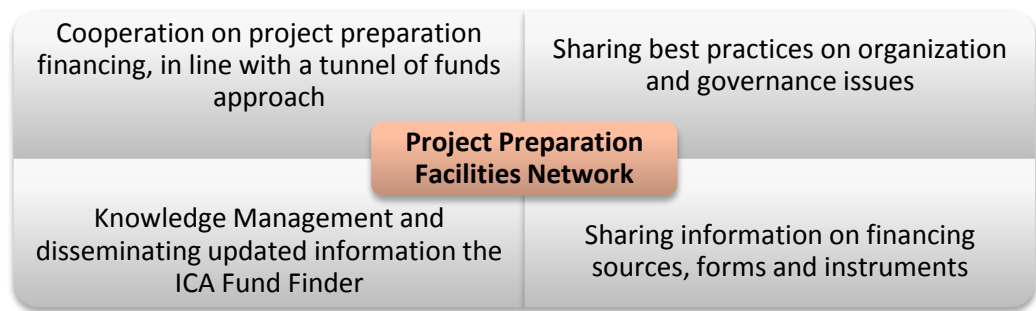
3.4.2. Coordinating role of the Project Preparation Facilities Network

It is recommended that the newly formed PPFN be harnessed for greater coordination between the various PPFs to support the national ownership framework of project preparation, as follows:

1. Knowledge Management: The PPFN should undertake systematic data collection on the eligibility criteria, focus areas and financing capacity of various PPFs and report these via the ICA Fund Finder so that this information is readily available to national governments undertaking project preparation.¹⁵

¹⁵ ICA. 2013. *ICA proposal for the creation of a project preparation facilities network*.

Figure 8: Role of the PPFN



2. Sharing best practices on organizational and governance issues: While one PPF may be grappling with issues of bureaucratic administration, another might find that its success ratio is much lower than targeted and its funding pool is limited. The PPFN can facilitate dialogue amongst PPFs so that they learn from each other's experiences, and share knowledge on regional and international best practices.
3. Cooperation on project preparation financing, in line with a tunnel of funds approach: Most PPFs focus on providing financing/technical support for particular stages, rather than supporting the entire project preparation process. The PPFN can facilitate cooperation between groups of PPFs that focus on supporting the different stages of the project preparation process. This will enable continuity in the project's preparation financing, so that the process progresses smoothly and delays are limited. This will also allow PPFs to develop areas of specialisation and comparative advantage in terms of the stage of preparation that they cover.

A similar argument can be made for multi-sector projects, as well as regional projects. In the case of regional projects, a group of PPFs focussing on the different countries involved can come together, facilitated by the PPFN, to support the project. The financing can be structured according to a tunnel of funds approach¹⁶.

4. Sharing information on financing sources, forms and instruments: The PPFN can act as a forum for the exchange of information and best practice on how innovative sources of finance and private sector participation can be leveraged for project preparation.

Realising institutional efficiencies may help to bridge the demand side of the project preparation financing gap, while the supply side will still need to be addressed. The next section discusses financing options, specifically in terms of sources, forms and instruments of finance suitable for the various stages of the project preparation process.

¹⁶ "The funding of sequential support to different stages of the project cycle by different PPFs has become known as the 'tunnel of funds' approach to project preparation." [Source: ICA(2012)]

4. FINANCING PROJECT PREPARATION IN AFRICA

The extent of the project preparation financing gap has been examined in section 2. On average, project preparation financing requires between 5-10% of the total project cost, however actual allocations made for project preparation financing can be much lower in practice. At present, grant funding from donors, through ODA as well as routed through PPFs is the largest source of financing for project preparation. ICA (2012) argues that support for early stage preparation continues to remain limited as most PPFs only get involved in the mid to late stages of the project preparation process.

The existence of the early stage financing gap is partly due to excess demand for infrastructure financing; however, another important factor is the level of risk involved. Early stage project preparation *is the point of highest risk in the project development cycle*, as it is the farthest point from the project's actual implementation. On average, NEPAD-IPPF (2014) notes that it takes 7-10 years for large scale African infrastructure projects to move from identification to financial closure, and then a further 3-5 years may be required for construction.¹⁷ World Bank (1996) had reported that in developed economies, project development in the private sector can take between 2- 8 years.¹⁸ This time lag between investments and returns leads to a problem of asymmetric information and heightens the investment risk. Hence, despite the fact that the amounts of financing required for the early stage forms a small proportion of the total project cost, the risk involved deters investors. Therefore, in order to find solutions to bridge these gaps, there is a need for diversification, particularly as grant funding is limited.

Financing options for project preparation may be viewed along two dimensions:

1. **Sources of financing** such as public sector, private sector, donors, etc.
2. **Forms and instruments of financing** including grants, debt, equity and guarantees.

In this section, three classes of financing sources are presented: traditional, private sector based, and innovative, emerging sources. Then, the major forms of financing which can be used for project preparation are discussed. Finally, these ideas are brought together to recommend a framework for bridging the project preparation financing gap.

4.1. SOURCES OF FINANCING

In this section, a variety of financing sources for project preparation are explored, and constraints to leveraging financing from each of these sources are analysed.

4.1.1. Typology of financing sources

The sources of financing for project preparation can be grouped into three areas: traditional, private sector and innovative sources, as shown in Figure 9.

While, traditional financiers currently form the largest proportion of infrastructure financing in Africa, the contributions from private sector and innovative sources is growing.

- The World Bank, AfDB and EU institutions were the top 3 multilateral donors, whereas China, Japan and France were the top 3 bilateral donors¹⁹.

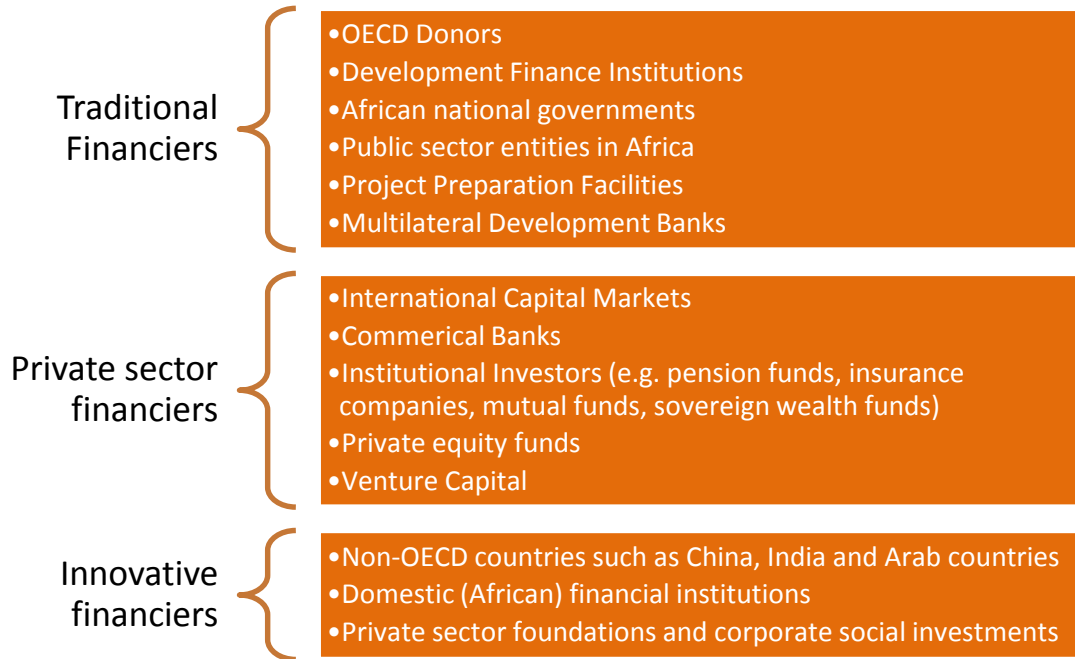
¹⁷ NEPAD – IPPF (2014), p. 2.

¹⁸ World Bank. 1996. *Transaction Costs in Private Infrastructure Projects—Are They Too High*.

¹⁹ OECD. 2012. *Mapping Support for Africa's Infrastructure Investment*. [OECD (2012)]

- The contribution of African national governments to total infrastructure funding was about 47%, public sector external funding was about 44% and private sector about 9% in 2012.²⁰
- Contribution from non-OECD financiers, mainly China, India and Arab countries, increased from less than US\$ 1 billion in 2003 to about US\$ 19 billion in 2012²¹. China has emerged as the largest financier of Africa infrastructure.

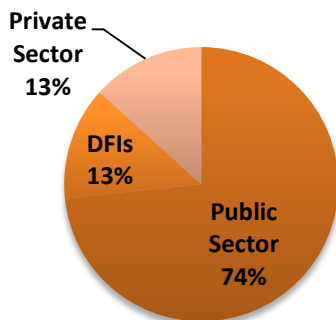
Figure 9: Sources of financing for project preparation



Source: ICA (2012) | NEPAD-IPPF (2014) | PPIAF (2008)

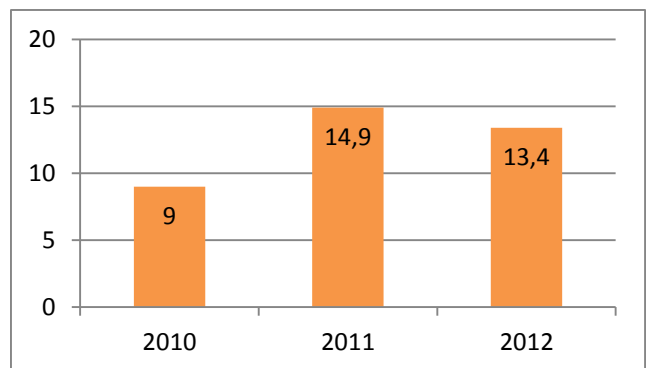
Although it is unclear how much of the financing from private sector and innovative sources has been directed to project preparation, particularly in the early stages, the sheer size of the investments being made by these sources in recent years suggests that there exists an opportunity to leverage increased financing from them.

Figure 11: Current actual annual infrastructure investment, by source (%)



Source: NEPAD-IPPF (2014)

Figure 10: Chinese investment in African infrastructure (US\$, billions)



Source: ICA Annual Report 2012

²⁰ ICA (2012)

²¹ PPIAF. 2008. *The changing landscape of infrastructure financing in Africa*
ICA (2012)

4.1.2. Constraints on financing from these sources

There are certain constraints when it comes to providing financing for project preparation. The key areas of concern when it comes to financing from these sources for project preparation are as follows:

1. Traditional financiers

- 1.1. Traditional OECD donors are the largest source of project preparation financing in Africa²²; yet following the recent financial crisis, financing provided by this source has become more limited and more focused on the function of **leveraging finance** from the private sector and innovative sources. One of the ways in which traditional donors have been undertaking this function is to focus their support on the ‘soft’ aspects of infrastructure development including legal and regulatory reforms to assist in creating an enabling environment for leveraging financing from the private sector and more innovative sources in the later stages. Traditional financiers are dedicating more of their financing to these ‘soft’ aspects. OECD (2012) noted that average official development financing for these aspects of infrastructure was about US\$ 1.6 billion (2008-10), amounting to about 22% of the aid provided to infrastructure financing in Africa.²³ Hence, traditional OECD donors are an important source of project preparation financing, particularly for the early stages.
- 1.2. Africa shows promising **domestic resource mobilisation** potential, with US\$520 billion in tax revenues, US\$ 400 billion in international reserves and US\$ 40 billion in diaspora remittances.²⁴ Also, on average, spending on infrastructure development by 20 selected African economies increased by 8.6% from 2010 to 2012²⁵. However, domestic resource mobilisation is constrained by
 - **Low domestic savings rates:** The savings to GDP ratio over 2005-10 in Africa was just 22% (much lower than the 46% in East Asia). This arises from a lack of access to the formal banking system for low income earners and low interest rates paid on savings.²⁶
 - **Low tax to GDP ratios:** The average tax-to-GDP ratios in low and middle income countries are 11.1% and 13% respectively compared to an average of 15% for high income countries²⁷. African countries can increase tax revenues by expanding their tax base and focus on tapping underutilised sources such as property and environmental taxes.

Channelling domestic resources to infrastructure development requires the availability of suitable instruments of financing, including:

²² ICA. 2012. *Annual Report*.

²³ OECD (2012), p. 27

²⁴ NEPAD. 2014. *Mobilizing Domestic Financial Resources for Implementing NEPAD National and Regional Programmes & Projects*, p. 15. [NEPAD (2014)]

²⁵ ICA. 2012. *Annual Report*.

²⁶ NEPAD (2014), p. 16.

²⁷ AfDB. 2011. *Closing Africa's Infrastructure Gap: Innovative Financing and Risks*, p.6. [AfDB (2011)]; NEPAD (2014), p. 18

- **Sovereign wealth funds** with a specific infrastructure component can be useful for harnessing revenues from natural resource commodities. Thirteen African countries, including Nigeria, have already set up such funds²⁸.
- **Diaspora bonds** are long term debt instruments targeted at mobilising the savings of the emigrant population. These bonds provide emigrants with an alternate way of contributing to the development of their home country, as well as a means of saving, as opposed to remittances which are largely used for consumption expenditure. The World Bank has estimated that Sub-Saharan African countries could leverage up to US\$ 5-10 billion per year through diaspora bonds.²⁹
- **Pension fund** assets in Africa are growing at an impressive pace.
 - South Africa: US\$ 166 billion (2007) to US\$ 277 billion (2011), i.e. a growth of 67%
 - Nigeria: US\$ 3 billion (2008) to US\$ 14 billion (2010); i.e. increase of more than 3 times.

Nigeria's Sovereign Wealth Fund was set up in 2012 to receive, manage and invest in a diversified portfolio of investments from the Federal and state governments. Its aim is to prepare for the eventual depletion of Nigeria's hydrocarbon resources and it has about US\$ 1 billion in assets.

The Nigeria Infrastructure Fund (NIF) focuses entirely on domestic investments in selected infrastructure sectors with a 40% allocation of Funds under the Nigeria Sovereign Wealth Fund. The NIF is managed by an in-house team of investment professionals tasked with identifying infrastructure investments, undertaking project preparation for potential investments and recommending projects for investment to the Board.

Source: <http://nsia.com.ng/>

Financial sector deepening is required to channel pension fund assets into infrastructure bonds and infrastructure funds.

Moreover, it is essential that the increasing domestic spend on infrastructure by African governments be directed towards early stage project preparation so that it can catalyse other sources of financing for the later stages. In order to direct increased infrastructure development financing to project preparation, governments could consider setting up national level project preparation funds, such as the South African National Treasury's Project Development Facility.

National Treasury's PPP Unit has established the Project Development Facility as a vehicle for institutions to source funding for a portion of the transaction advisor costs and thus reduce the impact of PPP procurement costs on institutions' budgets. Ideally, also, the PDF should increase the quality and quantity of successful deals that are processed through the PPP Unit's project pipeline. The PDF has been established as a fund with a limited life span. It will wind down its operations after ten years, by which time PPPs will be well established and their procurement will form part of institutions' budgeting. The PDF recovers these funds from the successful private party bidder after the financial closure of the PPP.

Source: South African National Treasury PPP Manual

²⁸ NEPAD (2014), p. 37

²⁹ AfDB (2011)

2. Private Sector financiers

- 2.1. Private equity funds have been playing an increasing role in financing African infrastructure development, particularly through specialised infrastructure funds. For instance, they have provided long term financing of 15 years for the Emerging Africa Infrastructure Fund and also assisted in mobilising financing from a range of sources, including private sector institutional investors and DFIs.³⁰ Further, WEF (2013)³¹ notes that at a global level, insurance firms have expressed the desire to increase investment in infrastructure from 1.1% to 2.6% of their portfolio, whereas pension funds aim to increase from about 2.8% to 5%.
- 2.2. Nonetheless, discussions with a variety of stakeholders³² suggest that private sector financiers have a limited interest in project preparation, particularly in the early stages where the risks are highest. South Africa's Renewable Energy IPPP programme is one of the few examples where private sector bidders took the lead in detailed project preparation at the mid-to late stages³³. Private sector investments are driven by a business case approach, and if a project does not show commercial viability, it will be difficult to bring a private sector financier on board for project preparation. Hence, there is a need to devise innovative financial instruments to involve the private sector in project preparation.
- 2.3. AfDB (2011) notes that domestic capital markets in most low and middle income African countries are still underdeveloped and that Sub-Saharan economies have low private saving rates. South Africa and Kenya have made strides in harnessing domestic savings for infrastructure financing through financial instruments such as infrastructure bonds, municipal bonds and syndicated loans. However, there is a need for financial innovation and financial sector deepening in low and middle income countries to develop domestic sources of financing for infrastructure development. The contribution of these sources to project preparation would then be dependent on their risk appetite.

Each investor class provides financing in different forms, and they are structured in terms of various instruments. The applicability of these forms of financing to project preparation is discussed next.

4.2. FORMS OF FINANCING

The major forms of financing which are currently being used for infrastructure financing are presented in Figure 12. Under each form, certain examples of financing instruments are also shown.

The list of instruments presented in Figure 12 illustrates that financing for infrastructure project development cycle can be structured in a variety of ways in order to minimize the cost of capital for the project, given the level of risk. However, not all these forms would be suitable for each stage of the project preparation process.

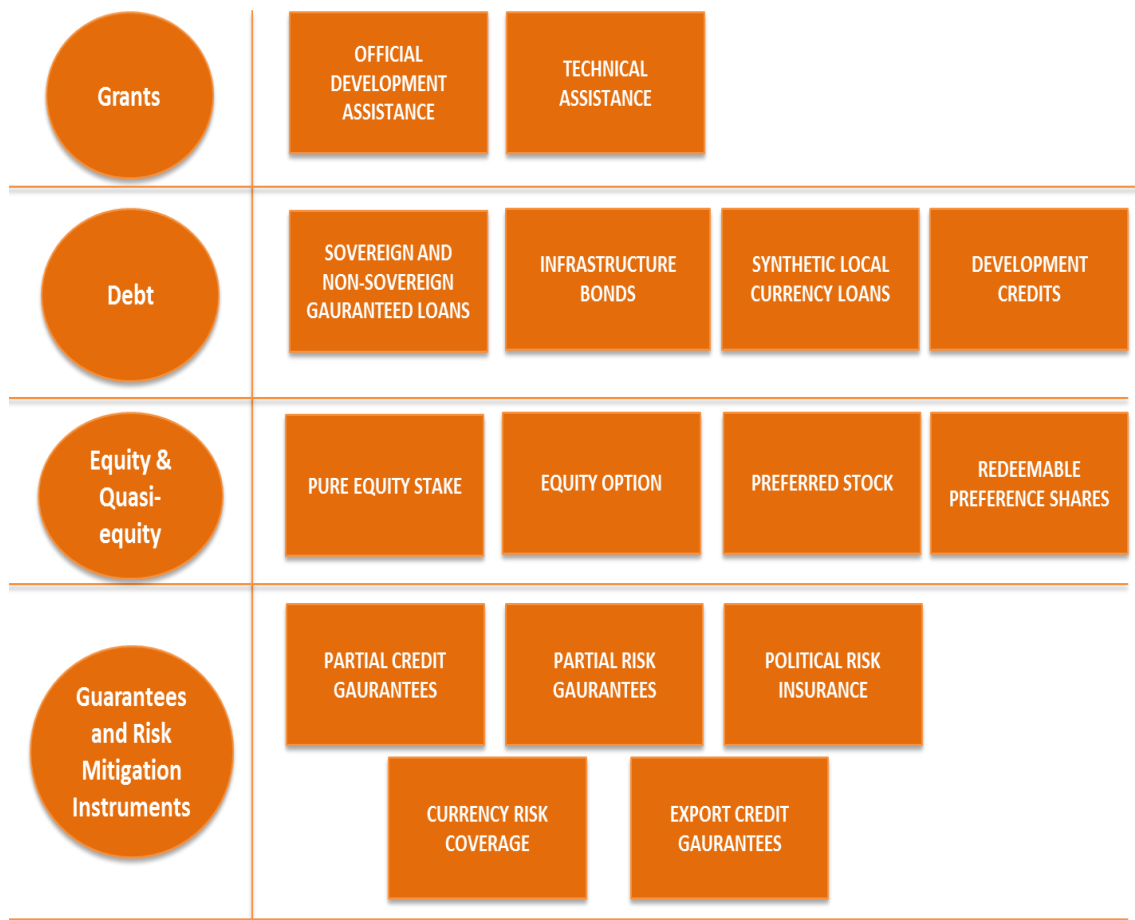
³⁰ AfDB (2011), p. 4

³¹ WEF. 2013. *Strategic Infrastructure Steps to Prepare and Accelerate Public-Private Partnerships*, p. 15.

³² Based on discussions with the WEF, DFID and DBSA.

³³ This case study is discussed in depth in section 5.6.

Figure 12: Forms and Instruments of financing



Source: AfDB (2011) | OECD (2012)

The suitability of each financing form in the context of the project preparation process is discussed below.

1. **Grants:** Grant funding can mostly be accessed from traditional sources, however, non-OECD countries and private sector foundations also provide grants for infrastructure financing. The constraint on grant funding is that it must be justified clearly in terms of specific objectives, outputs and outcomes. Increasingly, one of the key requirements for accessing grant funding is that it must leverage additional financing for the sustainability of the project. Hence, it is recommended that scarce grant funding should be used in the early stages of project preparation, so that it can have a catalytic impact for leveraging other forms of financing in later stages.
2. **Debt:** There is a whole range of loans, at both commercial and concessional interest rates which can be used for infrastructure development. Further, several innovative bond instruments are

Infrastructure bonds are long term debt instruments which can be issued in local currencies on domestic capital markets, and in currencies like the USD on international capital markets. The Government of Kenya has issued 3 local currency infrastructure bonds since 2009 with a total value of US\$ 1 billion. The success of these bonds then spurred the issuance of corporate bonds by the state-owned electricity utility KenGen and private sector firm Safaricom.

Source: AfDB (2011)

emerging, such as infrastructure bonds and diaspora bonds.³⁴ However, it is difficult to access debt financing from commercial banks for project preparation activities, due to the high-level of risk involved.³⁵ Long term debt financing for project preparation can be accessed from DFIs and development banks, which often have an AAA rating, thus lowering the underlying cost of accessing capital. The early stages involve high levels of risk, thereby raising the returns expected by debt financiers³⁶. Hence, in order to optimise the cost of capital, concessional debt financing should be accessed from DFIs and development banks in the mid-to late stages.

3. **Equity:** This is the long term investment undertaken in a project and represents ownership. National governments, development Banks and DFIs as well as private sector financiers are important sources of equity financing. Given the level of risk involved at the early stages, equity financing is more common during late stage project preparation. An innovative way of using equity financing is through cost recovery mechanisms, as is being done by the PPF Infraco.³⁷ This is discussed further in section 5.2.1.

InfraCo finances the high upfront costs of large infrastructure projects and undertakes initial project preparation activities such as carrying out feasibility studies, securing construction permits, and negotiating tariffs and maintenance agreements. Having developed a project to a point where it is bankable, InfraCo recovers its costs through the sale of its property rights to the winning investor, either through a minority equity stake or in cash. If it takes an equity position in the winning company, the stake tends to be approximately 10% to 15% and InfraCo never retains a majority interest. Any profit from the sale is reverted back to the facility's account to cover new project preparation costs.

Source: OECD (2012)

4. **Guarantees and risk mitigation instruments:** DFIs, IFIs and MDBs offer guarantees and risk mitigation instruments with the aim of assisting in leveraging private sector financing. Since guarantees cover commercial and political risks throughout the project development cycle, they improve the risk-return profile of the infrastructure investment, thereby making the investment more attractive for private sector financiers. Some examples are presented in Table 2. Guarantees directly assist in mitigating non-repayment and political risks and have been very effective tools for leveraging finance in the late project preparation stage from the private sector for reaching financial closure. Private sector financiers perceive the provision of risk-insurance products, first-loss positions in projects, and other risk mitigation instruments by MDBs and DFIs to be even more important than their grant making functions.³⁸

³⁴ AfDB (2011), p. 3

³⁵ UNEP (2011), p. 15

³⁶ UNEP (2011) estimates that returns expected by financiers in the early stages are in the range of 30-40%.

³⁷ OECD (2012)

³⁸ OECD and AfDB. 2014. *Private Investment in Infrastructure*, p. 4. [OECD-AfDB (2014)]

Table 2: Risk mitigation support for African infrastructure

Host Institution	Investment Guarantee Agency	Form of support
World Bank	Multilateral Investment Guarantee Agency	<ul style="list-style-type: none"> • Guarantees against non-commercial risks • Loan guarantees • Equity investments
PIDG Group/ Frontier Markets Fund Managers	GrantCo	<ul style="list-style-type: none"> • Long term guarantees for local currency financing • Support local debt capital market issues
African Development Bank	Initiative for Risk Management in Africa	<ul style="list-style-type: none"> • Provides information on risk mitigation instruments for African infrastructure

Source: OECD (2012)

Hence, there is a case for financial innovation so that guarantees can also be used in the mid-stages of project preparation to leverage private sector financing, particularly for commercially viable projects.

The overall recommendations for bridging the project preparation financing gap are discussed in the next section.

4.3. RECOMMENDATIONS FOR BRIDGING THE PROJECT PREPARATION GAP

Based on the discussions in section 4.1 and 4.2, in this section two solutions for bridging the project preparation financing gap are suggested. Firstly, given the risk-return profile of infrastructure projects, the appropriate source and form of financing should be matched to a project preparation stage to realise efficiencies in line with the tunnel of funds approach. Secondly, the Africa50 should be used as one of the primary forums to develop private sector and innovative financing sources as contributors to the project preparation process. These recommendations are discussed below.

For every dollar of public finance invested in early stage project preparation, \$ 4 can be leveraged for late stage project preparation, and \$ 95 for construction finance.

⇒ \$ 1 of early stage project preparation

4.3.1. Matching project preparation stage with an appropriate source/form combination

Matching the correct source/form of financing on the supply side with the given risk-return profile on the demand side, can result in a market equilibrium with optimal levels of investment. Hence, efficiencies can be realised by matching the risk-return profile desired by financiers with the appropriate project preparation stage.

When sufficient attention is paid to early stage preparation, then project information and

documents necessary for proceeding with the mid to late stages become available. Hence, if sufficient resources are provided for early stage project preparation, in line with the tunnel of funds approach, it has the potential to result in a pipeline of well-prepared bankable projects.

As the project moves from the early to the late stages, its worth increases as preparation results in increased value additions at each stage and uncertainty reduces. This implies that it becomes progressively easier to involve financiers with lower risk appetites. Further, UNEP (2011)³⁹ notes, public finance investment in early stage project preparation has a catalytic impact, and can help leverage financing for late stage preparation and project implementation.

Therefore, in light of the discussion on the sources of finance and the forms of financing available for project preparation and noting the catalytic impact of the tunnel of funds approach, a framework for assisting in bridging the project preparation financing gap is proposed, as shown in Figure 13.

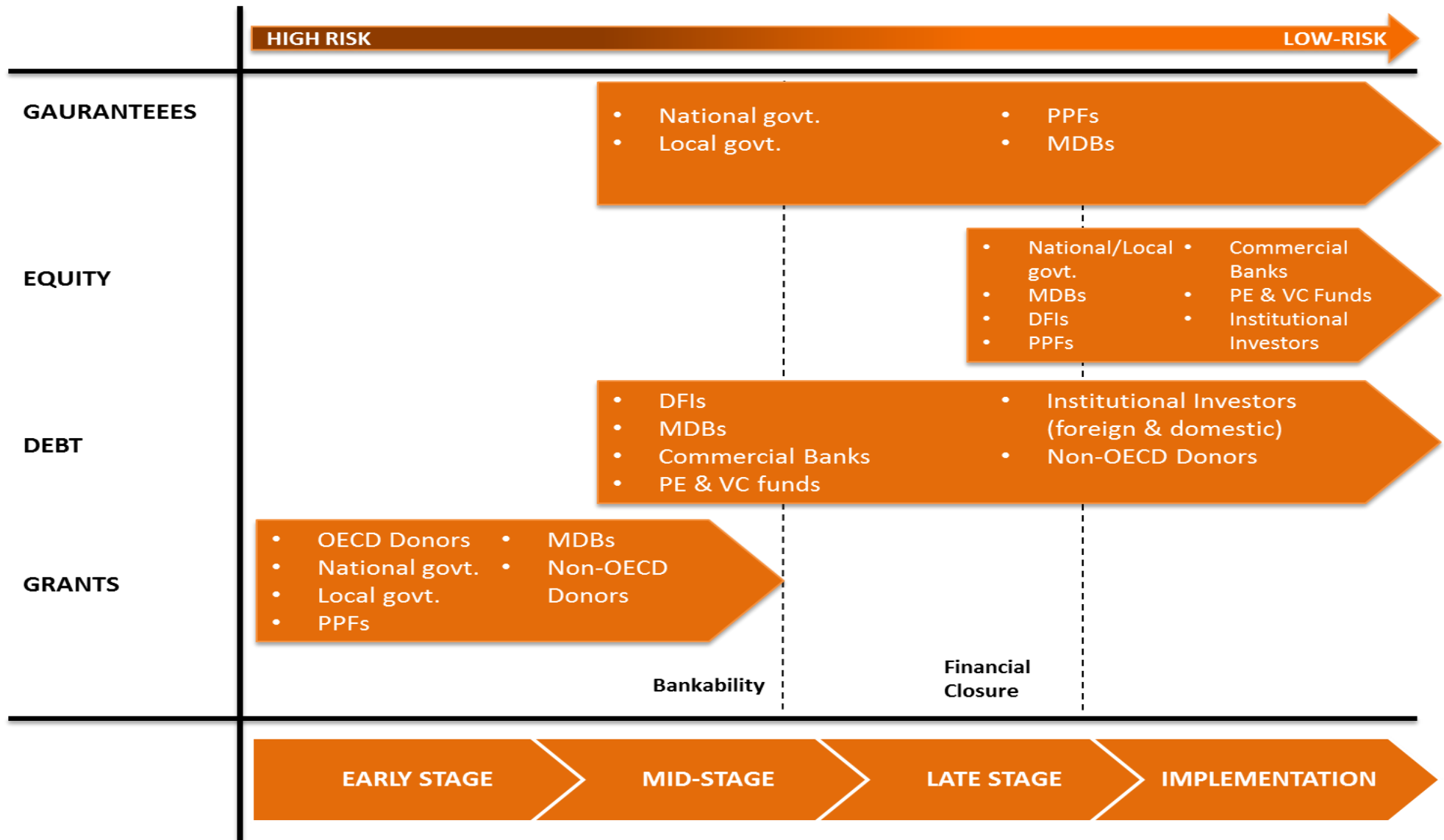
This framework is aimed at enhancing the efficiency of the financing available for project preparation from all areas. The recommendations made for deploying a form and source of financing at particular stages have been done in order to maximise their competitive advantages. The salient points of our framework are as follows:

1. Grant funding from the public sector should be used largely in the early to mid-stages of project preparation, i.e. for tasks relating to the creation of an enabling environment, project definition, and pre-feasibility and feasibility phases. This is recommended since:
 - 1.1. Grant funding is becoming scarcer and more focused on leveraging additional financing, and this trend is likely to continue.
 - 1.2. In the absence of financial innovation to reduce risk, private sector financiers are reluctant to invest in the early stage project preparation tasks.
 - 1.3. Public sector financing has been shown to have a catalytic impact in attracting financing from other sources as risk is reduced in the project preparation process.
2. Debt financing should be used in the mid to late stages of project preparation.
 - 2.1. In the feasibility phase, concessional loans can be taken by the project sponsor from MDBs/DFIs/PPFs and blended with grants, particularly for those projects which show the promise of commercial viability at pre-feasibility. This is because:
 - 2.1.1. MDBs and DFIs, which have an AAA rating, are able to obtain lower cost capital on international capital markets and on-lend to project sponsors.
 - 2.1.2. Using concessional loans would lower the financing cost of the feasibility stage tasks.

Post the feasibility stage, more commercial forms of debt financing can be used in the project structuring and transaction stages, as the risks associated with the project reduce. The costs of project preparation for these stages can be repaid at financial closure, alongside an additional return on the investment by the project implementer.

³⁹ UNEP (2011), p. 26

Figure 13: Project preparation financing framework



3. Equity financing should be used in the late stages of project preparation.
 - 3.1. In the early stages of project preparation equity financing from private sector financiers is difficult to access for public-sector originating projects due to the high levels of risk. Further, the returns expected by equity financiers would be very high due to these high levels of risk.
 - 3.2. Private sector financiers, such as private equity funds, venture capitalists, commercial banks and institutional investors, would become more inclined towards purchasing an equity stake in the project organisation once the uncertainty of the early stages has waned, the project bankability has been established and the project implementing organisation structure has been decided.
 - 3.3. Equity investments from private sector financiers such as institutional investors, PE funds and VC funds, can be routed through specialised infrastructure funds, or can be provided directly to the project company.⁴⁰ These can be encouraged further by providing guarantees.
4. As discussed in section 4.1, in the short term, the role of innovative financing sources is seen to be minimal in the project preparation process as it appears that they lack the risk appetite for project preparation investments. However, attempts should still be made to increase the levels of private sector financing for preparation, through guarantees to reduce risk perception and other mechanisms.

4.3.2. Harnessing Africa50 and the Global Infrastructure Facility

Africa50

Africa50 is a proposed infrastructure financing vehicle, hosted by the AfDB, which aims to address both the infrastructure financing gap as well as the project preparation financing gap. Africa50 has already received expressions of interest amounting to US\$ 650 million, out of which it aims to direct US\$ 100 million to its project development company over a period of 3-4 years.⁴¹

Figure 14: Innovative structural features of Africa50



⁴⁰ OECD (2012); AfDB (2011)

⁴¹ Africa50. May 2014. *Changing the Game for Africa*.

Africa50 has a number of innovative structural features, which set it apart from currently existing infrastructure funds and PPFs. The features which make it particularly relevant for bridging the project preparation financing gap are as follows⁴²:

1. Tunnel of funds approach to direct scarce grant funding to the early stage: Africa50 aims to focus on financing mid-to late stage project preparation, and will get involved only after the feasibility studies have been completed. It aims to partner closely with its 'key collaborator', the NEPAD-IPPF as well as other PPFs to take projects from feasibility to financial closure.⁴³ Africa50 plans to leverage resources from traditional financiers, commercial banks and private equity funds to finance the mid to late stages of project preparation. For construction and operation, it aims to bring in financing from pension funds, sovereign wealth funds and insurance companies. This structure allows scarce grant funding to be redirected to early stage preparation for establishing project feasibility and then using other, increasingly commercial forms of financing for the later stages of the project development cycle.
2. Integrated focus on project development to find new financing sources for project preparation: Africa50 aims to operate through two business lines (project development and project finance) with a Chinese wall between the two, in order to avoid conflict of interest.⁴⁴ Often, new, innovative sources of finance are found for project implementation. For instance, China has emerged as the largest contributor to infrastructure financing for Africa in the last few years. However, these financiers are hesitant to contribute to project preparation financing, particularly in the early stages, due to the relatively high levels of risk. Having one entity focusing on mobilizing finance for both project preparation and project finance will help in developing strategies and instruments to encourage private sector and innovative financiers to participate in project preparation financing.
3. Flexibility in financing instruments linked to single A rating: Africa50's project development and project finance facilities will operate with a single A rating. This will allow it to balance the objectives of accessing most major international and domestic capital markets for raising financing, and having fewer constraints than an AAA rating. The establishment and maintenance of a single A requires lower levels of credit default than a AAA rating, implying that financing higher risk activities, such as mid-to late stage project preparation, becomes possible for Africa50.⁴⁵ Further, this will allow new forms of financing to be leveraged from project preparation in the mid-to-late stages, as most DFIs and MDBs currently involved in project preparation financing have an AAA rating.
4. Opportunity for financial innovation for leveraging project preparation financing: Africa50 aims to be a flexible financing vehicle which combines financing from traditional, private sector as well as innovative financing sources and respond to the changing risk profile of projects over the project development cycle. Further, the Africa50 project finance company aims to offer innovative instruments for project implementation. Hence, given that Africa50 would be dealing with a wide range of financiers, financial instruments as well as have a deep knowledge of the

⁴² NEPAD – IPPF (2014)

⁴³ NEPAD-IPPF (2014), p. 13

⁴⁴ This implies that the two business lines will operate as independent entities, to avoid conflict of interest.

⁴⁵ "Credit ratings are forward-looking opinions about credit risk. Ratings express relative opinions about the creditworthiness of an issuer or credit quality of an individual debt issue, from strongest to weakest, within a universe of credit risk. The likelihood of default is the single most important factor in the assessment of creditworthiness. Typically, ratings are expressed as letter grades that range, for example, from 'AAA' to 'D' to communicate the agency's opinion of relative level of credit risk."

(Source: http://www.standardandpoors.com/ratings/definitions-and-faqs/en/us#def_3)

challenges in African capital markets, this presents an opportunity for it to use its knowledge for developing innovative financial instruments for minimizing the cost of capital and managing the risk-return challenges.

5. Use of cost recovery mechanisms for incentivizing private sector participation: The Africa50 project development company aims to bring a commercial approach to the management of development capital. In addition, it plans to levy a 'success fee' on projects which reach financial closure to enable the project development company to function in a financially sustainable manner. Hence, private sector financiers may be more assured about expanding their investments into project preparation activities upon seeing the sustainable operations of the project development company, and seeing the possibility of returns on their investment.

Global Infrastructure Facility

In addition to the Africa50, another promising vehicle is the World Bank's recently launched Global Infrastructure Facility (GIF).⁴⁶ The GIF is a World Bank hosted facility, launched on 9 October 2014, with the aim of leveraging financing for infrastructure projects in developing countries, particularly from the private sector. It is understood that there will be a three-year pilot phase until 2017 in the facility's operation. In terms of a sector focus, the GIF aims to focus on climate friendly investments as well as ventures to bolster trade in its pilot phase. Further, the GIF will focus on projects which have a catalytic impact and can leverage financing from the private sector.

The GIF provides a platform to global private sector financiers including institutional investors, such as pension funds and insurance companies, as well as private equity and venture capital funds to invest in infrastructure projects in developing regions. Aside from certain MDBs and donor governments, 12 large international financial institutions, including HSBC Bank, Standard Bank, Blackrock Financial Holdings and the World Pension Council have committed to supporting the GIF.

The GIF was launched with the specific mandate of leveraging private sector financing for infrastructure projects in developing countries. Project preparation will be a specific focus of the GIF, as it seeks to work alongside existing PPFs across the developing world. The GIF will operate according to the following core principles⁴⁷: Leveraging private sector project finance; Addressing public goods problems; Promoting sustainability and inclusiveness; and forging partnerships between the public and private sector. Further, a large number of multinational private sector institutional investors have already signed up to the GIF. It could therefore become a promising source for linking private sector financing with project preparation activities in Africa.

The GIF will focus its efforts on providing support for ensuring the creation of a pipeline of bankable projects. GIF will support early stage project preparation. The forms and instruments to be used by the GIF for leveraging long term private capital are still under deliberation. However, it has been proposed that some form of cost recovery will be employed for recovering the resources invested in project preparation for projects reaching financing closure; however, the precise modality of this is still being worked out. It has also been proposed that the GIF will operate as a revolving fund, such that reimbursements will be injected back into the facility and utilized for project preparation. This will ensure sustainability of the fund – an area that has been a challenge for some of the existing facilities.

⁴⁶ World Bank Group. 9 October 2014. *World Bank Group Launches New Global Infrastructure Facility*.

⁴⁷ World Bank Group. September 2014. *Global Infrastructure Facility: Update for G20*.

5. UNLOCKING PRIVATE SECTOR PARTICIPATION IN PROJECT PREPARATION

This section deals with private sector financing. Private sector involvement is often cited as the answer to bridging the infrastructure funding gap. However, private sector participation in project preparation should be approached from a collaborative lens, as it can unlock certain key efficiencies, including:

1. Commercial approach for efficiency in execution: At present, most project preparation financing comes in the form of grant funding which need not be repaid. However, the private sector undertakes investment with a profit motive. Hence, involving the private sector would add a commercial orientation, aimed at keeping costs low and maximizing resources to achieve milestones and produce results along the project preparation process.
2. Sector knowledge: Large, private sector financiers are exposed to several countries, industries and sectors and these institutions have in-depth knowledge about sector-level trends, key players and market occurrences.
3. Crowding in private sector participation for project implementation: Private sector financiers can provide insights to project sponsors about risks that would inhibit private sector participation in an infrastructure project. In this way, the project can be structured so that it is suited to a PPP or pure private implementation model. Further, they can help in taking large infrastructure projects to financial closure by providing connections with financiers who would be well-matched with the sectoral and geographical focus of the project.
4. Technical skills: Private sector consultants often have the specialist expertise to prepare bankable projects given their professional experience in numerous jurisdictions.

In this section, concerns of private sector financiers are discussed, and recommendations are provided on specific mechanisms which can be instituted to incentivise their participation in project preparation.

5.1. CONSTRAINTS TO PRIVATE SECTOR INTEREST

The first step for unlocking private sector participation in project preparation is to understand the key challenges and incentive misalignments that currently affect this investor class.⁴⁸ While several of these challenges pertain to investment in infrastructure development, they are equally applicable to investment in project preparation, particularly in the late stages. These are examined below.

5.1.1. High opportunity cost of capital

Private sector financiers guided by profit motive in financial markets with several alternative options would need to be attracted by the returns from investment in project preparation.⁴⁹ The risks involved fall as the project moves closer to financial closure. Alongside this, the returns that can be earned by investors also fall. The early-stage equity investors in the infrastructure asset take on higher risk; however, they also earn the right to sell this asset further down the value chain. Hence, one way of reducing the opportunity cost of capital is by enabling the upstream, high-risk financiers to trade their equity stake to low-risk financiers downstream.

⁴⁸ It is understood that there is great heterogeneity within the class of profit motivated private sector financiers. This paper only addresses the high level concerns generally felt across the board. A more in-depth investigation should be conducted to delve into the deeper issues for each investor sub-class in the private sector.

5.1.2. High political and commercial risks

Political risk has been found to be the biggest impediment to African infrastructure investments by the private sector⁵⁰. The earlier one is placed in the project development cycle, the greater the political risk, due to the time intensive nature of project preparation and construction in infrastructure projects. In addition, standard commercial risks such as credit risks, currency risks, and interest rate risks are also exacerbated in the early stages of project preparation. MDBs, DFIs and national governments can step in to remedy this situation in two ways:

1. Use of guarantees: There is a need for financial innovation in order to make guarantees available for private financiers investing in mid-to late stages of project preparation, particularly to address concerns around political risks.
2. Reforms to address underlying risks: IFIs should advise national governments on setting up legal and institutional structures for facilitating the participation of private sector financiers.⁵¹ Advisors and technical experts from the private sector should also be involved in this process so as to enhance the understanding of reform requirements.

5.1.3. Lack of enabling regulatory environment

Sector regulators often set the '*rules of the game*' within which the private sector is expected to operate. Some of the specific roles of the regulator in an infrastructure project involving private sector participation include⁵²:

- Establishing the terms and conditions of services to be supplied by the private sector investors
- Regulating the tariffs which are to be charged to the users of the infrastructure facility
- Providing a clear and transparent set of the rules for the sector (e.g. licensing functions and entry requirements)
- Monitoring the performance and efficiency of the private sector operator of the facility
- Settling disputes, particularly between the public and private partners

In this regard, there are two main constraints preventing private sector financiers from investing in project preparation activities.

1. Regulatory restrictions: Under Basel III regulations, capital charges against long-term infrastructure loans will increase, making banks wary of financing long-term, illiquid assets. In addition, the Solvency II directive could make infrastructure debt unattractive for European insurance companies, as capital requirements are increased.⁵³ Regulations which dis-incentivise private sector financiers from long-term investments have a restrictive impact on the kind of capital which can be attracted for project preparation.
2. Regulatory track record: Investors are keen to invest only when they can find a proven track record of the regulations in a country.⁵⁴ Most African economies, however, lack this track record and thus private sector financiers are dis-incentivised from undertaking such high risk investments into project preparation.

⁵⁰ OECD-AfDB (2014)

⁵¹ OECD-AfDB (2014)

⁵² Nikore. 2014. *Addressing the funding gap in infrastructure expansion through PPP financing*.

⁵³ WEF. 2014. *Infrastructure Investment Policy Blueprint*.

⁵⁴ OECD-AfDB (2014)

There are two innovative ways in which regulatory frameworks and bodies can be strengthened in order to respond to the concerns of the private sector:

1. Modelling regulatory frameworks on those of countries with proven track records: Even if developing countries lack a track record, they could model their regulatory frameworks around those of other countries which have a longer history of operations. Familiar provisions in the regulatory framework can build investor confidence.⁵⁵ However, it is recommended that caution should be exerted to ensure that these regulatory frameworks are modified where necessary to suit the context of the adopting country.
2. Harnessing RECs for setting up regional working groups on regulatory reforms: Pooling scarce resources from regulatory agencies operating in the region would help in realizing economies of scale. Representatives from private sector financiers could also be invited for a regular exchange of ideas. Further, this would enable the regional alignment of regulatory frameworks.

5.1.4. Lack of domestic capital markets

Most investors provide infrastructure financing in foreign currencies, and may incur the additional currency risk in lending to African infrastructure projects, particularly in the absence of suitable hedging instruments. Further, there is a lack of innovative financing instruments, such as local currency infrastructure bonds which can absorb private sector financing in several African economies. The development of a well-functioning domestic capital market can assist in the management of currency risks through price signalling mechanisms as well as help establish instruments which can attract a foreign and domestic private investor base.^{56,57} Hence, IFIs and DFIs should support African national governments in devising legal and regulatory frameworks to support the development of domestic capital markets.

5.1.5. Asymmetric information leading to sub-optimal levels of investment

African officials often lack expertise in project planning and execution, which leads them to exercise caution in project approvals and drafting supporting regulations. On the other hand, large international private sector investors are ignorant about the local context and conditions. OECD-AfDB (2014) notes that, *“PE firms have the risk appetite for infrastructure investment in Africa; they just don’t have the time.”* Hence, communicating the needs and opportunities in project preparation to the private sector is as important as providing incentives for leveraging financing. Producing appropriate marketing materials which provide clear information about the project would greatly assist private sector financiers in making investment decisions. PPFs are well-placed to assist and advise project sponsors in their communication efforts with large private sector financiers thanks to their vast experience and networks. Further, the PPFN can also set up formal communication mechanisms to understand the informational requirements of private sector financiers.

5.1.6. Avoiding conflict of interest

While it brings in several efficiencies to project preparation, private sector participation can raise conflict of interest issues. Private sector firms involved in preparation can become privy to key project

⁵⁵ OECD-AfDB (2014)

⁵⁶ OECD (2012)

⁵⁷ OECD-AfDB (2014)

documents and information, which is released only after a competitive procurement process.⁵⁸ Hence, private sector firms could benefit from information gained during involvement in the project preparation process.

One solution could be that private sector firms participate in early stage preparation at a sector or industry level.⁵⁹ Instead of providing them with the project's exact technical specifications and costs, they could be asked to prepare a generic model of private sector participation which optimises risk allocation, cost sharing arrangements and pricing for the sector/industry and country in which the project is located. This generic model can then be tailored to the specific project by the technical team working with the public sector project sponsor. The private sector firm is then excluded from participating in the feasibility study and the design of procurement documents, and therefore remains eligible for the competitive procurement process. In this manner, there can be knowledge creation which can have wider applicability, optimal use of the private sector's technical skills as well as a resolution of conflict of interest issues.

To conclude this section, a brief case study of South Africa's REIPPPs is presented below. This case study demonstrates how the private sector can be effectively engaged in the project preparation process through the provision of clear project parameters and information. If the project objective and procurement timetable are defined upfront, with a clear, logical sequence of steps, this can encourage the private sector to meaningfully engage with the project preparation process. The detailed analysis of this programme can be found in Appendix 4. Following this, specific mechanisms for incentivising private sector financiers to undertake financial investments in project preparation are discussed in the next section.

⁵⁸ Advisors to governments from the private sector may also face conflict of interest, but this should be precluded by government regulations.

⁵⁹ Based on discussions with the Africa Infrastructure Desk of the NEPAD Business Foundation.

SOUTH AFRICA'S REIPPPS

Recognizing considerable potential for certain types of renewable electricity generation in South Africa, the Department of Energy (DOE) rolled out a new programme that embraced a competitive bidding process known as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in 2011.

The procurement process was planned to include up to five bidding rounds, with three having been conducted so far. Overall, 64 projects have been awarded totalling 3,915MW in production capacity with a total investment cost of around US\$ 14 billion.

KEY LESSONS

Experienced, skilled and diverse project management team

The management team appointed for the bidding process was composed of highly skilled individuals with extensive experience in managing similar processes and who were held in high regard by both the public and private sectors.

Extensive consultation within public and private sector

Extensive consultation with a wide range of stakeholders within both the public and private sector prior to the bidding process assisted the management team in understanding the needs of private investors and worked to generate public and private sector support for the programme.

Independent, dedicated institutional support

A new DOE IPP Unit charged with overseeing the REIPPP programme was established with a relative degree of independence. Further, not being subject to the more rigorous PPP regulations hastened the bidding process; three bidding rounds were held and financial

closure reached within around three years of the establishment of the programme.

Well-defined, transparent and high quality procurement system and tools

The manner in which the procurement process was run and the quality and detail of the bidding process generated investor confidence in the programme.

Besides extensive qualification criteria, the RFP included standardized documentation, including a purchase power agreement, implementation agreement, and direct agreement, the cumulative impact of which was to reduce uncertainty relating to revenue streams from potential projects by providing IPPs with a guaranteed off taker and market for electricity produced.

Bids were assessed by local and international experts hired by the DOE IPP unit, many of whom had been involved in the bid design process. Evaluation was done with high levels of security and confidentiality.

Multiple bid processes assisted in learning and established investor confidence

Being held over multiple bidding rounds, the programme learned from previous experience and improved on the process, such as through the shift towards a more competitive tendering process in the last two rounds. Multiple successes in the bidding round also clarified the 'rules of the game' for investors, building investor confidence in the people and processes involved.

Clear and attractive incentives for private sector participation

Given the large costs associated with determining project feasibility and preparing bids, sufficient incentive was required for investor participation. These were:

- The size of potential revenue streams demonstrated in the project documents

meant that, even with the large resource costs required for the submission of bids, investors were confident of recovering these costs later on and they were incentivized to invest in preparing bids.

- Standardised agreements provided in the RFQ further reduced risk and uncertainty by making it clear that power generated would be bought by Eskom as the off-taker and that a default on this arrangement was covered by the DOE which would guarantee payment.
- Potential bidders had a strong understanding of the pipeline of projects to be allocated over the bidding rounds and what the allocation to each RE technology was to be.
- With multiple bid winners, bidders' risks of being rejected decreased.

Involvement of private sector in the project preparation process

Bidders were required to contain detailed information relating to the project's proposed structural, legal, environmental, financial, technical, and economic aspects as well as identify potential project sites in their bids. This implied that bidders, in their submissions, were required to undertake studies to

demonstrate the feasibility and viability of their proposed projects. Further, the submission of bank letters indicating that financing had been secured for the project's implementation was also required. This effectively ensured that banks conducted due diligence on the projects. Bidders paid for project preparation costs themselves and were also expected to pay registration fees at the start of the programme and provide guarantees on proposed project generation capacity.

This transferred a significant responsibility for preparing projects onto the private sector at an early stage of project preparation.

CONCLUSION

Bidders undertook to meet these requirements only because of the strength of the other key success factors mentioned above. Because of confidence in the project management team, the clearly defined bidding process, and the clear incentives for investment, the private sector came of their own volition and contributed with resources and energy to developing the feasibility of the project as part of their bid submissions.

5.2. INCENTIVISING PRIVATE SECTOR PARTICIPATION IN PROJECT PREPARATION

As discussed in section 5.1, the participation of private sector financiers in project preparation is quite low.⁶⁰ Private sector participation is mostly concentrated in the mid-to-late stages, in specific functions such as consulting on feasibility studies and transaction advisory. In order to broaden this participation, there is a need for meaningful engagement with the private sector, which requires two key changes in the approach to project preparation:

1. Commercial Orientation: Project sponsors need to view projects from a commercial point of view in order to be able to distinguish between projects which can be both financially and economically viable, from those which should be undertaken solely for their social and community level benefits.
2. Partnership approach: Project sponsors should not view the private sector as simply a source of financing, but as a source of ideas, skills and experience. A continuous dialogue needs to be fostered to understand their capacity for contribution, and they should be viewed as true development partners.

Two specific manifestations of this approach discussed here are cost recovery mechanisms at PPFs and portfolio level investments to de-risk the investment in project preparation. The role of PPPs is also highlighted.

5.2.1. Instituting Cost Recovery mechanisms at PPFs

Motivation

Though at present, most project preparation financing comes in the form of non-redeemable grants, steps are being taken towards instituting cost recovery mechanisms at PPFs⁶¹. There are two major motivations for instituting cost recovery mechanisms:

1. Incentivise private sector participation through returns: If cost recovery mechanisms are instituted, private sector financiers can consider infrastructure projects as assets which pay a rate of return upon reaching financial closure. Further, if upstream financiers are allowed to trade their equity investments with downstream financiers, then the time horizon for investments in project preparation can be shortened, reducing risks further. Hence, private sector financiers can then choose to invest at the stage of the project preparation process where the risk-return profile supplied by the project matches their demand.
2. Financial sustainability of project preparation institutions: PPFs and other institutions providing grants for project preparation are fast getting depleted. ICA (2012) found that out of 17 PPFs, only 12 were operational and even these were in varying needs of replenishment.⁶² Project preparation institutions need to recoup their investments, at least in the case where a project reaches financial closure.

⁶⁰ ICA. 2012. *Annual Report*.

⁶¹ GIB (2014), p. 21

While they are discussed in the context of PPFs, these ideas can be extended to cover other institutions involved in project preparation as well.

⁶² ICA (2012), p. 24

Ultimate bearer of preparation costs

In all cost recovery mechanisms, it is recommended that the ultimate bearer of the project preparation costs be the payer of the capital investment.⁶³ Typically, this would fall on the project sponsor, but if project implementers undertake the capital investments, they should bear the project preparation expenses. While in public sector originated projects, this would fall on the government agency acting as project sponsor, in a PPP project, the risk sharing arrangement would dictate the bearer of the preparation expenses.

It is recommended that there should be no repayment of project preparation investment in case a project is derailed before it reaches financial closure. However, there is a need to devise indicators and specific quantitative benchmarks for deciding the stage at which project preparation should stop if the project is not found to be economically viable, if not financially viable. Importantly, the aim should be to recoup project preparation expenses for all stages of preparation. However in case of financing constraints priority should be placed on recovering costs for phases 3-5.⁶⁴

Mechanisms

This paper presents four mechanisms of cost recovery which have been mentioned in the context of African PPFs in the literature.⁶⁵ The application of these mechanisms should be project specific, as well as dependent on the needs of the PPF/PPU.

1. **Success fees**: When a project reaches financial close, a proportion of the total project preparation cost is charged by the PPF/PPU. On one hand, this incentivises the PPF/PPU to take as many projects as possible to financial closure; it also incentivises the PPF/PPU to stop the preparation of projects which are unlikely to reach financial closure. Hence, success fees could encourage private sector financiers to invest in project preparation, as the risk perception associated with project failure could be lower under this incentive system. For instance, the India Infrastructure Project Development Fund has successfully applied a success fees for both commercially oriented as well as only-economically feasible projects.⁶⁶ Africa50 also intends to institute success fees.⁶⁷
2. **Redeemable Grants**: Under this arrangement, grants would be given to PPFs under the '*business as usual*' scenario, however if financial closure is reached, the grants would be repaid to the PPF and re-invested in project preparation.⁶⁸ The advantage of this approach is that there is no requirement to provide an additional return and only the project preparation costs need to be repaid, thus making it suitable for those projects which are economically viable but not commercially oriented.
3. **Revolving fund**: A revolving fund is an entity where, after the infusion of seed capital, replenishment of the fund occurs through repayment for goods and services provided by the fund. GIB (2014)⁶⁹ suggests a revolving fund to support projects from pre-feasibility to financial closure, i.e. phases 3-5. The initial corpus, i.e. seed capital, for setting up the fund would come

⁶³ Based on discussion with the WEF.

⁶⁴ ICA (2012)⁶⁴ suggests that the preparation costs pertaining to phases 3-5 (i.e. feasibility, structuring and transaction support) should be recovered, while early stage preparation costs should be covered by grants.

⁶⁵ While there exist several mechanisms for cost recovery, a full discussion is beyond the scope of this paper. An in-depth study on these mechanisms should be conducted for identifying best practices which can be applied in the African context.

⁶⁶ ICA (2012); Government of India. *Scheme and Guidelines for India Infrastructure Project Development Fund*.

⁶⁷ NEPAD-IPPF (2014)

⁶⁸ ICA (2012)

⁶⁹ GIB (2014), pp 26 - 27

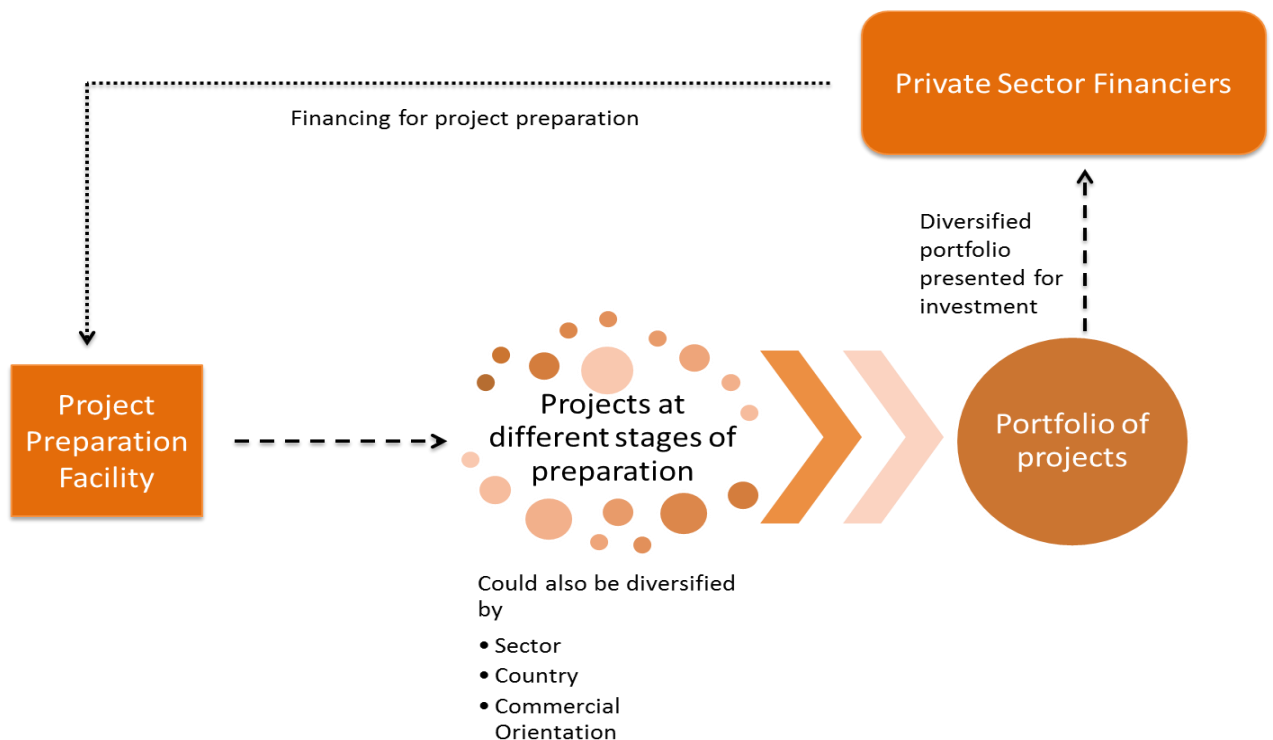
from public sector financiers and foundations providing grants and concessional funding and private sector financiers providing more commercial forms. The revenues from cost recovery would then be re-invested into project preparation and repayment of private sector loans. If the private sector financiers find that their investments yield sufficient returns, they would continue to provide investments into the fund.

4. **Equity:** A PPF could provide financing, either as a grant or loan, at any stage of the project preparation process. When the project reaches financial closure, the PPF would receive an equity stake in the project organisation, in proportion to its initial contribution to preparation. The PPF could then sell its equity stake or equity option to a private sector financier and re-invest the recouped amount into project preparation if it seeks quick recovery.

5.2.2. Investment through a portfolio approach

As discussed in section 5.1, the biggest hurdle to investment in project preparation is the high level of political and commercial risks involved in a project. One way of mitigating this investment risk is through applying the principle of diversification to investment in project preparation.⁷⁰

Figure 15: Facilitating investment through a portfolio approach



The level of risk involved in a project falls as one moves from upstream to downstream project preparation activities. Private sector financiers can therefore be offered a portfolio of projects which are at different stages of preparation to reduce risks. Diversification can be enhanced by combining projects belonging to different sectors, as well as different countries. Another parameter for increasing diversification would be the level of private sector participation involved in the project, as this would be representative of the project's commercial viability. Hence, creating a diversified portfolio of projects along these parameters would incentivise investment from private sector financiers.

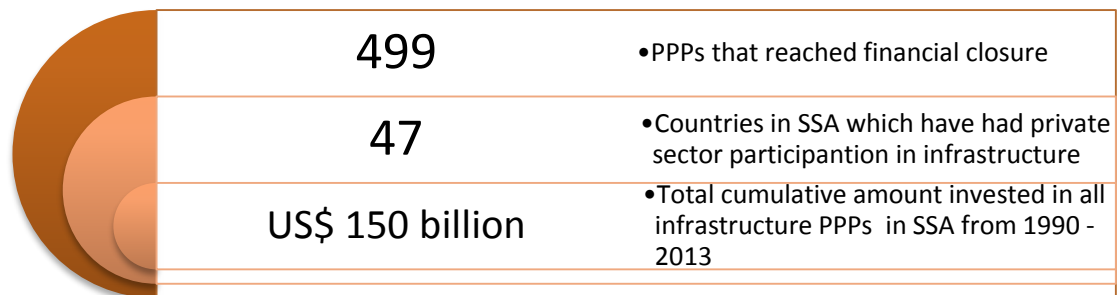
⁷⁰ This suggestion is closely aligned with the approach suggested by the WEF.

PPFs have ready access to a portfolio of projects. Hence, investments in a PPF provide an ideal mechanism for the private sector to access a diversified portfolio of projects to reduce investment risks. In addition, by providing financing to a PPF, private sector financiers can gain representation to their steering committees. In this manner, private sector financiers can meaningfully engage and provide a commercial orientation to the project preparation process. African governments are increasingly undertaking efforts to set up enabling mechanisms, such as supporting regulations and setting up specialised preparation units, to crowd in private sector interest through PPPs. The role of PPPs for leveraging private sector financing in project preparation is discussed below.

5.2.3. Role of PPPs in leveraging private sector financing

Growth in the level of total financing for infrastructure PPPs increased from US\$ 40 million in 1990 to US\$ 14.85 billion in 2013 in Sub – Saharan Africa.⁷¹

Figure 16: Infrastructure PPP Investments in SSA, 1990 - 2013



Source: World Bank

In a PPP, risk allocation is aimed at realising efficiencies. Project preparation, particularly in the early stages, carries high levels of political risk, which is best allocated to the public sector. However, private sector resources can be leveraged for late stage project preparation in PPPs in two key ways:

1. **Cost Recovery:** A condition can be placed on the private sector partner that it absorb a proportion of the project preparation costs as part of the total project costs and repay external technical consultants and/or PPFs for project preparation expenses at financial closure. However, as discussed in section 5.2.1, this would depend on the terms of the PPP agreement.
2. **Cost of detailed designs:** The private sector partner may undertake detailed design after being appointed, using its own resources. Alternatively, private sector bidders may invest in the preparation of detailed implementation designs and conceptual plans as part of the competitive bidding process.

Hence, while it may be feasible to involve the private sector in project preparation, this may occur only in the late stages, and early stage preparation would largely fall on the national governments. A project which clearly demonstrates this is the N4 toll road, one of the first PPPs undertaken in South Africa. This case study is explored briefly below, and the detailed analysis can be found in Appendix 4.

⁷¹ http://ppi.worldbank.org/resources/ppi_methodology.aspx

THE N4 TOLL ROAD

The Maputo Development Corridor (MDC), running from Witbank, South Africa to Maputo, Mozambique involved re-establishing the transport link between the industrial heartland of South Africa and its closest port through the rehabilitation and upgrading of existing infrastructure and the stimulation of trade and investment along the corridor.

As part of the MDC, the N4 Toll Road Project involved upgrading the 630km road from Witbank to Maputo and was developed as a PPP. Trans-Africa Concession (TRAC), a private-sector consortium, was awarded the contract as preferred bidder to design, finance construct, rehabilitate, operate, and maintain the toll road, with the concession operating for a thirty year period.

Toll charges were the main revenue stream. Base tariffs were set jointly by SANRAL (the regulator), TRAC and shareholders of the PPP project company. They were stipulated to be increased annually in line with consumer prices.

KEY SUCCESSES

Institutional arrangements and political support

The project was pursued as a bilateral rather than regional SADC initiative which simplified the decision-making process. Further, project 'champions' in the form of the Transport Ministers from both countries drove the planning and development process, providing the necessary political backing for the project and ensured that key stakeholders from both governments were involved.

Simple and focused project design

The MDC as a whole, and the N4 Toll Road project in particular, had a simple and focused project design and implementation process.

Prior to the issuing of the RFP, respective authorities from both governments met to develop the institutional and legal environment in which the project could be developed and eventually tendered out for design, financing and implementation. It was agreed at the outset that legal and institutional reforms would be identified and taken up as and when the need arose. Planning and development were thereafter concerned with a few priority projects which resulted in a rapid procurement process.

Private sector project preparation and cost recovery

The private-sector was well incentivized to engage in the design, construction and maintenance of the project. Risks were mitigated politically through extensive government support at the highest level and commercially through the fact that the N4 route was already well-established. However, although initial political leadership was important to create enabling conditions for the project, the success of this PPP stemmed from the commercial imperative which ensured that appropriate technical and financial partners were engaged at the mid-stage of project preparation through a rigorous and clear tender process.

Robust market demand and excludability in road-use implied relatively secure revenue streams and good return potential in the future from user-fees. The optimistic prospects of cost recovery therefore meant that the concessionaire was willing to bear the costs of undertaking both detailed design and implementation of the project.

6. CONCLUSIONS

Enhancing the efficiency of project preparation in Africa is a multifaceted task. Navigating through a complex institutional landscape, strategies must be devised to maximise the development impact of current resources, as well as leverage additional resources for bridging the project preparation financing gap. This concept paper has laid emphasis on three key big ideas in order to assist in realising these efficiencies.

1. National ownership of the project preparation process

National governments must become the anchors and drive the project preparation process. This must be the case even in regional projects, as demonstrated by the governments of South Africa and Mozambique during the preparation of the N4 Toll Road. Bureaucrats within line ministries/government agencies are expected to drive the project preparation process and coordinate inputs from various stakeholders as they are central to the approval process. Political support must be sought to minimise political risk, leverage project preparation funding and build consensus for regional projects. Strong political commitments, and equally strong bureaucratic support within the sponsor government agency to drive project preparation, are thus necessary conditions for successful project preparation.

However, this does not mean that national governments are expected to undertake each project preparation activity by themselves. National governments should work in tandem with the RECs, and with PPFs in order to take a project from inception to bankability and financial closure. RECs should be involved in providing oversight of the project preparation process, and undertake specific activities to ease project preparation including the provision of REC-level standardised documentation, driving consensus around key regional projects, collecting and disseminating data on priority projects, monitoring project progress and providing interface with continental level bodies. PPFs should assist national governments throughout the project preparation process by providing technical and managerial assistance as well as through financial resources, particularly by refocusing their efforts on the early stages of project preparation.

2. Matching appropriate financing sources and forms with project preparation stages

Maximal developmental impact for investments can be ensured if sufficient attention is paid to early stage preparation first and subsequently, funds proceed downstream in the project cycle. As the project moves from the early to the late stages, uncertainty falls and it becomes progressively easier to involve financiers with lower risk appetites. Therefore, it is recommended that:

- Scarce grant funding from the public sector should be used largely in the early to mid-stages of project preparation, where the risk level is the highest and where it can have a catalytic impact to leverage financing from other, more commercial sources.
- Debt financing should be used in the mid to late stages of project preparation, as the risk is lower and concessionary loans from DFIs and MDBs can be accessed.
- Equity financing should be used in the late stages once the project bankability has been established, as the risk is lower and therefore, expectations of returns are also lower.
- Guarantees be provided by traditional financiers to assist in leveraging financing from private sector and innovative financiers.

3. Forging meaningful partnerships with the private sector

Private sector involvement in project preparation should be approached with a collaborative lens, as demonstrated by the South African National Treasury during the REIPPP programme. By bringing their commercial approach, sector knowledge, access to networks, as well as technical skills, the private sector can unlock key efficiencies throughout the project preparation process. The first step for unlocking private sector participation in project preparation is to understand the key challenges and incentive misalignments that currently affect this investor class (Table 3). Concrete actions need to be taken by national and regional organisations to address these concerns.

Table 3: Recommendations for enhancing private sector participation in project preparation

Constraint on private sector participation in project preparation	Suggested recommendation
High Opportunity Cost of Capital	Enabling the upstream, high-risk financiers to trade their equity stake to low-risk private sector financiers downstream
High Political and Commercial Risks	<ul style="list-style-type: none"> • Using guarantees in the short term • Reforms to address underlying causes of risk alongside engagement with private sector financiers
Lack of enabling regulatory environment	<ul style="list-style-type: none"> • Modelling regulatory frameworks on those of countries with proven track records • Harnessing RECs for setting up regional working groups on regulatory reform
Lack of domestic capital markets	Formulating legal and regulatory policies for developing instruments to help leverage private sector financing for preparation
Asymmetric information leading to sub-optimal levels of investment	<ul style="list-style-type: none"> • PPFs should assist project sponsors in producing marketing and communication material • PPFN should set up a formal communications mechanism to understand concerns of private sector financiers.
Possibility for conflict of interest	Excluding private sector firms from project-specific procurement design, but involving them in the development of sector/industry level generic models of private sector participation in project implementation to optimise risk allocation arrangements

The second step is to incentivise the private sector to participate in the preparation process. Some of the specific mechanisms which can be instituted for this include:

1. Cost recovery mechanisms: If cost recovery mechanisms are instituted, private sector financiers can view infrastructure projects as assets which pay a rate of return upon reaching financial closure. Also, if upstream financiers are allowed to trade their equity investments with downstream financiers, then the time horizon for investments in project preparation can be shortened, reducing risks further. Hence, private sector financiers can then choose to invest at the stage of the project preparation process where the risk-return profile supplied by the project matches their demand.
2. Encouraging investment through a portfolio approach: Private sector financiers can be offered a portfolio of projects which are at different stages of preparation to reduce risks. Diversification can be enhanced by combining projects belonging to different sectors, as well as different countries. Another parameter for increasing diversification would be the level of

private sector participation involved in the project, as this would be representative of the extent of project's commercial viability. Hence, creating a diversified portfolio of projects along these parameters would improve the overall risk-return profile of the investment portfolio, and would therefore incentivise investment from private sector financiers.

3. PPPs: Private sector financing for late stage project preparation can be leveraged in PPP projects by passing-through project preparation costs to the private sector partner at financial closure, or by passing the responsibility of certain project preparation tasks, such as detailed designs to the to the private sector partner.

Realising efficiencies in project preparation requires that all stakeholders involved in project preparation work together to create a pipeline of well-prepared infrastructure projects to unlock economic growth in Africa. It is hoped that this paper will be effective in informing the deliberations at the ICA Annual Meeting, 2014 and will prompt discussion around the suggested recommendations.

BIBLIOGRAPHY

DOCUMENTS

- AfDB. 2011. *AfDB's Financial Products*. Available at <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Financial-Information/Financial%20Products%20-%20Offered%20by%20the%20African%20Development%20Bank.pdf>. Accessed on 28 October 2014.
- AfDB. 2011. *Closing Africa's Infrastructure Gap: Innovative Financing and Risks*. Available at [http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Africa%20Econo%20brief%20-Africa%20Econo%20brief%20%20\(2\).pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Africa%20Econo%20brief%20-Africa%20Econo%20brief%20%20(2).pdf). Accessed on 28 October 2014.
- Africa50. May 2014. *Changing the Game for Africa*. Presentation for the World Economic Forum on Africa.
- African Development Bank. 2011. *Africa in 50 years' time: The road towards inclusive growth*. Available at <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Africa%20in%2050%20Years%20Time.pdf>. Accessed on 28 October 2014.
- Briceno-Garmendia, C. 2008. *Financing public infrastructure in sub-Saharan Africa: patterns, issues, and options*. AICD, Background Paper.
- CABRI. 2011. *Regional Public Goods: Incentives, Financial Frameworks and Institutional Arrangements*. Available at <http://www.cabri-sbo.org/resources/publications/reports/160-regional-public-goods-in-africa-incentives-financial-frameworks-and-institutional-arrangements>. Accessed on 28 October 2014.
- Centre for Chinese Studies. 2009. *China's Interest and Activity in Africa's Construction and Infrastructure Sectors*. Available at <http://www.ccs.org.za/downloads/DFID%203rd%20Edition.pdf>. Accessed on 28 October 2014.
- Chaponda and Lishman. 2013. *PPPs and missing markets in Sub-Saharan Africa*.
- Comer, the Wharton School. 1996. *Project Finance Teaching Note*. Available at <http://finance.wharton.upenn.edu/~bodnarg/ml/projfinance.pdf>. Accessed on 28 October 2014.
- Dalberg. 2011. *Investment Opportunities in African Infrastructure*. Available at [http://dalberg.com/sites/dalberg.com/files/African%20Infrastructure%20-%20GBC%20Conference%20\(Final\).pdf](http://dalberg.com/sites/dalberg.com/files/African%20Infrastructure%20-%20GBC%20Conference%20(Final).pdf). Accessed on 28 October 2014.
- Eberhard, Kolker, and Leigland. 2014. *South Africa's Renewable Energy IPP Procurement Programme: Success Factors and Lessons*. Available at <http://www.gsb.uct.ac.za/files/PPIAFReport.pdf>. Accessed on 28 October 2014.
- Foster and Briceño-Garmendia. November 2009. *Africa's Infrastructure: A Time for Transformation*. Available at <http://infrastructureafrica.org/library/doc/552/africa%E2%80%99s-infrastructure-time-transformation>. Accessed on 28 October 2014.

Foster. 2008. *Overhauling the engine of growth: infrastructure in Africa*. African Infrastructure Country Diagnostic (AICD). Available at http://siteresources.worldbank.org/INTAFRICA/Resources/AICD_exec_summ_9-30-08a.pdf. Accessed on 28 October 2014.

GIB. 2014. *Unleashing Private Capital Investments for Sustainable Infrastructure Greenfield Projects*. Available at http://www.gib-foundation.org/content/uploads/2014/05/Scoping-Study-for-the-Early-Phase-Project-Preparation-Phase_.pdf. Accessed on 28 October 2014.

Government of India. *Scheme and Guidelines for India Infrastructure Project Development Fund*. Available at http://www.pppinindia.com/pdf/guideline_scheme_IIPDF.pdf. Accessed on 28 October 2014.

ICA and PEI. 2011. *Infrastructure Investor Africa – An Intelligence Report*. Available at http://www.icafrica.org/fileadmin/documents/Publications/Ica_investor_report.pdf. Accessed on 28 October 2014.

ICA and PPIAF. 2009. *Attracting Investors to African Public-Private Partnerships: A Project Preparation Guide*. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/2588/461310revised017808213773070Revised.pdf?sequence=1>. Accessed on 28 October 2014.

ICA. 2006. *Project preparation Guide*. Available at <http://www.ppiaf.org/sites/ppiaf.org/files/publication/ICA%20Guide%202006%20-%20Infra%20Project%20Preparation%20-%20ENG.pdf>. Accessed on 28 October 2014.

ICA. 2011. *When the power comes: An analysis of IPPs in Africa*. Available at http://www.icafrica.org/fileadmin/documents/Knowledge/Energy/ICA_WHEN%20THE%20POWER%20COMES_report.pdf. Accessed on 28 October 2014.

ICA. 2012. *Annual Report*. Available at http://www.icafrica.org/fileadmin/documents/Annual_Reports/ICA%20AnnualReport%202012.pdf. Accessed on 28 October 2014.

ICA. 2012. *Assessment of Project Preparation Facilities for Africa*. Available at http://www.icafrica.org/fileadmin/documents/Knowledge/ICA_publications/ICA-PPF-Study%20Report-ENGLISH-VOL%20A.pdf. Accessed on 28 October 2014.

ICA. 2013. *ICA proposal for the creation of a project preparation facilities network*. Available at http://www.icafrica.org/fileadmin/documents/ICA_meeting/2013_Annual_Meeting/PPF%20Network%20Report.pdf. Accessed on 28 October 2014.

Martin and Winkler. 2014. *Procurement models applied to independent power producer programmes in South Africa*. Available at http://www.eri.uct.ac.za/Research/publications/14-Martin-Winkler-Procurement_models_for_IPPs.pdf. Accessed on 28 October 2014.

NEPAD. 2008. *Programme for Infrastructure Development in Africa: Interconnecting, integrating and transforming a continent*. Available at <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/PIDA%20note%20English%20for%20web%200208.pdf>. Accessed on 28 October 2014.

NEPAD. 2014. *Mobilizing Domestic Financial Resources for Implementing NEPAD National and Regional Programmes & Projects*. Available at http://www.nepad.org/sites/default/files/DRM_ENGLISH_REPRO.pdf. Accessed on 28 October 2014.

NEPAD-IPPF Oversight Committee. 2014. *Africa50-Information Note*.

Nikore. 2014. *Addressing the funding gap in infrastructure expansion through PPP financing*.

OECD and AfDB. 2014. *Private Investment in Infrastructure*. Available at <http://www.oecd.org/daf/inv/investment-policy/oecd-afdb-seminar-private-investment-in-african-infrastructure.htm>. Accessed on 28 October 2014.

OECD. 2012. *Mapping Support for Africa's Infrastructure Investment*. Available at <http://www.oecd.org/daf/inv/investment-policy/MappingReportWeb.pdf>. Accessed on 28 October 2014.

PPIAF. 2007. *The African project preparation gap*. Available at <http://www.ppiaf.org/sites/ppiaf.org/files/publication/Gridlines-18-The%20African%20Project%20Preparation%20Gap%20-%20Leigland%20Roberts.pdf>. Accessed on 28 October 2014.

PPIAF. 2008. *The changing landscape of infrastructure financing in Africa*. Available at <http://www.ppiaf.org/sites/ppiaf.org/files/publication/Gridlines-43-Finance%20Infrastructure%20in%20Africa%20-%20Foster.pdf>. Accessed on 28 October 2014.

PPIAF. 2009. *Toolkit for Public-Private Partnerships in Road and Highways: N4 Toll Road from South Africa to Mozambique*. Available at <http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/6/pdf-version/safricamozambique.pdf>. Accessed on 28 October 2014.

Rogerson. 2001. *Spatial Development Initiatives in Southern Africa: the Maputo Development Corridor*. Available at <http://onlinelibrary.wiley.com/doi/10.1111/1467-9663.00160/abstract>. Accessed on 28 October 2014.

South African National Treasury. 2004. *Public-Private Partnership Manual*.

Taylor. 2000. *The Maputo-Witbank Toll Road: Lessons for Development Corridors*. Available at https://open.uct.ac.za/bitstream/handle/11427/7252/DPRU_PB_00-P5.pdf?sequence=1. Accessed on 28 October 2014.

The Wall Street Journal. 6 May 2014. *China Takes Wary Steps Into New Africa Deals*. Available at <http://online.wsj.com/news/articles/SB10001424052702303647204579545813194873656>. Accessed on 28 October 2014.

UNEP. 2011. *Catalysing Early Stage Investment*. Available at <http://www.scaf-energy.org/news/pdf/Catalyzing%20Early%20Stage%20Investment.pdf>. Accessed on 28 October 2014.

WEF. 2013. *Strategic Infrastructure Steps to Prepare and Accelerate Public-Private Partnerships*. Available at http://www3.weforum.org/docs/AF13/WEF_AF13_Strategic_Infrastructure_Initiative.pdf. Accessed on 28 October 2014.

WEF. 2014. *Infrastructure Investment Policy Blueprint*. Available at http://www3.weforum.org/docs/WEF_II_InfrastructureInvestmentPolicyBlueprint_Report_2014.pdf. Accessed on 28 October 2014.

World Bank & PPIAF. April 2012. *Public-Private Partnerships Reference Guide, Version 1.0*. Available at <https://wbi.worldbank.org/wbi/document/public-private-partnerships-reference-guide-version-10>. Accessed on 6 March 2014. Accessed on 28 October 2014.

World Bank Group. 9 October 2014. *World Bank Group Launches New Global Infrastructure Facility*. Available at <http://www.worldbank.org/en/news/press-release/2014/10/09/world-bank-group-launches-new-global-infrastructure-facility>. Accessed on 27 October 2014.

World Bank Group. September 2014. *Global Infrastructure Facility: Update for G20*. Available at https://www.g20.org/sites/default/files/g20_resources/library/11%20Global%20Infrastructure%20Facility%20-%20Update%20for%20G20.pdf. Accessed on 27 October 2014.

World Bank. 1993. *The Contributions of Infrastructure to Economic Development*. Available at <http://elibrary.worldbank.org/doi/pdf/10.1596/0-8213-2628-7>. Accessed on 28 October 2014.

World Bank. 1996. *Transaction Costs in Private Infrastructure Projects—Are They Too High*. Available at <http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/282884-1303327122200/095klein.pdf>. Accessed on 28 October 2014.

World Bank. 2008. *Making Sense of Sub-Saharan Africa's Infrastructure Endowment: A Benchmarking Approach*. Available at http://infrastructureafrica.org/system/files/library/2011/05/WP01_Benchmarking.pdf. Accessed on 28 October 2014.

WEBLINKS

http://content.sharebuilder.com/mgdcon/knowledgecenter/Trade/asset_allocation/managing-risk-with-diversification.htm#.VDmN_fmUfAk. Accessed on 28 October 2014.

<http://nsia.com.ng/>. Accessed on 28 October 2014.

http://ppi.worldbank.org/resources/ppi_methodology.aspx. Accessed on 28 October 2014.

<http://ppp.worldbank.org/public-private-partnership/agreements/concessions-bots-dbos>. Accessed on 28 October 2014.

<http://www.eia.gov/tools/glossary/index.cfm?id=i>. Accessed on 28 October 2014.

http://www.eskom.co.za/Whatweredoing/InfoSiteForIPPs/Pages/Guide_To_Independent_Power_Producer_IPP_Processes.aspx. Accessed on 28 October 2014.

<http://www.investopedia.com/terms/d/debt.asp>. Accessed on 28 October 2014.

<http://www.investopedia.com/terms/e/equity.asp>. Accessed on 28 October 2014.

http://www.standardandpoors.com/ratings/definitions-and-faqs/en/us#def_3. Accessed on 28 October 2014.

INTERVIEWS

Organisation	Name/Designation of interviewee
World Economic Forum	Ms. Benji Coetzee Project Manager, Africa Strategic Infrastructure Initiative
NEPAD-IPPF	Mr. Bamory Traore Manager/ Chef de Division
DFID	Mr. Brian Baxendale Senior Infrastructure Adviser, African Regional Department
NEPAD Agency	Mr. Adama Deen Head, Infrastructure
DBSA	Mr. Mohale Rakgate Investment banking manager
NEPAD Business Foundation	Ms. Laetitia Habchi Head, Africa Infrastructure Desk
Maputo Corridor Logistics Initiative	Ms. Barbara Mommen CEO

APPENDIX 1: KEY CHALLENGES BEFORE PROJECT PREPARATION FACILITIES

In line with ICA (2012)⁷², this report defines project preparation facilities (PPFs) as institutions with funds specially demarcated for use in the early, mid or late stages of project preparation.

PPFs are not homogenous and vary according to several parameters as follows⁷³:

- Type of financing: PPFs could advance grant funding, or expect to recover its costs, i.e. could expect repayment for project preparation support;
- Project Origination: Support from PPFs could be restricted to projects originating in the public sector, or they could also support project ideas from the private sector.
- Stage: PPFs could support one or more of the phases in the project preparation process;
- Sector: PPFs could specialise in a particular sector, such as Energy, ICT, Water, Transport;
- Geography: PPFs could support projects globally, in Africa, regionally, nationally or sub-nationally;
- Host organisation: Facilities can be hosted by multi-lateral development banks (MDBs), Africa-based development banks, RECs, national governments as well as other institutions such as the private sector;
- Procurement Support: Support provided by PPFs could be linked to procuring goods and services from the facility itself, or could be unlinked;

Each of these parameters should not be seen as having distinct categories, but rather operating on a continuum. For instance, most facilities in Africa will provide both grants as well as cost contribution based financing for project preparation, however, the proportions of each type of funds will vary.⁷⁴ Hence, each facility can have different characteristics based on the permutations and combinations of the parameters above.

There exists a considerable project preparation financing gap in Africa, which necessitates that all resources dedicated to project preparation must be used efficiently to maximise development impact. Certain key features of PPFs can be challenging to achieving efficacy in these organisations, these challenges and recommendations for PPFs are discussed below.

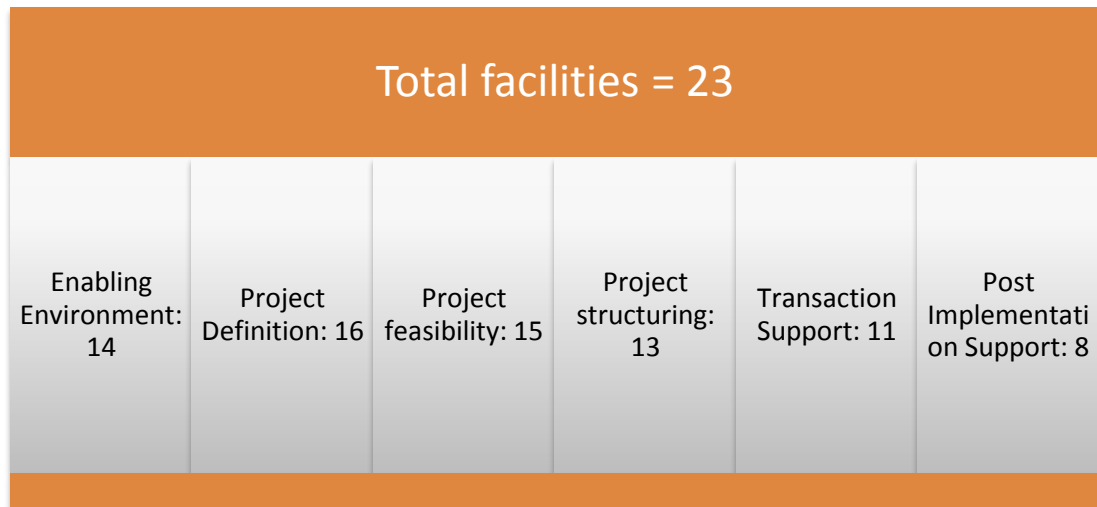
⁷² ICA (2012), p. 25

⁷³ ICA (2006), ICA (2012)

⁷⁴ ICA (2006), p. 7

UNSUSTAINABLE FUNDING MODELS

Figure 17: Number of PPFs providing grant funding by project preparation phase



Source: ICA (2006), pp. 12 - 13

As can be gleaned from Figure 17 above, based on data from ICA (2006), on average, about 56% of all PPFs provide grant financing to project sponsors for project preparation. The proportion of PPFs providing grant financing in the early to mid-stages is even higher, at 63%. Hence, the majority of financing provided for project preparation is non-recoverable.

When grant funding is provided for project preparation it results in a moral hazard⁷⁵ problem due to the misalignment of incentives between the counter-party, i.e. the fund seeker and the grantor, i.e. the PPF. A simple example to explain the situation is as follows. Suppose a PPF provides grants in terms of financing and technical capacity to a government entity in its capacity as a project sponsor. In this situation, it is possible that even when the project's feasibility study has been undertaken, there may be tardiness on the part of the government entity with approvals, simply because the government officials are not invested in the project. They do not need to repay the project preparation financing 'granted' to them and hence lack the incentives to proceed with the remaining project preparation. The moral hazard problem can result in high levels of sunk costs for PPFs, such that their spending on the early to mid-stages of project preparation can be lost in such situations. Therefore, innovative models of cost recovery, such as success fees and redeemable grants must be explored in order to have sustainable PPFs which do not constantly draw down on their financing allocation.

LIMITED AND UNSYSTEMATIC FINANCING FOR PROJECT PREPARATION

PPFs are facing severe financing constraints, both for financing project preparation, as well as for their operations. ICA (2012) notes that financing for project preparation is often mobilized in an ad-hoc manner, and support is not comprehensive.⁷⁶ Further, the performance of PPFs is often judged by the amount of financing that they are able to disburse to actual projects, regardless of the exogenous variables (such as delays on account of external actors) beyond their control. Non-disbursement results in their not being able to access

⁷⁵ "Moral hazard arises when a contract or financial arrangement creates incentives for the parties involved to behave against the interest of others." [Source: <http://lexicon.ft.com/Term?term=moral-hazard>]

⁷⁶ ICA (2012), p. 50

additional financing, even if their financing portfolio is committed. This limited funding pool hampers their overall project delivery capability, results in delays and can result in a situation where they can neither finance new projects, nor are their current projects proceeding.

PAUCITY OF SPECIALIST FACILITIES

ICA (2012) notes that PPFs which have a defined focus are able to develop 'core competencies' and thus have an advantage over more generalized facilities. One of the key weaknesses of PPFs is that try to cover several sectors, geographies and project preparation stages. Specialisation based on one or more of these parameters would allow PPFs to intensively develop their scarce resources with specific sectoral and functional knowledge. This would allow for institutional cross-learning to be transferred from one project to the other, as there would be similarities between the projects supported by the facility. Further, it would mean that fewer technical experts would be needed and economies of scale could be applied as, for instance, standardised sector-level documentation could be prepared for each project preparation stage.

Importantly, the newly formed Project Preparation Facilities Network (PPFN) could encourage the specialisation of facilities as it can coordinate to draw on different specialised facilities to ensure they work together as needed. For instance, a scenario could be envisioned where one facility specialises in early stage, another in mid-stage and a different one in late stage preparation. The co-ordination between these three specialised facilities as a project passes from one to the other can be facilitated by the PPFN.

BUREAUCRATIC ADMINISTRATION OF FACILITY FUNDS

Out of the 17 core PPFs operating in Africa identified by ICA (2012), a majority are hosted by MDBs, African development banks, or donors. This means that their operations are heavily influenced by the institutional structure of their host and they are faced with heavy administration requirements. Further, PPFs are predominantly accessing financing from donors.⁷⁷ As a result, the accountability required of PPFs regarding the financing requirement is very high, particularly in light of the scarcity of grant funding. There can a huge time lag between the financing commitment made by a donor, and actual disbursement to the facility, due to administrative procedures. This, then leads to delays when PPFs disburse funds to project sponsors. Hence, there is a need to conduct an in-depth assessment to streamline bureaucratic procedures for PPFs, on a case by case basis.

Lack of involvement in early stage project preparation

ICA (2012) argues that support for early stage preparation continues to remain limited as most PPFs only get involved in the mid to late stages of the project preparation process. PPIAF (2007) notes that the original mandate for PPFs was to intervene during the mid-to late stages, assist in project feasibility

The Climate Resilient Infrastructure Development Facility (CRIDF) is a DFID financed infrastructure PPF for supporting the construction of climate resilient water infrastructure in southern Africa. Its technical staff largely comprises of experts in the water sector, and it is able to conduct quick project preparation thanks to its narrow sector and geographic focus.

⁷⁷ ICA (2012),p. 14

to bring the project to bankability and then support with project structuring to take it to financial closure. However, in their experience PPFs found that though their mandate was to only enter at the project feasibility stage, the activities necessary for undertaking feasibility had not completed. PPFs, therefore found themselves in a situation where they lacked the necessary resources, both in terms of financing as well as technical capacity, for undertaking early stage project preparation. In order to bridge this early stage financing gap, it is necessary to increase the focus of PPFs on this stage of the project preparation process, as well as to equip with the necessary resources.

PAUCITY OF PROJECT APPRAISAL AND IMPLEMENTATION CAPACITY

PPFs suffer from the twin problems of paucity of technical capacity, as well as lack of data, which results in weak project appraisals.

- Firstly, there is a shortage of internal technical capacity at PPFs, due to financial resource constraints. Findings of ICA (2012)⁷⁸ suggest that there remains a severe skills gap in at least 5, and a moderate skills gap in 4 of the 14 facilities assessed. This implies that PPFs also have to resort to enlisting the help of external technical consultants, often at international prices in order to conduct detailed feasibility studies. Also, the PPFs may lack the internal capacity to competently review the findings of the specialist technical consultants.
- Secondly, conducting even simplified cost-benefit analyses⁷⁹ requires the correct estimation of project costs, at the very least. PPIAF (2007)⁸⁰ notes that out of 58 rail projects surveyed, costs were found to be underestimated by at least 45%, on average for each project. Often, there are multiple government departments, agencies, and external consultants involved in development of a project, some being in the field, while others being in government offices. The result can be coordination failures to the extent that even basic data about the project can be difficult to obtain with precision. In addition, data for the estimation of the project's benefits is often through secondary research as there is a lack of resources (technical and financial) for the collection and analysis of primary data. Hence, project appraisals are often found to be imprecise.

In addition, ICA (2012)⁸¹ notes that most PPFs have underestimated the challenges involved with the wider role that their management may be called upon to play in the project preparation process, so as to drive the individual tasks in each phase. Misunderstanding and underestimating the scope of work leads to capacity constraints at PPFs for executing these time-intensive tasks.

There is, therefore, a need to build the internal capacity of PPFs so that they can effectively oversee the work of technical consultants at the project feasibility stage as well as 'hand-hold' project sponsors through the project preparation process.

LACK OF TRANSPARENCY

PPIAF (2007) found that obtaining as well as disbursing information about PPFs to project sponsors was a difficult proposition. The ICA's Project Preparation Finder⁸² was launched in October 2012⁸³ order to

⁷⁸ ICA (2012), p. 71

⁷⁹ Cost-Benefit Analysis (CBA) is a methodology for appraising the economic value of investment projects or proposals. A CBA seeks to identify the financial, economic and social implications of the technically viable project implementation arrangements in order to identify the best option.

⁸⁰ PPIAF. 2007. *The African project preparation gap*, p.2.

⁸¹ ICA (2012), p. 67

⁸² <http://www.icafrica.org/en/fund-finder/introduction/>

bridge precisely this information gap and provides an online searchable database with information about 13 key PPFs operating in Africa for fund seekers. The Fund Finder is regularly updated so that the latest information on actual disbursements can be publically available and applications to the facilities can be enabled. However, the Fund Finder only covers information about 13 PPFs, and there are several others who are not captured on this Fund Finder, thereby continuing with the difficulties of accessing information about eligibility criteria, application requirements, funding priorities as well as actual funding available.

Another dimension of the lack of transparency is the difficulty in obtaining timely feedback on applications by fund seekers. ICA (2012) found that the responsiveness of 10 out of the 15 facilities reviewed was in the medium to low range. Further, it is difficult to obtain explanations from facilities on the reasons for the rejection of an application.

Hence, there is a need to conduct an in-depth assessment of individual facilities in order to ensure that their updated on the Project Preparation Fund Finder, and to devise methods in which PPFs can engage with their applicants to provide feedback.

SUMMARY

These challenges are summarised below.

Table 4: Organizational and Governance challenges faced by PPFs

Challenge faced by PPF	Suggested recommendation
Unsustainable funding models	Innovative funding models built on principle of cost recovery
Limited and unsystematic financing	<ul style="list-style-type: none"> • Increased financing to be leveraged by PPFs • Review of PPF performance criteria
Paucity of specialist facilities	Specialisation by sector / geography / project preparation stage
Bureaucratic administration of facility funds	Streamlining procedures at facility level
Lack of involvement in early stage project preparation	Increased grant and public financing for early stages to catalyse investments at later stages
Paucity of project appraisal and managerial cap	Increasing capacity of PPFs in order to be able to effectively oversee project preparation activities.
Lack of transparency	In-depth study of individual PPFs and compiling data.

⁸³ ICA. 2013. *ICA proposal for the creation of a project preparation facilities network*, p. 13.

APPENDIX 2: ROLES IN INFRASTRUCTURE PROJECT PREPARATION

The typical roles, and institutions involved in performing these roles in project preparation are presented in Table 5.

Table 5: Roles in project preparation

Role	Explanation	Institutions typically performing the role
Project Sponsor	The project owner who generally has an equity stake in the project, which is typically a significant proportion of project costs. The project sponsor is the owner of the infrastructure asset. This is generally the player who anchors the project preparation process.	<ul style="list-style-type: none"> • National Government • Local Government • State Owned Entity • Municipal Agency • Private sector (in private sector originated projects)
Project Implementer	This is the institution that is contracted to carry out the implementation of the project. It is possible that the transaction is structured in such a manner that multiple institutions are part of the project's implementation as contractors, managers, and operators. The project implementer's role occurs largely after financial closure; hence, it has a minimal contribution in project preparation.	<ul style="list-style-type: none"> • National Governments • Local Governments • EPC Contractors • Local or International Technical/Engineering firms • Other private sector equipment suppliers and contractors • Concessionaire in a PPP project
Technical Consultants	These are the engineering, legal, financial, economic, environmental and social experts who advise project sponsors on their specialist areas. Technical consultants play an important role in the mid-to late stages of project preparation, as they are responsible for conducting the feasibility studies as well as transaction advisory.	<ul style="list-style-type: none"> • Private sector • DFIs • MDBs • PPFs
Financiers	Institutions which contribute to the financing of the project through grants, debt and equity contributions as well as guarantee providers.	<ul style="list-style-type: none"> • Donors • National/Local government • MDBs • DFIs • PPFs • Private sector financiers
Project Preparation Specialists	Service providers to project sponsors, providing technical expertise as well as financial resources for all stages of the project preparation process.	<ul style="list-style-type: none"> • PPFs including National PPIUs and PPP units. • Private sector developers
Political	Institutions that assist in shaping project priorities	<ul style="list-style-type: none"> • RECs

Oversight	as well as monitor the progress of projects.	<ul style="list-style-type: none">• MDBs• PPFs• National Governments• Donors• Multilateral agencies
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Source: Comer (1996)

APPENDIX 3: ENHANCING REGIONAL PROJECT PREPARATION

Regional infrastructure can enable Africa to unlock several sector level efficiencies, as follows:

- Energy sector: Construction of power generation facilities, such as hydropower dams, in regions where geography enables maximization of generation capacity and then constructing supporting transmission and distribution infrastructure can be done. This can unlock efficiencies through power sharing arrangements.
- Transport Sector: Construction of surface transport facilities such a road and rail as well development of ports can ease the movement of goods and persons across the continent and beyond, leading to increased trade and each country developing its own areas of competitive advantage.
- Information and Communications Technology: Diffusion of technology can be accelerated with regional infrastructure development, thereby enabling Africa's integration with the global, digital economy.
- Water: Creation of regional and transboundary water infrastructure can promote integrated water resource management for prevention of floods and droughts and increasing water security, thereby unlocking key growth channels through improved irrigation, water supply and sanitation.

However, regional projects have certain inherent complexities which can slow down the project preparation process. These are discussed below.

INHERENT COMPLEXITIES IN REGIONAL PROJECTS

Differing policy priorities

Regional projects involve countries which are different stages of their development. In addition, each country grapples with its internal set of development challenges. For instance, one country involved in a multi-modal transport corridor project may be landlocked and would be pushing for the construction of surface transport like railways or roads, whereas another maybe more inclined towards the development of ports. The unique situation of a country's development challenges can lead to a divergence of priorities and can result in variable political support and will to participate in the preparation of a project. There should be an increased focus on aligning national policy priorities for regional infrastructure projects in accordance with the list of PIDA projects, as well as to update the list of PIDA projects to reflect national concerns from time to time. This can assist in reducing the divergence in policy priorities.

Disharmony in legal and regulatory regimes

The legal and regulatory architecture defines the 'rules of the game' for a project's development. It helps in defining the scope of the project as well as assists the private sector in identifying the roles it can play in project preparation and development. Regional projects most certainly involve legal and regulatory agencies from multiple countries. A single project being governed by multiple legal and regulatory regimes would confuse investors, particularly from the private sector. Having multiple regulatory agencies, speaking in different voices, would raise the risk level of the investment and would be a clear signal for financiers that the project development could be derailed. Further, there is

considerable regulatory risk in that, depending on the negotiations between the agencies, frequent changes could be made to the regulations governing the project.

Holistic regional infrastructure development would either require that the legal and regulatory regimes of each country be harmonized. However, at a project level, a regulation by contract approach could be followed in the short term such that the project sponsors agree on a uniform set of rules for governing the project, applicable to all countries involved.

Coordination failure

Regional projects involve a large number of stakeholders. For instance, a transport project in just two countries will involve from each country at least the following stakeholders:

- Ministry of transport
- Ministry of finance
- Sector regulator
- Municipal level bodies
- Technical consultants
- Cabinet office

In addition, representatives from the relevant RECs may also be involved. In projects which are even large in scope, in terms of sector or geography, the number of stakeholders involved would be even higher.

The presence of this large number of stakeholders in project preparation makes the situation ripe for coordination failures⁸⁴, i.e. misalignment between the interests of various stakeholders could lead to a situation where project preparation is derailed or delayed. These coordination failures can manifest in various ways such as

- a) Significant delays in conducting discussions due to the difficulty of getting all stakeholders together at one time;
- b) Delays in obtaining approvals from all parties; for instance, even if a PPF submits a completed project feasibility report to the project sponsors, they may delays in granting approvals from project sponsors;
- c) Derailment due to disagreement over project objectives, particularly if the original conception differs significantly from the shape and form the project takes in the mid-to late stages of preparation as the project evolves.

Regular stakeholder engagement is one way of managing the risk of coordination failure. PPFs have a special role to play in this regard as they can bring all stakeholders together at the project level and provide oversight of the project preparation process. At the policy level, the NEPAD Agency, the newly formed PPFN and the ICA should use their convening power to encourage discussion around alignment in policy priorities.

⁸⁴ *Many economists therefore think of depression as being a state of coordination failure; a state in which market forces have failed to coordinate the millions of transactors that interact daily through a web of interconnected markets. What Smith called the 'invisible hand,' or Mummery and Hobson (disparagingly) called the 'automatic machinery of commerce,' has not guided them to a state in which markets clear. Instead, people are somehow led to act at cross purposes, failing collectively to take full advantage of potential gains from trade. As Keynes put it, the system is not 'self-adjusting.'* (http://www.econ.brown.edu/fac/peter_howitt/publication/Coordination.pdf)

Differing technical and institutional capacity

The various countries involved in a regional project would have varying levels of technical and institutional capacity within government for undertaking project preparation. Further, some countries may face financing constraints for bringing in technical consultants or transaction advisors. In such projects, often it is seen that one country anchors the project preparation process, and contributes greater resource. However, this scenario raises a public good problem. If one country, say the one with a more advanced economy, contributes more resources to project preparation, particularly in the form of a grant, then the incentive to contribute for other countries is reduced as they can free-ride on the project preparation services being provided. Whether they contribute to project preparation or not, due to their geographical location, they would be in a position to enjoy the benefits from the project's implementation.

In order to resolve this public good problem, it needs to be ensured that there is full cost recovery, possibly with a return, from the bearers of the capital investment. Then, each country could make differentiated contributions, possibly matched by additional financing from a PPF. If the project is implemented as a public sector project, they could receive an equity stake proportionate to their initial contribution and if it is undertaken with private sector participation, their initial investment would be recovered with a small return.

REC BASED PROJECT PREPARATION UNITS

ICA (2012) has identified several REC-based PPFs, which have been actively undertaking regional project preparation on the continent. However, it has also been established that their successes have been limited to date and there is a lack of requisite implementing skills at these PPFs. ICA (2012) has recommended that REC-based PPFs would perform better if they had a clear focus on a limited set of activities.

This paper studied the ECOWAS Project Preparation Development Unit (PPDU) and found that the broad focus of the PPDU was indeed preventing it from realizing efficiencies, despite its clear focus on private sector engagement. The case study is presented below.

ECOWAS PPDU

The ECOWAS PPDU was established in 2008, with technical and financial support from multilateral organisations such as the World Bank, the PPIAF, the AfDB, the ECOWAS Bank for Investment and Development and the Economic Commission for Africa and from donor agencies such as DFID and JICA. The ECOWAS PPDU is hosted by the Government of Togo. In 2008, the ECOWAS Council of Ministers approved US\$ 8.864 million to finance the first five years of the operations of the PPDU and another US\$ 10 million to be paid into an infrastructure fund for project preparation. ICA (2012) reported that the ECOWAS PPDU still had US\$ 5 million left for disbursement in 2012.

KEY SUCCESS FACTORS OF THE ECOWAS PPDU

1. Commercially oriented objective: The ECOWAS PPDU has a clearly defined and commercially oriented objective, “to equip ECOWAS with the required capacity to quickly prepare bankable infrastructure investment projects which will attract private and public sector financing.” Hence, it is understood that leveraging financing is its main objective.
2. Private sector engagement:
 - 2.1. It is proposed that an ‘Honest Broker Unit’ will be set up to split the fund into two separate areas of operation, one to support private sector led initiatives, and another to support public sector led projects. This would enable a clear focus on private sector led projects.

- 2.2. The Board of the PPDU includes representatives from the private sector so as to assist the facility in maintaining a value for money focus.

- 2.3. It is intended that the management of the PPDU would be outsourced to experienced developers and advisors from the private sector, once an upfront investment for this has been secured.

KEY CHALLENGES FOR THE ECOWAS PPDU

1. Broad areas of focus: The ECOWAS PPDU is focusing on several sectors and activities. It is currently working on 11 feasibility studies, and dealing with capacity constraints. In order to enhance its impact, there is a need to identify key regional priority projects for the PPDU.
2. Need to set up governance structures: Governance structures such as the PPDU Steering Committee and operational structures need to be established for efficient management and functioning of the PPDU.

CONCLUSION

As noted by ICA (2012), it has taken a long time for the ECOWAS PPDU to set up its operations and to support project preparation. There is a need to bring clarity and establish priority areas for the PPDU, in order to realise efficiencies in its operations.

APPENDIX 4: CASE STUDY OF THE SOUTH AFRICAN RENEWABLE ENERGY IPPP PROGRAMME

ELECTRICITY GENERATION IN SOUTH AFRICA

South Africa's primary supplier of electricity is the publicly owned utility, Eskom, which generates around 96% of the country's electricity. The utility distributes approximately 60% of electricity it produces directly to customers, with local authorities buying the rest in bulk and selling it to make a profit. Of its distribution business, 40% is accounted for by direct electricity sales to mines and industry, an indicator of South Africa's highly energy intensive economy.⁸⁵ Besides being the key player in the production of electricity, Eskom also owns and controls the South Africa's national high-voltage transmission grid that links large stations concentrated in the interior of the country (near mines and industry) with consumers all around and far away.

During the 1970's, Eskom undertook a large investment programme to increase generation capacity. This was based on high expected demand growth and continued well into the 1980's, when it became clear that demand had been overestimated. The large overcapacity in electricity production that resulted meant that by the end of the 1990's, South Africa's electricity prices ranked among the cheapest in the world.

By the mid-2000's, though, Eskom's power reserves were coming under pressure and interventions in both the demand and supply side of the economy would be required to restore sufficient production capacity. A power plant construction programme was therefore initiated and the National Energy Regulator of South Africa (NERSA) began allowing significant tariff increases over time to sustain Eskom's financial viability.⁸⁶

Independent Power Producers

Whereas before Eskom was the sole authority in charge of planning energy generation, the post-Apartheid South African Government approved a change in policy to shift this authority to the government department responsible for the sector. This was laid out in a 1998 White Paper on Energy Policy which mandates the Department of Energy (then a combined Department of Minerals and Energy) with policy development in the energy sector.⁸⁷

The DOE is tasked with producing an electricity plan called the Integrated Resource Plan (IRP). The IRP contains decisions around new electricity supply investments (i.e. when they are to be made and their magnitude) that Eskom is obliged to follow.⁸⁸ This was to 'ensure that utilities avoid or delay electricity supply investments, or delay decommissioning decisions, when it is economical to do so, by optimising the utilisation of existing capacity and increasing the efficiency of energy supply and consumption' (DME, 1998).

The 1998 White Paper still provides the overarching policy context for procurement models for IPPs in South Africa today. Among other aspects of energy planning, the White Paper dressed the need to

⁸⁵ Eberhard, Kolker, and Leigland. 2014. *South Africa's Renewable Energy IPP Procurement Programme: Success Factors and Lessons*, p. 6. [Eberhard et. al. (2014)]

⁸⁶ Ibid. Pg. 5

⁸⁷ Martin and Winkler. 2014. *Procurement models applied to independent power producer programmes in South Africa*, p. 2. [Martin and Winkler (2014)]

⁸⁸ Ibid

introduce IPPs into the electricity generation mix.⁸⁹ Independent power producers (IPPs) are private-sector entities that own or operate facilities for the generation of electricity primarily for use by the public.⁹⁰ In South Africa, they are seen as crucial in addressing the future electricity needs of the country, reducing the funding burden on Government, relieving the borrowing requirements of Eskom, and introducing new technologies.⁹¹

Movement towards renewable energy

South Africa relies largely on coal-powered energy supply, with approximately 70% of primary energy and 90% of electricity relying on coal.⁹² Combined with a highly energy-intensive economy, South Africa's carbon emissions (on a per capita and GDP basis) are disproportionately high. High emission levels pose risks to the country's economy, not least to its future international competitiveness.⁹³

Recognizing considerable potential for certain types of renewable electricity generation in South Africa, and given the country's voluntary pledge at the 2009 Copenhagen Conference of Parties (COP) to reduce its carbon emissions from a business as usual scenario, the most recent IRP 2010-2030 incorporated a carbon emissions cap and included renewable energy options.

RENEWABLE ENERGY IPP PROCUREMENT PROGRAMME (REIPPPP)

With the IRP 2010-2030 paving the way for development of renewable energy production in South Africa, in 2009 NERSA approved a REFIT policy and took charge of designing a tariff system for renewable energy production.⁹⁴ This was to provide a basis for renewable energy programmes and incentivize development in this sector. The policy was not effective and in two years of REFIT's implementation, no energy agreements were signed. This was primarily due to uncertainty surrounding the procurement and licensing process and the legality of FITs within South Africa's public procurement framework. The latter was eventually found to be non-competitive and prohibited by government's procurement regulations.

Informal consultations were then held with stakeholders who helped to assuage market concerns inform the design of a new procurement model. The result was an announcement by the DOE in 2011 of a new programme that rejected REFITs in favour of a competitive bidding process for renewable energy known as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP).

Institutional Structure of the REIPPP programme

The REIPPP programme was initiated in an institutionally weak energy sector in which previous attempts at contracting IPPs led by Eskom had failed. The DOE took control of the programme and, "*recognizing its limited institutional capacity to run a sophisticated, multi-project, multi-billion dollar*

⁸⁹ Martin and Winkler (2014)

⁹⁰ <http://www.eia.gov/tools/glossary/index.cfm?id=i>

⁹¹ http://www.eskom.co.za/Whatweredoing/InfoSiteForIPPs/Pages/Guide_To_Independent_Power_Producer_IPP_Processes.asp

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⁹² Martin and Winkler (2014), p. 1

⁹³ Eberhard *et al.* (2014), p. 2.

⁹⁴ Renewable Energy Feed-in tariffs (REFITs) are prices set for the sale of electricity produced by renewable resource projects. They are generally used for locking in private sector investment by offering long-term supply contracts to renewable energy producers and usually differentiate between types of renewable energy based on their respective costs of generation. FIT levels may also decrease over time to track cost reductions due to new technologies and to incentivize technological advances.

*international competitive bidding process*⁹⁵, it enlisted the help of the PPP Unit in National Treasury. With technical staff from both the DOE and the PPP Unit, the project office was established, which was named the DOE IPP Unit.

The project team was led by an experienced member of the National Treasury PPP unit who had been involved early on in the DOE's attempts at promoting IPPs. Local and international technical experts with strong expertise in closing PPP contracts were also appointed. Overall, the project team was highly regarded in both the public and private sectors. Familiar with the private sector, the project team actively engaged potential stakeholders early on in the programme design process. Continuous dialogue, an effort to meet deadlines and a high level of standards and professionalism earned the project team the credibility to act as champions of the REIPPPP process.⁹⁶

Sufficient resources to run a comprehensive programme were made available through signed MOU's between the DOE, the National Treasury and the DBSA (which was later repaid). Bilateral donors also provided technical assistance for programme design. The programme also relied on bidders' registration fees and fees from successful IPP companies which were to go into a Project Development Fund for Renewable Energy managed by the DOE. This would cover future costs and have helped programme remain off the formal government budget.

Procurement Process

In total, the REIPPPP programme hoped to procure 3,625 MW of power over a maximum of 5 tender rounds, with another 100MW reserved for smaller projects. Caps were set on the capacity allocated for different RE technologies so as to restrict the potential for supply to be bid out and hence increase the level of competition among different technologies.⁹⁷ A Request for Proposals (RFP) was issued on 3 August 2011 with a compulsory bidders' conference, attended by around 300 organisations, held a month later. Tenders for different RE technologies were held at the same time and interested parties could bid for more than one project and more than one technology.⁹⁸

For the first round of bidding, caps were set on the price for each technology at levels that were similar to NERSA's previous REFITs. Besides extensive qualification criteria, the RFP also included the following standardized documentation, which was non-negotiable and developed after review of international best practice and stakeholder consultation.

- Purchase Power Agreement (PPA): to be signed by the IPP and Eskom acting as the off-taker. PPAs also specified that contracts would have 20 year tenures. Together, these provided IPPs with greater certainty regarding the extent of future revenue streams.
- Implementation Agreement (IA): to be signed by the IPP and DOE which required the DOE to make payments to the IPP in the case of a default by Eskom. This effectively provided a secure guarantee of payment to the IPP, providing further certainty for revenue flows.
- Direct Agreement (DA): this provided step-in rights for lenders in the event of default by the project implementer to find another party to fulfil project obligations.

⁹⁵ Martin and Winkler (2014), p. 9

⁹⁶ Eberhard *et al* (2014), p. 3

⁹⁷ Ibid

⁹⁸ *ibid*

The cumulative impact of these agreements was to reduce uncertainty relating to revenue streams from potential projects by providing IPPs with a guaranteed market for electricity produced.

Importantly, bids were required to contain detailed information relating to the project's proposed structural, legal, environmental, financial, technical, and economic aspects as well as identify potential project sites in their bids. This implied that bidders, in their submissions, were required to undertake studies to demonstrate the feasibility and viability of their proposed projects. Further, bidders also had to submit bank letters as part of their submissions indicating that financing had been secured for the project's implementation. This effectively ensured that banks conducted due diligence on the projects.

Bids that were submitted were therefore selective, in that they involved only those projects regarded as feasible and financially viable. Bidders paid for these project preparation costs themselves and were also expected to pay registration fees at the start of the programme and provide guarantees on proposed project generation capacity.

Given the large costs associated with determining project feasibility and preparing bids, sufficient incentive was required for investors. The size of the projects to be awarded and the surety of potential revenue streams provided by the agreements explained above meant that, even with the large resource costs required for the submission of bids, investors were confident of recovering these costs later on.

Evaluation

Bids were to be assessed on a 70/30 split between price and economic development considerations. This is different to the 90/10 split normally required by the government in the procurement process and was an exemption obtained from the Public Preferential Procurement Framework Act in order to maximize economic development objectives.⁹⁹ The REIPPPP was also deemed not to be subject to National Treasury Regulation 16 that guides the evaluation and approval for PPPs as Eskom – purchaser and signer of the PPAs – is a state owned enterprise rather than a government agency and was therefore not bound by National Treasury's PPP regulations. Given that these regulations can be time consuming, complicated and expensive to abide by, this greatly accelerated the procurement process.

Multiple Bidding Rounds

Bids were assessed by local and international experts hired by the DOE IPP unit, many of whom had been involved in the bid design process. Evaluation was done with high levels of security and confidentiality. The procurement process was planned to include up to five bidding rounds, with three having been conducted so far.¹⁰⁰ Having all suppliers bid at once may have resulted in many potential suppliers and projects being overlooked. The purpose of conducting multiple rounds was to ensure that this didn't happen by giving more bidders more time to prepare projects, ensuring that viable projects were not outbid and, hence, increase competition in the bidding process. Further, transparent and expert evaluation in bidding rounds established private sector confidence in the programme and incentivizing investment.

⁹⁹ Eberhard *et al.* (2014), p. 12

¹⁰⁰ Financial closure expected to be reached on the third round towards the end of 2014

The table below presents selected outcomes from each stage.

Table 6: Outcomes of bidding rounds for the REIPPPP

	Round 1	Round 2	Round 3	Total
Bids Received	53	79	93	225
Projects Awarded	28	19	17	64
Capacity Offered (MW)	3625	1275	1473	6373
Capacity Awarded (MW)	1415	1044	1456	3915
Average Bid Price (SAc/kW)				
Wind	114.3	89.7	65.6	
<i>Reduction from previous round</i>		-21.5%	-26.9%	
<i>Total reduction from Round 1</i>			-42.6%	
Solar PV	275.8	164.5	88.1	
<i>Reduction from previous round</i>		-40.4%	-46.4%	
<i>Total reduction from Round 1</i>			-68.1%	
Concentrated Solar Power	268.6	251.2	146	
<i>Reduction from previous round</i>		-6.5%	-41.9%	
<i>Total reduction from Round 1</i>			-45.6%	
Total Investment (ZAR mill)	47792	28059	44413	120264
Total Investment (USD mill)	5974	3534	4504	14012

Source: Eberhard et al. 2014.

A number of key trends that emerge over the three rounds include the following:

- Large increases in the number of bids received over the successive rounds, despite significant reductions in the amount of power on offer
- Capacity of electricity production that was offered for projects eventually being almost entirely taken up and awarded
- Large decreases in average bid prices for all technologies for each successive round

These factors point to the attempts to make the procurement process more competitive over the three rounds. The second and third rounds drew on lessons learned from the first and, although similar RFPs were used, the total amount of power to be procured was restricted and price caps were eventually removed. Combined with clarity on bidding timelines, the result was a more competitive bidding process, with more projects bid and large decreases in the average price of electricity production. This happened because, with less power on offer and more time for competitors to prepare bids, bidders were forced to reduce the prices they proposed charging for electricity generated by their projects.

Further, it is noted that, “according to government officials, results of Round 2 – particularly lower prices and better local content terms – effectively saved the reputation of the programme and suggested to some officials that competitive tenders might be a way to achieve significantly lower prices than FITs”¹⁰¹.

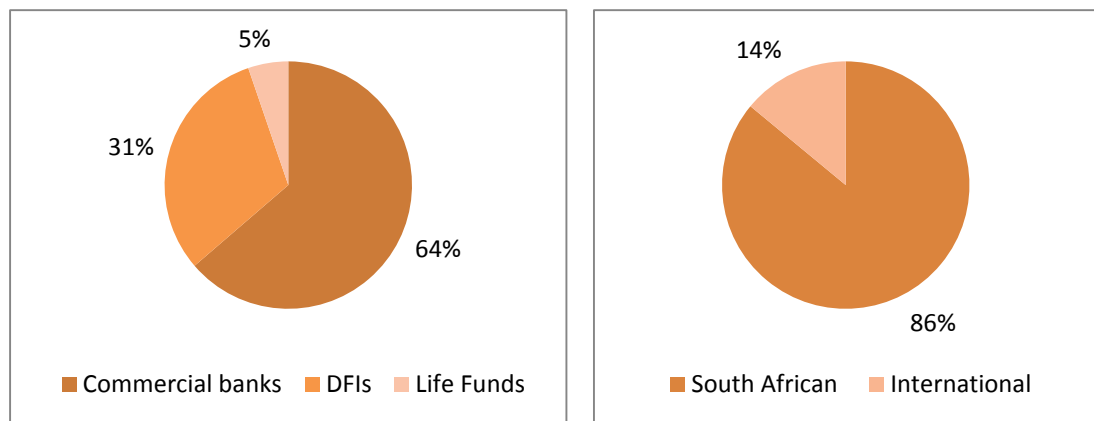
¹⁰¹ Eberhard et al. (2014), p. 16.

Private Sector Participation

A wide range of participants took part in the three rounds of bidding, including international project developers, sponsors, and equity investors. The 64 projects selected in total represent more than 100 different shareholder entities, with 46 participating in more than one project and 25 in three or more projects.

Of the 64 projects that were selected through the 3 bidding rounds, 56 were project financed, 1 was issued a corporate bond and the rest were corporate financed. Further, on average across the three rounds, around two-thirds of funding was debt, one quarter funded from pure equity and shareholder loans, and the remaining from corporate finance.¹⁰² Looking at debt funding only, the majority came from commercial banks, with the remainder from DFIs and pension and insurance funds. Further, 86% of the total debt was raised within South Africa. This can be seen in figure three below, which outlines the share of debt financing for the implementation of the different projects selected over the three rounds.

Figure 18: Share of debt financing in three REIPPPP rounds



Source: Eberhard *et al.* 2014.

Overall, five of South Africa's largest commercial banks¹⁰³ dominated programme lending. Each was involved in multiple projects with the biggest lender involved in 23 of the 64 projects. Roles played by these banks ranged from lead debt arranger to participation as co-senior lenders or providers of subordinated mezzanine debt. Other local funding came from the government-owned Industrial Development Corporation and the DBSA, often as backers for black economic empowerment and community participation. It is also interesting to note the small, but not insignificant participation, of local insurance and pension funds¹⁰⁴. Going forward, it is likely that commercial banks will sell on debt to these secondary capital markets (insurance companies, pension funds, and other investment funds) for ongoing exposure to future REIPPPP bidding rounds.¹⁰⁵

The costs of financing bids were borne by the bidder consortiums themselves which, as was pointed out earlier, they undertook given the significant potential benefits expected.

¹⁰² Ibid Pg. 20

¹⁰³ Nedbank, Standard, ABSA, RMB/First Rand, and Investec

¹⁰⁴ Old Mutual, Sanlam, and Liberty

¹⁰⁵ Eberhard *et al.* (2014),p. 21

KEY SUCCESS FACTORS OF THE REIPPP

There are number of success factors that can be drawn from the REIPPP programme. The most important of these are outlined below, along with some of their key drivers:

1. Experienced, skilled and diverse project management team

The management team appointed for the bidding process was composed of highly skilled individuals with extensive experience in managing similar processes. Overall, the management and advisory team was held in high regard by both the public and private sector that trusted their expertise and were willing to actively participate in designing the process.

2. Extensive consultation within public and private sector

Extensive consultation with a wide range of stakeholders within both the public and private sector prior to the bidding process assisted the management team in learning lessons from previous attempts at using REFITs, helped them to understand the needs of private investors and worked to generate government support for the programme.

3. Independent, accelerated and well supported tender process

The new DOE IPP Unit charged with overseeing the REIPPP programme was established with a relative degree of independence. Being outside the mandate of the immediate government ministry, its *“ad hoc status emphasized problem solving rather than enforcement of administrative arrangements, without undermining transparency and quality”*¹⁰⁶. Further, not being subject to the more rigorous PPP regulations hastened the bidding process, such that even with small delays, three bidding rounds were held and financial closure reached within around three years of the establishment of the programme.

4. Well-defined, transparent and high quality procurement system and tools

The manner in which the procurement process was run helped establish investor confidence in the programme and ensured the efficient running of the bidding process. Further, the quality and detail of the bid documentation, the clarity provided during the bidder’s conference, and the ongoing stakeholder engagement helped to establish the “rules of the game” and generated confidence in the programme. This was further enhanced through the highly confidential and well developed evaluation processes which occurred after each bidding round that lent great credibility to the programme.

5. Multiple bid process benefited from learning and established investor confidence

Being held over multiple bidding rounds, the programme learned from previous experience and improved on the process. A clear example of this was the shift towards a more competitive tendering process in the last two rounds that came about largely through the reduction in the amount of power on offer, the movement away from price caps and the clear timelines provided which allowed a greater number of participant the time to prepare and submit bids.

Another important positive aspect of the multiple bidding rounds was that it built investor confidence in the people and processes involved. Besides a few small delays in achieving financial closure, the successful running of each bidding round helped in assuaging potential bidders concerns over risks in the bidding process.

¹⁰⁶ Eberhard *et al.* (2014),p. 2

6. Clear and attractive incentives for private sector participation

Fundamental to any bidding process is the clear dissemination of information and common understanding between all parties. Potential bidders had a strong understanding of the pipeline of projects to be allocated over the bidding rounds and what the allocation to each RE technology was to be. Further, with multiple bid winners, bidders' risks of being rejected decreased and, given the significant size of the projects to be awarded and the potential for good profits to be made, they were incentivized to invest in preparing the projects in their bids.

Standardised agreements included in bidding process (PPA, IA, DA) also reduced risk and uncertainty by making it clear that power generated would be bought by Eskom as the off-taker and that a default on this arrangement was covered by the DOE which would guarantee payment. This allowed the government to mitigate key risks in the project development process and further made factors such as the socio-economic and enterprise development criteria emphasized in the RFP less onerous to include and eventually implement.

7. Involvement of private sector in project preparation process

Bidders were expected to devote significant resources and cover a number of areas in detail in their response to the RFP so as to demonstrate the feasibility and viability of their projects. This transferred a significant responsibility for preparing projects onto the private sector at an early stage of project preparation. For example, bidders were required to submit bank letters as part of their proposal that indicated that financing for the project had been secured. This effectively transferred the due diligence task to banks who had to screen projects themselves before backing them. Along with the requirement that bids be fully underwritten by debt as well as equity, this addressed a key problem often experienced with auctions and tenders, that of the 'low balling' that results in deals not closing or preferred bidders renegotiating contracts.¹⁰⁷

Bidders undertook to meet these requirements only because of the strength of the other key success factors mentioned above. Because of confidence in the project management team, the clearly defined bidding process, and the clear incentives for investment, the private sector were brought on of their own volition and contributed with resources and energy to developing the feasibility of the project as part of their bid submissions. .

LESSONS FOR AN AFRICAN CONTEXT

Given the experience of the REIPPP and the success factors identified, a number of lessons can be taken in trying to source finance for preparing projects by involving the private sector more closely in their development.

Establishing the right institutions with the right mandate

Although the ad-hoc status of the DOE IPP unit facilitated a quicker bidding process, this may come at the expense of transparency and less effective institutions. The same applies to having the procurement process exempt from South African Treasury PPP regulations. Establishing strong institutions requires political buy-in and, importantly, requires champions with the skill, experience, autonomy, and credibility to effectively run a programme of this nature. Institutions also need to have a clear mandate and be provided the authority to make key decisions when necessary, without having

¹⁰⁷ Eberhard *et al.* (2014), p. 11

to resort to extensive bureaucratic involvement.

Generating confidence in the procurement process

Key to achieving buy-in from the private sector was confidence established in the programme through a number of ways, including: the creation of a clear and transparent bidding process; multiple bid rounds which built on successes and instilled a belief in the integrity of the process; the expectation of future bidding rounds and therefore a pipeline of projects in which to prepare; and extensive consultations with both the private and public sectors to determine best practice and how to optimize the structure of the programme.

Mitigating risk and incentivizing private sector investment in determining feasible projects

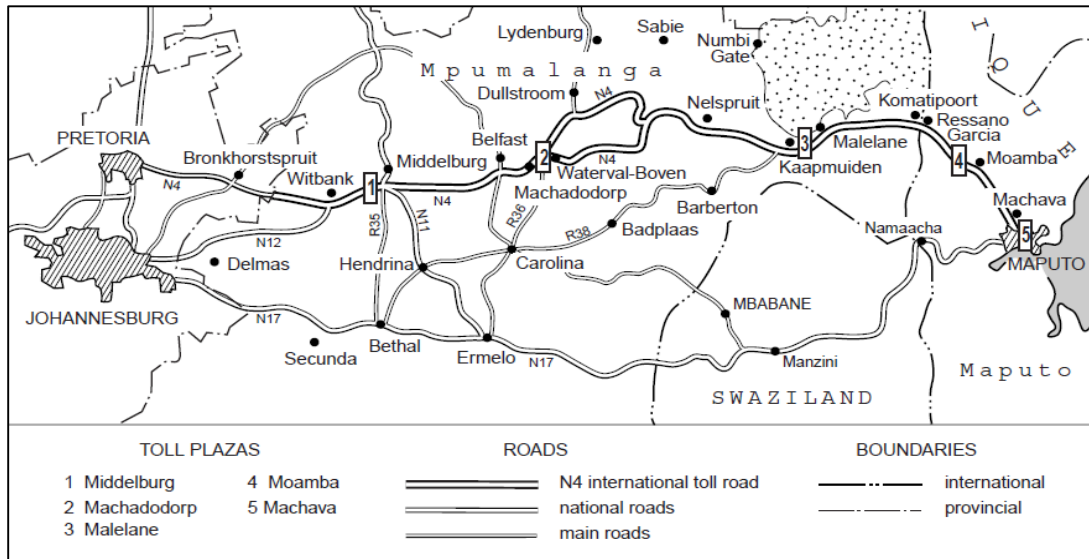
Risks in the procurement process often relate to the costs involved in the preparing bids relative to the low chance of a project being selected. The up-front administrative and high bid costs in the REIPPP, and the requirement for locking in finance prior to bid submission, had the potential to discourage potential investors.¹⁰⁸ However, reasonable levels of profitability, the large programme size, the selection of multiple bid winners, and the mitigation of key risks by the government (such as guaranteeing the purchase of power produced), combined to ensure that the private sector was provided with a clear procurement framework in which to invest.

Understanding the role of external factors

It is important to be aware of certain external factors that might have had country or region-specific impacts on the programme. A number of these worked in favour of the programme, including: the sophisticated nature of the South African capital market which was deep enough to meet project financing requirements; the investment-grade rating that South Africa (and Eskom) enjoyed at the time; the dominance of Eskom in the energy market in its central position as off-taker; and the global slow-down in the OECD renewable energy market making the REIPPPP attractive to foreign investors. These incentivized the private sector to develop feasible projects that might take advantage of the potential offered by the above but which may not apply as easily elsewhere.

¹⁰⁸ They have been further criticized in that they potentially discouraged participation by SMEs and may not be successful for smaller projects with lower potential returns.

APPENDIX 5: CASE STUDY OF THE N4 TOLL ROAD



THE MAPUTO DEVELOPMENT CORRIDOR

Background

Spatial Development Initiatives and the Maputo Development Corridor

In 1995, following South Africa's first democratic elections and peace agreements in Mozambique, the Government of the Republic of South Africa launched a number of key investment strategies. These included Spatial Development Initiatives (SDIs), which were "*short-term and targeted attempts to stimulate growth by creating globally competitive spatial entities via new investment, infrastructural development and job creation*"¹⁰⁹.

The Maputo Development Corridor (MDC), running from Witbank, South Africa to Maputo, Mozambique was the first of the SDIs to be implemented. This was a flagship programme which involved re-establishing the transport link between the industrial heartland of South Africa and its closest port (a route that had been disrupted by apartheid-era policies) through the rehabilitation and upgrading of existing infrastructure and the stimulation of trade and investment along the corridor.¹¹⁰

Role of Public-Private Partnerships (PPPs)

Given the large capital investments required, and given the large developmental challenges facing both governments, it was understood that these SDI's would require both public and private financing to leverage infrastructure developments.¹¹¹ This idea – that the government would need to partner with private capital to afford the large projects it hoped to execute – meant that public-private partnerships (PPPs) were beginning to play an increasingly important role in the supply and rehabilitation of infrastructural projects.¹¹²

¹⁰⁹ Taylor. 2000. *The Maputo-Witbank Toll Road: Lessons for Development Corridors*, p. 3. [Taylor (2000)]

¹¹⁰ CABRI. 2011. *Regional Public Goods: Incentives, Financial Frameworks and Institutional Arrangements*, p. 26. [CABRI (2011)]

¹¹¹ Ibid

¹¹² Taylor (2000), p.4

To facilitate the creation of PPPs, the South African National Treasury, the public sector institution responsible for PPP projects, developed a PPP Manual to guide projects of this nature¹¹³. The Manual defines a PPP to be: “a contract between a public sector institution and a private party, in which the private party assumes substantial financial, technical and operational risk in the design, financing, building, and operation of a project”¹¹⁴.

Although the South African National Roads Agency (SANRAL) had already been developing concessionary models to overcome budgetary constraints, the N4 project developed under the MDC was the first major PPP project implemented in South Africa which paved the way for other PPP road projects to follow.¹¹⁵

Objectives

The MDC was based on four key objectives:¹¹⁶

- To rehabilitate the core infrastructure along the corridor using (road, rail, port, border post and energy) utilizing the private sector and minimizing the impact on the fiscal as much as possible;
- To maximize economic investment opportunities in the corridor area made available by the new and rehabilitated infrastructure;
- To ensure that the development impacts of investments made are maximized, particularly for disadvantaged communities (e.g. ensuring that economic growth leads to increased employment); and
- To ensure that the project is sustainable by developing policy, strategy and frameworks that take into account a holistic, participatory, and integrated developmental approach.

Key Projects

Key infrastructure projects undertaken by the governments of South Africa and Mozambique under the MDC programme include:¹¹⁷

- N4/EN4 Toll Road from Witbank to Maputo: upgrading of the 630km road from Witbank, South Africa to Maputo, Mozambique; the flagship project of the MDC.
- Railway links to Maputo: re-establishment of the rail link between both countries through the upgrading of the rail link between the border post and Maputo.
- One-Stop Border Facility: establishment of a single border facility at Komatipoort/ Ressano Garcia to facilitate easy access and the flow of goods and people between the two countries and reduce bottlenecks through a one-stop border control process.
- Port of Maputo: financing, rehabilitation and operation of the port of Maputo (through a joint-venture between public and private actors) as the region’s core infrastructure link to the global economy.

¹¹³ A PPP Unit was later established in the early 2000’s

¹¹⁴ South African National Treasury. 2004. *Public-Private Partnership Manual*.

¹¹⁵ For example, the N3 between Johannesburg and Durban

¹¹⁶ CABRI (2011), p. 27

¹¹⁷ Taylor (2000), p.5-6; CABRI (2011), p. 30

- **Sectoral Investments:** other large projects planned to strengthen the infrastructure network and expand and diversify the economic benefits of the MDC, including: the establishment of a cellular communications network in Mozambique; new electricity supply infrastructure to southern Mozambique; the construction of a new Kruger Mpumalanga International Airport near Nelspruit; and the upgrading of urban infrastructure in Maputo.

THE MAPUTO – WITBANK / N4 TOLL ROAD

The first major project completed as part of the MDC, this involved upgrading of the 630km road from Witbank to Maputo.¹¹⁸ At the time, the project was the largest road project yet undertaken in sub-Saharan Africa.

Table 7: Costs of the N4 toll road

Time Period	Expenditure
Mid-1998 – 2007	ZAR 2 billion
2007 – 2027	ZAR 3 billion

Source: De Beer 29

The new road system reduced the distance between Gauteng and Maputo by 150km, shortening travelling time to around 4 hours.¹¹⁹

Procurement model

The N4 Toll Road Project was developed as a PPP, involving the private sector and both South African and Mozambican governments. The partnership between the latter emerged in 1995 during the planning of the MDC, when the respective road authorities from both countries agreed to establish a 'development axis' that would run between Gauteng and Maputo.¹²⁰ This created an enabling environment in which the project concept could be further developed and, **by the end of the same year**, further agreements had been reached to go ahead with the project and tenders were issued for the appointment of a concessionaire.

In 1996, Trans-Africa Concession (TRAC), a private-sector consortium composed of a French construction multi-national and two South African construction companies, was awarded the contract as preferred bidder and a concessionaire agreement was signed at the beginning of 1997. TRAC was contracted to finance, design, construct, rehabilitate, operate, and maintain the toll road.¹²¹ The N4 project was constructed on a build-operate-transfer (BOT¹²²) basis, with the concession operating for a thirty (30) year period¹²³, after which TRAC is ultimately expected to transfer back the upgraded facilities to the South African and Mozambican states.

¹¹⁸ Originally, the project involved the upgrade of 390km and construction of 50km of new road surfaces; this was later extended to include sections between Witbank and Pretoria

¹¹⁹ Taylor (2000), p.7

¹²⁰ Rogerson. 2001. *Spatial Development Initiatives in Southern Africa: the Maputo Development Corridor*, p. 332

¹²¹ CABRI (2011), p. 29

¹²² *In a BOT concession, the implementer finances, owns and constructs the facility or system and operates it commercially for the concession period, after which the facility is transferred to the project sponsor.* (Source: <http://ppp.worldbank.org/public-private-partnership/agreements/concessions-bots-dbos>)

¹²³ Concession is expected to end in 2027

Having secured the contract, TRAC appointed SBB, a joint venture between three construction companies, to undertake the detailed design and construction of the project. TRAC then reached an important milestone towards the end of 1997, when it raised the necessary financing for the project.¹²⁴

The financing was split between 20% equity and 80% debt.¹²⁵ The construction companies involved provided ZAR 331 million worth of equity, with the remainder of the capital provided by large investors such as SA Infrastructure Fund and RMB Asset management. The debt was predominantly financed by four of South Africa's major banks.¹²⁶ Construction commenced at the beginning of 1998, just prior to the official launching of the MDC project as a whole, with the N4 Toll Road acting as the programme's anchor project.

Fundamental to the successful structuring of the project as a PPP was recognizing how the project implementer would collect revenues. For this project, toll charges would provide the primary revenue stream, and it was therefore necessary to clearly identify the tariff structure of the toll to be charged to road users. This was important to protect 'consumers' of the road facilities against TRAC over-charging given its monopoly on the road operation.

In light of this, the concession agreement considered differentiated tariffs for four types of vehicles (light, medium heavy, large heavy, and extra heavy), with tolls collected at six main line toll plaza's and 2 ramp plazas.¹²⁷ Further, the concession agreement was based on a tariffs set jointly by SANRAL, TRAC and the lenders and shareholders of the PPP. These were initially set at ZAR 0.20 per km for light vehicles and ZAR 0.50 for heavy vehicles, with the stipulation that these tariffs may only be increased annually in line with consumer prices.

Incentivising the private sector

Key to the successful implementation of the N4 Toll Road project as a PPP were the characteristics that made the project attractive to private sector investors. The risk of the project was borne entirely by the TRAC consortium, with no government subsidies involved (although both governments provided debt guarantees)¹²⁸. Risks involved in the collection of revenues therefore needed to be minimised to ensure an expected level of return to compensate for such a large investment. The following key factors contributed towards this:

1. Well established transport route: South Africa already had experience with toll road projects prior to the development of the N4 Toll Road PPP and had, in general, a well-established and good quality road network country-wide.¹²⁹ Further, the east-west corridor between Johannesburg and Maputo was already an established route prior to the project.
2. Robust Market Demand: Gauteng is the major trade generator of the South African economy, and given the same for Maputo in Mozambique, the port of Maputo provided an attractive and more accessible gateway to the Indian Ocean than other ports in South Africa.¹³⁰ In addition, given that the new route was significantly shorter and quicker than previously, it

¹²⁴ Rogerson. 2001. *Spatial Development Initiatives in Southern Africa: the Maputo Development Corridor*, p. 332

¹²⁵ PPIAF. 2009. *Toolkit for Public-Private Partnerships in Road and Highways: N4 Toll Road from South Africa to Mozambique*, p. 93.

¹²⁶ Ibid, p. 93

¹²⁷ PPIAF. 2009. *Toolkit for Public-Private Partnerships in Road and Highways: N4 Toll Road from South Africa to Mozambique*, p.93

¹²⁸ Ibid, p. 94

¹²⁹ Ibid

¹³⁰ Ibid

made logical sense for commuters to use the new facilities, even with the need to pay toll fees.

3. User-fees: User-fees – the payment by users for the use of the new and rehabilitated N4 toll road – were charged on a pay-as-you-go basis. This meant that free-riders were excluded (if you don't pay, you are not permitted to use the facilities). The high level of excludability in the project, and the non-rival nature of road use¹³¹, made the returns attractive and more predictable for potential financiers.

The factors above were crucial to involving the private sector early on in the project preparation process, as they were fundamental to establishing the commercial viability of the project. The concessionaire undertook the detailed design of the project and took full responsibility for raising the required finance. The mitigation of key risks by the government, robust market demand, and the potential for secure and reasonable profits incentivized the private sector to commit significant resources to preparing the project.

Challenges and resolutions

The successful implementation of the project was also due to how challenges that arose were adequately dealt with by both the public and the private sector. These two key challenges and the responses that were undertaken to each are described below.

1. Affordability concerns: It is noted that there was a lack of transparency and consultation with potential beneficiaries in the design and implementation of the project.¹³² A key concern related to the need for road users to pay toll fees (when before they had not) and that the charges being unaffordable for many people.

This was addressed by introducing much lower toll fees through a series of discounts for commuter and local users.¹³³

2. Issues of overloading: The concession agreement did not specify regulations of truck loads even though overloading has the potential to damage road surfaces. This was noticed by concessionaire to be a serious problem in the early stages of the project.

To rectify this, in 2002 TRAC worked with both governments to assist them in establishing axle load control measures through a set of six traffic control centres, a number of mobile units and a series of weigh bridges that can identify overloaded trucks. Between 2001 and 2004, it was calculated that overloaded vehicles fell from 23% to 9%.

3. Declining political support: In 2004, a number of private sector entities involved in the MDC formed the MCLI in response a concern about the lack of progress with key elements of the MDC. The MCLI was a “multilateral, multi-stakeholder institutional structure to integrate, coordinate, communicate, and facilitate activities in the MDC”.

Opening offices in Nelspruit on the N4, and with a fully established board of directors, representatives from both South African and Mozambican organised business, the MCLI effectively functioned as a private-sector response to a decline in political support for the

¹³¹ This assumes that traffic does not become so bad that users are not able to effectively use the road

¹³² Taylor (2000), p.7

¹³³ Ibid

MDC. Its activities were effective: between 2004-2011, considerable progress was made, including the removal of short-stay visa requirements between the two countries, extension of operating hours of the Ressano Garcia border post, resolution of a rail stand-off, securing of shipping line interest, and the continued marketing of the MDC.

Overall, that the private sector took significant steps to address challenges associated with the N4 Project and the MDC more generally is testament to the project's incentive structure.

KEY SUCCESSES OF THE N4 ROAD PROJECT

The involvement of the private sector in the preparation of the N4 Toll Road project has important lessons for understanding how project institutional and technical structure can be used to effectively leverage private sector resources.

1. Institutional arrangements and political support

A number of institutional and legal reforms supported the planning and development process of the MDC and played an important role in the successes the programme achieved.¹³⁴ That the project was pursued as a bilateral rather than regional SADC initiative simplified the decision-making process. Further, project 'champions' in the form of the two Transport Ministers from both countries drove the planning and development process which provided the necessary political backing for the project and ensured that key stakeholders were involved.

2. Simple and focused project design

The MDC as a whole, and the N4 Toll Road project in particular, had a simple and focused project design and implementation process that was supported by both countries desire for feasibility of the concept.¹³⁵ The political will behind the project and the extensive engagements between respective road authorities in both countries at the early stage of the project preparation meant that an appropriate institutional and regulatory environment was identified and that was worked towards. It was agreed at the outset that legal and institutional reforms would be identified and taken up as and when the need arose. Planning and development thereafter were concerned with a few priority projects. This simplified and hastened the project preparation process, without the need to establish complex inter-country agreements.

3. Private sector project preparation and cost recovery

The private-sector was well incentivized to engage in the design, construction and maintenance of the project. Risks were mitigated politically through extensive government support at the highest level and commercially through the fact that the N4 route was already well-established. However, although initial political leadership was important to create enabling conditions for the project, the success of this PPP stemmed from the commercial imperative which ensured that the right technical and financial partners were engaged.

Robust market demand and excludability in road-use implied relatively secure revenue streams and good return potential in the future. The good prospects of cost recovery therefore meant that the concessionaire was willing to fund up-front project preparation and implementation costs; other than

¹³⁴ CABRI (2011), p. 11

¹³⁵ Ibid

a guarantee of debt by the government, the design, implementation and operations of the project were fully funded by the private sector.

Further, the concessionaire has been incentivized to continue upgrading and maintaining road surfaces due to the need to pay off debt and provide a return on equity employed. Likewise is the example of TRAC's further engagement with government to establish mutually beneficial overloading control measures. The establishment – and successes – of the MCLI as a private sector-driven approach to championing project preparation also provides an indication that with projects of such a magnitude, providing the necessary incentives for the private sector can be simply the correct structuring of the project and continued political support, without the need for other public transfers or beneficial conditions.

LESSONS FOR AN AFRICAN CONTEXT

The N4 Toll Road project, and MDC broadly, provides a good example of country cooperation and private sector involvement, from which a few of key lessons can be drawn:

<p>Necessity of political support and programme/ project champions</p>
<p>From the outset, it is vital that the project has the necessary political support and, more importantly, is driven by project 'champions' with authority. The primary aim of the public sector in cross-country, 'club good-type' projects aiming to involve the private sector should be to provide the overarching policy framework, bilateral agreements, regulations, and incentives. Further, continued political support is required once the novelty of the programme has worn off but implementation is still underway.</p>
<p>Simplified process focusing on core projects</p>
<p>Infrastructure programmes with many facets must identify upfront an anchor/lead project rather than attempt to focus on a more comprehensive development programme. It is easier to get stakeholders to agree on a few specific collaboration projects, especially in the case of countries. Once anchor projects are underway, they also provide much-needed initiative for other linked projects to be mobilised.</p>
<p>Necessary legal and regulatory reforms</p>
<p>A number of regional trade bodies are often involved in complex regulatory and legal reform associated with the move towards free-er trade zones.¹³⁶ Although necessary for projects that impact many countries, bilateral structures may be preferable in trans-boundary projects such as this in that they involved far more simple and practical agreements requiring less onerous decision-making processes. For example, inter-sectoral coordinating bodies at the ministerial and technical levels appointed within each country were highly effective in facilitating work within each country as well as in coordinating activities bi-nationally.</p>

¹³⁶ CABRI (2011), p. 37

Involvement of the private sector in project preparation

Successful infrastructure projects involving private sector participation usually take place in situations with clearly underutilized development potential and a strong demand for outputs.¹³⁷ In order for the private sector to be incentivized to commit significant resources to both designing and implementing a big project, risks need to be mitigated by the government and the potential for cost-recovery needs to be high. The commercial attractiveness of the project relies on the creation of a sound business case, based on good market demand for the various elements of the infrastructure and high levels of excludability.

¹³⁷ Ibid p. 35