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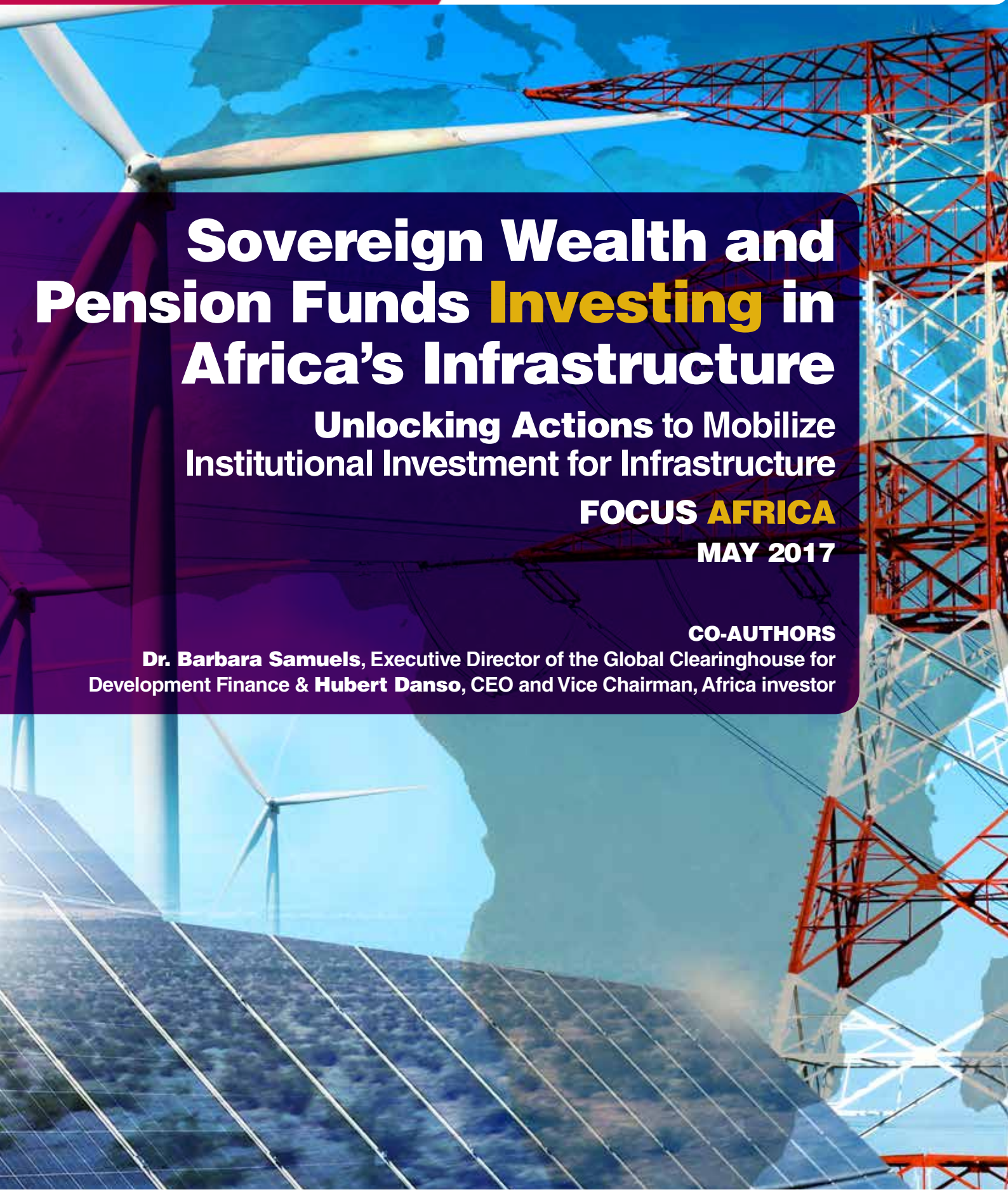

Sovereign Wealth and Pension Funds Investing in Africa's Infrastructure

Unlocking Actions to Mobilize Institutional Investment for Infrastructure

FOCUS AFRICA

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Ai capital INVESTMENT MATTERS

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Executive **Summary**

CALL TO ACTION
SOVEREIGN WEALTH AND PENSION FUNDS INVESTING IN AFRICA'S INFRASTRUCTURE

1.0 Objective

This report defines challenges and suggested actions aimed at unlocking significant institutional investment for infrastructure projects in developing countries, with special emphasis on Africa's regional and national infrastructure. The key recommendations in this report are based on multiple inputs: expert studies, surveys of institutional investors, and input from public and private sector participants involved in the development and finance of infrastructure assets.[1]

Summarized extracts from this paper were provided by the NEPAD Secretariat at the second meeting of the Continental Business Network (CBN) in May 2016 as part of the African Development Bank Annual Meetings in Lusaka, Zambia, and updated for presentation in July 2016 to African Heads of State at the 27th Ordinary Session of the Assembly of the African Union Heads of State in Kigali, Rwanda.[2] The report will be made available to participants at the Ai CEO Institutional Investment Summit in New York for their feedback, and disseminated widely in support of the Financing for Development framework for the achievement of the Sustainable Development Goals.[3]

Suggestions on refinements to the suggested unlocking actions are invited, so the recommendations can be refined and implemented.[4] Technical issues and solutions need to be expanded, focusing on the required changes to current development of infrastructure investment assets and related processes, information, partnerships, instruments, performance benchmarks, and other key factors affecting investment and related decision making.

2.0 The Imperative of Mobilizing Institutional Investment for Infrastructure

The global consensus on the imperative of addressing the extremely large finance gap for infrastructure is undeniable, as witnessed in the many high-level policy forums at the United Nations, World Bank, IMF, OECD, G-20, and World Economic Forum to the declarations of Heads of State and Finance Ministers across all countries worldwide. Delivering on the Sustainable Development Goals, climate change agreements, sustainable development and inclusiveness is dependent on mobilizing greater amounts of capital, echoing the mantra "from billions to trillions."

The main suggested financing sources for filling the infrastructure finance gap as set forth by senior policy leaders worldwide are institutional investors including sovereign wealth funds. The declared public objective is to mobilize institutional investors to finance infrastructure services critical to sustainable and inclusive climate-smart development worldwide, including critical regional and national infrastructure in Africa.

This strong global consensus is based on the potential alignment of institutional investor and public sector interests: institutional investors are interested in increasing their investments in infrastructure to meet their financial performance requirements while governments require significant increases in long-term capital to increase sustainable infrastructure services. The match is – in theory – aligned as institutional investors are faced with low interest rate environments and infrastructure assets can potentially provide them with predictable inflation-adjusted cash flows that have low correlations with existing investment returns.

The need for significant amounts of institutional investment is magnified by the reduced amount of available public funding and reduced bank finance available in today's global infrastructure market. The outlook for government funding is weak given a combination of projected lower economic growth, coupled by increased fiscal deficits. Many developing countries have also entered a period of lowered creditworthiness; for example, the rating agency Standard & Poor's reports a significant reduction in national credit ratings for African countries from a continental average of BB- two years ago to B in early 2016.[5] Against this backdrop, commercial banks are reported as decreasing the long-term funding available to infrastructure projects given the higher capital allocations under Basel III.

The Ai African Sovereign Wealth and Pension Fund Forum (ASWPFF)

This report is an initiative of the Ai African Sovereign Wealth and Pension Fund Forum (ASWPFF) with technical support from Africa investor (Ai) Capital and the Global Clearinghouse for Development Finance (GlobalDF).

The ASWPFF is a high-level platform for African Sovereign Wealth and Pension Fund (SWF & PF) leaders to network and share best practices on key issues related to improving the investment environment for long term intra-African investment. The Forum fosters and facilitates inbound investment in the continent's financial markets, together with Northern Hemisphere asset owners and supranational institutions.

The ASWPFF builds on a series of Ai-led consultations and events for African SWF & PF leaders to assess and determine existing barriers to investment in Africa - including non-listed assets such as infrastructure.

The ASWPPF also builds on Ai's work with the African Union, the World Bank, NEPAD, the Continental Business Network and the Ai Heads of State Investment Advisory Council. The ASWPFF is committed to accelerating the development of the continent by intensifying institutional investment flows across Africa.

Through the Forum, Members generate and have access to industry research, connect and coordinate as a community, strengthen governance, and build investment capacity.

3.0 The Challenge

We need to face the daunting challenge before us: Despite the aligned interests of institutional investors and governments and the urgent need to access increased institutional investment, the facts set forth in expert studies document that the actual current level of institutional investment in infrastructure is minimal relative to the potential.

The OECD reports in their 2015 annual survey of pension funds (77 funds totalling US$8 trillion) that infrastructure investment in the form of unlisted equity and debt was only US$86 billion in 2014, representing a mere 1.1% of the total assets under management. Moreover, the study states that, of the limited 1.1% portfolio investments made in infrastructure, 74% was reported as invested directly or co-directly in infrastructure projects and almost all in investment-grade projects located in OECD countries, with the balance in infrastructure funds.

Many issues limit institutional investment in infrastructure assets, as detailed in this report. The key issue is that institutional investors are limited by their internal credit standards, fiduciary responsibilities, and government regulations requiring investments in low risk assets. Reported constraints impeding institutional investment in developing countries, especially Africa, include (but are not limited to) the following: unacceptable levels of political, commercial, and cross-border currency risks; lack of ability of institutional investors to conduct due diligence and invest (especially domestic institutional investors); lack of investable assets; and lack of information on investable assets.

In this regard, we need to confront head on the mismatch between demand and supply regarding the maturity and quality of infrastructure assets:

- Most of the demand for infrastructure finance is for new infrastructure assets ("greenfield"), namely the higher risk start-up development phases of projects that involve construction before revenues are established.

- However, as a result of their strict investment criterion, institutional investors are mainly interested in investing in low-risk infrastructure projects that are already operating, receiving fees from users of their services and evidencing profits with steady proven revenues ("brownfield").

The lack of investable assets is underlined by the OECD survey, citing that many pension funds such as CalPERS reported that they were unable to meet their infrastructure allocations due to the lack of suitably structured investment-grade assets with established financial track records.[6]

However, this issue of mismatch between demand for early-stage investment and supply of low-risk finance can be partially addressed through realignment of the investment and infrastructure ecosystems, improving coordination between sources of finance, such as commercial banks, fund managers, development finance institutions (DFIs), and institutional investors. The investment ecosystem needs to have defined efficient investment modalities and instruments that link early-stage investors and institutional investors. For example, the following processes can be strengthened and scaled:

- **Two Stage Investment Process:** Initial investors in new infrastructure greenfield assets assume the risk of construction and development. Once the infrastructure assets are established as mature low-risk brown-field infrastructure assets, they can be transferred from early investors to institutional investors with credit enhancements as required to meet due diligence requirements.

- **Investment Vehicles:** As detailed in the main report, investment vehicles managed by established and credible asset managers with successful long-term track records can be scaled up to enable institutional investment.

- **Infrastructure Asset Recycling:** As an immediate step to accelerate institutional investment, existing brown-field infrastructure assets held by banks, national development banks, governments, and development partners could be systemically credit-enhanced and transferred to institutional investors. Then the banks, national development banks, governments, and development partners would have the capacity to invest again in the early-stage greenfield infrastructure assets, holding them on their balance sheets until they are proven established assets and suitable for institutional investment, starting the cycle over again. Large-scale infrastructure recycling, now being explored by development partners, could serve as a transformative leapfrog intervention, catalyzing greater institutional investment and mainstreaming infrastructure as a separate asset class. Such programs are now being implemented or considered in developed countries, such as Australia, Canada, and the United States.

These kinds of defined functions in the investment ecosystem could respond to the urgent need to scale up institutional investment, addressing some of the existing systematic impediments blocking access to private finance.

In fact, given the urgent political import of mobilizing institutional investment for infrastructure, the public sector push for greater institutional investment in infrastructure has gone *"from words to actions*," with several public sector initiatives. For example, the OECD is developing guidance on diversified financing instruments for infrastructure and the role of institutional investors as sources of long-term finance, and also leading the Sustainable Partnership on Infrastructure Development (SDIP). The Canadian government is supporting Convergence as an investment platform. The G20 is advancing support in the development of bankable infrastructure projects, setting forth operational directives to advance infrastructure investment, setting up the Global Infrastructure Hub and calling on Ministers *"… to improve the investment ecosystem, promote long-term financing, foster institutional investors' involvement, support the development of alternative capital market instruments and asset-based financing models, and encourage Multilateral Development Banks (MDBs) to mobilize their resources, optimize their balance sheets, and catalyze private sector funding."*[7]

However, the existing high-level political commitments and related initiatives do not adequately address the systematic gaps in the investment and infrastructure ecosystems, or meet the operational technical requirements that are preconditions for significantly increasing the amount of institutional investment in infrastructure, especially in African countries. The current public sector initiatives have not been successful to date in mobilizing the required significant increase in institutional investment. It is important to note these different initiatives are not closely coordinated between themselves. They are also not designed by institutional investors or currently being used as operational tools embedded in the investment ecosystem. This lack of direct application, fragmentation and separation limits the ability of the various public initiatives to have the required impact in significantly increasing institutional investment in infrastructure as they are not fully integrated within the investment ecosystem or decision-making processes.

A more robust investment-oriented approach is needed to change the mainstream behaviour of institutional investors with regards to considering investments in infrastructure, especially with regards to African infrastructure assets considered higher risk. If

governments are truly committed to unlocking institutional investment for infrastructure, they need to be more coordinated, targeted and effective in affecting the actual decision-making processes for investment in the ecosystem itself. Designing and implementing targeted interventions requires greater public investment in the identification of best practices and solutions for developing the smartly-designed high-performing robust fiduciary frameworks required for responsible institutional investment in infrastructure.

Based on the status quo and results to date, there is zero chance to move from "billions to trillions" of financing over the next few years to meet the urgent infrastructure objectives underlying inclusive, sustainable and climate-smart development. We need to design and implement new interventions that motivate and enable the public and private sectors to pro-actively partner in improving the technical operational processes and functions embedded within the investment and infrastructure ecosystems.

This requirement for transformative interventions embedded in the investment ecosystem requires a fundamental change in public sector roles and processes to meet institutional investment requirements for high-quality infrastructure assets. Meeting investment criteria entails developing the required information, databases, technical assessments, risk mitigation solutions, performance metrics, investment facilitation processes, and enabling environments. ***To be effective, these targeted public sector interventions will need to cover the entire life cycle for investment fiduciary frameworks, from design to implementation and dissemination, working closely with private sector technical experts in developing infrastructure investment products that respond entirely and faithfully to investment requirements, enabling low risk investments in strict compliance with institutional investment criteria.***

Given the recent shift in investment criteria to include environmental sustainability and social impact, the public sector requirements for sustainable, inclusive and climate-smart infrastructure investments are often aligned with private sector institutional investment criteria.

4.0 Call to Action

We must face the facts: As documented in the prior section, institutional investment is currently minimal in developing countries, especially Africa, and dominantly in performing infrastructure projects considered investment-grade. As noted by the many surveys and studies in this paper, there is no indication of the significant required increases in investment for new infrastructure projects, or as a result of existing public initiatives. Yet there is an urgent need to increase investment dramatically.

Mobilizing greater amounts of institutional investment for African infrastructure projects requires a paradigm shift enabling greater alignment with institutional investment mandates and investment criteria: Working together, the private and public sectors need to pro-actively create effective and efficient investment and infrastructure ecosystems that result in: (1) *the increased capacity of institutional investors to invest in infrastructure;* and (2) *the significant scaling up of pipelines of infrastructure assets that fit the needs of institutional investors.*

If we are to be successful in increasing the number of infrastructure projects and impact in advancing sustainable inclusive development, wholesale changes are needed in the mindsets of public leaders so that the public sector can make effective targeted interventions that can improve infrastructure development and the functioning of investment and infrastructure ecosystems. We need to improve investment support processes, databases, regulations, project development processes, and performance tracking and metrics, optimizing the roles of all participants. Concurrently we need to innovate with risk-mitigating solutions that deliver development impact, working in technically cohesive public-private partnerships, securing long-term affordable finance from pension funds, insurance companies, and sovereign wealth funds for high-quality investment grade investments in infrastructure.

Given the urgency to mobilize institutional infrastructure for infrastructure, this paper is intended to serve as a "*Call to Action*" – a private sector manifesto catalyzing the practical definition of impediments, technical requirements, and practical "unlocking actions." Specific recommendations are defined with regard to the "supply" of capital and the "demand" for capital from investable infrastructure assets, as summarized below.

Recommendations in the Executive Summary are segmented into the next three sections: (1) *immediate incremental actions that can be taken independently by institutional investors and host governments*; (2) *the imperative for large-scale public sector support of systematic scalable interventions for widespread development impact*; and (3) *the total list of unlocking actions.*

5.0 Actions that Can be Taken Independently by Institutional Investors and Host Governments

There are immediate actions that institutional investor stakeholders and host governments can implement on their own to incrementally increase investments without new coordinated large-scale public sector interventions. The immediate actions summarized below are aimed at leveraging the above current investment modalities to enable immediate increased institutional investment in infrastructure, with a focus on Africa. *The actions are differentiated by the key actors:* institutional investors and host governments (with support from development partners).

Institutional Investors: The feasibility of the suggested private sector actions are grounded in the realities of existing modalities for institutional investment in infrastructure as documented in this report. In other words, what is working today and how can we build on those successes? ***Key building blocks are provided below.***

❶ Which institutional investors are currently investing, and how can such investment modalities be expanded?

- **Large OECD Institutional Investors:** There are 75 institutional investors that currently have more than US$1 billion allocated to infrastructure with a combined US$8 trillion in assets under management (AUM). Large institutional investors have reported as increasing their investments in infrastructure as a separate asset class, at relatively high levels between 7 – 7.5% of total assets. Examples of large institutional investors in infrastructure include APG – All Pensions Group (AUM EUR 413 billion), CPP Investment Board (AUM CAD 367 billion), and CDPQ (AUM CAD 248 billion).[8] The rationale is simple: Large investors can responsibly invest in these higher-yielding assets if they (or their asset managers) have the capacity to conduct extensive due diligence required for infrastructure investments.

Therefore, there is the potential of increasing investments from large institutional investors and for their co-investments with the larger ecosystem of financial sources (e.g., local institutional investors, development partners, private sector, philanthropies).

- **Domestic Institutional Investors:** The optimal anchor investors in any country's infrastructure are local. By virtue of their access to local currency funds, relationship to their governments, and the broader range of stakeholders, domestic institutional investors are endowed with greater potential to assess the opportunities and risks, as well as serve as "*risk mitigation*" protecting their investments from political actions that hurt financial performance. While aggregate summary data on African domestic institutional investors in infrastructure is not readily available, there are reports of individual African institutional investors significantly increasing their infrastructure allocations. Therefore, there is the potential for increased co-investment with domestic institutional investors and leveraging their contributions to building pipelines of investable assets.

❷ How are institutional investors already investing in infrastructure?

Institutional investors have a wide range of investment modalities, all requiring strict due diligence and established track records. ***Examples of investment modalities include:***

- **Established Asset Managers & Investment Vehicles:** Given the low risk tolerance of institutional investors, most investment is in mature assets and investment vehicles that provide a proven track record of performance. Therefore, institutional investors can access the best infrastructure opportunities by working with experienced fund managers that have successful established track records in originating and investing in infrastructure assets. Examples include Macquarie Infrastructure and Real Assets (US$30 billion) and Brookfield Asset Management (US$30 billion), as well as country infrastructure funds (such as those managed by Darby Overseas Investments Ltd., the dedicated private equity arm of Franklin Templeton Investments). Such established asset managers could expand their infrastructure investment vehicles.

- **Investment with DFI Support and/or PPPs:** Institutional investors have invested directly into infrastructure transactions that have significant risk mitigation provided by Development Finance Institutions (DFIs) and other development partners. These often include public-private partnerships (PPPs), which have proven to provide solid financial returns.[9] Project sponsors and their financial advisors can develop more credit-enhanced projects and PPPs.

- **Investment through Bonds and Stock Markets:** Institutional investors also invest in infrastructure through bonds and stock markets. There is a long history of infrastructure finance through corporate bonds, project bonds, and pooled finance transactions, with successful transactions in developing countries (for example, India, Mexico, South Africa, etc.). In addition, institutional investors have invested in infrastructure through national and international stock markets. For example, Brazil's water and sanitation company SABE-SP is listed on the New York Stock Exchange as well as national stock markets. More project sponsors and investment banks can use capital markets for investments.

- **Co-Investment with Asset Managers that have in-Country competency:** In cases where investments are made through asset managers, the asset managers are often required to invest alongside institutional investors and therefore need to have in-country capacities to adequately access opportunities and risks. Established asset managers can grow their in-country networks working with local asset managers and experts.

- **Co-Investment with other Institutional Investors:** There have been successful Co-Investment Platforms set up in several countries, notably in Canada, Australia, and the United Kingdom. **A more recent development has been the launch of cross-border co-investment platforms that can leverage local institutional investors as anchor investments that have superior insights into local opportunities and the ability to mitigate risks.** The Caisse de dépôt et placement du Québec (CDPQ), a Canadian long-term institutional investor, and a consortium of Mexican institutional investors (including Mexico's three largest Afores) have joined under CKD Infraestructura México, S.A. de C.V. (CKD IM), a newly-created trust, to serve as a co-investment vehicle for infrastructure projects in Mexico with planned investments of up to MXN 35.1 billion (CAD 2.8 billion) over the next five years.[10] More co-investment platforms can be developed and more platforms can be expanded.

❸ What are the accepted existing rationales being used by institutional investors and the larger ecosystem of advisors, consultants, and bankers for increasing institutional investment in infrastructure?

The research produced by the ratings agencies, research agencies, and development banks has provided data that suggests that infrastructure investments in developing countries are producing higher returns with lower failure rates than similar investments in OECD markets. The key financing structures used to mitigate infrastructure risk are proven project finance techniques.[11] The requirement for portfolio diversification is also extremely important as data indicates that infrastructure assets are more resilient to macroeconomic events given the essential need for services.[12]

Below are examples of **immediate actions** that can be undertaken by institutional **investors** and their support **network** of advisors, consultants and asset managers:

❶ Develop a customized infrastructure investment business case: The potential benefits of investing in infrastructure assets for institutional investors are large, encompassing the potential for high returns, long-term demand and steady growth (given essential nature of infrastructure services), regulated returns (provided political risks are mitigated), and diversification (for cross-border investors given largely uncorrelated markets). For each institutional investor to increase its investment allocations in infrastructure, a customized investment case for infrastructure will need to be developed relative to the entity's specific internal credit policies, financial return targets, diversification objectives, internal capacities, and government regulations. It will be important to draw on the extensive research done by rating agencies, research institutes, and experts. This document will need to be presented to senior decision-makers and provide the basis for extensive internal discussions required before making any changes in investment policies and allocations.

❷ Optimize the existing public support infrastructure initiatives, instruments, and investment vehicles available to identify opportunities and mitigate risks: The investment strategy can better meet institutional investment requirements if it explicitly integrates the available public sector support to identify opportunities, access grant support and concessional finance, and mitigate risks. Examples include the extensive array of existing and emerging risk mitigation instruments (e.g., MIGA, IFC, OPIC, ATI, USAID, Global Infrastructure Facility, etc.) and partnership

programs (e.g., Sustainable Development Infrastructure Program, Convergence, etc.). In addition, institutional investors can directly invest into public sector managed investment vehicles (such as the IFC Asset Management Company) and work with private sector insurance brokers.

❸ **Employ best practices in the infrastructure investments, such as project finance and public-private partnerships (PPPs):** As noted earlier, experience to date has demonstrated the superior performance of infrastructure assets employing project finance techniques. Also, despite negative experiences with PPPs, there have been successful PPPs that provide insights into the required conditions for sustained financial performance. The investment criteria for institutional investments will need to incorporate these best practices to ensure positive outcomes.

❹ **Establish an allocation specifically for infrastructure assets:** If the institutional investor decides to increase infrastructure investment, it is important to consider establishing a separate infrastructure asset class as evidenced by large institutional investors. Having a separate asset class will enable a more precise and successful implementation strategy, as well as better performance tracking and reporting, enabling adjustments as needed and facilitating increased allocations if merited. In developing the proposed allocation level, it will be important to research the practices of other institutional investor practices as benchmarks, concurrently developing peer networks for sharing best practices.

❺ **Develop Requests for Proposals (RFPs) that focus on infrastructure:** If the institutional investor does not have experienced internal staff for direct investments, there will need to be a selection process for selecting one or more fund managers to implement the approved infrastructure investment allocation.

❻ **Increase demand and supply of investment vehicles:** As noted earlier, institutional investors need to have established investment vehicles managed by credible asset managers. Institutional investors can set forth requests in their RFPs, creating more demand for such instruments. Concurrently, experienced asset managers can create more investment vehicles taking into account the specifications of investors. There are cases of reported African institutional investment in countries such as South Africa in infrastructure investment vehicles, such as the Pan African Infrastructure Development Fund and the South African Infrastructure Fund. National insurance assets are also reported as having invested in infrastructure sectors that are considered the least risky, such as telecom equity in Cape Verde and telecom bonds in Mozambique.

❼ **Develop co-investment agreements and platforms:** Given the expense of assessing infrastructure assets with extensive due diligence, the potential returns will need to justify the scaling up of assessments. Actions that can be justified by large financial returns are scaled infrastructure co-investments with one or more other entities, or through a larger co-investment platform. Benefits from co-investment platforms include improved access to infrastructure investment opportunities, reduced transaction costs through joint origination and due diligence teams, and reduced risks through shared arrangements with governments and development finance institutions (DFIs) (e.g., negotiated support through grants, off-take agreements, political risk insurance, minimum revenue guarantees, etc.). There are several strategic options for co-investment, all of which could be explored concurrently, such as co-investment with experienced large institutional investors, domestic institutional investors, established fund managers, national and cross-border co-investment platforms, climate-smart and social impact investors, and DFIs.

❽ **Insure capacity to assess opportunities and risks:** To implement the above steps, it is essential to have experienced and credible advisors (or internal staff) and asset managers that can access the opportunities and risks posed by infrastructure investment in developing countries (especially Africa). They will need to have networks of experts and fund managers and leverage existing services (e.g., analytical services, rating agencies, historical data bases on infrastructure performance, etc.). In RFPs, it will be important to list requirements as having experience in developing country (and African) infrastructure and the use of risk mitigation. Investing cross-border in infrastructure projects generating local currency revenues will require the development of risk mitigation strategies for cross-border risk.

❾ **Identification of risks and solutions:** Institutional investors cannot invest without extensive due diligence on all the risks and mitigants. Advisors, consultants, and rating agencies can build their expertise in the area of infrastructure assets, thereby increasing the capacity of institutional investors to invest in infrastructure. It is particularly important that the rating agencies further their existing initiatives in this area. All experts need to help develop corresponding risk mitigant structures and instruments.

❿ **Design and implementation of performance metrics:** Institutional investors cannot invest without information such as default rates, recovery rates, and financial returns. Data in turn is used to construct benchmarks and investment indices to measure risks, returns and diversification benefits. Again, advisors, consultants, and rating agencies are needed to advance performance metrics. In addition, the amount of capital mobilized by DFIs needs to be systematically measured. The Multilateral Project League Table developed by Thomson Reuters Project Finance International needs to be expanded.[13]

⓫ **Build effective advocacy platforms and discourse with public sector:** The public sector – both host governments and development partners – are now implementing programs, policies, regulations, risk mitigation, partnerships, and other initiatives aimed at the mobilization of institutional investment for infrastructure. However, for any interventions to be successful, institutional investors and their wide network of support entities will need to clearly articulate their views of the most effective public sector interventions and optimal implementation modalities. For suggested interventions to be credible and impactful, it will also be important to develop detailed specific suggestions, as intended by this preliminary report for investor feedback. Moreover, advocacy suggestions need to be endorsed by key investors, asset managers, and related professional organizations.[14]

The proactive support of DFIs and bilateral development partners in implementing all the above suggested actions is critical. To be scalable with widespread application delivering large amounts of institutional capital finance, the above actions need public sector partnership and facilitation funding so they can be jumpstarted on an urgent basis in a comprehensive manner. It is important to recognize that if the economics of these actions yielded financial returns, these actions would already be implemented by the private sector. However, once the market is activated, all or most of these actions may well be self-sustaining with market momentum resulting from competitive forces.

Therefore, effective advocacy in setting forth precise actions and implementation plans is critical. It is important to note that advocacy efforts by institutional investors and the wide spectrum of investment ecosystem participants will need to use credible independent technical-based assessments to help broaden the understanding of investment impediments and why the market alone cannot solve the problem, thereby providing the needed legitimacy and import of public sector interventions. It is important

to address the widespread concerns that public sector actions can inadvertently provide unwarranted profits to private sector entities and enable corruption and the inequitable distribution of benefits.

Host Governments: There are immediate actions that host governments can implement on their own to incrementally increase investments without new coordinated large-scale public sector interventions.

The feasibility of the suggested public sector actions are grounded in the realities of existing modalities for public sector support as documented in this report. In other words, what is working today and how can we build on those successes?

Key building blocks that provide the foundational conditions for investment include the following existing conditions: widespread commitment of senior political leaders to partnering with investors and making the needed adjustments to develop investable assets, improve enabling environments, provide public support programs (risk mitigation, grants for infrastructure, project development support, subsidies, etc.), develop new public support programs to engage institutional investment, and develop databases on infrastructure asset performance.

Below are examples of **immediate actions** that can be undertaken immediately by **host governments** supported by their networks of advisors, consultants and development partners:

1) Proclaim long-term national public commitment to investable infrastructure and key principles: The government and other key political forces need to announce their consensus commitment to investable infrastructure – developing and maintaining the country's infrastructure and respecting the need for the assets to provide financial returns. It is critical that all local stake- holders and potential investors witness widespread consensus across high-level political actors to the delivery and operation of investable infrastructure that meet institutional investor due diligence requirements. ***Key principles include:***

a Long-term government support: Infrastructure commitments cannot be limited to the governing party and subject to the risk of changes in elected officials. Commitments need to be deeply institutionalized in governmental processes and programs and agreed to by the full spectrum of political leaders, with support from civil society.

b Import of sub-national climate-smart infrastructure: As stated in all international sovereign agreements related to development, it is essential that cities, states, and other local governments have a critical role in facilitating local climate-smart infrastructure services. Building these sub-national linkages and capacities are therefore key.

c Local investment and infrastructure ecosystems with early-stage development funding: Investable infrastructure assets require a wide team of skilled experts. Governments need to commit to developing the local investment ecosystem of highly-skilled experts who can support the development of investable infrastructure assets and their operation. A key part of the ecosystem is ensuring access to early-phase capital for project development.

d Engagement of local banks and institutional investors: Local banks and institutional investors serve as the anchor investors in infrastructure, so national governments must ensure regulatory frameworks are in place and that local banks and institutional investors have the capacity to conduct adequate due diligence.

e Development of capital markets: Infrastructure is highly leveraged and dependent on long-term debt. Also, investments can be made through the stock market. Retail investment is also key for infrastructure. Therefore governments need to commit to developing their domestic capital markets.

f Open transparent partnerships with private sector and DFIs: Infrastructure requires open information and dynamic and effective processes that engage experienced technical private sector experts and investors, and supportive development partners.

2) Develop a credible infrastructure plan: Institutional investors need to understand and have confidence in the country's roadmap to development and have a comprehensive understanding of development priorities and infrastructure investments considered of utmost importance to the country's sustainable development. In addition, investor confidence will be enhanced if such infrastructure plans are integrated into: (a) *the country's national sustainable development plan*, (b) *support programs with development partners*, and (c) *government commitments under related international commitments*, such as the United Nations Development Agenda 2030, Sustainable Development Goals (SDGs), Climate Agreement COP21, and Habitat III. For example, alignment between the energy, transport, water, and subnational goals set forth in the SDGs would provide a solid credible basis for the plan and securing the needed public implementation support.

3) Establish National Expert Working Groups with specified infrastructure outcomes: National governments will need to have expert input on several technical fronts. ***Expert groups can provide input in several areas, such as the following:***

a Infrastructure Plan and Project Priorities: Based on assessment of development and infrastructure priorities taking into account key factors (e.g., economic inclusive growth and sustainability, climate-smart approaches, market linkages and potential global competitiveness, etc.), develop a national infrastructure plan with infrastructure priorities. To ensure solid economic rationales underlie project priorities, technical teams of independent experts will need to document the data substantiating recommendations, and all projects need to undergo/be open to expert consultations.

b Integration of Sub-national and Climate - Smart Infrastructure: Given the recognized essential role of local governments in delivering on sustainable inclusive and climate-smart infrastructure, it will be important to develop an integrated national and sub-national planning process informed by the market-based assessments of investability and required public sector support interventions, as well as the latest developments in climate-change resiliency techniques and equipment. Local governments need to be engaged in the planning, development, and finance of infrastructure services. Experts will need to help provide a framework for developing projects using best practices that can access finance and limit any contingent liabilities for local and national government.

c Access to Local Finance & Development of Domestic Capital Market: As noted earlier, local finance institutions serve as the anchor investors for infrastructure projects. Therefore, it is critical to develop practical strategies to unlock domestic capital markets, including banks, institutional investors, equity funds, and stock markets. This working group will need to address needed improvements in national and sub-national regulatory, legal, and institutional frameworks, including the predictability and adequateness of intergovernmental financial transfers and the ability to use transfers to partially fund sub-national infrastructure projects. Other key issues include building the capacity of the entire investment and infrastructure ecosystems (e.g., SME and other project sponsors, government officials, financial advisors, investors, banks, lawyers, etc.), increasing expertise in project finance, developing effective project preparation and risk mitigation support, and the streamlining of procurement processes.

d Build Effective Advocacy Platforms & Discourse with Private Sector: For any interventions to be successful, host governments and their development partners will need to engage institutional investors and their wide network of support entities in these working groups, creating an open space to identify impediments and solutions.

As with institutional investors, securing the proactive support of DFIs and bilateral development partners in implementing all the above-suggested actions is critical. To be scalable with widespread application delivering large amounts of institutional capital finance, the above actions need widespread public sector partnership and facilitation funding so they can be jumpstarted on an urgent basis in a comprehensive manner. It is important to recognize that if these actions were simple and achievable for national governments on a one-off basis, these actions would already be implemented in a large-scale manner by the bulk of developing country governments. However, once these actions are in full motion, all or most of these actions may well be self-sustaining with political and economic momentum resulting from competitive forces and reduced costs from scalable implementation roadmaps.

6.0 The Imperative for Transformative Public Actions to Unlock Institutional Investment

Therefore, while the above one-off actions by investors and host governments can help to incrementally unlock institutional investment, these individual actions alone will not achieve the required significant institutional investment in the urgent time-frame required, especially in Africa. As noted earlier, there is no evidence today of significant institutional investment in African infrastructure, especially as much of the demand is for the early stages of infrastructure before revenues are established ("*greenfield assets*"). The baseline is extremely low, so significant immediate actions are required.

To secure institutional investment, the public sector will need to undertake large-scale catalytic scalable efforts, significantly increasing its investments in the technical areas that enable the creation of investable infrastructure assets that meet institutional investor criteria. This requires a more strategic leveraging of the capacities of host governments, regional institutions, and development finance institutions (DFIs) working with private sector investors and experts to create investment-grade infrastructure assets while concurrently addressing macro-environmental impediments. Examples of investment "*deal breakers*" that impede infrastructure investment include uncreditworthy utilities, regulations that prohibit local institutional investors from investing in quality infrastructure assets, and the lack of investment analytic capacity and information across investment ecosystems.

To achieve timely results, there is the need for public sector and private sector scalable actions at global and regional levels with economics of scale that are systematically anchored at local operative levels. Based on expert assessments of the gaps in the investment ecosystem ("*market failures*"), targeted interventions need to be devised that can activate the private sector, aligning incentives and enable the effective functioning between the vast array of public and private stakeholders.

Examples of systematic gaps in the investment and infrastructure ecosystems that impede the scaling up of institutional investment include the following:

1) Lack of enabling local infrastructure and infrastructure ecosystems

2) Lack of investor ability to conduct due diligence in alignment with their regulatory and internal due diligence requirements

   a. Linkages between investors (large, smaller, local)

   b. Linkages between asset managers (large, smaller, local)

3) Lack of finance of early and operating stages of assets (greenfield and brownfield)

   a. Linkages between banks and institutional investors (banks providing finance for early green field stage, followed by institutional investment of mature brownfield assets)

   b. Linkages between public sector support in project preparation and risk mitigation

It is essential that market-based surgical interventions address specific market and coordination failures that account for the lack of institutional investment in developing countries, especially in Africa, as detailed in the main report.

"Unlocking actions" need to address both the supply and demand sides of institutional investment in infrastructure:

1) SUPPLY: Targeted unlocking actions that increase the supply of institutional investment for infrastructure assets; and

2) DEMAND: Targeted unlocking actions that increase the demand for institutional investment by high-quality infrastructure assets that meet their investment criteria (i.e., building pipelines of investable infrastructure projects).

The schematic below provides an illustrative summary of "unlocking actions."

Given the complexity of the systematic impediments blocking access to institutional investment, the details on specific "*unlocking actions*" cannot be presented in the Executive Summary. The main report provides full details on all unlocking actions with background information, rationales, evidence, and illustrative examples. A summary list of all unlocking actions is provided below.

As noted earlier, we invite candid feedback and suggestions on how to refine and implement the recommended "unlocking actions" to mobilize greater amounts of institutional investment for infrastructure. Please provide input to Dr. Barbara Samuels, Executive Director, Global Clearinghouse for Development (barbara@globaldf.org) and Hubert Danso, CEO, Africa investor (hdanso@africainvestor.com).

	IMPEDIMENTS	SOLUTIONS	SELECTED PROGRAMS & PROCESSES
OVERALL	*Lack of alignment between investment ecosystems and infrastructure assets* •Lack of suitable assets •Lack of information •Lack of capacity •Lack of incentives to activate marketplace	*Public sector reallocates funds & political support with targeted interventions*: •Develop investable assets •Improve regulatory frameworks, investment facilitation, risk mitigation, capacity	•Working groups to identify best practices & solutions •"How to Toolkits" •In-country pilot applications •Co-investment platforms •Local marketplaces & capacity programs (project finance) •Programs to scale instruments, risk mitigation, ratings, & processes
UNLOCK CAPITAL	• Lack of enabling environments •Lack of information •Lack of investable instruments •Lack of capacity	•Recycle infrastructure assets to meet investor requirements •Create On-Line Database on Investment Performance & Benchmarks •Create On-Line Directories of Infrastructure Assets •Create Asset Manager Networks	• DFI Recycling Programs •Programs to create & disseminate Performance Benchmarks, info on Infrastructure investments •Programs to improve risk mitigation instruments (greenfield, currency risk) •Regulatory Reform Programs •Investor Capacity Programs
UNLOCK INVESTABLE ASSETS	•Inadequate Project Preparation Facilities (PPFs) •Unacceptable investment risks •Inadequate use of risk mitigation	•Restructure & Increase PPFs •Incentivize project developers •Expand ownership and investment options •Change bidding & procurement processes •Expand risk mitigation solutions	•PPF one stop shop (same application process, more effective)) •Project developer incentive programs •Ownership Structure Templates •New Procurement Modalities •New Risk Mitigation Instruments •Financial Advisory Programs

NOTE: ***Interventions need to be led by private investment experts with up-front public support & funding***

7.0 SUMMARY OF UNLOCKING ACTIONS

TARGETED UNLOCKING ACTIONS THAT INCREASE THE SUPPLY OF CAPITAL

Surveys, studies, experts from development financial institutions, and investors all provide evidence of the low current levels of institutional investment in infrastructure. The prospect for increased institutional investment is not significant unless specific targeted actions are taken by the public sector to create enabling environments and meet the needs of institutional investors to comply with the strict due diligence requirements.

Effective and targeted actions need to be implemented and integrated into the investment ecosystem encompassing investment allocations, instruments, and projects, providing the required information, assessments, risk mitigation, and investment facilitation processes. ***Key actions with large-scale impact in unlocking the supply of institutional investment for infrastructure are summarized below.***

OVERALL ACTIONS TO UNLOCK INSTITUTIONAL INVESTMENT

- **Define and implement transformative public sector interventions to facilitate the supply of institutional capital for investable infrastructure assets**. Mobilizing institutional investment requires host governments and their development partners to strategically work hand in hand with institutional investors and asset managers in mapping common objectives, obstacles, and prudent solutions. These efforts will require leadership and a reallocation of resources so the requirements of targeted institutional investors are well understood and incorporated into the activities underlying the development, structure, finance, and regulation of infrastructure investment assets.

- **Develop networks of credible active asset managers with well-established relationships with institutional investors, and work closely with them to develop pipelines of investable infrastructure assets**. Many institutional investors will only invest in infrastructure through their trusted existing network of asset managers. Also some institutional investors require their asset manager to co-invest in the infrastructure asset to ensure aligned financial interests ("skin in the game"). Governments will therefore need to attract established asset managers in the development and finance of investable infrastructure assets.

- **Develop "Capital Market Infrastructure Development Plans."** Each country needs to develop an explicit plan to expand the funding of its institutional investors into high-quality infrastructure assets. This process will require identifying the specific impediments now limiting infrastructure investment and the specific implementation steps required to achieve: (a) investable infrastructure assets that have attractive and competitive pricing in the primary market; and (b) the existence of a secondary market to enable the liquidity and tradability of the infrastructure assets.

- **Enhance "Value for Money" frameworks and analytical support to guide public sector - private sector negotiations on infrastructure projects, covering investments, services, and Public-Private Partnerships (PPPs).** A major reported impediment to the development of investable projects is the difficulty of governments and investors coming to agreement on specific terms and conditions. The reported costs include failed negotiations and delays of years, resulting in decreased economic growth and negative investor perceptions. Therefore there is an urgent need to improve existing "Value for Money" and other negotiation frameworks that can be used by governments and private sector investors to improve their ability to access the costs and benefits of alternative terms and conditions for infrastructure projects, with the support of independent qualified experts that can facilitate the technical analysis and agreement on transaction terms and conditions.

- **Support the development of private sector-led infrastructure vehicles that can mainstream "crowding-in" of institutional investors.** Host governments and their development partners need to prioritize the transformative actions required to create infrastructure assets that are attractive to institutional investors. Innovation in developing acceptable investment assets requires a total change in the public sector approach to private sector-led initiatives, proactively encouraging private sector-led initiatives with active engagement and funding support.

- **Recycle infrastructure assets.** Development Financial Institutions (DFIs) need to implement large-scale programs that recycle investment-grade infrastructure assets to institutional investors, jumpstarting the mainstreaming of infrastructure as a mainstream asset class. Two sets of recycling programs need to be implemented: (1) DFI Programs that recycle existing infrastructure assets from DFIs to institutional investors; and (2) Commercial bank programs that recycle existing infrastructure loans from commercial banks to institutional investors. In both programs, there is the need to use risk mitigation techniques to upgrade the quality of infrastructure assets to meet institutional investment requirements, also engaging rating agencies to provide credit ratings.

- **Develop acceptable strategies for mitigating cross-border currency risk**. The public discourse assumes a significant increase in international institution- al investment across country borders with differing currencies, notably in African countries with weak domestic capital markets. However, currency risk is a major investment risk that impedes investment in infrastructure, especially in developing countries subject to economic and political volatility that often results in depreciating currencies. Cross-border infrastructure investments are not realistic or even advisable unless there are explicit strategies to mitigate the risks of depreciating currencies borne by cross-border investors or transferred to governments and their citizens. Technical experts in currency risks and possible solutions need to be engaged to formulate assessment methodologies; level of risks and possible risk mitigation instruments.

- **Develop funding vehicles and risk mitigation for greenfield infrastructure assets.** While the urgent need is for greenfield investment of new infrastructure projects, institutional investment is largely restricted to low-risk assets with established high-performing track records that meet investment-grade criteria. To offset this funding gap, the public sector will need to focus activities and funding on addressing the risks and creating commensurate funding vehicles and risk mitigation instruments.

- **Develop and implement "best practices" in achieving scale.** The public sector is committed to innovative finance structures followed by the widespread scaling up of these finance structures to achieve widespread development impact across countries. However, innovative approaches that succeed in pilots are often not brought to scale. An inventory of successful transaction structures needs to be compiled, with an assessment of impediments to scaling and possible ways to break through these impediments and reach scale within countries and across countries.

PERFORMANCE AND DUE DILIGENCE REQUIREMENTS

- **Create online easy access to an "Infrastructure Project Performance Database" with benchmarks and leverage ratios.** Institutional investors cannot make investments without a credible source of data on investment performance. Therefore it is critical to develop a coordinated centralized database of information provided in a user-friendly online information platform designed to meet investor decision-making needs, coordinating with other ongoing initiatives to eliminate redundancy. It will be critical to highlight the performance of credit-enhanced assets and the role of the public sector in successfully protecting investors against investment risks.

- **Proactively market the Infrastructure Project Performance Database & Benchmarks.** The existence of information does not mean it will be used. There will need to be intensive engagement of the institutional investment community in defining the specifications of the database, benchmarks, and the user interface, so platform is systematically integrated into the investment ecosystem and decision-making, advancing the mainstreaming of infrastructure as a mainstream asset class.

INVESTMENT RATIONALES

- **Develop *"Key Best Practice Principles for Investment-Grade Infrastructure Assets"* that identify risk issues and potential mitigating solutions.** The Best Practices Principles would need to be structured as a standardized framework to meet due diligence assessment requirements for the range of investment modalities related to the infrastructure asset class, including a systematic assessment of the different risks and menu of investment and risk-mitigation solutions.

INVESTMENT OPTIONS

- **Create an Open Marketplace of documented Infrastructure Investment Products and Co-Investment Platforms.** Institutional investors report the lack of information on existing infrastructure products. Experts need to be recruited to map decision needs, aggregate available data on products and co-investment platforms, provide specifications for the construction of the online database, and design the investor interface so it can effectively inform decision-making. A second essential activity is the design, launch, and implementation of marketing and dissemination strategies to fully integrate infrastructure investments into institutional investment decision-making processes.

- **Scale up Intermediation Investment Vehicles.** To secure the investment required by African national and regional projects and leverage limited public funding, the public sector needs to aggressively support the scaling up of debt and equity investment vehicles that can credibly serve as intermediaries channelling capital to infrastructure projects. This is especially important for early-stage "greenfield" project investment. Partnerships with the private sector are critical in designing and operating such intermediation investment vehicles. To be effective, investor surveys indicate that these initiatives need to be private sector-led and managed.

- **Recycle existing infrastructure assets held by Development Financial Institutions (DFIs) to institutional investors.** DFIs should immediately proceed to recycle their existing infrastructure to the host country institutional investors: This process would serve to jumpstart the required transformation in the investment ecosystem of the main sources of institutional investment.

- **Recycle existing infrastructure assets held commercial banks to institutional investors.** DFIs should immediately proceed to scale up the use of their risk mitigation instruments to recycle the existing infrastructure debt on bank balance sheets to the host country institutional investors. This process, supplemented by other actions, would serve to jumpstart the required transformation in the investment ecosystem of the main sources of institutional investment.

- **Measure DFI mobilization of private sector capital and compute leverage ratios against the objective of moving from billions to trillions.** If DFI leverage performance is not measured, it cannot be managed or scaled. Annual DFI Infrastructure Leverage Performance Reports need to be compiled to document the amount of private funds mobilized and compute leverage ratios (by project and DFI).

- **Support the development of Co-Investment Platforms** (such as the *"African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform")*.

INFRASTRUCTURE AS A MAINSTREAM ASSET CLASS

- **Dedicate public sector support in close collaboration with the private sector aimed at developing infrastructure as a mainstream asset class for institutional investors.** The public sector needs to invest more in joint efforts with the private sector (including rating agencies) and research institutes in building infrastructure as a separate asset class supported by fact-based assessment and investment grade ratings. Such efforts include building benchmarks of private infrastructure investments to inform investor asset allocation decisions, and assessing the implications for required refinements of risk mitigation instruments and techniques. A real-time deal tracking system should also be provided, enabling cost-effective coordination and tracking with performance metrics to build market awareness, momentum, and confidence.

ENABLING ENVIRONMENTS

- **Develop enabling regulatory environments based on best practices through evidence-based technical exchanges, the development of global best practices, and country-specific action plans.** Institutional investors report many impediments limiting their investment in infrastructure. To address these constraints, the public sector needs to develop an ***"Institutional Investor Regulatory Toolkit for Infrastructure Assets"*** and support country-based diagnostics and action plans for improving prudent and enabling regulatory frameworks.

INVESTMENT CAPACITY

- **Set up training programs to train pension fund officials, local asset managers, investment consultants, government officials, and other stakeholders.** The lack of the needed skills and knowledge is reported as a major constraint to institutional investment in infrastructure. Training programs need to de designed and implemented that enable the development and execution of prudent and diversified investment strategies, the creation of investable infrastructure products, and the capacity to license new investable products.

- **Provide training in project finance techniques.** Studies have provided solid evidence that project finance techniques are a key success factor in the development of infrastructure assets that are of investment-grade quality, including developing countries and specifically in Africa. Given the pivotal role of project finance techniques in ensuring the investability of infrastructure assets, the public sector needs to aggressively facilitate the scaling up of the required training courses in developing countries.

- **Proactively encourage the scaling up of credit ratings for infrastructure projects and investment products.** Institutional investors require solid documentation of infrastructure risks and often require the assessments and credit ratings provided by rating agencies. Therefore a key means of facilitating institutional investment is by supporting the expansion of credit ratings for infrastructure assets.

TARGETED UNLOCKING ACTIONS THAT INCREASE DEMAND FOR CAPITAL

The evidence is undeniable: There is an abundance of capital but a severe lack of investable infrastructure assets. The solution is re-engineering project development, investment frameworks, and the processes for private sector engagement, encompassing project identification and the entire project development process, including the design of project structures, ownership, risk mitigation, and use of proven project finance techniques. Key "*unlocking actions*" with large-scale impact in increasing the demand for capital are summarized below.

OVERALL REALLOCATION OF PUBLIC RESOURCES

- **Define and implement transformative public sector interventions to facilitate the development of investable infrastructure assets.** The public sector needs to better understand the project development ecosystem and investment criteria, investing in the required increased effectiveness and efficiency of the project development cycle. This will required significant changes in mindset, processes, and collaboration frameworks working in partnership with the private sector at the project and investment vehicle level from inception through development, structuring, risk mitigation, finance, and operation.

DEFINING PRIORITY PROJECTS

- **Invest in the development of upfront "*Project Assessments*" that address key development and investment risk issues.** The public sector needs to invest in the development of publicly disclosed Preliminary Infrastructure Project Assessments ("Project Assessments") that cover both development dividends and investability. The transparent process of generating Project Assessments would serve as a collaborative integrating platform, crowding in the technical public and private sector experts and local stakeholders required to optimize sustainable development impact and access to private capital. The private sector needs to take a leadership role in this process, bringing innovative ideas, approaches, technologies, and financing structures to the design of the project. Development Finance Institutions can provide a critical facilitation and brokering role from project inception, especially for cross-border projects, in bringing together the required private sector experts and investors.

FUNDING FOR INVESTABLE PROJECT DEVELOPMENT

- **Restructure and increase Project Preparation Facilities (PPFs) so they are effective in meeting the investment requirements for infrastructure assets.** There is wide agreement in the private sector on the need to exponentially increase the amount of funding for project preparation and development, allocating the bulk of PPF funds to the early stages of investment, and create simplified one-stop access through open information and aggregation platforms including online portals and specialized online applications. These platforms and applications should also include aggregated directories of the entire eco-system needed to develop high-quality infrastructure projects: skilled professionals (e.g., project developers, financial advisors, project finance lawyers, environmental engineers, etc.); risk mitigation techniques, instruments, and best practices; and standardized approaches (e.g., toolkits, project legal documentation, off-take agreements, etc.).

- **Refine Approaches to Procurement. Governments and their development partners need to crowd in private sector funding of the "project development finance gap" through streamlined transparent and well-governed policies redefining procurement processes.** There needs to be public-private collaboration in defining innovative procurement processes (e.g., unsolicited bids, auctions, restricted bidding, open book tendering, single sourcing infrastructure tenders, etc.), that accelerate project development, increase investable project pipelines, reduce costs, and time to service delivery, resulting in greater sustainable development impact.

- **Incentivize project developers to develop infrastructure projects.** The public sector needs to create a framework that incentivizes project developers to drive the project development process. Two sets of actions are required: (i) *Employ business models with adequate payment models for private sector project developers, so they can increase the number of investable projects they develop*; and (ii) *Directly fund more project developers*.

- **Scale up effective investment intermediation vehicles.** The public sector needs to partner with the private sector and invest in the development and scaling up effective investment intermediation vehicles, such as infrastructure project bonds, government bonds '*earmarked*' for infrastructure investments, indices, Special Vehicle Transaction Structures, and Infrastructure Funds, aligning with the investment criteria of institutional investors.

- **Develop investment vehicles for greenfield infrastructure investment. The largest gap in funding is for early-stage "greenfield" infrastructure, so a key focus of the public sector needs to be catalysing the scaling up of greenfield infrastructure products.** Such initiatives need to be scaled up and refined across all DFIs, leveraging their AAA ratings, experience and low default rates, as well as deal-sourcing and risk mitigation capacity.

PROJECT OWNERSHIP & INCENTIVES

- **Prepare a full and open menu of options with regard to project ownership and debt and equity options.**

- **Develop an ownership strategy that incentivizes local support through shared benefits of ownership, mitigating risks and creating spill-over effects for local development.** Each project should have a well-defined strategy that builds local roots within a technical viable framework.

- **Encourage private sector project developers to jumpstart projects with public support, ensuring project success so they can later sell off assets to local pension funds and retail investors through the stock market.**

- **Facilitate government access to independent financial advisors.** The public sector needs to improve the enabling environment for regional projects by providing independent financial advisors to all participant governments to ensure suitable treaties and cross-border agreements, and involving private sector entities (local, regional, and international) as the dynamic "*engine*" creating momentum for achieving timely progress and results.

CLOSING "*PROJECT VIABILITY GAPS*" WITH ENHANCED DEVELOPMENT EFFECTIVENESS

- **Identify the "*project viability gap*" and focus development support and risk mitigation to eliminate the obstacles impeding access to private finance.** Project developers and investors, governments, and development partners need to create a new collaborative work process focused on ***"identifying project viability gaps"*** to achieve bankability. Online platforms are needed to enable cost-effective technical coordination between the wide spectrum of project participants, provider of risk mitigation, and potential investors in solving the "project viability gap," with leverage metrics to measure performance and advance lessons learned.

LEVERAGE MULTIPLIERS

- **Scale up the use of project finance techniques. Governments need to increase their investment in using "*project finance*" techniques that can mitigate risks, identifying the project viability gap and working closely with the wide array of required public and private sector partners in identifying and implementing solutions.** If risks are adequately mitigated, a local investment grade rating can be secured post-construction on local currency tranches, enabling significant local institutional investment. In some cases, it may be possible to "pierce the sovereign ceiling" and obtain a credit rating better than the sovereign.

- **Scale up the use of public and private sector consortiums**. Given the complexities of national and regional infrastructure projects, consortiums of public and private sector entities can be developed to provide the needed support. Development partners can develop consortiums to better enable effective donor coordination and targeted inputs address project viability gaps. Banks can coordinate, given Basel III and their limited ability to provide upfront funding to cover construction risks until the assets are performing and institutional investment can be secured. Insurance companies can partner for reinsurance and complementary policies.

RISK MITIGATION INNOVATION

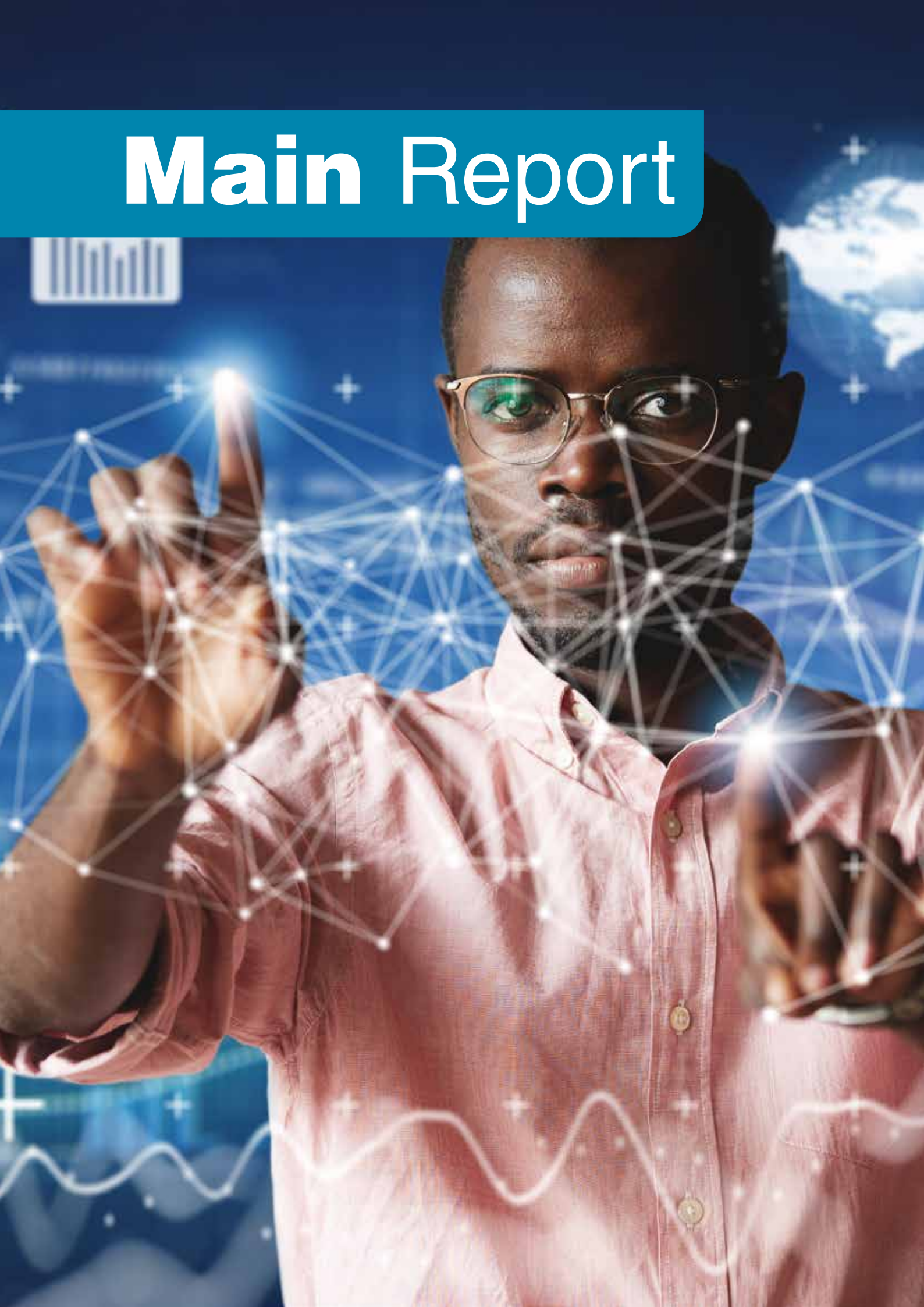
- **Scale up risk mitigation with focus on expanding applications and utilization**. The public sector needs to increase its investment in the scaling up and utilization of existing and new effective risk mitigation instruments working closely with finance experts, project developers, investors and other professionals involved in project development. ***"Risk Mitigation Innovation Labs"*** need to be supported by the public sector, bringing together experts from across the public and private sectors. As noted earlier, for risk mitigation techniques and instruments to be scaled up, there needs to be a whole scale change in the economics, standardization, dissemination and ease of use. To support this process, there needs to be easy online access to information on risk mitigation instruments, leading-edge transaction structures, standard documentation, and directories of professionals (e.g., expanding INFRADEV Marketplace www.infradev.org).

REGIONAL HARMONIZATION

- **Champion the implementation of regional African harmonization interventions (such as regional procurement bodies/authorities) that can facilitate the development of bankable and sustainable regional infrastructure projects, both on a systematic regional level as well as within each individual regional project structure.**

Details on each of the above "unlocking actions" for unlocking the demand for institutional investment through investable infrastructure assets, their rationales and implementation are provided in the main report.

Main Report



Section A

BACKGROUND: DRIVERS SHAPING THE INVESTMENT AND INFRASTRUCTURE ECOSYSTEMS

The world has seen a convergent escalation from the public and private sectors in prioritizing infrastructure. ***Key drivers are set forth below.***

1.0 INSTITUTIONAL INVESTMENT MAGNIFIED BY PUSH FOR YIELD AND DIVERSIFICATION

The potential for significant increased amounts of institutional investment in infrastructure assets is firmly evidenced by the reported activities of institutional investors and the operational entities that drive their investment decisions, including Boards, Trustees, asset managers, consultants, and analytical services, especially rating agencies.

According to research from the G-20-sponsored Global Infrastructure Hub, 69% of institutional investor funds would like to increase allocations to the infrastructure sector, with particular interest in emerging markets.[15] Evidence of the growing interest is reflected in recent announcements by pension funds. For example, in 2015, the New York State Common Retirement Fund, one of the largest US pension funds worth approximately US$180 billion, announced plans to invest up to 3% of its assets (US$5 billion) in Africa over the next five years to diversify its portfolio and boost returns.[16]

According to the OECD, fundamental drivers for pension funds to significantly increase infrastructure investment include: decline of interest rates in the post-global financial crisis period, falling interest rates, narrowing credit spreads, the need to diversify with uncorrelated assets, increased pension liabilities, and demographic risk (including a population that is living longer). The result is the need to yield enhancement through credit investments and asset classes with higher prospective returns such as equities and alternatives, including infrastructure.[17]

Other surveys of institutional investors confirm the push for higher yielding assets with increased interest in infrastructure assets, as well as the strategic rethinking of how to increase capacity to formulate prudent investment decisions in new types of higher-yielding assets. For example, the 2016 McKinsey Survey of leading institutional investors reports strategic changes in internal decision-making and staffing that reflect the objective of selecting new types of investments that could include infrastructure. It states: "… Institutions plan to … [focus] on building portfolio-construction capabilities, given that these drive the vast majority of long-term returns. The most striking finding from our research is that almost 80 percent of institutions plan to reinforce their central portfolio-construction team, with most expecting to add three to five people. In interviews, leaders also said they expect a more dynamic decision-making process structured around top-down economic scenarios, which they hope will provoke more debate and move them away from a rote approval of strategic asset allocation by the executive committee and board."[18]

The reported shift to enhanced due diligence capacities in larger institutional investors represents an important emerging opportunity to increase infrastructure investments.

Other reported trends also boost the potential for increased institutional investment in infrastructure. For the bulk of smaller institutional investors, there are reports of increased use and interest in co-investment platforms, pooling resources and investments with other institutional investors – both large institutional investors as well as in-country institutional investors that have greater knowledge). This presents another important opportunity to leverage the capacities of both larger institutional investors and home country institutional investors.

In step with their clients, analytical investment support services are increasing their product coverage on infrastructure transactions. Notable examples are the rating agencies with new default studies on infrastructure projects and public-sponsored research such as the G20 Global Infrastructure Hub and EDHEC Infrastructure Institute-Singapore.[19]

2.0 POLITICAL IMPERATIVE OF INCREASING INFRASTRUCTURE INVESTMENT

The political commitment of the world's governments also presents critical opportunities to build on political leadership, approved resolutions between all member states of the United Nations, and actions being undertaken in new public sector infrastructure support programs. In multiple venues such as the United Nations, World Bank, IMF, OECD, and G20, governments have explicitly called on institutional investors to close the funding gap for infrastructure. Governments have set forth their commitments in many political agreements, such as the United Nations 2015 declarations on Financing for Development, Sustainable Development Goals, Paris Agreement on Climate Change, and the G20 Leaders' Communiqué Antalya Summit.[20]

The political rationale for public investment in mobilizing finance for infrastructure is evidence-based: Experts have confirmed that infrastructure serves as the basis for long-term growth and can also immediately boost economic activity. For advanced countries, the IMF estimates every dollar of infrastructure investment during periods of low growth can increase output over the medium term by three times (US$3).[21]

Infrastructure investment in developing countries is even more critical. Analysis by the IMF has shown that the benefits of infrastructure investment are greatest when an economy is operating below capacity, investment efficiency is high, and public investment is debt-financed.[22] Therefore, the imperative of infrastructure investment is paramount for African countries as the essential pre-condition for access to markets, supply chains, inclusive and sustainable economic growth, and job creation, creating the conditions for political stability.

2.1 The Enormity of the Challenge: The facts are also evidence of the enormity of the challenge: Institutional investors, notably pension funds bound to protect retiree earnings, have extremely low risk tolerance and are governed by related strict regulations that constrain the bulk of institutional investments to assets assessed as being very low risk. The most recent OECD pension survey states that despite growing interest from pension fund managers, actual institutional investment in infrastructure (including unlisted debt and equity) is estimated at 1.1% of portfolios.[23] Institutional investors require projects of very high credit quality, and the lack of investable projects is underlined by the OECD survey, citing that many pension funds such as CalPERS reported that they were unable to meet their infrastructure allocations due to the lack of suitably structured assets and availability of quality investments.

The OECD study states that of the limited 1.1% portfolio investments made in infrastructure, 74% was reported as invested directly or co-directly in infrastructure projects and almost all in investment trade projects located in OECD countries, with the balance in infrastructure funds. Moreover, the dominant institutional investment is in "brownfield projects" that are already post-construction with solid track records of profitability and sustainability that meet stringent investment criteria.

2.2 The Greenfield Funding Gap: In contrast to this mainstream institutional investment criteria, the main source of demand for infrastructure finance in Africa is not financing operational established "brownfield" projects, but rather for the "greenfield" financing of start-up infrastructure projects. Moreover, the required level of greenfield investment is extremely large given the current portfolio of national and regional projects, with the exception of a few existing projects requiring funding for expansion. While some international institutional investors have started to seek out "greenfield projects" in upper middle-income developing countries, the potential for scale greenfield investment from institutional investments is not significant unless risk levels can be reduced to meet their very low-risk investment criteria.[24]

However, there are infrastructure investment vehicles that could be significantly scaled up, provided adequate risk mitigation structures are put into place. While the total institutional investment in either greenfield or brownfield African infrastructure projects is not documented in the OECD study, there are cases of reported African institutional investment in countries such as South Africa in infrastructure investment vehicles, such as the Pan African Infrastructure Development Fund and the South African Infrastructure Fund. National insurance assets are also reported as having invested in infrastructure sectors that are considered the least risky, such as telecom equity in Cape Verde and telecom bonds in Mozambique. In short, there is the need to exponentially increase the number and scope of domestic and international infrastructure debt and equity investment vehicles, both listed and unlisted, that can finance greenfield infrastructure projects and meet investment criteria.

Therefore the challenge of tapping into large-scale institutional investment for developing country infrastructure projects is straightforward: The need to create high-quality investment vehicles with low risk and adequate returns over the long term. To access finance for African infrastructure projects, we need to mitigate the high risks associated with projects providing services to people often unable to pay for the full cost of service delivery, located in non-investment-grade countries with high degrees of risk related to the political, economic, and regulatory environment, and several with the risk of social disruption and terrorism.

2.3 The Daunting Challenge of Financing African Regional Infrastructure Projects: Africa's regional infrastructure projects present even greater challenges, due to the difficulty of ensuring stable cross-border operations of regional infrastructure projects that operate across countries with different policies, regulations, laws, economies, and political leaders, with agreements often complicated by unstable bilateral relations and differing economic interests. Investable regional projects require the explicit harmonization of all project operations, revenue structures, and management, enabling stable financial returns.

The World Economic Forum's Africa Strategic Infrastructure Initiative Report characterizes the challenges facing regional infrastructure projects as follows:

- "Financial challenges of participating countries to agree on sharing the risks, costs and benefits, and to implement the agreement or to establish an optimal financing structure including currency debates;
- Technical challenges to align different technical standards, operating requirements and construction risks;
- Regulatory challenges to provide and/or enforce legal agreements, harmonize different procedures, and manage the risk of regulatory changes in all participating countries;
- Personnel/cultural challenges to build trusting relationships, regardless of political or historical differences, overcome language barriers, coordinate a large number and variety of stakeholders with diversified interests; and
- Governance-related challenges to align the distinctive national agendas, and ensure all participating countries have appropriate ownership of the program, coordinate responsibilities within and between the participating countries, overcome national interests in staffing, etc."[25]

Yet delivering on cross-border transport and energy projects is the core precondition to creating the foundational economic and political backbone of Africa. ***Without the basic infrastructure to enable the development of regional trade and production, the prospects for economic growth and investment at the local level with robust regional economic corridors catalyzing the growth of local entrepreneurs and regional markets are blocked.***

Failure to develop and finance regional African infrastructure projects is not an option: These regional infrastructure projects serve as the physical backbone needed for African integration, wider economic growth and deepening trade and investment regional links enabling greater political stability.

The time to confront the daunting challenge of financing Africa regional infrastructure projects is now: *The global political consensus has recognized that the challenge of mobilizing private finance requires new partnerships, investment vehicles, business models, policies, programs, and innovative approaches. This report is intended to advance the identification of the new required models, processes, solutions and critical roadmap actions to refine and implement immediately.*

2.4 Aggressive Public Actions to Deliver: Given the urgent political import of mobilizing institutional investment for infrastructure, the public sector push for greater institutional investment in infrastructure has gone "from words to actions," with several public sector initiatives. For example, the OECD is developing guidance on diversified financing instruments for

THE ECONOMIC AND POLITICAL COSTS OF NOT DELIVERING ON AFRICA'S INFRASTRUCTURE

The cost of not delivering on the infrastructure required to diversify Africa's economy is potentially catastrophic, threatening Africa's economic and political stability with spillover effects affecting the world. "Africa Rising" is now jeopardized, given the failure over the past decades to deliver on national and regional infrastructure, making Africa's countries vulnerable to the decline in commodity pric- es, lower economic growth in China and Europe, and a stronger US dollar.

Due to the failure to invest adequately in its infrastructure, Africa is now exposed to global risks with continued overreliance on commodity markets and inadequate economic diversification across its borders and across sectors. It lacks the physical backbone of infrastructure required for economic diversification, increased cross-border trade and investment, and broad inclusive growth.

As a result, in the current global environment, Africa's credit quality has already decreased with the rating agency Standard & Poor's reporting that the average international credit rating of African countries has dropped from an average of BB to B over the last two years, making it even harder to mobilize private investment. Moreover, most of the African countries have a negative outlook given their dependence on commodity prices.[26]

In fact, the 2016 World Economic Competitiveness Report issued by the World Economic Forum states that the competitiveness of African countries ranks below other developing countries in the areas of infrastructure and human capital (health and primary education and higher education and training) as well as in the more complex areas of competitiveness, technological readiness and business sophistication and innovation. Moreover, the report states that approximately 13 million Africans per year are entering the labor force with the vast majority failing to find secure positions in the formal economy.[27] Meanwhile, the IMF projects that Africa's working-age population will continue to expand to exceed that of the rest of the world combined by 2030.[28] This level of underemployment creates an underlying high risk of economic and political instability.

infrastructure and the role of institutional investors as sources of long-term finance, and also leading the Sustainable Partnership on Infrastructure Development (SDIP). The Canadian government is supporting Convergence as an investment platform. The G20 is advancing support in the development of bankable infrastructure projects. In fact, the G20 Summit set forth operational directives to advance infrastructure investment:

"Going forward, we call on our Ministers to continue their work to improve the investment ecosystem, promote long-term financing, foster institutional investors' involvement, support the development of alternative capital market instruments and asset-based financing models, and encourage Multilateral Development Banks (MDBs) to mobilize their resources, optimize their balance sheets, and catalyze private sector funding. We are advancing efforts and developing toolkits to unlock the ways and means for countries to better prepare, prioritize and finance infrastructure projects. We expect the Global Infrastructure Hub to make a significant contribution towards these endeavours." [29]

However, as documented in many expert studies, the current public sector initiatives have not been successful to date in mobilizing the required levels of institutional investment. It is important to note these different initiatives are not closely coordinated between themselves or with institutional investors, nor do they currently serve as operational tools embedded in the investment eco-system. This lack of direct application, fragmentation and separation limits the ability of these initiatives to have the required impact in significantly increasing institutional investment in infrastructure, as they are not fully integrated within investment decision-making processes. Therefore they are unlikely to change the mainstream behaviour of institutional investors with regards to considering investments in infrastructure, especially with regards to African infrastructure assets considered higher risk.

3.0 OPERATIONALIZING THE "*CALL TO ACTION*" – WHO DOES WHAT WHEN & HOW?

As noted earlier, existing institutional investment in infrastructure is relatively low today compared to potential levels. Moreover, of the low investment levels in infrastructure, the great bulk is in the lower-risk OECD countries, with little evidence of meaningful institutional investment in African infrastructure.

To address this issue, we need to address practical ways to increase institutional investment in infrastructure based on the realities of how investment decisions are made, namely who does what when and how?

Key aspects of this assessment need to include the following:

- **Practical Actions by Institutional Investors:** What practical actions can institutional investors take to increase their level of investments in infrastructure given current market and public conditions?

- **Gaps in the Investment Ecosystem & Market/Coordination Failures:** Why haven't investors increased their investments to meet the extraordinarily high levels of demand? What are the gaps in the investment eco-system, and the specific market and coordination failures?

- **Catalytic Actions by the Public Sector:** If the public sector needs to take actions to unlock institutional investment, what are the specific targeted actions, and which are the least costly that can mobilize institutional investment?

The sections below summarize the factors that determine the ability of institutional investors to invest in infrastructure, providing an overview of the investment ecosystem affecting investment decision-making, and setting forth possible actions and actors drawing from the extensive existing research on this issue.

3.1 Drivers Activating the Infrastructure Marketplace: Supply and Demand: *The drivers for fundamental change are strong on both the supply and demand sides of the equation, as summarized below.*

❶ **Institutional Investors to "Supply" More Capital:** As noted before, numerous expert studies document the solid evidence-based case for dramatically scaling up institutional investment in high-quality infrastructure, assessed at investment-grade credit ratings based on core investment fundamentals: institutional investors require investment-grade, diversified, long-term assets with returns that meet their fiduciary requirements to reliably fund long-term liabilities. In fact, expert studies and surveys have documented significant yield and diversification pressures for increased institutional investment in infrastructure assets.[30] Moreover, there is under-deployed institutional capital for infrastructure within Africa itself: African pension fund assets alone, not counting insurance companies or sovereign wealth funds, in the 16 largest Africa pension markets at year- end 2014 were estimated at US$ 334 billion.[31]

❷ **Public Sector & Political Will to "Demand" More Institutional Investor Capital:** The world's governments and their development partners have assigned urgent political importance to undertaking actions that can increase the ability and willingness of institutional investors to provide funding to infrastructure assets worldwide. To achieve the goals in the 2030 Agenda for Sustainable Development, there is public consensus on the immediate need to urgently and effectively tap into the large funding pools of global and domestic institutional investment.

This need for significant institutional investment is magnified by the reduced amount of available public funding and reduced bank finance available in today's global infrastructure market. The outlook for government funding is weak given a combination of projected lower economic growth, coupled by increased fiscal deficits. Many developing countries have also entered a period of lowered creditworthiness; for example, S&P reports a significant reduction in national credit rating for African countries from a continental average of BB-two years ago to B in 2016.[32] Against this backdrop, commercial banks are reported as decreasing the long-term funding available to infrastructure projects given the higher capital allocations under Basel III.

3.2 The Strict Due Diligence Requirements of Institutional Investors:

As a leading World Bank Expert stated, *"If infrastructure was perceived by investors as a truly stable, risk-adjusted investment, it would already be able to attract the financing it needed. There would be no gap."*[33] The evidence is conclusive that institutional investments in infrastructure cannot increase significantly unless there are improvements in: (1) *the ability of institutional investors to assess infrastructure assets*; and (2) *the quality of infrastructure assets.* ***These requirements are non-negotiable, as institutional investors are required by national regulations and internal credit policies to make sure that all their investments comply with strict due diligence and performance requirements and national regulations.***

The due diligence and investment requirements of institutional investors are regulated and strictly controlled by internal credit policies aimed at: (1) *limiting underperforming assets* (i.e., not achieving expected financial returns to enable payment of projected liabilities); and (2) *avoiding any losses of any amount of investments.*

In fact, given the government regulations and the political import of delivering on expected returns and funding liabilities, failed institutional investments can result in lawsuits, job loss, and in some cases, personal liability.[34] Lawsuits can be directed against the full spectrum of market participants (including rating agencies), with plaintiffs including retirees, institutional investors and governments. The penalties can be very large. For example, the rating agency Standard and Poor's Financial Services paid a total of US$1.4 billion to the US national government (Justice Department), 19 states, and Washington DC to settle government charges that it inflated the ratings of mortgage-backed securing during the housing boom, helping to set off the financial crisis.[35]

3.3 The Complexity of the Infrastructure Ecosystem and Assessing Infrastructure Assets:

While institutional investors have very strict standards requiring low-risk investments, infrastructure assets are extremely complex and difficult to assess in terms of risk and financial performance. ***For institutional investors to meet their due diligence requirements, they need to employ teams of highly-skilled experts to conduct detailed assessments and interviews to assess risks and likely financial performance, such as:***

- **Financial documents** (e.g., audited financial statements, business plan, financial models under different stress scenarios, etc.);
- **Legal documentation** (legal and ownership structure, off-take agreements, equipment contracts, etc.);
- **Technical studies** (e.g., demand, supply, environmental, engineering, etc.);
- **Management performance and capacities** (e.g., staff bios, structure, and performance);
- **Government commitments** (e.g., tariff agreements, government permits, etc.); and
- **Risk mitigation contracts**; rating agency reports; etc.

The final due diligence assessment justifying investment decisions – whether the investment is direct or indirect through asset managers – needs to be documented with monitored, regular performance tracking reported to senior accountable management and the Board.

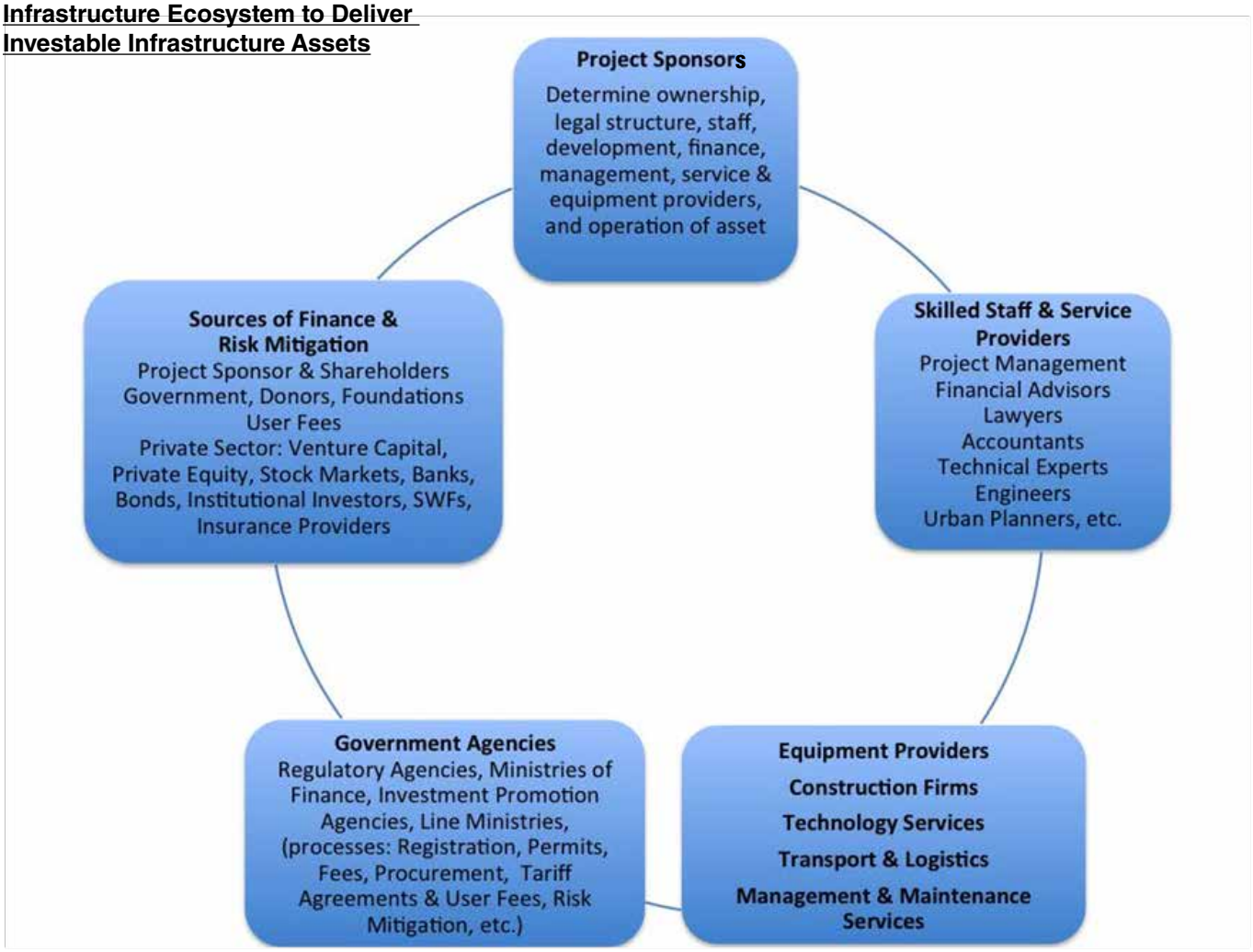
The extensive due diligence process for infrastructure assets in fact mirrors the technical complexity of the infrastructure and investment ecosystems. The ability to develop investable infrastructure assets is directly correlated to the well-functioning of the infrastructure and investment ecosystems.[36] It is critical to understand that the process of developing, structuring, and financing infrastructure assets is dependent entirely on ability to connect a wide array of highly-skilled experts and link adequately to networks of knowledge, equipment, risk mitigation, public processes and support, and finance.

Infrastructure projects take years to develop into investable assets, employing teams of diverse, highly-skilled and experienced experts that can be successful in developing, financing, and operating infrastructure services. A simplified schematic is presented below to illustrate the wide array of participants and processes underlying the sustainability of investable infrastructure assets.

As evidenced in developed countries, the infrastructure ecosystems are deep and highly networked, with vast numbers and reinforcing networks of in-country professionals that can deliver the array of services, equipment, and finance required for investable infrastructure assets.

However, in developing countries (especially many countries in Africa), the infrastructure ecosystems are weak or non-existent given the lack of experienced project sponsors, local professional experts, users able to pay fees that cover the costs of services, enabling regulatory frameworks, and developed domestic capital markets. As a direct result of weak local infrastructure eco-systems, it is extremely difficult to develop, finance, and operate investable infrastructure assets in developing countries (especially Africa).

Essential Participants in Infrastructure Ecosystem to Deliver Investable Infrastructure Assets



Therefore, given the complexity and difficulty embedded in developing and operating investable infrastructure assets, there are high-cost hurdles related to assessing the risks and opportunities. Institutional investors and their ecosystem of advisors, consultants, and asset managers face the significant challenge of recruiting highly-compensated skilled experts and paying them over long time periods to assess potential investments and ensure they comply with regulatory, due diligence and financial requirements. Moreover, as noted earlier, there are high institutional and personal penalties for failures in correctly assessing the risks of these complex investments.

A directly related well-documented impediment prevalent in developing countries (especially Africa) is the lack of high-quality "bankable" infrastructure assets that meet the due diligence requirements of institutional investors. As noted earlier, the ability to develop investable infrastructure assets and secure institutional investment is directly correlated to the well-functioning of the infrastructure and investment ecosystems. It is critical to understand that the process of developing, structuring, and financing of investable infrastructure assets is dependent entirely on the ability to connect a wide array of highly-skilled experts and decision makers, and link adequately to networks of knowledge, services, equipment, risk mitigation, public processes, government support, and finance.

Based on studies to date, the private sector cannot alone address the challenges of project development nor solve the issues undermining investability. A related issue is the lack of information on the limited pipeline of existing bankable infrastructure assets. These impediments therefore severely limit the ability of institutional investors to scale up their existing investments in developing country infrastructure. Section C of this report explains this issue in further detail.

3.4 The Complexity of the Investment Ecosystem and Aligning Institutional Investment Decision-Making with Infrastructure Assets: Institutional investors and the entire investment ecosystem related to institutional investors – Boards, Trustees, overseers, asset managers, investment consultants, and analytical services (especially rating agencies) – need to be "networked" with the other parts of the investment ecosystem that develop and manage infrastructure assets and provide finance. They need to have credible detailed information on possible infrastructure investments and make responsible investment allocations specific to infrastructure that are aligned with their conservative investment criteria and performance targets.

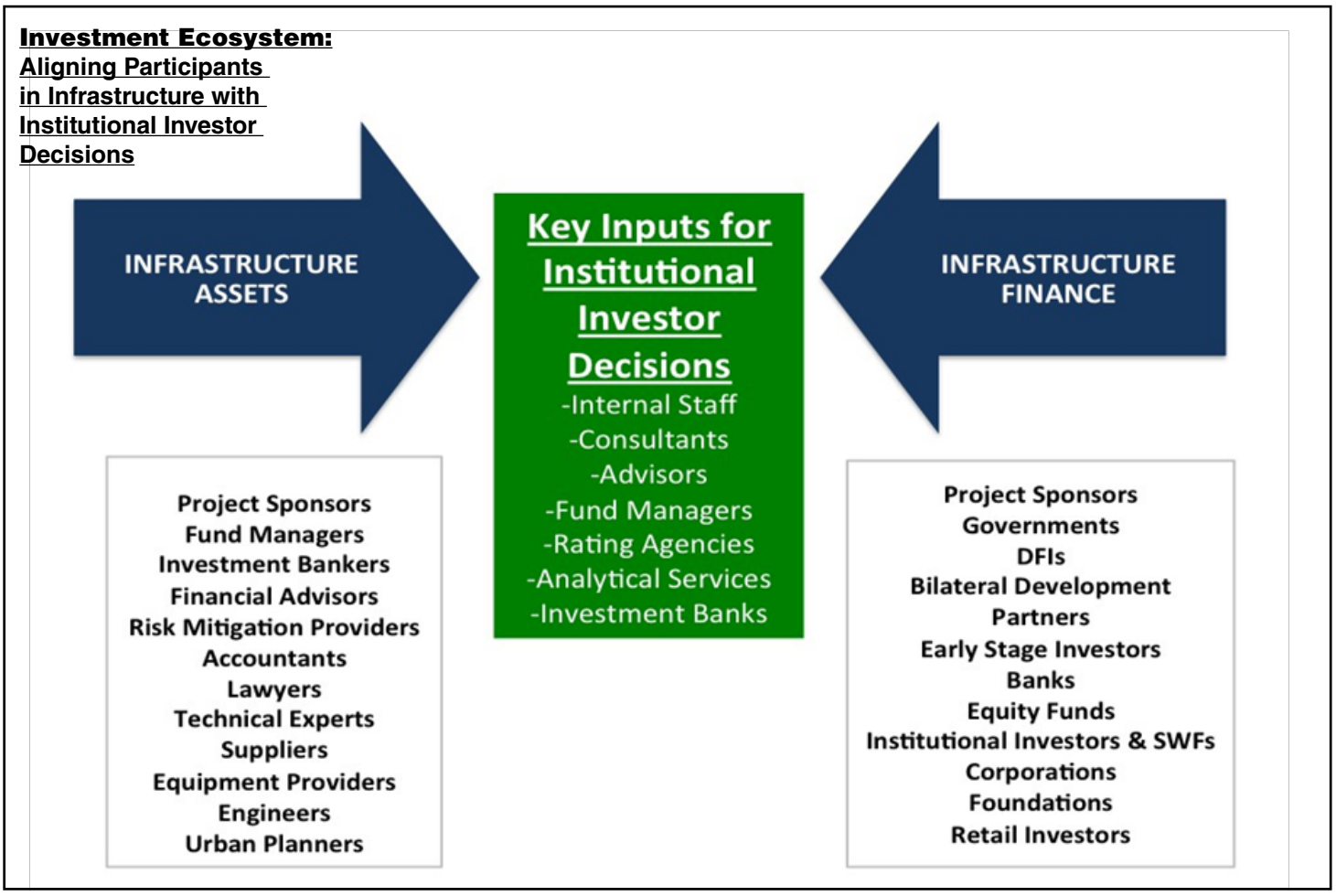
The finance decisions for infrastructure in the institutional investment ecosystem operate at multiple levels, involving a spectrum of internal decision makers (such as investment officers, supporting staff and consultants), Board Members, Trustees, and Overseers (including regulators and, in the case of public pension funds, government officials), asset managers, advisors, and consultants. Accountable institutional investment ecosystem participants are required first and foremost to achieve the investor fiduciary responsibilities to meet stringent due diligence requirements based on the return targets and a low risk tolerance (i.e., failure to reach return targets and negligible risk of any losses).

Therefore, the key participants that shape the institutional investment decision-making process need to be "networked" with experienced participants in the larger investment ecosystem capable of developing, financing, and managing investable infrastructure assets. There are two larger subsets in the ecosystem:

- **Creators of Investable Infrastructure Assets:** As noted in the earlier section, the development, finance, and operation of infrastructure assets in the investment ecosystem involve a wide array of participants, ranging from the project sponsors and fund managers to the teams of technical experts that are essential to the development and operation of investable infrastructure assets.

- **Providers of Finance to Infrastructure Assets:** Institutional investors do not finance the entirety of infrastructure assets. Therefore they need to be networked with the wide spectrum of finance participants in infrastructure. For example, an infrastructure project in a developing country is financed from a wide array of sources, starting with the project sponsor and any equity partners and branching out to potentially include governments, DFIs, banks, domestic debt markets, equity funds, local institutional investors, sovereign wealth funds, foundations, corporations, stock markets, and retail investors.

The schematic below provides a simplified overview illustrating some of the vast array of participants in the investment ecosystem, those involved in developing and managing infrastructure assets (on the left) and participants in the financing (on the right). Key participants influencing institutional investor decisions that need to be aligned in the larger investment network are noted in the center of the diagram.



The systematic gaps in the investment ecosystem, between the wide range of participants noted in the previous schematic, need to be carefully assessed and resolved by building the needed linkages required to develop investable infrastructure assets and be able to adequately obtain information and assess them as required for institutional investment.

4.0 EFFECTIVE PUBLIC SECTOR ACTIONS ALIGNED WITH INVESTOR REQUIREMENTS

If governments are truly committed to unlocking institutional investment for infrastructure, they need to be more coordinated, targeted and effective in affecting the actual decision-making processes for investment in the ecosystem itself: Fundamentally changing public sector roles and processes to meet institutional investment requirements, developing the required information, databases, technical assessments and risk mitigation solutions, investment facilitation processes, and improving enabling environments. These targeted interventions require investment in the identification of best practices and solutions for developing the smartly-designed high-performing robust fiduciary frameworks required for responsible institutional investment in infrastructure. It should be noted that the requirements for sustainable, inclusive and climate-smart infrastructure investments need to be inherently and totally aligned with these investment criterion.

To be effective, these targeted public sector interventions will need to cover the entire life cycle for investment fiduciary frameworks, from design to implementation and dissemination, working closely with private sector technical experts in developing infrastructure investment products that respond entirely and faithfully to investment requirements, insuring low risk investments in strict compliance with institutional investment criteria.

4.1 Acknowledging and Addressing Potential Risks to Institutional Investors and their Home Countries:

To respect the investments of institutional investors, governments will need to acknowledge the risks and invest in the creation of risk mitigation solutions. Protecting institutional investment from losses and unacceptable low returns is as important a political imperative as facilitating increased investment in infrastructure. If retirees and other long-term investors are hurt financially, governments may incur other public liabilities and/or higher social support costs resulting from retirees with diminished pensions and unpaid insurance claims. There has been a long history of retirees hurt from unwise investments at both national and international levels, ranging from the Argentine debt crisis to the 2008 global sub-prime financial crisis.

Experts have documented issues resulting from prior institutional investments in problematic infrastructure projects, even in developed countries, that have been perceived as having rule of law and trustworthy and prudent investment regulations.[37] In fact, some market players have warned of asset bubbles as institutional investors provide new momentum in direct infrastructure investing absent the required expertise.[38] Therefore developing a responsible investment ecosystem needs to be forthright in identifying risks of infrastructure investment and potential solutions, assessing the history of infrastructure losses to date and potential ways to improve due diligence performance and protect against losses.

4.2 Requirement for Technical, Non-Politicized Expert-Led Process Fully Integrated into Institutional Investment Decision-Making Processes:

The long history of infrastructure investment provides solid evidence of its extremely technical nature and the resulting requirement for a wide spectrum of highly-skilled and specialized professionals to develop investable infrastructure projects and investment vehicles that can deliver the required public services while mitigating the related risks and delivering the expected investment returns.

While infrastructure offers the potential for ***"win-win investments"*** that concurrently deliver sustainable development dividends and financial returns, there are significant risks that need to be expertly managed spanning from construction risk, market risk, political risk, and operation risks to currency risks. Therefore, this process of public-private technical collaboration needs to be led and managed by credible financial, sector, management, and legal professionals with demonstrated track records in successful infrastructure development and operation. This will necessitate a complete change in the approach of the public sector and development partners towards this public objective, making space for the professional infrastructure community to take the operational lead in setting forth the technical standards and processes requirements for mainstreaming institutional investment in infrastructure.

4.3 Essential Localization and Country Ecosystems Required for Creditworthy Sustainable Infrastructure Development:

It is critical that public sector officials fully understand the underlying massive local requirements for the development and finance of investable infrastructure assets and the flagship leading role of domestic institutional investors.

Three key issues are paramount in advancing the import of "localization" in terms of risk mitigation, finance, and expertise:

❶ **Reduced Political Risk & Improved Service Delivery through Local Involvement:** A key risk-mitigation principle considered by investors is "*local skin in the game*," meaning that the risks of government interference are much reduced if local investors have provided capital. Sources of local capital include local institutional investors, as well as government, corporate and retail investors that can invest through stock markets and bonds, or directly as equity partners. Also, local stake-holders need to see first hand the benefits and quality of services being delivered by infrastructure projects, also serving as critical check-point monitors of infrastructure delivery and operations. Therefore, local institutional investors need to be able to invest in local infrastructure projects that meet investment-grade due diligence requirements, and the public sector needs to invest in the development of other local investment vehicles through domestic capital markets.

❷ **Managing Cross-Border Currency Risk:** The import of currency losses is evidenced by the recent announcement of over US$1.3 trillion of losses to US pension funds (6% total assets) resulting from the appreciation of the US dollar.[39] Another country with a strengthening currency is reported to have sustained losses due to overseas investments: Japan's Government Pension Investment Fund lost 5.2 trillion yen (US$52 billion) in the April-June quarter of 2016 largely due to overseas investments and the strengthening of the yen.[40] Currency risk is an intrinsic part of cross-border investment. Most infrastructure projects such as energy, water and sanitation, and transport (toll roads, railways) generate all or most of their revenues in local currency. To eliminate cross-border currency risk resulting from depreciating local currencies,

the long-term finance of such infrastructure projects needs to be dominated in local currency (or hedged) to avoid the risk of mismatched currencies that decrease financial returns. As a result, the optimal investors in infrastructure projects that generate local currency revenues are those investors that can provide long-term local currency financing.[41] Any use of external currencies will need to be carefully evaluated with regards to the risks borne by the government, the public, and investors. Therefore, if international institutional investors are to invest cross-border in infrastructure projects generating local currency revenues, there needs to a wholesale assessment of the related currency risks and development of adequate risk mitigating solutions.

❸ **Need for Extensive Financial Advisory Support:** As institutional investors require long track records showing stable returns to ensure prudent investments, government officials will need to work closely with financial and legal advisors to develop highly structured infrastructure projects and investment vehicles that meet investor requirements. Given the many risks in developing countries, this process is likely to require extensive credit enhancements working with development partners using their risk mitigation instruments to offset risks impeding investment. To increase the ability to develop bankable infrastructure projects and vehicles, the public sector therefore needs to invest in the building of a ***"local ecosystem"*** of infrastructure professionals with the required skill sets to structure credit enhanced high-quality infrastructure assets.

Given the import of ***"localization"*** to developing pipelines of investable infrastructure projects, host governments need to diagnose their capacities for localizing the capital and expertise needed for their priority infrastructure projects and develop action plans for improving the local infrastructure ecosystem. ***See ANNEX B for a specific initiative aimed at strengthening local ecosystems ("INFRADEV Marketplace").***

4.4 Need to Address Public Sector Crowding out of Institutional Investment: Institutional investment in infrastructure requires an enabling environment not blocked as a result of competing public sector financial instruments or finance. A key long-standing issue in finance worldwide is the extent to which public sector actions can result in the unintended "crowding out" of the private sector. For example, in developing countries, the national government's issuance of high-interest rate Treasury Bonds is often reported as crowding out the market for private sector finance.

Likewise, financial instruments provided by DFIs are sometimes reported as crowding out local banks, as the private sector needs to charge higher interest rates than subsidized public lenders.[42] Similarly infrastructure market makers in developing countries report the crowding out of infrastructure investments by the public sector given the massive amount of national debt with high returns offered to local institutional investors. DFIs are also reported as crowding out private sector funding by providing concessional loans for infrastructure projects that have lower interest rates and have lower credit quality requirements (often due to sovereign guarantees).

4.5 Requirement for High-Quality Public Sector Infrastructure Planning and Investment in Bankable Projects: The public sector needs to ensure institutional investors have enabling quality ecosystems, including the inputs needed to produce investable infrastructure plans and bankable projects.

Infrastructure projects are in their essence "political" assets that serve as the lifeblood of a country, delivering energy, water and sanitation, transport, and other public services encompassing the national government, local governments, civil society, and the business community. Therefore each country's national government is accountable for developing national sustainable development plans with an articulation of priority infrastructure projects that can deliver the required services for citizens to achieve quality of life and the ability to develop businesses, competitiveness, and access to markets.

To deliver on "win-win" infrastructure projects that deliver both sustainable development dividends and secure financial returns, experts in economic and political development, including local private sector development and supply chains, will need to lead the infrastructure planning process, working hand in hand with local stake-holders. This process also involves greater public sector support of bankable infrastructure projects to improve "demand" for institutional investment (as detailed in the section on required actions).

Infrastructure projects that fail to deliver development returns are also likely to fail, resulting in investment losses. Therefore, a critical requirement for a new investment ecosystem is marrying the alignment of sustainable development and financial returns into high-performing, comprehensive due diligence processes.[43]

5.0 THE OPPORTUNITY TO SCALE USING PROJECT FINANCE TECHNIQUES

Project finance techniques have been proven to enable access to long-term private capital. In fact, the need to scale up the use of project finance is noted in the Addis Ababa Action Agenda endorsed by all UN member countries. **The rationale of scaling up project finance techniques is fact-based and compelling:** Moody's Investors Service conducted a default study that showed that default rates for project finance transactions are significantly less than for corporate transactions and suitable for institutional investment.[44]

Key findings from Moody's research on unrated project finance bank loans include key points underscoring the usefulness of a project finance structure in meeting investor requirements:

- Project finance transactions in emerging markets demonstrate resilient credit strength;
- PPPs are a discrete sub-sector lying at the low-risk end of the project finance spectrum; and
- Average ultimate recovery rates for OECD and non-OECD project finance projects are similar.

Most importantly, Moody's found that ten-year cumulative default rates for project finance transactions are consistent with low investment-grade ratings. Such investment grade ratings are the gateway to unlocking institutional investment.

Other studies based on extensive data analysis found that project finance deals (and cash flows) are more resilient to macro-variables or the business cycle than corporate loans. For example, the EDHECinfra Institute found that project finance infrastructure structures and their cash flows were more resilient to macro-variables and the business cycle.[45] The use of resilient sustainable structures is critical for African countries subject to multiple

sources of volatility, especially given the ongoing reduction of global demand, commodity prices and creditworthiness. Therefore, project finance approaches can be used to enable African regional and national infrastructure projects to reach financial close.

Driven by the imperative of mobilizing greater institutional investment, DFIs, bilateral development partners, institutional investors, and even sovereign wealth funds are setting forth new policies, programs, and vehicles to implement this mission.[46] However, the use of sophisticated and complex techniques such as project finance cannot be implemented without whole-scale changes in development finance, cutting across approaches, processes, resource allocations, and staffing. Moreover, this technique is not brought to scale in developing countries, notably Africa, due to the costly and extensive processes that project finance techniques entails. These investment imperatives need the urgent support of the public sector aimed at unlocking institutional investment for infrastructure.

6.0 HOW TO ACHIEVE RESULTS: THE THEORY OF CHANGE

As set forth in earlier sections, given the extremely low amount of institutional investment in infrastructure today, especially in African countries, the required increase in institutional investment cannot be achieved absent transformative changes that target the existing disabling gaps impairing the entire investment ecosystem.

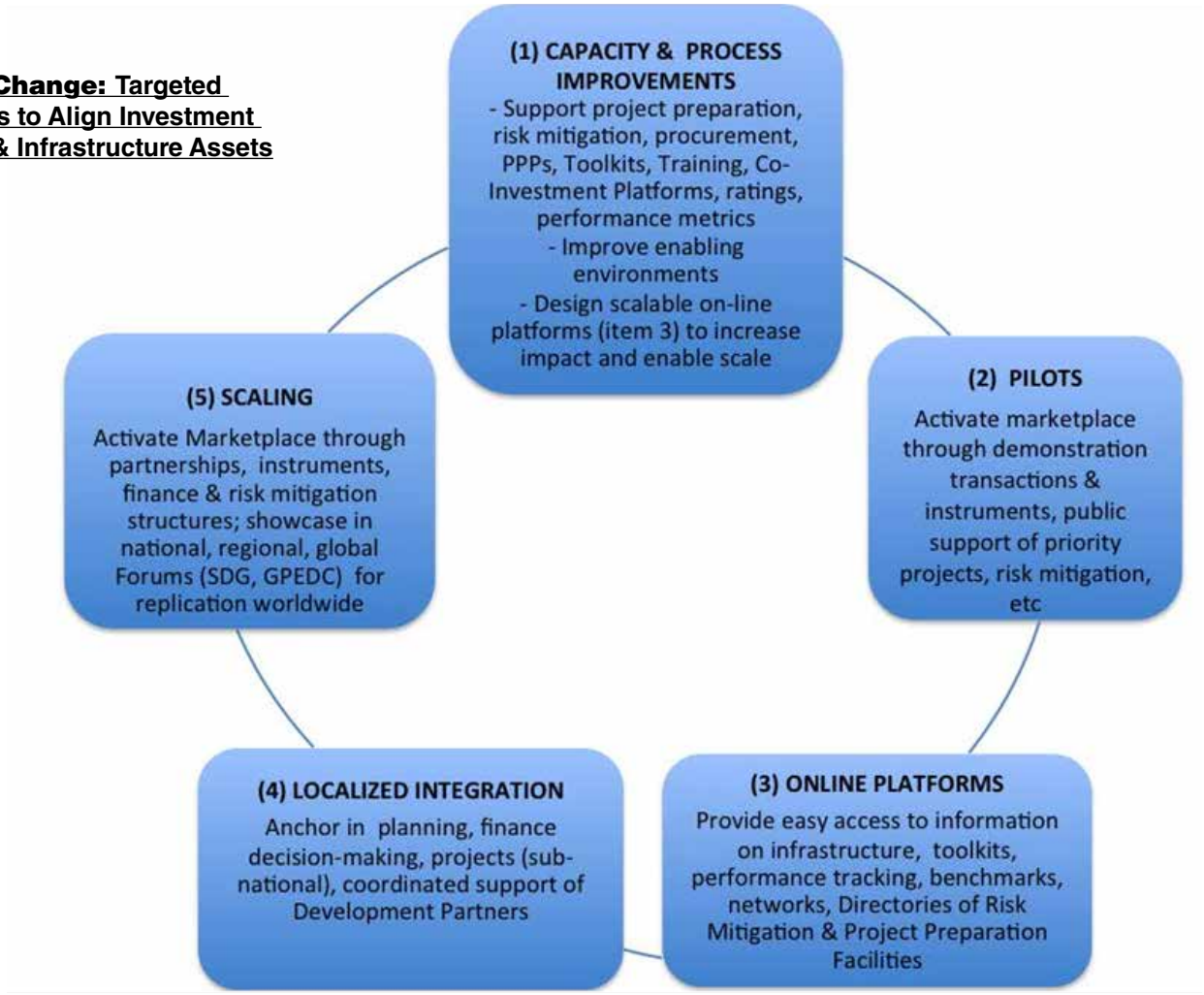
Therefore the public sector will need to effectively jump-start the activation of the marketplace using targeted interventions. The specific unlocking actions set forth in the next sections of this report build on the existing behaviour of the market and public sector, drawing from expert studies, surveys, and the extensive experience of development programs to date, incorporating proven techniques related to capacity inputs, pilots, online platforms, localized development planning and development partner programs, and scaling partnerships.[47]

However, to ensure results, development techniques need to be effective in stimulating investor interest, catalyzing the actual processes, instruments, information platforms, and capacities required to mobilize institutional investment as illustrated in the simplified schematic below.

Therefore it will be essential that the public sector work hand-in-hand with private sector finance experts to use its existing toolkits and methodologies (often termed "the theory of change") to address dysfunctionalities – market and communication failures – jumpstarting the needed enhancements in information, processes, communication, and partnerships. An illustrative schematic is provided below showing accepted public sector interventions applied to the investment and infrastructure ecosystems.

Key interventions include public support of: (1) *investment capacity-building and process improvements* (including performance metrics); (2) *pilots focused on increasing investable instruments, risk mitigation, and projects creating proofs of concept and demonstration effects*; (3) *the development of enabling-information platforms related to infrastructure asset performance and assets, the development of networks of asset managers and service providers*; (4) *localization of capacities and instruments into country planning and investment processes*; and (5) *scaling through marketplace activation, using partnerships, instruments, finance and risk mitigation structures, networks, and forums*. Details are provided in the following report sections.

Theory of Change: Targeted Interventions to Align Investment Ecosystem & Infrastructure Assets



Section B

CALL FOR ACTION: UNLOCK THE SUPPLY OF INSTITUTIONAL CAPITAL FOR INFRASTRUCTURE

Institutional investors and the entire investment ecosystem of Boards, Trustees, overseers, asset managers, investment consultants, and analytical services (especially rating agencies) need to have credible detailed information to make responsible investment allocations specific to infrastructure that are aligned with their conservative investment criteria.

The investment ecosystem is complex and operates at multiple levels, involving a spectrum of internal decision makers (such as investment officers, supporting staff and consultants), Board Members, Trustees, and Overseers (including regulators and, in the case of public pension funds, government officials), asset managers, advisors, and consultants. All ecosystem participants are required first and foremost to achieve the investor fiduciary responsibilities to meet stringent due diligence requirements based on the return targets and a low risk tolerance (i.e., failure to reach return targets and negligible risk of any losses). A simplified overview of the process is reported as the following:

❶ **Allocation Recommendations:** Internal staff within the institutional investment entity (often with the support of consultants) will recommend allocation decisions to the senior decision makers. These allocation recommendations need to comply with internal credit policies and government regulations (national, state, local).

- **Allocation decisions** will include specifications such as risk/return objectives, amounts dedicated to specific asset classes, geographies, and other criteria reflecting internal strategies, credit policy guidelines, and government regulations.
- **Infrastructure** is usually part of the larger asset class "alternative investments" and not broken out as a separate allocation.
- **Geographic regions** are often restricted to home countries, OECD and/or developed countries. In exceptional cases of non-African institutional investors, there are reports of allocations to Africa as a region.

❷ **Allocation Decisions:** Boards, Trustees, and Overseers (in some cases government officials) are responsible for reviewing and approving the proposed investment allocations. Opinion leaders including rating agency analysts, government officials, economists, investment analysts, and others will also influence this process. The means for implementing allocation decisions can be in a range of investment vehicles that are direct or indirect depending on the investment structure, capacities, and objectives of the specific institutional investor.

❸ **Investment Decisions:** Most institutional investors are reported as outsourcing the implementation of investment decisions. In this case, internal staff (often with the support of consultants) will draft and issue Requests for Proposals and then select an investment manager who will be responsible for all investment decisions and accountable for complying with the specified risk/return criteria. Often institutional investors will require that investment managers co-invest a minimum amount of funding into the asset.

❹ **Originating Investments:** The actual investing entity (direct or indirect) needs to have identified credible investment options that meet the stringent requirements of the specific institutional investor and government regulations. Surveys of institutional investors consistently report that it is difficult for the investing entities to identify infrastructure assets that meet the specified risk/return criterion.[48]

❺ **Accountability:** For accountable institutional investor employees, the professional and personal repercussions of incurring investment losses and violations of internal credit policy can be catastrophic, ranging from damaged professional reputation, job loss, political fallout, to criminal prosecution and personal legal liability.

Therefore, to increase investment in infrastructure, all accountable participants in the infrastructure investment ecosystem need to be supported with the required information and advisory on infrastructure investment for them to meet their fiduciary requirements and be able to conduct the required technical assessments of risks and returns. Transformative unlocking actions need to be taken to create the following transformative enhancements to the investment ecosystem to ensure that adequately verifiable and credible detailed information is available and aligned with investment criteria. The challenge of this process for African infrastructure investments is especially daunting given the lack of information and credible on-the-ground information sources, analytical services, and asset managers.

To actually operationalize the potential alignment between institutional investor investment and the public interest – significantly increasing the amount of institutional investment in infrastructure – there will need to be widely-supported public sector initiatives with targeted actions covering all segments of the institutional investment market, enabling and activating an infrastructure investment ecosystem. The public sector will need to empower and engage the key decision-makers and implementation practitioners in the investment ecosystem in detailed technical exchanges that define the details underlying investment obstacles, concrete solutions, and realistic implementation strategies. The investment ecosystem participants need to be the technical inside "*doers,*" reaching into the operations of the ecosystem including Chief Investment Officers and their staffs, infrastructure asset managers, investment consultants, infrastructure project developers, commercial banks, providers of risk mitigation (public and private), and providers of services (rating agencies, financial advisors, project finance lawyers, etc.).

To meaningfully engage investment ecosystem participants, the public sector will need to transform its current approach, adopting a new entrepreneurial approach that creates space for openly diagnosing investment obstacles and developing innovative solutions. ***There will need to be true open partnerships without constrained bureaucratic boundaries in the detailed formulation of best practices, as well as the identification and design of new processes and required changes, implementation modalities, and performance monitoring and metrics. The key outcome would be the re-engineering and operationalization of "investment ecosystems" that systematically include infrastructure as a well-articulated and mainstreamed asset class.***

Results cannot be achieved without practical, professionally-defined targeted interventions that are designed to meet the investment and due diligence needs of institutional investors, as well as modifications to national legal and regulatory frameworks that impede responsible institutional investments in infrastructure. These required enhancements to the investment and infrastructure ecosystems will not occur absent focused public sector leadership and investment in setting forth new innovative approaches aimed at improving ecosystem functionality, effectiveness, governance, and transparency with regard to infrastructure investment.

While the existing significant public sector initiatives are very helpful, they will not materially change the level of institutional investment in infrastructure as their outputs are not embedded in the investment ecosystem itself. ***To achieve the required changes, new credible technical interventions are needed that can provide value to the investment ecosystem by:***

1. Meeting actual technical operational and analytical needs related to performance and due diligence processes (from the perspectives of investors); and

2. Providing easy access to networks and investment options that can be fully integrated into the life cycle and ecosystem of investment decision-making processes involving Boards, trustees, opinion leaders, internal staff, fund managers, and consultants (fitting into ongoing requirements).

The "*unlocking actions*" detailed in this section are aimed at identifying targeted interventions that can meet these objectives. To yield results, it is critical to break down the requirements for changing the institutional investment ecosystem so infrastructure investments by institutional investors can realistically be scaled up. Behaviour cannot change unless inputs are accessible at the decision-making level.

1.0 UNLOCKING ACTIONS

Specific "*unlocking actions*" related to operational tools, analytics, and processes to improve the investment ecosystem are detailed below.

1.0 Overall Actions to Unlock Institutional Investment: Redesigning Functions and Processes to Meet Institutional Investor Requirements

If the public sector is to be successful in mobilizing institutional investment in infrastructure, it will need to re-orient its entire approach and perspective, adopting the very different perspectives of institutional investors that have an institutional and fiduciary responsibility to fund retirees, pay claims, and safeguard national assets.

Moreover, as noted in the preface, the public sector will need to rethink its own behaviour and how it can unintentionally "*crowd out*" access for non-government borrowers and infrastructure investments. It is important to recognize that a key long-standing issue in finance worldwide is the extent to which public sector actions can result in the unintended "*crowding out*" of the private sector. For example, in developing countries, the national government's issuance of high-interest rate Treasury Bonds is often reported as crowding out the market for private sector finance.

Likewise, financial instruments provided by development institutions are sometimes reported as crowding out local banks, as the private sector needs to charge higher interest rates than subsidized public lenders.[49] Similarly infrastructure market makers in developing countries report the crowding out of infrastructure investments by the public sector given the massive amount of national debt with high returns offered to local institutional investors.

DFIs are also reported as crowding out private sector funding by providing concessional loans for infrastructure projects that have lower interest rates and have lower credit quality requirements (often due to sovereign guarantees). It is important to note the added benefits of institutional investment: Market requirements ensure well-structured independent projects with extensive documentation and due diligence, usually with no sovereign guarantees, thereby enabling sustainable finance with no or limited government funding.

Specific "unlocking actions" with details on rationales and implementation activities are presented below.

ACTION 1(a): Define and Implement Transformative Public Sector Interventions to Facilitate the Supply of Institutional Capital for Investable Infrastructure Assets. Mobilizing institutional investment requires host governments and their development partners to strategically work hand in hand with institutional investors and asset managers in mapping common objectives, obstacles, and prudent solutions. These efforts will require leadership and a reallocation of resources so the requirements of targeted institutional investors are well understood and incorporated into the activities underlying the development, structure, finance, and regulation of infrastructure investment assets.

It is critical that the public sector fully understands that most institutional investors, especially those in developing countries, do not have the capacity or willingness to invest directly in infrastructure. Infrastructure is a very complex asset, and most institutional investors need to be shielded from the complexities of developing, assessing and managing infrastructure assets. They usually require high-quality, structured financial products and instruments, "*off-the-shelf*" products with established track records and already performing ("brownfield projects") with reliable and adequate cash flows to meet the targeted financial returns at acceptable risk levels. The assets need to meet stringent credit policy standards that comply with fiduciary responsibilities.

The public sector therefore needs to change its infrastructure planning, development, and support activities to insure that infrastructure assets are developed to become top quality investment-grade projects. This entails having complied with best practices in the development of the infrastructure asset with management by experienced and credible asset managers and often entails having secured high investment-grade ratings by credible rating agencies.

Public sector activities therefore need to be structured to develop investable infrastructure assets on two levels:

1) **Investable infrastructure projects:** The identification and development of viable infrastructure projects that are well-structured and deliver on both sustainable development and financial returns.

2) **Investable infrastructure products:** The identification and development of infrastructure products that meet the needs of most institutional investors, employing a portfolio approach to bundling infrastructure debt and equity investments.

To achieve high credit quality, the many risks of projects will need to be mitigated through extensive use of project structuring, use of complex project techniques, extensive contracts, with credible risk mitigation structures, instruments, and credit enhancements. **The public sector will need to invest in changing these processes, techniques, and instruments and engage leading private sector experts in infrastructure, the development of investment-grade projects and instruments, and capital market development, as detailed below.**

ACTION 1(b): Develop networks of credible active asset managers with well-established relationships with institutional investors, and work closely with them to develop pipelines of investable infrastructure assets. Many institutional investors will only invest in infrastructure through their trusted existing network of asset managers. Also, some institutional investors require their asset manager to co-invest in the infrastructure asset to ensure aligned financial interests ("*skin in the game*"). Governments will therefore need to attract established asset managers in the development and finance of investable infrastructure assets.

ACTION 1(c): Develop "*Capital Market Infrastructure Development Plans*." Each country needs to develop an explicit plan to expand the funding by its institutional investors into high-quality infrastructure assets. This process will require identifying the specific impediments now limiting infrastructure investment and the specific implementation steps required to achieve: (a) *investable infrastructure assets that have attractive and competitive pricing in the primary market*; and (b) *the existence of a secondary market to enable the liquidity and tradability of the infrastructure assets*.

To crowd in local institutional investors, each national government needs to conduct an independent analysis of the competitive products being presented to institutional investors and develop a "*Capital Market Infrastructure Development Plan*" with open input from institutional investors and their expert ecosystem participants on specific actions that can reverse any "*crowding out*" of infrastructure assets and identify the needed roadmap to the "*crowding in*" of infrastructure assets. Canada and Australia are often cited as countries with government interventions that have been successful in this area.[50]

The objective is to formulate targeted national action plans that can make the needed adjustments to create tradable infrastructure assets with high investment-grade credit ratings that meet the due diligence requirements of institutional investors. **Two steps are needed:**

❶ **Global Methodology Based on Best Practices:** Engage technical experts with capital market transactional experience to develop a methodology for improving domestic capital markets and the ability to mobilize institutional investment for infrastructure. The methodology will need to include how to conduct financial scans of African capital markets, ways to research and document the existing financial products and the existing portfolio allocations of institutional investors, and how to develop recommended steps for improving the enabling environment and new financial products related to infrastructure finance.

❷ **Country Capital Market Plans for Financing Infrastructure:** Adapt the global methodology as needed to country needs, engaging teams of experts to develop "*Capital Market Infrastructure Plans*" on a country basis.

ACTION 1(d): Enhance "*Value for Money*" frameworks and analytical support to guide public sector-private sector negotiations on infrastructure projects, covering investments, services, and Public-Private Partnerships (PPPs). A major reported impediment to the development of investable projects is the difficulty of governments and investors coming to an agreement on specific terms and conditions. The reported costs include failed negotiations and delays of years, resulting in decreased economic growth and negative investor perceptions. Therefore, there is an urgent need to improve existing "*Value for Money*" and other negotiation frameworks that can be used by governments and private sector investors to improve their ability to access the costs and benefits of alternative terms and conditions for infrastructure projects, with the support of independent qualified experts that can facilitate the technical analysis and agreement on transaction terms and conditions.

The prevailing methodology used for determining investment terms is "*Value for Money*."[51] While this approach serves as a best practice technical framework, project developers and other infrastructure practitioners report that the full assessment of the needed quality inputs for the project are often insufficiently accounted for, with awards simply being delivered to the bidder with the lowest bid even if they have lack the required technical and/or investment capacity. Even in single-sourced infrastructure projects, negotiations are reported as often complicated by the government's lack of understanding of technical and investment requirements.

In other cases, protracted negotiations are reported as ongoing over years, with delays increasing costs to the government and negative implications for the overall investment perception of the country, reducing the country's pipeline of investable infrastructure assets.

A new approach enabling more effective and timely agreements on terms and conditions needs to be developed so government officials and development partners can more fully understand project costs and the needed returns to attract institutional investment. Also, the costs of delays and negative investor perception (affecting overall investor perception and future deal flow) need to be factored into the assessment of costs. Therefore, it is important that a more robust technical framework with relevant guidelines is provided to facilitate the technical discussions and negotiations between governments and investors.

The need for independent technical advisors is also critical. Governments often lack access to the highly-skilled private sector financial advisors who are totally independent and can help them understand all the aspects of proposed deal terms and how to negotiate to ensure infrastructure assets perform to meet estimates of both development and financial returns. By having such independent expert advisors, governments can also develop the needed reputation for professional negotiation, offsetting the often negative perceptions of governments by investors. This is particularly critical for African countries.

ACTION 1(e): Support the development of private sector-led infrastructure vehicles that can mainstream "*crowding-in*" of institutional investors: Host governments and their development partners need to prioritize the transformative actions required to create infrastructure assets that are attractive to institutional investors. Innovation in developing acceptable investment assets requires a total change in the public sector approach to private sector-led initiatives, proactively encouraging private sector-led initiatives with active engagement and funding support.

The development of high-quality infrastructure assets is an extremely complex, expensive process that is usually not economical, given the level of risks and uncertain returns. **Progress in developing and mainstreaming large-scale instrument products and vehicles requires extensive targeted public sector support in two areas:**

❶ **Support the Development of New Infrastructure Products:** Provide support and funding for investment experts to create new infrastructure products that meet the investment criteria of institutional investors. The focus will need to be on proven rated-instruments that meet the high level of investment grade criteria required by institutional investors, such as collateralized debt obligations (CBOs), credit linked notes (CLNs), credit-enhanced project bonds, and retail bonds (such as in Kenya).[52]

❷ **Support the Development of Proven Credit Enhancement Vehicles that Can Address the Risks that Impede Investment:** While there have been extensive public sector efforts in this area, success has been limited in scale.[53] The most effective credit enhancement to date for mobilizing institutional investment has been the 100% credit guarantees provided by private sector monolines, having guaranteed US$650 billion in total international debt, of which US$43 billion is guaranteed developing country debt with only 0.07% of loss over 22 years.[54] The public sector should immediately explore the development and funding of effective credit enhancements, such as expanding the use of private sector-led monolines.[55]

More details on investment vehicles and risk mitigation solutions are provided in subsequent sections.

ACTION 1(f): Development Financial Institutions (DFIs) need to implement large-scale programs that recycle investment-grade infrastructure assets to institutional investors, jumpstarting the mainstreaming of infrastructure as an asset class. Two sets of recycling programs need to be implemented: (1) *DFI programs that recycle existing infrastructure assets from DFIs to institutional investors*; and (2) *Commercial bank programs that recycle existing infrastructure loans from commercial banks to institutional investors*. In both programs, there is the need to use risk mitigation techniques to upgrade the quality of infrastructure assets to meet institutional investment requirements, also engaging rating agencies to provide credit ratings.

DFIs will need to provide the needed risk mitigants and credit enhancements so that the infrastructure assets meet the investment criteria of institutional investors. Also, infrastructure assets that generate local currency revenues should be recycled to institutional investors in home countries, enabling the elimination of currency risks. Any issues relating to currency risks will need to be mitigated through public support.

ACTION 1(g): Develop Acceptable Strategies for Mitigating Cross-Border Currency Risk: The public discourse assumes a significant increase in international institutional investment across country borders with differing currencies, notably in African countries with weak domestic capital markets. However, currency risk is a major investment risk that impedes investment in infrastructure, especially in developing countries subject to economic and political volatility that often results in depreciating currencies. Cross-border infrastructure investments are not realistic or even advisable unless there are explicit strategies to mitigate the risks of depreciating currencies borne by cross-border investors or transferred to governments and their citizens. Technical experts in currency risks and possible solutions need to be engaged to formulate assessment methodologies; level of risks and possible risk mitigation instruments.

First, there needs to be an established credible methodology for estimating currency risk for long-term currency deprecation risks that can be applied to one-off infrastructure investments. Second, the range of possible currency risk mitigation approaches and instruments need to be thoroughly assessed and expanded. ***Examples include:***

❶ The structuring of infrastructure assets into different currency tranches that match currencies (for example, users with access to offshore currencies commit to payments outside the country as in future-flow transactions);

❷ The adoption and scaling up of currency instruments such as TCX, the Foreign Exchange Liquidity Facility, dynamic hedging and other techniques;

❸ The development of currency clearing-houses in which investors create diversified currency portfolios that can reduce currency risks for specific investments; and

❹ The use of diversification approaches that can insulate long-term risk, especially for long-term commitments to specific regions such as Africa.

ACTION 1(h): Develop Funding Vehicles and Risk Mitigation for Greenfield Infrastructure Assets: While the urgent need is for greenfield investment of new infrastructure projects, institutional investment is largely restricted to low-risk assets with established high-performing track records that meet investment-grade criteria. To offset this funding gap, the public sector will need to focus activities and funding on addressing the risks and creating commensurate funding vehicles and risk mitigation instruments.

As noted in the earlier section, some fund managers have been able to mobilize institutional investment for greenfield infrastructure assets. However, these vehicles are insufficient and need to be scaled.

It is also essential to develop more risk mitigation to cover development risks such as construction. While there have been some efforts in this area, the results to date are insufficient to reach scale. For example, on 1 July 2016, the Credit Guarantee and Investment Facility (CGIF) launched a new guarantee product

aimed at mitigating construction risks in greenfield infrastructure projects in the hopes this could increase institutional investment at the early development stage of infrastructure projects. However, the program is just at the pilot stage and is not yet operational.[56]

ACTION 1(i): Diagnose and Address Systematic Problems in Achieving Scale: The public sector is committed to innovative finance structures followed by the widespread scaling up of these finance structures to achieve widespread development impact across countries. However, innovative approaches that succeed in pilots are often not brought to scale. An inventory of successful transaction structures needs to be compiled, with an assessment of impediments to scaling and possible ways to break through these impediments and reach scale within countries and across countries.

The public sector is committed to innovative finance structures followed by the widespread scaling up of these finance structures to achieve widespread development impact across countries. ***However, the facts are indisputable: reaching scale has proven extremely difficult with minimal success to date.*** For example, pooled finance techniques have been used in both developed and developing countries to access institutional investment for sub-national infrastructure projects.[57] However, there has been a failure in scaling up and mainstreaming these pooled finance facilities across developing countries, including Africa. To confront these bottlenecks, the public sector needs to proactively launch programs focused on understanding impediments to scaling and required interventions to adapt and implement new financial structures and processes.

The above "*unlocking actions*" encompass the overall need to redesign public sector functions and processes to meet institutional investor requirements related to greater funding of infrastructure. Suggestions are appreciated on ways to refine and expand this list of unlocking actions. More details on related unlocking actions are provided in the below sections.

2.0 PERFORMANCE & DUE DILIGENCE REQUIREMENTS: PROVIDING CREDIBLE INFORMATION & BENCHMARKS

Given their fiduciary and due diligence requirements, institutional investors need to ensure that all investment decisions are based on verifiable documentation of investment performance and risks that support their compliance with internal credit policies, return specifications, and government regulations.

Internal staff, asset managers, and investment consultants are responsible for guiding all investment allocations and then determining the framework and accountabilities for executing prudent investments in compliance with the mandated allocations and approved credit policies that safeguard all investments. Experts report that access to the required information is lacking and a major hurdle to achieving the needed investments. Allocation and investment decisions simply cannot be executed at scale without easy access to credible information on infrastructure projects and their long-term historical performance in terms of default rates[58] and recovery rates.

Operationalizing the Historical Infrastructure Performance Database: There have been several notable efforts by Moody's Investors Services and EDHECinfra to address this information gap.[59] These efforts need to be intensified and mainstreamed with the creation of a free, user-friendly global infrastructure database. Historical performance data needs to be documented in a detailed verifiable manner and searchable by key analytical categories.[60]

Given the import of performance benchmarks and diversification to investment decisions, the database should include all relevant benchmarks to enable the needed comparative assessments used to make investment decisions and measure contributions against risk/return, diversification, and other investment criteria.

Customizing Information based on the Needs of the Different Market Segments: Different segments of the institutional investment market have different investment information needs, and due diligence requirements. The provision of information and the interface of the infrastructure database (described above) will need to be customized based on the different needs and interests of the respective segments of the institutional investor market, based on the specific requirements of pension funds, insurance companies, and sovereign wealth funds.

For example, much of the existing research is focused on pension funds. However, insurance companies are a major segment of the institutional investment market, and today they provide significant funding for infrastructure. The IMF reports that insurance companies are among the largest segment of institutional investors, holding about 12% of global financial assets, or US$24 trillion (of which life insurance accounts for 85%).[61] In fact, they are the largest segment of institutional investors in Europe.

The insurance industry in some countries invests heavily in sub-national infrastructure. For example, the US insurance industry is a major institutional investor in the US$3.7 trillion municipal securities market, providing funding used by local governments for infrastructure projects such as water and sanitation, transport, and energy. US insurer exposure to municipal bonds was approximately US$550 billion at year-end 2015, or 14.9% of the market's outstanding tax-exempt and taxable municipal debt.[62] Both developed and developing countries have growing sub-national bond markets, providing important opportunities for increased institutional investment in subnational infrastructure. Such long-term finance is critical to delivering on the huge need for sustainable, climate-smart projects in urban and rural areas.

Mainstreaming and Scaling up of Infrastructure as a Specific Asset Class: Mainstreaming infrastructure as an asset class would provide the technical and operational basis for enabling the targeting of specific allocations by institutional investors to infrastructure investments. The existence of a credible database would serve as a foundational basis to mainstream and scale up the separate "*infrastructure asset class*," fully functional with defined definitions, data, and investment parameters. It will also be critical to include a comprehensive assessment of all risks and mitigants, complete with best practices, and a directory of infrastructure asset products with contact information for asset managers, investment consultants, and other support services.

Specific "unlocking actions" with details on rationale and implementation activities are presented below.

ACTION 2(a): Create Online Easy Access to an "Infrastructure Project Performance Database" with benchmarks and leverage ratios. Institutional investors cannot make investments without a credible source of data on investment performance. Therefore, it is critical to develop a coordinated centralized database of information provided in a user-friendly online information platform designed to meet investor decision-making needs, coordinating with other ongoing initiatives to eliminate redundancy. It will be critical to highlight the performance of credit enhanced assets and the role of the public sector in successfully protecting investors against investment risks.

This initiative should leverage the ground-breaking research to date conducted with the support of the public sector, such as the Global Infrastructure Hub (G20), EDHEC Infrastructure Institute-Singapore, OECD, World Bank, etc. A team of professional finance and technology experts could design the online platform based on the direct specifications of targeted institutional investors and their supporting participants in the investment ecosystem. The team would need to conduct specific activities enabling responsible investments in infrastructure such as: market segmentation (identifying needs, processes, etc.), mapping decision needs, sourcing available data, constructing the database architecture and access to data, aggregating and refinement of benchmarks, and design of the investor interface (with data visualization).

Credit Enhanced Assets & Benchmarks: Institutional investors can only invest in low risk projects, so it will be important to highlight risk-mitigated infrastructure projects that are credit enhanced. The default and recovery rates of such projects could be obtained from DFIs, leveraging their historically superior asset performance irrespective of asset location. This risk mitigated category and related financial returns will need to be compared against benchmarks.

ACTION 2(b): Proactively market the "*Infrastructure Project Performance Database and Benchmarks*." The existence of information does not mean it will be used. There will need to be intensive engagement of the institutional investment community in defining the specifications of the database, benchmarks, and the user interface, so platform is systematically integrated into the investment ecosystem and decision-making, advancing the mainstreaming of infrastructure as a mainstream asset class.

The proactive marketing and dissemination of this data platform by credible experts and opinion leaders will be critical so the information can be integrated into the actual ongoing decision-making processes of institutional investors in both developed and developing countries.

3.0 INVESTMENT RATIONALES: DEVELOPING KEY PRINCIPLES FOR INVESTMENT-GRADE INFRASTRUCTURE ASSETS THAT IDENTIFY RISK ISSUES AND POTENTIAL MITIGATING SOLUTIONS

If infrastructure investment is to have a solid foundation as a mainstream asset class, the full panoply of risk issues needs to be surfaced and addressed in alignment with the low risk tolerance and diversification requirements of institutional investment criteria.

Despite a plethora of excellent studies on infrastructure investment, there has not been a mainstream "*prospectus-like*" assessment of the experience to date of infrastructure investment that addresses the full spectrum of issues that is written in a way to meet the needs of institutional investors and their ecosystem of professional entities. In fact, some studies state that investors express "*increasing concerns about regulatory risks, such as inconsistent infrastructure policies and retroactive changes in the rules.*" [63]

Pension fund officials reiterate the many issues set forth in studies: In short, they are mandated to invest in low risk assets and infrastructure investments have a long history of unexpected losses across both developing and developed countries. The most cited risk is the interference of governments with the fee structure that investment returns are dependent on. Other issues include the difficulty of assessing risk, value, market volatility, demand risk (especially off-take risk of uncreditworthy utilities), operations risk, country risk, currency risk, etc. For example, the renowned expert George Inderst cites some of the issues that need to be addressed as the following: "*over-valuation of assets (as in the mid- 2000s and perhaps again these days in some places); poor risk assessment (e.g., demand risk of transport assets) and risk management (e.g., excessive leverage); market volatility of listed infrastructure stocks and funds; governance and fee issues with infrastructure funds; high degree of portfolio concentration; and pitfalls in investing in less-known overseas jurisdictions.*" [64]

Development of Best Practice Principles for Investment-Grade Infrastructure Assets: To address the concerns of prospective institutional investors, there needs to be a comprehensive technical study that sets forth the key best practice principles for investment-grade infrastructure assets. The study would need to document the full range of risks from an institutional investor perspective, and the key due diligence requirements to protect them from losses that violate their fiduciary and due diligence requirements.

While excellent studies provided by the OECD and other research entities can be extremely helpful for this assessment, the foundation of the study needs to be the assessment of actual transactions, documenting the origins of the problems and what measures could be put into place to protect investors from re-occurrences. The formulation of best practice principles will need to provide a credible investment roadmap for all market participants in the infrastructure investment ecosystem, covering the following key determinants of investment performance.

Examples of best practices to be refined and expanded include:

1. **Proven Structures:** To create a credible and attractive infrastructure asset class, there needs to be a "holy grail" of best practices related to legal, governance, and management structures that insulate infrastructure investments from losses and lowered returns.

2. **Contract Requirements:** The basis for creditworthiness is heavily dependent on the contracts related to the operation of infrastructure assets. These include contracts with service and equipment providers, maintenance, employees, land use, etc. Again, best practices need to be defined.

3. **Political Support Requirements:** The key risk of infrastructure investment relates to political interference, so best practices on ways to ensure consistent political support is critical, encompassing local and national governments.

4. **Currency Strategies:** Mismatched currencies between finance and revenues create the potential for political interference and significant financial losses, incurring the cancellation of contracts. Therefore, there is a need to develop best practice principles and mechanisms (see other related actions).

5. **Co-Investment Strategies:** As noted, co-investment is a key investment strategy so understanding best practices and documenting lessons learned is critical.

6. **Key Transaction Enabler Strategies:** Key success factors include project preparation, developing robust project pipelines (supported by enhanced technical assistance and project

preparation facilities), efficient capital markets, bank intermediation, and a favourable macro-economic environment with political stability, etc.

7 **Performance Monitoring & Metrics:** Key best practices need to cover monitoring of development impacts, delays in payment and defaults, reporting guidelines, etc.[65]

Action 3: Develop "*Key Best Practice Principles for Investment-Grade Infrastructure Assets*" that identify risk issues and potential mitigating solutions. The Best Practices Principles would need to be structured as a standardized framework to meet due diligence assessment requirements for the range of investment modalities related to the infrastructure asset class, including a systematic assessment of the different risks and menu of investment and risk-mitigation solutions.

To unlock local institutional investment, each country's local ecosystem underlying its domestic capital market needs to be transformed based on the best practices for institutional investment in infrastructure. For the assessment to be relevant and effective, the approach would need to be entirely based on the specifications provided by institutional investors and rating agencies.

The actual working group involved in designing and implementing the assessment would need to include infrastructure transaction experts and institutional investors, asset managers, and consultants and be driven by the due diligence requirements of institutional investors. This initiative could leverage the ground-breaking research to date in the public and private sectors, including the OECD, Global Infrastructure Hub (G20), EDHEC Infrastructure Institute-Singapore, World Bank, rating agencies, investment managers, etc.

4.0 INVESTMENT OPTIONS: PROVIDING AN OPEN MARKETPLACE OF DOCUMENTED INFRASTRUCTURE INVESTMENT PRODUCTS AND CO-INVESTMENT PLATFORMS

As in setting mandated allocations, the investment process is dependent on having access to the required information on acceptable investment products that meet investment criteria.

Experts report that access to the required information on the hundreds of specific infrastructure investment vehicles is lacking and a major hurdle to achieving the needed investments. ***There are numerous problems reported in institutional investor surveys that inhibit their ability to invest in specific infrastructure products, including (but not limited to):***

1. Lack of complete and acceptable information on infrastructure investment products and managers;
2. High cost; and
3. Lack of internal capacity to conduct due diligence.

Both large and small investors lack the resources to identify the full range of infrastructure investment options. Therefore, there is a need to centralize information on information products. ***In fact, the recent EDHEC Infrastructure Institute-Singapore study suggests there is a market failure in delegated investment management, with no standard framework to report performance and valuation to institutional investors:*** *"The net benefits of internalising long-term investment in infrastructure are not self-evident…. These issues hinge around the absence of sufficient information about what can be achieved through infrastructure investment and who can commit to achieving such goals."* [66] This market failure needs to be addressed through public targeted intervention, building a marketplace that connects the supply of funds to infrastructure investments.

Another critical hurdle is the complexity of assessing infrastructure projects and products. The due diligence process of assessing the risks and opportunities associated with infrastructure is very complex and technical, requiring a wide range of skills including finance, credit, country risk, construction risk, performance risk, demand risk, legal structures and contracts, currency risk, environmental risks, etc. As a result, the process of sourcing and accessing infrastructure investments is a complicated and technical process requiring a large team of highly skilled, experienced, and well-compensated experts.

The complexity of analysis is further dependent on the wide range of different investment modalities in the host country and worldwide, each modality requiring its own detailed skill set of analytics, experience and detailed information. The five broad categories of infrastructure investment options by magnitude of increasing technical requirements and execution costs could be categorized as follows:

- Listed funds which invest in direct infrastructure, listed infrastructure or both, and are usually externally managed;
- Listed stocks on stock market exchanges world-wide, including utilities;
- Fund of funds which is a fund that invests in a diverse portfolio of infrastructure funds;
- Unlisted funds that invest directly in infrastructure on behalf of their limited partners; and
- Direct infrastructure investments, including equity, mezzanine debt, project bonds, pooled finance facilities, loans, etc.

Operationalizing the Investment Product Database: There are several notable efforts to address this information gap by international initiatives launched at the 2015 Addis International Conference on Financing for Development: The Sustainable Development Partnership on Infrastructure (SDIP) and Convergence.[67] Such efforts need to be expanded and integrated into a one-stop shop global database for institutional investors, complete with an investor-friendly user interface enabling access to the full range of specific investment vehicles. Detailed investment data needs to be documented and searchable by key categories.[68]

Scale Up Intermediation Investment Vehicles: To secure the investment required by African national and regional projects, the public sector needs to aggressively support the scaling up of debt and equity investment vehicles that can credibly serve as intermediaries channelling capital to develop viable infrastructure projects. As noted earlier, this is especially important for early-stage "*greenfield*" project investment. Partnerships with the private sector are critical in designing and operating such intermediation investment vehicles.

There are four key areas where targeted unlocking actions are needed:

❶ **Shift in DFI Focus from Lending to Risk Mitigation:** As set forth in countless studies, evaluations, and UN member resolutions, a paradigm shift is needed in development finance, with development finance institutions (DFIs) reallocating the dominant use of its balance sheet and resources from lending and grants to risk mitigation.[69] DFIs can serve as high-impact "*finance multipliers*," using their AAA ratings, experience, credibility and relationships with governments in spearheading new innovative investment vehicles. DFIs can provide targeted high-impact interventions in the development of investable infrastructure projects and investment vehicles, given their top investment-grade ratings, low default rates in project finance, strong relationships with governments and potential to mitigate risks. For example, the IFC has created a co-financing company with institutional investors (AMC) and has just launched a syndication product (MCPP).[70] To be effective in optimizing their leverage of private capital, DFIs need to partner more closely with the private sector as well as coordinate more effectively with each other. This requires a more flexible and dynamic results-based framework, working collaboratively against strict deadlines and performance targets on a project basis. The role of Africa50 needs to be activated across these functions, using its capacities to develop and finance projects working with private investors.

❷ **New Leveraging Vehicles:** There is public sector consensus on the urgent need to leverage limited public funds. To deliver, the public sector needs to proactively support private sector initiatives by experienced finance experts building on proven financial vehicles. Examples of proven leveraging vehicles are monolines that provide large-scale access to institutional investment for infrastructure in many countries. To date, monolines have guaranteed US$650 billion in total international debt; within that total, US$43 billion is guaranteed developing country debt – with only 0.07% of loss over 22 years. For a fee, monoline guarantees could take the place of a sovereign guarantee, which often do not meet the needs of institutional investors, create contingent liabilities for the national government, and if suitable and available, can take an extended amount of time to secure. More-over, a monoline guarantee, in contrast to most African government guarantees, is investment grade on an international scale, covers up to 100% (principal and interest) of debt service and is unconditional and irrevocable, transferring credit risk from the project company to the monoline, thereby enabling large-scale institutional investment in infrastructure projects. An important private sector initiative is the Ascending Markets Financial Guarantee Corporation (AMF), which is intended to serve as an investment-grade developing country monoline to enable local pension funds, insurance companies, banks and other fixed income investors to fund infrastructure and public services.[71]

❸ **New Infrastructure Products:** Surveys of institutional investors have found that many are dissatisfied with existing infrastructure products and many pension funds, especially those in Africa, report they do not have sufficient access to investment opportunities in infrastructure. Reported issues include fee levels and the absence of well-defined investment objectives.[72] Moreover, investors have stated a preference for privately-held infrastructure debt or equity (as opposed to public stocks or bonds).[73] Therefore, new initiatives to create attractive infrastructure products could address these issues. Mobilizing institutional investment for priority infrastructure projects.

❹ **Asset Aggregation, Recycling Modalities and Co-Investment Platforms (such as the "*African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform*"):** Experts have documented the lack of capacity of institutional investors to invest directly in infrastructure, except for the very largest. Also the size of required investments is also reported as an impediment. For example, many pension funds are reported as not able to commit to the size of the investments needed for them to participate in private equity funds. To address this issue, many countries have successfully adopted co-investment platforms to scale up institutional investment in infrastructure.[74] To tap into the market for large investments, infrastructure in emerging and developing countries needs to be aggregated, for example through co-investment platforms, blended funds and warehousing models.[75]

Specific "unlocking actions" with details on rationale and implementation activities are presented below.

ACTION 4(a): Create an Open Marketplace of Documented Infrastructure Investment Products and Co-Investment Platforms. Institutional investors report the lack of information on existing infrastructure products. Experts need to be recruited to map decision needs, aggregate available data on products and co-investment platforms, provide specifications for the construction of the online database, and design the investor interface so it can effectively inform decision-making. A second essential activity is the design, launch, and implementation of marketing and dissemination strategies to fully integrate infrastructure investments into institutional investment decision-making processes.

The public and private sectors need to partner in further developing co-investment platforms with risk mitigation enhancements that facilitate investment from institutional investors into African regional and national infrastructure projects, learning from the many platforms developed globally, by sector, regionally, and investment theme (e.g., social impact, etc.). The public sector needs to especially champion the establishment of infrastructure co-investment platform forums for African pension and sovereign wealth funds, as a means to mobilize domestic and international pension and sovereign wealth fund investment into de-risked African regional and domestic infrastructure investment projects.

For example, the United Kingdom's Pension Investment Platform (PIP), Canada-based Global Strategic Investment Alliance (GSIA) and the Canada Pension Plan Investment Board (CPPIB)-led syndicate model all provide examples of different co-investment structures that may help institutional investors access infrastructure investments more efficiently.[76] This type of co-investment platform could be used to facilitate investment into regional African infrastructure projects, as well as other national projects.

A new innovative cross-border institutional investment platform was launched in September 2015 between the Caisse de Dépôt et Placement du Québec (CDPQ), a Canadian long-term institutional investor, and a consortium of Mexican institutional investors (including Mexico's three largest Afores). They have joined under CKD Infraestructura México, S.A. de C.V. (CKD IM), a newly-created trust, to serve as a co-investment vehicle for infrastructure projects in Mexico with planned investments of up to MXN35.1 billion (CAD2.8 billion) over the next five years.[77] It is important to note that the first investment is a brownfield infrastructure asset that is already performing.

Related initiatives set forth by African investors and investment advisors to address this challenge include:

- *"Mechanisms and opportunities for pension funds to create investment syndicates/consortiums to make these investments at the entry threshold level, and/or the customization of private equity products to allow for these investment size limitations.*

- *Larger pension funds that are able to achieve the relevant thresholds for investment should explore finding methods to collaborate with smaller funds to enable the latter to co-invest on a 'piggyback' basis. This would also entail establishing a network through which larger funds could communicate co-investment opportunities to smaller funds.*

- *Associations representing the private equity sector or advocating private equity as an investment mechanism (such as SAVCA and AVCA) as well as DFIs (like AFDB, SADB, IFC) should actively engage directly with organisations representing pension funds (such as Batseta, APFN) and regulators (like IOPS) to understand respective perspectives regarding the asset class."*[78]

ACTION 4(b): Development Financial Institutions (DFIs) should immediately proceed to recycle their existing infrastructure to the host country institutional investors: This process would serve to jumpstart the required transformation in the investment ecosystem of the main sources of institutional investment.

The objective of institutional investment in infrastructure could be jumpstarted immediately to advance the mainstreaming of institutional investment through the following process:

❶ DFIs have existing performing infrastructure assets on their books that could be transferred at an acceptable price to domestic institutional investors.

❷ DFIs could work with financial experts to re-structure assets as needed to meet investor due diligence and return requirements.

❸ All currency risk issues would need to be mitigated, so that institutional investors are not subject to unacceptable risks. The assets could be sold to institutional investors in local currency.

To be effective, these efforts need to empower private sector leadership and the engagement of institutional investors. This outcome requires a more flexible and dynamic results-based framework, working collaboratively against strict deadlines and performance targets on a project basis. The role of Africa50 needs to be activated across these functions, using its capacities to develop and finance projects working with private investors.

ACTION 4(c): Development finance institutions (DFIs) should immediately proceed to scale up the use of their risk mitigation instruments to recycle the existing infrastructure debt on bank balance sheets to the host country institutional investors: This process, supplemented by other actions, would serve to jumpstart the required transformation in the investment ecosystem of the main sources of institutional investment.

Already, results are being seen in this process, but they need to be scaled. For example, in 2012, the Asian Development Bank partnered with India Infrastructure Finance Company Limited (IIFCL) to provide a US$128 million (ZAR168 billion) facility, to provide partial guarantees on rupee-denominated bonds issued by Indian companies to finance infrastructure projects. This enables cash-rich pension funds and insurers, which can only invest in assets graded AA or above, to buy the bonds. Replacing bank debt with bonds will, in turn, allow banks more room to provide loans to other infrastructure projects and businesses.[79]

ACTION 4(d): Measure DFI mobilization of private sector capital and compute leverage ratios against the objective of moving from "*billions to trillions.*" If DFI leverage performance is not measured, it cannot be managed or scaled. Annual DFI Infrastructure Leverage Performance Reports need to be compiled to document the amount of private funds mobilized and compute leverage ratios (by project and DFI).

One of the principal measures of the effectiveness of development finance institutions (DFIs) is the ability to attract significant amounts of private sector capital. It is commonly understood and mandated that DFIs can serve as high-impact "*finance multipliers*," using their AAA ratings, experience, credibility and relationships with governments in spearheading new innovative investment vehicles. DFIs can provide targeted, high-impact interventions in the development of investable infrastructure projects and investment vehicles, given their top investment-grade ratings, low default rates in project finance, strong relationships with governments, and potential to mitigate risks.

Leverage ratios need to be calculated to provide an objective measure of the performance of DFIs to mobilize private sector financing to infrastructure projects. **Two sets of measurements need to be calculated:** (1*) A project ranking ordered by the greatest amount of leverage by project*; and (2) *a DFI ranking ordered by the greatest amount of leverage by DFI.* Further analysis needs to be provided by infrastructure sector and geography, showing the relative performance across energy, water and sanitation, transport, and other sectors, as well as by region and country. The leverage data will need to be disseminated with public and private sector partners to showcase the most successful transactions, and provide details on the underlying approaches that enabled success. Annual awards can be given to the top performing DFIs.[80]

ACTION 4(f): Support the development of Co-Investment Platforms (*"African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform"*). Experts have documented the lack of capacity of institutional investors with the exception of the very largest to conduct the required extensive and complicated due diligence required for infrastructure investments. To address this issue, many countries have successfully adopted co-investment platforms to scale up institutional investment in infrastructure.[81]

To tap into the market for large investments, infrastructure in emerging and developing countries needs to be aggregated, for example through co-investment platforms, blended funds and warehousing models.[82] Towards this end, we need to facilitate the development of co-investment platforms, with a specific regional platform to advance co-investment in African infrastructure ("*African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform*").[83] Africa investor, as an initiative of the African Pension and Sovereign Wealth Fund Forum (www.aiswpff.com), launched the **African Infrastructure Co-investment Platform**. The Platform was endorsed as a key Continental Business Network (CBN) priority action and initiative by the African Union Heads of State.

The African Infrastructure Co-investment Platform exists to support African asset owners with originating and accessing infrastructure co-investment opportunities. The Platform builds on a series of Ai-led consultations with African pension and sovereign wealth fund leaders, to assess and determine their barriers to investing in infrastructure as an investable asset class. It also builds on Ai's work with the African Development Bank, African Union, the World Bank, NEPAD, the CBN and is supported through engagements with a number of African Heads of State and Ministers of Finance who are committed to facilitating institutional investment into African infrastructure as an investable asset class.

It is driven by an initial group of investment partners including a select group of African and global pension and sovereign funds committed to investing cross-border in infrastructure assets. Through the platform, Ai has sourced investable projects and instruments that match pension and sovereign investors' risk profiles and criteria, yield expectations and direct investment and manager selection criteria. The platform uses a 'combined' fund of funds model (with unique manager selection IP) and a co-investment approach, supporting access to capital and growth for both African infrastructure funds, as well as the continent's most prominent and successful private sector infrastructure project developers. The Platform currently has a pool of US$1.5 billion in pension fund and sovereign wealth fund capital, with significant additional capital that can be leveraged for the right projects.

5.0 INFRASTRUCTURE AS A MAINSTREAM ASSET CLASS: MOBILIZING INSTITUTIONAL INVESTMENT THROUGH LOCAL INVESTMENT-GRADE PROJECT RATINGS, PERFORMANCE TRACKING AND METRICS

The roadmap to accessing finance for Africa's infrastructure projects – regional and national – is through framing African national and regional infrastructure projects as a separate and distinct superior asset class. If projects are seen as a separate asset class and assessed as able to withstand negative environmental developments and risks (real and perceived), investors will have a greater ability and willingness to provide both debt and equity capital. Capital can be provided directly to projects or through intermediaries (e.g., funds, stock markets, etc.).

Formulating a strategy for institutional investment in African infrastructure projects requires the recognition of the current market realities:

❶ Infrastructure has been developing as a separate asset class given its solid track record of superior performance compared with corporate loans.

❷ Institutional investors are strictly regulated and depend largely on rating agencies for compliance with their fiduciary and due diligence responsibilities.

❸ Investors perceive Africa as the most risky continent for investment, but project finance-structured infrastructure projects have been studied by rating agencies and are reported as having lower default rates in developing countries, including Africa.

❹ Given the need to mitigate local risks and access funding in local currency for most infrastructure projects, local institutional investors and retail stock market investors can serve as the "anchor long-term investors," supplemented by other investors with support from development partners.

❺ Given their stringent investment criteria and currency risk associated with cross-border investment, international institutional investors cannot provide significant investment to African infrastructure projects that earn revenue in local currency.

These market realities suggest the definition of road-maps that can be scaled up to meet the funding needs of Africa's regional and national infrastructure projects.

First, the emergence of infrastructure as a separate and superior asset class presents an extremely significant funding opportunity for African infrastructure projects. The public and private sector perceptions of infrastructure assets as delivering potentially superior performance are evidenced in the following developments:

❶ **Public sector view of lower risk associated with project finance infrastructure investments, with a lower risk rating and lower capital charges:** On 30 September 2015, as part of a package of measures forming part of the Capital Markets Union initiative to remove barriers to investment in the EU, the European Commission made a number of amendments to the Solvency II Delegated Regulation. The main element concerns infrastructure. The announcement states that *"Qualifying infrastructure investments"* will now form a *"distinct asset category under Solvency II and will benefit from an appropriate risk calibration, lower than that which would otherwise apply (for example the calibration of the stress factor for such an investment in unlisted equity is lowered from 49% to 30%). This will ultimately lead to a lower capital charge."*[84]

❷ **Private sector view of lower risk associated with project finance infrastructure projects:** As noted earlier, the statistical assessments conducted by the rating agencies have documented the lower default rates of project finance transactions in both developed and developing countries as well as higher recovery rates, including Africa.[85] Similarly, a recent study of the EDHEC Infrastructure Institute-Singapore finds that infrastructure firms exhibit a unique business model in terms of revenue and profit dynamics compared to a large control group of public and private firms, with significantly lower volatility of revenues and profits

and pay a much higher proportion of their revenues much more frequently to their owners, independent of the business cycle.[86]

❸ **Evidence of worldwide institutional investor interest in infrastructure assets:** Aligned with this superior performance, surveys find that institutional investors are interested in emerging market infrastructure investments. While local investors may be the main anchor investors, international investors may invest a minor part of their portfolios to cross-border infrastructure projects. **For example, the Blackrock study of worldwide institutional investors reports that institutional investors are planning to increase infrastructure allocations, with emerging markets considered almost as attractive as developed ones:** 45% of the surveyed investors are at least somewhat interested in emerging-market brownfield investments and 23% are interested in emerging-market greenfield opportunities (the same percentage interested in new developed-market projects).[87]

The importance of project selection and adequate project development is therefore all determining with respect to securing private capital. As stated by the CEO of Swiss Life, a global leading insurance company, David Frost, *"Two factors make infrastructure attractive for institutional investors: on the one hand, it is the goal of attaining attractive returns and high and stable dividends with limited risk; and on the other hand, it is the capacity to offer protection against rising inflation….However, for these characteristics to come to fruition, the selection of the projects is crucial."*[88] This project-centric approach means that the risk rating most important to securing local and international institutional investment for an infrastructure project is the rating of the project itself.

Import of National Project Ratings: Therefore, the critical focus for infrastructure projects is first and foremost whether the project is expected to be creditworthy and sustainable, delivering the expected returns and serving its debts in a timely manner. For this reason, it is essential to structure the project from inception to enable it to secure a minimum of a national investment-grade rating from a reputable rating agency.

If the project has obtained the national investment grade level rating required by local institutional investors, it has the potential to secure local institutional investment. This is a strategic opportunity for African infrastructure investment: If an African regional or national infrastructure project can be structured to mitigate the perceived and real risks, it can potentially secure investment from local institutional investors.

Import of International Project Ratings and Country Ratings: However, to secure significant amounts of international institutional investment, the infrastructure project needs to achieve an international investment-grade project credit rating. It is important to recognize that most projects cannot be rated higher than their host country as the vast bulk of revenue is usually in local currency and subject to the actions of the sovereign. In exceptional cases, projects can "*pierce the sovereign ceiling*", achieving a project rating better than the rating of the host country, but this is rare. As Moody's states:

"In order for a cross-border security issuance or a forward sale transaction to obtain a rating that exceeds the foreign-currency ceiling of the country in which the issuer or originator is domiciled, the transaction… will be evaluated as to the likelihood that it would continue to pay investors as specified in the original contract even in the event of a severe balance of payments or financial crisis in which the government has defaulted upon (by Moody's definition) its own Eurobonds and has imposed a general foreign exchange payments moratorium on entities within that country. It should be convincingly demonstrated that a transaction will generate (or otherwise have access to) ample foreign exchange revenues to pay all debt service and/or would not fall subject to foreign exchange controls if imposed. This exemption from controls could arise through the explicit permission of the monetary authorities, due to the commercial nature of the underlying transaction, or because of the high opportunity costs associated with interfering with the transaction."[89]

Examples of transactions that have better ratings than the host country are usually in strategic sectors such as oil and gas in which a major exporter generates significant foreign exchange revenues and/or is involved in transactions that generate foreign exchange in a form that would be difficult for the government to divert or control.

Moreover, as cited by Moody's, international investors are particularly sensitive to country-specific risks, including (1) *political risk*, (2) *the credit strength of key counterparties*, which may include the host government and sub-sovereign entities, (3) *untested and evolving legal and regulatory frameworks*, (4) *potential forex risk arising from a mismatch between local currency revenues and dollar or euro-denominated deb*t, and (5) *any concerns regarding transparency and global consistency*.[90] However, as noted in other sections, some exceptional infrastructure projects have been able to attract limited international institutional investment through direct channels and with risk mitigation.

Given the much greater difficulty of securing significant amounts of institutional investment for African infrastructure projects, it is critical for project developers and host governments to concentrate first and foremost on securing finance from local commercial banks and local institutional investors.

Bridging the Greenfield Gap – Crowding in Local Banks: As noted in prior sections, the chances of securing institutional investment are higher if the project is already performing as a well-established brownfield asset with stable and adequate cash flows. Local banks will also require extensive project documentation and technical studies demonstrating the creditworthiness of the project through construction and operation. Once the assets are performing, institutional investors are more likely to invest.

However, Moody's reports that many banks have reduced long-term infrastructure lending in response to the global financial crisis are now once again pursuing opportunities in the sector. These lenders are drawn by attractive loan margins as well as the characteristic credit strength of infrastructure debt. These banks see lending to the infrastructure sector, and providing associated hedging products, advisory and agency services, as an attractive use of capital despite the increased regulatory cost of long-term lending under Basel III.[91]

Performance: Part of the creation of a separate and distinct asset class requires creating a track record of performance, crowding in local banks and institutional investors and building market momentum and confidence. The use of risk mitigation techniques and instruments explained in the prior section is pivotal to this transformative market development for national, regional, and international investors.

The overall "unlocking action" is summarized below.

ACTION 5: Dedicate public sector support in close collaboration with the private sector aimed at developing infrastructure as a mainstream asset class for institutional investors. The public sector needs to invest more in joint efforts with the private sector (including rating agencies) and research institutes in building infrastructure as a separate asset class supported by fact-based assessments. Such efforts include building benchmarks of private infrastructure investments to inform investor asset allocation decisions, and assessing the implications for required refinements of risk mitigation instruments and techniques. A real-time deal tracking system should also be provided, enabling cost-effective coordination and tracking with performance metrics to build market awareness, momentum, and confidence.[92] In addition, the amount of capital mobilized by DFIs in infrastructure projects needs to be systematically measured. The DFI Project League Table developed by Thomson Reuters Project Finance International needs to be expanded.[93]

6.0 ENABLING ENVIRONMENTS

The Pivotal Role of Local Institutional Investors, Enabling Regulatory Frameworks & Local Infrastructure Investment Products: Mobilizing African pension and sovereign wealth fund capital for investment in infrastructure assets needs to assume a leading role if Africa is to meet the financing gap that is currently hindering its economic and social development. In response to requests from the African Union and political leaders across the continent, Africa's pension and sovereign wealth fund investment community has expressed a strong interest in partnering to explore solutions and conditions to provide the necessary funding for African regional and domestic infrastructure projects.

Local Institutional Investors as lead investor in African infrastructure projects: It is critical to acknowledge that the key source of potential long-term investment in African infrastructure is from its own institutional investors. There is much discussion about significant amounts of international institutional investment in African infrastructure, but the scope is limited by regulations and currency risks.

❶ International investors simply cannot invest large amounts of funding into African infrastructure projects. They are largely constrained by strict home country regulations that constrain their investments to countries and projects that are investment-grade by reputable rating agencies.

❷ Most infrastructure projects generate most of their revenue in local currency. This means cross-border investors usually bear the risk of local currency depreciation. International Institutional investors simply cannot take that risk.

The ideal investors are local institutional investors for several reasons. First, they are best positioned to assess investment risks, manage the risk through their relation- ships with the government and leading actors. Second, their assets are in local currency, so for projects with local currency revenues, there is no foreign currency risk. As Moody's states, *"local institutional investors often have a better understanding of, and greater tolerance for, country-specific risks."* [94]

Therefore creating an environment for African sovereign wealth and pension funds to assess infrastructure co-investment opportunities is an overriding agenda priority, not only for the business and finance community, but also for African governments and development finance partners. African policy makers have an opportunity to engage and provide leadership in fostering an enabling environment for African and global institutional investors to increase their investments in African infrastructure.

First and foremost, the risks resulting from the project's environment – ranging from institutional, regulatory, and legal frameworks to credit, political and economic issues and terrorism – need to be reduced as much as possible through strong dialogue and proactive public-private partnerships in targeting the needed reforms to institutional, regulatory and regulatory frameworks. As well documented by many studies, there are significant constraints limiting African institutional investment in their own country's infrastructure, cutting across uncreditworthy utilities, restrictive regulations, lack of investment skills and access to information.

Addressing Regulatory Constraints: Building public sector cohesion, public-private collaboration, and access to information is not enough, as many institutional investors do not have the regulatory freedom to invest in infrastructure assets. Numerous OECD and other studies document regulatory limits to institutional investment. As African institutional investors are the lead potential long-term investors in African infrastructure investment, their ability to make such investments in pivotal.

At a conference in 2014, African pension funds, asset managers, investment consultants and other participants expressed concerns that "regulations appear not to be keeping pace with the markets and that there is a need for initiatives to increase information and training available to governments and regulators about the need for more diversified investment opportunities for pension funds, what those might be, and how any risks or concerns related to these options might be addressed through sound regulation, preferably based on lessons learnt in other jurisdictions. There is a need for greater engagement amongst the regulators in different countries around these issues and more collaboration is needed to address some of these issues." [95]

Specific "unlocking actions" are presented below.

ACTION 6: Develop enabling regulatory environments based on best practices through evidence-based technical exchanges, the development of global best practices, and country-specific action plans. Institutional investors report many impediments limiting their investment in infrastructure. To address these constraints, the public sector needs to develop an ***"Institutional Investor Regulatory Toolkit for Infrastructure Assets"*** and support country-based diagnostics and action plans for improving prudent and enabling regulatory frameworks.

Governments need prudent roadmaps with best practices to improve regulatory frameworks for institutional investors. ***Two steps are needed:***

❶ **Global Regulatory Best Practices:** Engage institutional investors and technical experts with capital market regulatory experience to develop a global compendium of regulatory issues, solutions, and best practices, including an *"Institutional Investment Regulatory Toolkit"* that provides a roadmap for national diagnostics and action plans to improve country regulatory frameworks.

❷ **Country Diagnostics of Regulations and Action Plans:** Leverage global regulatory best practices at the country level, engaging experts to collaborate with local stakeholders in assessing national regulations and developing possible improvements to be reviewed and adapted as needed by the regulatory authority,

Enabling Regulatory Frameworks for African Pension Fund Investment into Infrastructure Assets

The optimal source of investment for African infrastructure is from African long-term investors, especially pension funds. In fact, countries around the world are introducing regulatory changes to allow or increase pension fund investments in infrastructure. Changes in regulatory regimes facilitate the investment of pension funds into specific infrastructure projects and specific financial vehicles meeting the investment criteria of pension funds in terms of profile, risk, returns, and portfolio diversification.

Below are some suggestions on areas for further research and implementation aimed at enhancing the effectiveness of Africa's regulatory frameworks to facilitate high-quality infrastructure investment by African pension funds.

1. LAY THE FOUNDATION FOR AN"INFRASTRUCTURE ASSET CLASS" WITH PRUDENTIAL REGULATORY GUIDELINES: Current regulations in African countries do not single out infrastructure as an asset class. However, across the world there have been widespread calls for its establishment given the alignment between the long-term investment needs of pension funds and the need for long-term capital to fund essential infrastructure services. For instance, the South African government Regulation 28 on Pension Funds, which is considered progressive, could provide greater clarity on the regulatory guidelines applying to investment in infrastructure assets based on historical default and recovery rates. This could be achieved by breaking infrastructure out separately from the larger 15% allocation with specific guidelines based on technical assessments. For example, the higher quality of infrastructure projects – lower default rates and higher recovery rates compared to corporate debt – has been documented by the rating agencies. Revised regulatory guidelines could incorporate these technical credit guidelines to protect pension funds from high-risk investments. The lack of definition around infrastructure investment also creates regulatory ambiguity as to the kind of projects pension investors are allowed to invest in.

2. PROVIDE ACCESS TO ANALYTICAL DUE DILIGENCE FRAMEWORKS AND RELATED TRAINING: There is a lack of capacity to assess infrastructure assets across pension funds, trustees, board members, fund managers, advisors, and investment consultants. Without the required skills and analytical frameworks, the relevant experts in institutional investment ecosystems are not motivated or equipped to assess potential investments and their risks, and take advantage of relevant opportunities in infrastructure investment. Therefore, it is necessary for members of the whole ecosystem and value chain to develop the required analytical skills.

3. PROVIDE ACCESS TO RELIABLE AND STANDARDIZED DATA: In the African context, infrastructure investment by pension funds is relatively new territory and often it is hard to identify investment opportunities related to infrastructure. Pension funds and their ecosystem of fund managers, consultants, and decision makers face the problem of inadequate data on investments and track records of performance. Without credible benchmarked data, pension investors cannot discharge their fiduciary responsibilities and objectively assess the opportunities presented to them, thereby contributing to the bottleneck limiting infrastructure investments.

4. INCREASE EXTERNAL INVESTMENT LIMITS: Regulations that limit investment allocations outside of the home country in the form of "*local-only investments*" serve to stifle the infrastructure investment space for African pension funds. This is a particularly acute challenge for Africa's larger regional infrastructure platforms and assets seeking long term investors. With the exception of South Africa, Botswana and Mauritius, most countries in Africa do not allow for pensions investing outside their borders. This restriction also limits pension funds from obtaining needed higher returns as they do not have sufficient choices in terms of investable infrastructure assets. For this reason, some countries such as Chile have increased their limits on external country allocations.

5. ENHANCE "RULE OF LAW" AND HARMONIZED INVESTOR PROTECTION LAWS: The assurance of "*Rule of Law*" is a precondition to institutional investment. Due to the varied regulatory regimes across the African continent,coupled with perceptions of high risk, pension funds are often concerned that their rights are not sufficiently enforceable. This viewpoint together with disjointed regional/continental frameworks makes pension investors highly risk averse to cross-border investments. Part of the solution is for a concerted coordination effort from African industry regulators, to improve their legal and regulatory environments as well as from trustees and consultants to learn about them. The systematic assessment of each African country's regulatory regime would provide the evidence-based analysis of impediments and required interventions needed to improve country regulatory regimes so they meet institutional investment requirements. Moreover, such expert assessment could provide investors with credible documentation of the quality of the regulations aimed at ensuring prudential investments, thereby contributing to their internal due diligence requirements. (Please see unlocking actions below related to "*Country Diagnostics of Regulations and Action Plans*" for more information.)

6. THE VIABILITY OF AFRICAN STOCK EXCHANGES/CAPITAL MARKETS: The dearth of innovative products (from the capital markets side) and low liquidity on African stock exchange poses a problem for institutional investors who may require flexibility. Additionally, product offerings need to be customized for the relevant pension investors (for example, DB versus DC funds). Finally, regulatory support for the development of the infrastructure products is necessary to ensure that pension funds can allocate to infrastructure assets in a safe but meaningful manner.

7. DEVELOP LOW-RISK MODALITIES FOR INVESTMENTS INTO GREENFIELD INFRASTRUCTURE ASSETS: Worldwide pension funds require low-risk investments, and therefore tend to limit any infrastructure investments to established brownfield infrastructure projects already producing consistent profits. More analysis is needed on the performance of various funds that invest in start-up greenfield infrastructure projects so that an assessment could be made of the risk levels. Rating agencies could also contribute to this process. Based on the results, new regulations could reflect prudential guidelines for pension fund investments into greenfield projects in different modalities, such as diversified funds. Additionally, risk mitigation instruments would play a large role in commercialising the early-stage aspect of infrastructure assets for pension investors.

8. LEARN FROM OTHER COUNTRIES: Many countries are developing regulatory regimes that enable innovative ways to create new infrastructure products that meet the credit criteria and needs of institutional investors. For example, Mexico is developing packaged instruments for pension fund investment in such projects, with the so-called Fibra (Real Estate Investment Trusts) and CKD (Development Capital Certificate). Colombia has developed infrastructure bonds with limited government financing. Peru has trust funds to invest in infrastructure set up by the pension funds themselves, and has also developed the CRPI (Work in Progress Certificates) for mega infrastructure projects that have substantial guarantees from government tax revenues (see Javier Alonso et al., "Pension Fund Investment in Infrastructure and Global Financial Regulation," Pension Research Council Working Paper, Wharton School of the University of Pennsylvania, August 2015, pages 12 – 13).

Related unlocking actions are detailed in the report.

government, investors, and experts for subsequent implementation.

Institutional investors have suggested in Africa investor Forums a myriad of related activities that could advance the formulation of improved investment regulations and the development of prudent infrastructure assets such as the following:

- **Technical Expert Suggestions on Obstacles and Possible Solutions:** *"Legal and investment analysts could precipitate regulatory change by identifying the obstacles to optimal capacitation of pension funds as investors in particular jurisdictions and could advise on ways to remove obstacles while respecting domestic risk concerns;"*

- **Investment Product Developer and Regulatory Exchanges:** *"Product developers and regulators should engage directly to identify mechanisms to increase portfolio diversification while managing risk reasonably;"*

- **Support of DFIs and Experts in Assessing High-Impact Interventions:** *"Engagement by Development Finance Institutions (DFIs) and 'think tank' type projects (like Making Finance Work For Africa or the International Finance Corporation (IFC) or the African Pension Funds Network) with policy makers, governments and regulators in liberalized and less liberalized jurisdictions to identify low-disruption, high-impact legislative, administrative and regulatory interventions to stimulate sound, effective and sustainable, enhanced investment exposure for pension funds;"*

- **Linkage to Forums of Regulators:** *"More rigorous evidence-based analysis and discussion of investment regulatory issues at regulators' forums such as the International Organization of Pension Supervisors (IOPS);"*

- **Cross-Fertilization between Countries:** *"Engagement by larger and/or more liberalized funds investing on the continent with governments, regulators and policy makers in less liberalized jurisdictions;"* and

- **Expert Support in Developing Suitable Investment Products:** *"Engagement by DFIs, 'think tank' projects and pension funds or pension fund associations with investment product developers to inform research and development into products more suitably tailored to specific jurisdictions or environmental circumstances."* [96]

To deliver enabling regulatory environments, such suggestions need to be refined with explicit work plans and outputs. The public sector will need to encourage, facilitate, and support these exchanges and the development of related product knowledge products.

7.0 INVESTMENT CAPACITY: ADDRESSING KNOWLEDGE & SKILL GAPS

As noted in the prior section, the key flagship investors in developing country infrastructure (notably those generating local currency revenues) need to be local institutional investors, with a strong ecosystem of professionals that can support prudent investment decisions.

A continent-wide effort is needed to strengthen the ecosystem of African institutional investment led by African countries and their development partners working hand-in-hand with the private sector. Even in countries such as South Africa with an enabling regulatory environment, pension funds report underinvestment in infrastructure (national and regional) due to the lack of capacity in the pension funds, their fund managers and their consultants to properly assess risks.

African institutional investors, including their fund managers and consultants, lack the credit assessment skills and information to adequately assess the creditworthiness of infrastructure projects and vehicles. For example, South African pension funds explain they have not utilized the 5% allocation level they have for regional investments due to the lack of adequate information on projects and the capacity to assess whether they fit their investment criteria. Moreover, the availability of credit ratings, used worldwide to facilitate institutional investment, is not sufficiently developed in Africa.

National reforms are self-reinforcing and will serve to create momentum that leads to results: By increasing the broad-based knowledge of infrastructure projects, their development dividends and investment requirements, national and local governments will be supported by the required public consensus needed to implement reforms. In turn, improvements in the enabling environment will serve to increase the probability of investment and reduce project costs and delays, thereby reducing fees to end users and contributing to economic growth and competitiveness.

Towards this end, as noted earlier, information on infrastructure investments should be openly provided on a web-based platform, with linkages to the related leading information and assessment initiatives aimed at advancing the needed assessment of infrastructure investments, such as rating agency reports and studies by the OECD, the EDHECinfra Institute, among others.

Specific "unlocking actions" with details on rationale and implementation activities are presented below.

ACTION 7(a): Set up training programs to train pension fund officials, local asset managers, investment consultants, government officials, and other stakeholders. The lack of the needed skills and knowledge is reported as a major constraint to institutional investment in infrastructure. Training programs need to be designed and implemented that enable the development and execution of prudent and diversified investment strategies, the creation of investable infrastructure products, and the capacity to license new investable products.

Training programs need to be developed with scaling mechanisms using global teaching materials and disseminated through existing associations and networks. Two steps are needed:

1. **Global Training Programs:** Develop overall global training programs working with relevant experts, universities, and institutional investment associations, leveraging best practices and existing infrastructure products.

2. **Country Training and Certification Programs:** Leverage global training materials at the country level as appropriate, coordinating with the national government, professional organizations, the investor community, rating agencies, analytical experts, and universities.

Examples of support activities at the country level suggested by institutional investors include:

- **Product Training:** *"There needs to be a process to identify the investment products that retirement funds need in different countries, the capacity and knowledge to develop those products, and the support to get those product providers and the products themselves licensed and approved in the various countries."*

- **Engagement of Local Investors, Professional Associations, and Product Developers:** *"Retirement funds can create the supply by articulating the demand. Therefore, larger funds or pension fund associations should engage in education, conferences, roundtables etc. with product developers to propose and define their investment capacity."*

- **Diversification Strategies:** *"Product developers and regulators should engage directly to identify mechanisms to increase portfolio diversification while managing risk reasonably."* [97]

ACTION 7(b): Provide training in project finance techniques. Studies have provided solid evidence that project finance techniques are a key success factor in the development of infrastructure assets that are of investment-grade quality, including developing countries and specifically in Africa. Given the pivotal role of project finance techniques in ensuring the investability of infrastructure assets, the public sector needs to aggressively facilitate the scaling up of the required training courses in developing countries.

As noted in the prior section, the role of project finance in mitigating infrastructure risks has been documented in studies and evidenced in the default studies conducted by rating agencies and other experts. However, there is a gap in knowledge of project finance techniques in most developing countries. The provision of university project finance courses covering the full range of specialized skills related to project finance techniques, especially risk mitigation and legal structures (including contracts), is absolutely imperative for the scaling up of investable infrastructure projects.

ACTION 7(c): Proactively encourage the scaling up of credit ratings for project finance investments. Institutional investors require solid documentation of infrastructure risks and often require the assessments and credit ratings provided by rating agencies. Therefore a key means of facilitating institutional investment is by supporting the expansion of credit ratings for infrastructure assets.

The importance of rating agencies in catalysing investment has been documented worldwide, so they can be utilized to help create the needed analytics and investor confidence needed to mobilize new sources of finance. Given the essential role of rating agencies in capital market development, it is very important to facilitate the scaling up of ratings. Institutional investors are required to invest in investment-grade assets. Therefore, rating agencies have an essential role to play in rating infrastructure projects and products.[98]

Section C

CALL FOR ACTION: UNLOCK DEMAND WITH INVESTABLE INFRASTRUCTURE ASSETS

The evidence is overwhelming: ***Surveys, studies, experts from development financial institutions, and investors all agree. There is an abundance of private capital available for investment but a severe lack of investable projects and investment vehicles acceptable to institutional investors.***

The solution is urgently re-engineering project development, investment frameworks, and the processes for private sector engagement, encompassing project identification and the entire project development process, including the design of project structures, ownership, risk mitigation, and use of finance techniques. Details are provided below.

Policy Changes - Heightened Focus on Developing Investable Projects: It is increasingly recognized that the key problem impeding infrastructure private finance is not the lack of available investment but rather the lack of investable infrastructure projects suitable for private investment. ***The key headlines for action set forth by the private sector require a paradigm change in development finance, the ways the public sector conceptualizes and acts to support infrastructure, project development, and the engagement of the private sector as summarized below.***

- **Immediate reallocation of public funding to support project inception and early project development:** For infrastructure projects to be investable, the public sector needs to invest more, and more effectively, in the actual project development life cycle, engaging the private sector in meaningful ways that serve to drive practical and technical solutions enabling investment. "Project Preparation Facilities" provided by the public sector need to be restructured and scaled up, making them easily available to the private sector in recognition that the current "project development finance gap" is enormous and impeding the development of viable projects (e.g., the gap is estimated at over US$3 billion a year for Africa's regional infrastructure projects alone).[99] The public sector needs to invest in the development of publicly disclosed Preliminary Infrastructure Project Assessments ("Project Assessments") that cover both development dividends and investability. Such assessment needs to explicitly identify the "viability gaps" that need to be bridged by the public sector to access private capital.

- **Alignment of processes and incentives to support Project Sponsors and Deal Teams:** Each national and regional infrastructure project requires a strong project sponsor (or project developer) with a skilled "Deal Team" composed of highly-motivated and experienced technical experts from the public and private sectors, with very strong national and local political support, leveraging the convening skills, capital and risk mitigation instruments of development partners. To accomplish this, the project development process needs to "crowd in" the needed expertise and finance from the private sector, engaging the whole ecosystem of required skills encompassing project developers, financial advisors, project finance lawyers and investors, etc., providing incentives and compensation models that serve to motivate this array of critical project development participants. This "crowding-in" needs to also attract creative thinkers capable of addressing the daunting project challenges, so they can develop new models and apply proven models for project development and procurement that result in bankable, investable projects. The public sector also needs to create a framework that incentivizes project developers to drive the project development process. Two sets of actions are required: (i) *Employ business models with adequate payment models for private sector project developers so they can increase the number of investable projects they develop*; and (ii) *Directly fund more project development efforts.*

- **Use of proven project finance techniques, replication/ adaptation of other proven finance approaches, and adherence to investment criteria and asset classes of targeted investors:** Proven finance techniques acceptable to institutional investors need to be used, such as project finance acknowledged by rating agencies as having low default rates potentially at the low investment grade-level. Individual projects need to be linked to investable intermediation instruments that can serve as credible investment products for institutional investment for both early-stage "greenfield" and operational "brownfield" investments (e.g., listed and unlisted equity and debt funds that meet institutional investment criteria).

- **Operational Changes - Greater development effectiveness and catalysing of local "ecosystems" of skilled professionals for developing pipelines of bankable infrastructure projects ("INFRADEV Marketplace"):** The above paradigm shift to focus on building pipelines of investable projects – the technical detailed process of identifying, developing, structuring, negotiating, and financing infrastructure projects – is an extremely complex and costly process. Scaling up investable projects requires moving from a supply-driven development architecture to a demand-driven development architecture at the project level, supported by competent local technical professionals. The public sector (host governments and development partners) needs to work together at the specific project level with technical experts to define and implement effective and targeted development interventions needed to reach project investability. These technical experts need to be competent and coupled with armies of local skilled project development professionals.

- **The host government and development partners coordinate in a dynamic and calibrated manner around specific priority infrastructure projects to achieve investability.** Development partners have acknowledged the challenge of developing investable projects, and the need to scale up intra-development partner coordination towards this objective. African infrastructure projects, national and especially regional, are extraordinarily challenging, requiring coordination, communication, and partnerships between a vast array of public and private entities, including private sector experts, providers of services and equipment, investors, providers of project development support, and providers of risk mitigation and investors (debt and equity). Around each project, it is critical that a new ***"project partnership for effective development cooperation"*** is created with a tracking and coordination system, leveraging support from development partners and foundations at all levels (global, regional, national, local), reinforcing host country support at the individual project level through facilitation, risk mitigation, technical support and funding support.

- **Activate *"localized marketplaces"* in project development, replicating the vast professional sectors in developed countries that are intrinsic to the development of investable infrastructure projects, such as project developers, financial advisors, project finance-skilled lawyers, etc.** Successful bankable infrastructure projects usually require enormous amounts of support on a constant basis, usually over years. Moreover, all infrastructure projects require an array of highly-skilled professionals with experience in project finance transactions, ranging from project developers, financial advisors, lawyers skilled in project finance contracts, environmental engineers, etc. However, the development of African projects depends largely on international consultants. This is a factor that impedes the

development of bankable projects, as it increases costs greatly and international consultants do not have the requisite time in country or knowledge of local conditions and networks. African countries today lack the project finance know-how and local experts to effectively develop bankable infrastructure projects and need to build their own local ecosystems of infrastructure practitioners. Cost-effective coordination and skill-transfer needs to be facilitated via a continuously updated, online project tracking system to facilitate effective coordination between the public and private sectors in developing bankable, investable projects, with transparent metrics on performance.

- **Support the development of a modern online communication platform to support the development of bankable projects, facilitating development partner coordination and risk mitigation and activating ecosystems of local professionals ("INFRADEV Marketplace"):** An online communication platform would activate the required market dynamics for teamwork and knowledge sharing, and enable effective development partner coordination. The Platform could serve as a one-stop-shop of enabling information, as well as enabling dynamic performance metrics and host regular finance innovation exchanges to advance effective public-private risk sharing. The Global Clearinghouse for Development Finance is now engaging partners to build such a platform ("INFRADEV Marketplace") for use at national and sub-national levels that activates the entire ecosystem to drive project development through initial project definition through development to finance and operation, connecting the nucleus of highly-skilled public and private sector professionals who need to work together effectively to develop investable deals.[100] **For more information, see ANNEX B.**

- **Mitigate Credit "Off-Take" Risk:** Projects cannot be investable if the buyers of the infrastructure services are not creditworthy. The greatest impediment to delivering on Africa's infrastructure is uncreditworthy utilities. Furthermore, with declining commodity prices and lower growth, the creditworthiness of both utilities and their host governments are declining. Host governments and their development partners need to urgently solve this issue, as these fundamental credit risks are "deal breakers" that impede investment across many African countries.

Unlocking actions are detailed below.

1.0 OVERALL MINDSET CHANGE: RESTRUCTURING OF INFRASTRUCTURE PROJECT DEVELOPMENT & FINANCE PROCESS

Understanding the project development life cycle and how each step relates to project investability is essential for host governments and their development partners. In fact, the success of the project development life cycle in reaching investability is a function of large "*Deal Teams*" composed of a wide array of highly-skilled professionals, such as strategic and urban planners, project developers, financial advisors, geographic information technicians, contractors, suppliers, project finance lawyers, consulting and environmental engineers, accountants, sector experts, project managers, etc. The concept of "*blended finance*" is entirely dependent on the success of project "*Deal Team*" professionals in developing investable projects over extended periods on site. As a result, the first-order requisite to ensure access to private finance is ensuring the quality and activation of the highly specialized localized infrastructure "*ecosystems*" constituting the entire project development life cycle.

The Program for Infrastructure Development in Africa (PIDA), focused on regional infrastructure projects, has not secured the required large amounts of finance or even the provision of easy-to-access open information on the projects, their envisioned benefits, feasibility, or status despite many years of efforts and donor funding.[101] NEPAD has attempted to advance the development of PIDA regional infrastructure projects and engage the private sector through various meetings and working groups such as the World Economic Forum's African Strategic Infrastructure Initiative,[102] the establishment of the NEPAD Foundation, and most recently the establishment of the Continental Business Network (CBN). Despite these efforts, private sector interest to date has been limited due to the huge expense and risks associated with developing PIDA projects.

The overall "unlocking action" is summarized below.

ACTION 1: Define and Implement Transformative Public Sector Interventions to Facilitate the Development of Investable Infrastructure Assets. The public sector needs to better understand the project development ecosystem and investment criteria, investing in the required increased effectiveness and efficiency of the project development cycle. This will required significant changes in mindset, processes, and collaboration frameworks working in partnership with the private sector at the project and investment vehicle level, from inception through development, structuring, risk mitigation, finance, and operation.

This new framework entails sharing information openly, using online platforms to reduce costs and improve effectiveness, and developing and employing performance metrics that credibly document envisioned project development impact and the estimated amount of mobilized private investment.

Moreover, this new public-private partnership will require significant public investment in the development of local highly-skilled professionals and capacity-building interventions needed to scale up the development of investable infrastructure projects, such as local project developers, financial advisors, suppliers, contractors, project finance lawyers, environmental engineers, project operators, etc.

2.0 DEFINING PRIORITY PROJECTS: CREATING *"INFRASTRUCTURE PROJECT ASSESSMENTS"* ALIGNED WITH DEVELOPMENT AND INVESTMENT CRITERIA

The starting point for securing finance is at project inception, through an initial technical project assessment that addresses both development needs and investment criteria conducted by experienced public and private sector experts, with input from highly-skilled professionals with successful track records in developing and financing similar projects using private capital.

The "*crowding in*" of the private sector and risk mitigation providers (including development finance institutions) at project identification is especially critical for large regional infrastructure projects that require a wide array of support from a consortium of development partners, financial institutions, and skilled professionals.

The overall "unlocking action" is summarized below.

ACTION 2: Invest in the development of upfront "*Project Assessments*" that address key development and investment risk issues. The public sector needs to invest in the development of publicly disclosed Preliminary Infrastructure Project Assessments ("*Project Assessments*") that cover both development dividends and investability. The transparent process of generating Project Assessments would serve as a collaborative integrating platform, crowding in the technical public and private sector experts and local stakeholders required to optimize the sustainable development impact and access to private capital. The private sector needs to take a leadership role in this process, bringing innovative ideas, approaches, technologies, and financing structures to the design of the project. Development finance institutions can provide a critical facilitation and brokering role from project inception, especially for cross-border projects, in bringing together the required private sector experts and investors.

The very process of developing comprehensive Project Assessments could serve as the foundation to effective project development and finance, catalysing the required technical and dynamic public-private collaboration needed to design investable infrastructure projects that deliver a sustainable and inclusive development impact. The Project Assessment process could be designed to "*crowd in*" the experts and practitioners from the public and private sectors needed to successfully formulate a project with optimal development dividends while meeting the practical requirements for successful and timely project development and finance. Therefore, Project Assessments could jumpstart the foundation needed for the targeted innovative technical inputs to speed up the project development process, including access to private finance.

It is important to note that Project Assessments could be openly disseminated to investors, governments (regional, national and local), and stakeholders to create an open public-private marketplace of innovation, trust, technical exchanges, shared economic interests, political leadership, and governance[103] needed for the very complex process of advancing these projects. Moreover, by providing a solid preliminary basis for the development and business case for a project, well-executed Project Assessments will enhance the broad-based local and cross-border public and private sector buy-in needed for successful regional infrastructure project development, access to finance, and development impact.

3.0 FUNDING FOR INVESTABLE PROJECT DEVELOPMENT: DEVELOPING SOLUTIONS TO THE "*PROJECT DEVELOPMENT FINANCING GAP*"

The development of infrastructure projects costs up to 12% or more of total project costs, and may take over ten years before financial close.[104] Moreover there is a significant risk of project failure in both developing and developed countries, given the many project development challenges that often impede access to finance. Solutions are outlined below.

3.1 Need to restructure and increase Project Preparation Facilities: According to a study conducted by the Infrastructure Consortium of Africa (ICA), existing PIDA African project preparation facilities (PPFs) for regional infrastructure projects amount to only US$190 million, against a total annual project preparation financing requirement estimated at US$3.36 billion, leaving an annual project development financing gap of over US$3 billion.[105] Moreover, the total gap for all of Africa's infrastructure projects is estimated by ICA at an astounding 99.95% of the estimated total project development finance requirement.[106]

Furthermore, the existing PPFs are not designed to meet the practical requirements of successful project development. First, they are fragmented and mainly available only to the public sector, focusing on PPPs. Second, they limit funding to specific development activities (such as a single technical study), resulting in a cumbersome and expensive process of applying to multiple funds. Third, PPFs allocate the least funding to the most crucial early stage of project development, instead providing the most amount of support to the lower risk project development – the mid-to-late stages. In short, the finance of both national and regional infrastructure projects is severely impeded by the huge gap in adequate and integrated one-stop funding sources for project preparation, especially early-stage, with few direct funds available to the private sector, undermining the prospects for successful project development and investability.

Specific "unlocking actions" with details on rationale and implementation activities are presented below.

ACTION 3(a): Restructure and increase Project Preparation Facilities (PPFs) so they are effective in meeting the investment requirements for infrastructure assets. There is wide agreement in the private sector on the need to exponentially increase the amount of funding for project preparation and development, allocating the bulk of PPF funds to the early stages of investment, and create simplified one-stop access through open information and aggregation platforms including online portals and specialized online applications. These platforms and applications should also include aggregated directories of the entire ecosystem needed to develop high-quality infrastructure projects: skilled professionals (e.g., project developers, financial advisors, project finance lawyers, environmental engineers, etc.); risk mitigation techniques, instruments, and best practices; and standardized approaches (e.g., toolkits, project legal documentation, off-take agreements, etc.).

It is important to recognize that specific early-stage project development actions need to include early "quick and dirty" demand studies that establish at the outset whether there is likely to be sufficient demand to justify investments, documenting the full range of assessed risks and possible solutions (especially "*off-take risk*"), as well as estimated project development costs. PPF facilities, application processes, and response time need to be offered to private sector developers, and be restructured, integrated, and exponentially increased to meaningfully address project development bottlenecks.

3.2 Need to Incentivize Private Financing of the "*Project Development Finance Gap*": Given the enormous financing gap for developing projects, even a significant increase in PPF funding and PPF effectiveness will not solve the daunting challenge of how to scale up investable projects. The facts are clear: Governments and their development partners do not have the capacity to meet the daunting requirement for increased project development finance.

Therefore the most important solution to the ***"project development finance gap"*** is to incentivize private sector companies to take the risk of funding a greater portion of project development costs. ***However, there are several underlying issues that are reported as prohibiting private sector investment from financing the hugely expensive process of developing infrastructure projects:***

❶ **Public procurement processes are very complex and often require prohibitive "*development dollars*."** Without the certainty that large projects will in fact be approved by the governments, private sector investors are concerned that investing extensive resources in costly project development processes will violate their fiduciary responsibilities to their shareholders.

❷ **The profitability of many projects is uncertain or unlikely given the lack of creditworthiness of the entities operating and managing the infrastructure assets, as well as the entities paying for the service ("*off-take risk*")**. In fact, in many cases, user fees do not cover the cost of providing the service nor provide return on investment. The fact is that initial infrastructure is the pre-condition – the physical backbone – for building strong economies, job creation, supply chains, and access to markets. The targeted users, especially in developing countries, are often poor and unable to pay the full recovery cost of services, so they require subsidized user fees. In fact, in many sectors across developed countries, national governments routinely subsidize user fees (e.g., transport, renewable energy, water and sanitation, etc.).

❸ **Projects are often delayed and fail, as their internal processes require review and approval across ministries and political constituencies.** The risk of delay and failure is reported as particularly high when governments own projects in whole or in part.

❹ **Procurement processes are very complex and require extensive upfront studies and documentation**. The many concerns around corruption and excess profits have resulted in the adoption of complex procurement processes which create unacceptable costs to private developers and investors.

Furthermore, it is important to recognize that government procurement entities are reported as often impeding project development due to two problems: lack of technical capacity to effectively and efficiently specify, evaluate and contract large and complex infrastructure assets; and ineffective decision making due to multiple centres of decision-making powers typically dispersed among the entity's management, board, accounting officers, Finance Ministry, parent line ministries and Parliamentary committees – all with large influence and often divergent views on the procurement process. These challenges frequently result in inordinate delays in decisions and all too often "*decision paralysis*" – that can by itself transform a potentially viable and investable project to an outright failure.

Moreover, international and African private developers and investors report that public requirements for "Competitive Tendering" have become major "deal breakers" for the private sector, especially for large, complex infrastructure projects. First, the process of Competitive Tendering is reported as serving as a major conduit for institutionalized corruption. Second, the process has reportedly led to sub-optimal outcomes often impeding the participation of African and other project developers. The larger and more complex a project is, the greater the likelihood that only a few global scale companies have the capacity, scale, technical and financial resources to participate and successfully execute them. Therefore, the private sector is not optimally engaged in funding project development, given the daunting risks of project failure combined with the process of complying with complex, time-consuming, and expensive government procurement processes.

However, private sector developers and investors have set forth suggestions of how to increase their ability to assume greater portions of project development costs. Private developers call for redefining competitive sourcing processes, and set forth the urgent imperative of designing more effective procurement processes such as unsolicited bids, auctions, restricted bidding, open book tendering and single sourcing infrastructure tenders. A large number of project developers especially argue the merits of unsolicited bids.

One example of an unsolicited majority-owned private sector project that is considered critical to the host country's development is Ghana 1000, a multi-phase greenfield gas-to-power project that will consist of approximately 1,300MW of combined cycle power generation technology, supporting Ghana's burgeoning domestic natural gas industry by purchasing natural gas from the Sankofa gas field from Ghana National Petroleum Corporation.[107] Another unsolicited bid project is the Kenya Lake Turkana Wind Power Project, expected to be equivalent to approximately 20% of the current installed electricity generating capacity, that was awarded the African Renewables Deal of the Year for the IJ Global Awards 2014 Europe & Africa, African Renewables Deal of the Year 2014 by Project Finance International, and Africa investor (Ai) Power Deal of the Year.

There are also unsolicited private sector-driven regional infrastructure projects. For example, the West Coast High Speed Rail Project is the first high-speed rail project in the continent of Africa designed, structured and poised to be a world-class, unique, high-speed, low environmental impact speed rail transport system that will span across five West African countries. It is expected to be transformational by providing regional arteries for travel and market access to the region's peoples, providing affordable regional travel and freighting services to millions of people and businesses.[108]

As a result, the common theme voiced by project developers is the urgent priority need to create a public-private framework to design and scale up unsolicited and other streamlined bidding processes, and also ensuring the support of all development partners (as some cannot provide support to projects obtained through unsolicited bids).

ACTION 3(b): Refine approaches to procurement policies. Governments and their development partners need to crowd in private sector funding of the "*project development finance gap*" through streamlined, transparent and well-governed policies redefining procurement processes. There needs to be public-private collaboration in defining innovative procurement processes (e.g., unsolicited bids, auctions, restricted bidding, open book tendering, single sourcing infrastructure tenders, etc.), that accelerate project development, increase investable project pipelines, reduce costs, and time to service delivery, resulting in greater sustainable development impact.

Specific suggestions set forth for further refinement include the following:

❶ **Develop an early-stage auction with a streamlined, transparent process:** An auction process could be conducted by the government(s) in a simple manner, building on the lessons learned from mobile telecom auctions. Two suggestions have been provided (for further refinement):

a. Interested project developers would bid based on the committed user fees for the project. (The level of user fees could be included in the Project Assessments outlined in the prior section.)

b. Interested project developers could simply provide a required rate of return for their investment and project development services.

❷ **Promote unsolicited bids and other bidding processes:** Many governments and their development partners discourage unsolicited bids given the risk of corruption. However, many private investors argue that corruption is in fact prevalent in the current competitive tendering process, and that streamlined refinements are needed to speed up the process and enable their funding of project development. Corruption and overpayment risks can be avoided through transparent negotiations in which governments have independent expert advisors, transparent documentation and open disclosure of all terms, with detailed price benchmarking to ensure value for money.

❸ **Provide greater comprehensive support for project developers:** Infrastructure projects require strong economic rationales, long-term strong political support, and committed, effective project developers. Project developers are especially critical to the success of PPPs, as they need to provide the technical and operational skills for both governments and local private partners. However, as noted above, there is a lack of private sector interest given the extraordinarily high risks and high costs, compounded in regional projects. Moreover, there is a lack of qualified experienced project developers resident in Africa.

Greater public support would enable greater scale and result in a larger project pipeline. For example, the publically-funded project developer eleQtra is considered a success story that could be replicated, and also scaled up with greater public funding to increase the number of investable projects being developed.[109]

ACTION 3(c): Incentivize project developers to develop infrastructure projects. The public sector needs to create a framework that incentivizes project developers to drive the project development process. Two sets of actions are required: (i) *Employ business models with adequate payment models for private sector project developers*, so they can increase the number of investable projects they develop; and (ii) *Directly fund more project developers.*

If the procurement and project development process does not change and provide greater incentives for private sector investors and firms to finance and drive the project development process, the prospects for the execution of African regional infrastructure projects are not hopeful.

3.3 Need to scale up investment vehicles for greenfield and brownfield infrastructure projects: Institutional investors also invest at different stages of the project development process ("*greenfield*" and "*brownfield*" investment), either directly in the project itself or through different types of investment vehicles.

Some institutional investors have the capacity and interest to invest directly in well-established performing projects, and of these investors, only a few will invest in the early stages ("*greenfield investment*"). Direct investment requires an extremely well-structured and risk mitigated project structure. These projects are normally risk-mitigated by using proven project finance techniques.[110] For example, contracts for construction are carefully designed so they transfer construction risk to the contractors, protecting the project against cost over-runs and delays. A reputable study states that the average cost overrun for project finance schemes are 3.5%, versus 27% for traditionally procured projects.[111]

Greenfield Investment at the Vehicle Level: However, institutional investors are more able to provide capital to greenfield projects through investment vehicles. For example, the Pan African Infrastructure Development Fund specializes in investments in greenfield and brownfield infrastructure projects in the energy; transport including road, rail, ports and airports; ICT; water and sanitation; and telecommunications. The fund makes equity investments between US$10 million to US$100 million in its projects. It takes a minority stake between 20% – 49%, and typically provides long-term (15 years) equity financing to its portfolio companies.

To mobilize large-scale institutional investment for national and regional infrastructure projects, the increase of investable intermediary investment vehicles is critical. Several new innovative vehicles have been launched or are in development but they are not sufficient; for example:

- The IFC developed AMC as a new model of development that can mobilize institutional investment for equity investment in infrastructure and other projects. The total amount of funds in the global infrastructure fund is only US$1.6 billion. AMC uses a strong governance structure and innovative business model to marry commercial capital with development finance. It is described as providing "*a unique opportunity for institutional investors to access IFC's superior investment track record in emerging markets, its unparalleled network of in-country presence and expertise, and its strong investment pipeline. AMC also provides a robust governance framework which capitalizes on IFC's strengths in identifying and structuring investment opportunities while maintaining requisite decision making independence as a manager of third-party funds with the attendant fiduciary duties.*" AMC's investors include sovereign wealth funds, pension funds, bilateral and multilateral development finance institutions and other investors.[112]

- The IFC has launched a new program "*Managed Co-Lending Portfolio Program (MCPP)*" as an IFC Syndications product that allows institutional investors the opportunity to passively participate in IFC's future loan portfolio. There is only one investor to date, albeit very large, reported on the website (US$3 billion). The vehicle works as a portfolio pool basis: Investors provide capital on a portfolio basis, which can be deployed by IFC in individual investments across all regions and sectors in accordance with IFC's strategy and processes. MCPP investor approval is sought pre-mandate; project appraisal, approval, commitment, and supervision are managed directly by IFC with the investor passively following IFC decisions. MCPP complements IFC's existing B Loan and Parallel Loan platforms. Through MCPP, IFC can expand its base of co-lending partners to include investors that do not have the capacity to invest on a "*deal by deal*" basis. IFC acts on behalf of MCPP investors and is the only interface with the borrower.[113]

Such initiatives need to be scaled up and refined across all DFIs, leveraging their AAA ratings, experience and low default rates, as well as deal-sourcing and risk mitigation capacity.

Other vehicles used by institutional investors include listed and unlisted infrastructure funds, infrastructure bonds, indices, green bonds, etc. New innovative intermediaries are also being developed to enable greater institutional investment in greenfield projects. For example, new vehicles include special purpose acquisition companies (SPACs), which are corporations formed by private individuals to facilitate investment through an initial public offering (IPO). The proceeds are used to buy one or more existing companies. In June 2015, RENERGEN Limited, a company in the fast-developing alternative energy industry, is listed on the JSE's AltX board as the first SPAC from South Africa to list on the exchange. The company plans to invest in alternative and renewable energy projects of up to ZAR500 million or more, such as natural gas and hydro-electricity, using debt and top-up equity from shareholders.[114]

Therefore key"unlocking actions"can access greater institutional capital by creating investable high-quality investment vehicles, as set forth below.

ACTION 3(d): **Scale up effective investment intermediation vehicles.** The public sector needs to partner with the private sector and invest in the development and scaling up of effective investment intermediation vehicles, such as infrastructure project bonds, government bonds 'earmarked' for infrastructure investments, indices, Special Vehicle Transaction Structures, and Infrastructure Funds, aligning with the investment criteria of institutional investors.

ACTION 3(e): Develop investment vehicles for greenfield infrastructure investment. The largest gap in funding is for early-stage greenfield infrastructure, so a key focus of the public sector needs to be catalysing the scaling up of greenfield infrastructure products. Such initiatives need to be scaled up and refined across all DFIs, leveraging their AAA ratings, experience and low default rates, as well as deal-sourcing and risk mitigation capacity.

4.0 RETHINKING PROJECT OWNERSHIP: DEVELOPING OPTIONS FOR PROJECT OWNERSHIP TO ADVANCE DEVELOPMENT IMPACT & RISK MITIGATION

Often ideology clouds the issue of infrastructure ownership, especially given the perception of extensive failed PPPs. However, as documented by the wide array of existing national and infrastructure projects, ownership models are diverse, spanning across the public and private sectors with successful track records for diverse examples. ***Aligning ownership with local interests is often critical to risk mitigation and long-term development impact, but harnessing private sector expertise and impetus can also be critical to the jumpstarting of successful development, finance, and operation of projects.***

Import of Local Ownership: Given the national interest of infrastructure, an ideal project ownership structure aligned with domestic self-interest could include local institutional investors and retail investors, with investment through national stock markets as well. For example, the largest water and sanitation company in the world, SAPESP, is majority-owned by the State of Sao Paulo in Brazil, but listed on both national and international stock exchanges.

Moreover there is an emerging new frontier in the evolution of emerging market capital markets and mobile technology, possibly transformative in expanding debt sources through the sale of retail bonds using cell phones, per the recent Kenya government M-Akiba infrastructure retail bond initiative.[115] Therefore, in the initial definition of the project and its ownership structure, it is important to consider the full diverse and expanding menu of ownership options and their suitability based on the specific project details. For example, in many cases, ownership includes minority shares held by entities other than governments or private sector companies, encompassing development partners, listed and unlisted funds, stock markets (local and international), institutional investors, local community groupings, and foundations.

Need to Expand Sources of Debt Finance: In addition to defining the project shareholders, securing debt sources is of critical growing import given reduced long-term bank participation (due to Basel III). The increased costs of long-term debt imposed by the Basel III regulatory framework results in greater reliance on bond markets (e.g., project bonds, infrastructure funds, country bonds), mezzanine debt, concessional debt, and the move to "*crowd sourcing*" individuals through retail bonds (e.g., Ethiopia Renaissance Dam).

Jumpstart Projects with Private Project Developers: African infrastructure participants cite the critical role of private sector developers in serving as the engines for project inception and development. In fact, the role is often conceptualized as "jumpstarting" project development, with shares then sold once the project has stable operation and cash flows to local institutional investors and retail investors.

Several African private sector developers report that the likelihood of a project being properly structured and reaching financial close is greatly increased if there is a majority private sector owner that drives the development of the project, supplemented by minority shares held by local pension funds, funds listed on local stock markets, community organizations, development partners, etc. For example, the Lake Turkana Wind Power Project is the largest private sector investment in Kenya's history (€625 million), led by project developers with extensive support from development finance institutions.[116] Another local project development model is illustrated by the Western Power Company, a Zambian Independent Power Producer developing the Ngonye Falls Hydroelectric Scheme, a 60MW run-of-river hydro-electric station, in partnership with the community of the Western Province with project development funding from the Development Bank of Southern Africa and InfraCo Africa.[117]

Conversely, private sector firms report that public ownership of infrastructure projects can in fact create sustained delays and increase failure risk, as the project's fate is a function of the varying political interests and commitments of revolving political leaders. In fact, at the recent inaugural Global Infrastructure Forum, one proposal set forth by a major regional bank was to create an instrument that mitigated this risk of changing government regimes on project development and viability. The challenges of bringing together different governments can sometimes be a showstopper given the need for agreement on the corporate structure, profits, and the many technical aspects of operation. It is therefore important for governments and development partners to think through with the private sector the total menu of ownership options and their respective advantages and disadvantages based on specific project characteristics and objectives.

Regional Projects: As explained in the first section, the challenge of African regional infrastructure projects is vastly more complicated given the need to ensure that projects are not hurt by complications due to different national frameworks (legal, regulatory, institutional, tariffs, etc.), political conflicts at national or local levels, civil disruption, etc. For this reason, there needs to be a comprehensive examination of how the ownership structure can mitigate these risks based on the specifics of each project.

The options of an expanded ownership base are also impeded by the lack of qualified and experienced independent financial advisors available to governments to advise on the full range of ownership options for each project and advise them in the negotiation process with private sector developers and investors. A related key need is

how to expedite the formulation of investor-friendly treaties that can reinforce project investability.

Without evaluating the full range of optimal project ownership at project inception, coupled with adequate investment in the engagement of credible private sector partners, there is slim hope of developing sufficient numbers of regional and national infrastructure projects that can successfully secure large-scale institutional investment.

ACTION 4(a): Prepare a full and open menu of options with regard to project ownership and debt and equity options, ensuring a rigorous process led by highly-skilled independent financial advisors.

ACTION 4(b): Develop an ownership strategy that incentivizes local support through shared benefits of ownership, mitigating risks and creating spill-over effects for local development. Each project should have a well-defined strategy that builds local roots within a technical viable framework.

ACTION 4(c): Encourage private sector project developers to jumpstart projects with public support, ensuring project success so they can later sell off assets to local pension funds and retail investors through the stock market.

ACTION 4(d): Facilitate government access to independent financial advisors. The public sector needs to improve the enabling environment for regional projects by providing independent financial advisors to all participant governments to ensure suitable treaties and cross-border agreements, and involving private sector entities (local, regional, and international) as the dynamic "engine" creating momentum for achieving timely progress and results.

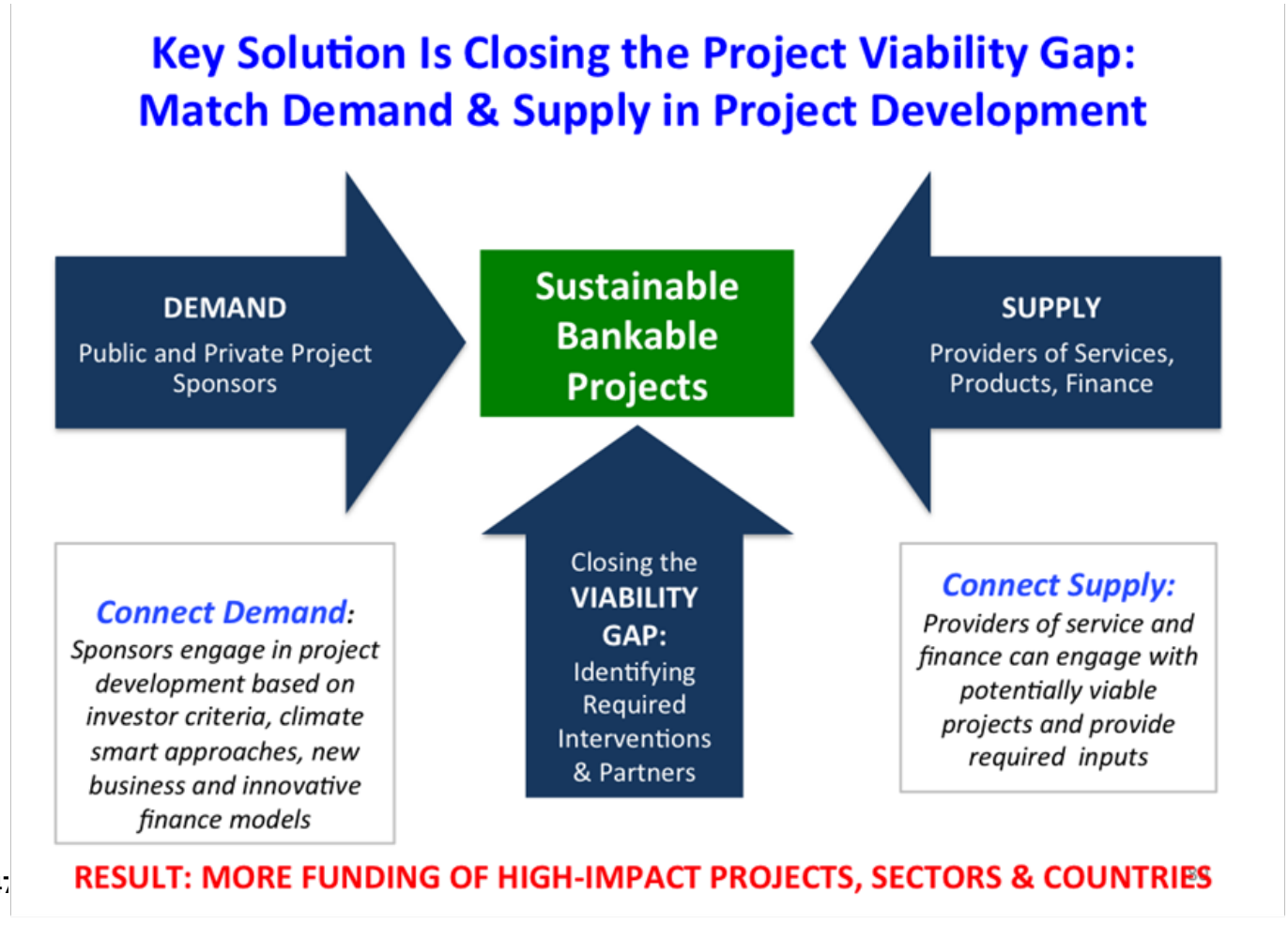
5.0 CLOSING "*PROJECT VIABILITY GAPS*" WITH ENHANCED DEVELOPMENT EFFECTIVENESS: INSTITUTIONAL INVESTORS CANNOT INVEST IN ANY PROJECT THAT IS NOT VIABLE

"Project viability gaps" impeding access to private finance can be determined by identifying the specific impediments impeding access to finance. Solutions can be developed by then bringing together the interested public and private sector stakeholders to develop potential solutions that meet investment criteria.

To secure institutional investment, the project viability gap assessment will need to include rating agency analysts or advisors so that the project can meet investment criteria.

The ability to close the "*project viability gap*" is usually compromised by the difficulty of effectively partnering with governments and development partners in identifying and implementing solutions at the project level. There is no established process to "crowd in" potential providers of risk mitigation and other support. In fact, the current number of development support mechanisms has expanded dramatically, and are highly fragmented with no integrating function around projects that require targeted public support to achieve bankability/investability. Issues include the following:

1. Development partners usually do not coordinate around projects.
2. There are no mechanisms to partner on a project basis with other potential supporters, such as host government, foundations, social impact investors, private sector providers of risk mitigation, etc.
3. Often the risk mitigation instruments offered by the public sector are managed at their home country capital office, with little in-country staff knowledgeable of the process or able to engage in the complex process of negotiation and execution.
4. Many different risk mitigation instruments may be needed, for example, interest rate subsidies, political risk insurance, and funding for technical studies.



To enable the required public-private collaboration in closing "project viability gaps," there needs to be streamlined processes enabling cost-effective coordination at the project level:

1. Projects need to have financial advisors who can help them access the project viability gaps and work effectively with potential providers of risk mitigation, and other solutions.

2. Governments and their development partners need to assign accountable, knowledgeable officials at the country level who can coordinate their various programs in project preparation support, risk mitigation, grants, and output-based aid.

3. New cost-effective coordination frameworks, processes, and performance metrics are needed to enable effective public-private collaboration at the project level. Online platforms are essential. It is also important to create performance metrics, including leverage ratios measuring the extent of private sector capital mobilized that can be collected and used by development agencies and the OECD to advance lessons learned.

The overall "unlocking action" is summarized below.

ACTION 5: Identify the "project viability gap" and focus development support and risk mitigation to eliminate the obstacles impeding access to private finance. Project developers and investors, governments, and development partners need to create a new collaborative work process focused on *"identifying project viability gaps"* to achieve bankability. Online platforms are needed to enable cost-effective technical coordination between the wide spectrum of project participants, provider of risk mitigation, and potential investors in solving the "project viability gap," with leverage metrics to measure performance and advance lessons learned.

6.0 LEVERAGE MULTIPLIERS: SCALING UP INVESTABLE INVESTMENT STRUCTURES

The daunting challenge of meeting the low risk tolerance of institutional investors requires significant public investment in building the requisite investment structures that can reduce investment risk and be aligned with investment criteria. ***Below are examples of the investment structures that can be refined with documented details to enable cost-effective assessments and adaptations for a range of transactions.***

6.1 High-Quality Asset Structures Using Project Finance Structures: The most successful structure for infrastructure worldwide in both developing and developed countries is the use of project finance, single asset risk transactions structured in special purpose vehicles with ring-fenced revenues to pay debt service. In fact, as noted earlier, Moody's Investors Service conducted a study that showed that default rates for project finance are less than for corporate risk.[118] Key findings from Moody's research on unrated project finance bank loans include key points underscoring the usefulness of project finance structure in meeting investor requirements: Project finance transactions in emerging markets demonstrate resilient credit strength; PPPs are a discrete sub-sector lying at the low-risk end of the project finance spectrum; and average ultimate recovery rates for OECD and non-OECD projects are similar.

Most importantly, ten-year cumulative default rates for project finance transactions are consistent with low investment-grade ratings. Other studies based on extensive data analysis find that project finance deals (and cash flows) are more resilient to macro-variables or the business cycle than corporate loans.[119]

The diagram on the next page illustrates the basic structure of risk mitigation. Actual deal structures are extremely complex, involving an array of public and private experts needed to develop, structure, and finance the project.

The structure of each project finance transaction is customized to offset risks that can affect the project's operation, cash flows, and sustainability. Project investability can potentially be attained through targeted support from the host government, development partners and other risk mitigation providers, including partial credit guarantees, grants, first loss facilities, interest rate subsidies, and other instruments/techniques.

The complexity of these structures is amply evidenced by prior infrastructure projects that involved a multiplicity of complex public and private sector inputs over a development period of many years.

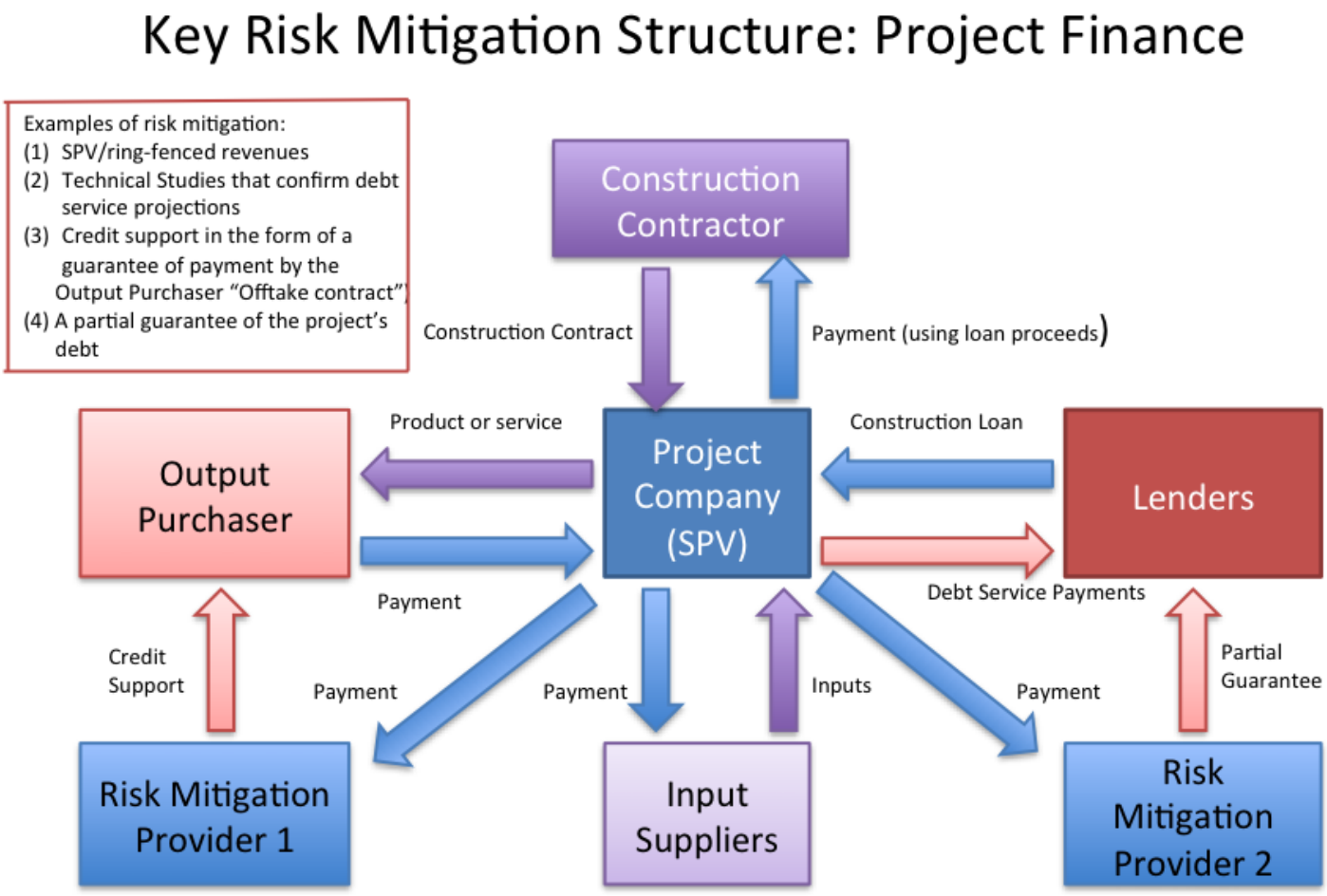
For example, in 2004 the World Bank provided its first enclave partial risk guarantee (PRG) for Mozambique in support of the Southern Africa Regional Gas Project (SARG), a Mozambique-South Africa natural gas development and pipeline project. The Project was implemented under a series of contractual agreements between Government of Mozambique (GoM), Government of South Africa, ENH (Empresa Nacional de Hidrocarbonetos de Moçambique), Sasol Limited and its subsidiaries. These agreements include the Petroleum Production Agreement (PPA), the Pipeline Agreement (PA), the Joint Operation Agreement (JOA), the Gas Sales Agreement (GSA) and the Gas Transportation Agreement (GTA).

The financing involved three tranches lead by the Standard Bank of South Africa, Development Bank of Southern Africa (DBSA) and European Investment Bank (EIB) (see Figure 2). The political risk coverage was provided by the World Bank through the enclave partial risk guarantee, MIGA (partially re-insured by Sace of Italy and EFIC of Australia) and Export Credit Insurance Corporation of South Africa (ECIC). The Standard Bank tranche is based on Sasol corporate credit for commercial risks. The Mozambican political risks have been carved out from Sasol corporate support and are covered by political risk coverage providers.[120] It is critical that the public sector understands the extreme complexity and difficulty of these projects, so scaling up requires an enormous level of support from both the public and private sectors, and cost-effective development partner consortiums.

The "unlocking actions" are summarized below.

ACTION 6(a): Scale up the use of project finance techniques. Governments need to increase their investment in using "project finance" structures that can mitigate risks, identifying the project viability gap and working closely with the wide array of required public and private sector partners in identifying and implementing solutions. If risks are adequately mitigated, a local investment-grade rating can be secured post-construction on local currency tranches, enabling significant local institutional investment. In some cases, it may be possible to "pierce the sovereign ceiling" and obtain a credit rating better than the sovereign.

ACTION 6(b): Scale up the use of public and private sector consortiums. Given the complexities of national and regional infrastructure projects, consortiums of public and private sector entities can be developed to provide the needed support. Development partners can develop consortiums to better enable effective donor coordination and targeted inputs address project viability gaps. Banks can coordinate, given Basel III and their limited ability to provide upfront funding to cover construction risks until the assets are performing and institutional investment can be secured. Insurance companies can partner for reinsurance and complementary policies.



6.2 Scale Up Collective Financing Vehicles: Only the largest investors have the capacity to invest directly in infrastructure projects. Smaller pension funds in particular require pooled investment and other vehicles. Collective investment vehicles have been available, such as infrastructure funds, but problems with high fees and extensive leverage mean that these have become less popular since the financial crisis.[121]

Co-Investment Pooling: As noted in the earlier sections, co-investment platforms have emerged as a way for investors to align interests, achieve larger scale and invest in assets without the expense of fund managers. Initiatives where public capital is invested alongside and on the same terms as private capital help to provide the reassurance of a continued investor-friendly regime.

Other Investment Vehicles: As noted in the earlier section, there are also other investment vehicles that could be scaled up for African regional and national infrastructure projects. Examples include the following:

1. Infrastructure project bonds, as has been done in Latin American countries (such as Chile, Peru and Colombia),[122] as well as regional project bonds for cross-border PIDA and other regional infrastructure projects;

2. Government bonds 'earmarked' for infrastructure investments (as in Kenya, Senegal and Ghana); and

3. Diversified Infrastructure Funds, offering exposure to more than one project (thereby diversifying risk) in many countries and as global emerging market infrastructure funds (typically in the form of private-equity funds, mutual funds or infrastructure trusts, often listed on the large stock exchanges such as London, New York or Sydney).

These instruments need to be further assessed as to their current attractiveness to institutional investors, what types of projects are being financed, and how to increase their contribution to funding infrastructure. Given the added complexity of African cross-border projects, it will be extremely important for NEPAD, host governments, and development partners to invest in a team of highly skilled and experienced finance experts to develop viable solutions with the governments and development partners, in close partnership with the private sector.

6.3 Match Currencies - Debt Service to Revenues: Mismatched currencies have historically been a source of systematic crisis, when the currency of the project revenues is not matched with the currency of debt payments. Most infrastructure projects have local currency revenues so if the debt is denominated in a foreign currency; devaluation in the local currency increases debt service. Therefore, unless there are affordable hedging vehicles, foreign currency financing exposes project sponsors of local currency revenue projects to high levels of foreign exchange risk. If the tariffs are indexed to the same foreign currency as the debt, the exchange rate risk is passed on to the customer.

During the last two decades, in both cases of indexed and non-indexed tariffs, many projects in developing countries financed with US dollar-denominated debt experienced a major devaluation that caused projects to default or to be restructured. The cause was the mismatch in currencies: The reduced value of their local currency revenues did not produce enough US dollars to service the project's debt.

Future Flow Transaction Structures: However, some infrastructure projects do generate hard currency that can be used to pay debt service, such as ports or airports. In these cases, a proven risk mitigated instrument for mitigating currency and sovereign risks is the future flow transaction, in which the borrowing entity sells its future receivables from international clients from sales to a Special Purpose Vehicle (SPV). For infrastructure projects such as ports, airports, and railroads located in non-investment grade countries, future flow transaction structures may have the potential to obtain international investment-grade ratings for long-term external debt.

Hard currency payments from international clients pay for the services and products into an offshore trust managed by the SPV that pays the debt service. Sovereign transfer and convertibility risks are mitigated because the borrowing entity has obtained a legally binding consent from designated clients that they will make all their payments to the offshore trust. Bankruptcy risk is also decreased in such transactions because SPVs typically have no other creditors.[123]

Creating Separate Tariffs: In addition, some projects have classes of clients who can assume the foreign exchange risk, because they have access to foreign currency through exports. For example, businesses located in an export-processing zone that export their products could assume the risk of a dollar-indexed tariff.

7.0 RISK MITIGATION INNOVATION: ISSUES OF UNDERUTILIZATION & EXPANDING DEVELOPMENTAL IMPACT

Often times, the debate on risk mitigation assumes that risk mitigation instruments can serve as the sole gateway to accessing the private sector by reducing actual and perceived investment risk. However, it is critical to understand that risk mitigation instruments only contribute one piece of the solution after the project itself has been selected, designed, and structured to minimize risks. Moreover, despite significant efforts, risk mitigation instruments have been underutilized to date and require serious rethinking to increase their developmental impact.

Mitigation from Start to Finish: The mitigation of risk starts at project conceptualization: Defining the project's service, business model, legal structure, and ownership; securing experienced management with solid track records, defining a financial model based on technical assumptions validated in technical demand and supply studies, negotiating contracts with suppliers that mitigate performance and construction risk and risk of delays and non-payment from off-takers (buyers of the service), etc.

Hybrid of Risk Mitigation Solutions: Once a project has been well-structured and developed, there is a wide range of risk mitigation instruments that can mitigate the remaining infrastructure investment risks impeding access to private capital (equity and debt). The standard practice of development institutions and private sector providers is to limit the use of risk mitigation instruments to covering specific risks – such as political risk, breach of contract, expropriation, credit risk, performance risk, demand risk, etc.

While most private sector insurance policies are limited in their coverage by type of risk and level of coverage, growing partnerships with public insurers are providing private insurers with greater flexibility. The sections below provide further explanations of key areas that need to be addressed in collaboration with private sector experts to ensure risk mitigation instruments are used to increase access to private capital.

7.1 Common Misunderstandings: Given the shortfall in public finance to fund the achievement of the Sustainable Development Goals, there has been an extensive and heated debate on how to mobilize greater amounts of private capital with a focus on "*guarantees*." However, there needs to be a more accurate technical understanding of risk mitigation. Other terms often used to describe public interventions used to enable access to private capital are "*credit enhancement*" and "*blended finance*."

Guarantees are one of many risk mitigation instruments: Guarantees are only one limited part of the spectrum of credit enhancements that constitute risk mitigation.[124] The most common guarantees are Partial Political Risk Guarantees (PRGs) and Partial Credit Guarantees (PCGs). PCGs cover risks related to the lack of collateral and the credit risk perception on the part of lenders. PRGs can help to mitigate views of regulatory and political risks. Performance guarantees can cover uncertainty around the amount of cash flow that projects may be able to generate from their performance, especially useful for green projects.

However, the spectrum of risk mitigation instruments is vastly more complex and multi-dimensional than the label "*guarantees*" suggests, covering a host of variant instruments that address breach of contract, political risk, payment risk, demand risk, interest rate risk, etc.

Illustrative examples of other risk mitigation instruments that can be used to enable access to private finance include: Political Risk Insurance (covering expropriation and other political risks), Output-Based Aid (subsidies for poor clients who cannot pay the full recovery cost of the service), Co-Financing (A/B Loan Structures to reduce credit risk), Feed-in Tariffs (subsidies for renewable energy to enable them to be delivered at market rates), and geothermal Multi-Well Exploration Risk Insurance, among others.[125] Often, simple grants are employed to buy down the cost of equipment so the project costs are reduced and the project can become economically viable, as user costs can then fully cover project expenses and required financial returns.

Risk Mitigation Instruments Are Limited in Scope: With limited exceptions, existing risk mitigation instruments in the current infrastructure developing country market of public and private sector instruments do not provide unconditional and irrevocable coverage of 100% of the private investment at risk.[126]

More Than One Risk Mitigation Instrument Is Often Needed to Made a Project "Bankable:" For many projects, more than one risk mitigation instrument is required to secure private financing. For example, equity investors in an infrastructure project may require a partial risk guarantee to guard against expropriation and other political risks. Debt providers (loans and bonds) may require a partial credit guarantee to reduce credit risk. Given that infrastructure project customers are usually poor people with limited ability to pay the full cost of service, the project may not be able to charge the amount needed to be bankable, so Output-Based Aid ("OBA") may be required to provide subsidies to poor customers. Another type of risk mitigation can be provided through first loss facilities which protect private investors up to the amount of funding provided in the facility. While several guarantees can be used on a single project, they are usually limited in scope and impact in mitigating investment risk. Even a combination of risk mitigation instruments does not usually cover 100% of the investor's equity or debt investment.

Project bankability requires more than risk mitigation: Therefore, while risk mitigation instruments can be pivotal to the private financing and success of infrastructure projects, they can only be employed in projects that are well-designed and fundamentally creditworthy over the longer term.

7.2 Reported Benefits of Risk Mitigation Instruments:

The heated debates on guarantees often focus on concerns of subsidization of the private investor (e.g., the "socialization of risk and privatization of returns"), in lieu of focusing on the lessons learned and development of technical frameworks to reduce their risks and optimize their developmental impact.

However, private investors cannot invest in infrastructure projects that do not meet due diligence criteria. The only means of reducing risk is through risk mitigation – the use of astute project development (e.g., selection, structuring, management, service provision strategies, etc.) and the use of risk mitigation instruments.

Performance metrics need to be developed to measure the effectiveness of risk mitigation. An effective way to measure the impact of risk mitigation instruments is to measure "effective leverage," defined as the total investment (debt and equity) secured by the project (funding secured) divided by the total amount of risk mitigation (the amount of risk mitigation support provided).

7.3 Reported Lessons Learned & Lack of Utilization:

Despite the considerable innovation that has gone into developing risk mitigation products, their market acceptance and aggregate value has remained relatively modest compared with either official loans or overall private flows. An independent evaluation reviewing the World Bank's experience with guarantee instruments during 1990-2007 concluded that the use of these products has fallen short of reasonable expectations. In this time period, MIGA issued 897 guarantees for a total of US$16.7 billion, the World Bank issued 25 guarantees for US$3 billion, and the IFC approved 196 guarantee operations totalling US$2.8 billion.[127] This is in contrast to private capital flows to developing countries, which increased over US$480 billion from US$165 billion in 2001 to US$647 billion in 2006.[128]

The World Bank study and other studies document the low utilization of risk mitigation instruments, despite the high demand across sectors documented earlier in areas such as infrastructure, agriculture, trade, SME, and consumers. The World Bank study reports that the use of risk mitigation instruments (guarantee products) has fallen short of reasonable expectations because of factors including (1) *competition among institutions for the same clients*; (2) *weaknesses in the marketing of products that limit client awareness and choice*; (3) *limited internal awareness, skills or incentives to use guarantee instruments in relevant situations*; and (4) *inconsistent pricing.*[129]

Integrated approach of risk mitigation with other support programs: The research on risk mitigation underscores the importance of their targeted use and integration within a larger program of capacity-building and monitoring. For example, a study conducted by the Inter-American Development Bank concluded that guarantees are usually more successful when combined with other instruments, such as: (i) *appropriately blended financial resources, to provide more attractive loan conditions or tenors*; (ii) *capacity building programs for the lenders, designed to increase awareness and technical capacity on the supply side of financing*; (iii) *capacity building for borrowers, to help them design more bankable projects on the demand side of financing*; and (iv) *technical assistance to help overcome specific barriers.*[130]

7.4 Factors Impeding Effective Use of Risk Mitigation Instruments:

The reported factors impeding the use of risk mitigation instruments include the lack of bankable projects, the difficulty of securing government approvals, and internal DFI implementation issues, amongst others. ***Examples of reported constraints related to the national environment are summarized below.***

Lack of bankable projects: While risk mitigation instruments facilitate the mobilization of private debt and equity capital, the borrower or project must be sufficiently "bankable" to enable the providers of such instruments properly to assess risks, identify recourse measures as needed, and offer defined risk coverage. Furthermore, preparing infrastructure projects for private financing is a costly exercise for developing countries, which may not have adequate financial and technical expertise.[131] This is especially true

at the sub-sovereign level where local officials are more sensitive to the cost of feasibility studies (essential for project development) and have less knowledge about market expectations for design and feasibility analysis. There is also far less grant funding available at the local level for feasibility studies.[132] The demand for risk mitigation instruments is therefore constrained by the limited availability of bankable projects.

Lack of suitability of the debt/capital market environment: Use of risk mitigation instruments is affected by the absence of certain fundamentals that drive investment. These include enabling legal, institutional, and regulatory frameworks; a banking system able to provide long-term debt; a stable macroeconomic situation; the availability of bankable projects and experienced project sponsors; transparent financial statements; developed capital markets; and the presence of credit ratings agencies.[133] To achieve domestic financing for projects which are credit enhanced, it is essential that the provider of risk mitigation be comfortable with the credit appraisal and financial administrative capacity of local financial institutions extending the loans that are guaranteed. This lack of financial capacity limits the use of these instruments in many developing countries.

Lack of host country government understanding of risk mitigation benefits: While most governments are supportive of instruments that facilitate investment, they would typically prefer a loan rather than a guarantee facility, even when the guarantees are scored preferentially to loans (i.e., allowing them to access more support from the DFI). The process is more complex and may require a sovereign counter guarantee. Therefore, lack of host country government understanding of the benefits of guarantee products as well as other risk mitigation instruments is a constraint to scaling up the use of such products.

Some reported constraints are related to DFI internal processes and management of risk mitigation instruments, as summarized below.

Design of products and country limits: A central issue here is concerned with how risk management processes are designed and implemented in DFIs. Often the private sector operations in DFIs have to manage to "zero loss" guidelines, meaning that the expectation for each transaction booked is that there will not be any losses. In addition, official sector managers are often pressured to have high rates of return, reportedly as high as 23% on average. These policies and guidelines have the convoluted effect of pushing donors to compete against the private sector and each other for the least risky and most profitable deals, instead of implementing those transactions that the private sector cannot finance due to unacceptable risk or low profitability.[134]

Furthermore, country limits and budget performance reports do not differentiate according to the risk reduction produced by risk mitigation products or the benefits of leveraging official sector commitments by using guarantees to attract additional private sector capital. For example, in donor institutions a guarantee may count the same as a direct loan against a country limit (and against capital), even though loss experience with guarantees may be significantly less than with a loan. As country limits are a scarce commodity and need to be allocated between competing projects, this accounting treatment creates a very strong internal bias to allocate the country limit to direct loans, as direct loans produce more revenues than guarantees.

However, while guarantees produce less revenue, they may result in the country having access to more capital. This is a critical point, as developing countries benefit from private sector financing based on guarantees that leverage official sector capital, permitting the completion of large infrastructure projects that provide critical services such as electricity, roads, and water, with private sector capital.

Requirement of obtaining sovereign guarantees: The public sector windows of most DFIs require sovereign guarantees for issuing their instruments. Securing such guarantees is time-consuming and usually must be done in the context of the DFIs larger lending and assistance program. The preparation and administration of such guarantees can require the same upfront effort as a loan product, with lower direct tangible benefits to the government. Sovereign guarantees on private infrastructure projects can also meet resistance from governments because it adds to their contingent liability exposure and affects overall debt ceilings.[135] The ability of host governments to provide sovereign guarantees is often limited by national fiscal constraints and the need to adhere to IMF debt policies.

In the case of certain sectors (e.g., the water and sanitation sector) guarantees must support undertakings by sub-sovereign entities. Many sub-sovereign governments lack the experience and ability to be able to negotiate the terms and conditions of these risk mitigation instruments. Also, some governments are unable to exert effective influence over issues such as national regulatory reform or changes in license conditions. For these reasons, a number of investors have indicated that they prefer to see this coverage backed by a counter guarantee from the central government.[136]

Credit Scoring: As noted above, guarantees and other risk mitigation are usually scored by DFIs at parity with loans. Therefore guarantees are unlikely to be promoted or championed.

Treatment of foreign exchange risk in local currency guarantee schemes: DFIs have different policies for dealing with the contingent foreign exchange risks that may occur from providing local currency guarantees. Some DFIs require that, in the event of a default and claim payment, the currency of the credit converts to hard currency based on the exchange rate in effect on the date that the transaction closed. The guarantor will then proceed to recover foreign exchange from the borrower in satisfaction of outstanding obligations. Others, for example the US Export-Import Bank, convert the claim amount to US dollars based on the spot rate in effect on the claim payment date. While guarantees can serve as mainstream credit enhancements for domestic institutional investors investing in well-structured infrastructure projects, backstopping credit, political, and other risks, they do not cover cross-border currency devaluation risk. Therefore, they have more limited value for international institutional investors requiring investment-grade ratings or currency hedges to invest. The only way to achieve an international investment-grade rating from a credit rating agency in a non-investment country is to mitigate all the risks associated with the country, including political, economic, and currency. Some experts believe that the demand for local currency guarantees by DFIs is reduced significantly by the focus on hard currency loans.[137]

Capital allocation for credit guarantee obligations and concern regarding triple-A ratings of DFIs: With the exception of the World Bank treatment of Low-Income Countries, DFIs often allocate capital on a 1:1 basis against the par value of their credit guarantee obligations as soon as those obligations are agreed and the underlying transaction has closed. This stands in sharp contrast to commercial providers of these instruments such as monoline financial guarantee insurers, which are incentivized by the profit motive to use the least amount of capital possible to back each application of their guarantee. Following the same policy on leverage for their guarantee operations as required for loans, results in an economically inefficient use of DFI capital.

Managements of DFIs are also concerned about the preservation of their triple-A credit ratings, which enable them to access low-cost capital from international capital markets. Although experts and credit analysts have disputed the validity of this concern, its prevalence amongst internal risk management units within DFIs is reported as hindering the enhancement of risk mitigation programs.

High transaction costs: Development institutions have protected themselves with extensive and lengthy procurement and transaction processes resulting in large transaction costs that often deter all but the largest companies or small, specialized businesses that survive on donor contracts. Legal costs are also reported as extremely high given the propensity of in-house legal staffs to perform strict due diligence for each transaction.[138]

Recording of guarantees in DAC aid statistics: DAC's convention is to allow donors to report contributions to creating local guarantee funds as ODA, as well as payments out under guarantee schemes as they arise. The fact that a guarantee issued by an official provider would count very little as ODA may be a disincentive for official sources to provide guarantees.[139]

Lack of internal incentives: In an environment where the staff believes that lending is prioritized, guarantees are unlikely to be championed within the institution. The "lending culture" of development institutions first attracted wider attention through the so-called Wapenhans report in 1992 which crystallized the critique that the World Bank's management information systems and incentives attached special importance to meeting quantitative lending targets and that other considerations, such as the quality of the projects, received less management attention or recognition via the internal career path. Such a culture continues to exist and could be part of the explanation for the failure of development institutions aggressively to develop alternatives to direct lending, such as guarantees.[140]

Furthermore, most DFIs have broad mandates with an emphasis on development lending or private sector financing and, thus, risk mitigation instruments represent only a small proportion of a wide array of products and services on offer. Therefore, they have to compete for management attention and wider acceptance within the DFI country assistance strategy process.

Lack of technical skills within DFIs: The due diligence undertaken for deciding upon the use of risk mitigation instruments requires the application of technical skills in credit analysis, often including credit analysis of sub-sovereign entities, and the scoring of political, contractual, and regulatory risks. Some DFIs are reported as better equipped to undertake such analysis than others.[141]

Lack of equity coverage: There are limited risk mitigation instruments that provide coverage for equity holders. Thus, companies (especially local companies) investing equity into projects can sometimes only ensure their debt, leaving the general interests of their shareholders unprotected against non-commercial and political risk. However, the World Banks' PCG can be structured to offer protection to the interests of equity investors by providing downside protection.

Retrenchment of private sector: Expansion of risk mitigation activity by DFIs requires private sector engagement. Financial crises and failed privatizations have soured the enthusiasm of many private sector companies and finance institutions.

Bailout concern: The long history of *"bailouts"* has made policy makers wary of any type of guarantee arrangement that might encourage reckless private sector risk-taking at taxpayer expense.

Cross-Default concerns & government focus (rather than private sector): If a country defaults on a donor-guaranteed obligation, the donor institution may be required by its operating rules of cross-default to shut down its entire program for that country, prohibiting any new lending and further disbursements under approved loans. Expanding risk mitigation programs would also mean increasing exposure to projects managed by the private sector, rather than working with governments with which DFIs have a long working relationship.[142]

Lack of Product awareness & market friendliness: Finally, there are many issues that affect the effective use of risk mitigation instruments, such as lack of information, difficulty in understanding products, high costs and time-consuming processes, and the need to improve financial engineering with regard to priority risks impeding investability, such as off-take and cross-border currency risks.[143]

Certain instruments have not reached the same level of market understanding and acceptance as the more commonly used ones, such as traditional political risk instruments. In the case of certain contractual and regulatory risk products, the trigger events for payment and the claims process are not yet standardized or well understood by investors or lenders. By nature, these types of instruments are unlikely to achieve the same level of standardization as traditional political risk instruments have. Their greater complexity results in a much greater time to negotiate the terms and conditions of the coverage.

A number of market participants have also indicated a limited awareness of these instruments and understanding of how they work. This results in an uncertainty over the ability of these types of complex instruments to lower the cost of debt.[144] For risk mitigation products to be valued accurately by the capital markets and contribute to reducing the cost of financing, the contract documentation, dispute resolution, and claims processing procedures must be well defined.

7.5 Recent Developments: Despite these reported issues, given the political commitment to mobilize private capital, there has been a renewed effort by development institutions to expand and improve the array of risk mitigation instruments. Over the last few years, key providers of risk mitigation have been expanding their products to cover more credit risks to support the mobilization of institutional investment. Internal reviews at the World Bank and bilateral development agencies are now in process to develop and improve their risk mitigation instruments, and develop new ones.

The overall "unlocking action" is summarized below.

ACTION 7: Scale up risk mitigation labs and applications. The public sector needs to increase its investment in the scaling up and utilization of existing and new effective risk mitigation instruments, working closely with finance experts, project developers, investors and other professionals involved in project development. "*Risk Mitigation Innovation Labs*" need to be supported by the public sector, bringing together experts from across the public and private sectors.

As noted earlier, for risk mitigation techniques and instruments to be scaled up, there needs to be a whole scale change in the economics, standardization, dissemination and ease of use. To support this process, there needs to be easy online access to information on risk mitigation instruments, leading-edge transaction structures, standard documentation, and directories of professionals (INFRADEV Marketplace www.infradev.org).

7.6 Risk Mitigation Innovation - Illustrative Examples of Instruments to Be Further Developed and Scaled Up:

Below are illustrative examples of risk mitigation instruments that need to be further developed and utilized with the support of the public sector.

Insurance to Mitigate Off-Take & Breach of Contract Risk: Project developers often cite that the greatest impediment to investable infrastructure projects is the lack of creditworthy off-takers, such as utility companies. Public insurers such as MIGA, OPIC, and African Trade Insurance Agency (ATI) provide related risk mitigation services.

For example, ATI has Contract Frustration Cover that protects against government obligors (project owners) arbitrarily dismissing their contractual obligations or frustrating the contractual process. This can take the form of a government unilaterally cancelling an operating contract or license. This insurance can also cover breach of contract by a host government, which may result from an arbitrary act by the government, and losses arising from the non-payment of a guarantee.[145]

Three new initiatives have been reported that could help address off-take risk and could be scaled up in partnership with other providers of risk mitigation:

- **Mitigation of Payment Delays:** A European DFI is reported as launching a guarantee instrument for independent power producers (IPPs) that provides six months of liquidity in case their off-taker cannot pay in time for the power it purchases. It is comparable to the Partial Risk Guarantees that are offered by the World Bank and others, but it would be easier to implement and cover a longer period. Initially, the facility, managed by ATI, would cover projects in a limited number of African countries, increasing scope over time.

- **Investment-Grade Timely Payments:** ATI is insuring a subsidiary of GuarantCo in Zambia that discounts certificates issued by the National Roads Authority to local contractors, so they are assured that they will not encounter any working capital problems if they are not paid on time. ATI insurance would help institutional investors to invest because the insurance would enable the assets to be potentially rated as local investment-grade, provided other credit conditions are met. This model is exportable and has great potential. The entire project is intended to be financed in the local capital market.

- **Mitigation of Regional Payment Risk:** A PPP venture, Africa GreenCo, is being explored to address off-taker creditworthiness to unlock private investment in power projects and to help establish a renewable energy power market. The principle objective of Africa GreenCo is to establish a public-private partnership entity in the form of a creditworthy, regional, renewable energy off-taker/trader and aggregator of power streamlining development, mitigating off-take and credit risk and catalysing private sector finance for renewable energy development.[146]

First Loss: A common risk mitigation instrument is the use of first loss, in which public sector entities reduce the risk to private sector investors by taking the initial risk of non-payment. The value of this instrument is demonstrated by its use in the 2020 Europe Bond Initiative.[147] The Initiative was set up by the European Commission to help investors raise finance for European infrastructure projects from institutional investors by providing guarantees directly to senior debt holders or introducing a junior debt layer underwritten by the European Investment Bank between the equity and the senior debt.

In fact, the Greater Gabbard offshore transmission link has become the first UK-based infrastructure project to attract finance from institutional investors using the Project Bond Credit Enhancement initiative. Bonds with a value of GBP305 million have been issued to finance the new transmission link to connect the 140 turbine wind farm off the Suffolk coast with the UK mainland electricity and have been successfully placed with a broad range of investors. Proceeds from the bond issue have been released, the bonds have started trading on the Irish Stock Exchange and technicalities concluded to allow financial close. The European Investment Bank has provided a GBP45.8 million guarantee, representing 15% of the bond issued, as a credit support under the Project Bond Credit Enhancement model that allows a one-notch upgrade in the project's rating provided by Moody's. This enables enhanced recovery for senior lenders by reducing outstanding debt and acting as first-loss in the financing structure.

Insurance Syndications backed by Pools Acting as First Loss: Some insurance company executive suggest that new innovative risk mitigation instruments can be configured through assembling pools of insurance and reinsurance, diversifying sources of coverage and the risks being covered. For example, a specific infrastructure project can have specific risks mitigated through a syndication of insurance companies, both public and private. Additional coverage can be provided through pools of funds acting as first loss. Providers can be host governments, development partners, as well as local institutions and individuals.

For example, off-take risk of a large cross-border rail-road project could be mitigated through an insurance syndication backed by a pool of funds acting as a first loss. The funds could be provided by the host government, local pension funds, and companies and individuals supporting the project, such as local businesses expecting to gain from use of the new railroad (for example through a retail bond issue). In this way, the regional railroad project would be seen as less risky as it would have the concrete support of the host government, domestic business, and local communities.

Contingent Refinancing Facilities: This is a new instrument that could "crowd-in" institutional investors at initial project financing and bridge the greenfield financing gap. Many African pension funds are experiencing rapid growth in contributions and assets, and are committed to providing finance to development projects that meet their investment criteria. Moreover, local institutional investors have a high level of liquidity provided by (1) *a large amount of short-term liquid assets* and (2) *the cash flows provided by new contributions*. As noted earlier in the paper, institutional investors require stable cash flows to meet their low risk tolerance. Therefore institutional investment criteria require high-quality long-term performing assets.

For this reason, institutional investors are suited to invest in existing well-performing "brownfield" infrastructure projects, and not initial "greenfield" infrastructure projects. On the other hand, domestic African banks can

provide short-term financing in local currency to infrastructure projects.

The Contingent Refinancing Facility combines the natural roles of commercial banks with local pension funds by providing a commitment from one or more domestic pension funds to purchase the debt of an infrastructure project that was initially financed by domestic commercial banks. The bank financing would typically provide construction funding and financing for the initial years of the project's operation. ***At a pre-established date, such as five years after closing of the initial financing for a project, the provider of the Contingent Refinancing Facility would purchase the remaining project debt, in the event that:***

1. The bank(s) that provided the initial funding do not wish to roll over their initial financing and keep the project's debt on their books; and

2. The project is not in default and has a minimum debt service coverage ratio (i.e., the amount by which annual revenues available for debt service exceed the annual debt service amount).

The Contingent Refinancing Facility would enable banks to do what they do best – provide construction financing – while remaining within the constraints of the tenor of financing that they are able to provide. Providing the Contingent Refinancing Facility would not stress the liquidity of a pension fund because the fund would typically have a relatively high level of short-term liquid assets (often in the form of bank market investments), as well as new sources of funding provided by pension contributions.

Providing the Contingent Refinancing Facility would be a reasonable credit risk for pension funds because they would only have to purchase a the debt of a project that has operated successfully, as demonstrated by the fact that it is not in default and has a satisfactory debt service coverage ratio. The Contingent Refinancing Facility will provide infrastructure projects with the equivalent of long-term financing by enabling banks to provide short-term financing with a long-term amortization schedule. The fact that a project would only have to cover annual principal payments based on a long-term amortization schedule would enable it to offer its services to the public at an affordable cost.

Monolines: A "monoline" is an insurance company that exclusively provides guarantees to debt issuers. A monoline guarantee covers 100% (principal and interest) of debt service and is unconditional and irrevocable. Credit wraps raise the credit rating of a given bond or bank loan, thereby catalysing greater market access for such debt. Monolines initially provided for U.S. municipal bonds and over time expanded into U.S. structured finance and international project, municipal and structured finance. The monolines guaranteed US$650 billion in total international debt; within that total, there was US$43 billion in guaranteed emerging market debt – with only 0.07% of loss over 22 years.

Recently, a new Asia monoline has been established, the Credit Guarantee and Investment Facility (CGIF) by the ten members of the Association of Southeast Asian Nations (ASEAN) together with the People's Republic of China, Japan, Republic of Korea (ASEAN+3) and Asian Development Bank (ADB). CGIF is a key component of the Asian Bond Markets Initiative (ABMI) of the ASEAN+3 cooperation. It has been established to promote economic development, stability and resilience of financial markets in the region. The main function of CGIF is to provide credit guarantees for local currency denominated bonds issued by investment grade companies in ASEAN and three other countries.[148]

Given the proven value of monolines in providing large-scale access to institutional investment, they need to be scaled up. Over the last 12 years, an emerging market monoline company, Ascending Markets Financial Guarantee Corporation (AMF), has been in the process of development to enhance local currency developing nation bond markets, but it has yet not been launched. AMF is intended to enable greater self-financing of essential public services and infrastructure through provision of financial guarantees for: (1) *local currency financing of physical and social infrastructure, sub-sovereigns, utilities, and securitizations for housing and transportation*; and (2) *foreign currency financing for bank remittances, commodity exports and infrastructure.*

AMF's financial guarantees would enable local pension funds, insurance companies, banks and other fixed income investors to fund infrastructure and public services – which, due to the AMF financial guarantee, would attain AAA national scale ratings in most developing countries.[149]

Foreign Exchange Liquidity Facility: Foreign currency financing exposes projects to foreign exchange risk because most infrastructure projects have local currency revenues. During the last two decades, many projects in developing countries were financed with US dollar denominated debt, but many of these countries later experienced a major devaluation that caused projects to default or to be restructured because the reduced value of their local currency revenues did not produce enough US dollars to service their debt. Projects can be financed only if their cash flow available for debt service is expected to exceed annual debt service by some positive ratio – e.g., 1.5 to 2.0. Therefore, so long as the host country's currency does not decline in value by more than one-third, the project should be able to meet its debt service. Unfortunately, many countries have experienced larger devaluations.

A Foreign Exchange Liquidity Facility is a contingent credit facility that provides funding to a project when devaluation of the host country's currency has reduced the value of the project's cash flow available for debt service and, as a result, the project is unable to meet its current debt service. Thus, two requirements must be met before a Foreign Exchange Liquidity Facility can be drawn upon: (1) *the host country's currency must have declined in value*; and (2) *the project must be unable to meet its current debt service without drawing upon the facility*.

Foreign Exchange Liquidity Facilities are based on a historical analysis of real exchange rates in a wide range of countries which indicates that real exchange rates tend to oscillate in five-to-seven year periods. After a major devaluation, a country's real exchange rate will recover much of its lost value during the next several years. The real exchange rate will typically recover because the country's nominal exchange rate will strengthen or increases in domestic inflation will not be fully offset by compensating changes in the nominal exchange rate or both. Analysis of real exchange rate movements indicates that the size of a Foreign Exchange Liquidity Facility (i.e., the total amount of financing it should be prepared to provide to a single project) is no more that 10% to 20% of the principal amount of the project's debt.

The Foreign Exchange Liquidity Facility could unlock access to international investment from banks and institutional investors which are not allowed to invest, given the cross-border currency risk. For example, the OPIC Foreign Exchange Liquidity Facility enabled The AES Corporation to refinance a group of Brazilian energy projects at longer tenors and lower interest rates than were available from any alternative form of financing at a time when Brazil's sovereign debt ratings were below investment grade. The transaction was awarded the global Deal of the Year by Infrastructure Journal. By

providing infrastructure projects with long-term low-cost financing, companies can pass on savings to their customers, enabling them to offer their services to the public at more affordable rates.

Collective Risk Mitigation Capacity: African infrastructure projects, especially regional projects, represent a daunting challenge in covering the multitude of risks to meet institutional investment criteria. The scaling up of capacity in risk mitigation needs to be accelerated urgently. ***Reported examples include the following:***

- **Investment Grade Regional Guarantees:** Projects with regional scope present specific difficulties. A consolidated regional guarantee capacity is needed. ATI reports that it is working with the European Investment Bank, other international and multilateral insurers and other financial institutions with investment grade ratings, to pool their resources and capacity together to insure infrastructure projects across Africa. This regional facility is expected to reinforce host government commitments, helping projects to become bankable and have access to low cost sources of private finance.[150]

- **Tenor Extensions:** Another challenge reported by ATI is finding enough insurance and reinsurance capacity for projects that require risk coverage for more than ten years. There are very few private insurers who can insure beyond ten years, while many infrastructure projects need 15 years or more to recover the initial investment. ATI has recently received approval to go up to 15 years in selected projects.

The above list of risk mitigation instruments is indicative of the spectrum of risk mitigation instruments and approaches that need to be further refined by the public sector, working with the private sector, to enable the required level of institutional investment for developing countries, especially Africa's regional and national infrastructure projects.

8.0 REGIONAL HARMONIZATION: DEFINE & IMPLEMENT ROADMAPS FOR REGIONAL SUPPORT AND PROJECT-SPECIFIC SOLUTIONS

Significant investment needs to be made into cross-border harmonization interventions, both on a systematic regional level as well as within each individual regional project structure. Regional infrastructure projects providing transport and energy are essential to increasing Africa's cross-border trade, investment and overall economic development, but the sustainability and bankability of each regional project requires harmonizing required specific cross-border agreements. These cross-border country agreements encompass the entire project development cycle and operation, from project definition to the business model, ownership, management, governance, risk mitigation, procurement processes, finance and maintenance.

These daunting challenges of cross-border harmonization and coordination need to be urgently addressed through the systematic development of a menu of options to enable the effective development and finance of African regional projects. Several ideas of how to support regional projects have surfaced in the discussions for this paper, such as regional procurement agencies, regional implementing authorities and regional special purpose vehicles. Such concepts need to be refined and evaluated based on an astute understanding of the issues encountered to date and on the existing solutions that have been employed successfully worldwide. Moreover, given the need to mobilize private capital, it is critical that each option be tested as to its ability to meet investor requirements.

Experts have noted some of the core building blocks and principles that can be leveraged in the development of potential solutions. Two distinctive work streams have emerged: Region-wide facilitation support and project-specific solutions, as summarized below.

Innovative Risk Mitigation for Regional Infrastructure Projects

Greenfield projects such as the Ghana 1000 Gas-to-Power Project could use the Contingent Refinancing Facility to access low-cost long-term finance as it develops an integrated fuel solution of approximately 1,300 MW of combined cycle power generation featuring GE state-of-the-art multi-fuel gas turbine technology, purpose-built LNG import infrastructure, and a floating storage and re-gasification unit ("FSRU"). The financing challenge is daunting given the large amount of required debt financing over an extended construction "greenfield" phase, combined with the need for extremely long-term debt over years. The Contingent Refinancing Facility will provide Ghana 1000 with the equivalent of long-term financing by enabling banks to provide short-term financing with a long-term amortization schedule. Since the project would only have to cover annual principal payments based on a long-term amortization schedule, it will be able to deliver power to the public at less cost. A default long-term tenor could be obtained by combining upfront bank loans during the Greenfield construction phases, with Contingent Refinancing Facilities provided by institutional investors.

Region-Wide Facilitation Support: As noted, different governments with different priorities, frameworks (institutional, legal, regulatory, governance) and resources need to coordinate in defining the exact nature of the project, the tariff structure used for user fees, the level of required subsidies (often required for public services worldwide), procurement processes and decisions, and the project structure (ownership, management, governance).

Therefore there is the need for highly-skilled technical experts with the requisite experience to be available to support regional and large national infrastructure projects. This expert support is especially essential for the initial process of defining regional projects and the optimal ownership structure. Key points are noted below.

Sector-Specific Regional Structures: An example of a sub-regional facilitation structure focused on one sector is the Southern African Power Pool (SAPP). The SAPP mission is to provide low-cost,

environmentally-friendly and affordable energy and to increase accessibility to rural communities. Technical functions are wide, ranging from procurement, technical support and market-making.

Regional Infrastructure Procurement Body: Another suggestion is to establish a Regional Infrastructure Procurement Body to enable faster, more efficient infrastructure delivery via the standardization of policies, rules, processes and forms. Uniformity in infrastructure procurement would decrease due diligence costs, provide more predictability and reduce transaction time-frames. The Regional Infrastructure Procurement Body should be composed of people with background and expertise in PPP structuring, project finance, legal (for jurisdiction-specific procurement laws and rules), financial modelling, engineering and deal/procurement management. There should be an overarching agreement between the governments on the mandate and responsibilities of such a body. It should also include a clear undertaking of support and delegated authority from the various governments. A Governing Board composed of senior Ministers from the various governments and technical experts could be established to set the direction and policies (upon recommendation of the Regional Infrastructure Procurement Body). The Regional Infrastructure Procurement Body would report to the Governing Body.

These types of regional facilitation and capacity-building structures will require significant funding from governments and their development partners.

Project-Specific Solutions: The required harmonization for regional infrastructure projects can also be addressed through the structuring of the project itself. ***Below are key foundational elements of project-specific solutions as set forth by experts***.

Advisory Support from Regional Economic Communities (RECs): As the existing institutional entities used to coordinate political policies, RECs can play a critical advisory role in project identification and facilitation for development and political support. However, they do not have the legal or technical capacity to actually manage projects or contract debt or equity.

Bankable Regional Project Structures - Special Purpose Vehicles: Both the public and private sectors have a multitude of existing sustainable regional projects that operate successfully across multiple country borders as a single legal entity with transparent governance and financial reporting that can legally contract debt and equity. The rating agency default studies have evidenced the superior financial performance of Special Purpose Vehicles using the proven principles of project finance. Such Special Purpose Vehicles have optional ownership by government entities (national, local, etc.) and/or the private sector.

Ownership of Regional Projects: Other countries have established joint government entities, as well as approved independent private sector regional companies. For example, The Port Authority of New York and New Jersey is the United States' first bi-state agency operating several transport services operating through an interstate compact. Other options include PPPs or private sector-owned entities such as the company Groupe EuroTunnel SE that manages and operates the Channel Tunnel Channel between Britain and France. Ownership is widely diversified among 270,000 shareholders with the largest share institutional investors (36%) in more than five countries (largest share 39% in the United States) (see http://www.eurotunnelgroup.com/uk/shareholders-and-investors/key-figures/shareholder-analysis/).

Board Governance of Regional Projects: Likewise, there are several options for management control across the public and private sectors: Participating governments can participate at the Board level, as in the Port Authority of NY and NJ, in which the Governor of each state appoints six members of the agency's Board of Commissioners, subject to state senate approval. In the case of EuroTunnel, the Board is entirely private sector (see http://www.eurotunnelgroup.com/uk/eurotunnel-group/corporate-governance/board-of-directors/).

Tariffs & Other Cross-Border Agreements: All regional projects, irrespective of ownership, require long-term commitments on cross-border agreements such as tariffs and border control processes. Participating governments need to therefore agree to specialized cross-border tariffs and any subsidies needed to ensure project bankability. All other specific cross-border arrangements will also need to be identified and determined as part of the project's legal documents. Back-up support from development partners is likely to be required to mitigate political and regulatory risks.

Joint Implementing Authority: Each project could have a joint government authority with the appropriate representation from all stakeholders – and most importantly with executive authority, decision-making ability, implementation responsibility and regulatory authority to engage as a one-stop shop with the private sector in respect of that project, and bind all the stakeholders behind it. This may take some time to set up initially, but it will save significant time and money down the line for all concerned. Pre-approved funders and sponsors are also a good idea – although one should do so in a way that ensures that the procuring authority gets the best technical/ financial solution and a competitive process.

Sustainable Business Models: The design of such Regional Projects needs to ensure they are self-sustaining. For example, The Port Authority of New York and New Jersey is a financially self-supporting public agency that relies almost entirely on revenues generated by facility users, tolls, fees and rents. Groupe Eurotunnel SE earns revenue on the tunnel and other trains through the tunnel, and is listed on both the Euronext London and Euronext Paris markets. In many projects world-wide, predictable and adequate government subsidies are required to provide transport, energy and other public services.

Procurement: Procurement processes can be conducted as part of the regional infrastructure project. See, for example, the Guide to Procurement for the Port Authority of New York and New Jersey.[151]

The overall "unlocking action" is summarized below.

ACTION 8: Champion the implementation of regional African harmonization interventions (such as regional procurement bodies/authorities) that can facilitate the development of bankable and sustainable regional infrastructure projects, both on a systematic regional level as well as within each individual regional project structure.

A detailed technical analysis of existing cross-border structures is required as a basis for developing the menu of options to solve these harmonization and co-ordination issues. The resulting full array of regional harmonization solutions will need to be defined based on extensive analyses, and refined through systematic feedback from governments, development partners and targeted private sector providers of services and capital. This process will require both strong and resolute senior political will, coupled with leading highly-skilled experts working on actual cross-border infrastructure projects and regional solutions to systemic issues.

Though the implementation of such de-risking initiative, the ability to attract private capital and expertise will be immediately increased exponentially by providing frictionless, streamlined and harmonized facilitation for regional project development, finance and operation.

Political leaders need to champion and support technical experts in developing regional frameworks and interventions that can serve to harmonize cross-border regulations, procurements and other conditions required for regional project development, finance and operation. These new frameworks will be crucial in crowding in private sector and development finance and expertise to develop priority regional and domestic infrastructure projects in Africa.

9.0 THE "*RECYCLING ROAD MAP*" TO FAST TRACKING INSTITUTIONAL INVESTMENT IN INFRASTRUCTURE

This section explores a promising approach that could possibly fast track the mobilization of institutional investment in infrastructure: the recycling of existing performing institutional investment. As noted earlier in this report, infrastructure asset recycling is an immediate step that may serve to accelerate institutional investment.

- Existing brownfield infrastructure assets held by banks, national development banks, governments, and development partners could be systemically credit-enhanced and transferred to institutional investors.

- Then the banks, national development banks, governments, and development partners would have the capacity to invest again in the early-stage greenfield infrastructure assets, holding them on their balance sheets until they are proven established assets and suitable for institutional investment, starting the cycle over again.

Large-scale infrastructure recycling, now being explored by development partners, could serve as a transformative leapfrog intervention, catalyzing greater institutional investment and mainstreaming infrastructure as a separate asset class. Such programs are now being implemented or considered in developed countries, such as Australia, Canada, and the United States.

The evidence is that we need new solutions: ***The current infrastructure initiatives, while promising, are not delivering the massive amounts of new infrastructure that is required at the required speed or volumes.*** Urgent broad-based sustainable development imperatives include economic growth, advancing job creation and economic equity, improving the business environment and global competitiveness, and the utilization of climate-smart approaches and technologies.

This section is therefore aimed at suggesting the broad outlines of a roadmap to fast track institutional investment in infrastructure, outlining specific practical actions that can be refined and implemented by the public sector in collaboration with private sector experts and providers of capital.

9.1 Changing the Paradigm: The proposed roadmap is designed to result in near-term out-sized transformative results, targeting limited public sector resources on specific interventions that can realistically mobilize institutional investment.

Paradigm Shift 1: ***Aligning with Market Realities and Investment Criteria***. To be successful at recycling assets to institutional investors, the approach must be anchored into the universal "*market realities*" inherent in investment criteria. These standard due diligence requirements need to be explicitly acknowledged and leveraged, as detailed in the previous sections of this paper. To reiterate, infrastructure assets must be explicitly developed and designed to meet the low-risk investment requirements of institutional investors.

As noted in prior sections of this paper, key "market realities" need to be accepted and integrated into the roadmap strategy and action plan:

1. Low risk tolerance of institutional investors given home country regulatory regimes and investment requirements;

2. Preference for established well-performing "brownfield" infrastructure assets with solid, consistent performance track records (i.e., existing stable profitability and positive outlook);

3. Stringent due diligence requirements for well-documented investments detailing strong performance track records, with detailed documentation by the accountable investment credit function and by independent credible experts (such as rating agencies);

4. Non-negotiable requirement of de-risking the current pipelines of infrastructure assets so tat that meet institutional investor needs; and

5. Reallocation of public sector resources from loans and grants to expediential increases in project development funding and risk mitigation of infrastructure assets that are potentially investable.

Key areas that require expediential increases in public support are:

- Improving the national legal, regulatory, and institutional frameworks for institutional investment in infrastructure;
- Project development and restructuring activities aimed at developing investable infrastructure assets; and
- Provision of risk mitigation structures, process, and instruments that address those risks unacceptable to institutional investors.

Accepting the above market realities is extraordinarily challenging for public sector entities, as it requires a fundamental rethinking (a "radical mind shift"), the willingness to partner meaningfully with the private sector (mobilizing expertise and capital), and comprehensive restructuring of public sector resource allocations. These changes require senior political leadership in the transformation of public sector entities, cutting across objectives, programs, policies, instruments, and performance tracking metrics.

Paradigm Shift 2: ***Through Purpose Fitting of National Environments, Mobilize Local Institutional Investment.*** Given the significant currency and political risks associated with cross-border investments, local institutional investors are usually more suitable than international institutional investors for financing infrastructure assets that dominantly yield local currency returns. However, for developing country institutional investors to have the capacity to provide such finance, ***there needs to be a wide scale investment in improving national "infrastructure-enabling environments" and the local ecosystems of fund managers, advisors, and consultants.***

Preparing local institutional investors for infrastructure investment is also extraordinarily challenging, as it requires technical scanning of national infrastructure enabling environments, detailing the impediments for institutional investors cutting across regulatory, legal, and institutional frameworks. Customized programs need to be designed that can target priority interventions and training aimed at building the local ecosystems for infrastructure development and investment.

9.2 Building Blocks for the Fast-Track Recycling Roadmap: These "*market realities*"at the investment and country level are the building blocks of the roadmap set forth in this section. Both work streams are critical to the effective scaled mainstreaming of recycling assets existing high-quality brownfield infrastructure assets currently on the balance sheets of DFIs and the public sector to the balance sheets of institutional investors. The suggested actions are summarized in the sections below.

❶ **Shift Mindset to Mobilizing Institutional Investment for "Brownfield" Infrastructure Assets:** Much of the current DFI and public sector activity is focused on mobilizing institutional investment for new "greenfield" infrastructure projects.[152] However, as noted by countless studies, institutional investors require low-risk investments. As documented in the OECD annual surveys of pension funds, institutional investors invest predominantly in established "brownfield" infrastructure assets that are already proven to be low risk investments with ample steady cash flows and profits, performing at a high-credit standard with high investment-grade ratings.[153]

In short, we need to adopt a mind shift reflecting market realities, resulting in a shift of focus from mobilizing institutional investment for "greenfield" infrastructure assets to a new focus on mobilizing institutional investment for high-quality "brownfield" infrastructure assets.

❷ **Massive Amounts of Existing Public Sector Investment in Brownfield Infrastructure Assets:** The opportunity for large scale immediate success is significant given the current massive public sector holdings of infrastructure assets. Today the public sector owns large portions of performing infrastructure assets (equity) and also large debt portfolios of infrastructure assets. Examples of public equity and debt financings in infrastructure assets are provided in the below table.

EXISTING PUBLIC SECTOR FINANCING OF BROWNFIELD INFRASTRUCTURE PROJECTS

Funding of Brownfield Assets	Debt Examples	Equity Examples
1. National Governments	Government loans Government bonds	Equity ownership of National Utility Companies (owned by national government)
2. Local Governments	Sub-sovereign loans Sub-sovereign bonds	Equity ownership of State and Municipal Utilities Companies
3. Local Development Banks	Loans	Partial Equity Ownership of Infrastructure Companies and Funds
4. Development Finance Institutions (DFIs)	Loans	Partial Equity Ownership of Infrastructure Companies and Funds
5. Development Partners	Loans	Partial Equity Ownership of Infrastructure Companies and Funds

NOTE: The above chart only outlines the expansive spectrum of debt financing, and does not include information on the wide use of public sector risk mitigation (for example, the common requirement for sovereign guarantees of public sector debt, especially sub-sovereign loans).

To illustrate, the World Bank alone lent over US$12 billion to energy and mining projects and US$9 billion to transportation projects from 2012 - 2016.[154] In fact, in 2015 and 2016 alone the World Bank reported investment project financing of social and physical infrastructure of US$15.4 billion and US$11.4 billion respectively.[155] Given the massive amount of existing public sector financing of infrastructure equity and debt, public sector entities therefore have the option of transferring selected infrastructure assets from their balance sheets to the balance sheets of institutional investors.

In fact, there is a long history of public sector experience in recycling infrastructure assets that could provide helpful lessons learned. In

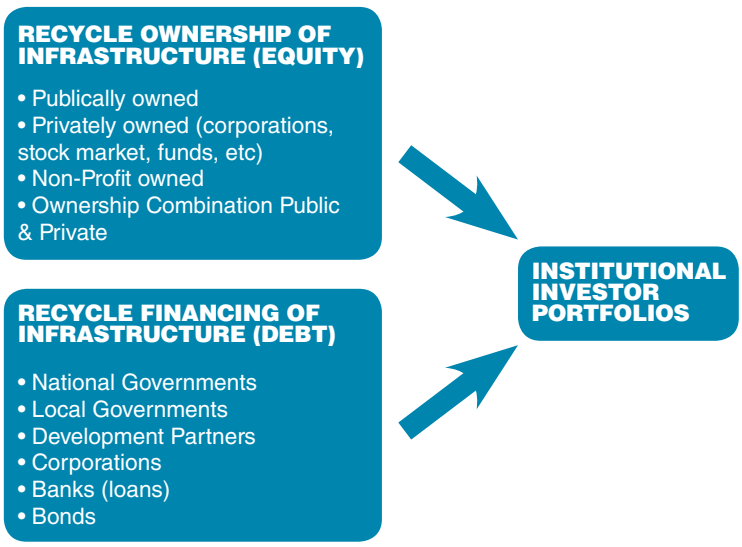
terms of equity, there is experience with public company listings on stock exchanges, PPPs, and privatizations. In debt markets, there is a expansive range of private debt structures, such as syndications, collateralized debt obligations, monolines, co-financings, design of infrastructure funds, use of credit risk mitigation and credit enhancements, etc. The lessons learned from prior experiences would be instrumental in setting up the optimal processes, structures and governance for infrastructure asset recycling.

❸ **Opportunity for Massive Recycling of Public Sector Infrastructure Assets:** Therefore the public sector could,if it chooses to, undertake massive recycling of its brownfield infrastructure assets. However, as noted, the current focus of many infrastructure initiatives is on private sector financing of greenfield projects.

Market realities would suggest an urgent shift in focus: Since institutional investors are more willing and able to invest in brownfield infrastructure assets, the strategy for mainstreaming their investment in infrastructure needs to be focused on "*recycling*" existing high-quality performing infrastructure assets into their portfolios.

Public sector entities could set up *"Infrastructure Recycling Programs*" to recycle their existing high-quality infrastructure assets to institutional investors and other market participants. Such ***"Infrastructure Recycling Programs"*** could be an explicit priority, enabling the public sector more fiscal space for the needed development of new infrastructure projects. Such recycling could also serve to catalyze the expansion and mainstreaming of an "*infrastructure asset class*" for consideration of local and international institutional investors. In addition to the public sector, other providers of finance – corporations, funds, banks, non-profit organizations, etc. – could also recycle assets to institutional investors, as illustrated in the below schematic.

POTENTIAL FOR MASSIVE RECYCLING OF INFRASTRUCTURE ASSETS TO INSTITUTIONAL INVESTOR PORTFOLIOS



Therefore both the public and private sectors could systemically launch recycling programs to move brownfield infrastructure assets from their balance sheets to those of institutional investors.

However, if we are to succeed in securing an expediential increase of mainstream institutional investment in brownfield infrastructure, there needs to be an explicit roadmap that acknowledges the investment requirements of institutional investors and builds on proven acceptable investment techniques and products that focus on brownfield infrastructure assets.

9.3 Leveraging Prior Experiences & Best Practices in Recycling Brownfield Infrastructure Assets: This recycling of brownfield infrastructure assets could be jumpstarted by systemically employing proven finance techniques and instruments already used in the marketplace. The methods used for recycling debt are more common and standardized, while equity recycling is more politically difficult and complex given the need to ensure the low cost and inclusive coverage of public infrastructure services.

Debt Recycling, Impediments, and Solutions: Across both developed and developing countries, institutional investors have invested in infrastructure debt assets. Active debt markets include various instruments, such as funds, debt syndications, project bonds, revenue bonds, and collateralized bond obligations. There are also ample risk mitigation instruments that can be used to enhance debt assets, such as partial credit guarantees, revenue guarantees, political risk insurance, and first loss facilities, so that these assets can meet investment criteria of institutional investors.

The effective employment of these instruments will require public sector leadership in advancing this objective, proactively setting up recycling programs and credit enhancements. The DFIs have a solid foundation to execute these programs, given their existing co-financing, infrastructure, institutional investment, and risk mitigation instruments.

However, there are notable impediments that impede recycling, such as the following:

❶ **Public sector reliance on income from infrastructure assets:** Many public sector entities depend on the income they receive from infrastructure assets. Notably, DFIs usually rely on debt payments as a significant source of income. Public sector entities will need to rethink their business models and reliance on interest income, reviewing ways to increase other sources of income, such as fees related to advisory, transactions, and risk mitigation. Innovative solutions can also be developed by engaging a wide array of experienced financial experts in open brainstorming venues with DFI financial staffs.

❷ **Need to reduce risk levels of infrastructure assets:** To execute these recycling programs, the public sector will also need to engage experienced finance experts who can help restructure the debt as needed to meet institutional investor requirements. There will be the need to develop innovative solutions that meet institutional requirements in terms of both risk mitigation as well as return requirements. Finance experts will need to work closely with governments and their development partners to ensure that robust restructurings meet the needs of the general public while providing stable low-risk returns to institutional investors.

❸ **Building capacity in risk mitigation, credit enhancement, and local capital market ecosystems:** Key actions will encompass public funding of project development support, provision of risk mitigation and credit enhancement, and capacity building. Local institutional investors and their advisors and fund managers will also need training so they can perform the needed assessments, due diligence, and monitoring of infrastructure assets.

For debt recycling programs to be successfully launched and executed, they will require strong and consistent senior political endorsement and the whole scale reorientation of the public sector units involved in infrastructure finance.

In short, public sector entities in partnership with private sector experts and fund managers will need to rethink their business models and develop debt recycling programs. ***This will involve***

developing innovative restructuring methods to credit enhance infrastructure assets so that meet investor criteria; proactively creating business relationships with suitable debt funds and managers; and providing targeted interventions to develop the capacity of local institutional investors and their local ecosystems of fund managers, consultants, and advisors.

Equity Recycling, Impediments and Solutions: Both developed and developing countries have undertaken programs to recycle the ownership of infrastructure assets from the public sector to other entities. For example, many programs have involved transferring ownership or structuring infrastructure projects to include the private sector, such as extensive privatization programs and Public Private Partnership (PPP) programs.

Moreover, as noted earlier in this paper, equity funds serve as critical financing conduits for institutional investors to invest in the equity of infrastructure projects.[156] This critical role is evidenced by Harith General Partners currently the leading Pan-African fund manager for infrastructure development in Africa. Harith manages Africa's first and only 15-year US$630 million infrastructure fund, the Pan African Infrastructure Development Fund (PAIDF) 1 and recently announced the first close of the US$435 million PAIDF2.[157] Another leading fund manager is the Abraaj Group, having launched its third Sub-Saharan Africa Fund in 2015 raising US$990 million, with 76% pledged by institutional investors, including SWFs.[158]

However, there are many impediments to recycling equity to institutional investors, cutting across regulatory regimes, lack of capacity, and restructuring of assets. Again, specific programs would need to be established with experts dedicated to assessing the assets, restructuring, governance arrangements, and negotiating the transfers of ownership. Specific risk mitigation instruments may be required, such as partial risk guarantees, political risk insurance, first loss facilities, etc.

To advance the participation of institutional investment in the equity ownership of infrastructure assets, the public sector will need to establish infrastructure recycling programs with strong and consistent senior political endorsement. To jumpstart the process, the operation of these programs could be outsourced to fund managers and/or financial experts.

9.4 Political Leadership Action Steps to Reorient Governments and Development Organizations:

Recycling infrastructure assets to institutional investors will not occur unless the leaders of the wide array of governments and development partners proactively set in place specific interventions aimed at effectively identifying, structuring, and selling attractive infrastructure assets to institutional investors.

The following specific fast-track actions could be undertaken:

❶ **Adopt the due diligence requirements of institutional investors:** If governments and development partners want to access the capital of institutional investors, they need to fully understand their investment requirements and adopt public sector behaviour so that the targeted infrastructure assets meet investment requirements. The fact is non-negotiable: Institutional investors must adhere to strict regulatory and credit specifications so the public sector needs to adapt its objectives, approaches, credit processes, and overall behaviour.

The first step is for the key accountable officials working for governments and development partners to adopt the basic credit principles and investment criteria that drive institutional investor decision-making. Institutional investment criteria needs to be integrated into public sector credit analysis and reporting metrics, and adapted into due diligence processes, assessment methodologies, performance tracking, and reporting formats.

Senior public sector decision-makers will need to refashion their existing infrastructure programs with these objectives, allocating the needed resources, ensuring proper staffing, implementing training programs, and outsourcing required finance experts as needed to prepare investable infrastructure assets suitable for institutional investment. Assets will need to be credit-enhanced to meet institutional investment requirements.

❷ **Launch new public-private partnerships to recycle infrastructure assets:** Developing country governments have long lists of infrastructure projects; however, the lack of pipelines of investable infrastructure assets is widely acknowledged. Today, governments and development partners often work separately in silos, and also often operate disengaged from the private sector. A whole new operating system of cross-cutting development cooperation across public and private sector silos needs to be developed with the sole objective being recycling of investable infrastructure assets that meet the investment criteria of private sector investment. Public-private recycling programs could be designed and launched.

As noted in this paper, developing investable infrastructure assets is a complex process that usually requires targeted interventions from many institutions, so a team approach would be needed. "*Deal Teams*" would need to be developed around each specific project or asset. The private sector needs to be engaged in the design and implementation of these recycling programs, including the rating agencies given the key role of ratings in the due diligence process. Governments and development partners would need to contract experienced private sector finance experts to help them identify, structure, develop, and finance investable entities for institutional investment, ranging from infrastructure special purpose vehicles to funds, bonds, and other investment instruments.

❸ **Adopt compelling incentives that motivate the needed changes, track progress, and publicize results:** For decades governments and their development partners have recognized the pivotal import of developing new infrastructure projects and mobilizing institutional investment. However, the internal incentives and management processes across the public sector are not aligned with this urgent imperative. The success of recycling infrastructure programs will be totally dependent on the systematic integration of meaningful incentives and management reporting processes. For example, quarterly reporting on infrastructure development to senior members of government and development partners could have routine detailed status reports of progress against set time-frames outlining specified risks and resolution strategies.

Moreover such processes will need to reflect the public-private partnerships required both on an overall program and specific transaction basis. Each infrastructure program and project will require effective collaborative working groups comprised of key public and private sector people accountable for delivering on results, with specified accountabilities. For example, "*Recycling Expert Teams*" can support the implementation of each recycling program with "*Deal Teams*" for each project. These public-private teams need to simulate the best practices in infrastructure, involving all key technical and political parties, in a dynamic and transparent manner. When confronting the inevitable challenges, the qualified external experts need to problem-solve in an effective manner. ***"Working Platforms" can enable dynamic collaboration between the various public and private sector experts, the sharing of information and documents, and the systematic tracking of deals against specific goals.***

❹ **Design and implement relevant performance metrics and openly report results**: The old saying pertains: *"If you cannot measure it, you cannot manage it."* Success is not likely without dynamic measurements of progress that are regularly reported to

senior decision makers. Moreover, public "League Tables" showing the status of recycled assets can help create market knowledge and momentum, especially given the demands of institutional investors for higher yields.

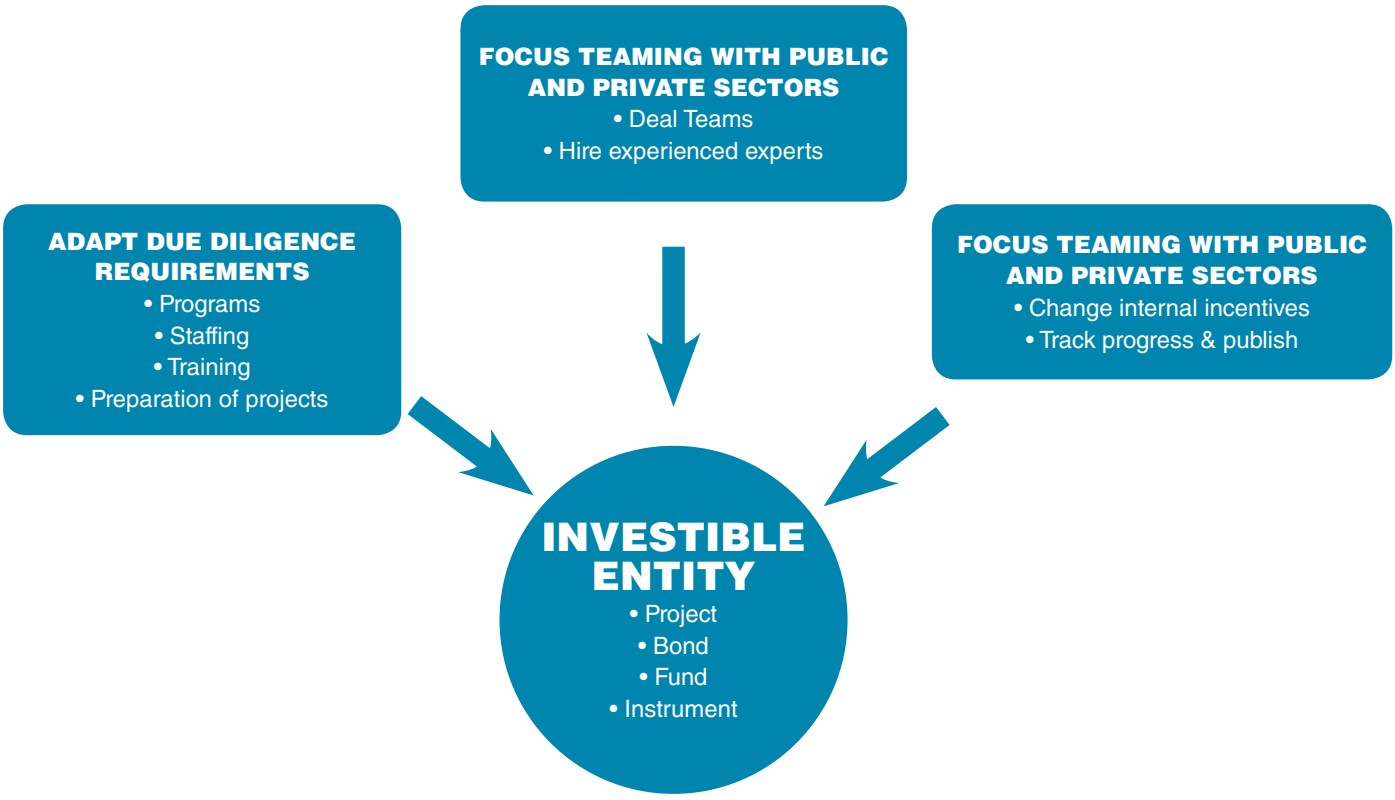
Without adopting these specific steps to reorient their objectives, skill sets of officials, the nature of their operations, and human resource policies, governments and development partners will not have the willingness or internal capacity to recycle infrastructure assets to institutional investors.

ACTIONS NEEDED TO REORIENT GOVERNMENTS AND DEVELOPMENT PARTNERS TO MOBILIZE INSTITUTIONAL INVESTMENT FOR INFRASTRUCTURE

As noted earlier, the above required changes in public sector behaviour across governments and development partners are extremely difficult to execute given the whole scale need to reform existing practices, programs, cultures, human resources, and capital allocations. Therefore the critical success factor is senior leadership in implementing internal restructurings, cutting across upgrading of staff and use of external experts; changes in objectives, programs and capital allocations; use of new performance metrics; and open disclosure of results and issues. More details on the roadmap of steps are provided in the next section.

9.5 Targeted Interventions to Jump-Start the Recycling of Infrastructure Assets to Institutional Investors: As set forth earlier in this paper, the expediential growth of the institutional investor marketplace for infrastructure assets could be achieved if the requirements for investment are met. The prior section argued that targeted public sector actions are required so that: (1) institutional investors have the required information on infrastructure assets that they can invest in, and (2) these infrastructure assets meet investment requirements.

The steps outlined below are aimed at setting forth examples of the specific targeted interventions that can jump-start the immediate growth in institutional investment, focusing on the recycling of existing infrastructure debt and equity holdings from the public sector to institutional investors. The steps are designed to activate market dynamics and leverage existing initiatives using cost-effective proven investment processes and structures.



❶ **Develop and disseminate detailed information on the investment criterion of institutional investors:** The public sector cannot be empowered to recycle their infrastructure assets if their officials do not know their envisioned clients and understand their investment criteria. This action step would center on the development of ***"The Composite Handbook of Investment Criteria for Institutional Investment (Investment Criteria Handbook)"*** aimed at defining international guidelines for presenting brownfield infrastructure assets to institutional investors.

- These guidelines could include an inventory of investment criteria with case studies of issues and solutions for those institutions interesting in preparing brownfield infrastructure assets for possible investment by institutional investors. The consultant would leverage existing information and related initiatives, develop a directory of investment requirements,and then refine a composite international standard through interviews.

- Critical input would be needed by those ecosystem participants that actually determine investment decisions, such as fund managers, investment advisors and consultants, financial advisors, investment bankers, and rating agency analysts.

- To ensure their relevancy, the final guidelines will be peer-reviewed by a selected cross-section of institutional investors, fund managers, rating agencies, and associations (e.g., Institutional Investor Institute, Institute of International Finance, Sovereign Wealth Fund Institute, The Harvard Law School Institutional Investor Forum (HIIF), etc.).

- The *Investment Criteria Handbook* would be provided to governments and development partners for their proposed adoption and as a global resource. The Handbook will serve as a foundational reference to governments, development partners, industry associations, government agencies (PPP programs, Ministries of Finance, Investment Promotion Agencies, line agencies, etc.) and related initiatives (e.g., Global Infrastructure Hub, Convergence, SDIP, Making Finance Work for Africa, etc.).

❷ **Conduct "*Country Institutional Investment Assessments*":** The infrastructure assets of developing countries will not meet institutional investor criteria if the assets are not considered high credit quality. Therefore country evaluations could include a scan of available infrastructure assets, and required interventions to enhance the quality of the assets. In some cases, the required changes will relate to legal, regulatory, and institutional frameworks or overall macro political and economic risks that need to mitigated through risk mitigation instruments. In other cases, the assets may need to be restructured or credit-enhanced. Country Institutional Investment Assessments could define strategic approaches to the country-specific issues and recommend the optimal strategies to recycle shares of infrastructure assets to institutional investors, and governance structure to ensure political concerns are openly discussed and mitigated.

❸ **Obtain Mandates For Selling Infrastructure Assets:** Each public sector entity would need to evaluate what assets might be available to institutional investors and provide an inventory of selected appropriate infrastructure assets for sale. Governments could mandate that all government-owned and financed infrastructure entities provide information on open web sites, following international standards to the extent possible (outlined in step one above). Financial advisors will need to be contracted to assist government-owned entities in developing investment information in acceptable formats. Governments and development partners could provide needed funding to enable government-owned entities to execute above steps.

❹ **Provide Easy Access to Investment Information for Institutional Investors:** A central data base could be created for easy access by institutional investors and their ecosystem of advisors, consultants, and fund managers. National governments could set up a national database with inventories of infrastructure assets (e.g., Ministries, PPP Programs, Investment Promotion Agencies, etc.). Regional initiatives could aggregate national databases (e.g., Making Finance Work for Africa Donor Projects Database). Existing global initiatives and programs (e.g., G-20 Infrastructure Pipeline, World Bank PPI Database, Convergence, SDIP, etc.) could also play invaluable roles.

❺ **Creating Investment Products:** Finance experts could create new debt and equity products of recycled infrastructure assets.

❻ **Create "*Proof of Concept*" Case Studies of Recycled Infrastructure Assets:** Market confidence could be boosted through the demonstrating of success, showing the high-creditworthiness of infrastructure assets, resilient structures and risk mitigation supports.

❼ **Engage Early Champions and Market Leaders:** It would be important to cultivate leaders from the public sector (such as the DFIs and governments) as well as from local pension funds and SWFs to show commitment and create momentum.

❽ **Tracking and Disseminating Performance Metrics:** Dynamic performance reports detailing the recycled assets and their performance can build market interest and provide the documented track records needed for institutional investment internal reporting.

The above steps need to be refined in a detailed study exploring how recycling programs can be set up to advance the mobilization of institutional investment in infrastructure.

We invite feedback on the recommendations set forth in this discussion report. Your partnership and input will enable the refinement of proposed "*unlocking actions*" and the development of concrete work plans for implementation. Please provide your suggestions to Dr. Barbara Samuels, Executive Director, Global Clearinghouse for Development (barbara@globaldf.org) and Hubert Danso, CEO, Africa investor (hdanso@africainvestor.com)

footnotes

1 Infrastructure participants include institutional investors, bankers, sovereign wealth funds, asset managers, project developers, project finance lawyers, engineers, providers of equipment, financial advisors, providers of analytical services (e.g., rating agency analysts, research institutes, etc.), providers of project development support and risk mitigation (e.g., development partners, private insurance companies, etc.), and members of the NEPAD Continental Business Network (CBN). Significant contributions were provided by participants at the Africa investor (Ai) CEO Infrastructure Project Developers Summit 2016 and the Ai CEO Infrastructure and Sovereign Investment Summit, held 9-10 May 2016. The author also draws on her finance experience (Country Risk Director, Chase Manhattan Bank; Managing Director, Moody's Emerging Markets Service; Technical Implementation Provider, UN Capital Development Fund; Implementation Partner, World Bank; advisor to many investors, etc.) and expert studies she has directed on the global financial system, development finance and risk mitigation (Council on Foreign Relations, World Economic Forum, African Development Bank, Inter-American Development Bank, French government, NEPAD, UN Financing for Development, etc.).

2 NEPAD is the New Partnership for Africa's Development, a program of the African Union (AU), adopted in 2001 by African leaders, with the primary objectives of poverty eradication, promotion of sustainable growth and development, and the empowerment of women through building genuine partnerships at country, regional and global levels. The Continental Business Network (CBN) is mandated by African Heads of State to serve as the exclusive private sector infrastructure investment advisory platform for African Heads of State and African policy makers, providing private sector engagement on a range of related strategic issues.

3 Information on the Africa investor-organized Investment Summits can be obtained by contacting Renee Montez at rmontez@africainvestor.com. The Third International Conference on Financing for Development in Addis Ababa, Ethiopia set forth the financing framework for the achievement of the Sustainable Development Goals (SDGs), including core concepts such as blended finance, project finance, pooled finance, etc. See http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf

4 Please provide feedback to Dr. Barbara Samuels, Executive Director, Global Clearinghouse for Development (barbara@globaldf.org) and Hubert Danso, CEO, Africa investor (hdanso@africainvestor.com).

5 "Global Sovereign Rating Trends, 2016," Standard & Poor's Rating Services, January 6, 2016, https://www.spratings.com/documents/20184/908545/US_SR_Event_Webcast_trends2016/5ee5aff9-9ef8-457b-92c8-76ff31d12b3a?sp_mid=62999&sp_rid=2022669

6 "Annual Survey of Large Pension Funds and Public Pension Reserve Funds: REPORT ON PENSION FUNDS' LONG-TERM INVESTMENTS," OECD, 2015, pages 19 - 22. It is important to recognize that the OECD annual survey, while extremely helpful in surveying pension funds, does not include all segments of institutional investment. As noted in this report, if we are to optimize the potential for institutional investment in infrastructure, we need to segment all the different categories of institutional investment – notably insurance companies and sovereign wealth funds – and map their investment objectives and criteria.

7 "G20 Leaders' Communiqué Antalya Summit," 15-16 November 2015, paragraph 10. See OECD research on infrastructure as an asset class, equity investment in infrastructure, and annual surveys on pension funds. The Global Infrastructure Hub is described on their website as having "a G20 mandate to grow the global pipeline of quality, bankable infrastructure projects. By facilitating knowledge sharing, highlighting reform opportunities and connecting the public and private sectors, our ambitious goal is to increase the flow and quality of private and public infrastructure investment opportunities in G20 and non-G20 countries." See http://globalinfrastructurehub.org/about/

8 A key source for this section is the 2016 Preqin survey. See "The $1bn Club: Largest Infrastructure Fund Managers and Investors," Real Asset Spotlight, Preqin, August 2016 https://www.preqin.com/docs/newsletters/ra/Preqin-Real-Assets-Spotlight-August-2016.pdf

9 For example, public-private partnerships (PPPs) in Africa's water sector date back to 1959, with the implementation of the Côte d'Ivoire urban water affermage – a successful operation that continues to provide water to over 7 million people today. See "Water PPPs in Africa," World Bank, 2014, https://www.ifc. org/wps/wcm/connect/838c700045139b7099359dc66d9c728b/WBG_AfricaWaterPPPs.pdf

10 See "World Bank provides IBRD Enclave Guarantee to Cross-Border Southern Africa Regional Gas Project," World Bank, November 2003 http://cdpq.com/ en/news-media/press-releases/cdpq-and-leading-mexican-institutional-investors-create-co-investment

11 For the World Bank's confirmation of lower risk profiles for project finance transactions, see Jordan Schwartz, "Institutional Investment in Infrastructure: A view from the bridge of a development agency," http://blogs.worldbank.org/psd/institutional-investment-infrastructure-view-bridge-development-agency. For G-20 supported study, see "Revenue and dividend payouts in privately-held infrastructure investments: Evidence from 15 years of UK data," EDHEC Infrastructure Institute – Singapore, March 2016, page 13. For rating agency documents on measuring infrastructure and project finance risk, see: http://www. spcapitaliq.com/blog/project-finance-risky-business-how-do-you-measure-the-impact-of-performance-market-and-country-risk; https://www.moodys.com/researchandratings/market-segment/infrastructure-project-finance/-/005008/4294966386/4294966623/-1/0/-/0/-/-/-/-/-/-/-/en/global/pdf/rra; https:// www.fitchratings.com/site/infrastructure

12 "Revenue and dividend payouts in privately-held infrastructure investments: Evidence from 15 years of UK data," EDHEC Infrastructure Institute – Singapore, March 2016.

13 See the "Thomson Reuters Project Finance International (PFI) annual league tables," pages 77-79, http://www.pfie.com/Journals/2016/01/26/c/b/y/ PFI-Financial-League-Tables-2015.pdf. The initial design with leverage ratios (designed with technical support from the Global Clearinghouse on Development Finance) can be accessed at: http://www.globalclearinghouse.org/InfraDev/assets/10/documents/Reuters%20PFI%20IDFI%20Tables.pdf

14 A key example of successful sector advocacy is the Institute of International Finance, set up by commercial banks in response to the Latin American financial crisis.

15 Christopher Heathcote (CEO, Global Infrastructure Hub, G20), "Sending the right infrastructure message: How governments can encourage private-sector infrastructure investment," McKinsey, August 2016. http://www.mckinsey.com/industries/infrastructure/our-insights/sending-the-right-infrastructure-message?cid=other-eml-alt-mip-mck-oth-1608

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16 The investments will include African private equity firms, venture capital, real estate and new infrastructure projects. See "New York Pension Fund to Invest Billions in Africa," April 29, 2015, Wall Street Journal, http://www.wsj.com/articles/new-york-pension-fund-to-invest-billions-in-africa-1430298385

17 Annual Survey of Large Pension Funds and Public Pension Reserve Funds: REPORT ON PENSION FUNDS' LONG-TERM INVESTMENTS," OECD, 2015.

18 McKinsey surveyed 50 senior executives at more than half of the top 50 pensions and sovereign-wealth funds worldwide, which collectively manage US$7.4 trillion in assets. "From big to great: The world's leading institutional investors forge ahead," McKinsey & Co., June 2016, http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/how-leading-institutions-are-changing-the-rules-on-portfolio-construction?cid=other-eml-alt-mip-mck-oth-1608

19 For World Bank confirmation on lower risk profile, see Jordan Schwartz, "Institutional Investment in Infrastructure: A view from the bridge of a development agency," http://blogs.worldbank.org/psd/institutional-investment-infrastructure-view-bridge-development-agency. For rating agency documents on measuring infrastructure and project finance risk, see: http://www.spcapitaliq.com/blog/project-finance-risky-business-how-do-you-measure-the-impact-of-performance-market-and-country-risk; https://www.moodys.com/researchandratings/market-segment/infrastructure-project-finance/-/005008/4294966386/4294966623/-1/0/-/0/-/-/-/-/-/-/-/en/global/pdf/rra; https://www.fitchratings.com/site/infrastructure

20 The global financing of the Sustainable Development Goals is set forth in the Addis Ababa Action Agenda (see http://www.un.org/esa/ffd/wp-content/up-loads/2015/08/AAAA_Outcome.pdf). The G20 Summit calls for the public support of an improved investment ecosystem, citing the G20 Hub on Infrastructure. For the text of the "G20 Leaders' Communiqué Antalya Summit," see http://www.mofa.go.jp/files/000111117.pdf.

21 IMF World Economic Outlook, October 2014.

22 Ibid.

23 "Annual Survey of Large Pension Funds and Public Pension Reserve Funds," OECD, 2015, pages 19 – 22. However, the OECD reports that some large pension funds, particularly in Australia and Canada, have been actively raising their allocations to infrastructure over the past decade, with allocations as high as 10-15%.

24 Georg Inderst et al., "Institutional Investment in Infrastructure in Developing Countries: Introduction to Potential Models," World Bank, February 2014, page 3. www.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/02/14/000158349_20140214150617/Rendered/PDF/WPS6780.pdf

25 See "Africa Strategic Infrastructure Initiative Project Overview: Accelerating Infrastructure Development in Africa," World Economic Forum, June 2015, page 10. http://www.weforum.org/docs/WEF_AFSII_Project_Overview_Accelerating_Infrastructure_Development_in_Africa.pdf

26 "Global Sovereign Rating Trends, 2016," Standard & Poor's Rating Services, January 6, 2016, https://www.spratings.com/documents/20184/908545/ US_SR_Event_Webcast_trends2016/5ee5aff9-9ef8-457b-92c8-76ff31d12b3a?sp_mid=62999&sp_rid=2022669

27 "An Agenda for Africa's Competitiveness," World Economic Forum, 2016, http://www.weforum.org/docs/Africa_Competitiveness_2016.pdf

28 "Regional Economic Outlook for Sub-Saharan Africa," IMF 2015.

29 "G20 Leaders' Communiqué Antalya Summit," 15-16 November 2015, paragraph 10. See OECD research on infrastructure as an asset class, equity investment in infrastructure, and annual surveys on pension funds. The Global Infrastructure Hub is described on their website as having "a G20 mandate to grow the global pipeline of quality, bankable infrastructure projects. By facilitating knowledge sharing, highlighting reform opportunities and connecting the public and private sectors, our ambitious goal is to increase the flow and quality of private and public infrastructure investment opportunities in G20 and non-G20 countries." See http://globalinfrastructurehub.org/about/

30 Exhaustive research has been done documenting the alignment between institutional investment objectives and infrastructure. See the studies conducted by the OECD, EDHEC Infrastructure Institute-Singapore, World Bank, IMF, McKinsey, Moody's Rating Service, PricewaterhouseCoopers, etc. Of special note are the following three recent surveys of institutional investor interest in increasing investment in infrastructure: "Annual Survey of Large Pension Funds and Public Pension Reserve Funds: REPORT ON PENSION FUNDS' LONG-TERM INVESTMENTS," OECD, 2015; "Towards Better Infrastructure Investment Products: A survey of investor's perceptions and expectations from investing in infrastructure," EDHEC Infrastructure Institute-Singapore, July 2016; and "From big to great: The world's leading institutional investors forge ahead," McKinsey & Co., June 2016, http://www.globalinfrastructurehub.org/content/uploads/2015/10/GI-Hub-EDHECinfra-Investor-Survey-full-report.pdf

31 "Global Pension Study," Towers Watson, 2015. Estimated using the sixteen major pension markets, the study reports that 90% of the assets are concentrated in Nigeria, South Africa, Namibia and Botswana.

32 "Global Sovereign Rating Trends, 2016," Standard & Poor's Rating Services, January 6, 2016, https://www.spratings.com/documents/20184/908545/ US_SR_Event_Webcast_trends2016/5ee5aff9-9ef8-457b-92c8-76ff31d12b3a?sp_mid=62999&sp_rid=2022669

33 Jordan Schwartz, "Institutional Investment in Infrastructure: A view from the bridge of a development agency," http://blogs.worldbank.org/psd/institutional-investment-infrastructure-view-bridge-development-agency

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34 Examples include the 2008 financial crisis and the recent Petrobas Brazil case. For examples, see "Brazil's Petrobras Trial Date Set, As U.S. Pension Funds Seek 'Tens of Billions' In Losses," Forbes, May 26, 2016, http://www.forbes.com/sites/kenrapoza/2016/05/26/brazils-petrobras-trial-date-set-as-us-pension-funds-seek-tens-of-billions-in-losses/#183a69389e36; "State Street Corp. is Sued Over Pension Fund Losses," New York Times, January 4, 2008, http://www. nytimes.com/2008/01/04/business/04state.html , "California sues Morgan Stanley over huge losses suffered by state's public pension funds," Mercury News Business, April 2, 2016, http://www.mercurynews.com/business/ci_29714711/california-sues-morgan-stanley

35 "S&P paying $1.4B over crisis-era ratings," USA Today, February 3, 2015, http://www.usatoday.com/story/money/markets/2015/02/03/standard-poors-settlement-fcc/22788653/

36 The term "ecosystem" is now widely used to assess economic systems given the importance of networks of entities that can provide the required services and reinforcements needed for dynamic economic production. For example, see the literature on entrepreneur ecosystems: "Enabling Entrepreneurial Ecosystems," Kaufman Foundation, 2015. http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2015/10/enabling_entrepreneurial_ecosystems.pdf

37 For example, income to international institutional investors was decreased by a reported US$2.1 billion when the Norwegian government cut tariffs rates by 90% in violation of the contracts, resulting in investors claiming that Norway's reputation as a stable and predictable business environment had been hurt significantly. The institutional investors, including Allianz SE, Abu Dhabi's sovereign wealth fund and Canadian pension funds, are suing Norway to reclaim lost values. The investors, having invested 32 billion kroner buying a 44% stake in Gassled, argue the cuts will reduce their income by 15 billion kroner over the time period from 2016 to 2028. See Mikael Holter, "Norway Tariff Cut Wiped $2.1 Billion Off Gas Pipes' Value," Bloomberg, April 26, 2016, http://www. bloomberg.com/news/articles/2016-04-26/norway-wiped-2-1-billion-off-gas-pipes-value-with-tariff-cut. See for example "The influence of direct investors in infrastructure investing," PricewaterhouseCoopers, 2015, http://www.pwc.com/gx/en/sovereign-wealth-investment-funds/publications/assets/pwc-the-influence-of-direct-investors-in-infrastructure-investing.pdf

38 See for example "The influence of direct investors in infrastructure investing," PricewaterhouseCoopers, 2015, http://www.pwc.com/gx/en/sovereign-wealth-investment-funds/publications/assets/pwc-the-influence-of-direct-investors-in-infrastructure-investing.pdf

39 See "Analysis: Strong dollar knocks off $1 trillion from U.S. pension assets," Reuters, July 2, 2015, file:///Users/barbara/Desktop/FX%20PFs/Analysis:%20Strong%20dollar%20knocks%20off%20$1%20trillion%20from%20U.S.%20pension%20assets%20%7C%20Reuters.webarchive

40 "World's Biggest Pension Fund Loses $52 Billion in Stock Rout" Bloomberg, August 26, 2016, http://www.bloomberg.com/news/articles/2016-08-26/ world-s-biggest-pension-fund-loses-52-billion-as-stocks-slump

41 If user fees are indexed to an external currency, the government has transferred the currency risk to consumers, exposing users to undue increases in their user fees. This in turn creates the risk of political pressure to delink tariffs to the currency index, and exposing investors to the risks of financial losses resulting from currency depreciation. Also, it is important to note that most infrastructure projects require large initial purchases of equipment and services from offshore companies. As most foreign currency expenses are in the early stages of projects (e.g., construction) with many disbursements due at financial close or shortly thereafter, the currency mismatches resulting from local currency funding are minimal. The opposite is true of infrastructure projects such as airports that in many cases have the bulk of revenues in external currencies. To enable currency matching and minimal currency risk, such projects with all or some revenues denominated in hard currency revenues can have matched funding for the entire project or tranches denominated in the same currency.

42 For example, see Shahe Emran and Subika Farazi, "Government Borrowing and Private Credit: Evidence from Developing Countries," World Bank, May 2008, http://siteresources.worldbank.org/INTFR/Resources/Farazi_Crowding_Nov11_08.pdf ; "Brazil's BNDES crowding out private banks from loans, OECD says," Reuters, October 22, 2013, http://www.reuters.com/article/bndes-brazil-oecd-idUSL-1N0I81RP20131022

43 Examples of initiatives aligning sustainable and inclusive development, governance, integrated reporting, social impact and financial returns are: KING report on Corporate Governance (http://www.iodsa.co.za/?kingIII), Global Compact (https://www.unglobalcompact.org), Principles of Responsible Investment (https://www.unpri.org), Global Impact Investing Network (GIIN - https://thegiin.org/about/), and the National Impact Investment Readiness (NIIR). For in- formation on NIIR, see "Overcoming Barriers to Scale: Institutional impact investments in low-income and developing countries," International Institute for Sustainable Development, 2013, http://www.iisd.org/pdf/2013/overcoming_barriers_to_scale.pdf

44 The Moody's study data set represents 62% of all transactions originated globally over the period 1983-2014. See Moody's Investors Service report "Default and Recovery Rates for Project Finance Bank Loans, 1983-2014," March 2016.

45 See "Cash Flow Dynamics of Private Infrastructure Project Debt," EDHECinfra, EDHEC Business School, March 2016, page 9.

46 For example, the Senegalese US$500 million Sovereign Development Fund, FONSIS, is developing a new vehicle to partner with international institutions with a new finance structure separating greenfield and brownfield investment. See https://www.investorintelligencenetwork.com/research/trends-and-analysis/senegal-sovereign-fund-seeks-partners-infrastructure-investment

47 See for example: Craig Valters, "Theories of Change: Time for a radical approach to learning in development," ODI, September 2015. Key principles included are: focus on process; priorities learning; be locally led; and think compass, not map.

48 For example, see "Annual Survey of Large Pension Funds and Public Pension Reserve Funds: REPORT ON PENSION FUNDS' LONG-TERM INVESTMENTS," OECD, 2015; "Towards Better Infrastructure Investment Products: A survey of investors' perceptions and expectations from investing in infrastructure," EDHEC Infrastructure Institute-Singapore, July 2016; and "From big to great: The world's leading institutional investors forge ahead," McKinsey & Co., June 2016 http://www.globalinfrastructurehub.org/content/uploads/2015/10/GI-Hub-EDHECinfra-Investor-Survey-full-report.pdf

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50 See Georg Inderst, "Pension Fund Investment in Infrastructure: Lessons from Australia and Canada," Rodman International Journal of Pension Management, Volume 7, Issue 1, Spring 2014.

51 "Value for Money (VFM) is the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user's requirements." See "Value-for-Money Analysis—Practices and Challenges," PIAFF, World Bank Institute, 2013; and Philippe Burger and Ian Hawkesworth, "How to Attain Value for Money: Comparing PPP and Traditional Infrastructure Public Procurement," OECD Journal on Budgeting, Volume 2011/1.

52 Retail bonds are a critical investment product that could be scaled throughout countries. For example, the Kenyan government has developed a retail plat- form vehicle using cell phones for individuals to buy Kenyan government bonds funding infrastructure projects (M-Akiba Infrastructure Bond). See http://www.treasury.go.ke/news-updates/280-feature-government-launches-makiba-infrastructure-bond.html The US government also sells its treasure bonds directly to individuals (http://www.treasurydirect.gov).

53 For example, the Credit Guarantee and Investment Facility (CGIF) was established by the ten members of the Association of Southeast Asian Nations (ASEAN) together with the People's Republic of China, Japan, Republic of Korea (ASEAN+3) and Asian Development Bank (ADB). The website states: "CGIF provides guarantees on local currency denominated bonds issued by corporations in the region. Such guarantees will make it easier for corporations to issue local currency bonds with longer maturities. This will help reduce the currency and maturity mismatches that caused the 1997-1998 Asian financial crisis and make the region's financial system more resilient to volatile global capital flows and external shocks." See http://www.cgif-abmi.org

54 Monoline insurers give institutional investors the confidence to invest by providing 100% credit guarantees backed by their investment-grade ratings. Without fully understanding the investment itself, institutional investors can often meet their due diligence requirements provided the monoline is evaluated as high-investment grade.

55 A private sector-led monoline, AMF Guarantee, has been developed over 12 years but lacks adequate funding for implementation. See http://www.amf- guarantee.com

56 See http://www.cgif-abmi.org/wp-content/uploads/2016/07/Press-Release-and-CPG-Fact-Sheet_20160701.pdf. There are some national risk mitigation instruments focused on construction, but they need to be scaled. For example, the Uganda Energy Credit Capitalisation Company (UECCC) offers a partial credit guarantee that serves as a cost overrun insurance facility, available during the construction phase of the investment projects. This facility enables projects to initially access guaranteed cover for cost overruns of up to 15% of the total project cost. Additional overruns beyond the 15% but, in any case, not exceeding 50% of the project cost may be financed on a 50/50% basis between UECCC and the project developer. See http://www.ueccc.or.ug/ueccc_servs.htm

57 See "The Potential Catalytic Role of Subnational Pooled Financing Mechanisms," with support of the French government (AFD) and the local government `organization FMDV (written by this report's author); see http://www.metropolis.org/sites/default/files/media_root/documents/fmdv_policy_paper_spfm_eng1. pdf

58 Defaults are defined as missed or delayed payments, bankruptcy filing, distressed exchange or a change in payment terms.

59 For project finance data on defaults and recovery, see Moody's Investors Service report "Default and Recovery Rates for Project Finance Bank Loans, 1983- 2014," March 2016. The Moody's study data set represents 62% of all transactions originated globally over the period 1983-2014. Also see "Cash Flow Dynamics of Private Infrastructure Project Debt," EDHECinfra, EDHEC Business School, March 2016, page 9.

60 Examples of data fields for each transaction could include analytical components of the transaction to the extent available, such as performance, sector, type of investment vehicle (e.g., project finance transaction, corporate entity, unlisted equity, listed equity, bond, etc.), type of investment (equity, debt), stage of investment (greenfield, brownfield), project sponsor, investors, global scale and national scale credit ratings (if any), risk mitigation support, country, transaction size, currency, tenor, default rate, recovery rate, etc. The exact data fields would need to be developed based on an extensive examination of the specifications provided by institutional investors, asset managers and consultants, rating agencies, and other supporting analytical services.

61 See "Global Financial Stability Report," IMF, 2016, page 88, http://www.imf.org/external/pubs/ft/gfsr/2016/01/pdf/text_v2.pdf

62 See "Municipal Bonds," National Association of Insurance Commissioners, April 26, 2016 http://www.naic.org/cipr_topics/topic_municipal_bonds.html In addition, European Local Government Funding Agencies depend on financing from international bond markets. In 2014 alone, the Scandinavian and Dutch agencies issued bonds in various capital markets for a total estimated value of €70 billion (specific asset class very much in demand in international markets).

63 Georg Inderst, "Pension Fund Investment in Infrastructure: Lessons from Australia and Canada," Rodman International Journal of Pension Management, Volume 7, Issue 1, Spring 2014, page 46.

64 Ibid, page 45.

65 See examples such as integratedreporting.org and the "Draft KING IV Report on Corporate Governance in South Africa," https://c.ymcdn.com/sites/iodsa.site-ym.com/resource/resmgr/King_IV/King_IV_Report_draft.pdf

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66 "Towards Better Infrastructure Investment Products: A survey of investor's perceptions and expectations from investing in infrastructure," EDHEC Infrastructure Institute-Singapore, July 2016, page 80.

67 The Sustainable Development Investment Partnership (SDIP) aims to mobilise US$100 billion in financing over 5 years to infrastructure projects in developing countries. See http://www.sdiponline.org. Convergence is a platform that connects and supports private, public, and philanthropic investors for blended finance deals in emerging and frontier markets. See https://convergence.finance/. Also, S&P Global Market Intelligence provides data aggregation and data analytics services to a group of banks or institutions that agree to contribute data on an ongoing or one-time confidential basis as members of a specific Data Consortium. See http://www.spcapitaliq.com/our-capabilities/our-capabilities.html?product=data-consortia

68 Examples of data fields for each transaction could be the same as in the prior historical database to the extent available, such as name of project, sector, type of investment vehicle (project finance transaction, corporate entity, unlisted equity, listed equity, bond, etc.), type of investment (equity, debt), stage of investment (greenfield, brownfield), project sponsor, investors, global scale and national scale credit ratings (if any), risk mitigation support, country, transaction size, currency, tenor, default rate, recovery rate, projected returns, and relevant contact information.

69 See for example "Building on the Monterrey Consensus: Harnessing the Private Sector for Development," World Economic Forum, 2006 (directed by this report's author). www.un.org/esa/ffd/monterrey/MonterreyConsensus.pdf

70 See IFC Asset Management Company (AMC) https://www.ifcamc.org and the IFC Managed Co-Lending Portfolio Program (MCPP) http://www.ifc.org/wps/ wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Syndications/Overview_Benefits_Structure/Managed+Co-Lending+Portfolio+Program71 AMF has not been launched due to a lack of funding and other issues. See http://www.amfguarantee.com

72 See "Pension Funds Investing in Africa: From 'Why' to 'How,'" Bowman Gilfillan Africa Group, 2014, http://www.bowman.co.za/FileBrowser/Pensions/ Why2How%20Conference%20Issues%20Summary.pdf

73 "Towards Better Infrastructure Investment Products: A survey of investor's perceptions and expectations from investing in infrastructure," EDHEC Infrastructure Institute-Singapore, July 2016, page 73.

74 Inderst, Georg, "Pension Fund Investment in Infrastructure: Lessons from Australia and Canada," Rodman International Journal of Pension Management, Volume 7, Issue 1, Spring 2014.

75 "Climate finance for developing and emerging countries: Five recommendations to catalyze institutional investment," September 2015, Institutional Investors Group on Climate Change (IIGCC), 2015, http://www.iigcc.org/files/publication-files/IIGCC_2015_Climate_Finance_v25_WEB.pdf

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78 See "Pension Funds Investing in Africa: From 'Why' to 'How,'" Bowman Gilfillan Africa Group, 2014, page 3, http://www.bowman.co.za/FileBrowser/Pensions/Why2How%20Conference%20Issues%20Summary.pdf

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80 For information on leverage ratios highlighted in Project League Tables produced by Reuters Project Finance International with the technical support of the Global Clearinghouse for Development Finance, see: http://www.globalclearinghouse.org/infradev/resources.cfm?id=457

81 Georg Inderst, "Pension Fund Investment in Infrastructure: Lessons from Australia and Canada," Rodman International Journal of Pension Management, Volume 7, Issue 1, Spring 2014.

82 "Climate finance for developing and emerging countries: Five recommendations to catalyze institutional investment," September 2015, Institutional Investors Group on Climate Change (IIGCC), 2015 http://www.iigcc.org/files/publication-files/IIGCC_2015_Climate_Finance_v25_WEB.pdf

83 The African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform is an initiative of Africa investor. See Annex A.

84 Solvency II is an EU legislative program implemented in all 28 Member States, including the UK, which introduced a new, harmonized EU-wide insurance regulatory regime. The legislation replaced 14 EU insurance directives. See http://ec.europa.eu/finance/insurance/solvency/solvency2/index_en.htm

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96 Ratings provide critical information to institutional investors, For example, Moody's Investor Service has conducted an extensive study that shoe that project finance bank loans continue to demonstrate default and recovery performance that are attractive to long-term lenders. See the latest annual study, "Default and Recovery Rates for Project Finance Bank Loans, 1983-2014."

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98 Ratings provide critical information to institutional investors, For example, Moody's Investor Service has conducted an extensive study that shoe that project finance bank loans continue to demonstrate default and recovery performance that are attractive to long-term lenders. See the latest annual study, "Default and Recovery Rates for Project Finance Bank Loans, 1983-2014."

99 Effective Project Preparation for Africa's Infrastructure Gap," Infrastructure Consortium for Africa, 2014, page 6.

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105 Ibid., page 4.

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107 See http://endeavor-energy.com/project_portfolio/ghana1000/

108 See http://www.africaspeedrail.com/un-portfolio/west-coast-high-speed-rail/

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115 The Kenyan government has developed a retail platform vehicle using cell phones for individuals to buy Kenyan government bonds funding infrastructure projects. See http://www.treasury.go.ke/news-updates/280-feature-government-launches-m-akiba-infrastructure-bond.html

116 See http://www.ltwp.co.ke/consortium

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118 The Moody's study data set represents 62% of all transactions originated globally over the period 1983-2014. "Default and Recovery Rates for Project Finance Bank Loans, 1983-2014," March 2016. Also see "Cash Flow Dynamics of Private Infrastructure Project Debt," EDHECinfra, EDHEC Business School, March 2016, page 9.

119 See "Cash Flow Dynamics of Private Infrastructure Project Debt," March 2016, EDHECinfra, EDHEC Business School, page 9.

120 See http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/03/12/000334955_20100312070319/Rendered/PD- F/534550BRI0PFG110Box345611B01PUBLIC1.pdf. Another regional cross-border project is the largest East Asia project Nam Theun 2, sponsored by Electricité de France (EDF) of France, Italian-Thai Development Public Company Limited (ITD) of Thailand, and Electricity Generating Public Company Limited (EGCO) of Thailand. The base project cost was funded 28% by equity (US$350 million) and 72% by debt (US$900 million). The additional US$200 million of contingent costs was financed 50% by equity and 50% by debt, on a pari-passu basis. Project equity was provided by the four shareholders of NTPC — EDFI (35%); ITD (15%); EGCO (25%); and Lao Holding State Enterprise (LHSE, a newly-created state enterprise to hold GOL's 25% equity in NTPC). NTPC secured US$1,000 million of debt financing for the project, including contingencies. The following institutions provided loans to NTPC and/or guarantees to private lenders to mobilize the debt package for the project: (i) Multilaterals including the World Bank Group (IDA and MIGA); (ii) bilateral agencies; and (iii) export credit agencies (ECAs), along with a consortium of 14 international private commercial banks — nine international dollar lenders and seven Thai lenders.

121 Ibid.

122 Currently, most bonds are corporate and in the energy and telecommunications sectors. See Rajeev J. Sawant, Infrastructure Investing: Managing the Risks and Rewards for Pensions, Insurance Companies, and Endowments, Wiley & Sons (2010).

123 See http://www.imf.org/external/pubs/ft/fandd/2001/03/ketkar.htm

124 For studies on the range of risk mitigation instruments, see Tomoko Matsukawa and Odo Habeck, "Review of Risk Mitigation Instruments," World Bank, 2007; PricewaterhouseCoopers, "Comparative Review of IFI Risk Mitigation Instruments," 2004, http://siteresources.worldbank.org/INTWSS/Resources/RaymondPwCIFIRiskMitigation.pdf ; The only online directory of risk mitigation instruments can be found on www.infradev.org (needs to be updated; hosted by the Global Clearinghouse for Development Finance).

125 For example, in 2015 Munich Re provided Multi-Well Exploration Risk insurance to a series of eight wells in a region in Kenya that is characterized by so-called high enthalpy (especially high sub-ground temperatures). The risk insurance covers the risk of insufficient output due to lack of geothermal resources, and is quite often a prerequisite for the financing of geothermal projects. See https://www.munichre.com/en/media-relations/publications/company-news/2015/2015-07-30-company-news/index.html

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126 One exception is the new OPIC breach of contract instrument which can in certain cases provide 100% credit cover; however the policy is only available for projects in investment-grade countries, and foreign exchange risk needs to be covered by a private sector party in the transaction. Other examples are South Korea's KiBo scheme, which is part of Korea Credit Guarantee Fund (KODIT), and some schemes offered through Japan's Credit Guarantee Corporation. Another notable exception is monoline insurers that provide 100% wraps, transferring all the risks unconditionally to the guarantor. However, today such 100% guarantees are only available to a very limited number of high-quality projects in investment grade countries. Also, the Credit Guarantee and Investment Facility (CGIF) provides credit guarantees for local currency denominated bonds issued by investment grade companies in ASEAN and three other countries. See http://www.cgif-abmi.org

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130 Marco Aldana, Isabelle Braly-Cartillier, and Laura Susanne Shuford, "Guarantees for Green Markets Potential and Challenges," Inter-American Development Bank, 2014, pages 13-24.

131 Tomoko Matsukawa and Odo Habeck, "Review of Risk Mitigation Instruments," World Bank, 2007, https://www.ppiaf.org/sites/ppiaf.org/files/publication/Trends%20Policy%20Options-4-Review%20of%20Risk%20Mitigation%20Instrument%20-%20TMatsukawa%20OHabeck.pdf

132 "Research on Innovative Finance to Achieve Millennium Development Goals," Centennial Group Holdings, (prepared for the Japan Bank for International Cooperation), February 2006.

133 Ibid.

134 "Building on the Monterrey Consensus: Harnessing the Private Sector for Development," World Economic Forum, 2006 (directed by this report's author).

135 PricewaterhouseCoopers, "Comparative Review of IFI Risk Mitigation Instruments," 2004, http://siteresources.worldbank.org/INTWSS/Resources/Ray-mondPwCIFIRiskMitigation.pdf

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144 Aldo Baietti and Peter Raymond, "Financing Water Supply and Sanitation Investments: Utilizing Risk Mitigation Instruments to Bridge the Financing Gap" (Washington, D.C.: The World Bank, January 2005). http://siteresources.worldbank.org/INTWSS/Resources/WSS_Investments.pdf

145 See http://www.ati-aca.org/index.php/products-and-services/risk-insuarance-products/political-risk-insurance?id=154#sthash.epEJanxc.dpuf

footnotes

146 The principle objective of Africa GreenCo (Africa Green Regional Energy: Efficient, New and Creditworthy Off-taker) is to establish a public-private partnership entity in the form of a creditworthy, regional, renewable energy off-taker/trader and aggregator of power: streamlining development, mitigating off-take and credit risk, and catalyzing private sector finance for renewable energy development. Africa GreenCo will enter into long-term power purchase agreements with generators and back-to-back power sale agreements with various off-takers, which in turn would encourage private sector investment and enable quick and much-needed capacity additions. From a financial stand-point, it will leverage its capital base to achieve adequate creditworthiness so as to reduce the need for the private sector to obtain credit protection. Through its structuring, governance and supply arrangements with a number of off-takers at the back end, it will mitigate and diversify the risks of end-user off-taker default. From an operations stand-point, it will coordinate government decision making, facilitate interconnection and increase power trading. Africa GreenCo as a concept was endorsed and included in the recommendations section of the SE4All's Finance Committee Report (prepared by the Bank of America, BNDES and the World Bank) that was presented to Africa's Heads of State in Addis Ababa on the 13th of July 2015 at the Doha Financing for Development Conference.

147 See http://ec.europa.eu/economy_finance/financial_operations/investment/europe_2020/index_en.htm

148 See http://www.cgif-abmi.org

149 See http://www.amfguarantee.com

150 See the "Africa Energy Guarantee Facility (AEGF)," http://www.eib.org/projects/pipeline/2012/20120168.html

151 See http://www.panynj.gov/business-opportunities/pdf/guide-to-procurement.pdf

152 See for example the pipelines of infrastructure projects on the G-20 Global Infrastructure Hub Pipeline (http://globalinfrastructurehub.org/gi-hub-launches-project-pipeline/), the Canadian government supported initiative Convergence (https://www.convergence.finance/about), and the OECD-World Economic Forum supported Sustainable Development Infrastructure Partnership (http://sdiponline.org/sdip-in-action/projectinvestmentreviewgroup.htm). It is important to note that some projects may represent expansions of existing projects, which can be much easier to finance with institutional investment provided the existing entity is considered of high credit quality and the expansion plan has well-documented credible business plan and supporting technical studies.

153 As documented in this paper, limited institutional investment in start-up Greenfield projects has been made through listed and unlisted funds as well as direct equity ownership at the project level.

154 "World Bank 2016 Annual Report," page 63, http://www.worldbank.org/en/about/annual-report

155 "World Bank Financial Statements," June 30, 2016, page 16 http://siteresources.worldbank.org/EXTABOUTUS/sources/29707-1280852909811/IBRD_Jun_16.pdf

156 A study by the OECD states: "Equity funds formed as partnerships of public and private institutions could become important sources of finance and providers of organizational capacity and expertise in support of the financing of infrastructure projects. Initiatives such as the establishment of the Pan African Infrastructure Development fund, the Philippine Investment Alliance for Infrastructure fund and the Marguerite fund in Europe provide examples of how funds can be set up with government involvement to help attract institutional investment in the much needed investment areas of the emerging economies and greenfield infrastructure." See "Pooling of Institutional Investors Capital – Selected Case Studies in Unlisted Equity Infrastructure," OECD, April 2014, page 9.

157 In 2016, Harith and Africa Finance Corporation (AFC) merged their assets, expertise and experience to create a new energy entity combining both renewable and non-renewable power generating assets in Africa. http://www.harith.co.za/?/media/details/afc-and-harith-merge-assets-to-bring-power-to-africa

158 See African Business Central: http://www.africanbusinesscentral.com/2015/04/14/private-equity-firm-abraaj-raises-almost-1b-african-fund/

annexes

A) African Infrastructure Co-Investment Platform to Scale up Regional Investment

B) INFRADEV Marketplace to Activate Development of Investable Projects and Performance Tracking

annex a

The Africa investor (Ai) African Infrastructure Co-Investment Platform

The Africa investor (Ai) African Infrastructure Co-Investment Platform, is an African Heads of State supported industry response, designed with participation from long term investors, to overcome these obstacles by building a practical collaboration platform that leverages the long-term investment horizon of institutional investors, especially sovereign wealth funds, pension funds, and insurance companies, to invest in de-risked African infrastructure assets that meet their mandates and investment criteria. This platform, initiated by Africa investor (Ai), with an initial portfolio of infrastructure assets totalling over US $1.5 billion, is expected to increase to over $3 billion within three years.

The emergent nature of long term institutional investors on the continent, combined with the lack of internal infrastructure specific investment expertise and deficit of information on investable infrastructure assets, make the African infrastructure investment market difficult for domestic and international institutional investors to participate.

The initial investment partners include a select group of African and global pension and sovereign funds committed to investing cross border in infrastructure assets. Through the platform, Ai has sourced investable projects and instruments that match pension and sovereign investors' risk profiles and criteria, yield expectations and direct investment and manager selection criteria.

The platform will originate projects through Ai's extensive and close working relationships with infrastructure-focused private equity firms, asset managers and its 500-strong network of Africa's foremost private sector infrastructure project developers. This network has enabled Ai to build the continent's largest and strongest single-point platform of investable infrastructure projects with facilitation support and risk mitigation solutions.

The platform uses a 'combined' fund of funds model (with unique manager selection IP) and a direct investment approach, supporting access to capital and growth for both African infrastructure funds, as well as the continent's most prominent and successful private sector infrastructure project developers.

Participating investors will reap numerous benefits from using the platform to pursue infrastructure investment strategies, given the greater transparency of fees, unparalleled access to prime co-investment opportunities and cost-efficiency, as platform investors will not pay more to invest in investments showcased on the platform than traditional approaches.

For more information, please contact: Hubert Danso, CEO and Vice Chairman Africa investor hdanso@africainvestor.com.

Ai africainvestor

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annex b

Summary: INFRADEV Marketplace
Building Pipelines of Investable Infrastructure Projects

The Imperative: Delivering on infrastructure is an essential precondition to creating jobs, enabling the development of the private sector, and creating competitive business environments, as well as reducing poverty, civil strife and terrorism. Reflecting this imperative, many initiatives set forth at the Third International Conference on Financing for Development were focused on providing a more effective global financial framework for sustainable and bankable infrastructure projects. The public and private sectors need to partner more closely in building pipelines of investable infrastructure projects. This initiative sets forth a scalable approach in building the required local investment and infrastructure ecosystems to identify, develop, structure, risk-mitigate, and finance infrastructure projects.

The "Local" Operational Requirements of Infrastructure Development and Finance: The dominant bottlenecks for developing country infrastructure are at the specific project level. Infrastructure projects in any country take years to define, develop, and finance, requiring large sums of upfront funding to cover the costs of project development, ranging from 2-12% of total project cost. This upfront funding is exposed to the risk that project development is unsuccessful or that the proposed project cannot obtain financing. In addition, a typical infrastructure project requires significant amount of equity capital– usually a minimum of 25-35% of the total project cost. As a result, the costs of project development are extremely large, blocking many potential project sponsors – local, regional, and international – from even beginning the costly process of project development. ***Key debilitating operational gaps in developing countries are outlined below***.

❶ **Lack of Local Financial Advisory Capacity: Each individual project requires extensive financial advisory support.** The standard practice is for infrastructure projects to be financed on a non-recourse basis using proven project finance techniques that limit recourse to project sponsors, whether they are governments or the private sector. Therefore, the very structure of the project requires experienced financial advice on the legal structure of the project, potential sources of equity and debt finance, an assessment of the risks, and ways to mitigate them. Legal and financial advice is very expensive, usually costing a minimum of US$1 million even for small projects, averaging approximately 2% of total project costs. The supply of experienced financial advisors at a country level is usually lacking, meaning that external experts need to be hired at high rates; however, these advisors are handicapped by their lack of knowledge of the country, connections, and ability to be available as needed.

❷ **Lack of Local Project Development Expertise: In addition to financial advisors, each individual project requires a large team of experts spanning a wide spectrum of technical skills:** project managers, sector experts, market consultants, engineers, lawyers, accountants, environmental experts, etc. The supply of skilled experts for infrastructure project development is usually lacking at the country level, so international consultants are used, often unsuccessfully, given their lack of in-country knowledge and connections, their high costs, and inability to commit to the long time periods in country required effectively to manage the coordination needed with local team members, the project sponsor, the government, development partners, and local stakeholders.

❸ **Lack of Project Finance and Due Diligence Capacity: Local financial institutions – banks, pension funds, insurance companies, fund managers, other investors – often do not have the internal capacity to assess the risks associated with specific infrastructure projects.** The due diligence process for each project involves an array of complicated technical, credit, financial, and legal skills – understanding the sector, the market, construction and operational risks, and management capacities, as well as assessing the projected expenses, revenues, and cash flows, including the extent to which contracts mitigate performance risks.

❹ **Inadequate Facilitation by the Public Sector: Governments and their development partners are critical in providing the facilitation needed to develop and finance infrastructure projects.** While there are some public sources of project development support and risk mitigation, usually extensive resources and time are required to access them, and fulfilling the requirements is often beyond the skill set of local project sponsors. Moreover, the sources of funding and risk mitigation are often inadequate, covering only incremental costs and risks.

The solution to the above gaps is the development of local infrastructure ecosystem at the country level, so that the required core skill sets and inputs are available for successful project definition, development, structuring, risk mitigation, and financing.

The INFRADEV Marketplace: Local infrastructure practitioners at the country level – in the government and private sector – are deeply committed to developing infrastructure projects and have fundamental interests and motivations to do so. They want to create and own their "local infrastructure marketplaces" that enable local providers of services and products to improve their ability to work together and also partner with international private sector companies and experts in the successful development and financing of infrastructure projects. The INFRADEV Marketplace is designed to serve a practical technical operational framework that can empower public and private infrastructure practitioners, and improve the effectiveness of existing infrastructure support programs and instruments (local, regional, and international).[152] ***Each INFRADEV country pilot will have a small team of in-country technical advisors supported by international finance advisors in the implementation of five work streams:***

UNLOCKING ACTIONS TO MOBILIZE INSTITUTIONAL INVESTMENT FOR INFRASTRUCTURE

❶ **Country baselines of current capacities and projects and engage local leaders: To build the needed foundation for a country's infrastructure development and finance, the following surveys need to be conducted at the country level:** existing providers of finance, project support, and risk mitigation (such as banks, institutional investors, insurance companies, strategic investors and funds, government agencies, development partners, etc.); existing experts available to support the development of infrastructure projects (who would constitute the emerging "local infrastructure professional sector" such as financial advisors, lawyers, engineers, etc.); and potential infrastructure projects (through discussion with government agencies and sub-national entities, development institutions, banks, business associations, and leading companies). Through the above assessments, the INFRADEV Team will engage the potential leaders of the local infrastructure sector in the government and private

sector who are interested in being "champions" in the development of a local infrastructure marketplace, securing political and funding support, identifying bottlenecks and devising practical solutions.

❷ **Training program combined with "Learn by Doing": To build local capacities, there needs to be easily-accessible comprehensive training on how to develop and finance bankable and sustainable infrastructure projects.** INFRADEV experts would engage local institutions in developing local professionally certified and learn-by-doing programs, peer-to-peer exchanges. At the global level, INFRADEV experts would engage existing leaders in infrastructure training to explore how to leverage their existing programs to deliver needed inputs at the country level (including through distance and e-learning, consolidation of best practices and lessons learned, open documentation of leading-transactions and deal structures, standard documentation, (such as purchasing power agreements), and best practices/lessons learned).

❸ **Piloting of proven financial techniques that en able institutional investors (especially pension funds) to invest in infrastructure projects: Key risks such as construction and foreign exchange risk impede the ability of institutional investors to invest debt and equity in infrastructure projects.** The INFRADEV Team will work with financial institutions and development partners, to develop and pilot specific instruments, such as contingency refinancing facilities, foreign exchange devaluation facilities, and equity put options.

❹ **Tracking of inputs at the project level:** Scalable country applications can enable public and private sector project sponsors to track private and public sector inputs at the project level, facilitating coordination and development effectiveness and feeding into donor reporting processes and investor benchmarks, such as the OECD TOSSD process and Reuter's Project Finance International Multilateral League Tables.

❺ **Online "INFRADEV Marketplace" that enables project sponsors and infrastructure practitioners to showcase their projects, services, and products: The INFRADEV country online platform is critical to the development of deep pipelines of investable projects.** Using modern technology is critical to achieving cost-effective public-private coordination and stimulating a local marketplace. Using INFRADEV, project sponsors can cost-effectively present information on their projects to potential providers of support and potential investors, as well as use the platform to access knowledge resources and providers of services and equipment (including climate-smart applications). **Components of the platform include:** Directories (Projects, Services, Products, Project Development Support Programs, Risk Mitigation and Insurance Instruments, Leading-Edge Transactions showing how project structures can mitigate risks); knowledge resources (toolkits, standardized documents; legal structures and business models, testimonials); and the provision of an online network facilitating sharing of knowledge and access to experts and finance.

INVITATION: The Global Clearinghouse for Development Finance is developing a coalition of partners and pilot countries committed to building "*local infrastructure marketplaces*" in developing countries as the foundational basis for developing deep pipelines of investable infrastructure projects. For more information, please contact Dr. Barbara Samuels (barbara@globaldf.org, cell +1 917 359 6696).

Ai African Sovereign Wealth and Pension Fund Forum

The **Ai African Sovereign Wealth and Pension Fund Forum (ASWPFF)** is a high-level platform for African Sovereign Wealth and Pension Fund (SWF & PF) leaders to network and share best practices on key issues related to improving the investment environment for long term intra-African investment. It hosts the Ai African Pension and Sovereign Wealth Fund Infrastructure Co-Investment Platform, a dedicated platform to assist originate infrastructure co-investment opportunities for asset owners working in Africa.

The Forum fosters and facilitates inbound investment in the continent's financial markets, together with Northern Hemisphere asset owners and supranational institutions. The ASWPFF builds on a series of Ai-led consultations and events for African SWF & PF leaders to assess and determine existing barriers to investment in Africa – including non-listed assets such as infrastructure.

www.aiswpff.com

Ai INVESTMENT MATTERS

Ai capital

INVESTMENT MATTERS

Africa's Investment Partner of Choice

Africa investor (Ai) Capital is an investment holding company that aligns its partner base of pension funds, sovereign wealth funds, family offices, and long-term international investors with investment opportunities in Africa. Ai Capital also assists and advises African project developers to access international capital and provides foreign investment and transaction advisory services to African governments and global investors.