Private Sector Project Developers Scaling Investable Infrastructure in Africa:

Benchmarking Project Development Practices to Mobilize Private Capital

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CO-AUTHORS

Hubert Danso, CEO and Vice Chairman, Africa investor & Dr. Barbara Samuels, Executive Director of the Global Clearinghouse for Development Finance
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1.0 Summary

Implementing African infrastructure projects is the essential precondition for the development of the continent, yet the lack of infrastructure project pipelines with investable infrastructure projects is a major impediment blocking access to private capital and the consequential competitiveness dividends of improved infrastructure in Africa. To address this issue, the Advisory Board of the Ai African Project Developers Forum with technical support from Africa Investor (Ai) Capital and the Global Clearinghouse of Development Finance (GlobalDF) have pioneered the “Benchmark for Investing in African Infrastructure Project Development” (“I4PD Benchmark”).

The I4PD Benchmark is designed to provide a global economic comparative benchmark of key industry project development practices and requirements that underpin the development of investable medium to large infrastructure projects focused on Africa. Armed with these insights, public and private sector decision makers can accelerate the mobilization of private capital to increase the development and number of investable African infrastructure projects. Moreover, these insights can empower public decision makers to create “engines” for scaling up investable infrastructure projects in Africa, creating “infrastructure-enabling environments” that “crowd in” and incentivize project developers to build pipelines of investable African infrastructure projects.

To illustrate the specific project development challenges and requirements, the I4PD Benchmark covers the entire project development process for infrastructure projects from the inception of the project concept to financial close, covering project development efficiency, impediments to project development, project development costs, project development funding, project developer compensation, and infrastructure development impact (economic, sustainability, social impact and local stakeholder inclusion).

SURVEY PARTICIPANTS

Leaders from the 200 strong Ai African Project Developers Forum, infrastructure investors, and infrastructure-focused private and public sector entities participated in the survey. To enable regional and advanced economy comparisons, infrastructure participants outside of Africa participated in the survey. The survey respondents span the many essential roles in infrastructure project development from project sponsors, developers and investors to providers of finance, risk mitigation, services and equipment. Survey respondents operate across all infrastructure sectors.

Ai would like to thank the following institutions for their insightful participation and suggestions on the structure and topics of the benchmark instrument and design of survey questions:


SIZING THE IMPEDIMENTS

Private sector project development is a very competitive and challenging sector with high costs and risks limited to countries where the enabling environment is predictable and early stage projects can be systematically de-risked. The I4PD Benchmark results underscore the uniquely challenging project development issues and resultant high risks attached to infrastructure project development in Africa, even when compared against the other developing country regions of Asia, Emerging Europe, the Middle East, and Latin America.

African national governments have a unique opportunity to partner with the private sector project developer community, to create modern and transparent centralized engagement and procurement frameworks, and fast track the implementation of their priority infrastructure programmes, especially for energy and transport projects. A lack of national-enabling environments and considerable government-related impediments are reported as more significantly undermining the successful development of infrastructure projects in Africa.

Reported “critical” impediments are the lack of consistent political support processes and adequate government institutional counterparts; reported “significant” impediments are the lack of national enabling environments and significant government red-tape and lack of transparency. Solutions can be created by host governments through the centralization and streamlining of procurement processes, permitting, and documentation processes, including the scaling up of lower cost, lower risk procurement frameworks (e.g., auctions and globally applied and transparent unsolicited bid frameworks, etc.).

Respondents also stressed the lack of adequate risk mitigation and the need for greater support from development institutions, more investment incentives, and greater funding for non-
economic infrastructure. Such requirements can be built into government infrastructure programs and policies, supplemented with easily available project development funding and risk mitigation instruments. Survey participants noted the exceptional pipelines of investable projects resulting from South Africa’s renewable energy programs.

Moreover, the actual infrastructure project development process in Africa is reported as more difficult and costly than in other developing country regions. Given the lack of a continent-wide infrastructure project development industry and ecosystem, it is difficult to secure the required skilled professionals to successfully develop infrastructure projects in Africa. The reported success rate of African projects (i.e., reaching financial close and able to provide services) is on average in the region of only 20%.

Given these challenges and high risks of African infrastructure projects, financing is reportedly very difficult to obtain, and if accessible, the costs are very high (equity 22% average, debt 15% average). For project developers and early stage investors to take on these risks for infrastructure development projects, the reported average development premium for Africa is higher (16-20%) than for other developing country regions (11-15%).

However, survey respondents also stressed the foundational importance of Africa’s infrastructure development as the backbone for the continent’s economic growth and increased job creation. The potential for infrastructure project development to build sustainability, social impact, and local stakeholder inclusion into project design was underscored. Many survey respondents noted the transformative potential for the infrastructure development process to catalyse local economic development, greater employment, local training, and local partnerships.

**Key Findings – Africa compared with other developing country regions:**

Below are four key I4PD Benchmark findings with illustrative mapping of average African survey responses compared against average responses for other developing country regions and advanced economies.

1. **The risk premium is significantly higher for Africa compared to other developing country regions:** Due to the high perceived risk and cost of capital, Africa is the only region where the survey participants stated that the required internal rate of return (IRR) is 16-20% for securing local partners, strategic investors, and international financial partners. All other developing country regions are reported as having a lower IRR threshold of 11-15%.

   **Figure 1:** Higher Required Rates of Return for African Infrastructure Projects (in %)

   - **Financial Partners**
   - **Local Partners**
   - **Strategic Partners**

2. **Requirement for Greater Public Support:** When compared to other developing country regions, the survey results indicate that African infrastructure projects are perceived as lacking in key areas critical to successful infrastructure project development.
Respondents noted the relative greater importance of adequate political support and risk mitigation, and the need for greater support from development institutions, more investment incentives, and greater funding for non-economic infrastructure. The regional comparative survey comparing the survey participants’ ratings of the importance of these factors is presented in the left schematic on a scale of 1-10 (with 10 being most important).

African infrastructure projects face significantly greater difficulty in securing qualified professionals: The survey results underline the embryonic stage of the project development industry in Africa and the need for public interventions such as training, focused on the high professional standards required for the development of investable infrastructure projects.

When assessing difficulty on a 1-10 scale (with 10 the hardest), respondents assess the other developing regions as significantly easier to secure qualified professional staff: For example, the difficulty of securing a local qualified project developer in Africa is stated on average as 7.6 versus 5.0 for Asia, 4.6 for Emerging Europe, 4.7 for the Middle East, and 3.8 for Latin America. Likewise, securing local professional staff in Africa is assessed at 6.6, versus 5.0 for Asia, 4.6 for Emerging Europe, 4.7 for Middle East, and 3.8 for Latin America. This reported large variance in securing adequate professional staff for the development of infrastructure projects is mapped in the below schematic.
Reported Challenging Roles for African Project Developers: Respondents assert that the project success rate is low for African and Emerging Europe infrastructure projects:

- The average project success rate is 20% in Africa and Emerging Europe.
- Better project success rates are reported for other developing country regions: 25% in Latin America, 27% in Asia, and 40% in the Middle East. The project success rate for the advanced economies is reported at 46%.

Against this high-risk backdrop, the various roles of private sector project developers in Africa are perceived as more demanding and important than in the other developing country regions. These factors significantly drive up the risk profile and cost of developer finance and equity. Respondents were asked to rate developer roles on a scale of 1-10 (with 10 the most important). They reported greater importance of African project developer roles compared with that of project developers worldwide is illustrated in the below schematic.

**Figure 4: More Demanding Roles of Private Sector Project Developers** (rated 1-10, 10 most important)

- Securing Off-take Agreements
- Negotiating with government
- Securing Risk Mitigation
- Design of project ownership and government
- Structuring finance (equity and debt)
- Negotiating contracts with suppliers and contractors
- Securing competent long-term staff
The previous survey headlines document the extremely different environment for private sector infrastructure project development in Africa and the consequential difficulties in the mobilization of private capital. These challenges are significantly greater when compared against other developing country regions, given the higher risks, longer project development time periods, more limited access to competitive financing (and when accessible, more costly), difficulty in securing local skilled professionals, and challenging country environments.

Summary of Africa Findings by Pillar: The survey design covered eight key aspects of infrastructure project development in order to pinpoint more specifically the degree and type of challenges. Key highlights of the survey by pillar based on participants’ average responses are as follows:

1) Project Development Efficiency: Infrastructure project efficiency in Africa is very low on a comparative basis with other developing country regions:

- Longer project development times (5.4 years on average);
- Significant difficulties in securing project developers (especially local project developers) and local professional staff;
- Limited ability to access non-recourse (or limited project finance) and if accessible, limited tenors (10 years on average);
- High required internal rates of return (16-20% on average); and
- Significant inefficiencies in securing national government support, development partner support, risk mitigation, investment incentives, and provision of funding for non-economic infrastructure.

However, there is a wide range of differences across African regions and countries, with Southern Africa and South Africa cited consistently as exceptions (given the reported leading role of host governments, especially in launching effective renewable energy programs).

2) Government-Related Impediments to Project Development: Respondents reported “Critical” government-related impediments to project development. Lack of government capacity and adequate government institutional counterparts was rated as “Critical.” The lack of national-enabling environments and negative impact of government red tape and/or corruption was reported as “Significant.” Again, there were significant differences reported across African regions and countries.

3) Project Development Costs: Respondents reported that project development on average costs 10% of the total project cost. Regional cross-border projects were reported as often requiring much higher development costs. Significant development costs cover the spectrum of development activities: financing costs; development premiums; project management; financial advisory; legal support; local economic development requirements; securing land, permits, off-take agreements, etc.; technical studies; and overhead.

4) Project Development Funding: Respondents reported that both public and private funding is limited, and that the costs for obtaining capital are very high (equity 22.1% average, debt 14.6% average), even when compared to some other developing country regions.

5) Project Developer Compensation: The survey results underscore the wide array of challenges faced by project developers and the high risks associated with obtaining any compensation given high failure rates.

- On a scale of 1-10 (with 10 most important), developers are reported as having critically important roles in securing off-take agreements (9.1), negotiating with governments (8.8), securing risk mitigation (8.3), designing project structure and governance (7.9), securing finance (7.6), negotiating contracts (7.4), and securing competent long term staff (7.1).

- Against these demanding roles, project developers are reported as having low success rates: on average only 20% of infrastructure projects reach financial close.

- The reported main components of project developer compensation as a percent of total revenue are on average: investment income (46%), development premiums (39%), and fees (15%).

- The investment holding periods for African infrastructure project developers on average is reported as only 4.7 years, considerably shorter than other developing country regions.

6) Infrastructure Development Impact: The “Critical” need to improve the impact of infrastructure development on GDP growth and employment was stressed, especially with regard to catalyzing local economic development (e.g., employment, local suppliers, etc.) and as a basis for local training and skills development. Some respondents also suggested that the integration of local partnerships into infrastructure project design would be “Significant.”

7) Integrating Sustainability and Social Impact into Project Design: Respondents reported the “Significant” need to integrate sustainability and social impact into infrastructure project design.

8) Integrating Local Stakeholders into Project Design: The importance of local stakeholder inclusion in infrastructure projects is directly associated with project risk reduction and local development impact, enabling linkages with the local economy, the creation of supply chains, and job creation. Respondents reported the “Significant” or “Critical” need to integrate local stakeholders into infrastructure project design, provided risks associated with delays and risks can be mitigated.

These pillar benchmark summaries document the wider spectrum of unique challenges encompassing infrastructure project development in Africa, as well as its importance to economic growth, local economic and social impact, job creation, and sustainability. The next section explores the implications of the I4PD Benchmark results and specific actions in the roadmap towards solutions.

IMPERATIVE FOR SOLUTIONS

The survey participants underscore the urgent imperative for de-risking and reducing the costs for project development in Africa. The uniquely complex and challenging African environment means that the success rate of project development is extremely low. In turn, high risk translates into fewer projects being developed, and those projects in development need to pay high premiums to attract finance and investment and compensate for that higher risk.

Moreover, the lack of African private sector infrastructure project development translates into reduced job creation opportunities, lower country GDPs, lack of local economic development, and limited opportunities for local shareholder inclusion, sustainability and development impact (employment, carbon-reduction, gender equity, etc.), especially important during this crucial cycle of low economic growth and commodity prices. Likewise, without successful private sector-led infrastructure project development across Africa, the
The fundamental solutions advocated by survey participants require strong and consistent government leadership in creating continent-wide national “infrastructure-enabling environments” in consultation with private sector project developers, early stage financiers, and long-term investors. The higher risks of African private sector project development need to be addressed by governments in partnership with developers across Africa by creating consistent and enabling policies and programs within stable regulatory, legal, and institutional frameworks. As one participant stated: “[Local economic development can be achieved] ... to a significant extent but this becomes relevant only if the developer has security from a policy point of view that the pipeline of opportunities is sufficient to support such economic development in the long term.”

The “road-map to infrastructure-enabling environments” set forth by the survey results is cross-cutting with profound insights for African governments and their development partners as well as project developers, early stage financiers, and long-term investors.

Key road-map actions are:

1. **Create new partnerships in infrastructure project development:** By understanding the difficult challenges facing project developers working in Africa, governments and their development partners can provide targeted support frameworks and also come to better understand the high risks and resultant premiums. The public sector and the private sector need to collaborate together in a more effective way to create “infrastructure-enabling environments.” The AI African Project Developers Forum is a unique platform for governments and development partners to engage leading private sector project developers working across Africa on solutions, partnerships, and best practices on policy formulation.

2. **Jump start project development through government programs:** Participants note the leadership role of the South African government by setting up effective infrastructure programs, also catalyzing the development of the country’s private sector infrastructure project development ecosystem. As two African project developers stated:

   “[Local economic development] has been experienced in SA through the Renewable Energy IPP programme.” “… Government policies [need] to be put in place such as the South African renewable energy procurement program.”

3. **Increase use of risk mitigation for off-take agreements and access to long-term finance:** A critical enabling factor is confidence in full and timely payments from off-take contracts for infrastructure project services. Secure off-take contracts unlock the cost of developer finance for the development process and project long-term finance (debt and equity). Guarantees as well as innovative risk mitigation and finance facilities will be needed in most cases to ensure access to needed long-term finance. With the growing impact of Basel III and IV, banks cannot offer long-term local finance without the reduction of risks and/or the provision of acceptable risk mitigation. As participants stated:

   “[There is] very limited availability to raise funding in local currency outside of South Africa.” “We need to see longer tenors from local banks. South Africa banks are lending very long tenors for local currency which made the renewable programs possible.”

4. **Increase the number of adequately skilled African professionals, decreasing project development costs and facilitating scale:** Given the lack of adequate local project development professionals in the majority of African countries, there needs to be public support for the professionalization of the project development industry in Africa and the training of local professionals. As one respondent explained: “The more projects are successfully brought to Commercial Operation Date (COD), the more the market for these local professionals will become robust. If nothing else, local knowledge and cost should be drivers here.”

The I4PD Benchmark provides unique and concrete evidence of the specific reasons for the extreme shortage of African pipelines of investable infrastructure projects and private sector investment in the development and operation of infrastructure projects, thereby constraining Africa’s sustainable economic growth. While the challenges to mobilising private sector capital into project development remain the solutions and roadmap to their implementation are also evident. The African infrastructure project development ecosystem requires closer working partnerships between the various public sector entities and private sector infrastructure practitioners, early stage financiers, and long-term investors. These parties all have catalytic and interconnected roles in developing and sustaining essential infrastructure. By working hand-in-hand -- the public sector with private sector project developers, pension and sovereign funds and the continent’s capital markets -- the continent’s prospects for transformative job creation, regional integration, and global trade and investment competitiveness can be achieved.

The attached detailed report provides greater details on the survey responses for all the questions, also including the many comments of respondents. The report breaks out the wide spectrum of respondent answers, as the average responses often mask the underlying variances based on project size, sector (and sub-sector), country, and currency. The respondents’ comments also provide suggestions of the underlying factors for variances. A major reported factor is the country location of the infrastructure project in development. Notably South Africa is mentioned repeatedly as a leader in enabling the most effective development of infrastructure projects, especially in renewable energy.

**Next Steps – The Annual I4PD Benchmark Review and Consultation Process**

The AI Africa Project Developer Forum has created a unique platform to advance and further research on the infrastructure development process. The Forum is committed to ongoing consultations with the industry to enable rich and valuable multi-stakeholder exchanges, facilitating insights on issues and possible solutions. These exchanges are aimed at increasing private sector participation in the development and financing of early stage infrastructure projects and project development in Africa, and ultimately the generation of a greater volume of investable infrastructure projects on the continent.
The “road-map to infrastructure-enabling environments” set forth by the survey results is crosscutting with profound insights for African governments and their development partners as well as project developers, early stage financiers, and long-term investors.

Key road-map actions are:

1. Create new partnerships in infrastructure project development:
   By understanding the difficult challenges facing project developers working in Africa, governments and their development partners can provide targeted support frameworks and also come to better understand the high risks and resultant premiums. The public sector and the private sector need to collaborate together in a more effective way to create “infrastructure-enabling environments.” The Ai African Project Developers Forum is a unique platform for governments and development partners to engage leading private sector project developers working across Africa on solutions, partnerships, and best practices on policy formulation.

2. Jump start project development through government programs:
   Participants note the leadership role of the South African government by setting up effective infrastructure programs, also catalyzing the development of the country’s private sector infrastructure project development ecosystem. As two African project developers stated: “[Local economic development] has been experienced in SA through the Renewable Energy IPP programme.” “...Government policies [need] to be put in place such as the South African renewable energy procurement program.”

3. Increase use of risk mitigation for off-take agreements and access to long-term finance:
   A critical enabling factor is confidence in full and timely payments from off-take contracts for infrastructure project services. Secure off-take contracts unlock the private sector project development ecosystem as they insure access to predictable adequate project revenues, thereby (1) incentivizing private sector project development investment; and (2) driving down the cost of developer finance for the development process and project long-term finance (debt and equity). Guarantees as well as innovative risk mitigation and finance facilities will be needed in most cases to ensure access to needed long-term finance. With the growing impact of Basel III and IV, banks cannot offer long term local finance absent the reduction of risks and/or the provision of acceptable risk mitigation. As participants stated: “[There is] very limited availability to raise funding in local currency outside of South Africa.” “We need to see longer tenors from local banks. South Africa banks are lending very long tenors for local currency which made the renewable programs possible.”

4. Increase the number of adequately skilled African professionals, decreasing project development costs and facilitating scale:
   Given the lack of adequate local project development professionals in the majority of African countries, there needs to be public support for the professionalization of the project development industry in Africa and the training of local professionals. As one respondent explained: “The more projects are successfully brought to Commercial Operation Date (COD), the more the market for these local professionals will become robust. If nothing else, local knowledge and cost should be drivers here.”

The Ai African Project Developers Forum will therefore be instituting an annual review and consultation process on the I4PD Benchmark, encompassing the full range of project development issues and solutions, as the basis for the sharing of best practices and collaboration on their enhancement. This process will be designed to enable increase the participation of the private sector in the development of critical infrastructure projects in Africa as well as enable the greater engagement of new classes of long term institutional investors, such as pension and sovereign funds and insurance companies.

The I4PD Benchmark will therefore serve as an essential reference tool and framework for the Ai African Project Developers Forum and its members from the infrastructure project development ecosystem to advance an ongoing dialogue and consultation on roadmap implementation actions. The I4PD Benchmark will be formally presented with substantive bilateral exchanges on the way forward with critical public sector partners such as the African Union Commission and member states, the African Development Bank, Regional Economic Communities, the G20, the World Bank Group, NEPAD, the Continental Business Network, the Islamic Development Bank, the Asian Development Bank, the European Commission, key UN Agencies, and relevant bilateral development and finance partners.

We invite interested public and private sector stakeholders to partner on this initiative and process. Please contact us if you are interested in participating in the annual stakeholder review and consultation process or interested in partnering on the development of the “Infrastructure Benchmark for Investing in the Development of Small African Infrastructure Projects” – a new complementary project development benchmark focused on the specific challenges of developing smaller projects (defined as less than US$50 million).

The annual I4PD Benchmark and complete survey results will be published annually at the Ai CEO Africa Project Developers CEO Summit.

Please see the attached background section, followed by the detailed section on benchmark results by pillar.
2.0 Background on I4PD Benchmark: Investing in Africa Infrastructure Project Development

**Objective:** Given the importance of developing more investable African infrastructure projects, develop a “Benchmark for Investing in African Infrastructure Project Development (I4PD Benchmark)” that compares key metrics shaping the project development investment process for medium to large infrastructure projects. The approach is also designed to contrast Africa infrastructure project development against infrastructure project development in other geographical regions and advanced economies, enabling comparative benchmarks.

The I4PD Benchmark is therefore intended to inform decision makers on specific issues that need to be addressed to incentivize and increase private sector engagement in building pipelines of investable African infrastructure projects that can access private capital.

Led by its Advisory Board, the Ai African Project Developers Forum with the technical support from Ai Capital and the Global Clearinghouse of Development Finance (GlobalDF) are pioneering the I4PD Benchmark.

**Rationale:** The global development community has prioritized the mobilization of private sector capital for African and other infrastructure projects, given the limits on public capital and the abundance of private capital in both domestic and international markets. However, the lack of infrastructure project pipelines -- investable infrastructure projects -- is a major impediment blocking access to private capital.

In fact, a key issue highlighted by leading project developers operating in Africa, at both the 2015 and 2016 Ai CEO Project Developers Summits held in association with the International Finance Corporation (IFC), is the dearth of benchmarking information and analysis of project development best practices. Governments, Development Finance Institutions (DFIs), other development partners, and providers of capital, project preparation facilities, and risk mitigation need to understand the challenges and solutions faced by infrastructure practitioners developing infrastructure projects in Africa and around the globe.

The I4PD Benchmark is designed to provide a global comparative benchmark of key aspects of project development finance and investment norms that can inform decision makers on specific issues that need to be addressed to enhance and increase the development and number of investable African infrastructure projects that can access private capital. The I4PD Benchmark therefore focuses on key aspects of the development of medium to large infrastructure projects that require private sector finance (i.e., projects not 100% financed by host governments and/or development partners).

**Methodology:** The I4PD Benchmark is based on the direct input of infrastructure practitioners (private and public sector) who are currently involved in the development of infrastructure projects aimed at mobilizing private capital in Africa, other developing country regions, and advanced economies. The survey approach is designed to highlight basic essential aspects of the project development process for infrastructure projects, focusing on securing the required debt finance and equity investment capital. The benchmark measures the norms that affect the ability to develop investable infrastructure projects so that they can reach financial close. In this regard, it is important to note that the global best practice for infrastructure finance is the use of project finance techniques, which requires a rigorous project development process that ensures projects are sustainable on a stand-alone basis (i.e., able to service debts and equity commitments from project operations without recourse to project sponsors).

These project development norms affect the quality and quantity of projects in African project pipelines, covering time, cost, access to finance, returns, and impact on the continent’s GDP growth, employment, economic development, and competitiveness. Leading infrastructure practitioners in Africa from the private and public sectors provided critical suggestions on how to structure the I4PD Benchmark survey and recommended specific questions for inclusion.

**Definition of Project Development:** The I4PD Benchmark covers the entire project development process for infrastructure projects. The project development process is defined as the activities from the inception of the project concept through its definition, structuring, and development until financial close. The development process includes the full range of activities, such as project conceptualization to setting up the legal entity and ownership structure, securing capital to develop the project, engaging professionals to conduct project development activities, the definition and completion of required technical studies, negotiation of contracts, obtaining the required off-take agreements and permits, land acquisition, securing of equipment and service providers, structuring of finance and risk mitigation, negotiation of financial and other contracts, and addressing all impediments in the development process. At financial close, the project has secured the equity and debt finance required to construct and operate the project.

**Benchmark Pillars:** Eight aspects of infrastructure project development are measured, serving as “pillars” of the I4PD Benchmark:

1. Project Development Efficiency
2. Government-Related Impediments to Project Development
3. Project Development Costs
4. Project Development Funding
5. Project Developer Co-financement
6. Infrastructure Development Impact
7. Integrating Sustainability and Social Impact into Project Design
8. Integrating Local Stakeholders into Project Design

**NOTE:** This project development benchmark will be compiled annually based on ongoing engagement with key stakeholders working in the infrastructure project development ecosystems in Africa and across other regions worldwide. We welcome suggestions on how to enhance the survey process and benchmark, and invite suggestions from participants and users on the methodology, questions, and output. Feedback can be provided to Hubert Danso, CEO, Africa investor (hdanso@africaninvestor.com) and Dr. Barbara Samuels, Executive Director, Global Clearinghouse for Development Finance (barbara@globaldf.org).

**I4PD Benchmark Launch and Use:** The I4PD Benchmark was launched at the 2017 Ai CEO Project Developers Summit on the 3rd of May 2017 in Durban, South Africa. Ai Capital and the Global Clearinghouse for Development Finance (GlobalDF), Africa investor’s technical partner, will also disseminate the I4PD Benchmark in global public and private sector forums, including “Financing for Development,” and in GlobalDF activities aimed at strengthening the local ecosystems, processes, and performance metrics for successful infrastructure project development.
Survey Participants: Since there are no databases with project development statistics, the I4PD Benchmark is survey-based, using input from a wide array of experienced infrastructure practitioners. To enable regional and advanced economy comparisons, infrastructure participants outside of Africa have participated in the survey.

The survey builds on an initiative of the Ai African Project Developers Forum which represents and polls over 200 leading institutions involved with project development, early stage financing, and infrastructure investment in Africa and globally.

The profile of survey participants is as follows:

- **Area of business:** Of all survey respondents, 85% operate in Africa and 15% operate in other regions. A large majority of respondents operate in Southern Africa (44%), followed by West Africa (21%) and East Africa (14%).
- **Home Base:** Most respondents are located in South Africa (65%), followed by Kenya (12%), Cote d’Ivoire (8%), Nigeria (6%), and Uganda (4%).
- **Public or Private Sector:** Most participants are in the private sector (84%); 16% are in the public sector.
- **Type of Role in Infrastructure:** Many survey respondents have multiple roles in infrastructure. The percentage of respondents operating by role is as follows: equity investors (57%); project developers (44%); early stage project developers or investors (42%); project sponsors (34%); financial advisors (29%); providers of project preparation/developer grants (11%); providers of subsidized finance (9%); consultants for technical studies (11%); providers of equipment, services, or goods (9%); providers of risk mitigation (5%); project finance lawyers (4%); and off-takers (3%).
- **Sectors:** Many survey respondents operate in several infrastructure sectors. The percentage of respondents operating by sector is as follows: renewable energy (85%), conventional energy (67%), roads (44%), energy transmission and distribution (43%), water (43%), large transport (40%), telecom (35%), and social infrastructure (33%).

The report is based entirely on the responses provided by participants. Many survey participants provided insightful comments. Some survey participants gave authorization that their comments could be provided with attribution in the report. For other participants, only their role in infrastructure is noted.

The detailed report with benchmark results by pillar is presented in the following section.
Detailed Report: Benchmark details by pillar

As explained in the prior section, eight aspects of infrastructure project development are measured, serving as “pillars” of the I4PD Benchmark:

1) Project Development Efficiency ............................................. 13
2) Government-Related Impediments to Project Development .................. 23
3) Project Development Costs .................................................. 27
4) Project Development Funding ............................................. 32
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6) Infrastructure Development Impact ...................................... 44
7) Integrating Sustainability and Social Impact into Project Design .......... 48
8) Integrating Local Stakeholders into Project Design ........................ 51

Each pillar is represented in a separate section. For each pillar, there is a brief summary, followed by a section on the African responses detailing on the spectrum of responses and details by each question. The last section of each pillar has a section providing regional comparisons.
PILLAR ONE: Project Development Efficiency
The first pillar of the benchmark is focused on project development efficiency. Survey respondents provided their views on various aspects of project development that must be confronted to develop investable African infrastructure projects and achieve access to finance.

Summary: The project development process in Africa was depicted by survey respondents as extremely challenging across the full spectrum of factors required for the successful development of infrastructure projects from project inception until financial close. When compared to other developing country regions, the difficulty of Africa’s infrastructure project development was reported as significantly greater.

Africa’s infrastructure project development is markedly more inefficient than that reported for other developing country regions:
- Longer project development times (5.4 years on average);
- Significant difficulties in securing project developers (especially local project developers) and local professional staff;
- Limited ability to access non-recourse (or limited project finance) and if accessible, limited tenors (10 years on average);
- High required internal rates of return (16-20% on average); and
- Significant inefficiencies in securing national government support, development partner support, risk mitigation, investment incentives, and provision of funding for non-economic infrastructure.

However, there is a wide range of differences across African regions and countries, with Southern Africa and South Africa cited consistently as exceptions (given the reported leading role of host governments, especially in launching effective renewable energy programs).

Therefore, in assessing the African responses, the average survey responses mask the variance between challenges across African countries. As noted, a large number of survey respondents are located in the South Africa, the most highly rated infrastructure country in the survey. This South African participant concentration suggests that the dominant share of African countries may face greater challenges in infrastructure project development than reflected in the survey average responses.

Detailed Responses for Africa: The average responses to the questions and the spectrum of responses are detailed in the below table.

Table 1: Pillar One – Project Development Efficiency
Summary of Questions, Average Responses, and Spectrum of Responses

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Average Time to Develop Project from inception to financial close?</td>
<td>5.4 years</td>
<td>45% respondents stated 3-5 years, 41% stated 6-8 years, 7% stated 9-15 years</td>
</tr>
<tr>
<td>2. Difficulty to Secure Project Developer (scale 1-10 hardest)?</td>
<td>6.3</td>
<td>52% respondents stated difficulty higher between 7-10</td>
</tr>
<tr>
<td>3. Difficulty to Secure LOCAL Project Developer (scale 1-10 hardest)?</td>
<td>7.6</td>
<td>52% respondents stated difficulty higher between 8 and 10</td>
</tr>
<tr>
<td>4. Difficulty to Secure LOCAL professionals (scale 1-10 hardest)?</td>
<td>6.6</td>
<td>47% respondents stated difficulty higher between 7 and 10</td>
</tr>
<tr>
<td>5. Design of project to optimize economic impact?</td>
<td>Sometimes</td>
<td>52% respondents stated “Sometimes” while 28% stated “Often” or “Always”</td>
</tr>
<tr>
<td>6.a. Structuring project to meet investment criteria of institutional investors?</td>
<td>Rarely</td>
<td>45% respondents stated “Rarely” while 28% stated “Sometimes”</td>
</tr>
<tr>
<td>6.b. Project developers invite institutional investors to invest?</td>
<td>Rarely</td>
<td>44% respondents stated “Rarely” while 34% stated “Sometimes”</td>
</tr>
<tr>
<td>7.a. Availability of non-recourse or limited recourse project finance?</td>
<td>Very Limited</td>
<td>40% respondents stated “Very limited” while 24% stated “ Moderate Availability”</td>
</tr>
<tr>
<td>7.b. Tenor lengths for infrastructure loans in market?</td>
<td>10 years</td>
<td>37% respondents stated 7-10 years, 20% stated 13-15 years, 18% stated less than 7 years, 14% stated 11-13 years, 11% stated over 16 years</td>
</tr>
<tr>
<td>7.c. Minimum Internal Rates of Return required for investors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Local partners?</td>
<td>18.3%</td>
<td>50% respondents stated 16-20%, 24% stated 21-30%, 24% stated 11-15%</td>
</tr>
<tr>
<td>(ii) International strategic partners?</td>
<td>17.8%</td>
<td>52% respondents stated 16-20%, 27% stated 11-15%, 19% stated 21-30%</td>
</tr>
<tr>
<td>(iii) International financial investors?</td>
<td>19.3%</td>
<td>60% respondents stated 16-20%, 21% stated 21-30%, 14% stated 11-15%</td>
</tr>
<tr>
<td>8. Effectiveness factors related to infrastructure project development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.a. Lack of consistent political support of national government?</td>
<td>Always</td>
<td>67% respondents stated “Always,” 23% stated “Often,” 6% stated “Sometimes”</td>
</tr>
<tr>
<td>8.b. Lack of support from development finance institution and/or development partners?</td>
<td>Always-Often</td>
<td>37% respondents stated “Always,” 35% stated “Often,” 19% stated “Sometimes”</td>
</tr>
<tr>
<td>8.c. Need for provision of risk mitigation?</td>
<td>Often-Always</td>
<td>44% respondents stated “Often,” 37% stated “Always,” 13% stated “Sometimes”</td>
</tr>
<tr>
<td>8.e. Need for provision of government funding for non-economic infrastructure?</td>
<td>Often - Sometimes</td>
<td>48% respondents stated “Often” and 31% “Sometimes,” 15% stated “Always,” 7% stated “Rarely”</td>
</tr>
</tbody>
</table>
Details by Question

Details on the survey respondents’ input on project development efficiency are provided below, numbered by survey question.

1) **AVERAGE TIME REQUIRED FOR PROJECT DEVELOPMENT** – 5.4 YEARS. Survey respondents estimated the average length of time to develop an infrastructure project of over US$ 50 million from project identification to financial close as 5.4 years.

However, the range of answers indicated a wide expance of experience, with 47% of the respondents notably providing longer time periods: 41% answering 6-8 years and 6% answering 9-15 years.

The factors determining the length of time relate to the specific sector and the country environment. Comments provided by respondents illustrate how specific sector requirements and country environments account for wide variances in project development time. Comments providing insights on the project development process are provided below:

- “It takes 6-8 years as most of these infrastructure programs require government procurement policies to be in place. Where the government policies are in place, one is looking at 3-5 years and in exceptional circumstances this can be achieved in 1-2 years” (Project Developer).
- “The time to develop the legal and regulatory elements in the enabling environment, as well as developing capacity in the public sector to negotiate related agreements, is the major contributor to this time-frame. It could easily double if there are significant changes in public utilities and key government departments that require the promoter to restart some of the negotiation processes” (Linsey Dyer, DRA, Project Developer and Consultant).
- “Solar PV is a lot quicker in Africa for smaller projects. Larger ones still take 2-4 years. In advanced economies, solar PV can be done in months with a private sector off-taker” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).
- [Project development is “quicker in South Africa than the rest of Sub-Saharan Africa” (Financial Advisor).

2 – 4) **THE DIFFICULTY OF SECURING REQUIRED PROFESSIONALS FOR INFRASTRUCTURE PROJECT DEVELOPMENT** – (6.3 - 7.6) on a scale of 1-10 (with 10 most difficult) (average). Survey respondents reported the significant difficulties of securing project developers (especially from inside Africa) and also the difficulty of securing the required professional staff, such as financial advisors, engineers, project finance lawyers, etc. Survey responses to three key aspects of professional project management are detailed below.

2) **SECURING PROJECT DEVELOPERS** – 6.3 (average). Respondents on average find the difficulty of engaging qualified project developers for infrastructure projects as 6.3 on a scale of 1-10 (with 10 most difficult). Again, the range of answers indicates a divergence in experience, with 52% of the respondents assessing the difficulty of finding project developers at between 7 and 10. However, other respondents provided more positive assessments on a scale of 2-6. The respondent comments provide insights into the challenges, dynamics, and high expense of securing qualified project developers:

- “Africa remains very challenging both in terms of finding qualified teams and in securing development capital” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).
- “It’s difficult at times to find well experienced international developers with the relevant local knowledge and experience of where the project is being developed” (Project Developer).
- “In a country like South Africa, it is much easier to find a project developer; however for the rest of Africa, it is quite challenging to find credible project developers” (Project Developer).
- “Synnove acts as a project developer for the projects it funds due to the high cost of quality developers coming from outside of Africa” (Fred Sisson, CEO Synnove Energy, Project Developer).

3) **SECURING LOCAL PROJECT DEVELOPERS** - 7.6. The difficulty of engaging project developers from within Africa is acknowledged as especially difficult. Again, the range of answers indicates a divergence in experience, with 52% of the respondents assessing the difficulty of finding local project developers at between 8 and 10.

The survey comments underscore the importance of developing local African project developers and how the process has begun in Southern Africa as a result of government procurement programmes:

- “Virtually no local project developers, except in South Africa and North Africa” (Project Developer and Investor).
- “It’s difficult at times to find well experienced local developers with the relevant know how” (Project Developer).
- “[There are] … very few local professionals who view project development as viable” (Alexander George Owino, Infrastructure Finance Specialist).
- “There is a huge divergence between countries within regions” (Project Developer).
- “Synnove acts as a project developer for the projects it funds due to the high number and relative low quality of other developers in the market” (Fred Sisson, CEO Synnove Energy, Project Developer).
- “[Almost none] other [project developers] than in South Africa. Implementing Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)-like initiatives in South Africa in other countries will be a strong way to initiate the development of local capacity…. There is a growing number of capable developers from Europe, China, India and elsewhere gaining experience in the Southern African market - whether that makes them qualified may be another matter. There is also a marked growth in homegrown capability in Southern Africa thanks to the REIPPPP Programme. Clarity on the expectations of government is critical; the 2015 request for Expressions of Interest by Botswana’s Department of Energy for 100MW solar PV resulted in submissions from many parties, most of which are not developers, qualified or otherwise. On a separate note, one of the key qualification issues is for developers to be sufficiently capitalised to weather longer than expected development processes, as we’ve seen with the current REIPPPP round where the developers are still waiting for PPAs from Eskom, although they’ve been given firm dates for Financial Close from the Department of Energy - a number of times” (Linsey Dyer, DRA, Project Developer and Consultant).

4) **SECURING LOCAL PROFESSIONAL STAFF** - 6.6 (average). The survey respondents were asked how difficult it is to engage the qualified local professionals required for the development of infrastructure projects (e.g., financial advisors, project finance lawyers, engineers, etc.). The survey comments underscore the lack of qualified professional staff in most African countries, the concentration of local professionals in South Africa, and the role of local knowledge and lower costs as potential drivers increasing the supply of qualified African professional staff across the continent for project development:

- “…very few local professionals view project development as viable” (Alexander George Owino, Infrastructure Finance Specialist).
“Getting better, but qualified staff still rare” (Project Developer and Investor).
“Easier in South Africa” (Financial Advisor).
“Not at all difficult in South Africa, less difficult especially for lawyers in other larger economies (e.g., Kenya, Nigeria), more difficult in smaller economies to obtain local services, so they are generally procured from South Africa instead” (Jonathan Berman, Fieldstone Africa, Financial Advisor).
“Again, South Africa is an exception to the rule” (Project Developer).
“Easier where international companies have subsidiaries or local offices” (Bertrand Belben, InfraCo Africa, Project Developer).
“[There is a] big difference between the professions and countries in each region” (Project Developer).
This is “averaged” out as it isn’t the same for the different categories of professionals above” (Bhavtik Vallabhjee, Barclays Africa, Financial Advisor).
“It would be interesting to disaggregate this question by profession, and by country. In South Africa the answer would be 1. Also, there is good engineering and construction capability available to work with international partners (the key there being they don’t have the track record or often capacity to satisfy funders they can do the work alone), so my response there would be between 3 and 5 depending on the country. Outside of South Africa, we still lack a critical mass in expertise and experience in these areas, except where specific project initiatives have attracted temporary inputs - but professionals cannot build a sustainable business on single opportunities and need to find work for clients other than international developers. We would typically look for project finance lawyers and financial analysts in local branches of international legal and audit firms. The more projects are successfully brought to COD, the more the market for these local professionals will become robust. If nothing else, local knowledge and cost should be drivers here” (Linsey Dyer, DRA, Project Developer and Consultant).

5) DESIGN OF PROJECT TO OPTIMIZE ECONOMIC IMPACT
– Sometimes (average): Respondents were asked to give their views on the extent to which infrastructure projects are currently designed to optimize their economic impact. The majority of respondents (54%) stated this was the case “Sometimes.” However, there was a wide variance in responses, as 28% of respondents stated “Often” while 18% stated “Rarely” and 4% stated “Always.” The comments provide insights as to the underlying factors driving these divergent views:

1 Difference in sectors: Infrastructure projects will vary based on sector and sub-sector. For example, one respondent pointed out the special nature of renewable energy projects in focusing on economic impact: “… developers bend over backwards to optimise socio-economic impact of renewable energy projects; less so with conventional energy. This is possibly attributable to the ethos behind some of these renewable projects. Example: the Kibali mine developed by Randgold/AngloGold Ashanti is supplied by 2 hydropower projects which also provide the town (built by the mine as well) with electricity as part of their ongoing drive to maintain Social License to Operate” (Linsey Dyer, DRA, Project Developer and Consultant).

2 Difference in location: Again, South Africa was set forth as an exceptional case. A respondent reported that economic impact is “More so in South Africa than the rest of sub-Saharan Africa” (Financial Advisor).

3 Need for conducive government policies: Another respondent attributed the distinctive case of South Africa to its specific policies: “For this to be always be the case requires government policies to be put in place such as the South African renewable energy procurement program” (Project Developer).

Respondents also stressed the essential role of proactive government policy in designing local impact programs and promoting greater local content and job creation:

“Given the infrastructure deficit in Africa, any successful infrastructure project when completed has a huge economic and developmental impact. However, more can be achieved if local production of input materials can be sourced locally. Unfortunately, this is can only happen in a few sectors like road construction, etc.” (Project Developer and Sponsor).
“Governments spend more time pushing risk to private sector than they do imposing local impact programs. Governments should take responsibility on certain risks (currency, default of payments, etc.) but in turn should force developers to have greater integration with local economy. One must remember that the holistic pricing must work for investors, so Governments must choose what priorities they have local developers focus on” (Brian Herlihy, Black Rhino, Project Developer).

Therefore, the respondents stressed the imperative and opportunity for deriving much greater economic impact from infrastructure projects. However, this will require that African governments be much more active and effective in setting forth needed policies and programs.

6.a) STRUCTURING PROJECT TO MEET INVESTMENT CRITERIA OF INSTITUTIONAL INVESTORS – Rarely (average):
With increasing restrictions placed on commercial banks (in light of Basel III), respondents were asked to what extent project developers are preparing or seeking to meet the investment criteria of pension, sovereign wealth fund and insurance investors. The greater number of responses (45%) stated “Rarely” contrasted with 26% stating “Sometimes” and 23% “Often.”

The respondents highlighted the complexity of the challenge of mobilizing institutional investment for infrastructure projects. First institutional investors are not candidates for investment in the infrastructure project development process given the high-risk levels. As one respondent stated: “The focus of project developers at the development stage is to target DFI and commercial bank funding. Pension funds can only be targeted as either institutional investors post construction of the project when it has been de-risked. Institutional investors typically like low risk-reliable cash flow businesses which cannot be achieved at the early stage of the infrastructure development cycle” (Project Developer and Sponsor).

However, once infrastructure projects have been developed and are operating with positive cashflows, accessing finance in the local institutional market is critical. Several respondents noted again the leading role of South Africa: “More so now in South Africa than the rest of sub-Saharan Africa” (Financial Advisor).

In this regard, respondents noted that significant efforts need to be made on both the project developer and the institutional investment sides. In terms of project structuring, some progress is being made according to one respondent: “Project developers are highly focused on getting to COD, and the class of investors mentioned here is more likely to invest post-COD once the project has been de-risked, meaning many developers don’t yet seem to be actively thinking about engaging them. That said, Power Africa is actively engaging American pension funds and sovereign wealth funds through their transaction advisory services.”
In terms of institutional investment, several respondents stressed the need for improvements in the regulatory environment and capacity:

- “African pension funds have come a long way to prepare for investing in infrastructure. Creating the right regulatory framework allowing pension funds to allocate assets to infrastructure remains a challenge in most African countries” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).
- “Other than in SA, this is sadly quite rare. But we firmly believe it can and should grow as a mechanism to fund projects, especially local currency denominated and/or locally managed funds” (Jonathan Berman, Fieldstone Africa, Financial Advisor).
- “Needs of SWFs and PFs non-existent at the moment as they are NOT players in the Kenyan and EAC Infrastructure space. Even in cases where they have invested like the PIC/GEPF in Lake Turkana Wind Power their needs do not feature at all. SWFS and PFs in Africa have work to do!” (Alexander George Owino, Infrastructure Finance Specialist).

Another respondent suggested a new approach focused on institutional investment in corporate companies instead of one-off projects: “Two comments: 1) it is a mistake to think that a Project can be prepared for the asset class above, we really need projects that form part of a company’s assets and in turn this asset class can take risk on the companies (not individual projects)” (Brian Herlihy, Black Rhino, Project Developer).

6.b) PROJECT DEVELOPERS INVITE INSTITUTIONAL INVESTORS TO INVET - Rarely (average): In this question, respondents were asked to what extent project developers are taking the initiative of actually inviting or engaging pension funds, sovereign wealth funds and insurance investors to invest in their projects. Again, the majority of respondents (45%) respondents stated “Rarely” while 34% stated “Sometimes” and 15% stated “Often.”

The variance in responses, and the underlying reasons, are again illustrated in the comments. First, a number of respondents questioned the premise of the question itself:

- “I think this is the wrong question - should be - how many Pension Funds, SWFs, insurance investors [are] capable of investing in infrastructure?” (Financial Advisor).
- “In Africa, the markets are not deep enough and the products have not been developed to attract institutional investors” (Project Developer and Sponsor).
- “We do not think there is a match for this asset class at the Project level, but we do think there is a match for this asset class to invest at the company level” (Brian Herlihy, Black Rhino, Project Developer).

In terms of actions that need to be taken, one respondent stressed the need for better more reliable finance models related to institutional investment so that developers have confidence that institutional investment is in fact possible: “[We need] Better developed tried and tested models, that developers have confidence in. Project development timetables are already so long and hazardous that many developers are not open to experimentation with financing solutions” (Jonathan Berman, Fieldstone Africa, Financial Advisor). Another respondent asserts that the trend for institutional investment is actually in motion, as there are actual cases of successful invited institutional investment in the post-development phase of projects (e.g., the Lake Turkana Wind Project): “Lake Turkana Wind in Kenya has SA’s PIC/GEPF as an Investor. Kengen (Power Company) recently invited PIC/GEPF to invest about USD20 million in a Rights Issue (for shares not taken by shareholders)” (Alexander George Owino, Infrastructure Finance Specialist).

7) IN THIS SECTION, SURVEY RESPONDENTS WERE ASKED QUESTIONS RELATED TO THE KEY CHARACTERISTICS OF THE BANK MARKET IN THEIR PRINCIPAL AREA OF OPERATION.

Availability of non-recourse or limited recourse project finance: Very Limited (average). The greater number of respondents (40%) stated “Very Limited” while 24% stated “Moderate Availability” and 19% stated “Medium Availability.” Again, the divergences are related to location of banks (i.e., South Africa as exception) and the project sponsors ability to access project finance from international banks and/or DFIs.

As noted in the comments, the overall availability of non-recourse (or limited) project finance is low given the long-term tenors needed and the high risks of the projects themselves, especially given the often un-creditworthiness of their off-takers. As one respondent stated: “Bank financing is very limited for infrastructure due to lack of long term funds to match the tenor of infrastructure projects and due to risks - mainly the poor credit rating of Off takers, typically State Corporations” (Alexander George Owino, Infrastructure Finance Specialist). However, South Africa is again noted as an exception according to one respondent: “Very good in South Africa, moderate in Namibia and Botswana, and very limited in most other markets we operate in and across sub-Saharan Africa” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

The reliance on international banks and funding from DFIs was also noted. One respondent stated: “[There is] very limited availability to raise funding in local currency outside of South Africa. However, there is appetite for USD / Euro funding” (Project Developer). The general lack of local bank funding translates into greater reliance on DFIs for project finance. “We have looked to the DFI market due to the volatility of the local banking markets. We would like to do more with the local banks but need greater comfort on their long-term capacity (outside South Africa)” (Brian Herlihy, Black Rhino, Project Developer).

Tenor lengths for infrastructure loans in market –10 years (average). Respondents were asked for the available tenor lengths for infrastructure loans in the market. The largest portion of respondents (37%) stated 7-10 years. However, again the variance was large: 20% stated 13-15 years, 18% stated less than 7 years, 14% stated 11-13 years, and 11% stated over 16 years.

The respondents’ comments stressed the variance: “Varies depending on sector” (Financial Advisor); “Varies a lot across countries” (Equity Investor); “Depends on project quantum costs” (Project Developer).

South Africa was singled out as the exception to shorter tenors: “Loans with tenors above 10 years are difficult to find. The SA banks and development banks are an exception” (Dr. Herta von Stiegel, Ariya Capital, Project Developer); “Over 15 years in SA. In most other Sub-Sahara markets, less than 7 to maximum of 7-10 [years] from local commercial banks” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

The need for longer tenors and the special role of DFIs in providing longer tenors was also noted: “DFIs tend to extend loan tenors, up to 16 years. Commercial banks have shorter tenors up to 10 years, and, more rarely, 15 years” (Project Developer and...
Investor): “We need to see longer tenors from local banks. South African banks are lending very long tenors for local currency which made the renewable programs possible” (Brian Herlihy, Black Rhino, Project Developer).

**Minimum Internal Rates of Return required for investors:**
For this question, respondents were asked based on their experience their views on the minimal internal rate of return (IRR) required for three investor types: local partners, international strategic partners, and international financial investors.

i. **Local partners – 18.3% (average).** The majority of respondents (50%) answered 16-20%. However, again there was significant variance with 24% selecting 21-30% and 24% selecting 11-15%.

Respondents’ comments noted the importance of sector, country and currency, and whether the project had secure off-take agreements (i.e., not merchant risk). For example, one respondent stated: “Depending on sector, country and currency, return requirements can be this low but may be up to 20%” (Jonathan Berman, Fieldstone Africa, Financial Advisor). Another respondent factored in the risk level associated with stable income secured by a firm off-take agreement: “Closer to 20% - assume project finance risk. If it were merchant risk need closer to 30%” (Brian Herlihy, BlackRhino, Project Developer). However, one respondent suggested IRRs would decline: “We see over the rates dropping to 11-15%” (Project Developer).

ii. **International strategic partners – 17.8 (average).** The majority of respondents (52%) answered 16-20%. However, again there was significant variance with 27% selecting 21-30% and 19% selecting 11-15%.

Respondents’ comments noted again the importance of sector, currency, and country, also noting the generally lower return expectations for clean and renewable energy. “International investors still view Africa as quite risky and expect high returns. The infrastructure return expectations are generally lower than for clean and renewable energy” (Dr. Herta von Stiegel, Ariya Capital, Project Developer). However, the different nature of international strategic investors and willingness to accept lower returns was noted, given their priority focus on entering and securing positions in new markets: “…strategic investors … want to secure market share” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

iii. **International financial investors – 19.3% (average).** The majority of respondents (60%) answered 16-20%. However, again there was significant variance with 21% selecting 21-30% and 14% selecting 11-15%.

The different nature of international financial investors was noted, given their demand for higher returns: “Financial investors tend to expect higher returns than strategic investors…. “ (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

b) **Effectiveness Factors Related to Infrastructure Project Development:** Based on their experience, the respondents were asked to share their views as to whether certain well-known enabling conditions for infrastructure development are available at project inception to ensure the successful and timely development of investable infrastructure projects. The four questions detailed below cover: consistent political support, the support of DFIs and other development partners, the need for risk mitigation, the need for investment incentives, and the need for funding of non-economic infrastructure.

**Consistent Political Support of National Government – Always (average).** Over two-thirds respondents (67%) stated that consistent political support of infrastructure project development is “Always” needed to ensure successful completion. Almost 30% of respondents answered “Often,” or “Sometimes.”

The importance of adequate political support was stressed by one respondent: “The biggest issue by far. All other issues pale in comparison and it is this lack of consistent government support that is Africa’s problem. Everything else is simple. As far as identifying impediments to project success, you could stop the survey right here” (Mark Fitzpatrick, Aldwych International, Project Developer).

The importance of political support is even greater for larger infrastructure projects in development. As one respondent stated: “For large infrastructure projects, government support is critical. It does not always need to be a government guarantee, but the explicit support by the Ministry of Energy in the media, through a letter of comfort, etc. is essential” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

**Support of Development Finance Institution and/or Development Partners: Always - Often (average).**
Respondents also set forth that the support of Development Finance Institutions (DFIs) and/or development partners is an important factor for the successful development of African infrastructure projects. Almost all survey participants (92%) stated that development partners can be an important factor: 37% respondents stated “Always,” 35% stated “Often,” 19% stated “Sometimes.”

For example, one respondent stated: “We are turning to support grants/risk loans from development agencies more and more” (Brian Herlihy, BlackRhino, Project Developer). Another survey participant noted that development partner support is needed for medium-larger projects in all African countries with the exception of certain Southern Africa countries: “SA and to some extent Namibia and Botswana the only SSA markets where DFI finance is not a pre-requisite for medium to large projects” (Jonathan Berman, Fieldstone Africa, Financial Advisor). Another participant suggested that the support of development partners is more important at the later stages of project development: “Not a prerequisite at inception - Can evolve later in the life-cycle” (Bhavtik Vallabhjee, Barclays Africa, Financial Advisor).

However, some respondents were critical of the role of development partners in Africa, suggesting they need to issue more guarantees, reduce their fees, and be careful not to crowd out the private sector:
- “DFIs are often more expensive and rigid than commercial banks, they hide that they have to safeguard ‘Taxpayers’ money’ but in the end profit expectations are sometimes higher than with commercial banks, they use the situation that in certain countries the developers have no alternative” (Project Developer).
- “DFIs could be very helpful if they issued guarantees, but often they now compete with the private sector in large infrastructure project and, if not careful, can distort the market” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

**Need for Provision of Risk Mitigation: Always - Often (average).** Respondents also stated that the provision of risk mitigation is an important factor for the successful development of African infrastructure projects. Almost all survey participants (94%) stated that risk mitigation provision can be an important factor: 37% respondents stated “Always,” 44% stated “Often,” 13% stated “Sometimes.”
Respondents again noted the differences across African countries, with South Africa again being the exception: “Doesn’t apply to South Africa” (Financial Advisor). Also, respondents noted the importance of Partial Credit Guarantees (PRGs) and Political Risk Insurance (PRI):

• “Commercial banks will need institutions like MIGA to issue PRG/PRI or similar guarantees” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

• “PRI and PRG are two most investment criteria” (Brian Herlihy, BlackRhino, Project Developer).

However, the importance of expanding risk mitigation and applying it to meet local needs with greater flexibility was noted: “Greater flexibility of risk mitigation instruments would be helpful” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

**Provision of Investment Incentives: Sometimes - Often (average).** Respondents also stated that the provision of investment incentives is an important factor for the successful development of African infrastructure projects, but less critical than political support and risk mitigation. Almost all survey participants (89%) stated that investment incentives can be an important factor: 44% of respondents stated “Sometimes,” 35% stated “Often,” and 10% stated “Always.”

Survey participants especially noted the importance of investment incentives, such as project preparation funding and tariff subsidies:

• “Especially grants for project preparation and subsidies such as linked to Feed In Tariffs (i.e. the KfW’s GET-Fit programme)” (Linsey Dyer, DRA, Project Developer and Consultant).

• “Tariff structures can on their own support economics for projects, but if there are reasons (often political or presentational) why tariffs at commercial levels are not viable, then other incentives can substitute. The political risk of future amendments to these remains however” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

**Provision of Government Funding for Non-Economic Infrastructure: Often – Sometimes (average).** Respondents also stated that the provision of government funding of non-economic infrastructure is an important factor for the successful development of African infrastructure projects. Almost all survey participants (94%) stated that the public funding of non-economic infrastructure provision can be an important factor: 48% respondents stated “Often,” 31% stated “Sometimes,” 15% stated “Always.”

One respondent suggested that more funding is needed, as often private companies undertake non-economic funding to be able to deliver on their projects: “I would say always from a ‘who SHOULD provide this’ perspective - but I have seen private companies step in too often (e.g. Mozambique and Niger to provide this infrastructure just to make their project able to get product to market or get electricity)” (Linsey Dyer, DRA, Project Developer and Consultant).

However, in some cases, the project can absorb the cost of non-economic infrastructure. For example, one respondent states: “Depends on magnitude of this – for example a small pipeline spur; a track inter change; fuel infrastructure to a power plant etc. can be added into main project without viability gap funding” (Vishal Agarwal, GE Africa, Project Developer).

**Internal Africa Comparison:** As noted above, survey respondents often pointed out the large variances between African regions and specific countries. To try and capture some of these differences, respondents were asked to provide their views on cross-regional African differences in project development efficiency. As expected, the region of Southern Africa was rated the least difficult region with an average response of 5.2, versus much higher difficulty scores for the other regions: Central Africa 9.0, West Africa 7.7, East Africa 6.9, and North Africa 6.4.

The average responses are provided below.

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<th>North Africa</th>
<th>West Africa</th>
<th>East Africa</th>
<th>Southern Africa</th>
<th>Central Africa</th>
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<tbody>
<tr>
<td><strong>Chart 1:</strong></td>
<td>6.4</td>
<td>7.7</td>
<td>6.9</td>
<td>5.2</td>
<td>9.0</td>
</tr>
</tbody>
</table>

However, the regional scores are biased by specific countries in the region. As one respondent stated: “Southern Africa skewed by South Africa. South Africa would score 2, whilst countries like Mozambique or Zambia would score 7” (Bertrand Belben, InfraCo Africa, Project Developer).

To address this issue, the leading investment countries were presented to respondents for their views on the level of difficulty. When assessed as an individual country, South Africa was rated an average response of 4.3, followed by Morocco 4.9, Egypt 5.8, Kenya 6.6, and Nigeria 7.7.

The responses are presented below.

<table>
<thead>
<tr>
<th></th>
<th>North Africa</th>
<th>West Africa</th>
<th>East Africa</th>
<th>Southern Africa</th>
<th>Central Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chart 2:</strong></td>
<td>4.3</td>
<td>7.7</td>
<td>6.6</td>
<td>5.8</td>
<td>4.9</td>
</tr>
</tbody>
</table>

These inter-Africa comparisons further demonstrate the variance across the continent in project development challenges and efficiencies.
### PILLAR ONE REGIONAL COMPARISONS – PROJECT DEVELOPMENT EFFICIENCY

As noted earlier, the survey has responses from infrastructure practitioners operating in other regions (Asia, Emerging Europe, Middle East, Latin America) and the advanced economies. The responses for other developing country regions indicate significantly harder challenges for infrastructure project development in Africa.

**Moreover, as noted in the comments to questions, the average responses for Africa mask the greater challenges facing most African countries in infrastructure project development. Taking this large variance between countries into consideration, the survey results indicate that infrastructure project efficiency in Africa is very low on a comparative basis with other developing country regions.** The table below summarizes the comparisons.

**Table 2: Project Development Efficiency - Average Survey Responses by Region**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Average Time to Develop Project from inception to financial close?</td>
<td>5.4 years</td>
<td>3.7 years</td>
<td>4.9 years</td>
<td>3.8 years</td>
<td>4.2 years</td>
<td>2.7 years</td>
</tr>
<tr>
<td>2. Difficulty to Secure Project Developer (scale 1-10 hardest)?</td>
<td>6.3</td>
<td>4.5</td>
<td>4.5</td>
<td>4.9</td>
<td>4.3</td>
<td>2.4</td>
</tr>
<tr>
<td>3. Difficulty to Secure LOCAL Project Developer (scale 1-10 hardest)?</td>
<td>7.6</td>
<td>5.0</td>
<td>4.6</td>
<td>4.7</td>
<td>3.8</td>
<td>2.5</td>
</tr>
<tr>
<td>4. Difficulty to Secure LOCAL professionals (scale 1-10 hardest)?</td>
<td>6.6</td>
<td>5.0</td>
<td>4.6</td>
<td>4.7</td>
<td>3.8</td>
<td>1.5</td>
</tr>
<tr>
<td>5. Design of project to optimize economic impact?</td>
<td>Sometimes</td>
<td>Often</td>
<td>Often</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
<tr>
<td>6.a. Structuring project to meet investment criteria of institutional investors?</td>
<td>Rarely</td>
<td>Sometimes-Often</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
<tr>
<td>6.b. Project developers invite institutional investors to invest?</td>
<td>Rarely</td>
<td>Sometimes-Often</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes-Often</td>
<td>Often</td>
</tr>
<tr>
<td>7.a. Availability of non-recourse or limited recourse project finance?</td>
<td>Very limited</td>
<td>Medium</td>
<td>Moderate</td>
<td>Extensive</td>
<td>Moderate</td>
<td>Extensive</td>
</tr>
<tr>
<td>7.b. Tenor lengths for infrastructure loans in market?</td>
<td>10 years</td>
<td>12 years</td>
<td>11 years</td>
<td>13 years</td>
<td>11 years</td>
<td>Over 15 years</td>
</tr>
<tr>
<td>7.c. Minimum Internal Rates of Return required for investors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Local Partners?</td>
<td>16-20%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>6-10%</td>
</tr>
<tr>
<td>- International strategic partners?</td>
<td>16-20%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>6-10%</td>
</tr>
<tr>
<td>- International financial investors?</td>
<td>16-20%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>11-15%</td>
<td>15%</td>
<td>6-10%</td>
</tr>
<tr>
<td>8. Effectiveness Factors for infrastructure project development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.a. Lack of consistent political support of national government?</td>
<td>Often-Always</td>
<td>Often</td>
<td>Often</td>
<td>Often-Always</td>
<td>Often</td>
<td>Rarely-Sometimes</td>
</tr>
<tr>
<td>8.b. Lack of support from development finance institution and/or development partners?</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely - Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Never - Sometimes</td>
</tr>
<tr>
<td>8.c. Need for provision of risk mitigation?</td>
<td>Often-Always</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Never - Sometimes</td>
</tr>
<tr>
<td>8.e. Need for provision of government funding for non-economic infrastructure?</td>
<td>Sometimes - Often</td>
<td>Sometimes- Often</td>
<td>Rarely- Some-times</td>
<td>Rarely - Some-times</td>
<td>Sometimes- Often</td>
<td>Sometimes</td>
</tr>
</tbody>
</table>
As noted in the previous chart, virtually all responses to every question show that the challenges of infrastructure development in Africa are perceived as more significant than for other developing country regions.

**Three specific areas of comparison are of special importance, as detailed below.**

1) **African Infrastructure Projects Face Significantly Greater Difficulty in Securing Qualified Professionals to Develop Infrastructure Projects.** When assessing difficulty on a 1-10 scale (with 10 the hardest), respondents assess the other developing regions as significantly easier to secure qualified professional staff. For example, the difficulty of securing a local project developer in Africa is stated on average as 7.6 versus 5.0 for Asia, 4.6 for Emerging Europe, 4.7 for the Middle East, and 3.8 for Latin America. Likewise, securing local professional staff in Africa is assessed at 6.6, versus 5.0 for Asia, 4.6 for Emerging Europe, 4.7 for Middle East, and 3.8 for Latin America.

The large variance in professional staff is presented in the below schematic.

![Figure 5: Difficulty of Securing Qualified Professional Staff Africa Compared to Other Regions and Advanced Economies](image)

For Africa, it is interesting to note that the required high rate of return is approximately the same for local partners as for strategic partners, and international financial institutions.

2) **Requirement for Greater Public Support:** When compared to other developing country regions, the survey results suggest that African infrastructure projects are perceived as lacking in key areas critical to successful infrastructure project development. Respondents noted the relative lack of adequate political support and risk mitigation, and the need for greater support from development institutions, more investment incentives, and greater funding for non-economic infrastructure.

The regional comparative survey results are presented in the following schematic.

![Figure 6: Higher Required Rates of Return for African Infrastructure Projects Compared to Other Developing Country Regions & Advanced Economies](image)

As noted earlier, the average African responses mask the greater difficulties encountered in most African countries, as a few countries, notably South Africa, improve the level of responses.

2) **The Risk Premium is Significantly Higher for Africa Compared to Other Developing Country Regions.**

All other developing country regions have a lower threshold of 11-15%.

Africa is the only region where infrastructure practitioners stated that the required internal rate of return is 16-20%.
However, it is interesting to note that Africa, the other developing country regions, and advanced economies are noted as all sometimes requiring funding for non-economic infrastructure.

In one section, respondents are asked about their views on “effectiveness factors” to infrastructure project development, with four questions covering documented conditions that are conducive to infrastructure development: political support, development partner support, provision of risk mitigation, provision of economic incentives, and funding for non-economic infrastructure. Respondents cite whether each effectiveness factor is existing in their region using the following response options: Always, Often, Sometimes, Rarely, and Never.

The average responses below illustrate the greater challenges for Africa infrastructure project development relative to other developing country regions.

### Table 3: Pillar One – Reported Lack of Effectiveness Factors to Infrastructure Project Development

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of consistent political support of national government?</td>
<td>Often-Always</td>
<td>Often</td>
<td>Often</td>
<td>Often-Always</td>
<td>Often</td>
<td>Rarely-Sometimes</td>
</tr>
<tr>
<td>Lack of support from development finance institution and/or development partners?</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Never-Sometimes</td>
</tr>
<tr>
<td>Need for provision of risk mitigation?</td>
<td>Often-Always</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Never-Sometimes</td>
</tr>
<tr>
<td>Need for provision of investment incentives?</td>
<td>Sometimes-Always</td>
<td>Rarely-Always</td>
<td>Sometimes</td>
<td>Rarely-Always</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Need for provision of government funding for non-economic infrastructure?</td>
<td>Sometimes-Often</td>
<td>Sometimes-Often</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Sometimes-Often</td>
<td>Sometimes</td>
</tr>
</tbody>
</table>

In conclusion, the survey results for Pillar One Project Development Efficiency are conclusive in setting forth specific profound challenges undermining the development of investable infrastructure projects in Africa.

Infrastructure project efficiency in Africa is very low on a comparative basis with other developing country regions:

- Longer project development times (5.4 years on average);
- Significant difficulties in securing project developers (especially local project developers) and local professional staff;
- Limited ability to access non-recourse (or limited project finance) and if accessible, limited tenors (10 years on average);
- High required internal rates of return (16-20% on average); and
- Significant inefficiencies in securing national government support, development partner support, risk mitigation, investment incentives, and provision of funding for non-economic infrastructure.

These challenges increase the costs of African project development and provide insights into the specific areas of required public-private coordination and public support.
PILLAR TWO: Government-Related Impediments to Project Development
The second pillar of the benchmark is focused on government-related impediments to project development. Survey respondents provided their views key government impediments that must be confronted to develop investable African infrastructure projects and access achieve to finance.

Summary: The level of government-related impediments to infrastructure project development in Africa was depicted by survey respondents as either “Significant” or “Critical.” The extreme answers applied to all questions – lack of government capacity, lack of national enabling environment, lack of adequate government institutional counterparts, and impact of government red tape and/or corruption.

In fact, when assessing the African responses by question, there is a moderate difference of reported impediments across the four variables:

- The greatest number of respondents (over 50%) considered the lack of government capacity and adequate institutional counterparts as “Critical” impediments.
- In contrast, the greatest number of respondents (over 50%) considered the lack of national enabling environment and impact of government red tape and/or corruption as “Significant” impediments.

When compared to other developing country regions, African government-related impediments were reported as significantly greater.

Detailed Responses for Africa: The average responses to the questions and the spectrum of responses are detailed in the below table.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Lack of adequate government institutional counterparts?</td>
<td>Critical</td>
<td>50% respondents responded “Critical,” 41% “Significant,” 9% answered “Moderate”</td>
</tr>
<tr>
<td>3. Lack of national enabling environment?</td>
<td>Significant</td>
<td>40% respondents responded “Critical,” 52% “Significant,” 6% answered “Moderate”</td>
</tr>
<tr>
<td>4. Impact of government red tape and/or corruption?</td>
<td>Significant</td>
<td>40% respondents responded “Critical,” 51% “Significant,” 8% answered “Moderate”</td>
</tr>
</tbody>
</table>

The comments provide context on the factors underlying the reported lack of adequate government institutional counterparts. One respondent reports that governments lack competent project finance experts (with the exception of Kenya and South Africa), and instead rely on outside advisors (funding permitting). Another respondent claims that even if governments have internal or outside experienced competent project finance experts, the institutions they work for do not have the required influence to be effective.

1) Lack of Government Capacity: Critical. Respondents were asked to what degree the lack of government capacity is a major impediment to infrastructure project development. The answers were clustered around the responses “Critical” and “Significant.” 53% respondents responded “Critical” and 41% “Significant.” Only 6% answered “Moderate.” No responses were provided for the response options “Minimal” or “Not at all.”

The comments underline the variance between countries and the importance of adequate government capacity related to the required functions of project development such as negotiating contracts such as purchase power agreements (PPAs).

- “The national utilities are often under-resourced and very political. Lack of expertise is one of the major impediments to utilities being able to negotiate bankable PPAs” (Dr. Herta von Stiegel, Anya Capital, Project Developer).

2) Lack of Adequate Government Institutional Counterparts: Critical. Respondents were asked how important they think it is to have a dedicated government unit dedicated to infrastructure project development and finance staffed with experienced competent project finance experts remunerated on a competitive private sector basis. The answers were clustered around the responses “Critical” and “Significant.” 50% respondents responded “Critical” and 41% “Significant.” Only 9% answered “Moderate.”

The comments underline the variance between countries and the importance of adequate government institutional counterparts.

- “Again, many African Countries and Kenya in particular has attempted this route. [However] what one then finds in reality [is] that this office or institution lacks political muscle and is not respected by the very Ministries it should have influence over” (Project Development Financier).

3) Lack of National Enabling Environment: Significant. Respondents were asked to what degree the lack of national enabling environments are major impediments to infrastructure project development. Almost all respondents (92%) answered “Critical” (52%) or “Significant” (40%). Only 6% answered “Moderate.”

The comments underline the variance between African countries and the importance of enforcement, standardization, and adaptability.

- “South Africa, Kenya, Zambia and Nigeria are probably exceptions to the rule” (Project Developer).

- “Less critical in South Africa” (Financial Advisor)
• “One often finds that many African countries have relatively good regulatory bodies and clear regulation. It is however worth mentioning that the problem often lies in have the same enforced fairly” (Project Developer).

• “Standardised contracts and procurement models and institutional mechanisms are critical, as long as a system exists to amend them on an even handed basis for new projects over time in the light of experience” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

4) Impact of Government Red Tape and/or Corruption: Significant: Respondents were asked to what degree the impact of government red tape and/or corruption was a major impediment to infrastructure project development. The answers were clustered around the responses “Critical” and “Significant:” 51% responded “Significant” and 41% respondents “Critical.” Only 8% answered “Moderate.” No responses were provided for the response options “Minimal” and “Not at all.”

The comments underline the importance of red tape and/or corruption as an impediment arresting the development of infrastructure projects and their economic impact. It is important to note that respondents did not differentiate between countries (as in prior cases).

• “This is huge and remains probably the most significant impediment to developing and completing energy projects” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

• “Red tape often more significant than corruption” (Jonathan Berman, Fieldstone Africa, Financial Advisor).

• “We continue to be amazed at the “speed” (or lack there of) in getting deals done, when the product (power, roads, etc.) have a huge impact on the countries economic capacity” (Brian Herlihy, BlackRhino, Project Developer).

PILLAR TWO REGIONAL COMPARISONS – GOVERNMENT-RELATED IMPEDIMENTS

The responses for other developing country regions and advanced economies indicate more significant government-related impediments for infrastructure project development in Africa.

As noted earlier, respondents for Africa’s project development rate lack of government capacity and adequate government institutional counterparts as “Critical” government-related impediments. The lack of African national-enabling environments and negative impact of government red tape and/or corruption were reported as “Significant.” Again, there were significant differences reported across African regions and countries.

The table below summarizes the comparisons between Africa and other developing country regions and advanced economies.

Table 5: Pillar Two Government-Related Impediments - Average Survey Responses by Region

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of government capacity?</td>
<td>Critical</td>
<td>Moderate</td>
<td>Minimal</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Minimal</td>
</tr>
<tr>
<td>2. Lack of adequate government institutional counterparts?</td>
<td>Critical</td>
<td>Significant</td>
<td>Moderate</td>
<td>Significant</td>
<td>Significant</td>
<td>Minimal</td>
</tr>
<tr>
<td>3. Lack of national enabling environment?</td>
<td>Significant</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Minimal</td>
</tr>
<tr>
<td>4. Impact of government red tape and/or corruption?</td>
<td>Significant</td>
<td>Significant</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Minimal</td>
</tr>
<tr>
<td>Need for provision of government funding for non-economic infrastructure?</td>
<td>Sometimes - Often</td>
<td>Sometimes - Often</td>
<td>Rarely - Sometimes</td>
<td>Rarely - Sometimes</td>
<td>Sometimes - Often</td>
<td>Sometimes</td>
</tr>
</tbody>
</table>
As in project development efficiency, virtually every question shows that on average, the government-related impediments in Africa are perceived as more significant than for most other developing country regions.

The respective answers for the regions are presented in the below schematic.

Figure 8: Reported Government-Related Impediments
Africa Compared to other Developing Country Regions in Africa & Advanced Economies

The above schematic maps the respective reported government-related impediments, showing the significantly higher level reported for Africa infrastructure project development compared to the other developing country regions.

In conclusion, the survey results for Pillar Two Government-Related Impediments underscore the significance of specific challenges undermining the development of investable infrastructure projects in Africa. Lack of government capacity and adequate government institutional counterparts was rated as “Critical.” The lack of national-enabling environments and negative impact of government red tape and/or corruption was reported as “Significant.” As with Pillar One results, these government-related impediments increase the costs of African project development and provide insights into the specific required areas of public-private coordination and public support.
PILLAR **THREE:**
PROJECT DEVELOPMENT COSTS
The third pillar of the benchmark is focused on project development costs. Survey respondents provided their views on various aspects of project development costs that are needed to finance in order to develop investable African infrastructure projects and achieve access to finance.

**Summary:** Survey respondents reported on average that the costs for project development in Africa are 10% of total project costs. For example, a project requiring US$300 million in investment would require funding of approximately US$30 million to develop.

**Respondents also provided input on the significant cost components of infrastructure project development:** project management, financial advisory, legal support, technical studies, development costs (e.g., securing land, permits, licenses, off-take agreements, etc.), local economic development requirements, financing costs, and development premium.

As in Pillar One, the range of answers across respondents was large, reflecting the large variance of costs across the region based on the location and project characteristics (sector, size, technology, etc.). When compared to other developing country regions, Africa’s project development costs were reported as approximately comparable to some other developing country regions.

**Detailed Responses on Africa:** The average responses to the questions and the spectrum of responses are detailed in the below table.

Table 6: Pillar Three – Project Development Costs Summary of Questions, Average Responses, and Spectrum of Responses

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Project Development Costs (as percent of total project cost)?</td>
<td>10%</td>
<td>49% respondents stated 6-10%, 22% stated 1-5%, 8% stated 21-30%</td>
</tr>
<tr>
<td>15. Relative costs of project development activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Financing costs?</td>
<td>14%</td>
<td>34% respondents stated 5-10%, 23% stated 11-20%, 21% stated 1-4%, 9% stated 21-30%, 6% stated 41-50%, 4% stated 31-40%, 2% stated 71-80%</td>
</tr>
<tr>
<td>b) Development premium?</td>
<td>18%</td>
<td>39% respondents stated 5-10%, 18% respondents stated 1-4%, 16% stated 21-30%, 14% stated 41-50%, 8% stated 11-20%, 2% stated 31-40%, 2% stated 61-70%, 2% stated 71-80%</td>
</tr>
<tr>
<td>c) Project Management?</td>
<td>9%</td>
<td>38% respondents stated 5-10%, 36% stated 1-4%, 19% stated 11-20%, 2% stated 21-30%, 2% stated 31-40%, 2% stated 41-50%</td>
</tr>
<tr>
<td>d) Local Economic Development Requirement?</td>
<td>6%</td>
<td>53% respondents answered 1-5%, 24% stated 6-10%, 13% stated 11-20%, 6% stated 0%, 4% stated 21-30%</td>
</tr>
<tr>
<td>e) Financial advisory?</td>
<td>6%</td>
<td>53% respondents stated 1-5%, 34% stated 6-10%, 11% stated 11-20%, 2% stated 31-40%</td>
</tr>
<tr>
<td>f) Legal support?</td>
<td>10%</td>
<td>51% respondents stated 1-5%, 22% stated 11-20%, 15% stated 6-10%, 6% stated 31-40, 4% stated 41-50%, 2% stated 21-30</td>
</tr>
<tr>
<td>g) Technical studies?</td>
<td>9%</td>
<td>48% respondents stated 1-5%, 25% stated 6-10%, 17% stated 11-20%, 4% stated 21-30%, 4% stated 31-40%, 2% answered 41-50%</td>
</tr>
<tr>
<td>h) Development costs securing land, permits, licenses, off-take agreements, etc.?</td>
<td>7%</td>
<td>49% respondents stated 1-5%, 31% stated 6-10%, 14% stated 11-20%, 6% stated 21-30%</td>
</tr>
<tr>
<td>i) Overhead?</td>
<td>7%</td>
<td>51% stated 1-5%, 23% stated 5-10%, 20% stated 11-20%, 4% stated 21-30%, 2% respondents stated 0%</td>
</tr>
</tbody>
</table>

Details by Question:

Details on the survey respondents’ input on project development cost factors are provided below.

14) **Project Development Costs? – 10% average of total project costs.** Respondents were asked based on their experience to provide the average cost of project development as a percent of the total project value. The response was that cost of infrastructure project development is on average 10% of total project cost. Cross-border and multi-user infrastructure projects are noted as often costing 11-15% of total project cost to develop.

As in prior questions, there was a wide variance in responses in the percent of project development costs relative to total project costs: 22% of respondents stated 1-5%, 49% stated 6-10%, and 8% stated 21-30%. One respondent noted that the reported costs account for only the “out-of-pocket” costs and do not include the costs associated with working with local partners, citing that such costs can double or triple these costs. In their comments, respondents stressed the variance in infrastructure project development costs, depending on sector, size, and location.

- “Varies significantly with project size, for smaller projects could be much higher” (Jonathan Berman, Fieldstone Africa, Financial Advisor).
- “Varies significantly by sector and complexity. Multi-user and cross-border infrastructure may be in the 11-15% column” (Linsey Dyer, DRA, Project Developer and Consultant).
• “Perhaps less in South Africa” (Financial Advisor, Financial Advisor).
• “[Percent] becomes higher for smaller value projects – [my response] assumes US$100 million” (Financial Advisor).
• “Within the 1%-5% category, the answer is “5%” (Bob Sheppard, Consultant, Financial Advisor).
• “We seek to spend $1 dollar on development for a minimum of $10 dollars of equity investment” (Brian Herlihy, BlackRhino, Project Developer).

However, African infrastructure projects can potentially be less expensive to develop than projects in advanced economies. The compensation paid to local African professionals (such as financial advisors, engineers, lawyers, consultants, etc.) is significantly less than that paid to international experts also incurring substantial international travel costs. As one respondent stated: “… while the costs in total are in line between Africa and Advanced economies, the incremental costs [in each category] (excluding Financing Costs) tend to be higher in Advanced economies than in Africa (on the higher end of the 1-4% spectrum)” (Fred Sisson, CEO Synnov Energy, Project Developer).

In addition, economies of scale are important given the fixed costs of required project development tasks. Therefore, the relative development costs of smaller projects are usually higher than those for larger projects. One respondent cited the required project size as US$100 million; below that, development costs are relatively more expensive. Given the higher relative level of project development costs of smaller projects, they are harder to undertake.

Respondents also commented on specific challenges of covering the costs of infrastructure project development in Africa.

• “The major impediment on projects is that nobody takes the risk. We have been developing an IPP in Mali and two individuals took the development risk over 7 years. No support in this respect will mean no projects!” (Ruth Beckers, Board Member, Albatross Energy, Project Developer).
• “Projects in Africa take a lot longer and are often burdened with additional costs, including hiring expensive technical and legal experts from Europe and the States. I assume this includes the developer’s premium of 5-6%” (Dr. Herta von Stiegel, Arjya Capital, Project Developer).
• “This relates to actual out-of-pocket costs. The other development cost related to developer or local partner free carry can double or triple this development cost” (Greg Babaya, Stanlib, Financial Advisor).

Below the costs of project development are broken out by main cost items.

15) Relative costs of project development cost components:

a) Financing Costs: 14% average of total project development costs. Respondents were asked how much financing costs represent as a percent of total project development costs. The average answer was 14% of total project development costs. This expense is important to note, as the costs of financing the project development process is often not recognized as a significant expense item that needs to be addressed.

However, the average answer of 14% for financing costs masks the wide variance in responses: 20% of respondents stated 1%-4%, 34% stated 5-10%, 10% stated 21-30%. As one respondent commented: “Varies so much it’s hard to comment” (Linsey Dyer, DRA, Project Developer and Consultant).

b) Development Premium: 18% average of total project development costs. Respondents were asked how much development premiums represented as a percent of total project development costs. The average answer was 18% of total project development costs. This expense is important to note, as the development premium is often not recognized as a significant project development cost item that needs to be addressed.

However, the average answer of 18% for the development premium of total development costs masks the wide variance in responses: 20% of respondents stated 1-5%, 34% stated 6-10%, 10% stated 21-30%. As one respondent commented: “[The relative amount] varies so much, it’s hard to comment. Have seen premiums ranging from 20-200%.” (Linsey Dyer, DRA, Project Developer and Consultant).

In fact, one respondent stated that they expect a development premium equal to the total development budget, suggesting that the developer’s relative share would be 50%: “Typically seek a development bonus equal to $1 x to of total development costs” (Brian Herlihy, CEO & Founder, BlackRhino - a Blackstone company, Project Developer). Finally, one respondent noted that the share of development premium as a percent to total development cost would possibly be lower in South Africa: “Perhaps lower in South Africa” (Financial Advisor).

c) Project Management: 9% average of total project development costs. Respondents were asked how much project management costs represent as a percent of total project development costs. The average answer was 9% of total project development costs.

However, the average answer of 9% for project management masks the wide variance in responses regarding the relative costs of project management as a percent of total development cost:

• On the high end, 25% of respondents answered that the average cost is above 10%: 19% of respondents stated 11-20%, 2% stated 21-30%, 2% stated 31-40%, and 2% stated 41-50%.
• On the low end, 36% of the respondents answered that the average costs is below 11%: 36% of respondents stated 1-4% and 38% stated 5-10%.

The respondents in their comments provide a deeper understanding of the variables affecting project management costs:

• “This also depends on whether [project management] is outsourced or if the Developer is also the Sponsor” (Project Development Financier).
• “Again, [the relative cost] depends on project complexity and level of integration required” (Linsey Dyer, DRA, Project Developer and Consultant).
• “… project management is the major cost everywhere” (Bob Sheppard, Consultant, Financial Advisor).

Project management expenses are important to note, as it is often not recognized as a significant cost item to enable successful project development.

d) Local Economic Development Requirement: 6% average of total project development costs. Respondents were asked how much a requirement of local economic development represented as a percent of total project development costs. This activity includes engaging with local stakeholders and defining relationships with the local economy, such as suppliers, the labour force, etc. The average answer was 6% of total financing costs.

However, the average answer of 6% masks the wide variance in responses: 77% of respondents reported between 1-10% (53% answered 1-5% and 24% stated 6-10%). And there were other extreme answers:

• On the high end, 13% stated average costs as 11-20% and 4% stated 21-30%.
• On the low end, 6% respondents stated zero expense.
One respondent explained that the local economic development costs "...grows considerably during construction" (Brian Herlihy, CEO & Founder, BlackRhino - a Blackstone company, Project Developer). Again, this expense is important to note, as the local economic development requirements are often not recognized as a significant project development cost item.

### Financial Advisory: 6% average of total project development costs

Respondents were asked how much financial advisory costs represent as a percent of total project development costs. The average answer was 6% of total project development costs.

However, the average answer of 6% for financial advisory masks the wide variance in responses:
- 87% of respondents reported average financial advisory costs as between 1-10% of total project development costs. 53% of respondents stated 1-5% while 34% stated 6-10%.
- However, 13% of respondents reported average financial advisory costs as significantly higher: 11% of respondents stated 11-20% and 2% stated 31-40%.

Again, the respondents clarify the difficulty of estimating this amount. As one respondent explains: "Difficult to generalize this often depends on how the Financial Advisory is structured, one can save costs if prepared to offer a success fee to the Advisor/s" (Project Developer). Furthermore, the metrics for measuring cost vary: "Financial advisory fees are normally measured as a percentage of total project cost or of the total project financing amount" (Bob Sheppard, Consultant, Financial Advisor).

Again, financial advisory expense is important to note, as it is often not recognized as a significant expense item.

### Legal Costs: 10% average of total project development costs

Respondents were asked how much legal costs represent as a percent of total project development costs. The average answer was 10% of total project development costs.

However, the average answer of 10% for legal costs masks the wide variance in responses:
- 66% of respondents reported average legal costs as between 1-10% of total project development costs. 51% of respondents stated 1-5% while 15% stated 6-10%.
- However, 34% of respondents reported average legal costs as significantly higher than 11%: 22 stated 11-20%, 2% stated 21-30%, 6% stated 31-40%, and 4% stated 41-50%.

The survey participants elaborated on the potential very large legal cost for infrastructure project development, especially as project finance is largely based on contracts that enable the lowering of risk with mitigation built in the deal structure. For example, one respondent states: "Depends on project complexity and number of agreements required. Difficult to choose a range" (Linsey Dyer, DRA, Project Developer and Consultant). Another respondent states: "Largest cost for development work" (Brian Herlihy, BlackRhino, Project Developer).

One respondent encouraged the thinking through of new ways to reduce project cost: "Legal costs are sometimes exorbitant, lawyers need to take more project risk" (Ruth Beckers, Board Member, Albatross Energy, Project Developer). Another respondent suggested the need to think through the metrics and establish standards: "Legal fees are normally measured as a percentage of total project cost or of the total project financing amount" (Bob Sheppard, Consultant, Financial Advisor).

The high reported legal expense is important to note, as it is often not recognized as a significant expense item with the potential for unexpected and unbudgeted increases that can threaten the success of project development.

### Technical Studies: 9% average of total project development costs

Respondents were asked how much of the cost of technical studies represents as a percent of total project development costs. The average answer was 9% of total project development costs.

However, the average answer of 9% for technical studies masks the wide variance in responses:
- 73% of respondents provided answers from 1-10% (48% answered 1-5%, 25% answered 6-10%).
- However, 30% of respondents provided answers from 11-51% (17% stated 11-20%, 4% stated 21-30%, 4% stated 31-40%, 2% stated 41-50%).

Again, the answers will vary based on the project, sector, and country. Key variables include the type of technology and the availability of data and related assessments. For example, one respondent states: "This depends entirely on the type of infrastructure and whether the one proposed has already been done in other areas of the country. When the project is an innovation then these costs tend to drastically increase."

Therefore, while technical studies are routinely included as a critical part of project development, it is important to better understand the factors affecting their costs and develop solutions aimed at reducing costs.

### Development Costs: Secure land, permits, licenses, and off-take contracts – 7% average of total project development costs

Respondents were asked how much development costs related to tasks such as securing land, permits, licenses, and off-take agreements represented as a percent of total project development costs. The average answer was 7% of total project development costs.

However, the average answer of 7% masks the wide variance in responses:
- 80% of respondents provide answers from 1-10% (49% stated 1-5%, 31% stated 6-10%).
- However, 20% of respondents provided answers from 11-30% (14% stated 11-20%, 6% stated 21-30%).

Respondents noted the specific difficulty of securing purchase power agreements (PPAs); "PPA negotiations are very legally intensive, so I have included the [related] legal fees" (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

The significant expense of securing land, permits, licenses, and off-take contracts is important to note, as often such essential development costs are often not recognized as a major component of project development costs.

### Overhead: 7% average of total project development costs

Respondents were asked how much overhead costs represent as a percent of total project development costs. The average answer was 7% of total project development costs.

However, the average answer of 7% masks the wide variance in responses:
- 74% of respondents answered from 1-10% (51% stated 1-5%, 23% stated 5-10%).
- However, 24% answered from 11 – 30% (20% stated 11-20%, 4% stated 21-30%).
- On the low end, 2% respondents stated zero expense.
The differences between overhead costs are often a function of the entity developing the project. For example, one respondent stated: “Low, if we’re looking for a robust premium” (Linsey Dyer, DRA, Project Developer and Consultant). Another respondent stated: “Typically do not charge company overhead into project (Brian Herlihy, BlackRhino, Project Developer).

Therefore, overhead is another project development cost that is important to note, as often it is not recognized as a core development expense item incurred by many developers.

**PILLAR THREE REGIONAL COMPARISONS - PROJECT DEVELOPMENT COSTS**

The responses for other regions and advanced economies are consistent in underscoring the high costs of project development across all developing regions and also in the advanced economies.

In fact, the average responses were comparable across regions, with Africa’s infrastructure project development reportedly costing on average 10% of total project costs compared to Latin America (12%), Middle East (10%), Advanced economies (8%), Asia (8%), and Emerging Europe (6%).

All regions were asked to provide an estimate of the average costs of key cost components as a percent of total project development costs. The summary results are provided in the below table.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Project Development Costs (as percent of total project cost)?</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
<td>10%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>15. Relative costs of project development activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Financing costs?</td>
<td>14%</td>
<td>13%</td>
<td>12%</td>
<td>30%</td>
<td>29%</td>
<td>13%</td>
</tr>
<tr>
<td>b) Development premium?</td>
<td>18%</td>
<td>11%</td>
<td>16%</td>
<td>10%</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>c) Project Management?</td>
<td>9%</td>
<td>10%</td>
<td>7%</td>
<td>14%</td>
<td>23%</td>
<td>8%</td>
</tr>
<tr>
<td>d) Local Economic Development Requirement?</td>
<td>6%</td>
<td>4%</td>
<td>3%</td>
<td>11%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>e) Financial advisory?</td>
<td>6%</td>
<td>16%</td>
<td>9%</td>
<td>14%</td>
<td>16%</td>
<td>6%</td>
</tr>
<tr>
<td>f) Legal support?</td>
<td>10%</td>
<td>23%</td>
<td>11%</td>
<td>17%</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>g) Technical studies?</td>
<td>9%</td>
<td>13%</td>
<td>4%</td>
<td>11%</td>
<td>15%</td>
<td>4%</td>
</tr>
<tr>
<td>h) Development costs securing land, permits, licenses, offtake agreements, etc.?</td>
<td>7%</td>
<td>5%</td>
<td>3%</td>
<td>5%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>i) Overhead?</td>
<td>7%</td>
<td>3%</td>
<td>2%</td>
<td>14%</td>
<td>11%</td>
<td>3%</td>
</tr>
</tbody>
</table>

In fact, Africa’s project development costs are comparable to the other regions, and reported as lower than many regions for most cost components. Examples include the following:

- Financial advisory as a percent of total project development costs were reported as being on average higher in Asia (16%), Latin America (16%), the Middle East (14%), Emerging Europe (9%) than in Africa (6%); and the advanced economies have the same average cost ratio as Africa (6%);
- Legal support as a percent of total project development costs were reported as being on average higher in Asia (23%), Latin America (17%), the Middle East (17%), Emerging Europe (11%) than in Africa (10%);
- Technical studies as a percent of total project development costs were reported as being on average higher in Asia (13%), Latin America (15%), and the Middle East (11%) than in Africa (9%); and
- Overhead as a percent of total project development costs were reported as being on average higher in the Middle East (14%) and Latin America (11%) than in Africa (7%).

In conclusion, the survey results for Pillar Three Project Development Costs underscore very significant project development costs as well as the large range of cost components involved in the development of investable infrastructure projects. Respondents reported that project development on average costs 10% of the total project cost. Regional cross-border projects were reported as often requiring much higher development costs. Significant development costs cover the spectrum of development activities: financing costs; development premiums; project management; financial advisory; legal support; local economic development requirements; securing land, permits, off-take agreements, etc.; technical studies; and overhead.

The survey results document the importance of increasing the finance available for the development of African infrastructure projects and the need to better align the funding with the different required development activities essential to achieving project investability. This rethinking of African infrastructure project development funding will require in-depth public-private coordination and public support.

"Projects in Africa take a lot longer and are often burdened with additional costs, including hiring expensive technical and legal experts from Europe and the States."
PILLAR FOUR: Project Development Funding
The fourth pillar of the benchmark is focused on detailing the various aspects of the funding of infrastructure project development. Survey respondents provided their views on various aspects of project development funding, from availability of finance for the project development process, to the costs of funding. African infrastructure specialists cited funding as a critical item that must be confronted to develop greater numbers of investable African infrastructure projects.

**Summary:** Survey respondents highlighted the extreme difficulty of obtaining funding for project development. Moreover, if funding is available, the costs of capital (both debt and equity) were reported as very high.

**In terms of types of funding available, Chinese public agencies and banks were reported as the most available, followed by Expert Credit Agencies. Public sector funding was reported as the most difficult to obtain. In summary:**

- **Public funding:** Almost half the respondents (48%) reported that public sector funding was “Rarely Available.” However, almost an equal number (46%) reported public funding as “Sometimes Available” or “Often Available.”
- **Private funding:** Respondents indicated private sector funding as more available, with 68% reporting availability “Sometimes,” “Often,” or “Always,” versus 32% reporting “Rarely Available.”
- **Commercial bank finance:** 49% of respondents reported commercial bank finance as available “Sometimes Available” or “Often Available,” while 35% reported “Rarely Available.”

- **Expert Credit Agency funding:** 66% of respondents reported Export Credit Agency (ECA) funding (excluding Chinese debt financing) as available “Sometimes” or “Often,” while 35% reported “Rarely Available.”
- **Chinese Public Agencies and Banks:** 80% of respondents reported finance available from Chinese Public Agencies and banks “Sometimes,” “Often,” or “Always.”

The reported cost of funding for both debt and equity was reported as high, ranging on average from 11-20%:

- **Cost of bank debt:** 59% of respondents reported bank debt for project development ranging from 11-20%.
- **Cost of equity to developers:** 56% of respondents reported the cost of equity for projects in development as between 11-20%.

The reported average cost of debt and equity for African projects is significantly higher (14.6% and 22.1% respectively) than that reported for other developing country regions.

**Detailed Responses for Africa:** The average responses to the questions and the spectrum of responses are detailed in the below table.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Availability of public funding to cover project development costs?</td>
<td>Rarely-Sometimes</td>
<td>Rarely, Sometimes, 31% stated “Rarely,” 3% stated “Never,” 14% stated “Often,” 2% stated “Always.”</td>
</tr>
<tr>
<td>17. Availability of private funding to cover project development costs?</td>
<td>Sometimes-Rarely</td>
<td>38% respondents stated “Sometimes,” 32% stated “Rarely,” 21% stated “Often,” 8% stated “Always.”</td>
</tr>
<tr>
<td>18. Cost of debt to Project Developers?</td>
<td>14.6%</td>
<td>44% respondents stated 11-15%, 30% stated 6-10%, 12% stated 16-20%, 8% stated 21-30%, 2% stated 31-40%, 2% stated 41-50%</td>
</tr>
<tr>
<td>19. Source of debt funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Public Sector (Export Credit Agencies and other public sources excluding Chinese debt financing)?</td>
<td>Often-Sometimes-Rarely</td>
<td>35% respondents stated “Often,” 30% stated “Sometimes,” 21% stated “Rarely,” 8% stated “Never,” 5% stated “Always.”</td>
</tr>
<tr>
<td>c) Chinese Public Agencies and Banks?</td>
<td>Sometimes</td>
<td>52% respondents stated “Sometimes,” 22% stated “Often,” 17% stated “Rarely,” 4% stated “Always,” 3% stated “Never.”</td>
</tr>
<tr>
<td>20. Cost of equity to Project Developers?</td>
<td>22.1%</td>
<td>33% respondents stated 16-20%, 25% stated 11-15%, 22% stated 21-30%, 8% stated 31-40%, 10% stated 41-50%, 2% stated 6-10%</td>
</tr>
</tbody>
</table>
16. Availability of public funding to cover project development costs: Occasionally-Sometimes (average). Respondents were asked based on their experience the extent to which adequate public funding is available to partially or totally cover project development costs on either a grant or reimbursable basis. The range of answers spanned the entire spectrum, but the majority was concentrated in two response categories “Occasionally” (48%) and “Sometimes” (31%).

However, the majority of respondents (53%) perceive the overall lack of available public funding for infrastructure project funding (48% “Occasionally,” 5% “Never”). On the other hand, 47% of respondents perceive some availability (31% “Sometimes,” 14% “Often,” 2% “Always”).

Respondent comments underscore the difficulty of obtaining public funding for infrastructure project development. One respondent characterized the process as “often slow and difficult” (Jonathan Berman, Fieldstone Africa, Financial Advisor). Another cited issue is the difficult nature of accessing the available funds: “…the issue is that many of those grants are not user friendly and difficult to navigate” (Jasandra Nyker, CEO, BioTherm Energy, Project Developer).

Obtaining funds is especially hard for private sector developers. A respondent stated: “[You need] … a public sector counterpart which can make the application. Still a dearth of funding for project preparation for private parties only.” Another respondent explained that they are asking for more public support: “We are pushing more and more for costs to be shared pre-PPA signing (in case of a power plant) [to address] the high risk of a project” (Brian Herlihy, CEO & Founder, BlackRhino - a Blackstone company, Project Developer).

17. Availability of private funding to cover project development costs: Occasionally-Rarely (average). Respondents were asked based on their experience the extent to which adequate private funding is available to partially or totally cover project development costs on either a developer loan or equity basis. The range of answers spanned the entire spectrum, but the majority was concentrated in two response categories “Sometimes” (38%) and “Rarely” (32%).

This response indicates that overall, survey participants felt more private finance is available for project development than public funding. In fact, 68% of respondents stated that private finance is available (38% “Sometimes,” 22% “Often,” and 8% “Always”). However, in contrast, only 32% of respondents stated that private finance is “Rarely” available.

The comments of respondents underline again the difficulty of generalization. One respondent stated: “[It is] difficult to generalize, it depends on many factors. Project size, type, expected returns and above all the approach [used] by the developers/sponsors on how to raise this high risk capital (Carlo van Wageningen, Chairman, Lake Turkana Wind Power, Project Developer).

The responses illustrate the reliance on private sector funding, in lieu of public funding. As one respondent states: “In our project, 100% [of the funding is private sector]” (Ruth Beckers, Board Member, Albatross Energy, Project Developer). In fact, in order to develop projects, many project developers have to provide their own funding. Another respondent stated: “We fund our own costs” (Brian Herlihy, CEO & Founder, BlackRhino - a Blackstone company, Project Developer).

18. Cost of debt to Project Developers: 14.2%. Respondents were asked to estimate the average cost of debt available to project developers, defined as total interest and fee costs as a percent of the total debt finance amount. Again, the average of 14.2% does not reflect the variance in responses:

• 45% of respondents stated that debt 11-15% of the total debt finance amount.
• However, 24% of respondents reported debt costing project developers 16-50% of the total debt finance amount (12% report 16-20%, 8% report 21-30%, 2% report 31-40%, 2% report 41-50%).
• On the lower end, 31% stated 6-10%.

The respondents’ comments illustrate the general lack of available debt finance for infrastructure project development and its large expense relative to the total debt finance amount. For example, one respondent stated: “Commercial banks generally do not finance the development stage. Funding may be available from DFIs” (Dr. Herta von Stiegel, Ariya Capital, Project Developer). Additionally, respondents cautioned that the variability of cost depends on the source, and whether the debt is in foreign or local currency. “It obviously depends on where the debt is raised - if banks or through private placement or other” (Project Developer). Another respondent pointed out that a key factor is the currency of the loan, as local currency loans are more expensive than foreign currency loans.

19. Sources of debt funding: Respondents were asked to indicate the dominant sources of debt funding available for project development. As noted earlier, Chinese public agencies and banks were reported as the most available, followed by Expert Credit Agencies. Public sector funding was reported as the most difficult to obtain. The range of answers spanned the entire spectrum, but the majority was concentrated in two response categories: “Rarely” (48%) and “Sometimes” (31%).

However, the majority of respondents (53%) perceive the overall lack of available public funding for infrastructure project funding (48% “Rarely,” 5% “Never”). On the other hand, 47% of respondents perceive some availability (31% “Sometimes,” 14% “Often,” 2% “Always”).

Commercial Bank Finance: “Rarely-Sometimes”, The range of answers spanned the entire spectrum, but the majority was concentrated in two response categories “Rarely” (36%) and “Sometimes” (20%).

Over a majority of respondents (52%) report some availability of commercial bank finance (20% “Sometimes,” 29% “Often,” 3% “Always”). However, almost the same amount of respondents (48%) reports that there is an overall lack of available commercial bank funding for infrastructure project funding (36% “Rarely,” 12% “Never”).

So again there is variability in access to commercial bank finance for the project development process. The respondents’ comments shed light on the types of variables and limits. For example, one respondent stated, “having a feasibility study that demonstrates bankability is required [to access bank finance]” (Linsey Dyer, DRA, Project Developer and Consultant). Again, access is greater for international banks: “Commercial bank finance is usually international rather than local” (Bertrand Belben, InfraCo Africa,
Private Sector Project Developers Scaling Investable Infrastructure in Africa

The respondent stated that “rich OECD and Multi-laterals Development Banks (MDBs) are falling by the wayside or limited” due to the following perceptions:

- “Conditionalities on financing;
- Strong controls over usage of funds provided; and
- Focus on “Soft Infrastructure” (e.g., financing NGOs for infrastructure financing provided as grants).

The majority of respondents (52%) reported that Chinese public agencies and banks provide funding for African infrastructure project development “Sometimes.”

In fact, in aggregate, almost 80% of respondents (78%) report there is some level of funding available from Chinese finance institutions (“Sometimes” 54%, “Often” 22%, 4% “Always”). Conversely, 20% of respondents report that Chinese funding is limited for African infrastructure project development (“Rarely” 17%, “Never” 3%).

Other major source(s) of debt funding: Based on their experience, respondents were asked to state any other key sources of debt funding available for infrastructure project development. Specific examples of other debt sources for project development included both public and private sources:

- Some respondents stated that the major source is public funds. Public sources included: DFIs, bi-lateral development agencies, and SWFs, with special reference to DBSA, Africa50 Fund, and “emerging DFIs” leveraged platforms (such as AFC, REPP, GAP, and Climate One Investors).
On the private finance side, some respondents noted the role of Japanese and European banks, equity investment funds, private investors (like Meridian), and the private developers themselves. In fact, several respondents noted that it was their experience that project development is funded mainly by developers’ own funds than debt. Also, the special role on infrastructure and equity funds and green bonds (public and private) in providing debt finance for project development was noted.

20. **Cost of equity to Project Developers: 22.1%**. Respondents were asked to advise on the average cost of equity funding available to project developers. The average answer of 22.1% on the cost of equity to project developers needs to be assessed in terms of the wide range of responses:

- 60% of respondents reported equity costs of below 21% (33% reported 16-20%, 25% reported 11-15%, 2% reported 6-10%).
- 40% of respondents reported equity costs from 21 – 50% (22% stated 21-30%, 8% stated 31-40%, 10% stated 41-50%).

The respondents clarified in their comments a different metric for the cost of equity - overall absolute return (i.e., rather than an average rate of return). Several noted that equity investors in Africa infrastructure projects expect to multiple their investment by at least two times: “a multiple of 2x money or more” (Linsey Dyer, DRA, Project Developer and Consultant). One respondent stated a larger multiple of investment, ranging from “between 2x and 10x, depending on the level of risk taken” (Greg Babaya, Stanlib, Financial Advisor).

**PILLAR FOUR: REGIONAL COMPARISON – PROJECT DEVELOPMENT COSTS**

The responses for other regions and advanced economies indicate greater costs for infrastructure project development in Africa. The table below summarizes the comparisons.

**Table 9: Pillar Four Project Development Funding - Average Survey Responses by Region**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Availability of public funding to cover project development costs?</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Never-Rarely-Sometimes</td>
</tr>
<tr>
<td>17. Availability of private funding to cover project development costs?</td>
<td>Sometimes-Rarely</td>
<td>Often-Always</td>
<td>Often</td>
<td>Always</td>
<td>Open</td>
<td>Always</td>
</tr>
<tr>
<td>18. Cost of debt to Project Developers?</td>
<td>14.6%</td>
<td>8.7%</td>
<td>10%</td>
<td>11.7%</td>
<td>11%</td>
<td>6.6%</td>
</tr>
<tr>
<td>19. Source of debt funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) - Commercial Bank Finance?</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Sometimes-Often-Always</td>
</tr>
<tr>
<td>b) - Public Sector (Export Credit Agencies and other public sources excluding Chinese debt financing)?</td>
<td>Sometimes-Rarely</td>
<td>Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
</tr>
<tr>
<td>c) - Chinese Public Agencies and Banks?</td>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Rarely-Sometimes</td>
<td>Never-Rarely</td>
</tr>
<tr>
<td>20. Cost of equity to Project Developers?</td>
<td>22.1%</td>
<td>16.1%</td>
<td>15.8%</td>
<td>11.7%</td>
<td>20.3%</td>
<td>10.5%</td>
</tr>
</tbody>
</table>

First, the reported availability of public and private funding for infrastructure project development across regions varies based on source: Private funding is reported as more available then public funding for all regions and advanced economics. On average, the level of reported availability of public funding across regions in not dramatically different across developing country regions.

The below pie chart illustrates the availability of public and private finance based on respondents’ answers: Never, Rarely, Sometimes, Often, and Always.

**Chart 3: Availability of Public and Private Funding: Africa Compared to Other Developing Country Regions and Advanced Economies**
However, as illustrated above, detailing African responses, there is a large range of responses for Africa. A large percent of responses report that funding is available “Rarely” from the public sector (47% of total respondents) and private sector (32% total respondents).

The responses regarding access to commercial bank finance, Export Credit Agency public funding, and Chinese public funding shows the differences between developing country regions. Africa, Asia, the Middle East, and Latin America are reported as having significant access to funding from Chinese public agencies, the exception being Emerging Europe. However, Africa and the Middle East have greatest access to Export Credit Agency finance. All developing country regions report access to commercial bank finance.

The differences are illustrated in the below schematic.

The higher cost of debt and equity for African infrastructure projects presents a profound challenge for scaling up the development of infrastructure projects and enabling financial close.

**In conclusion, the survey results for Pillar Four on Infrastructure Project Development Funding underscore the significant challenges financing the development of infrastructure projects in Africa. Respondents reported that both public and private funding is limited, and that the costs for obtaining capital are very high (equity 22.1% average, debt 14.6% average), even when compared to other developing country regions.**

As with other survey results, these funding challenges undermine the ability to develop investable African infrastructure projects and provide insights into specific areas of public-private coordination and public support.
PILLAR FIVE:
Project Developer Compensation
The fifth pillar of the benchmark is focused on project developer compensation, mapping the valuation of sweat equity, the project developer business model (breaking out the components of total revenue), defining the most important roles for project developers, the success rate of projects (reaching financial close), and estimating average equity holding periods for project developers. These critical aspects of project developer compensation and business models need to be better understood to improve the ecosystem and facilitating factors for scaling up the development of investable infrastructure projects.

**Summary:** The large variance in the responses to questions on project compensation and related aspects of the business model, coupled with the comments reflecting a wide range of project development approaches, reflects the need to for more research.

- On average, the reported main components of project developer compensation as a percent of total revenue are on average: investment income (46%), development premiums (39%), and fees (15%).
- On a scale of 1-10 (with 10 most important), developers are reported as having critically important roles in securing off-take agreements (9.1), negotiating with governments (8.8), securing risk mitigation (8.3), designing project structure and governance (7.9), securing finance (7.6), negotiating contracts (7.4), and securing competent long-term staff (7.1).
- Against these demanding roles, African project developers are reported as having low success rates: on average only 20% of infrastructure projects reach financial close.
- The investment holding periods for African infrastructure project developers on average is reported as only 4.7 years, considerably shorter than other developing country regions (7.5 years Middle East, 7 years Latin America, 6.8 years Asia, 6.7 years Emerging Europe).

**Detailed Responses for Africa:** The average responses to the questions and the spectrum of responses are detailed in the table below.

**Table 11: Pillar Five – Project Development Compensation Summary of Questions, Average Responses, and Spectrum of Responses**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Valuation of Project Developer sweat equity</td>
<td>15.3%</td>
<td>35% respondents stated 11-15%, 25% stated 6-10%, 15% stated 16-20%, 8% stated 1-5%, 8% stated 21-30%, 6% stated 31-40%, 4% stated 41-50%</td>
</tr>
<tr>
<td>22. Level of returns for Project Developers</td>
<td>21.1%</td>
<td>32% respondents stated 21-30%, 22% stated 16-20% returns, 22% stated 11-15%, 10% stated 31-40%, 4% stated 41-50%, 4% stated 1-5%, 4% stated 6-10%</td>
</tr>
<tr>
<td>23. Developer business model</td>
<td></td>
<td>35% respondents stated 1-10%, 30% stated 11-20%, 15% answered 21-30%, 13% stated 31-40%, 5% stated 0%, 2% stated 41-50%</td>
</tr>
<tr>
<td>a) Fees as a percent of total revenue</td>
<td>15.5%</td>
<td>31% respondents stated 11-20%, 19% answered 21-30%, 18% stated 41-50%, 16% stated 1-10%, 8% stated 0%, 5% stated 51-60%, 3% stated 61-70%</td>
</tr>
<tr>
<td>b) Development premium as a percent of total revenue</td>
<td>39%</td>
<td>19% respondents stated 11-20%, 16% stated 51-60%, 14% stated 71-80%, 14% stated 71-80%, 11% stated 81-90%, 11% stated 21-30%, 8% stated 31-40%, 8% stated 41-50%, 5% stated 1-10%, 3% stated 61-70%, 3% stated 91-100%</td>
</tr>
<tr>
<td>c) Investment income as a percent of income</td>
<td>46%</td>
<td>25% respondents stated 9, 23% stated 8, 22% stated 9, 10% stated 2, 13% stated 7, 3% stated 3, 5% stated 4, 3% stated 5, 1% stated 6</td>
</tr>
<tr>
<td>24. Roles of Developers (ranked 1-10 in order of importance)</td>
<td></td>
<td>21% respondents stated 10, 20% stated 8, 17% stated 12, 16% stated 8, 8% stated 6, 6% stated 4, 5% stated 5, 2% stated 1, 1% stated 2, 1% stated 3</td>
</tr>
<tr>
<td>a) Design of project ownership and government?</td>
<td>7.9</td>
<td>62% respondents stated 10, 13% stated 9, 13% stated 8, 6% stated 7, 5% stated 5, 1% stated 6</td>
</tr>
<tr>
<td>b) Structuring finance (equity and debt) (1-10 with 10 as very important)</td>
<td>7.6</td>
<td>21% respondents stated 10, 20% stated 8, 17% stated 12, 16% stated 8, 8% stated 6, 6% stated 4, 5% stated 5, 2% stated 1, 1% stated 2, 1% stated 3</td>
</tr>
<tr>
<td>c) Securing off-take agreements (1-10 with 10 as very important)</td>
<td>9.1</td>
<td>21% respondents stated 8, 13% stated 9, 18% stated 7, 15% stated 10, 13% stated 8, 13% stated 5, 11% stated 6, 6, 5% stated 4, 3% stated 3</td>
</tr>
<tr>
<td>d) Securing competent long-term staff (1-10 with 10 as very important)</td>
<td>7.10</td>
<td>22% respondents stated 10, 18% stated 9, 18% stated 7, 12% stated 8, 11% stated 6, 10% stated 5, 3% stated 4, 3% stated 3, 1% stated 1</td>
</tr>
<tr>
<td>e) Negotiating contracts with suppliers and contractors (1-10 with 10 as very important)</td>
<td>7.4</td>
<td>36% respondents stated 10, 33% stated 9, 20% stated 8, 8% stated 6, 1% stated 7, 1% stated 5</td>
</tr>
<tr>
<td>f) Negotiating with government (1-10 with 10 as very important)</td>
<td>8.8</td>
<td>35% respondents stated 10, 23% stated 9, 16% stated 8, 11% stated 7, 5% stated 6, 3% stated 4, 1% stated 5, 1% stated 2, 1% stated 1</td>
</tr>
<tr>
<td>g) Securing risk mitigation (1-10 with 10 as very important)</td>
<td>8.3</td>
<td>28% respondents stated 5-10% 22% stated 11-20%, 15% stated 31-40%, 14% stated 21-30%, 10% stated 1-4%, 5% stated 41-50%, 3% stated 61-70%, 1% stated 71-80%</td>
</tr>
<tr>
<td>h) Other role (1-10 with 10 as very important)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>25. Development success hit rate</td>
<td>20%</td>
<td>44% respondents stated 3-5 years, 30% stated 6-10 years, 11% stated over 10 years, 8% stated 1-2 years, 6% stated less than one year</td>
</tr>
<tr>
<td>26. Developer investment hold period</td>
<td>4.7</td>
<td>28% respondents stated 5-10% 22% stated 11-20%, 15% stated 31-40%, 14% stated 21-30%, 10% stated 1-4%, 5% stated 41-50%, 3% stated 61-70%, 1% stated 71-80%</td>
</tr>
</tbody>
</table>
Details by Question:

Details on the survey respondents’ responses to project development compensation questions are provided below.

21. Valuation of Project Developer sweat equity – 15.3% average: Respondents were asked based on their experience to provide insight on the range of equity provided to project developers for their “sweat equity” contributions to projects (covering the entire project cycle until financial close). The largest number of respondents (35%) answered 11-15%.

The average of responses 15.3% is misleading, as the range of responses was extreme:
- 33% of respondents provided higher estimates, 15% stated 16-20%, 8% stated 21-30%, 6% stated 31-40%, 4% stated 41-50%.
- 33% provided lower estimates: 25% stated 6-10% and 8% stated 1-5%.

Respondents provided explanations citing various factors accounting for the wide variance. One respondent stated that the amount of equity “depends on the basis of participation – stage, risk, etc.” (Financial Advisor). Another stated, “It varies greatly on a deal by deal basis” (Bob Sheppard, Consultant, Financial Advisor).

Moreover, the comments provided by respondents suggest there are cases where “sweat equity” is “not accepted by project participants” (Project Developer). For example, one respondent stated that “sweat equity” is “typically treated as a carry, not pure equity. If pure equity, then assume 8%” (Brian Herlihy, Black Rhino, Project Developer). This market inclination not to provide equity in exchange for in-kind contributions is a key issue for local developers who often lack capital and instead assume that they will be able to achieve a significant equity share of the project through their “sweat equity.”

22. Level of returns for Project Developers – 21.1% average: Respondents were asked what the net return is for project developers, after subtracting the total investment in project development, including valuation of sweat equity. The largest number of respondents (33%) respondents stated 21-30%. However, again the divergence was significant:
- 52% of respondents stated lower net returns lower than 21% to project developers: 22% stated 16-20%, 22% stated 11-15%, 4% stated 1-5%, and 4% stated 6-10%.
- Only 14% indicated higher returns than 21% to project developers: 10% stated 31-40% and 4% stated 41-50%.

The variance in net return responses suggests a wide range of experience, a lack of transparency in measurement, and perhaps differences in performance metrics. For example, one respondent provided a comment using a multiple ratio based on actual contributions (excluding sweat equity): “Assume a range between 3x and 5x of contributions made” (Greg Babaya, Stanlib, Financial Advisor).

23. Developer business model – income as a percent of total income: Investment Income 46%, Development Premiums 39%, Fees 15% (average). Respondents were asked to indicate the composition of developer total revenues, breaking out fees, development premiums, investment income, and other income as a percent of total revenues (equaling 100%). As detailed below, investment income were reported on average as the highest contribution (46%) to the total revenue of developers. The next highest reported contributor on average was development premiums (39%). Fees were reported on average as 16%.

a. Fees as a percent of total revenue – 15.5% (average). 58% of respondents reported fee income in the range of 11 to 40% of total revenue. 30% answered 11-20%, 15% answered 21-30%, and 13% answered 31-40%. An additional 2% reported income from 41-50%.

On the lower contribution side under 11% total revenue, 35% of respondents reported fee income as only 1-10% of developer total revenue. Five percent of respondents reported zero fee income.

b. Development premium as a percent of total income: 38.8% (average). A small amount of respondents reported very high development premiums as a percent of total revenues, skewing the average: 18% reported development premium contributions between 41-50% of total revenue, 5% reported 51-60% of total revenue, and 3% reported 61-70% of total revenue.

On the lower contribution side under 41%, most responses on reported development premium income (51%) were between 11-30% of total developer revenue: 31% of respondents reported 11-20% and 19% reported 21-30%. On the lowest contribution level, 16% of respondents reported development premium contributions at 1-10% total revenue and 8% reported zero contribution.

c. Investment income as a percent of total revenue: 46.1% (average). Again, a small number of respondents reported very high investment income as a percent of total revenues, skewing the average: 29% reported investment income contributions between 41-70% of total revenue, 8% reported 41-50% of total revenue, 5% reported 51-60% of total revenue, and 3% reported 61-70% of total revenue.

d. Other income as a percent of total income: 14.2% (average). Only 45% of respondents answered this question, suggesting that the business model used by developers is perceived as mainly constituted of fees, development premium, and investment income. The level of contributions reported is also much lower: 50% of respondents reported the contribution of other income as between 1-10% of total developer revenue.

However, higher contributions are also reported: 13% between 11-20% total revenue, 27% between 21-30% total revenue, 6% between 31-40% revenue, and 6% between 41-70% revenue.

Some of the respondents’ comments of respondents indicated a general need to better clarify the question, explaining the developer business model and providing overall greater clarification. Other respondents again emphasized the answers “varies significantly based on size of project, complexity, off-taker, etc.” (Dr Herta von Stiegel, Ariya Capital, Project Developer).

Also, other sources of revenue are possible depending on the level of vertical and horizontal integration in the supply of services and equipment, as well as in project equity. For example, one respondent stated: “Our company carries an EPC division which recognized a significant portion of the project revenues. We also take a long-term majority position in the project which yields much of the remainder of our revenues” (Fred Sisson, CEO Synnove Energy, Project Developer).

24. Roles of Developers: Respondents were asked to provide their views on the most important roles of developers to ensure project development success in reaching financial close. They were asked to rank each role in importance with 10 as the most important.

a. Design of project ownership and governance: 7.9 importance/1-10 scale (average). Almost all respondents (93%) stressed the importance of the project developer role in
designing project ownership and governance: 25% respondents stated 9, 23% stated 8, 22% stated 9, 10% stated 2, 13% stated 7.

**b** Structuring finance (equity and debt): 76 importance/10 scale (average) Over two-thirds of respondents (74%) stressed the importance of the project developer role of structuring finance (debt and equity): 62% respondents stated 10, 13% stated 9, 20% stated 8, 17% stated 7, 16% stated 9.

**c** Securing off-take agreement: 9.1 importance/10 scale (average) Almost all respondents (94%) stressed the importance of the project developer role in securing off-take agreements, of which 95% provided the highest ratings of 10 and 9. The breakdown of 94% is: 25% respondents stated 9, 23% stated 8, 22% stated 9, 13% stated 8, and 6% stated 7.

**d** Securing competent long-term staff: 7.1 importance/10 scale (average) Over two-thirds of respondents (84%) stressed the importance of the project developer role of securing competent long-term staff, but with lessor importance on average than the above items: 21% respondents stated 8, 13% stated 9, 18% stated 7, 15% stated 10, 13% stated 8, 13% stated 5, 11% stated 7, 11% stated 6.

One of the respondents suggested that this role is not critical at project inception, “African projects take much longer to develop than Advanced Economy projects, so strong supplier negotiations are not as important early on; they tend to need to be re-approached prior to construction” (Fred Sisson, CEO Synnove Energy, Project Developer).

**f** Negotiating with government: 8.8 importance/10 scale (average) Well in excess of over two-thirds of respondents (90%) stressed the importance of the project developer role in negotiating contracts with suppliers and contractors: 22% respondents stated 10, 18% stated 9, 18% stated 7, and 12% stated 8.

**g** Securing risk mitigation: 8.3 importance/10 scale (average) Again, well in excess of two-thirds of all respondents (85%) stressed the importance of the project developer role in securing risk mitigation: 35% respondents stated 10, 23% stated 9, 16% stated 8, and 11% stated 7.

Respondents in their comments emphasized the importance of risk mitigation: “Commercial banks want a credit wrapper either from the likes of MIGA or in the market through a Lloyds syndicate or similar cover” (Dr Herta von Stiegel, Anya Capital, Project Developer). Another participant stated: “Credit enhancement is necessary” (Brian Herlihy, Black Rhino, Project Developer).

**25) Development success hit rate: 20% (average).** Based on their experience, respondents were asked to share the percentage of infrastructure projects that are successfully developed and able to reach financial close. It is important to note that the average answer provided by respondents (20%) is misleading as the responses vary greatly due to a few very high responses:

- 62% of the responses estimate the success rate as lower than 21%: 28% of the respondents state 5-10%, 23% state 11-20%, and 11% state 1-4%.
- 38% of the responses estimate the success rate as higher than 20%: 15% of the respondents state 31-40%, 14% state 21-30%, 5% state 41-50%, 3% state 61-70%, and 1% states 71-80%.

The respondents’ comments help to clarify the variance in the responses. For example, one respondent explains that success rate for public projects is much lower: “For public sector it would be 1-4%” (Robert Futter, Cresco Projects, Project Developer).

In fact, one participant suggests that success rates will be improved through PPPs, and as the private sector becomes more involved: “[Success rates] will hopefully improve as the private sector involvement in Infrastructure matures through PPPs. It is a young industry for the private sector in Africa where infrastructure was Government Monopoly” (Project Development Financier).

Another respondent suggests that the success rate is in fact higher in Africa than some other places but at a cost of a longer project development time period: “Although success rates are higher in Africa, they take much longer to reach closure” (Fred Sisson, CEO Synnove Energy, Project Developer).

**26) Developer investment hold period: 4.7 years.** Respondents were asked to provide insight on the average length of time a developer will hold equity after financial close. The average response of the investment hold period (4.7 years) is largely due to the large number of respondents (44%) who answered 3-5 years. However, 41% of the respondents answered over 5 years, 30% from 6-10 years, 11% over 10 years.

Again these answers are variable based on a number of variables as set forth by the respondents:

- “[The hold period] tends to vary depending on whether the developer’s business model encompasses O&M” (Bertrand Belben, InfraCo Africa, Project Developer).
- “May only sell down a portion of equity, possibly not all” (Bhavtik Vallabhjee, Barclays Africa, Financial Advisor).
- “One cannot generalize it depends on many factors, my answer above is based on obligations the developer is mostly compelled to accept by the Lenders to the project” (Project Development Financier).
- “Preferred answer is one to two years post construction, which can vary depending on the project construction time line” (Greg Babaya, Stanlib, Financial Advisor).
- “Depends significantly on technology, role of developer (deep pockets, operational) and construction timetable” (Jonathan Berman, Fieldstone Africa, Financial Advisor).
- “For a company like ours, investment holding period would be longer than 10 years. For a PE firm or other financial investors, this could be 3-5 years after COD” (Project Developer).

**PILLAR FIVE REGIONAL COMPARISON – PROJECT DEVELOPER COMPENSATION**

The results indicate wide variances in project developer compensation across other regions. In contrast, the regional comparisons indicate the view that African project developers have more demanding multiple roles than project developers in other regions.
The average responses are summarized in the below table.

### Table 12: Pillar Five Project Developer Compensation - Average Survey Responses by Region

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Equity valuation of Project Developer sweat equity</td>
<td>15.3%</td>
<td>17%</td>
<td>9.7%</td>
<td>26%</td>
<td>19.4%</td>
<td>14.5%</td>
</tr>
<tr>
<td>22. Level of returns for Project Developers</td>
<td>21.1%</td>
<td>18.5%</td>
<td>17.7%</td>
<td>15.5%</td>
<td>23%</td>
<td>16.7%</td>
</tr>
<tr>
<td>24. Roles of Developers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Design of project ownership and governance? (1-10 with 10 as very important)</td>
<td>7.9</td>
<td>7.5</td>
<td>7.1</td>
<td>6.0</td>
<td>6.5</td>
<td>5.1</td>
</tr>
<tr>
<td>b. Structuring finance (equity and debt) (1-10 with 10 as very important)</td>
<td>7.6</td>
<td>7.0</td>
<td>4.6</td>
<td>7.0</td>
<td>6.2</td>
<td>6.5</td>
</tr>
<tr>
<td>c. Securing off-take agreements (1-10 with 10 as very important)</td>
<td>9.1</td>
<td>9.1</td>
<td>6.8</td>
<td>9.0</td>
<td>9.4</td>
<td>6.1</td>
</tr>
<tr>
<td>d. Securing competent long-term staff (1-10 with 10 as very important)</td>
<td>7.1</td>
<td>8.1</td>
<td>6.8</td>
<td>8.2</td>
<td>7.3</td>
<td>6.8</td>
</tr>
<tr>
<td>e. Negotiating contracts with suppliers and contractors (1-10 with 10 as very important)</td>
<td>7.4</td>
<td>7.3</td>
<td>6.7</td>
<td>7.6</td>
<td>6.8</td>
<td>6.7</td>
</tr>
<tr>
<td>f. Negotiating with government (1-10 with 10 as very important)</td>
<td>8.8</td>
<td>8.8</td>
<td>7.3</td>
<td>8.8</td>
<td>8.5</td>
<td>5.7</td>
</tr>
<tr>
<td>g. Securing risk mitigation (1-10 with 10 as very important)</td>
<td>8.3</td>
<td>7.4</td>
<td>4.7</td>
<td>6.3</td>
<td>6.0</td>
<td>4.3</td>
</tr>
<tr>
<td>25) Development success hit rate</td>
<td>20%</td>
<td>27%</td>
<td>20%</td>
<td>40%</td>
<td>25%</td>
<td>46%</td>
</tr>
<tr>
<td>26) Developer investment hold period</td>
<td>4.7 years</td>
<td>6.8 years</td>
<td>6.7 years</td>
<td>7.5 years</td>
<td>7.0 years</td>
<td>6.6 years</td>
</tr>
</tbody>
</table>

The survey results report the importance of the various roles of developers across other developing country regions as well as advanced economies.

**However, for most categories the roles of African project developers are perceived as more important than in the other developing country regions:**

- Securing risk mitigation is rated 8.3 in Africa versus a high of 7.4 (Asia) and a low of 4.7 (Middle East).
- The design of project ownership and governance is rated 7.9 in Africa, against scored between a high of 7.5 (Asia) and 6.0 (Middle East).
- Structuring finance (debt and equity) is rated 7.6 in Africa versus a high of 7.0 (Asia, Middle East) and a low of 4.6 (Emerging Europe).

The importance given the different roles of developers across regions is illustrated in the right schematic.
Against the very significant challenges facing project developers, the respondents assert that the success rate is low for African and Emerging Europe infrastructure projects:

- The average success rate is 20% in Africa and Emerging Europe.
- Higher success rates are reported for other developing country regions: 25% in Latin America, 27% in Asia, and 40% in the Middle East.
- The success rate for the advanced economies is reported at 46%.

As noted in the prior sections, the greater risk of failure for African infrastructure development is augmented by more years required for project development, higher development costs, harder access to finance (debt and equity), and higher cost of debt and equity.

The success hit rate in Africa and regions is illustrated in the below bar graph.

As shown in the left bar graph, the average success rate reported of 20% does not represent the wide variance reported by survey participants. Almost two-thirds of respondents (60%) report success rates from 1-20%. These low success rates are offset by the high reported success rates from 31-70%.

In conclusion, the survey results for Pillar Five on Project Developer Compensation underscore the importance of project developer roles in ensuring project success, but burdened with a spectrum of high failure rates. As with other survey results, these reported project developer challenges undermine the ability to develop investable infrastructure projects and provide insights into specific areas for public-private coordination and public support.
PILLAR SIX:
Infrastructure Development Impact
The sixth pillar of the benchmark focuses on infrastructure development impact. Respondents provided their views on the current impact of infrastructure development and the potential for greater economic impact. Additional questions delve into specific kinds of impact: local economic development, training, and local partnerships.

**Summary:** The “Critical” need to improve the impact of infrastructure development on GDP growth and employment was stressed, especially with regard to catalyzing local economic development (local suppliers, etc.) As a basis for local training and skills development. Some respondents also suggested that the integration of local partnerships into infrastructure project design would be “Significant.”

**Detailed Responses for Africa:** The average responses to the questions and the spectrum of responses are detailed in the table below.

### Table 13: Pillar Six – Infrastructure Development Impact Summary of Questions, Average Responses, and Spectrum of Responses

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. To what extent could infrastructure development catalyze Local Economic Development?</td>
<td>Critical-Significant</td>
<td>45% respondents stated “Critical,” 45% stated “Significant,” 6% stated “Moderate”</td>
</tr>
<tr>
<td>30. To what extent could infrastructure development serve as basis for local training, including skilled professional jobs for project preparation, construction, and O&amp;M?</td>
<td>Significant-Critical</td>
<td>53% respondents stated “Significant,” 30% stated “Critical,” 16% stated “Moderate,” 1% stated “Minimal”</td>
</tr>
<tr>
<td>31. To what extent could Local Partnerships be integrated into the infrastructure development process?</td>
<td>Significant</td>
<td>60% respondents stated “Significant,” 16% stated “Critical,” 15% stated “Moderate,” 8% stated “Minimal”</td>
</tr>
</tbody>
</table>

The balance of respondents (30%) stated “Moderate” (24%) and “Minimal” (6%), reflecting Africa’s current infrastructure deficit. The respondents’ comments reaffirmed the basic precondition of infrastructure to Africa’s economic growth:

- “Lack of power is one of the biggest impediments to growth in Africa” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).
- “It is significant provided the projects reach financial close and move to construction which is when you see that significance. So Infrastructure Development is a precursor to significant GDP growth and employment creation” (Project Development Financier).

**27) Existing infrastructure development impact on GDP growth and employment: Critical – Significant.** Based on their experience and perspective, respondents were asked to what extent existing infrastructure development contributes to national GDP growth and employment. Over two thirds of respondents (67%) underlined the “Significant” or “Critical” contribution of existing infrastructure to African GDP growth and employment: 42% of respondents stated “Critical” and 27% stated “Significant.”

The urgent need for additional infrastructure is reflected in one respondent’s comment: “It would be critical because of the role [new infrastructure] would play in unlocking economic growth in other sectors” (Linsey Dyer, DRA, Project Developer and Consultant).

**28) Potential infrastructure development impact on GDP growth and employment: Critical – Significant.** Based on their experience and perspective, respondents were asked to what extent required potential infrastructure development could contribute to national GDP growth and employment. Almost all respondents (96%) underlined the “Significant” or “Critical” contribution of potential infrastructure development to African GDP growth and employment: 48% of respondents stated “Critical” and 48% stated “Significant.”

The respondents’ comments underline both the potential and the preconditions for infrastructure development having a positive impact on local economic development: One respondent states the potential for positive impact is evidenced by the South Africa Renewable Energy Program “[Local economic development] has been experienced in SA through the Renewable Energy IPP programme” (Eliott Monama, Development Bank of Southern Africa, Early-stage project development financier).

Likewise, another respondent explains that positive local economic development impact cannot be forthcoming unless the national-enabling environment provides developers with the required stable policy frameworks: “[Local economic development can be achieved] … to a significant extent but
this becomes relevant only if the developer has security from a policy point of view that the pipeline of opportunities is sufficient to support such economic development in the long term."

30) Extent infrastructure development can serve as basis for local training and skills development: Significant – Critical. Respondents were asked to what extent infrastructure development could serve as the foundational basis for job training and skill development, including professional skilled jobs for project preparation, construction, operation, and maintenance. Almost all respondents (83%) underlined the potential “Significant” or “Critical” contribution of infrastructure development to local skills development: 53% of respondents stated “Significant” and 30% stated “Critical.” The balance (66%) stated “Moderate.”

One respondent suggested that national political leadership in advancing local training in infrastructure development helped to improve the educational profile of an Asian country: “If we refer to the Malaysian experience under Mahathir, we can see that the generation trained to deliver infrastructure mega-projects had the first generation of children who could go to university because their parents could afford to send them and valued the concept of a university education” (Greg Babaya, Stanlib, Financial Advisor).

31) Extent infrastructure development can be systemically integrating Local Partnerships: Significant. Respondents were asked to give their view on the extent to which local partnerships could be integrated systemically into the infrastructure development process. Over two-thirds of respondents (76%) underlined the potential “Significant” or “Critical” integration of local partnerships into infrastructure development: 60% of respondents stated “Significant” and (16%) stated “Critical.” The balance (24%) stated “Moderate” (16%) and “Minimal” (8%).

The respondents’ comments reflect the difficulties associated with integrating local partnerships given the advanced professional skills required for infrastructure development. As one respondent stated: “The potential for local partnerships is dependent on local capability and appetite for risk” (Bertrand Belben, InfraCo Africa, Project Developer). The challenges were especially highlighted for larger projects: “Currently, local partners do not have the skill set or financial resources to participate in any meaningful way in large infrastructure projects” (Project Developer).

On the other hand, another respondent emphasized the need to carefully apply a uniform approach integrating local partnerships taking into account specific project needs and expected development results: “Local partnerships should be a critical component of a systemic approach to infrastructure design based on desired development outcomes” (Linsey Dyer, DRA, Project Developer and Consultant).

REGIONAL COMPARISON FOR PILLAR FIVE – INFRASTRUCTURE DEVELOPMENT IMPACT

The results indicate consistent comparable responses on infrastructure development impact across all developing regions and the advanced economies, with Africa noted as the region with the highest needs.

- For all developing regions, most respondents stated that infrastructure development was “Significant” or “Critical” for GDP growth and employment, catalyzing local economic development, and as a basis for local training (including skilled professional jobs for project preparation, construction, and operations and maintenance).
- For all developing regions except Emerging Europe, the need for integrating local partnerships in infrastructure development was considered “Significant” or “Critical.”
- For the advanced economies, all dimensions were considered “Moderate” or “Significant.”

The average responses are summarized in the table below.

Table 14: Infrastructure Development Impact - Average Survey Responses by Region

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. To what extent could infrastructure development serve as basis for local training, including skilled professional jobs for project preparation, construction, and O&amp;M?</td>
<td>Significant-Critical</td>
<td>Significant-Critical</td>
<td>Significant-Critical</td>
<td>Significant-Critical</td>
<td>Significant-Critical</td>
<td>Moderate-Significant</td>
</tr>
<tr>
<td>31. To what extent could Local Partnerships be integrated into the infrastructure development process?</td>
<td>Significant</td>
<td>Significant</td>
<td>Moderate</td>
<td>Significant-Critical</td>
<td>Significant</td>
<td>Moderate-Significant</td>
</tr>
</tbody>
</table>
The average responses to the questions on the impact of infrastructure development on GDP growth and employment across regions are documented in the pie chart below, showing the comparable importance across regions.

**Chart 6: Existing and Potential Impact of Infrastructure Development on GDP and Employment Africa Compared with Other Developing Regions & Advanced Economies**

As illustrated above, the basic value of infrastructure development is consistent across developing regions and the advanced economies.

The two pie charts break out the responses for Africa, showing responses for the existing and potential impact. As noted in the responses on Africa, over 95% of the survey respondents considered the potential for greater economic impact as “Critical” or “Significant.”

**In conclusion, the survey results for Pillar Six on the economic impact of infrastructure development underscore the near universal agreement of the impact of infrastructure development across the dimensions of economic growth, including local economic development, training, and local partnerships.** The challenges are spelled out in respondents’ comments and provide insights into specific areas of public-private coordination and public support.
PILLAR SEVEN: Integrating Sustainability And Social Impact Into Project Design
The seventh pillar of the benchmark is focused on the integration of sustainability and social impact factors into the design of infrastructure projects. Respondents provided their views on current practices as well as potential for greater integration of sustainability and social impact factors. To define sustainability and social impact, survey participants were provided references to the UN Social Development Goals, climate change and carbon reduction approaches; Environmental, Social, and Governance Assessments (ESG); the Equator Principles; and the Integrated Reporting/six capitals approach.

Summary: Respondents on average reported the “Significant” need to integrate sustainability and social impact into infrastructure project design.

Details on Africa Responses: The average responses to the questions and the spectrum of responses are detailed in the table below.

Table 15: Pillar Seven - Integrating Sustainability and Social Impact into Project Design Summary of Questions, Average Responses, and Spectrum of Responses

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
</table>

Another respondent also stressed that the integration is driven by compliance requirements: “Developers, governments and financiers alike still treat this much as a compliance exercise rather than as a component of a systemic intervention” (Linsey Dyer, DRA, Project Developer and Consultant).

However, another respondent noted the increasing requirements to integrate both sustainability and social impact into infrastructure project design, indicating greater pressure on private sector compliance: “If these areas are not properly addressed, it is practically impossible for the Private Sector to implement any Infrastructure Project. This may differ for the PUBLIC sector, although more and more these two are being aligned” (Project Development Financier).

33) Potential for enhanced project development outcomes with greater integration of sustainability and social impact factors: Significant – Critical. Respondents were asked to what extent there is potential for more extensive integration of sustainability and social impact factors, thereby improving project development outcomes.

Over two-thirds of respondents (73%) stated that the potential for integration of sustainability and social impact factors into infrastructure development practices is “Significant” or “Critical”: 42% of respondents stated “Significant” and 31% stated “Critical.” However, again the balance of responses (27%) showed the divergence in opinions on the potential for greater integration of sustainability and social impact factors into project development practices, with 14% stating “Critical” and 13% stating “Minimal.”

One respondent provided insight into the practical difficulty of reconciling international sustainability standards while at the same time increasing social impact: “This all comes down to a common understanding on what this entails and the additional costs that this may incur. Many local contractors do not practice to these international standards and this does have an unintended consequence of adding cost and limiting participation of local participation” (Greg Babaya, Stanlib, Financial Advisor).
The pivotal role of the public sector in dealing with these issues and advancing sustainability and social impact was noted: “Would like to see Governments put more focus on this area” (Brian Herlihy, Black Rhino, Project Developer).

**REGIONAL COMPARISON: PILLAR SEVEN INTEGRATING SUSTAINABILITY AND SOCIAL IMPACT INTO PROJECT DESIGN**

The results indicate consistent comparable responses on sustainability and social impact across all developing regions and the advanced economies, with Africa noted as the region with the highest needs.

- For all developing regions, most respondents stated that infrastructure development was “Significant” or “Critical” for GDP growth and employment, catalyzing local economic development, and as a basis for local training (including skilled professional jobs for project reparation, construction, and operations and maintenance).
- For all developing regions except Emerging Europe, the need for integrating local partnerships in infrastructure development was considered “Significant” or “Critical.”
- For the advanced economies, all dimensions were considered “Moderate” or “Significant.”

The average responses are summarized in the table below.

**Table 16: Pillar Seven - Sustainability and Social Impact - Average Survey Responses by Region**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>32. Current integration of sustainability and social impact factors in project development?</td>
<td>Significant - Moderate</td>
<td>Moderate - Significant</td>
<td>Minimal - Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>33. Potential for enhanced project development outcomes with greater integration of sustainability and social impact factors?</td>
<td>Significant - Critical</td>
<td>Significant</td>
<td>Moderate - Significant</td>
<td>Moderate - Significant</td>
<td>Significant</td>
<td>Moderate - Significant</td>
</tr>
</tbody>
</table>

The average responses to the questions on the integration of sustainability and social impact into project design across regions are documented in the pie chart on the right, showing the comparable importance across regions. The two pie charts break out the responses for Africa, showing responses for the existing level of integration and potential impact.

**Chart 7: Integration of Sustainability into Project Design - Africa Compared with Other Developing Regions & Advanced economies**

The pie charts show the African responses, again illustrating the importance given to increasing sustainability for achieving greater development outcomes: 73% of respondents stated that the potential as “Significant” or “Critical.”

**In conclusion, the survey results for Pillar Seven on integration of sustainability and social impact in infrastructure development underscore the near universal agreement of the importance for infrastructure development.** The challenges are spelled out in respondents’ comments, and provide insights in the needs for specific areas of public-private coordination and public support.
PILLAR EIGHT: Integrating Local Stakeholder Inclusion into Project Design
The eighth pillar of the benchmark is focused on integrating stakeholder inclusion into project design. Based on their experiences, respondents were asked for their views on the extent of existing inclusion of local stakeholders into project design, and the potential for enhanced project development outcomes with more extensive inclusion.

**Summary:** Respondents reported the “Significant” or “Critical” need to integrate local stakeholders into infrastructure project design, provided risks associated with delays and risks can be mitigated.

**Detailed Responses for Africa:** The average responses to the questions and the spectrum of responses are detailed in the table below.

### Table 17: Pillar Eight - Local Stakeholder Inclusion

**Summary of Questions, Average Responses, and Spectrum of Responses**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Responses</th>
<th>Spectrum of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>34) Existing local stakeholder inclusion in project development?</td>
<td>Significant - Moderate</td>
<td>47% respondents stated “Significant,” 29% stated “Moderate,” 14% stated “Critical,” 10% stated “Minimal”</td>
</tr>
<tr>
<td>35) Potential for enhanced project development outcomes with more extensive local stakeholder inclusion?</td>
<td>Moderate - Significant</td>
<td>37% respondents stated “Moderate,” 28% stated “Significant,” 21% stated “Critical,” 13% stated “Minimal”</td>
</tr>
<tr>
<td>35) Potential for enhanced project development outcomes with more extensive local stakeholder inclusion?</td>
<td>Critical - Significant</td>
<td>35% respondents stated “Critical,” 33% stated “Significant,” 26% stated “Moderate,” 5% stated “Minimal”</td>
</tr>
</tbody>
</table>

### Details by Question:

Details on the survey respondents’ views on local stakeholder inclusion factors are provided below.

**34) Existing local stakeholder inclusion in project development: Moderate – Significant (average).** Based on their experience and perspective, respondents were asked to what extent existing project development processes include local stakeholders.

Over two-thirds of respondents (64%) stated existing local stakeholder inclusion into infrastructure development processes is “Moderate” or “Significant”: 36% of respondents stated “Moderate” and 28% stated “Significant.” However, the balance of responses (24%) showed the divergence in opinions, with 21% stating “Critical” and 13% stating “Minimal.”

One respondent stated that local stakeholder inclusion is “Critical but doesn’t happen enough” (Brian Herlihy, Black Rhino, Project Developer). Another respondent noted that in some countries local stakeholder inclusion is a governmental requirement: “In several countries there are requirements for local inclusion, such as the PDN or BEE legislation in Namibia and South Africa, respectively” (Dr. Herta von Stiegel, Ariya Capital, Project Developer).

**35) Potential for enhanced project development outcomes with more extensive local stakeholder inclusion:** Critical – Significant (average). Based on their experience and perspective, respondents were asked to what extent potential greater inclusion of local stakeholders improves project development incomes.

Over two-thirds of respondents (67%) stated that the potential for local stakeholder inclusion and development outcomes is “Critical” or “Significant”: 35% of respondents stated “Critical” and 32% stated “Significant.” The balance of responses 31% reflected concerns with potential negative outcomes, with 26% stating “Moderate” and 5% stating “Minimal.”

Respondents noted potential issues associated with local stakeholder inclusion, such as the need to define the nature of inclusion and the risk of inexperience adding delays and costs to the project:

- “[Local stakeholder inclusion] needs to be balanced. Inclusion of local stakeholders is important, but it should not be limited to mandatory equity stakes in the project” (Dr Herta von Stiegel, Ariya Capital, Project Developer).
- “This is a double edged sword. Local stakeholders do add significant value to all aspects of the process, but inexperience can add lengthy delay and cost to the process as well” (Greg Babaya, Stanlib, Financial Advisor).

**REGIONAL COMPARISONS PILLAR EIGHT - INTEGRATING LOCAL STAKEHOLDER INTO PROJECT DESIGN**

The overall view with regard to local stakeholder inclusion is comparable across developing country regions:

- With regard to existing inclusion of local stakeholders, all developing country regions rate the local inclusion of local stakeholders as “Moderate” to “Significant.”
- Moreover, the average responses for developing country regions all increase towards “Significant” when asked about the potential for enhanced project development outcomes with more extensive local stakeholder inclusion.

“This is a double edged sword. Local stakeholders do add significant value to all aspects of the process, but inexperience can add lengthy delay and cost to the process as well.”
In contrast, the current and potential impact of local stakeholder inclusion for advanced economies was rated as “Moderate.”

The summary of average responses across regions is presented in the table below.

Table 18: Pillar Eight - Local Stakeholder Inclusion - Average Survey Responses by Region

<table>
<thead>
<tr>
<th>Questions</th>
<th>Africa</th>
<th>Asia</th>
<th>Emerging Europe</th>
<th>Middle East</th>
<th>Latin America</th>
<th>Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>34) Current local stakeholder inclusion in project development?</td>
<td>Moderate -Significant</td>
<td>Moderate -Significant</td>
<td>Moderate -Significant</td>
<td>Moderate -Significant</td>
<td>Moderate -Significant</td>
<td>Moderate</td>
</tr>
<tr>
<td>35) Potential for enhanced project development outcomes with more extensive local stakeholder inclusion?</td>
<td>Significant -Critical</td>
<td>Significant</td>
<td>Moderate -Significant</td>
<td>Moderate -Significant</td>
<td>Significant</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

The average responses to the questions on the inclusion of local stakeholders into project design across regions are documented in the pie chart below, showing the comparable importance across regions. The two pie charts break out the responses for Africa, showing responses for the existing level of inclusion and potential impact.

Chart 8: Local Stakeholder Inclusion Africa Compared to Other Developing Regions & Advanced Economies

The pie charts show the African responses, again illustrating the importance given to increasing local stakeholder inclusion for achieving greater development outcomes: 68% of respondents stated that the potential as “Significant” or “Critical.”

Therefore, in conclusion, the survey results for Pillar Eight on the inclusion of local stakeholders in infrastructure development underscore the near universal agreement across developing country regions of the importance of increasing the inclusion of local stakeholders. The challenges are spelled out in respondents’ comments and provide insights into specific areas for public-private coordination and public support.
**Background:** The demand for enhanced project development is anchored within the professional community of African infrastructure practitioners and investors as manifested in the events organized by AfricaInvestor (Ai). A key issue highlighted by leading project developers operating in Africa, at both the 2015 and 2016 Ai CEO Project Developers Summits held in association with the International Finance Corporation (IFC), is the dearth of benchmarking information and analysis of project development best practice to enable developers, governments, DFIs and lenders to transparently evaluate the economic and commercial best practices currently employed by project developers operating in Africa and around the globe.

In 2015, the Summit inspired the establishment of the Ai African Project Developers Forum, a pan-African network of over 200 infrastructure project developers and early-stage financiers that share and publish thought leadership, promote best practices, discuss co-development opportunities and are committed to improving the business environment for project developers and financiers in Africa (see www.aidevelopersforum.com).

Led by its Advisory Board, the Ai African Project Developers Forum with the technical support of Ai Capital and the Global Clearinghouse of Development Finance (GlobalDF), is pioneering the *I4PD Benchmark* to provide a general snapshot comparison of key aspects of project development finance and investment norms. The I4PD Benchmark is intended to inform decision makers on specific issues that need to be addressed to incentivize and increase private sector investment into building the pipeline of investable African infrastructure projects that can access private capital.

**Methodology:** The approach is designed to highlight basic aspects of the project development process for infrastructure projects, focusing on finance and investment. The benchmark measures the norms that affect the ability to develop investable infrastructure projects so that they can reach financial close. These project development norms affect the quality and quantity of projects in African project pipelines, covering time, cost, access to finance, returns, and impact on the continent’s GDP growth, employment, economic development, and competitiveness.

**Definition of Project Development:** The *I4PD Benchmark* covers the entire project development process for infrastructure projects. The project development process is defined as the activities from the inception of the project concept through its definition, structuring, and development until financial close. At financial close, the project has secured the equity and debt finance required to construct and operate the project. The development process includes the full range of activities, such as project conceptualization to setting up the legal entity and ownership structure, securing capital to develop the project, engaging professionals to conduct project development activities, the definition and completion of required technical studies, negotiation of contracts, obtaining the required off-take agreements and permits, land acquisition, securing of equipment and service providers, structuring of finance and risk mitigation, negotiation of financial and other contracts, and addressing all impediments in the development process.

**Data:** Since there are no databases with project development statistics, the *I4PD Benchmark* is survey-based, using input from a wide array of experienced infrastructure practitioners across the public and private sectors. All respondent responses are confidential and provided on a non-attribution basis, unless respondents indicate otherwise. To enable regional and advanced economy comparisons, infrastructure participants outside of Africa are asked to participate in the survey.

**Benchmark Pillars:** Eight aspects of project development are measured, serving as “pillars:”

1. Project Development Efficiency
2. Government-Related Impediments to Project Development
3. Project Development Costs
4. Project Development Funding
5. Project Developer Compensation
6. Infrastructure Development Impact
7. Integrating Sustainability and Social Impact into Project Design
8. Integrating Stakeholder Inclusion into Project Design

**Regional Comparisons:** Since one objective is to contrast key metrics shaping the project development process in Africa against other geographical regions, the survey questions will ask for comparative benchmarks. If the respondent does not have recent experience (i.e., over the last three years) in one or more countries in a region, s/he is asked to answer “NA (not applicable).”

To enable an overall comparison between regions, Africa is compared with other major developing county regions at the continent level: Asia, Emerging Europe, Latin America & Caribbean, and the Middle East. To complete the relative comparison, a general category “Advanced Economies” is provided to cover developed countries, using the IMF definition.

**Project Size:** The project development process varies greatly based on the total size of the project. As this benchmark is focused on moderate to large infrastructure projects, survey respondents are asked to consider only infrastructure projects larger than US$50 million.

One consideration going forward is the need to compile an “Infrastructure Benchmark for Investing in the Development of Small African Infrastructure Projects.”

For questions and/or interest in partnerships, please contact Hubert Danso, CEO, Africa investor, (hdanso@africainvestor.com) and Dr. Barbara Samuels, Executive Director, Global Clearinghouse for Development Finance (barbara@globaldf.org).
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.