Capital projects in Africa: The new frontier

Organisations are increasingly investing in capital projects in Africa to build new infrastructure, develop new markets and attract new customers. Despite the challenges of the region, they can achieve high performance by adopting a business approach to capital project management.
Executive summary

- Few regions in the world offer better growth potential for capital projects than Africa. A wealth of natural resources, fluctuating commodity prices and improved standards of living in urban pockets, set against a backdrop of growing political stability, are prompting governments across the region to invest heavily in large capital projects. As confidence in Africa’s future grows, companies are prepared to make long-term commitments to local sourcing and skilling of future workers.

- However, they must also overcome a slew of challenges that are compounded by Africa’s current stage of development. Regulation is seen as complex and tariff policies regressive, with significant cost and timeline implications. The poor transportation infrastructure results in soaring costs and sub-optimal productivity. Managing diverse sets of stakeholders can be difficult. Africa also presents major workforce challenges—skills are scarce and training needs are high.

- Accenture believes these large and complex capital projects increasingly need to be managed like businesses. Capital project management must think and act like business owners, not project managers. The critical business issues of workforce management, defining and measuring success, stakeholder relations, planning, monitoring and governance need to be addressed effectively to enable robust decision making on multi-year projects.

- According to Accenture, capital project management in Africa must focus on five best practices: integrated project management, front-load project planning, creating dedicated capabilities, key supply-chain capabilities and planning for a workforce for high performance that aligns with the project lifecycle. With many of Africa’s projects at an early stage, the timing is right to start with the end in mind, and front-load project planning to improve outcomes and avoid costly retrofitting later.

- Capital project businesses need a vision and strategy, key performance indicators that reflect target outcomes, the right technology to support those outcomes and a stakeholder management plan to facilitate the right and timely decisions. Without a holistic view of the end state, and transparency across all the steps required to get there, Africa’s capital projects will not reach their full potential.

- Accenture’s research “Developing Strategies for the Effective Delivery of Capital Projects” has identified a number of key drivers of high performance capital projects. By following these principles capital project teams will be able to substantially increase their likelihood of on time performance, meeting the business case needs, delivering projects at reduced cost and making sure their projects are focused on operational readiness.
Africa is increasingly becoming an attractive destination for long-term capital investment. Several factors make a compelling case for global companies to play a part in this unfolding growth story. The continent has an abundance of natural resources, including proven reserves of diamonds, gold, manganese, copper and coal. It has around 10 percent of the world’s oil reserves and eight percent of its natural gas reserves.

At the same time, the continent’s economy is projected to grow at 4.8 percent in 2013, compared with 4.5 percent in 2012 and 3.4 percent in 2011. Incomes have been rising across urban pockets of sub-Saharan Africa. Consumer spending in the region is growing at a steady four percent a year, and is expected to be worth $1 trillion by 2020. This has resulted in the emergence of a new middle-class, estimated by the African Development Bank at around 300 million people.

Connected to this development are mounting expectations of higher living standards and improved infrastructure. In response, governments and parastatals (quasi-governmental agencies) have unveiled massive infrastructure development plans. These capital investments can be bankrolled with rising royalty receipts from higher commodity prices and buoyant corporate tax and income-tax revenues. Governments are also pursuing public-private partnerships for the funding, planning and execution of capital projects.

Projects on the drawing board include:

- **Upgrading rail and road networks, ports and airports.**
- **Improving dams and irrigation systems, sanitation, power plants and transmission lines.**
- **Widening social infrastructure such as hospitals, schools and universities.**
Clearly, the number and size of capital projects in several African countries are set for unprecedented growth, with deepening political stability across large parts of the continent. Global players are growing confident of doing business in Africa. Indeed, significant private investment can already be seen in Africa’s resources and telecommunications sectors. Accenture’s analysis of available information shows that several African countries will see considerable growth in infrastructure projects.

South Africa is particularly attractive for foreign and local capital investments. In terms of asset growth measured by gross fixed capital formation, South Africa outperforms many countries. This can be attributed to the mining and export of natural resources. Along with South Africa, economics such as Nigeria, Angola, Ghana, Tanzania, Uganda and Mozambique are also showing significant growth in gross domestic product and we believe they will become major players in the infrastructure industry as they step up their investments, take advantage of their natural resources and secure long-term economic growth.
Understanding the challenges

Capital investment in Africa is not without its challenges. The risks and complexities that typically accompany the execution of an infrastructure project are often compounded in a region that is still at an early stage of structural transformation. So, how does an investor complete a project on time, on budget, and maintain high quality standards while realising an optimal return on investment? The answer to achieving high performance in Africa lies in understanding and managing these risks and complexities.

We believe Africa’s capital projects ecosystem presents investors with challenges in the following areas:
Skills
Africa’s scarcity of skilled labour, especially in the construction sector, leads to delays or warrants redundancies that translate into higher costs. The growing number of projects in the region results in an even greater demand for experienced staff at both contractor and organisation levels. A growing reliance on expatriates to plug skill gaps not only raises intercultural communication challenges, but also places pressure on cost calculations and upsets local hiring prerequisites imposed by governments. Managerial and technology skills are also in short supply, impacting large, complex projects.

Regulation and taxation
Although interest in Africa is rising, countries in the region have yet to create an enabling environment for private sector investment in capital projects. Few have regulatory frameworks that help increase efficiency, drive down costs and encourage investment. Combined with regressive import tariff policies, these constraints have a significant impact on project feasibility, timelines and budgets. Local legislation on withholding tax and transfer pricing directly affects royalties. Payments, specifically for overseas suppliers of goods or services, are also impacted by the multiplicity of local foreign exchange controls.

Localisation
In order to enhance the contribution of capital projects to local economy, skills and society at large, several African governments impose stringent local content riders before awarding operating licenses. However, capital project developers will need to factor in the limited number and experience of local vendors. Considerable effort is also required to develop long-term suppliers in a sustainable manner.

Financing
In the aftermath of the global financial crisis and economic slowdown, lenders are enforcing tougher risk management on project developers, financial performance, local content, industrial relations and project delivery requirements. This adds further complexity to capital project planning, execution, supply chain activities and final operational startup. Many countries have public-private partnership legislation in place, but often lack the resources and capacity to prepare bankable projects for the market.

Logistics
In several African countries, inconsistent availability of power, water and effluent systems can seriously impact cost, risk and projected cash flows. Holdups at ports, bureaucratic hurdles and poor transportation infrastructure means it is often a challenge getting raw materials, equipment and people to project sites when they are needed. On-stream projects are often hit by a shortage of feedstock or spare parts. Limited power and internet connectivity can also seriously compromise the use of technology applications.
Integrated project management

An integrated capital project management methodology should span the entire capital project lifecycle, processes, stage gate requirements, and roles and responsibilities of each of the disciplines involved. Defining “good” project management is vital for effective planning and project controls, driving both project management consistency and discipline. It also clarifies the processes to be executed in a logical, well-coordinated manner and ensures process owners remain focused on appropriate outcomes.

The methodology ensures that accurate and timely information is available for decision-making and delivery management. In addition, it enhances project governance, as processes have been defined and suitably assigned. The project management methodology helps to align a company’s strategic key performance indicators with those of its capital project management and subsequently, with the personal performance contracts of the people involved. In this way, different capital project disciplines, with sometimes conflicting interests, find common ground and rigour.

In the African context, such an integrated methodology can help address several of the challenges outlined. Complexities resulting from internal and external changes can be managed with minimum disruption. Just as importantly, integrated project management facilitates transparency to external stakeholders such as governments, investors and suppliers, as well as internal project team members. It allows for consistent cross-project portfolio reporting on local content contributions, supplier performance, and vendor management. Moreover, an integrated methodology ensures the involvement of all relevant stakeholders at the appropriate time in the project management lifecycle, thereby embedding risk management and mitigation, particularly critical in the area of logistics.
Front-load project planning

Identifying critical areas for high performance as early as possible in the project lifecycle ensures core business challenges such as vision, strategy and metrics align to support rigorous decision making. Front-loading project planning also helps flag complexities, particularly relevant in Africa, and better understand how to tackle them. It allows early identification of risk and mitigation strategies. Given the importance of front-loaded project planning, the supporting skills need to be valued, adequate time allocated for the purpose, and the right people involved. The same is true of project estimation, control and monitoring, as these skills are among the most difficult to find.

Extensive, realistic planning minimises the likelihood of scope change later. And successfully executing to plan is possible only when the plan itself is realistic, flexible and accurate. Leading practice planning should account for likely variables in the local market, with some flexibility built in for different scenarios that may emerge. The potential complexities in the African market will affect delivery if not taken into account during the planning stage.

Our experience in the capital projects sector has shown that management should focus on six areas as early as possible in the project lifecycle (see Figure 1). Doing so will establish the right vision, strategy and delivery arrangements to drive expected outcomes. By providing a checklist of important questions, and then considering them in a geographical context, the framework recognises the complexities of the African market and proposes innovative ways to manage them.
Figure 1: Building on the Accenture Integrated Capital Project Business Model to provide a path to high performance in Africa

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Technology</th>
<th>Operational excellence</th>
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</thead>
<tbody>
<tr>
<td>• What are we seeking to achieve with the capital project? How does it align to the strategic agenda (new markets, new geographies, etc)?</td>
<td>• What technology enables the capital project to succeed and aligns with the strategy? Back-office technology?</td>
<td>• Do we understand the key and critical processes that will safeguard delivery?</td>
</tr>
<tr>
<td>• How are we measuring success and are our key performance indicators’s right?</td>
<td>• What technology will integrate information needs and stakeholders?</td>
<td>• Do we understand the roles and responsibilities of different parties (internal, external, such as engineering, procurement and construction management)?</td>
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<tr>
<td>• Are we prioritising upfront planning to mitigate later risks?</td>
<td>• What technology is being considered to reduce operational costs into the long-term?</td>
<td>• Do we seek to optimise our processes during the capital project lifecycle for maximum efficiency and effectiveness?</td>
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<tr>
<td>• What is our contractor strategy?</td>
<td>• How is technology reducing labour needs and increasing flexibility?</td>
<td>• Do we understand what industry good practice looks like?</td>
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<tr>
<td>• Do we illustrate our vision and strategy through clear communications to the market?</td>
<td></td>
<td>• Can we use insights from other industries?</td>
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<tr>
<td>• Do we prioritise the right investments to achieve our strategic goals?</td>
<td></td>
<td>• Do we adequately measure and manage supplier performance and are we actively contributing to supplier development?</td>
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<tr>
<td>• Does the portfolio, size and duration of capital projects deployed allow for a dedicated project management unit or dedicated Capital Project Sourcing organisation?</td>
<td></td>
<td>• Do we apply a multi-disciplinary approach during front-end loading to identify and mitigate risk associated with the complexities of deploying capital project in Africa?</td>
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<td>• In case of government or state-owned enterprises: Can we leverage existing capital project capabilities at other government institutions or state owned enterprises?</td>
<td></td>
<td>• Do we have and apply the right logistics, supplier and sourcing intelligence capabilities?</td>
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| High performance capital project business model                           |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Leadership                                                                | Organisation and governance                                               | People and culture                                                                     |
| • How do leaders set a clear example to drive focus and delivery?         | • Do we have an organisation design (including performance management) that enhances delivery and assigns clear roles and responsibilities? | • Do we have a talent strategy including onshore/offshore mix? |
| • Do we have the right types of leaders and managers for capital projects (short-term delivery, long-term business sustainability)? | • Are we making the right decisions, at the right time, with the right information? | • Do we promote a culture of delivery excellence and responsibility? |
|                                                                          | • Do we have defined governance structure to manage internal and external stakeholders (joint venture partners, government, environmental bodies, communities)? | • How do we support health and safety compliance and good practice? |
|                                                                          | • Do we have the right governance structure to manage the “management of change” process? | • How do we capture knowledge and experiences from employees, contractors, joint venture partners? |
|                                                                          | • Do we thoroughly understand government and regulatory requirements, proposed changes thereof, during early phases of the capital project, specifically on local content, supplier development and taxes? | • Do we provide career development opportunities in our capital project domain in order to attract and retain talent? |
|                                                                          | • Do we actively develop and build government and labour relations?        | • Do we understand the different pools of talent and are we actively sourcing from these pools? |
|                                                                          |                                                                          | • Are we deploying skills development programs that are aligned to career development? |
Clearly agreed operating model

Investors with a capital project pipeline focused on Africa should consider setting up a clearly agreed operating model with a strong mandate and strategic focus. This unit will oversee the portfolio including prioritisation, planning and portfolio risk. It will drive the development of appropriate management and performance metrics unique to capital projects in Africa.

Such an approach enhances the success of capital project delivery. It increases the project owner’s ability to leverage and build a talent pool, use lessons learned and drive continuous improvement in the project’s processes, tools and enabling technologies. It also helps build sustainable relationships with local suppliers, regulators, unions and governments. Dedicated project management units also enable management of cross-project portfolio risk, funding and capacity planning.

Build key supply-chain capabilities

Building these capabilities is vital in Africa where supply chains are underdeveloped and prone to a wide range of unforeseen changes. These capabilities include:

Strategic sourcing

When engaged early in the capital project lifecycle, this capability plays an important value-adding role by defining contracting and sourcing strategies. Cross-portfolio strategic sourcing opportunities are an important value lever to drive down spend and reduce risk.

Logistics Management

Logistical management is a key driver of cost and complexity within Africa. Challenges exist throughout the process due to the complexities associated with long supply chains, immature infrastructure, complex duties and tariff systems and a lack of visibility. Building early and efficient supply chain logistics teams will enable the project to increase their visibility and predictability of materials.

Commercial intelligence

- Logistics intelligence: This capability can be of great value in Africa where logistical complexities can affect capital project return on investment. It enables optimal sourcing and security of supply. Furthermore, it ensures quality of procured capital equipment and expedites procurement when needed.

- Supplier intelligence: Supplier management capability provides a consolidated view of suppliers across the entire capital projects portfolio. This includes supplier identification, selection, development and setting key performance indicators, as well as evaluating performance for strategic suppliers.Forging strong, collaborative relationships with suppliers drives additional value and helps meet local content and supplier development targets.

- Sourcing intelligence: This capability combines supplier intelligence with market intelligence to develop a commercial strategy on the use of contractors. Selecting the right approach depends on several factors including project segmentation strategy (what work to do in-house and what to outsource), schedule constraints, technologies, timing and risk.

Risk management

High-performance businesses recognise that risk must be proactively managed. This is even more crucial in Africa, where economic, political and other uncertainties abound. The most common procurement risk areas relate to supplier reliability and price volatility. The impact on cost and timelines can be minimised using a “risk management framework”—a comprehensive, end-to-end value chain approach to anticipating, monitoring and mitigating risk. Companies that invest in supplier risk management capabilities often experience fewer risk incidents and, in turn, establish more reliable time-to-market capabilities and greater value.

Advanced analytics

This capability provides actionable insights relevant to the overall management of capital project sourcing and procurement. Advanced analytics can provide valuable input to determine contracting strategies and sourcing strategies for capital equipment, engineering and construction services. These insights typically focus on commodities, suppliers and markets, and are aimed at leveraging demand.

Descriptive analytics, that is, spend analytics, supplier performance analytics, contract analytics and claims analytics, provides critical inputs to manage compliance risks and suppliers. Prescriptive analytics predicts outcomes based on past behaviours, as well as current and predicted political, economic and environmental scenarios. It can assist in predicting commodity price volatility and raw material pricing, risk exposure to exchange rate volatility, supplier performance risk and supply-chain disruption.

Plan for the workforce

Africa’s skills shortage makes active workforce planning critical to sustainably build capabilities, and manage short-term capacity and capability shortages. For instance, organisations need to source talent much earlier than in several other parts of the world. The focus in this region will also be affirmative action in hiring policies, such as the Broad-Based Black Economic Empowerment regulations in South Africa. Project owners will need to consider how to attract, develop and retain these sources of talent.

Programmes to reskill and upskill existing workers are important to create a flexible workforce and plug skill gaps. Training models that combine onsite, classroom and online training to develop talent in a range of locations contribute to a culture of operational excellence. At various stages of a project, there may be value in reviewing the insourced and outsourced mix of project activities. By building strong supplier relationships with engineering and construction firms, there are opportunities to employ their temporarily unutilised resources. This can help to counter the effects of the cyclical nature of these industries.
Global concerns

Capital projects typically involve large capital expenditure and a high degree of complexity and risk. The capital project lifecycle spans design, construction, commissioning and decommissioning phases. A recent global survey conducted by Accenture in the Mining, Energy and Utilities industry examined the challenges faced by key players and what industry leaders are doing differently.4

The survey found that a majority of companies are not delivering against targets (see Figure 2). Only 34 percent of respondents reported they had delivered within a 25 percent budget overrun for all projects. In addition, only 32 percent delivered all of their projects within a 25 percent overrun. Only 31 percent of respondents delivered to the quality defined in the original design.

The Accenture survey also indicated that the top priorities for respondents over the next three years are:

- Finding the right leaders and talent.
- Delivering to schedule and improving front-loading.
- Extracting greater value from contractors.
- Ensuring effective stakeholder management.
- Safety management.

The conclusion of the survey is that capital projects should focus more on running their project activities as businesses, with a clear strategy, a business model and an operating model that delivers on the strategy. Capital projects need to consistently execute a defined set of processes, apply appropriate governance and create insight into project performance to enable effective decision making. Finally, capital projects, similar to businesses, need to plan for, and anticipate, the dynamic environment in which they operate. This will significantly influence a project’s likelihood of schedule, budget and asset operability success.

The Accenture survey also indicated that high-performance capital projects have seven attributes and capabilities that allow them to solve major capital project challenges (see Table 1).

![Figure 2: Global Accenture research found that many mining, energy and utilities organisations are not meeting their targets](image)

<table>
<thead>
<tr>
<th>Table 1: Seven characteristics of high-performance capital projects</th>
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<tr>
<td><strong>1. Integrated project management methodology</strong></td>
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<td><strong>2. Performance data</strong></td>
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<td><strong>3. Key performance indicators</strong></td>
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<td><strong>4. Decision making</strong></td>
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<td><strong>5. Change management</strong></td>
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<td><strong>6. Transition management</strong></td>
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<td><strong>7. Culture</strong></td>
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Accenture believes that capital project management should focus on running activities as a business—with a clear strategy, a business model and an operating model that delivers on the strategy (see Figure 1). Capital projects need to consistently execute a defined set of processes, apply appropriate governance and create insight into project performance to enable effective decision making. Finally, capital projects, similar to businesses, need to plan for and anticipate the dynamic environment in which they operate.

Figure 3: Treating capital projects as businesses can significantly influence their success
Conclusion

Africa will need investments of US$93 billion annually until 2020 to close its infrastructure deficit. However, even with fluctuating commodity prices and improving tax revenues, governments in the region will be in no position to fund that kind of investment. Increasingly, they must turn to private companies or public-private partnerships to fund capital projects. These companies will have to adopt a comprehensive approach to manage the challenges, complexities and risks of capital projects in Africa. The traditional project management focus needs to transform into a business approach with targeted objectives, clear delivery strategies and careful monitoring to track progress toward high performance.

In today’s business environment, with its rapidly shifting market dynamics, Africa’s long-term investments are even more challenging to manage. These capital projects call for integrated project management, front-loaded project planning, dedicated business units and long-term workforce planning. Companies will also need to build key supply-chain capabilities in strategic sourcing, intelligence, risk management and advanced analytics. Addressing the cost and time objectives of capital projects provides companies with an opportunity to achieve competitive advantage in this rapidly emerging market.
Further reading

• Developing Strategies for the Effective Delivery of Capital Projects:
About the authors

Hayley Walters is a member of the Accenture South African Leadership Team. She leads Operations in South Africa as well as Innovation and Capital Projects across Africa. Hayley has led large Transformation Programmes, including those involving cost reduction, changes in operating models and integrated supply chain. Hayley’s area of specialisation includes procurement, supply chain, capital projects as well as journey and stakeholder management. Hayley has worked across multiple industries with experience including mining, utilities, energy, consumers goods and retail. Hayley is based in Johannesburg and can be reached at hayley.walters@accenture.com.

James Arnott is a Managing Director in Accenture’s Resource Operating Group. He leads Accenture’s Capital Project Services for Europe, Middle East, Africa and Latin America (EALA). James has extensive experience in the oil, gas, chemicals, mining and electricity industries and has a good understanding and practical experience in the strategic issues pertaining to transformation and delivery of capital projects within these industries. He has worked with clients in the Middle East, Australia, China, Indonesia, Malaysia and South Africa. Clients include international and national oil companies, global diversified mining companies, global chemical companies and state-owned utility companies. Based in the UAE, he can be reached at james.arnott@accenture.com.

Coen Hofstad is a Senior Manager in Accenture’s Operations Consulting practice in South Africa. He focuses on assisting clients in energy, utilities and mining industries with strategy definition, organisation design, process and performance improvement, supply-chain management, capital projects, project and change management. Based in Cape Town, he can be reached at coen.hofstad@accenture.com.

Fred Vitale is a Senior Manager in Accenture’s Operations Consulting practice. He focuses on helping clients in capital-intensive industries such as mining, utility and oil and gas across the globe. Fred specialises in resolving clients’ problems in procurement and capital project sourcing. He manages Accenture’s capital project sourcing offering and has more than 31 years’ experience. Fred is a member of the North American Sourcing and Procurement Leadership Team. Based in Washington DC, he can be reached at fred.m.vitale@accenture.com.

End notes


2. Euromonitor 2011


4. Developing strategies for the effective delivery of capital projects, Accenture, 2012
About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 266,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$27.9 billion for the fiscal year ended Aug. 31, 2012. Its home page is www.accenture.com.