

Deloitte.

Deloitte on Africa
African Construction
Trends Report 2013



Contents

African infrastructure	2
African construction trends	3
Regional review	
Southern Africa	6
East Africa	10
West Africa	14
Central Africa	18
North Africa	20
Conclusion	23

African infrastructure



Masterpiece under construction

The world is hard at work on the African infrastructure masterpiece. The continent is being molded and shaped to raise infrastructure in a bid for greater self-sufficiency and global competitiveness. New energy generation hubs are being forged. Transport corridors are being built with a view to better integrate regional trade and basic water infrastructure is being invested in. In addition, telecommunications connections are being strengthened and expanded and development is beginning to touch the commercial property sector. Exhibiting six of the ten fastest growing economies in the world, the breadth and depth of African construction activity over the past years has ushered in a growth era. The benefits of such high growth can, however only be sealed once projects are commissioned and consistently maintained.

Methodology

This is the second edition of the Deloitte on Africa, African Construction Trends Report. It is produced annually by Deloitte Southern Africa in collaboration with Deloitte African member firms and this year, the report expands on content covered in the maiden edition with projects spanning the entire continent. The sampling basis required infrastructure construction projects to be valued at over USD50 million and to have broken ground, but not been commissioned, by 1st June 2013. A total of 322 projects qualified for inclusion. Deloitte has also focused on presentation of robust regional analysis within this edition. Categorisation of regions follows that of the African Development Bank and data collected was limited to publicly available information. In drilling down into the details, we have aimed to extract trends and identify who owns, builds and funds African construction projects.

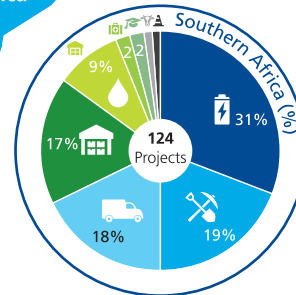
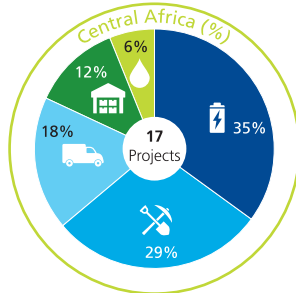
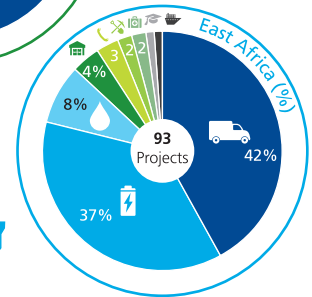
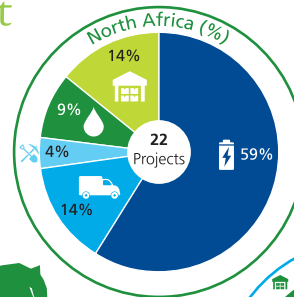
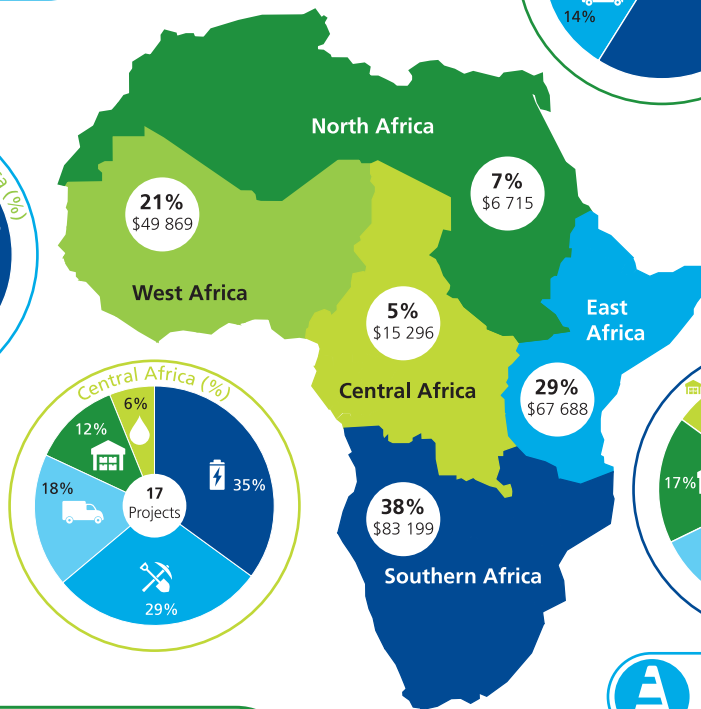
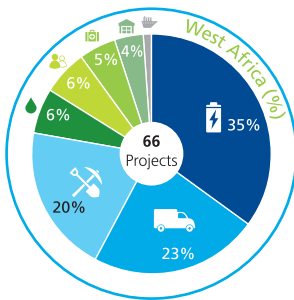
African construction trends

Building Africa

A view of construction on the continent

-  Energy/Power
-  Transport
-  Mining
-  Water
-  Real Estate
-  Healthcare
-  Telecommunications
-  Education
-  Agriculture
-  Construction
-  Shipping and Ports
-  Social Development

Predominant owners
 Government = 56%
 Europe/US = 17%
 PPP = 4%



Development Finance Institutions (DFIs) contribute **36%** of all funding on the continent and as such are doing most of the funding

Energy/Power sector is contributing **36%** of all projects collected followed by **25%** in **Transport**

Southern Africa had the highest number of projects followed by East Africa and West Africa
\$83 199 Million
 Southern Africa

Over **322** different collected construction projects are underway

Over **\$222 767 Million** in construction projects underway

Construction companies building on the African continent

Europe/US are building **37%** of all projects while the **Chinese** are building **12%**

Southern Africa contributed **38%** | East Africa contributed **29%** | West Africa contributed **21%** of the total collected projects

Artisans, architects and investors

Slightly over USD222 billion is being invested in 322 African infrastructure projects that meet the criteria for this report, i.e. project value over USD50 million and had broken ground by, but not yet been commissioned at, 1 June 2013. Notwithstanding the fact that the continent is working off a historically low base, this level of investment is substantial, holding high expectations both for and from stakeholders.

Top sectors in African infrastructure development (rated by investment value) are Energy and Power, Transport, Mining, Real Estate and Water, followed by Oil and Gas. Of the total number of large projects under construction at 1 June 2013, 36% fall into Energy and Power and 25% in Transport, indicating that there is a solid step being taken forward in these sectors.

Development is strongly concentrated in Southern and East Africa. In terms of the number of projects underway, Southern Africa leads with 38% of projects, followed relatively closely by East Africa with 29%. West Africa has 21% of the total number of projects while North Africa and Central Africa lag at 7% and 5% respectively.

Project equity ownership

Looking at project ownership, 56% of projects are owned by governments, while 4% of total projects collected are jointly owned between governments and Public Private Partnerships (PPPs). Private investors own 39% of the projects within this sample. Of this privately held 39%, European and US investors own 17% of the projects, with 10% having private domestic ownership. There is limited ownership exhibited by BRIC countries and by the East and intra-African investors hold just 2% of the ownership pie, confirming sustained low levels of intra-African trade and investment.

Project debt funding

36% of all funding on the continent is provided by Development Finance Institutions ('DFIs'), of which International DFIs account for 16% and Africa DFIs, 13%. 7% of the total projects are co-funded by International and Africa DFIs. Domestic Governments fund just 8% of projects, investing USD17 392 million.

Europe/US based stakeholders fund 15% of projects and Chinese stakeholders fund 10% of projects in the sample that was collected. Private domestic investors fund 11% of the projects collected and 7% of projects are funded by foreign institutional investors. The balance of funding is provided by Indian-based and Intra-African funding structures, with a portion of funding data categorised under 'not disclosed'.

Project construction

European/US contractors are building 37% of projects and Chinese construction corporations are building 12%. The balance of contracting parties are private domestic companies and contractors from countries such as Japan, South Korea, Brazil, Australia and South Africa.

The findings of this report highlight a growing regional consciousness in Africa. From a sectoral perspective, Southern Africa has received 38% of total investment flows while East Africa has attracted 29% of total investment flows. West Africa has secured 21% of investment with total infrastructure investment in North Africa and Central Africa once again lagging at just 7% and 5% respectively.

Sculpting African growth

The story of potential growth for Africa, the world's second largest continent is backed by some telling statistics. Standard Chartered Bank forecasts that Africa will grow by 7% pa over the next 20 years, slightly faster than China. According to the International Monetary Fund (IMF), between 2001 and 2010 the continent had six of the ten fastest growing countries globally and the IMF projects that between 2011 and 2015, seven of these ten countries will African.

One of the growth drivers within the continent is a growing middle class, which brings with it increased consumer spending power and rapid urbanisation. Further growth drivers are the continent's deepening financial sector and resurgent Emerging World partnerships. Added to this, a significant portion of allure lies in Africa's large share of unexploited industrial commodities including 25% of bauxite, over 60% of diamonds, 50% of cobalt, 80% of phosphate and more than 90% of platinum group metals.

In markets that are shape shifting to survive in the context of finite resources, recent finds of natural gas and oil in East Africa, as well as mineral wealth in West Africa are ratcheting up the continent's magnetism. Geographic hotspots for mining as well as oil and gas include Mozambique, Angola and South Africa in Southern Africa, Uganda, Kenya and Tanzania in East Africa together with countries along the West African coastline, including Ghana which has recently started oil production.

Looking closer at rapid urbanisation, dramatic changes are taking place. Consider that in 2010 Africa had 51 cities with more than a million inhabitants, and only

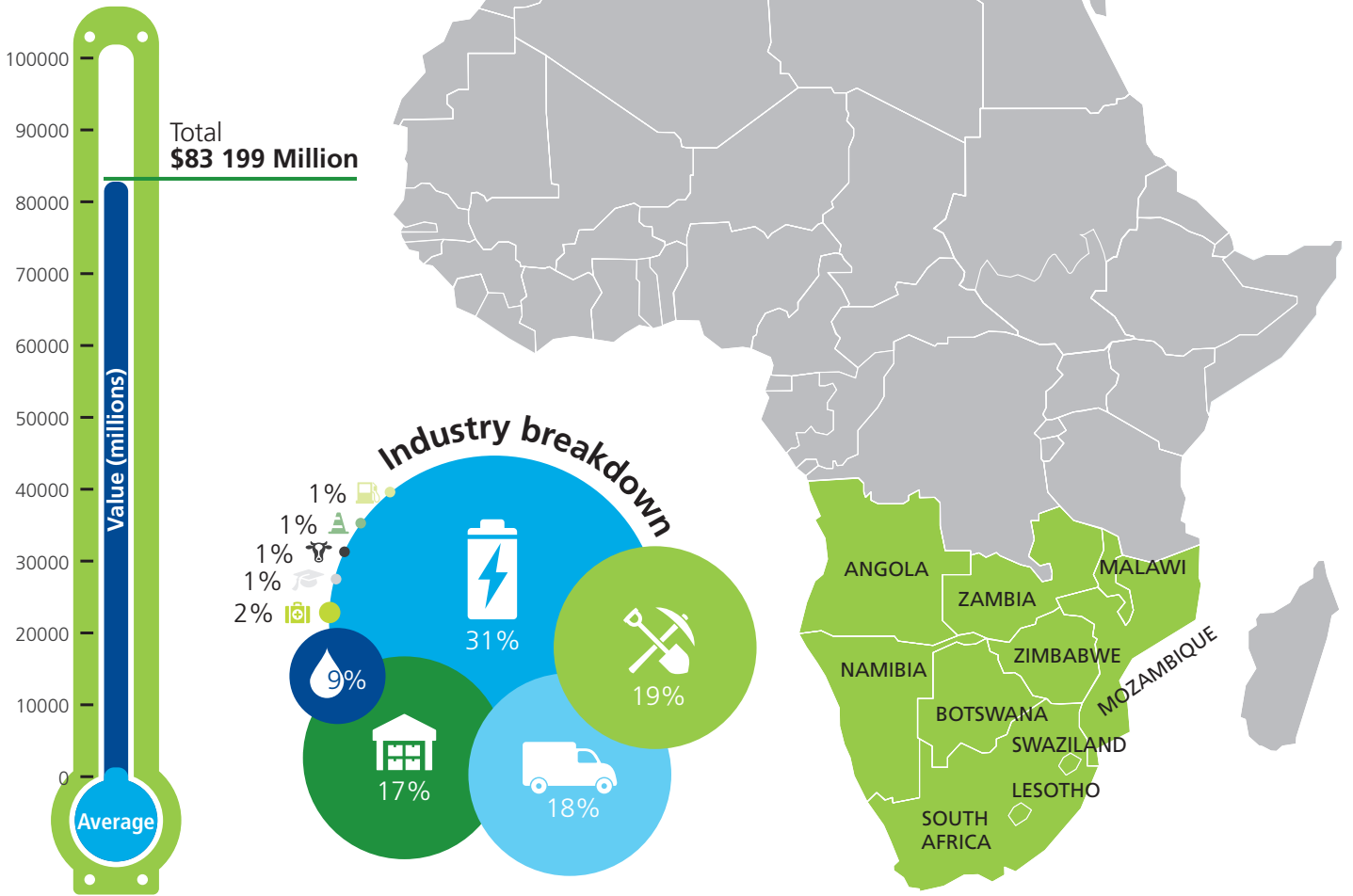
one city (Cairo) with more than 10 million. By 2040, Africa is expected to have more than 100 cities of more than a million people and seven cities of over 10 million inhabitants. Projections by PIDA (2011) propose that Kinshasa, with a population that could reach 24 million, will be the largest African city.

The pressure brought on by fast tracking urbanisation is being felt and in a bid to cope, entire new cities such as Tatu City and Konza City in Kenya, and the City of Light in Accra and King City in Takoradi, Ghana are being developed. In Nigeria, the Greater Port Harcourt City and the modern Eko-Atlantic City are being built on reclaimed sea. These 'self-contained' new cities, based on the work-play-live concept, are intended to relieve highly congested metropolises and minimise the need for inhabitants to go into the 'centre'.

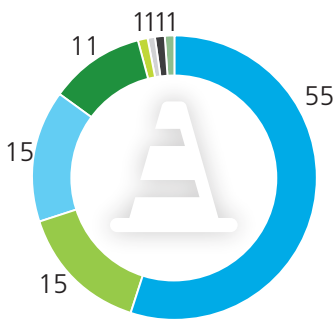
What cannot be discounted in Africa's growth story is that it has 60% of the world's unexploited arable land, particularly in countries such as the Sudan, DRC, Mali, Zambia, Tanzania, Mozambique and Angola. From a food security perspective Africa could – even needs to - become a go-to agri-hub. Operational and cost efficiencies must be unlocked through better infrastructure such as dams and irrigation schemes and integrated transport corridors.

Another telling statistic in sculpting Africa's growth story is that only 10% of trade currently takes place between African countries. Comparatively in Europe this figure is as high as 60%. To raise intra-African trade levels it is imperative to get infrastructure to work synergistically, with regional port-rail-road corridors needing to be rapidly developed. There is, on all fronts, opportunity to sculpt African growth in such a way that the continent becomes more self-serving for its people.

Southern Africa

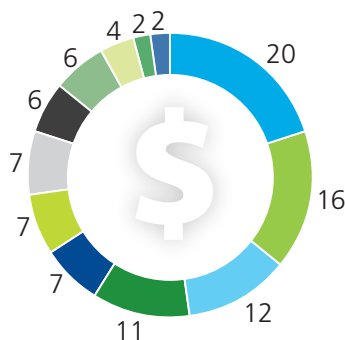


- Energy/Power
- Transport
- Mining
- Water
- Real Estate
- Healthcare
- Telecommunications
- Education
- Agriculture
- Construction
- Shipping and Ports
- Social Development
- Oil & Gas



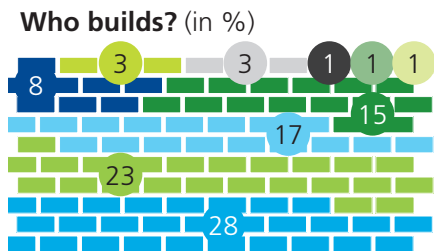
Who owns? (in %)

- Government
- Europe/US
- Private Domestic
- Other
- Intra-Africa
- Brazil
- China
- Not Disclosed



Who funds? (in %)

- Private Domestic
- Africa DFIs
- Europe/US
- International DFIs
- China
- Government
- Not Disclosed
- International DFIs/Africa DFIs
- Other
- Foreign Institutions
- Brazil
- Intra-Africa



Who builds? (in %)

- Europe/US
- Not Disclosed
- Private Domestic
- Other
- China
- Intra-Africa
- Brazil
- Government
- International DFIs/Africa DFIs
- Not Disclosed

Of the total projects collected national governments own most of the projects, European and USA companies seem to be doing most of the building and private domestic companies followed by African DFI's seem to be funding most of the projects. The industries seeing the most activity are the Energy and Power industry as well as the Mining industry.

Southern Africa has held on to its position as the gateway to Africa for many years. The region remains relatively established with markets such as South Africa being the largest on the continent, efficient logistics hubs such as Namibia's Walvis Bay, and relative political stability in the region despite poverty and a lack of social infrastructure and basic services continuing to loom over too many. Commitment to infrastructure development is tangible in Southern Africa, but will this be enough for the region to maintain its economic leadership status in Africa in years to come?

Mega trends

With the leading number of projects (38%) being in Southern Africa, the region is abuzz with infrastructure development through which it aims to maintain its economic leadership on the continent. Furthermore, with developmental hubs such as South Africa, Mozambique and Angola falling under the Southern Africa Development Community banner the region is hard at work to future-proof its position as a first choice gateway into Africa.

South Africa's USD300 billion Infrastructure Development Programme will have a significant economic upliftment impact on the region. Southern Africa boasts the three largest infrastructure development projects under construction (ranked by value) on the continent. Within this programme, a monumental USD20.3 billion is being invested into the construction of Eskom's Kusile Power Station. Medupi Power Station, also under construction, is receiving over USD10.8 billion in funding. PetroSA's planned 300 000 barrels per day crude refinery, Project Mthombo, has received an investment boost of around USD9 billion.

Of all the regions, Southern Africa is the most highly characterised by a spate of private sector driven retail malls and mixed-use development projects. The anchor tenants of these malls tend to be South African retailers as they seek new markets north of their borders. Coupled with the lack of formal retail infrastructure, this construction is consistent with the rising middle class on the continent.

Mozambique holds potential to fast track economic growth in the SADC. The country has unparalleled wealth in its recently proven Oil and Gas, Coal and Iron-ore reserves. There is notable construction activity in this country, specifically relating to infrastructure development in ports, rail and road to facilitate the export movement of resources from mines to ports.

Development of Mozambique's Transport sector focuses intensively on the Maputo port. With the Durban harbour consistently operating at or near capacity and the Richards Bay Coal Terminal being close to capacity, the Maputo port will increasingly become important in heightening transport and export efficiencies.

Mega projects and partnerships

Compared to other regions, Southern Africa has a broader sector spread in terms of construction activity. Of the 123 large projects identified in the region, 31% fall within Energy and Power, 19% in Mining, 18% in Transport and 17% in Commercial Real Estate. Of the projects, 53% are publicly owned with the balance being privately owned or owned through PPP's.

Over half (55%) of Southern African projects are Government owned with Private Domestic ownership levels and Europe/US at just 15% each. The remaining 15% in ownership is fragmented, divided between Intra-Africa, Brazil, China and Other categories.

The funding split is slightly more evenly shared with Private Domestic institutions leading the funding at 20% of projects while Africa DFIs fund 16% and Europe/US funders follow closely at 12%. Governments are funding only 7% of infrastructure development projects in this region.

European construction companies lead the building of projects at 28% of the total number of construction projects, followed by Intra-African building consortiums (23%). Broadly speaking, one would expect large South African construction players such as Group 5 and Aveng to hold a major share of build-based responsibilities. Looking at the sample within this survey however, this can only be alluded to because 17% of projects are being delivered by Private Domestic companies, 15% of building parties are classified as 'other' and 23% were 'not disclosed'.

Public Private Partnerships

Public Private Partnerships (PPPs) are becoming increasingly accepted and embraced in Africa to deliver both social and economic infrastructure. There is a growing realisation in many countries that government alone cannot fund and close the infrastructure gap on the continent.

PPPs address some key major developmental aspects. Firstly, the project context, which encompasses the technical ability and skills to understand and procure infrastructure projects and secondly to create a structure through which government funds are leveraged by facilitating private sector investment in a specific project.

There is recognition that PPPs cannot only deliver country infrastructure but support regional integration by assisting governments to close financial, managerial and technical gaps. In order to support this, PPP regulation frameworks and PPP oversight units are being established in West, East and Southern Africa. Although the level of PPP penetration is nowhere near the level of the US, UK, Europe and India, African PPPs are on the verge of significant momentum.

Southern Africa in particular has structured projects using this model extensively during the past. The SADC is active in establishing and managing these partnerships and has gone so far as to invest in a dedicated PPP Unit with a mandate to advance realisation of projects funded and implemented in this way (particularly focusing on inter-regional PPPs).

South Africa has an extensive track record in PPPs, having reached financial

close of 72 PPPs by August 2013. A number of these projects fall under the Renewable Energy Programme. To date, approximately 57 new PPPs reached financial close through the first three rounds of the Department of Energy Renewable Energy Independent Power Producer (REIPP).

South Africa's neighbour, Swaziland, is in the process of establishing a PPP unit and Lesotho has additional Healthcare PPPs in the pipeline. With PPP legislation that dates back to 2004, Mauritius has been a relatively early adopter of PPPs. This country is quite far advanced with a congestion management toll road PPP on the cards and investigation being done into a large broadband PPP project and light rail PPP.

In East Africa, Kenya has realised the need to strengthen its PPP offering and in response, has established a central PPP unit. This year the country issued a PPP Act as well as entered into an ISPPP Project with the World Bank to identify its PPP pipeline, while Uganda through its PPP Unit is looking at developing police and correctional facilities.

Ghana recently published a PPP Policy and has established a PPP Unit, while Nigeria has the Federal Infrastructure Concession Regulatory Commission with PPP units being established on state levels.

In many countries various forms of PPPs have been taking place, however, the market is moving through the establishment of units and policy to relegate and standardise process and procedure to enable the private and public sectors to understand how deals are put together.

COUNTRY FOCUS

On site in South Africa

Top five infrastructure development projects

1. *Kusile Power Station*

USD 20 397 million

Kusile will be one of the largest coal fired power stations in the world and the first power station in South Africa to use Flue Gas Desulphurization (FGD) through which oxides of sulphur (Sox) are removed from the exhaust flue gases. Kusile will consist of six 900 megawatt coal-fired generating units for a total generating capacity of 5400 megawatts. This plant will contribute significantly to resolving power shortages in South Africa and the region, and providing additional capacity to facilitate future economic growth.

2. *Medupi Power Station*

USD 10 843 million

With a 50 year operational life, Medupi will be the fourth largest coal fired power plant and the biggest dry-cooled power station in the world. Consisting of six boilers, each powering an 800 megawatt turbine, it will produce 4 800 megawatts of power.

3. *Project Mthombo fuel refinery*

USD 8 981 million

Demand for transportation fuels is forecast to grow to more than 400 000 bbl/d by 2020 in South Africa. PetroSA's planned 300 000 barrels per day crude refinery is one solution to this supply challenge, aimed at reducing imports and producing refined products locally.

4. *Transnet new multi-products pipeline*

USD 3 035 million

Transnet has launched a new multi-product pipeline, which will be able to transport petrol, diesel, jet fuel and gas from Durban to Heidelberg. Approximately three million litres will flow between Durban and Johannesburg weekly once the pipeline is fully operational.

5. *Venetia underground mine*

USD 2 000 million

When completed, the new underground Venetia mine will extend the life of the Venetia pit until 2042. It will, according to the company, replace the open pit as South Africa's largest diamond mine. Operations will yield approximately 96 million carats during the life of the mine.

On the ground in Angola

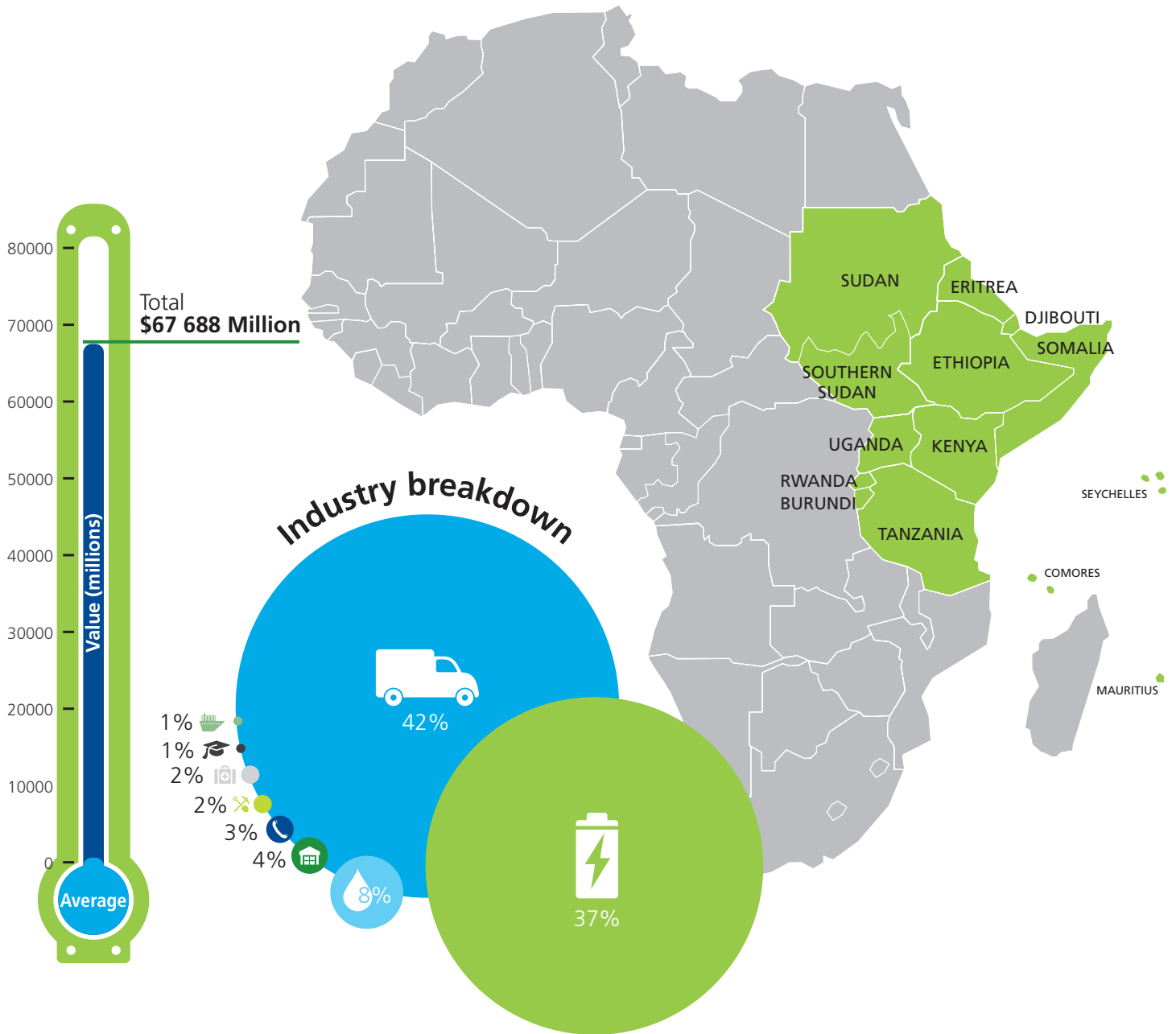
Angola presents an interesting case study in infrastructure development. Following the end of a protracted civil war (1975-2002), the country faced a massive task of rebuilding basic infrastructure. The government currently owns projects worth a substantial USD 1.75 billion. Projects are principally being funded by the fiscus while companies being contracted to deliver the actual construction include players from China, Brazil, Portugal and South Korea.

The Angolan development focus lies in building critical infrastructure. Twenty-two projects over USD50 million are currently under construction, of which half are in Real Estate, including the rebuilding of the National Assembly Headquarters and public housing. Water plant construction features in the mix with Energy and Power, Oil and Gas, Transport and Healthcare also in the equation.

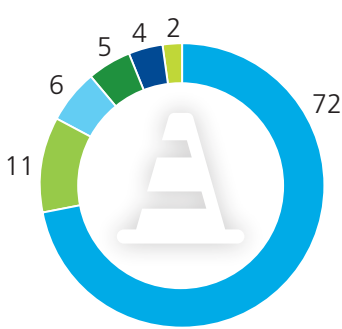
Angola's five-year governmental development plan aims to diversify the economic structure to diminish dependency on oil revenues. It aims to incorporate agriculture within its major offerings and decrease importing of food.

On the telecommunications front there is a large-scale plan scheduled to begin in 2014. This USD260 million project will feature the building of an undersea cable from Angola to Brazil, providing much needed additional capacity for currently congested telephone and data lines.

East Africa

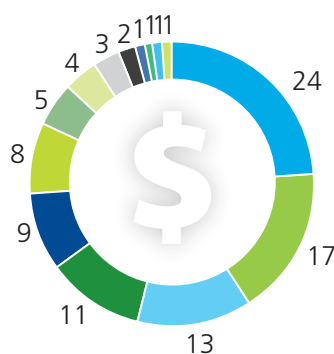


- Energy/Power
- Transport
- Mining
- Water
- Real Estate
- Healthcare
- Telecommunications
- Education
- Agriculture
- Construction
- Shipping and Ports
- Social Development
- Oil & Gas



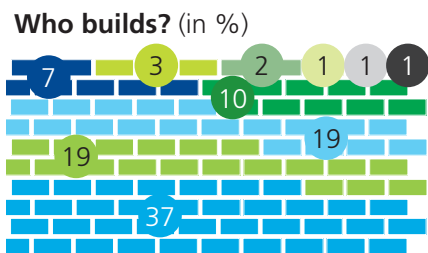
Who owns? (in %)

- Government
- Europe/US
- Other
- Private Domestic
- Government/Private Domestic
- Intra-Africa



Who funds? (in %)

- International DFIs
- China
- Europe/US
- Africa DFIs
- Foreign Institutions
- International DFIs/Africa DFIs
- Other
- Government
- Intra-Africa
- Private/Domestic
- Not Disclosed
- Brazil
- Government/Private Domestic
- India



Who builds? (in %)

- Europe/US
- China
- Not Disclosed
- Private Domestic
- Other
- Intra-Africa
- Brazil
- Government
- Government/Private Domestic
- India

Of the total projects collected national governments own most of the projects, European and USA companies seem to be doing most of the building and international DFI's seem to be funding most of the projects followed by the Chinese. The industry seeing the most activity is the Transport industry.

East Africa is fast becoming a leading African region and a strategic hub of continental growth. Though historically one of the world's poorest and least developed regions, it is fast tracking infrastructure development with countries such as Ethiopia having shown annual growth of over 10% pa in recent years. Could East Africa's Oil and Gas finds be one of the region's sustainable growth kickers?

Mega trends

East Africa is turning the heads of investors, construction firms and multi-national corporations. As aggressive development gains momentum, investors will rely on local governments to develop basic infrastructure such as rail, roads, healthcare facilities, housing, real estate and retail space.

The region has some discernible development highlights. Kenya is characterised by a significant roadworks programme financed by the African Development Bank, China, Brazil and Japan. These programmes are critical considering the country was losing close to Sh50 million (USD590 000) daily due to traffic congestion in Nairobi and its environs, primarily due to the time wasted on the road.

A portion of infrastructure development is designed to connect Kenya to its neighbouring countries, simultaneously helping to operationalise the East African Community. For example the LAPSET (Lamu Port Southern Sudan – Ethiopia Transport) project aims to connect Kenya, South Sudan and Ethiopia. Nairobi is also experiencing significant commercial, retail and residential apartment construction and numerous hotel developments.

Until the past few years East Africa was a sleepy backwater for the upstream Oil and Gas industry, but the discovery of significant quantities of oil in Uganda in 2006 ushered in a bonanza. In fact, more hydrocarbons have been discovered in East Africa in the past two years than anywhere else. The onshore oil discoveries in Uganda were followed by discoveries in Kenya. Offshore we have seen world-class discoveries of gas in Tanzania.

Every potential hydrocarbon basin across the region is currently the subject of intensive interest. Though there are pending developments in South Sudan, Uganda, Kenya and Tanzania that do not yet feature in the current year data, this sector will drive economic growth for East Africa for many years once these projects commence.

The development of the Oil and Gas industry will provide a major stimulus to local economies and will require extensive upgrading of existing infrastructure. Governments across the region are looking at how to harness the power of the industry to benefit their people. At the same time Oil and Gas companies are focusing their efforts on the development of local content and local capacity.

Yet despite these significant finds in the region, any slowdown in development of critical infrastructure could impact the rate of socio-economic growth. The dynamics behind this interlocked destiny are complex. Yes, significant revenue will be generated for East African governments but will the public sector respond timeously enough to carry this forward? A strategic plan that incorporates both public and private demands is needed to integrate infrastructure across the entire East Africa Community.

Countries in East Africa differ distinctly from one another, specifically with regard to their level of infrastructure development. Kenya is further down this road than Uganda, Tanzania and Ethiopia, although Ethiopia is making some noteworthy developmental inroads.

Despite the inherent complexity in developing regional assets, with some of these big projects being worked on or planned being cross-border by nature, there is a sense of collaboration and strategic integration in East Africa. There also appears to be significant activity being initiated in South Sudan to address basic infrastructure needs such as air transport and roads.

In this region, growth will be driven through making the Oil and Gas and the Energy and Power sectors work

optimally. In addition, Transport projects will play a vital role while Real Estate and Water projects cannot be underestimated in terms of enabling sustainable growth. At this stage Real Estate, whether in the domestic or commercial market, may be a sliver in the construction equation but in the next five years it will be a definitive growth area.

Mega projects

Ninety-four East African projects were sourced by Deloitte for this survey, with Transport dominating the share of projects after which Energy and Power feature strongly. The balance of projects in any one sector, in terms of the number thereof, is minimal, although Oil and Gas projects are beginning to feature.

Tanzania's Bagamoyo Port is receiving the largest investment in the region. The second largest project (Mombasa to Mabala Standard Gauge Railway Line) is significantly smaller from this perspective. Other significant projects include the Ethiopian Renaissance Dam (USD4.2 billion), Addis Ababa-Djibouti Railway (USD 3.3 billion), LAPSET (Lamu Port-South Sudan-Ethiopia Transport Corridor) Project (USD 3.3 billion) and Ugandan Farm-down Geothermal Plant (USD 2.9 billion).

Mega partnerships

Government owns a dominant 72% of projects in East Africa while Europe/US holds 11% in project ownership. International DFIs lead the funding charge at 24% with China funding 17% of projects in the region, after which Europe/US funding comes into play for 13% of projects. Africa DFIs are funding 11% of projects, followed by Foreign Institutions, which fund 9%. Of the sample, 71% are publicly funded, 28% privately funded and 1% are being funded through PPPs.

The East African context presents an important interdependency between the government of a country in which a project is being rolled out and private funders. A private party within a project may have high hopes for a project, even for the country within which it is being implemented but if the basic infrastructure is not in existence – or is not being planned – private funders could seek opportunities elsewhere.

European/US construction firms are responsible for the highest number of projects (37%) while Chinese firms are building 19% of projects underway. Interestingly, Indian construction firms are involved in power plant construction work, particularly aiming to showcase their expertise in the clean energy arena.

Africa's Texas

Discoveries of Oil and Gas in Southern Africa and East Africa are relatively recent. All of the major commercial discoveries have been made in the past five years, a flash in time in this long-standing sector.

Tanzania's extensive reserves were only discovered in the past two years, putting these, and those in Mozambique, Kenya and Uganda in the early stages of exploration. Activities on the ground include drilling, analysis of seismic data and assessing the optimal way in which to develop the resources.

With these reserves not having yet been commercialised, many of the projects do not fall within this study's data. Though within this context, it is critical to consider the role that infrastructure development must play in these countries as they continue down a path of discovery and realisation of resource-based wealth.

In Mozambique, where 80% of the total gas finds (2012) were discovered, a final investment decision is expected around the end of 2013. Only then will construction planning of offshore production facilities and platforms begin, and with Northern Mozambique being poverty stricken when it comes to basic infrastructure, domestic infrastructure development will be needed as the country pushes towards its goal to export natural gas by 2020.

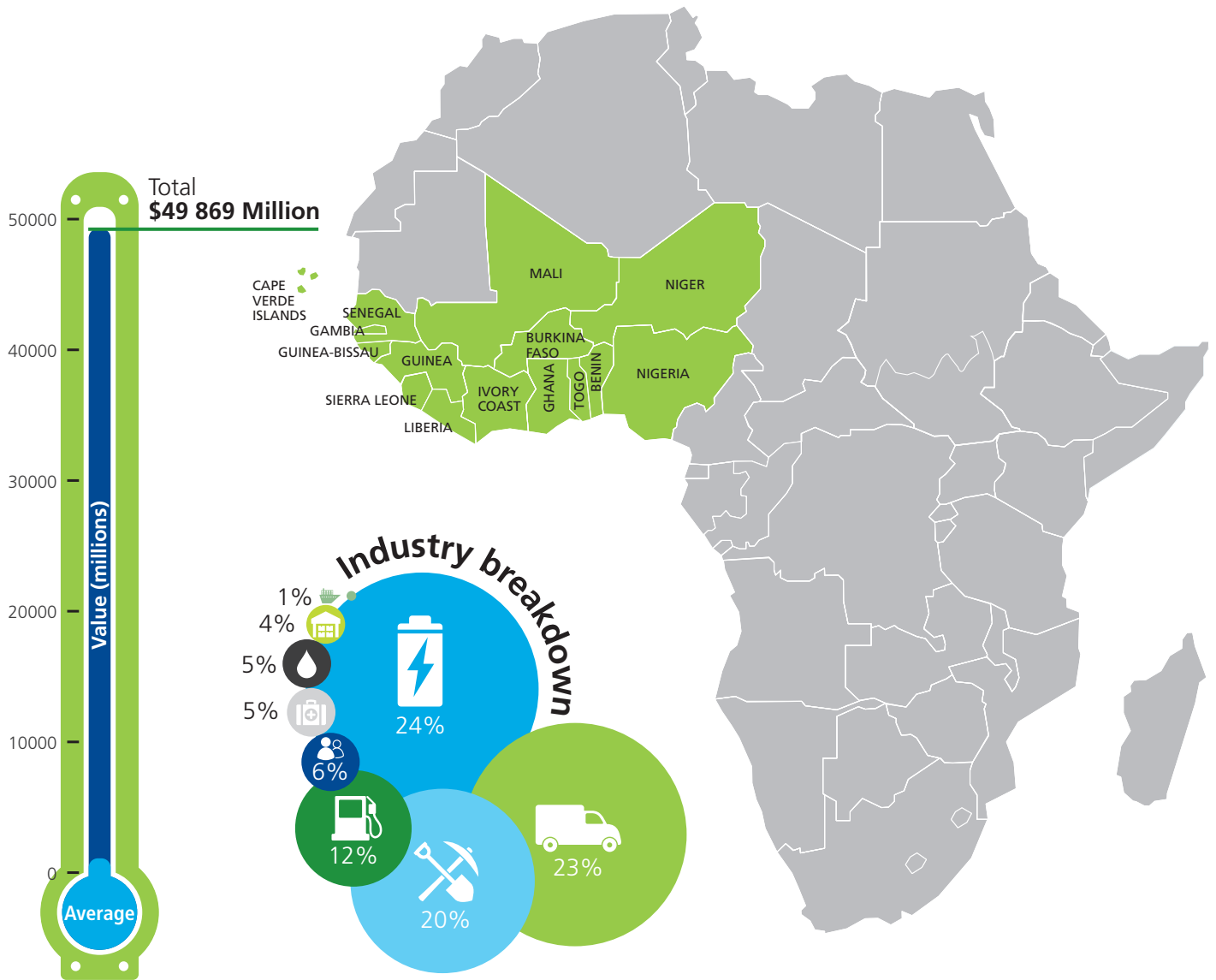
Each of the countries linked to Gas finds has created a legislative framework for Public Private Partnerships and is looking to use these structures for these projects. In Mozambique ENH State Oil has created ENH Logistics to take a major stake in the projects. In offshore Tanzania, there is extensive involvement by Chinese companies who have invested billions of dollars into financing a gas pipeline.

Further north, oil discoveries have been made onshore near Lake Turkana in Kenya and in Uganda, in the Lake Albert area. Kenya is at a slightly earlier stage in terms of commercial discovery though there have been extensive discussions held with regard to how to exploit these resources.

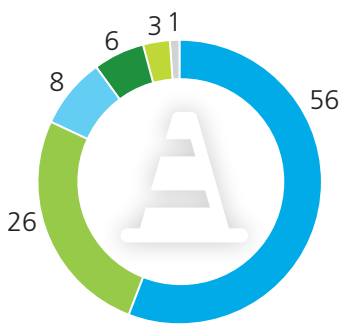
One slightly controversial area has been a potential pipeline through South Sudan, Uganda and Kenya to the proposed new port at Lamu and it has recently been announced that a Japanese firm will finance and develop the 2,000km oil pipeline, with construction costs in excess of \$5 billion. The exploitation of oil discovered in Uganda has been challenging to date, largely due to negotiations surrounding whether to go the local refinery or crude export pipeline route.

In Africa's newest Oil and Gas hotspots, several tens of billions of dollars will be spent in the near future. But going beyond the monetary value attached to this 'new age gold', the implications for socio-economic development of the countries in which these resources are located could be African potential in the likes of power generation, fertiliser production and petrochemical production will be positively impacted.

West Africa

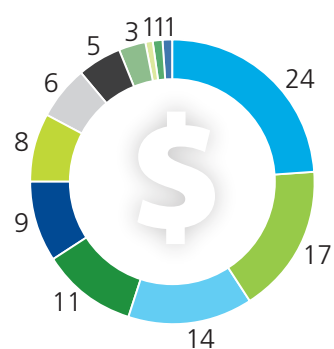


- Energy/Power
- Transport
- Mining
- Water
- Real Estate
- Healthcare
- Telecommunications
- Education
- Agriculture
- Construction
- Shipping and Ports
- Social Development
- Oil & Gas



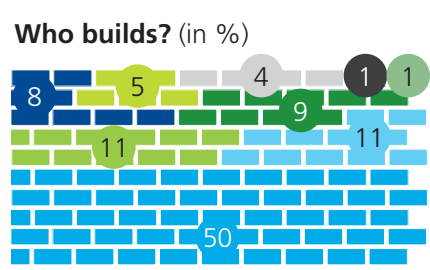
Who owns? (in %)

- Government
- Europe/US
- Private Domestic
- Other
- Government/Private Domestic
- Intra-Africa



Who funds? (in %)

- Europe/US
- International DFIs
- International DFIs/Africa DFIs
- Foreign Institutions
- Africa DFIs
- China
- Private Domestic
- Other
- Intra-Africa
- Not Disclosed
- Brazil
- Government



Who builds? (in %)

- Europe/US
- Private Domestic
- China
- Not Disclosed
- Other
- Government
- Intra-Africa
- Brazil
- Not Disclosed

Of the total projects collected national governments own most of the projects, European and USA companies seem to be doing most of the building. The industries seeing the most activity are the Energy and Power industry as well as the Transport industry.

West Africa is positioning itself as a desirable destination for investment and trade with fine-tuned purpose. With many parts of the continent being on the verge of growth due to the massive scale of infrastructure development, this is an undeniably good move. Strengthened by its solid steps towards progress in economic hubs such as Nigeria and Ghana, could this region become the next powerhouse region on the continent?

Mega trends

Covering critical sectors from Energy and Power to Healthcare, West Africa has a well-balanced range of infrastructure projects that have broken ground. Nigeria and Ghana are the primary infrastructure development hot spots, with Ghana presenting some interesting developments that have the potential to heighten West Africa’s global competitiveness. Infrastructure under construction includes Ghana’s harnessing of natural gas resources to generate sustainable power for in-country use and power provision to its neighbours.

Undoubtedly an African powerhouse, Nigeria continues to enhance its infrastructure, particularly in telecommunications and rail rehabilitation. As the second largest market on the continent after South Africa, Nigeria is a massive player in Africa’s growth story. Its telecommunications infrastructure, which provides 100% coverage, is opening up opportunity as systems are piggybacked thereon to offer services such as money transfers. Years of hard work and consistent investment in this sector will continue to raise Nigeria’s competitiveness globally. There is also significant railway construction and rehabilitation taking place in the country.

Nigeria’s neighbour Ghana has some fundamentally important changes in terms of infrastructure development. Ghanaians are by no means unrealistic in acknowledging the areas in which their country needs infrastructural improvement. Ghana has a dire need for a highly efficient transport infrastructure that supports the movement of goods and people. Its road, air and water transport systems need substantial upgrading.

Water resources also need to be developed for consumption and irrigation purposes, while investment in energy infrastructure is imperative to enhance generation, transmission and distribution capacity in support of the country’s rapid industrialisation. Other critical infrastructure needs, as stated in Ghana’s National Infrastructure Plan, lie in Agriculture, ICT, Human Settlements, as well as Municipal and Judicial infrastructure.

Perhaps one of the most critical infrastructure loops needing to be closed lies in an unpredictable Power sector. Ghana, together with the entire West African zone, experiences consistent electricity supply challenges.

The country may be rich in natural resources but it has to date not fully utilised these resources. Responding proactively to this constrained context, a gas pipeline that will run from Nigeria, through Benin and Togo to Ghana is being developed. The pipeline is scheduled to be operational by 2015, following which a five-year testing period will be completed prior to it operating at full scale.

A dilapidated and fragmented transport network is a major challenge facing West Africa. Road networks are often congested or in poor condition and there are areas where one is not able to freely move. The rail network is also under-developed and poorly maintained. Ports are congested, and require additional capacity.

Ghana's port is one of the more cost effective points through which to bring goods into the continent, but there are no rail lines connecting countries such as Burkina Faso to Ghana. This disconnection between port and rail forces large trucks onto sub-par roads, and slow and arduous haulage journeys to transport goods up north need to be taken.

Also in West Africa, Sierra Leone is seeing significant construction relating to infrastructure development. This is taking place at its ports, on rail and on road to facilitate the movement of coal and iron ore from the mines to the port for export. These developments are largely funded by large multinational commodity companies for their own use.

In Senegal, Benin and Togo there is a considerable focus on the Transport sector with development of new ports. Burkina Faso is focusing on development through road construction.

A strategically interesting project is underway in Cote d'Ivoire, where a highway is being built incorporating the third Abidjan bridge that will span 1.5 km and the Valéry Giscard d'Estaing interchange. Being built by Bouygues Construction, it is the first such concession in West Africa and located close to the largest port on the West African coast, it will not only improve traffic flow but will facilitate more efficient transportation of goods. When it is completed, 100,000 vehicles per day will be able to use the new road infrastructure.

Mega projects

This study identified 66 infrastructure projects greater than USD50m currently under construction in the West Africa region.

Of the top ten projects (by investment size) in West Africa five are in Nigeria, three in Ghana, and one each in Guinea and Liberia. From a sectoral perspective, 24% are in the Energy and Power sector, 23% are in Transportation, 20% in Mining and 12% in Oil and Gas. The strong focus on Mining sector development, which includes commodities such as iron-ore and gold is worth noting.

Just three projects fall within the Water sector, which mirrors the trend seen across regions. Although projects that are dedicated to Water infrastructure development do not feature strongly as standalone projects valued at over USD50 million, the region features significant smaller projects under construction such as urban water treatment plants and reticulation systems.

West African development includes Nigeria's offshore Egina oilfield and Nigerian Oil Refinery Project, its Forcados-Yokri Project and Southern Swamp Associated Gas Gathering Project, hydropower plant development and Bonny Gas LNG Vessels Financing 2013. Ghanaian projects include what is known as the "TEN Project", which includes the Tweneboa-Enyenra-Ntomme corridor development off the West African coast.

Mega partnerships

Project ownership is predominantly government-led with 56% of projects falling within this category. Europe/US owns 26% and funds 24% of the projects within the sample, and 40% of projects have been funded by International and Africa DFIs. 56% of projects are publicly owned and 41% privately owned. West Africa has a total of 3% of projects that are classified as PPPs.

To be expected with Europe and the US playing a strong hand in this region's project ownership and funding, they dominate the building analysis with 50% of all projects being constructed by European/US companies. Companies such as Tullow Oil and the Dangote Group, a domestic African company feature in this group of funders and construction parties.

Public Private Partnerships are gaining in prominence as a funding tool in West Africa, particularly in Nigeria and Ghana. To accelerate achievement of developmental goals the Ghanaian Government has identified five priority areas for PPP arrangements, namely energy, utilities, infrastructural development (particularly road networks, railroads and ports), housing and agri-business. In Ghana, notable PPP projects are the Ghana National Gas Project and Sunon Asogli Power Plant. Other regional PPP projects include the Accugas Nightingale Pipeline Expansion Project in Nigeria and the Cape Verde Wind Farm Project.

Interestingly though private investment is on the rise. In Nigeria for example, the Dangote Cement Group has emerged as a significant African investor in the construction industry with a number of cement plants being built across the continent. In terms of construction work, there is also a trend towards non-African players such as the China Civil Engineering Construction Corporation, China Road and Bridge Corporation and the Odebrecht Group from Brazil driving construction momentum.

COUNTRY FOCUS

Ghana gains infrastructure momentum

Top five infrastructure development projects

1. Akyem Mine Project

USD 900 million – USD 1.1 billion

Through the project, Newmont has the potential to double its gold production in Ghana to approximately one million ounces a year.

2. Ghana National Gas Project

USD 850 million

By receiving gas from the oil and gas fields in the Tano (Western) Basin and processing it into lean gas, propane, butane and condensate, this project aims to ensure that natural gas, associated gas and NGLs produced in Ghana are efficiently processed into clean fuels and feedstock for the domestic and export market.

3. Accra Sanitary Sewer and Storm Drainage Alleviation Project

USD 595 million

The project aims to act as a solution to the drainage problem in the Ghanaian capital, and to improve health and sanitation infrastructure of the city, which currently still has open sewers in parts of the city.

4. Takoradi International Company Power Plant Expansion

USD 330 million

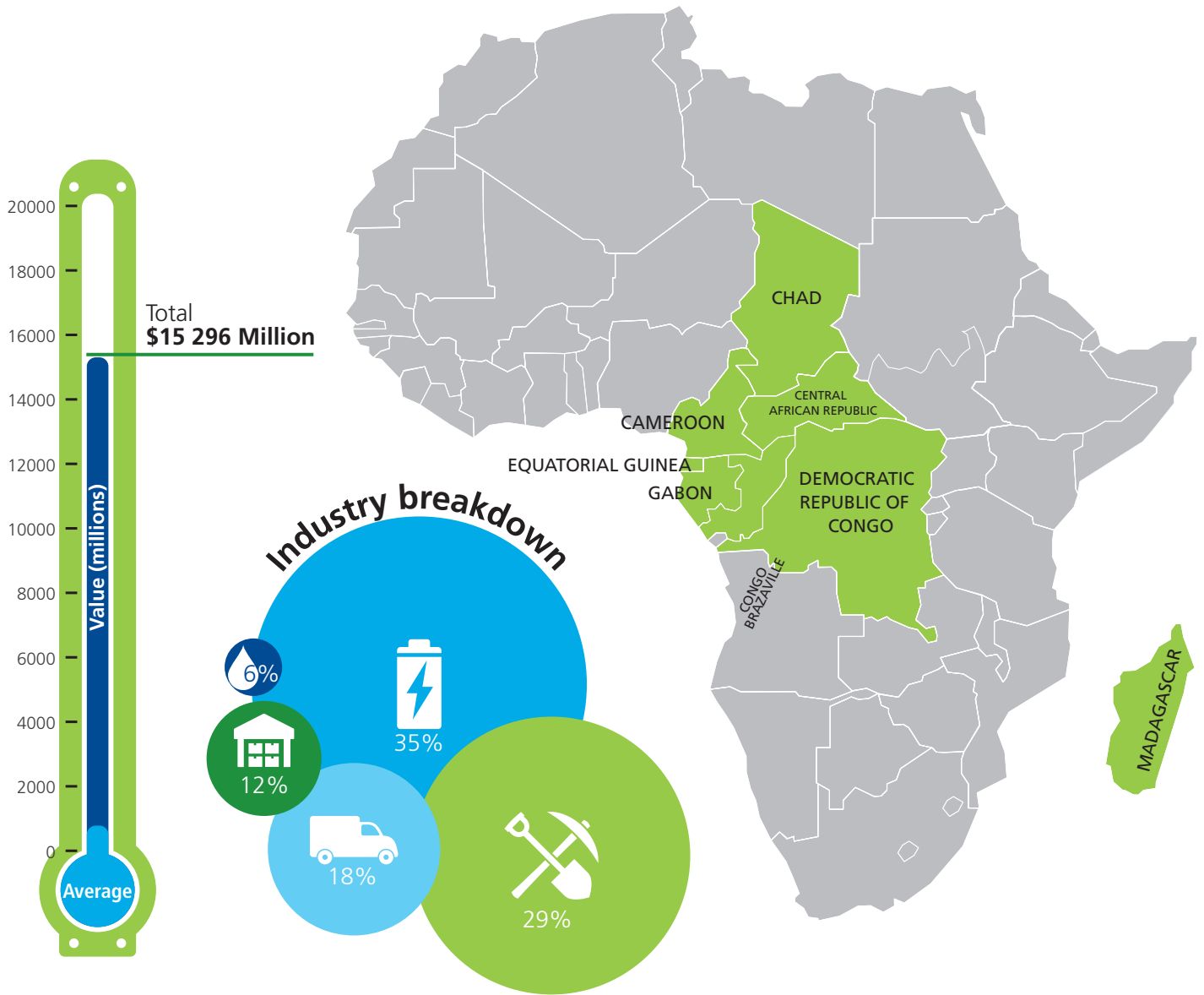
This African Development Bank financed project aims to improve electricity supply and energy security in Ghana through expansion of the existing 220MW single cycle gas/fuel oil power plant to a 330 MW combined cycle by adding a 110 MW steam turbine to the exhaust vent of the existing plant which has been in operation since September 2000.

5. University of Ghana Teaching Hospital Project

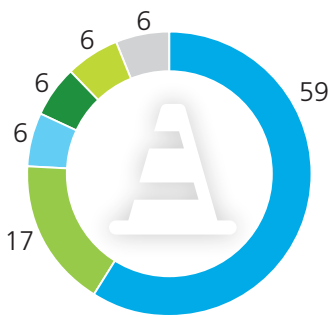
USD 217million

A 600-bed teaching hospital is being built at Legon courtesy of the University of Ghana (UG), which through the Government of Ghana sourced a loan facility of US\$217 million from the Israeli Government to develop this state-of-the-art facility for trauma and emergency services with a heliport and internal medicine including Surgery, Obstetrics and gynecology, pediatrics, cardiology, heart surgery and medicinal imaging.

Central Africa

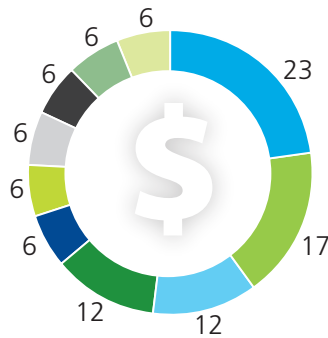


- Energy/Power
- Transport
- Mining
- Water
- Real Estate
- Healthcare
- Telecommunications
- Education
- Agriculture
- Construction
- Shipping and Ports
- Social Development
- Oil & Gas



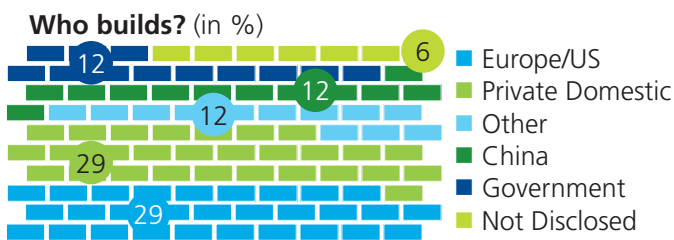
Who owns? (in %)

- Government
- Europe/US
- Not Disclosed
- Private Domestic
- Other
- Government/Private Domestic



Who funds? (in %)

- International DFIs
- China
- Europe/US
- Foreign Institutions
- International DFIs/Africa DFIs
- Africa DFIs
- Private Domestic
- Other
- Government
- Not Disclosed



Who builds? (in %)

- Europe/US
- Private Domestic
- Other
- China
- Government
- Not Disclosed

Central Africa has historically experienced a degree of political instability and turmoil, with Francophone countries such as the DRC, Central African Republic, Gabon, Chad, Equatorial Guinea and Congo Brazza presenting complex environments in which to engage, be it politically, socially or commercially.

Mega trends

Central Africa is notable in that it is a potential hydropower hub on the continent. The DRC in particular holds potential due to its strength in commodities, agriculture, hydropower and the Water sector.

Mega projects

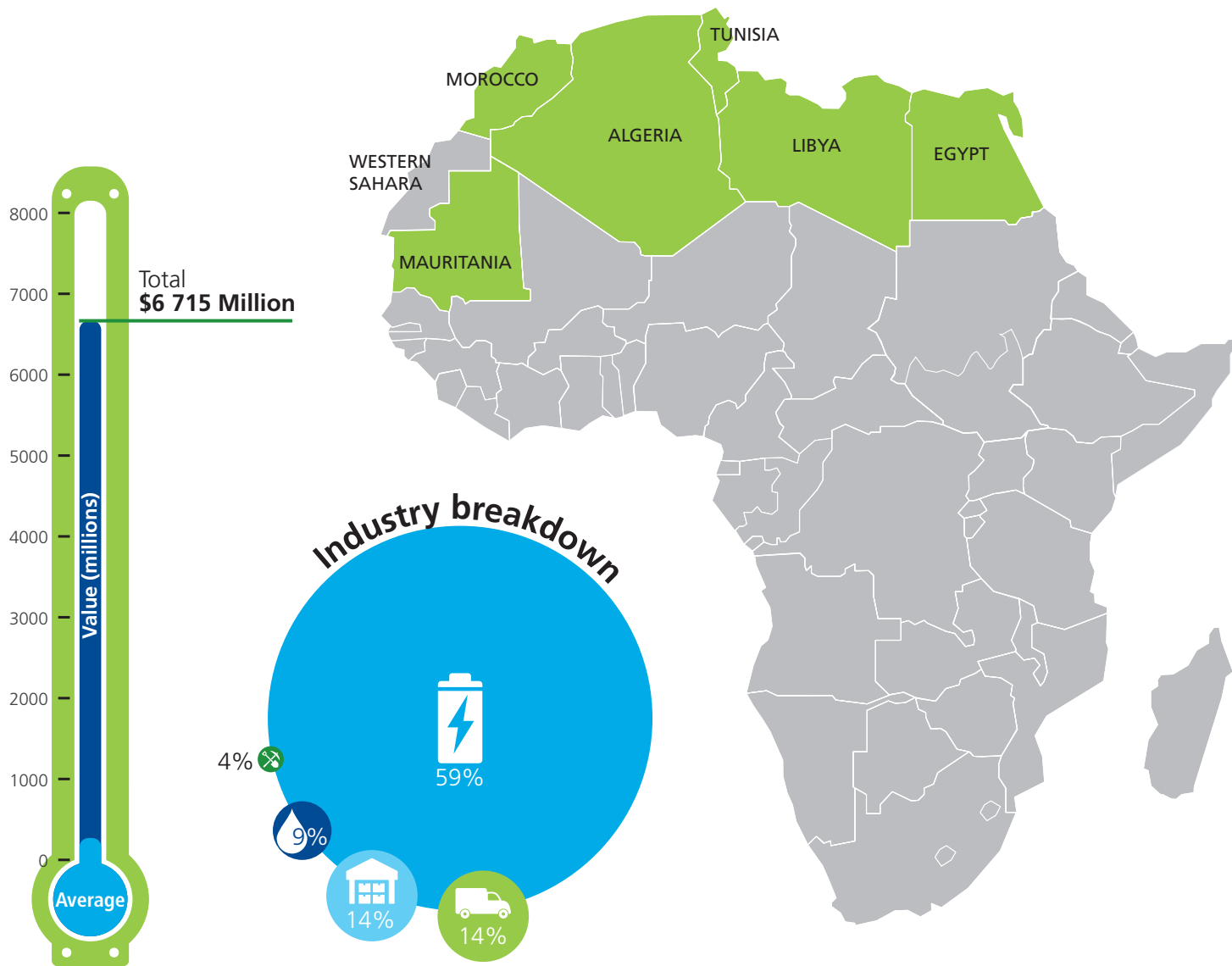
Looking at the sector split of infrastructure projects in the region, Energy and Power leads with 35% followed by Mining with 29% of the total share of projects. These two sectors are followed by 18% in the Transport sector and 12% in Real Estate sector. 6% of projects fall within the Water sector.

Mega partnerships

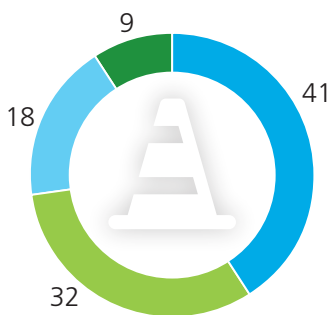
From a funding perspective 47% of projects are privately funded and the balance are being publicly and DFI funded. Europe and the US are building 29% of projects while China and Central African governments is building 12% respectively. Funding 17% of projects, China is the second largest funder in the region, preceded by International DFIs at 23%. Europe and the US, as well as Foreign Institutions both fund 12% of the total number of projects.

Of the total projects collected national governments own most of the projects, European and USA as well as Private Domestic companies seem to be doing most of the building and international DFI's and Chinese seem to be funding most of the projects. The industries seeing the most activity are the Energy and Power industry as well as the Mining industry.

North Africa

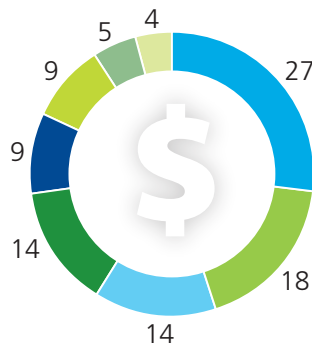


- Energy/Power
- Transport
- Mining
- Water
- Real Estate
- Healthcare
- Telecommunications
- Education
- Agriculture
- Construction
- Shipping and Ports
- Social Development
- Oil & Gas



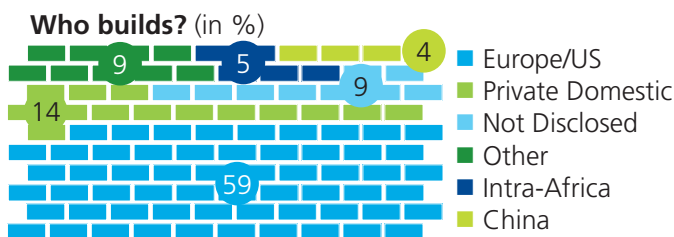
Who owns? (in %)

- Government
- Europe/US
- Private Domestic
- Other



Who funds? (in %)

- Private Domestic
- Africa DFIs
- Government
- Europe/US
- Foreign Institutions
- Not Disclosed
- International DFIs
- Other



Who builds? (in %)

- Europe/US
- Private Domestic
- Not Disclosed
- Other
- Intra-Africa
- China

Of the total projects collected national governments own most of the projects, European and USA companies seem to be doing most of the building and private domestic firms seem to be doing most of the funding. The industry seeing the most activity is the Energy and Power industry where most of the projects are privately owned.

A large part of North Africa is currently facing political and social instability. Civil unrest and turmoil in countries such as Libya, Syria and Egypt make the short to medium term outlook for infrastructure development in these countries within the region fairly uncertain, although this is not to say that the demand for development does not exist. Will unrest in select countries have a knock-on effect on investment across the region, particularly with countries such as Morocco offering interesting development in clean energy?

Mega trends

Despite turbulence in countries such as Egypt, Syria and Libya, the region has some important good news stories. In North Africa, French-speaking Morocco is a primary hub of infrastructure development, particularly within the Energy and Power sector. In its southern Tarfaya region, development of what will be Africa’s largest wind farm is underway. Completion of this project is scheduled for 2014.

With no hydrocarbon reserves to speak of in Morocco, the country aims to fulfill 42 percent of its energy needs through renewable sources by 2020, having launched a plan to produce 4,000 megawatts. Half of this generation capacity is to be sourced from solar energy with wind power to supply the remaining 2,000 megawatts. The project is led by GDF Suez, working in partnership with a Moroccan company Nareva Holdings.

Also in the north of Africa, Tunisia is in the process of building a Rapid Rail Link, which is scheduled for completion around mid-2014. Algeria has two gas processing facilities being constructed, which are being prioritised over power works.

Libya is a market that will be of future strategic importance due to European dependency on oil. The new Libyan government’s project to generate an asset register of state-owned assets is an important signal of a country that is committed to future development.

Despite the political instability and unrest in Egypt, it remains a strategically important country in the region. In addition, due to the rise of the African middle class, consumer-led demand continues to drive trade between South East Asia and Africa, with the Suez Canal continuing to be an important global transport corridor.

Mega projects

Within the current environment, investment appetite dwindles the further north into Africa we move. Notwithstanding this, a significant 59% of North African projects fall within the Energy and Power sector. Power projects captured within this research include the Algerian power grid and three publicly funded energy projects in Egypt i.e. the QASR Compression Plant, Akkaz Power Plant Project and Suez Thermal Power Plant.

Morocco has four projects within the Energy and Power sector, namely the wind power plant of Tarfaya, which is funded by the Worldbank, a publicly funded 160MW solar power plant and EU/BMU funded solar power plant for Desertec. Morocco also has the Jorf Lasfar IPP expansion project underway. At USD 1 413 million, this Energy sector development is the second largest project in North Africa, following the USD 2 000 million Ras Lanuf refinery project in Libya.

Both Transport and Property (Commercial and General) follow the lead sector of Energy and Power at 14% respectively. This is the second highest share of total projects of all the African regions, with this sector comprising 16% of total projects in Southern Africa. In both East and West Africa, this sector finds just 4% of projects. 9% of the North Africa projects that have broken ground by 1 June 2013 fall within the Water sector and just 4% lie in Mining.

Mega partnerships

Government owns the largest portion of infrastructure development projects in North Africa (41%) and funds 14%. Europe/US owns 32% of projects followed by 18% of project ownership by Private Domestic parties, who also fund the second highest number of projects (27%).

On the ground, the bulk of building in the region is being done by European and US firms (59%) while Private Domestic parties are responsible for 14% of projects in the region. Chinese construction firms are only building 4% of projects.

Interestingly, there is a distinct rise in Islamic financing in the facilitation of project finance. Though this market is growing from a very low base, which in 2008/09 came in at less than 1% of infrastructure investment worldwide, the fact that it has now more than doubled makes it an interesting story to follow as it has the mark of being a precursor to major infrastructure projects.

Conclusion

Master Class

Africa holds the attention of the world. As the continent from which all life is believed to have originated takes on improved infrastructure form, there is much to be learnt. There is equally much that Africa can teach as it resolutely walks its developmental path. Infrastructure development can help this continent of over one billion people stand firmly on its own. But at this stage, the African masterpiece remains fragile, vulnerable to being dropped, chipped or malformed. Can the artisans to whom the continent's future form is entrusted work with the required care? They, after all, hold one of the most important potential masterpieces of the world in their hands.



Meet the Deloitte Africa Infrastructure and Capital Projects leadership team



Andre Pottas

Partner

Africa and Southern Africa
Infrastructure and Capital Projects
leader

apottas@deloitte.co.za

+27 (0)11 209 6401



Arnaud Chevillat

Manager

Infrastructure and Capital Projects,
Francophone Africa

archevillat@deloitte.fr

+33 1 55 61 60 66



Mark Smith

Partner

East Africa Infrastructure and
Capital Projects leader

marksmith@deloitte.co.ke

+254 (20) 4230 470



Manfield Mandigora

Assistant Director

Infrastructure and Capital Projects,
Middle East

mmandigora@deloitte.com

+974 4434 1112



Stephane July

Assistant Director

Infrastructure and Capital Projects,
West Africa

sjuly@deloitte.com



Joaquim Jose Paulo

Partner

Infrastructure and Capital Projects,
Angola

jpaulo@deloitte.pt

+351 210422502

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited (DTTL), a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

Deloitte provides audit, tax, consulting and financial advisory services to public and private clients spanning multiple industries. With a globally connected network of member firms in more than 150 countries, Deloitte brings world-class capabilities and high-quality service to clients, delivering the insights they need to address their most complex business challenges. Deloitte has in the region of 200 000 professionals, all committed to becoming the standard of excellence.

This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collectively, the "Deloitte Network") is, by means of this publication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No entity in the Deloitte Network shall be responsible for any loss whatsoever sustained by any person who relies on this communication.

© 2013 Deloitte & Touche. All rights reserved. Member of Deloitte Touche Tohmatsu Limited

Designed and produced by Creative Services at Deloitte, Johannesburg. (806611/sue)