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# 1. African construction in focus

#### **Preface**

This edition of the Deloitte African Construction Trends cumulates and compares data and trends from the past three years, drawing out insights at both a continental and regional level. The data within this annual research by the firm pinpoints the realities of mega infrastructure project ownership, funding and construction. It also identifies details such as the sectoral spread of projects. The research data and trends extrapolated are supplemented by editorial contributions from various Deloitte Africa ICP leaders and as a team, we welcome your thoughts and considerations on this and future reports of this nature.

#### **Top Trends**

Infrastructure projects must be valued at more than USD50 million and need to have broken ground by no later than 1 June 2015 to qualify for inclusion in Deloitte African Construction Trends.

#### **Project landscape**

- The number of projects qualifying for inclusion in 2015 rose 17%, from 257 in 2014 to 301.
- The total value of projects under construction increased 15% year on year, climbing from USD325 billion to USD375 billion.
- Projects fall into the Transport sector (37%), Energy and Power (28%), Water (8%), Mining (7%), Oil and Gas (6%), and Real Estate (6%) and Other (8%).
- Development on this scale is less present in the education, manufacturing and telecommunication sectors, which collectively account for less than 2% of total projects.
- Anticipated challenges in terms of water security in Africa are not reflected in the investment volumes and neither is social development being prioritised at this level of capital expenditure in infrastructure.
- 63% of projects are old and ongoing while 37% are new, representing good prospects for the future.
- Rapid urbanisation and the influx of an expanding middle class continues to drive the need for infrastructural reform, expansion and upgrading, which will likely reflect in future projects coming to fruition.

#### Regional moves

- East Africa (61 projects) remains third with regard to ICP activity in terms of project count, with South Africa at 109 and West Africa with 79.
- Both Central and North Africa saw massive leaps in project count and related capital expenditure.

#### **Funding dynamics**

- With participation in 145 of the 301 projects in Africa, International Development Finance Institutions (DFIs) are the largest providers of financing, representing 48% of total projects and 34% of continent-wide financing.
- International DFIs are funding 52 Energy and Power projects and 43 in the Transport sector.
   West Africa (40 projects), East Africa (39 projects), South Africa (37 projects) is the most prominently funded region by this financier type after which features and the remainder is split relatively evenly between North Africa (17 projects) and Central Africa (12 projects).
- Government is the second highest provider of funding, followed by the amalgamation of the participation of all singular countries' financing and then by China on a stand-alone basis.

#### Ownership stakes

- Projects are primarily government-owned with 214 projects (71%), followed by private domestic owners with 38 projects (13%) and Africa DFIs with 9 projects (3%).
- China is the owner of only one project, however is present in the funding of 13 projects (4%) and heavily present in the construction of 42 projects (15%).
- Governments own 71% of African infrastructure projects and are part of the construction process for 27% and are present in the funding of 16% of these developments.
- Of all the projects in Africa, 68% belong to the public domain, primarily in the Transport (43%) and Energy and Power (24%) sectors. This relationship slant is seen throughout all regions.
- 19% of projects fall within the private domain in the Energy and Power (39%) and Mining (23%) sectors, while 13% of projects are funded through Public Private Partnerships (PPPs) in the Transport (46%), Energy and Power (33%) and Mining (10%) sectors.

#### **Construction contractors**

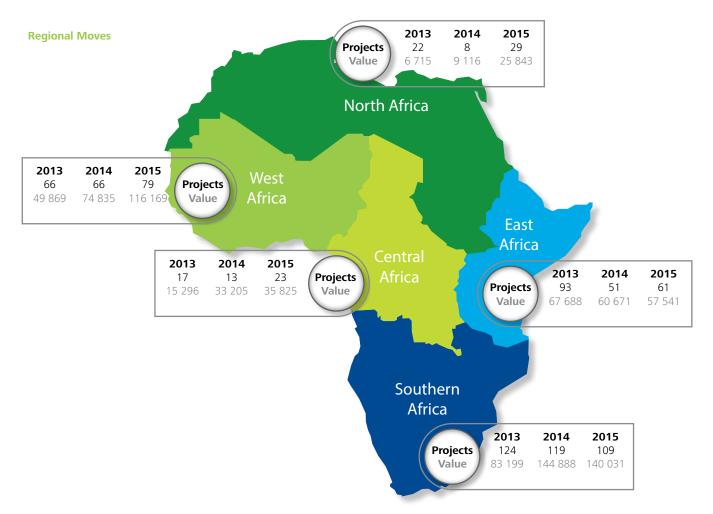
 The amalgamation of all the singular countries building participation represents the highest involvement at 28%, followed just slightly by governments (27%) and China, which is present in 14% of all the projects on a stand-alone basis.

#### Multiple roles

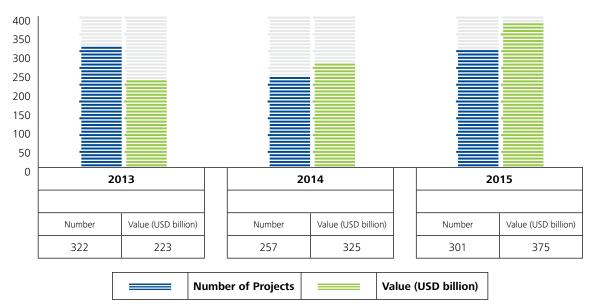
Of all the disclosed projects, owners co-function as the builders in 39% of the projects and as
the funders in 24% of the projects, while builders fill the role of funders in 22% of the projects.
 13% had the same entities present in all three, being the owner as well as participating in the
funding and construction of the projects.

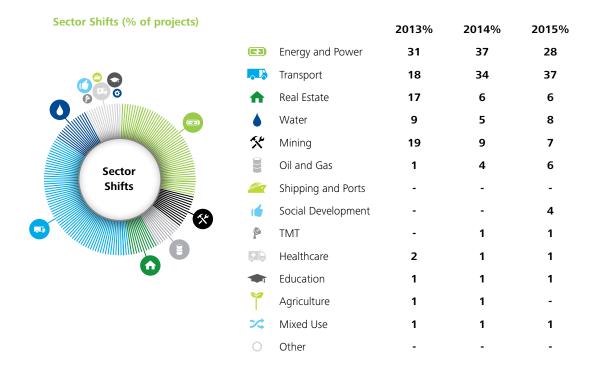
# **OVERVIEW**

		2013	2014	2015
Continental statistics	Number	322	257	301
	Value (USD million)	222 767	325 828	375 410

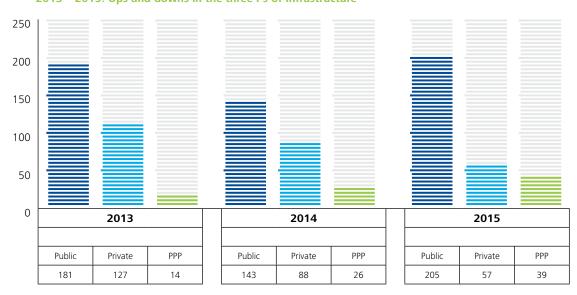


#### Continental Statistics OVERVIEW





2013 – 2015: Ups and downs in the three Ps of Infrastructure



#### **Total Projects**



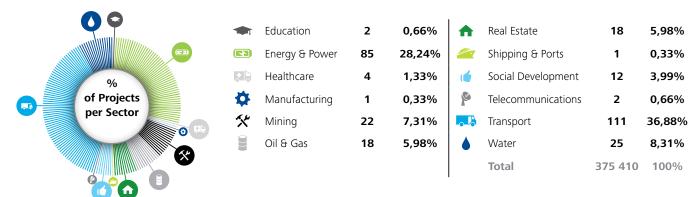
#### **Total Value**

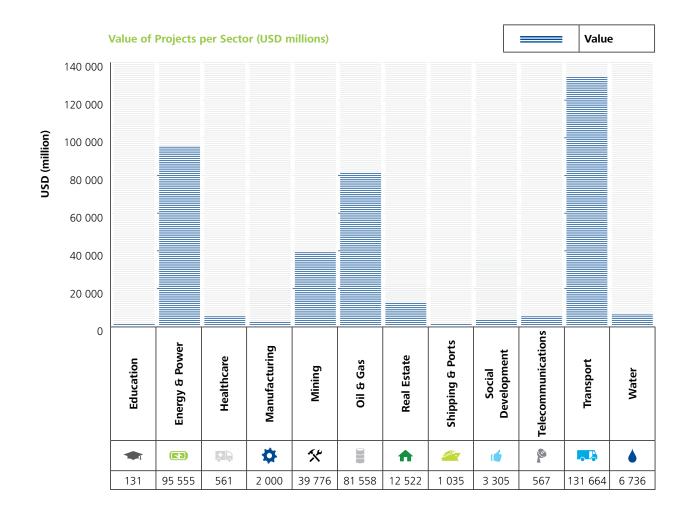


#### **Project Types**

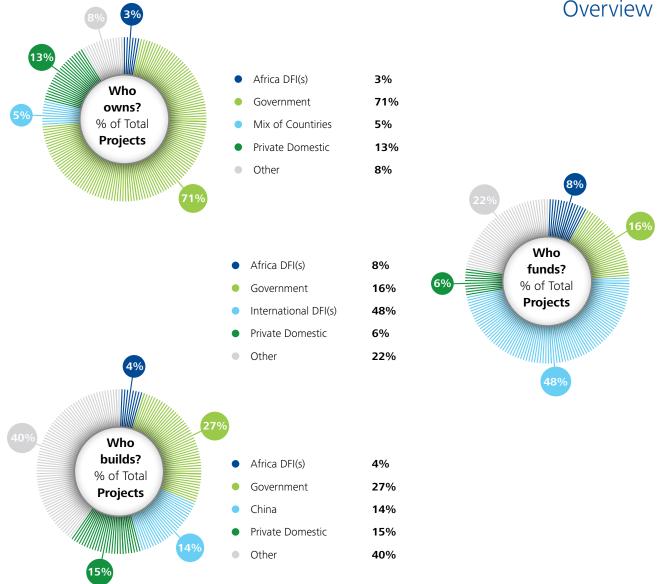
	Public	Private	PPP
2013 2014	181 143	127 88	14 26
2014	205	57	39

#### Looking at 2015

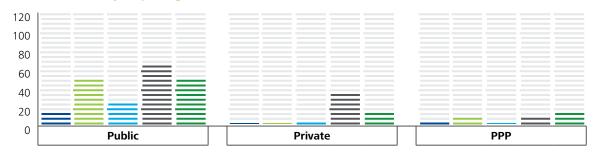




#### Overview



#### **Number of Projects per Region**



Central Africa
East Africa
North Africa
Southern Africa
West Africa

16
52
24
64
49

1
1
4
34
17

6
8
1
11
13

# 2. The full 360 degrees behind African construction

by JP Labuschagne

When it comes to debate as to Africa's potential there's never a shortage of forecasts, with infrastructure development so often being tagged in the game of "You're it".

As the basis for future growth, infrastructure carries a major responsibility, making this report interesting in that it enables us to assess the 360° view of the current construction landscape. This report, the forth in our series, begins to allow us to understand past trends and insights and potential trends going forward to be understood. Here, we analyse where we are at in the development cycle and what this means for us as Africans, as we continue in our pursuit to realise a bold vision for the continent.

Filled with mysticism from the ages, Africa has been considered the Cradle of Mankind and for decades, was dubbed the Dark Continent, followed by a continent-wide race for resources. The continent is far from being one of developmental clichés such as one size fits all. Instead, it exhibits intricacies behind the scenes that, if correctly understood and navigated, present infrastructure project leaders with tipping points towards success.

What is clear from the data is that Africa remains firmly on the construction investment and infrastructure activity radar. But in the landscape of large-scale infrastructure development, our editorial contributors all commented on similar challenges being faced across regions while highlighting that each region, country and even project faces deeply individual complexities, essentially one should not be traversing Africa without a local guide, map and compass.

What's more is that the findings are telling of the state of fundamental development in Africa. The dynamics at work within the long-term development cycle are indicators of dominant influencers worldwide. They point to where we are at in terms of project ownership, funding support levels and implementation progress, and test the hypothesis of Private-Public Partnership (PPP).

This year African infrastructure projects felt two major pinches, one being liquidity limitations as the global economy continued to contract and the second being the commodity crunch. Projects in sectors such as mining felt a tangible slowdown, which in turn put related financing deals through serious stress. A further dynamic that came into play was the knock-on impact of export- versus import-driven infrastructure development, which if executed right can fast-track project execution.

There has also been a marked shift from Government-led spend to Development Finance Institutions (DFIs). This leads us to question how long-term or sustainable such investment may be, the maintenance will one day need to come on the government budget. African economies may be getting the boost that they require to build the infrastructure currently but how will this investment be maximised and maintained for future benefit?

What has become clear is the need for us to be more cognisant of the role of DFIs versus that of donor funders. While donor funding is effectively a handout, not for repayment and often serving as a kick start for project planning, DFIs are called on to facilitate sustainable project funding. Interestingly, both financier types have, and continue to invest substantially in the continent's infrastructure development. According to a study by Deloitte (2011) donor activities were highest in East Africa and parts of West Africa, with actual disbursements dominated by USAID and the World Bank, and infrastructure development was the top addressable sector by these funders, receiving USD8.9 billion at that time.

The data in this report also indicates that development of social infrastructure lags behind other sectors. This begs further questions. Is the infrastructure development agenda being driven by getting people from A to B and keeping the lights switched on, or by catering for basic needs such as provision of healthcare, water, sanitation and housing? What is critical in the context of the developmental cycle?

These are not simple questions to answer but what we do know is that in taking a 360 degree view of infrastructure development in Africa, we are better able to understand the deep complexities behind building a continent from the ground up. In gaining this grasp on the development landscape, we can better navigate success.

What we also know, based on the experience of the Deloitte Africa ICP team, is that this project landscape is a litmus test for national and regional leadership. It is the new circle of influence in which heavyweight political and economic support need to come together, not only in talk but in true action as project teamwork is put to the test in realising some of our continent's boldest dreams for the future.

#### The infrastructure agenda

Worldwide there are essentially four drivers of demand behind infrastructure, investment and governments need to balance these four and the drivers in their planning.

- Rising population
- Ageing infrastructure and the imperative to move towards being a low carbon economy
- Natural disasters
- · Urbanisation and poverty



# 3. Methodology

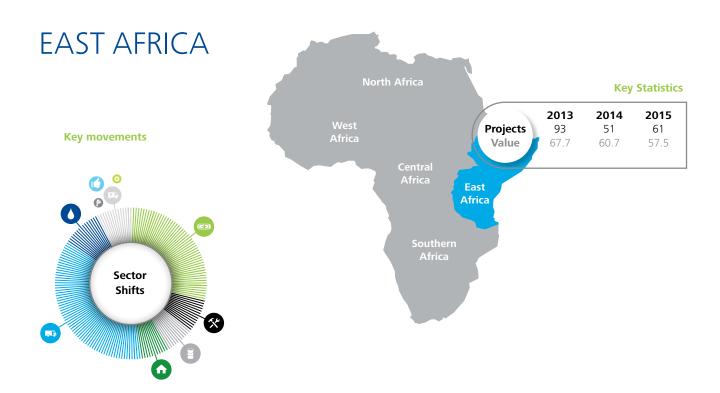
The annual Deloitte African Construction Trends Report monitors progress on capital intensive infrastructure on the continent. To qualify for inclusion in the data, infrastructure construction projects are required to be valued at over USD50 million. For this year's edition, projects must have broken ground, but not yet been commissioned as at 1 June 2015.

The analysis of construction trends focuses on projects that are physically under construction, with construction crews on-site at the annual cut-off date. The successive annual reports track the value of construction projects underway as at 1 June of each year, and the numbers should not be read as reflecting the total value of projects constructed during a 12-month period.

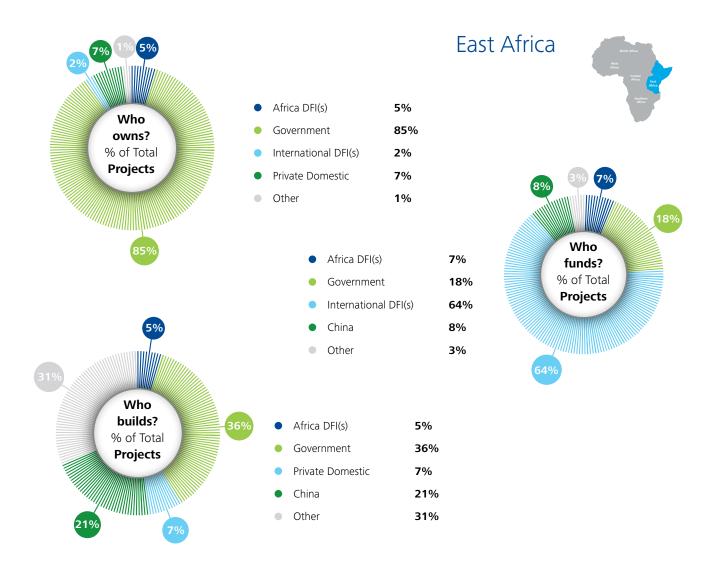
In this edition we are able to draw comparisons across three years of data, both from a continental and regional perspective, drilling down into a sectoral, project ownership, project funder and project builder landscape. It should be noted that categorisation of regions followed that of the African Development Bank and data collected was limited to publicly available information.



# 4. African construction regional trends and data



		2013%	2014%	2015%
	Energy and Power	37	37	30
	Transport	42	59	51
$\blacksquare$	Real Estate	-	-	1
•	Water	-	-	8
X	Mining	2	2	2
	Oil and Gas	-	2	3
4	Social Development	-	-	5
<b>©</b>	TMT	-	-	-
+	Healthcare	-	-	-
*	Manufacturing	-	-	-
$\circ$	Other	19	-	-



#### **Editorial commentary**

East Africa is increasingly being pegged as the African region that could swing the developmental pendulum faster towards growth. As far as infrastructure building and expansion goes, the east of the continent presents a story of progress. There is renewed optimism building in the region, yet it remains vulnerable and requires the right checks and balances.

This edition of Deloitte African Construction Trends reflects the growth reported in inter-regional trade, which in turn has encouraged movement in infrastructure development and bolstered confidence in projects. The region represents 20% of all projects in Africa, and 15% in Dollar value at USD57.5 billion. With 20 projects, Kenya followed by Ethopia at 12 have the highest number of the region's projects. Two thirds of projects are old status, with a third representing new and on-going projects. Transport development features in 51% of projects in the region, Energy and Power (30%), Water (8%), and Social Development (4%).

From a sectoral perspective, the mix of projects has expanded to incorporate sectors other than just Transport and Energy and Power. There have also been some changes in the Retail Estate sector where countries such as Kenya and Tanzania are experiencing significant growth in Retail, Entertainment and Lifestyle facilities (REL), modern office parks, and hotel space. This can be attributed to expansion in cities and a growing middle class, high yields in retail property

rentals, technology innovation and sustainability with a drive toward green and open spaces, growth of 'new urbanism', increased Foreign Direct Investment (FDI), and a shortage of quality property.

The region offers significant potential growth through future Oil and Gas fields albeit that such projects continue at a sluggish pace. Upstream Oil and Gas has huge investment potential, however there remains many moving parts that depend on governmental policies to drive impetus. East Africa at present showcases the imperative for maintaining the right balance between public sector policy, project and political risk and operator cost management.

East African projects are predominantly funded by International DFIs, followed by funding from the government. Projects are almost exclusively owned by the government, which owns 85% of the region's developments. Governments are involved in the construction of 36% of these projects, followed by China (21%). It is therefore not surprising that 85% of the projects are in the public domain, 13% in PPPs and 2% in the private domain.

With reference to the marked lift in investment from DFIs, East Africa is attracting significantly more interest from the private sector. Global investment confidence in the region is on the rise due to governmental stances such as that of the President of Kenya, who is bullish on weeding out corruption. In addition the rise of



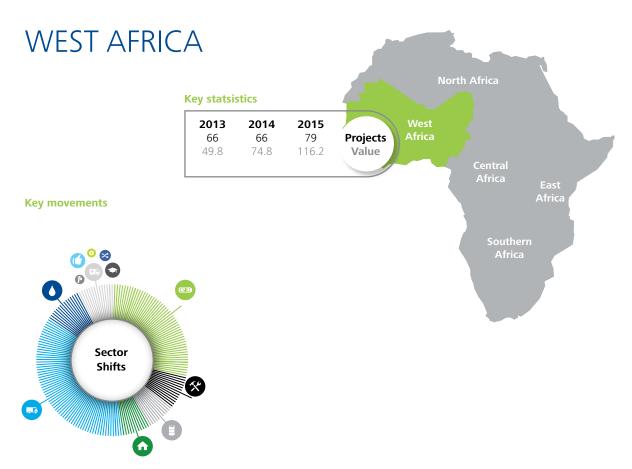
donor funder involvement backs support for regional integration, as these funders apply the right pressure on countries to unite to create regional trade routes.

A further trend unfolding in the region, is more collaborative decision-making surrounding prioritisation of projects and the flow of project execution. The cogs of East African progress will, in particular, rely substantially on development of trade routes. This is a priority at the highest levels of governance as through Presidential championship of projects such as LAPSSET, the region pushes towards more integrated Transport infrastructure. Certainly, this has taken years of slow progress prior to momentum being built but real progress is certainly being seen.

#### **Top 10 (by USD billions)**

	Kenya	East Africa Railway	Transport	13
	Tanzania	Port at Bagamoyo	Transport	11
<b>*</b>	Ethiopia	Grand Ethiopian Renaissance Dam	Energy and Power	4.7
*	Djibouti	740km Electric Railway	Transport	4
	Kenya	Mombasa to Malaba Standard Gauge Railway Line	Transport	3.8
0	Uganda	Karuma Power Station	Energy and Power	2.2
**	Ethiopia	Potash Railway	Transport	1.5
	Kenya	Eastern Electricity Highway Project	Energy and Power	1.2
	Tanzania	Songo Songo Gas & Electricity Project	Energy and Power	1.2
	Kenya	Lamu Berths	Transport	1

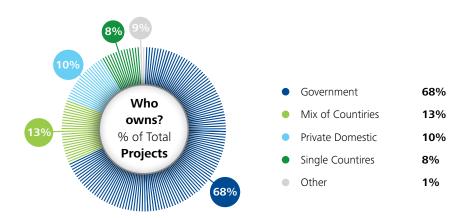


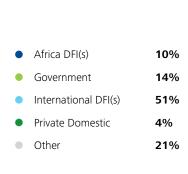


		2013%	2014%	2015%
	Energy and Power	24	21	23
	Transport	23	29	30
$\blacksquare$	Real Estate	4	8	8
	Water	5	12	10
×	Mining	20	14	9
4	Social Development	-	-	4

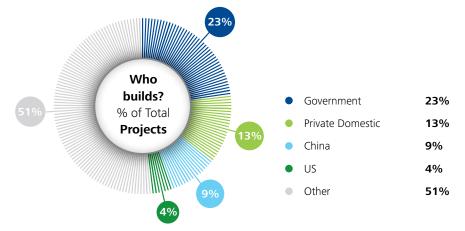
		2013%	2014%	2015%
* 5	Healthcare	5	3	2
<b>&gt;</b> \$	Mixed Use	0	2	-
	TMT	0	1	-
	Oil and Gas	-	-	14
	Education	-	-	-
0	Other	19	10	-

# West Africa









## West Africa



#### **Editorial commentary**

With USD116 billion being channelled into large scale infrastructure development in West Africa, up from USD75 billion in 2014, the region appears to be growing its share of related spend. It holds 26% of all projects in the total project count in Africa, and 31% in value.

Nigeria and Ghana have the highest number of projects in West Africa, with 19 and 15 projects respectively, and a representation of 24% and 19% respectively of the region's projects. There is the highest concentration of projects in the Transport sector, which represents 30% of total infrastructure projects in the region, followed by Energy and Power (23%) and Water and Mining at 9%. Forty-one of the projects are of a new status, with 59% representing older planned and on-going projects.

Infrastructure projects may have the highest spend of all regions behind them, but many were put on hold as the bottoming out of the oil price took a toll on development this year. One of the reasons for this could be a regional tendency of political posturing. This is particularly challenging in a country such as Ghana in which underdevelopment continues to plague the daily lives of people, yet projects are put on hold while new ones are launched.

There is a substantial focus on the building of roads in countries likes Ghana, in an attempt to counteract the overuse of the existing infrastructure with Transport projects in the region totalling USD11 billion. 23% of projects are in the Energy and Power sector. Oil and Gas projects continued to rank third in line.

Water infrastructure development (9%) features in West Africa. Mining continued to feature in the region's mix, however not that prominently because

of the negative impact of the commodity prices. Due to the impact of exorbitant pricing for example, on the gas pipeline being developed in Ghana, project viability came into question and delays were incurred. But in a project such as this, once it comes on stream, liquidity will be unlocked to an extent.

These projects are predominantly funded by International DFIs (51%) and Government (14%). Funding is also being provided by African DFIs and a mix of countries' individual investments. Projects are predominantly owned by the government (62%), followed by the private domestic investors (22%). Governments (23%) and the private domestic investors (13%) dominate in the construction of these projects, followed by China at 9%. 62% of the projects are in the public domain (35% in Transport and 18% in Energy and Power), 22% private (35% in Energy and Power and 24% in Real Estate) and 13% in PPPs (46% in Transport and 23% in Energy and Power).

In West Africa, governments are increasingly welcoming support from the private sector, with Ghana being an example of a country with a developed and Parliamentary approved PPP system. In Nigeria, government also featured strongly, however the country maintains a massive infrastructure gap that will take time to close. Here, significant private funding of infrastructure is coming into play with the role of government being defined as the creation of infrastructure that allows investors to become involved. There is a conscious move in West Africa towards following this model of project funding and execution.

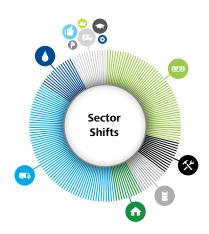
#### Top 10 (by USD billions)

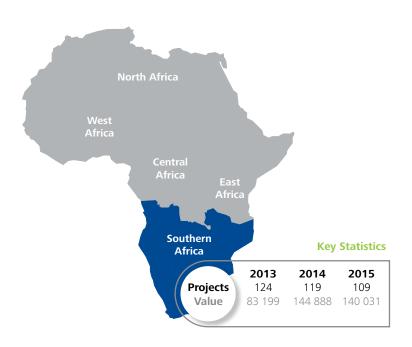
	Guinea	Simandou	Mining	20
	Nigeria	Nigeria-Algeria Gas Pipeline Project	Oil and Gas	20
	Nigeria	Nigeria's offshore Egina field	Oil and Gas	15
	Guinea	Bauxite and Alumina Refineries Development	Mining	5
*	Ghana	TEN Development Project	Oil and Gas	4.5
	Nigeria	Forcados - Yokri + Southern Swamp	Oil and Gas	3.9
	Nigeria	Mixed Use Development Abuja	Real Estate	2.8
	Nigeria	Niger Delta E-W Highway	Transport	2.2
	Nigeria	Greenfields Refinery Akwa Ibom State	Oil and Gas	1.7
	Niger	Rail line between Niger and Benin	Transport	1.6



# SOUTHERN AFRICA

#### **Key movements**



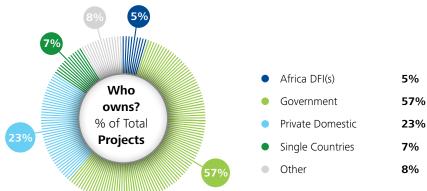


		2013%	2014%	2015%
	Energy and Power	31	44	34
	Transport	18	24	27
$\blacksquare$	Real Estate	17	7	7
•	Water	9	5	8
×	Mining	19	10	12
	Oil and Gas	1	2	3
	Shipping and Ports	-	-	-

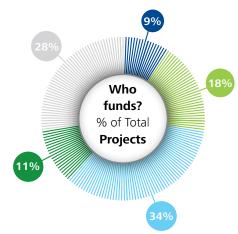
		2013%	2014%	2015%
	Social Development	-	-	4
	TMT	-	2	2
+ 0	Healthcare	2	1	2
	Education	1	1	1
7	Agriculture	1	1	-
<b>X</b>	Mixed Use	-	3	-
$\circ$	Other	1	-	-

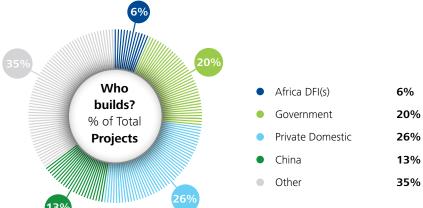
## Southern Africa











## Southern Africa



#### **Editorial commentary**

Southern Africa represents 36% of all projects in Africa, and 37% in dollar value of USD140 billion. In the region, 34% are in the Energy and Power sector, Transport accounts for 27%, Mining holds 12% of project share and Real Estate, 7%. With 28% of the total project count, South Africa features the most ICP activity in the region, followed by Mozambique at 18% and Angola at 17%.

The Energy and Power sector is a primary driver of economic growth in the developing world and during this year, there has been good work done towards bolstering energy capacity in Southern Africa. The Ingula Pumped Storage Scheme, is an example of additional generation capacity in South Africa. Ongoing development in this sector will remain a focus as urbanisation accelerates in pace.

Total investment value focuses on improving transport and transit facilitation decreased marginally (3%) year on year. Yet much of the expectation for growth in the region hinges on the development of transport infrastructure, particularly harbours and rail.

The Water sector saw an increase in investment while construction projects in Mining featured a slight rise to 12%. This is, in itself, significant as the industry weathered tough trading conditions. There are some interesting new projects entering the mining project radar and there appears to be longer term thinking infiltrating such development, specifically in markets such as Mozambique and Zambia.

Southern African projects are predominantly funded by DFIs rather than governments with a significant portion of this spend being allocated to bolstering renewable energy generation infrastructure. In South Africa alone, public sector investment holds a hefty R1-trillion price tag (over three years).

Funding is also being provided by African DFIs and private domestic funders. Projects are also predominantly owned by the government (57%) in Southern Africa followed by private domestic investement at 23%.

Similarly to other regions, 59% of the projects are funded through the public domain (35% in Transport and 18% in Energy & Power), 31% by private spend (35% in Energy and Power and 24% in Real Estate) and 10% through PPPs (46% in Transport and 23% in Energy and Power).

There is a strong relationship between the owner and builder of the disclosed projects being the same entity 33% of the time, the owner being the funder 26% of

the times, and having one entity involved in all three classifications at 18% of the time.

Just 25% of the projects are new this year which is slightly lower than other regions, with 75% representing older planned and ongoing projects.

#### Viewpoint

#### Overcoming a challenging contractor context

Competition between construction companies in Southern Africa intensified under duress of a difficult trading environment. Operating under severe pressure, building and civil contractors felt severe pressure on margins, while margin order books have not raised the bar in terms of quality. If anything, the quality of the order book of the region is concerning as those building infrastructure projects on this scale chase revenue to keep the wheels turning.

Slow project start-ups and project delays remained prevalent in the region, exacerbated by substantial cash flow constraints. Added to that, funding for feasibility studies was strained and contractor financing for projects increasingly became the norm.

In the midst of growth concerns and external mitigating factors such as low commodity prices, business models were required to change in order to heighten commercial insight and deliver on capability and capacity requirements. Construction entities also moved towards engineering and niche markets, and there was a growing emphasis on annuity income through service and maintenance of infrastructure.

Within the private sector an interesting trend in project ownership emerged, as a pullback in investment was seen. This was evident in countries such as South Africa where government is clearly spending money but the corporates are uncertain as to the policy direction being taken. As a result, those who are cash flush are holding back on regional investment.

From a project execution perspective, within this complex contractual landscape the tendency to partner with global engineering groups exists. In addition, clients are increasingly seeking project fast-tracking despite an uneven spread of risk and reward. Overall, these projects continue to present the opportunity for more effective employee engagement processes, which should raise productivity levels.

## Southern Africa



#### Top 10 (by USD billions)

2	South Africa	Durban Harbor Project	Transport	22.8
	South Africa	Kusile Power Station	Energy and Power	10.2
	South Africa	Coega Oil Refinery	Oil and Gas	10
	South Africa	Medupi Power Station	Energy and Power	7.9
<b>a</b>	Swaziland	146 km of new railway line	Transport	7
<b>A</b>	Mozambique	Coal Fired Power Plant	Energy and Power	4
2	Angola	Laúca's Hydroelectric Plant	Energy and Power	3.7
	South Africa	Ingula Pumped Storage Scheme	Energy and Power	3
*	Mozambique	Mpemda Nkuwu Hydro Power Plant	Energy and Power	3
	South Africa	S'hamba Sonke Road Maintenance Programm	Transport	3

#### Where and what are Southern Africa's water projects?

Q	Angola	Baynes Dam on Cunene River
এ	Angola	PAT - Water for All Programme
2	Angola	PDISA
	Mauritius	Bagatelle Dam Project
*	Mozambique	Maputo Water Supply Expansion Project
*	Mozambique	PROIRRI Sustainable Irrigation Development
	South Africa	Western Aquaduct Project
	Zambia	Irrigation Development and Support Project
and the	Zambia	Zambia Water Resources Development Project

# Mozambique and Malawi

#### Powering up in partnership

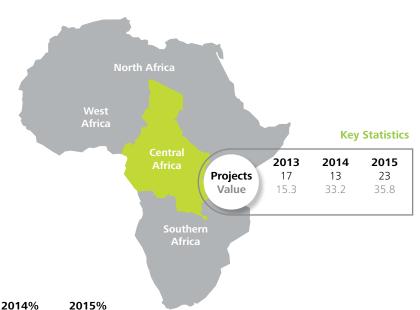
The Mozambique—Malawi Interconnector is one of the projects through which the Governments of Malawi and Mozambique are in pursuit of improving energy security. Specifically, it is their objective to increase access to diversified, reliable and affordable supplies of energy, and to provide Malawi and Mozambique the opportunity to benefit from bilateral and regional power trade in the Southern Africa Power Pool (SAPP). It entails the construction of a 220/400kV transmission line joining Matambo Substation in Mozambique to the proposed Phombeya substation in Malawi. The planned interconnector will enable the Electricity Supply Commission of Malawi (ESCOM) to refurbish its hydroelectric power stations through which to increase available capacity. The proposed interconnector will also ensure a more reliable source of electricity should the Shire River dry up, as it did between 1914 and 1935. Other benefits include the possibility of access to cheaper electricity and the increase in mining sector activities, which are currently hampered by inadequate electricity supply.



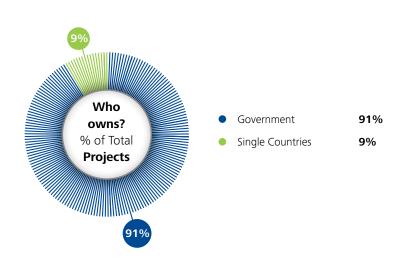
# **CENTRAL AFRICA**

#### **Key movements**





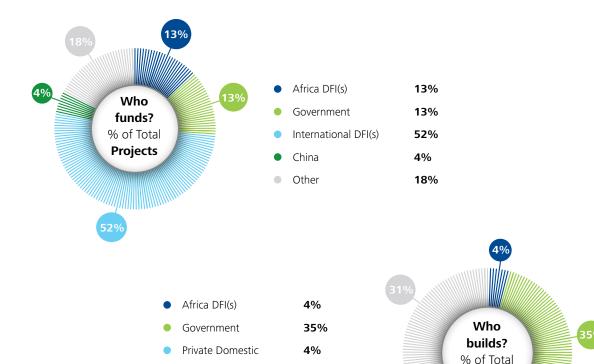
		2013%	2014%	2015%
	Energy and Power	35	27	19
	Transport	18	60	65
lack	Real Estate	12	6	4
	Water	6	-	4
*	Mining	29	7	4
	Shipping and Ports	-	-	-
	Social Development	-	-	4
	Education	-	-	-
+	Healthcare	-	-	-
	TMT	-	-	-
*	Manufacturing	-	-	-



#### Central Africa

**Projects** 





26%

31%

#### **Editorial commentary**

Central Africa, which includes Cameroon, Chad, Democratic Republic of the Congo (DRC), Equatorial Guinea, Gabon, Central African Republic and Sao Tome & Principe represents 8% of all projects in Africa, and 10% in Dollar value at USD35 billion. The project value for the region rose by USD30 billion, with by far the bulk (665%) of this investment being channelled into the development of transportation infrastructure. Development underway could account for this dominant share of capital expenditure.

China

Other

Projects in Energy and Power account for 17% of projects while the balance are split between Mining, Real Estate Social Development and Water. 57% of these projects are old status, with 43% new projects, 10% are in the Water sector and a further 10% in Social Development.

The region held up well considering that it acutely felt the impact of global liquidity pressure this year. The sharp decrease in commodity prices intensified the degree to which momentum was reined in. Particularly from an infrastructure development perspective, this meant the stunting of project progress due to budget constraints. Projects are mostly financed by DFIs followed by government. Governments (35%) are also the most involved in the construction phase, followed by China (26%). 70% of the projects are in the public domain (56% in the Transport sector), 4% private (all in Transport) and 26% in PPPs (83% in Transport).

#### Central Africa



## PROJECT PROFILE

#### **Inga 3 Power Project**

The Inga 3 Power Project is part of the Grand Inga Project, which aims to bring affordable, abundant, reliable and clean electricity to the people of the Democratic Republic of the Congo (DRC), to facilitate economic development and to improve the standards of living. It is part of the staged development of a scheme that could eventually provide up to 42 000MW of electricity capacity for the continent. Providing a point of reference South African produces in the region of 40 000MW. The scheme involves four 'energy highways' to transmit power to large areas of eastern, western and southern Africa, as well as meeting the DRC's rapidly increasing domestic and industrial energy requirements. The project will, in turn, contribute to the reduction of the impacts of climate change, reduction of poverty and reinforcement of regional economic development. The project is also seen as the leading clean, affordable and development option to address the challenges of energy access in Africa. It reaches beyond energy access as it looks to create local employment and income opportunities and contribute to cross-border cooperation in Africa and beyond.

#### Top 10 (by USD billions)

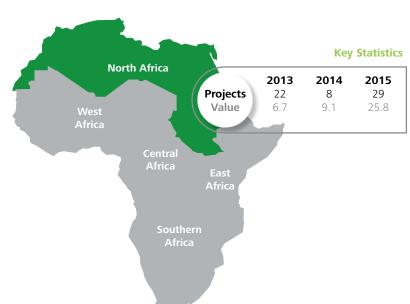
*	Cameroon	Edea-Kribi Railway	Transport	13
*	DRC	40,000MW Grand Inga 3 Power Project (Phase I)	Energy and Power	12
*	Cameroon	Mbalam Iron Ore Project Freight Railway	Transport	4.6
*	Cameroon	Kribi Deep Sea Port Multi-purpose Terminal (Phase II)	Transport	0.7
	Gabon	Port-Gentil-Omboue Project	Transport	0.6
*	Cameroon	CM-Lom Pangar Hydropower Project	Energy and Power	0.5
*	DRC	DRC Pro-routes Project	Transport	0.14
*	DRC	DRC High Priority Roads Reopening and Maintenance Project	Transport	0.12
	Gabon	Libreville-Moore Harbour Development Project	Transport	0.12
*	Cameroon	Flood Emergency Project	Water	0.1



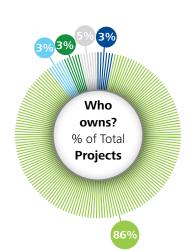
# **NORTH AFRICA**

#### **Key movements**





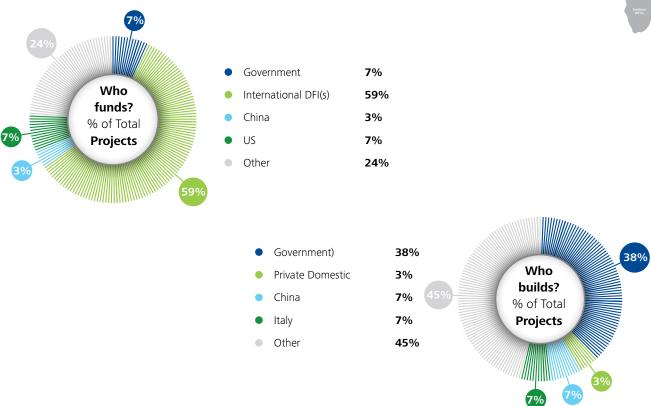
		2013%	2014%	2015%
	Energy and Power	59	75	28
	Transport	14	25	41
$\blacksquare$	Real Estate	14	-	7
•	Water	-	-	7
*	Mining	-	-	-
	Shipping and Ports	-	-	3
d	Social Development	-	-	3
*	Manufacturing	-	-	3
	Oil and Gas	-	-	8
	Education	-	-	-
+ 0	Healthcare	-	-	-
	TMT	-	-	-
0	Other	13	_	_



Africa DFI(s)
 Government
 Private Domestic
 US
 Other
 5%

#### North Africa





#### **Editorial commentary**

North Africa should not be overlooked in terms of it being a strategic and powerful engine for driving future growth in Africa. The region represents 10% of all projects in Africa, and is the recipient of 7% in Dollar value at USD25.9 million. Egypt and Morocco have the highest number of projects, with 10 and 7 projects respectively, and a representation of 35% and 24% of the regional project landscape.

The region demonstrates the importance of not analysing the continent's development at face value. Despite the five year legacy of political instability in countries such as Egypt and ongoing volatility in a country like Libya, when it comes to infrastructure the region is a magnet for international DFIs, as is clear from the high level of funding sourced from these entities. Interestingly, holding a 7% share of the funding stakes in qualifying projects, the United States is the second largest investor in large infrastructure projects in these African states. What is interesting is the number of new projects (79%) entering the database which indicates a strong revival of the ICP market in the region.

Other countries with a stake in this project landscape are Saudi Arabia, Kuwait and the United Arab Emirates, which supports the premise that the Middle East views North Africa as a cornerstone region on the continent. In Egypt for example significant capital and ideas are being activated, together with the private sector being very active in infrastructure development. In this country there is a high demand for primary infrastructure with related market opportunities in building projects.

The North African demand lies in core infrastructure with Transport now dominating the sectoral mix (41%) and Energy and Power infrastructure builds falling with a share of 28% of the projects in the region from a high of 15%. Oil and Gas (8%), followed by Water and Real Estate each represent 7% of the project landscape,

respectively. Projects in the region are being built by contractors from the United States, France, China, Saudi Arabia, Croatia, Italy and Greece.

The project with the largest price tag is the Tangier-Casablanca high-speed rail project that aims to reduce the travel time between these two cities from just under six hours to slightly more than two hours. Also on the transport front, the Nador West Med Port Complex is being built with the mandate to increase cargo handling capacity at Port Nador. A further project of interest in North Africa is Morocco's, Concentrated Solar Power Project.

Infrastructure development in the region is predominantly being funded by International DFIs, followed by funding from governments and the United States. Projects are almost exclusively owned by the government, which owns 86% of regional projects. Governments (38%) are also most involved in the construction of these projects, followed by China (7%) and Italy (7%).

North Africa demonstrates growing opportunities for PPPs and although government ownership of projects has increased significantly, privatisation remains on the agenda. Privatisation is viewed as the sale of government's equity or ownership in an existing project. While PPPs, which are generally new projects with no government ownership but sponsorship in terms of bringing the project to the markets, are promoted in countries such as Egypt.

PPPs provide projects on this scale with a funding vehicle through which to access world class expertise in development. In the region too, the social agenda is gaining traction with burgeoning investment into the Tourism sector. Within this vein, the Egypt Cairo Airport Development Project through which a new international airport will be built, is underway.

# North Africa

#### Top 10 (by USD billions)

C·	Morocco	Tangier-Casablanca High-speed Rail Project	Transport	4
Œ	Algeria	Gas Power Projects	Energy and Power	2.7
C·	Morocco	Noor Ouarzazate Concentrated Solar Power Project	Energy and Power	2.7
<u>ek</u> y	Egypt	EG-Giza North Power Project	Energy and Power	2.2
Œ	Algeria	Bellara Steel Complex	Manufacturing	2
*	Libya	Ras Ejdyer Emssad Motorway	Transport	1.3
Œ	Algeria	Grand Mosque	Social Development	1.3
C·	Morocco	Nador West Med Port Complex	Shipping and Ports	1
凼	Egypt	Egypt-Wind Power Development	Energy and Power	8.0
的	Egypt	EG-Ain Sokhna Power	Energy and Power	0.6

# 5. Oil and Gas: Viewpoint

The opportunity of the commodity crunch

Over the past year, the Oil and Gas sector has been confronted with numerous challenges triggered by the 50% drop in crude oil prices which started in June 2014. However, there are pockets of opportunities, in particular in gas-to-power projects and in the East Africa region.

The large drop in oil price has triggered drastic cuts in capex budgets, with the upstream end of the supply chain (exploration and production) bearing the brunt of these cuts: Energy and Power companies have reduced expenditures by up to 50% compared to the previous year. The midstream and downstream ends of the supply chain (transport, storage, refining and distribution) have however, continued to grow, in line with the increasing energy demand of the continent.

Exploration budgets have been slashed to a minimum. Projects that had not reached final investment decision have been postponed in order to review and cut costs. Fortunately costs have dropped, as contractors and service providers have cut prices in order to book new orders in a depressed market. However, many host governments have not woken-up yet to the new reality and are still pursuing wrong policies such as increasing taxes, tightening local content requirements or creating regulatory uncertainty.

East Africa has not yet seen the boom of activity that was expected, but this should materialise in the medium term once the large oil discoveries of the East Africa Rift Valley and offshore gas discoveries of the Rovuma basin move to development stage.

There is also a fair level of activity across the continent around gas to power projects. Governments are seeking to monetise stranded gas resources via the production of electricity to meet increasing domestic energy demand.

On the midstream and downstream fronts, investments are continuing in port, storage, transport and distribution infrastructure in order to import and distribute increasing volumes of petroleum products. However, here-again appropriate regulatory and pricing frameworks are needed in order to attract the required investments.

# 6. Laying tracks for African rail success

The 360° reality of rail on the continent and how to mobilise this catalyst of development

The revitalisation of Africa's rail network, which represents just 5% of the worldwide one million kilometre network, needs to be fast-tracked. As a transport and transit mode, this strategic asset holds wide potential economic benefits that include reduced transportation costs, accelerated industrialisation prospects and the establishment of new industries to service new railways.

For some time, many have called for more freight to be moved off roads and back onto rail. While road freight delivery is well-suited for short distances (under 100 kilometres), for longer distances, in theory, rail is the better option. A country such as Rwanda for example, which has no railway, pays a hefty premium for its logistics needs. The transaction costs of freight as a percentage of the value of imports of Rwanda and Burundi are between 35% and 40%.

The use of long distance road freight carries with it two further penalties, namely the cost of greatly increased road maintenance and the cost of road accidents and their resulting casualties. Road maintenance in many parts of Africa is not keeping up with damage to road surfaces. In South Africa, as long ago as 2010, the CSIR estimated that R32 billion was required to address road maintenance whereas maintenance expenditure was R9.2 billion.

Other related problems of relying heavily on roads are congestion and an increase in maintaining transport vehicles. However, for business, railways in the main takes a long time to deliver. To achieve balance in this equation, part of the solution lies in more efficient railways, which can support a more efficient supply chain. If freight lines can operate in the high tare/high speed quadrant, their chances of becoming, and remaining, competitive will improve.

#### State of rail transport mode

Africa's rail landscape is diverse and as a result, complex. To illustrate this, consider that with a total track distance of 30 400km the South African rail network is the eleventh largest in the world but it ranks lower by performance measures such as passenger journeys or passenger kilometres, and freight tonnes transported or tonne kilometres.

In North Africa, Egypt for example has rail infrastructure and rolling stock that is in urgent need of upgrading, which could cost more than USD10.5 billion over the next ten years. While Algeria aims to move from having no light rail to having three new systems in operation by 2020, as part of an emerging national revival of interest in public transport.

Morocco too has invested considerably in rail. In 2009, the Taourirt to Nador east-west link was completed and in 2010, the Rabat to Tangier shortcut. In the north, a new track between Tangier and Ras R'Mel has been constructed. Other routes under construction are the Casablanca to El-Jadida line and the Meknes Bypass, on the Rabat-Fes route. In Tunisia, the Société Nationale des Chemins de Fer Tunisiens (Tunisian Railways), or SNCFT, operates a network of 471km of 1,435mm gauge and a 1,674km of 1,000mm network. In 2012, the country completed an extensive railway renewal project.

East African rail traffic density is the lowest on the continent, with none of its lines having more than one million traffic units per route kilometre. By global standards, these traffic volumes are little more than what might be carried by a moderately busy branch line. Railways in the region handle 10% of the regional port cargo when this infrastructure could have handled at least 70%. Yet the existing network has the potential to increase cargo volumes from the current 3.7 million tonnes to over 16 million tonnes by 2030, an annual growth rate of 6.7%.

In assessing the state of rail in Africa, a dynamic needing to be considered is that of the average effective velocity of rail freight. In East Africa, for example the region averages less than 10 km/hour, which by all accounts is common across the continent. Slow movement of goods has something to do with infrastructure but even more to do with the extensive delays suffered in border crossings, port delays, planned services, reliability constraints, limited network, trade logistics and safety and is also often a symptom of years of underinvestment in the network.

Growth, however, in terms of total traffic on the continent is imminent. In East Africa alone, on one of the regional corridors, the Northern Corridor, traffic increased from 21.5 million tonnes in 2013 to 35.2 million in 2015, and is forecast to reach 89.6 million by 2030. These volumes correspond with an average annual growth rate of 11% between 2009 and 2015, and 7% between 2015 and 2030 in the region.

Also pertinent to East Africa, Ethiopia has built a regional first in a 34km modern light rail system. In the context of the challenging road traffic congestion this rail solution presents an interesting pilot case for further assessment. The economic spinoff thereof could be significant, as such transit options could grow the market economy for the regional city.

In Central Africa the demand for rail activity has historically been dictated by iron ore exploration. In terms of large infrastructure projects there is currently work underway to link north-eastern Cameroon to its neighbouring capital, N'Djamena in Chad via a 700km railway line. Also in Cameroon the Douala-Limbe railway being built aims to link Douala, the economic hub of the country, to the seaside resort town of Limbe.

In the mineral-rich West Africa region, rail could present a viable alternative to counteract the high cost of road freight and the congested state of many of the highways. Inter-regional rail links could serve to lower the cost of inter-country trade. Projects qualifying for this report include a 1,050km rail line between Niger and Benin, beginning at Cotonou and extending to Parakou while ending in Naimey. The completion of this line will have a positive impact for Niger and countries in the region as it will facilitate export of agricultural products, livestock and mineral resources.

In Nigeria's Lagos, the Public Private Partnership (PPP) project to build the light rail system, known as the Lagos Rail Mass Transit System, is underway. The Abuja-Kaduna rail project is the first phase to be implemented while the next segment to undergo standard-gauge upgrade is the 312km long Lagos-Ibadan rail line, a double-track standard-gauge line scheduled for completion in 2016. Other standard-gauge line projects in the pipeline in Nigeria include the Lagos-Benin City (300km), Benin-Abakiliki (500km), Benin-Obudu Cattle Ranch (673km), Lagos-Abuja high speed (615km), Zaria-Birnin Koni (520km), and the Port Harcourt-Maiduguri line (1,657km).

#### **Enablers of sustainable rail solutions**

Rail transport has the potential to be a mode of choice in Africa, but what will it take to deliver rail solutions that deliver on imperatives and last into the future? The following key drivers will go the distance in delivering sustainable rail solutions.

#### 1. Policy and legal framework harmonisation

Both a governance centred culture and consistent strategy for the development of railway infrastructure are necessary. Extension of the scope of current policy and/ or legislative works should streamline the requirements from inception though to operations, in a number of instances outdated rail policies do not allow for significant private sector involvement. This is one of the issues that needs to be addressed when considering new rail projects or reinvestment in these.

#### 2. Private sector investment injection

There is a growing realisation that government alone cannot deliver on Africa's infrastructure gap. PPPs ably address developmental enablers such as the project context, which encompasses the technical ability and skills needed to implement and procure infrastructure projects, and secondly, to create a structure through which government funding is leveraged to facilitate private sector investment.

#### 3. Expansion and improvement of infrastructure and services

Africa's diverse and difficult economic geographies make a regional approach to infrastructure development imperative to achieve modal improvements, and integrated transport infrastructure is paramount to meet developmental requirements.

#### 4. Knowledge management, partnership and capacity building

PPPs not only deliver country infrastructure but support regional integration by assisting governments to close financial, managerial and technical gaps. To give private sector stakeholders a broader understanding of the issues and elicit their buy-in, PPP regulation frameworks and PPP oversight units need to be established.

#### Conclusion

Transport corridors are the tangible and intangible facilitators of domestic and international trade. Successful revitalisation of regionally-focused rail networks will lead to predictable and sustained long-term demand for rolling stock and rail infrastructure. These critical infrastructure projects will create platforms for development of local industrial capacity and capability, as well as creating long-term employment opportunities in supplier industries.

Developing a rail network that complements other transport modes will also contribute towards important regional integration. It will support productivity, growth, stability and boost competitiveness of each of the regions. By modernising African rail networks, a modern, responsive and efficient transport system can be the order of the day.

#### **Resources security**

A major force behind the building of railways in Africa is the need to harness sustainable growth potential from the continent's minerals as well as oil and gas reserves. Much of the continent's large, high-grade mineral deposits remain under-explored. In the case of minerals, iron-ore and coal are exported largely in their 'raw' state. Per tonne, minerals such as coal, iron ore and bauxite are comparatively low cost minerals and unless these bulk commodities can be transported economically in very large tonnages, the economic benefits will not be realised. While oil is not a low cost commodity, railing it in tanker wagons is cheaper, and safer, than sending it by road. Rail is also well suited for transporting the heavy equipment needed for oil exploration.

#### **Food security**

In agribusiness, the situation is changing as initiatives such as the formation of the Comprehensive Africa Agriculture Development Programme (CAADP), which aims to promote economic growth through agriculture-led development, shows promise. In terms of food production, the call from African politicians is for the continent's farmers to raise production above minimum food security levels. The World Bank president believes that it is imperative that Africa starts contributing to the world agricultural value chain. The needs for improved agricultural productivity and for Africa to be a food exporter will be strong drivers for regional integration and a revived African rail network.

#### Clarifying perspective on disparate rail gauges

The issue of disparate rail gauges in Africa is not as large an issue as some might think. Yes, apart from Southern Africa and East Africa, there is not a seamless rail network connecting across borders. Continent-wide, currently, there are three places where lines of different gauges meet. But the problem of rail gauge compatibility is not limited to Africa. Europe and Japan both contend with similar challenges.

The most probable scenario for rail gauges on the continent is that the Southern African region will continue to operate on 1,067mm Cape or narrow gauge. The rest of Africa will remain on or change to 1,435mm standard gauge. While the South African Green Paper on Rail discusses the conversion of some rail from narrow to standard gauge, the practicalities and the costs are significant inhibitors.

#### Rail routes in East Africa a ground breaking story

Inter-regional trade currently drives the bulk of rail infrastructure development in East Africa. Cooperation and trade at this level is a priority that is being led at the highest levels in government. The building of the LAPPSET Corridor and the Mombasa-Nairobi-Kampala-Kigali railway route are two examples of projects that are forging ahead.

The LAPPSET Corridor Development Authority (LCDA) spearheads the development of the LAPSSET Corridor Project, a new railway line which begins at the Tanzanian port of Lamu. At Archers Post, the line will divide, one branch connecting with the Ethiopian network at the border at Moyale, the other crossing Kenya to Southern Sudan ending at Juba.

The new railway is part of a much larger project which is to include a new port at Lamu, highways and an oil pipeline among other developments. The project aims to foster a transport linkage between Kenya, South Sudan and Ethiopia, and promote regional socio-economic development along the transport corridor especially in the northern, eastern, northeastern and coastal parts of Kenya.

Conservative feasibility statistics show that the project will inject between 2% to 3% into Kenyan GDP. Statistics estimate that contribution of the LAPSSET Corridor Project to the country's economic growth might even range between 8% and 10% of GDP when generated and attracted investments come on board.

In addition, the LCDA believes that "railway transport along the LAPSSET Corridor will have a considerable impact on the modal split for cargo and hence on the trade within the Eastern and Horn of Africa region." It states that much of the cargo meant for railway transport will comprise agricultural commodities, finished or semi-finished goods, raw materials e.g. cement, oil, minerals, salt, grain, fruits and vegetables, livestock and livestock products (milk, butter, cheese) and manufactured goods.

The high-speed standard gauge railway is expected to move at an average speed of 150kph. As a result, efficiency of trade in bulky and perishable goods will be bolstered significantly in the region.

The Mombasa-Nairobi-Kampala-Kigali is a further railway route through which governments within East Africa aim to unlock inter-regional cooperation. This rail link will facilitate greater trade for land-locked Rwanda by providing a direct connection to the Indian Ocean. Starting at Mombasa, work is progressing well in the conversion of a metre-gauge line that runs via Nairobi to Kampala in Uganda to standard gauge. From Kampala, the narrow-gauge line to Kasese will be converted to standard-gauge, while new links will be built to Juba and to Kigali in Rwanda.

Once fully operational, this rail infrastructure has the potential to deliver a container from Mombasa to Kampala in under one tenth of the present rail time. Rail transport within the northern trade corridor has already cut down transport time from 48 to 10 hours.

These projects are genuine success stories in the making, as infrastructure finally takes shape on the ground. They are proof that that it is possible to fast-track such large-scale development at a regional level. They demonstrate that traction is gained as the major programmes gain funding and this is linked to the concept of how the countries cooperate together through inter-regional trade agreements.

# 7. The Power Africa initiative

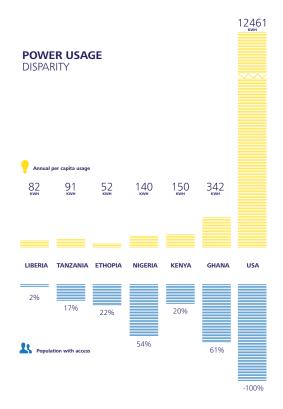
Under the spotlight

On June 30th, 2013 the President of the United States, Barack Obama announced the launch of the US-led Power Africa, a five-year initiative that he stated will double access to power in sub-Saharan Africa. "We'll reach more households not just in cities, but in villages and on farms ... We'll expand access for those who live currently off the power grid," he said.

The initiative aims to double access to electricity. It strives to do this by supporting the institutional and policy reforms needed to facilitate regional efforts to increase access to cleaner energy, including support for East and West African power pools and regional energy trading.

Its approach is one of partnership that is "driven by the private sector and supported by host country governments and multilateral and bilateral donors." One of the imperatives of the initiative is to add more than 10,000 megawatts (MW) of cleaner, more efficient energy generation capacity in sub-Saharan Africa, with the view to make this energy accessible to 20 million new households and commercial entities through on-grid, small-scale and off-grid solutions .

A year after launching, over a quarter of the energy generation target had been delivered; transactions brought to financial close will generate 2,792MW; the supply of over 5,000MW is in process; a ratio of nearly 3:1 leveraging of funds was achieved; and projects delivered during the year presenting the potential to power more than 5 million connections to African homes, businesses, schools, and clinics.



Source: Power Africa Annual Report 2014, p10

Power Africa Annual Report, July 2014, pp3 Power Africa Annual Report, July 2014, pp4

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