CFC Africa Insights

Developing African Infrastructure in Challenging Times

CASABLANCA FINANCE CITY
القطب المالي للدار البيضاء

AFRICA50
Investing in Infrastructure for Africa's Growth

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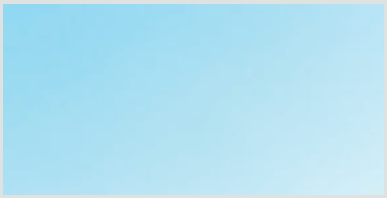

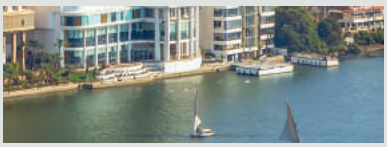

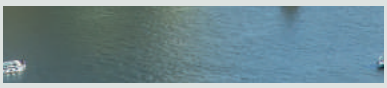

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FOREWORD

As part of our "CFC Africa Insights" series, we are delighted to team up with Africa50 and bring you this new edition on “Developing African Infrastructure in Challenging Times”.

Established by the African Development Bank and African governments, this flagship pan-African investment platform aims to accelerate infrastructure delivery on the continent through an innovative business model that covers the entire project lifecycle, by bringing project development and financing together under one entity. We are proud of Africa50’s significant achievements and wish them all success in their journey.

For this publication, we decided to tackle the timely theme of infrastructure development and financing. Indeed, infrastructure is a critical enabler for the continent's sustainable growth, at a time when governments are making major efforts to build back better as part of their post-COVID-19 recovery measures. Despite the current turbulent context, Africa's economic outlook remains promising and several megatrends underpin the continent's long-term growth trajectory: demographic dividend, enhanced governance and overall doing business climate, emerging middle-class, urbanization. These levers will no doubt be important in driving Africa's renaissance over the upcoming decades.

The report highlights some of the latest trends in Africa's infrastructure investment landscape. It sheds light on the current opportunities, challenges as well as some of the most innovative solutions implemented to bridge the financing gap (including PPPs and blended finance, impact & sustainable investing, FinTech, Islamic finance etc.). Lastly, the document provides insights into best practices, recommendations, and illustrative case studies of succesful infrastructure development, risk management and project execution in Africa.

Here again, financial centers can play a pivotal role in supporting the continent's infrastructure agenda, acting as conveners and catalysts for promoting further collaborations between key stakeholders. As a leading financial center in Africa, our ambition is to put forward the continent's untapped potential and untold business opportunities via an Africa-centric lens. We believe this is critical to shift risk perceptions and ultimately shape the continent's narrative.

I wish you a pleasant read.

Saïd Ibrahimi
Chief Executive Officer,
Casablanca Finance City Authority

Africa is poised to make a rebound from the challenging situation created by COVID-19. GDP is projected to grow by 3.4% in 2021, reversing the 2.1% contraction of 2020. It is critical that we do everything possible to support this momentum and achieve higher and more inclusive growth across the continent and to make it more resilient to future shocks.

This will require partnerships with the international community for debt relief or forgiveness, as well as with private sector creditors. For their part, African countries must credibly commit to bold initiatives and reforms that promote inclusive growth. The African Continental Free Trade Area (AfCFTA) is one such initiative that could transform Africa into the largest free trade area in the world, boosting Africa's income by US$450 billion and bringing 30 million people out of extreme poverty. It is an important step and a potential game changer, creating a larger and more dynamic market that will attract investors.

New funding sources and improved infrastructure - our mandate at Africa50 - will be a crucial component of the post-COVID recovery. We are redoubling our efforts in our core sectors of power, transportation, ICT, and midstream gas, and are expanding our scope to include fintech, health and education infrastructure. All these sectors are critical to support Africa's resilient and inclusive growth.

ESG and climate resilience are other important aspects of infrastructure development. Africa is subject to disproportionate repercussions of climate change compared to the level of its emissions. It is crucial to support infrastructure projects that can help the continent reach its climate commitments as well as its industrialization, and economic growth aspirations.

Increased availability of finance remains a critical ingredient for infrastructure investment. In addition to seeking external sources, we must leverage our own resources on the continent, demonstrating to the world that Africa is taking charge of its destiny. In this report we discuss some solutions, from asset recycling to leveraging local institutional investors and private equity. However, whether financing is external or internal, it will only materialize if there are viable, bankable projects to invest in. Finding and developing such projects is our priority at Africa50, and once engaged, we can leverage our early and late-stage equity finance vehicles to bring in other partners. We have proven that, when well prepared, infrastructure deals in Africa can be impactful and deliver decent returns to private investors, but what the continent needs now is to speed up and scale-up implementation of new projects.

In the complex, long-term world of infrastructure development, partnerships are crucial, whether with fellow development finance institutions (DFIs) for additional finance and risk mitigation, with developers with the requisite regional and sectoral experience, or with governments to smoothen the path toward financial close. One such partner is Casablanca Finance City, so we are pleased to have been invited to contribute to its Africa Insights series.

Alain Ebobissé
Chief Executive Officer, Africa50

EXECUTIVE SUMMARY

Africa's infrastructure needs and the financing gap

Prior to COVID, infrastructure investment trends in Africa were positive, with the continent reaching a peak of US$100 billion commitments in 2018. However, the pandemic has deeply impacted infrastructure financing globally and across Africa, through 2021. The slowdown of trade and business activities, as well as restrictions on the movement of people and goods, have disrupted the development of infrastructure and in some cases, prevented projects from achieving financial closure. This has widened the continent's infrastructure financing gap, which pre-COVID, stood at US$50-90 billion a year, according to the African Development Bank's latest estimates.

The critical role of Development Finance Institutions (DFIs)

Traditionally, infrastructure investments have been financed largely by governments; however, growing debt burdens and the constraints of the pandemic, led to a reduction in the level of public funds allocated to infrastructure. Development Finance Institutions (DFIs) played a critical role in cushioning this decline and they remain a key source of financing for large-scale projects. However, to bridge the infrastructure finance gap, it is critical to significantly increase investment flows from the private sector into this asset class.

Underlying resilience in private participation

In terms of private participation in infrastructure projects, the continent has shown resilience during the pandemic. In 2020, while the number of projects with private financing decreased by 52% in emerging markets and developing economies, Africa registered a 7.3% increase in investment levels, from 2019, with a total of US$7.5 billion in private sector commitments received across 28 projects. Sub-Saharan African alone recorded a 14% increase from its five-year average of US$5.5 billion since 2015, while all other emerging markets and developing economies registered a decrease during the same period.

African governments' embrace of the private sector will continue to be a positive trend, not just for infrastructure financing but for the overall business enabling environment. With the need for such investment growing further due to the pandemic, governments, DFIs and other stakeholders must do even more to lower investment risks, whether real or perceived.

Innovative financing mechanisms and alternative sources of capital

To meet the continent's infrastructure needs, all financing models must be leveraged. Public Private Partnerships (PPPs) will continue to be a preferred structure, but increased use of co-financing and blended finance with DFIs can kick start some investments. Asset recycling can be used to free up public funds, and Islamic finance can play a larger role in some regions. Further financial sector reforms and increased fintech adoption can help make local capital markets a viable source of finance. Additionally, private equity and institutional investors are poised to deploy significant capital into African infrastructure.

Opportunities abound

Demographics, both rising population numbers and growing middle classes, have been, and will continue to be, the driving force for infrastructure demand in Africa. Energy sector needs are as high as US$120 billion a year, with the use of renewables and natural gas likely to grow further. The transport sector has increasing revenue-generating opportunities in railroads, ports, airports, and toll roads due to traffic increases and implementation of the African Continental Free Trade Area (AfCFTA). Water and sanitation needs have also increased due to the pandemic, and investments in these sectors should get a boost due to the reforms implemented in some countries, which should make private investment more attractive. The pandemic has highlighted the need for strengthening social infrastructure, such as healthcare and education, and these sectors also present an increasing number of opportunities for private sector investment. And finally, ICT infrastructure should get an impetus to reach the next level in connectivity. Along with transport and sub sectors with regional reach, ICT should both benefit from and empower AfCFTA implementation.

Increasing focus on sustainability

As the pandemic wanes, the continent is seeking to build back better, with more emphasis placed on inclusive infrastructure that meets recognized Environmental, Social, and Governance (ESG) standards. Investment commitments to infrastructure are also a cornerstone of global efforts to combat climate change, and more funding will be made available to support projects that are net positive for African economies and help countries meet their climate goals.

Project preparation and risk mitigation are crucial

A major enabler and often showstopper is infrastructure project development. Only about 10% of projects in Africa reach financial close due to inadequate project preparation. In general terms, governments must create the framework and enabling environment that make projects bankable for developers and financiers, while developers must ensure that they have a strong business case and adapt to local circumstances. DFIs and donors can help by providing advice and various types of finance and risk mitigation mechanisms.

In conclusion, the COVID pandemic has changed the infrastructure investment landscape in Africa over the short term, but the growth fundamentals remain positive. The continent is forecast to return to growth in 2021 and there are plenty of opportunities for savvy, well-prepared investors. New financing models and asset recycling solutions can foster investments in both greenfield and brownfield projects to stimulate sustainable and climate-resilient growth on the continent. It is also important to dispel the myth that project finance in Africa is too risky. This can be achieved by focusing on opportunities in infrastructure and the success stories, while also supporting efforts to create the enabling environment investors seek.

The needs & business opportunities

Closing the African infrastructure quantity and quality gap relative to the best performers in the world could increase GDP growth per capita by 2.6% a year[1].

1

565 million africans still do not have access to reliable electricity. Achieving reliable electricity supply for all would require an almost fourfold increase in investment, to around US$120 billion a year through 2040[2].

2

In Africa, 42% of people are without basic water supply, and 72% without basic sanitation[3].

3

UNECA estimates that health business opportunities in Africa will be worth as much as US$259 billion by 2030, of which an important part is for infrastucture[4].

4

To achieve universal broadband internet access, an estimated US$100 billion is needed over the next decade, with a third of it in infrastructure[5].

The African Continental Free Trade Area, a game changer

AfCFTA can play a catalytic role in promoting trade and regional value chains. The continent needs to speed up industrialization and employment growth.

01

Implementing the AfCFTA could boost Africa's income by US$450 billion by 2015 (a gain of 7%)[6].

02

With a market of 1.3 billion people the AfCFTA is the largest free trade area in the world.

[1] Africa Economic Outlook, AfDB 2018
[2] IEA, Africa Energy Outlook, 2019
[3] WHO/UNICEF, Progress on Drinking Water, Sanitation and Hygiene, 2017
[4] UNECA, Economic Report on Africa, 2020
[5] World Bank, Connecting Africa to Broadband: A Roadmap for Inclusive Growth, 2019
[6] World Bank, The African Continental Free Trade Area, Economic and Distributional Effects, 2020

Bridging the financing gap in Africa

Private equity and institutional investors
can support the development of large and specialised funds that invest in a wide variety of projects

Public Private Partnerships (PPPs)
are a familiar vehicle that, given the right regulatory framework, sector planning, and quality off-takers, can provide the comfort private investors seek

Local capital markets
can provide local currency finance to protect economies from capital flow volitility and dependence on foreign debt. Local debt and equity markets can be better leveraged when large banks or DFIs provide risk guarantees or act as anchor investors

Co-financing between private investors and DFIs
draws on the strength of both to build confidence and spread risk beyond private sponsors and commercial banks

Blended finance
the combination of concessional financing and private capital to deliver sustainable projects is an additional critical tool in the dilvery of infrastructure on the continent

Ways to tap into new sources of capital for African infrastructure

THE AFRICAN INFRASTRUCTURE LANDSCAPE

PART 1. THE AFRICAN INFRASTRUCTURE LANDSCAPE

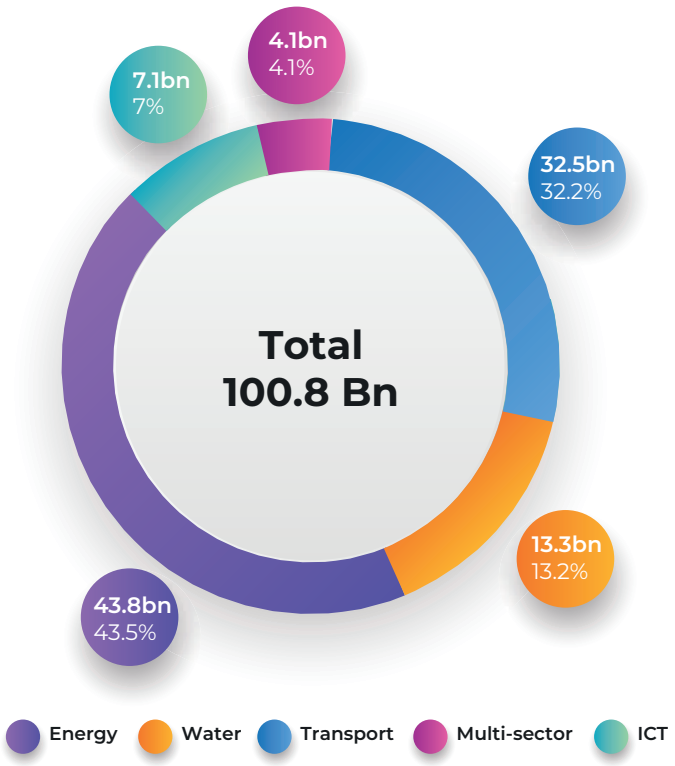
1. Overview

No country in Africa has been spared by the COVID-19 pandemic, and the hard-fought economic gains of recent years are under threat everywhere. In 2020, the slowdown of trade and business activities, as well as restrictions on the movement of people and goods, have disrupted the development of infrastructure and in some cases, prevented projects from achieving financial closure. In addition, according to the International Institute of Finance (IIF) the first quarter of 2020 saw the largest capital flight ever recorded for emerging markets. It has become more difficult for African countries to borrow, and government bond yields spiked in many countries. The continent must therefore increase its efforts and explore new ways to mobilize capital for its infrastructure needs.

Based on the latest data available, before COVID-19 struck Africa, the trends in infrastructure development were positive. In 2018, total commitments for infrastructure in African countries reached US$100.8 billion, thus exceeding the US$100 billion mark for the first time, an increase of 33% over the 2015-2017 average.[7] African governments continued to be the main source of finance (37.5%), followed by China (26%), ICA members[8] (20%), and the private sector (12%), and other bilateral and multilateral organizations (5%).

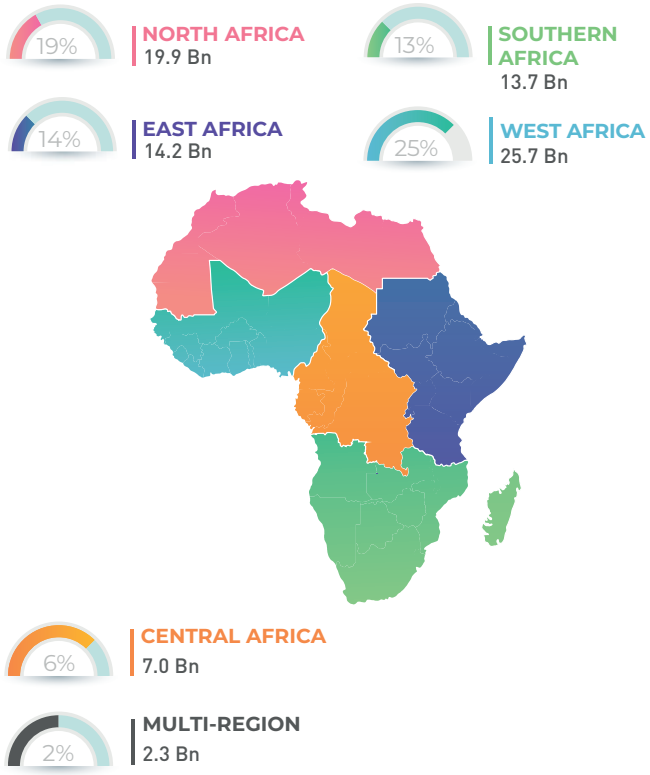
In 2018, investment in all sectors grew, with energy accounting for US$43.8 billion, 67% above the average for 2015-2017, the highest ever, and transport for US$32.5 billion (5% higher than the 2015-2017 average). Water and sanitation investment grew by 21% to US$13.3 billion, and ICT more than doubled to US$7.1 billion (Figure 1). Commitments by region were relatively well balanced, except for Central Africa, which received only 7% of the total. Regional projects, so important for implementation of the AfCFTA, represented only 2% of total commitments (Figure 2).

Figure 1: Commitments by sector in 2018 (USD)



Source: Infrastructure Consortium for Africa

Figure 2: Commitments by region in 2018 (USD)



[7] Infrastructure Consortium for Africa (ICA) report, African Infrastructure Financing Trends, 2018
[8] ICA members are: G8 countries, Spain, South Africa, AU, NEPAD, UNECA, AfDB, Afreximbank, EIB, IFC, IsDB, AFC, World Bank, AFD BOAD, DBSA

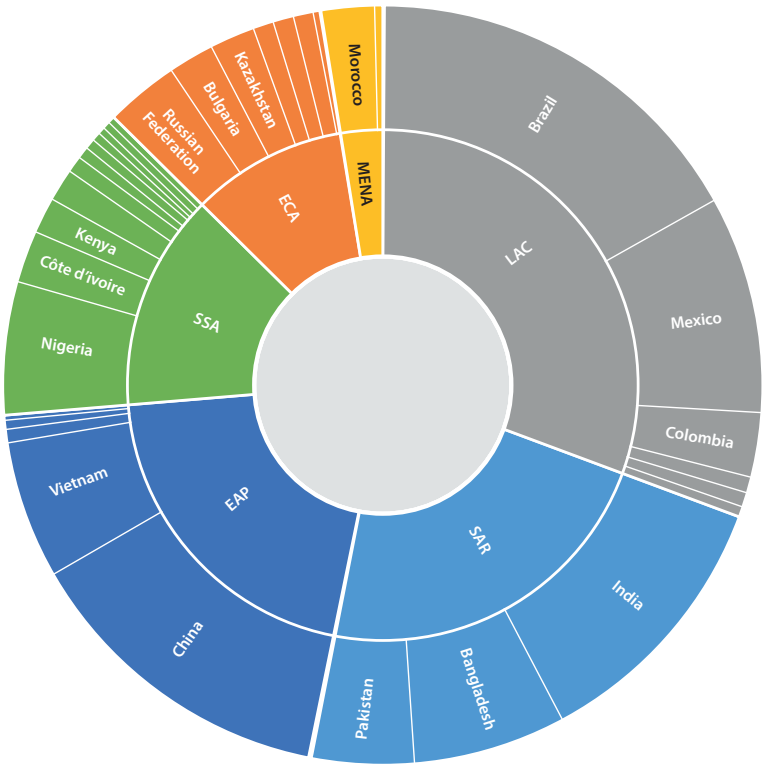
2. Private Sector participation in infrastructure financing

Private participation in infrastructure investment commitments in 2020 fell in all emerging markets and developing economies, except for Africa. The continent had a strong year in 2020 for private infrastructure financing: it received US$7.5 billion across 28 projects, a 7.3% increase over 2019. Sub-Saharan Africa alone registered a 14% increase from the five-year average of US$5.5 billion. Although many projects were fully DFI[9] financed, this region was the only one out of six that saw an increase from its five year average. This continued support from DFIs helped cushion the region from the pandemic's economic impact.

Examples of major projects that reached financial close in 2020 include a US$2.6 billion natural gas pipeline in Nigeria. Côte d'Ivoire received US$1 billion worth of private participation investments across three projects, including two independent power plants: Atinkou CCGT Plant and Azito Gas-Fired Power Plant Phase IV, which were both backed by DFI financing. Morocco recorded a US$837 million investment for the Noor Midelt CSP-PV Plant Stage I solar power project, and US$200 million for Taza Onshore wind power generation project (Figure 3).[10]

Burundi reported its first-ever project with private participation. The Democratic Republic of Congo reported a 600-megawatt solar project. Other countries with privately financed projects in the region included Burkina Faso, Cameroon, Chad, Djibouti, Gabon, Guinea, Kenya, Madagascar, Mali, Mozambique, Somalia, Tanzania, Tunisia and Togo.

Figure 3: Investment commitments in infrastructure projects with private participation in emerging markets and developing economies, by region and country, 2020 (Total Investments = US$45.7 billion)

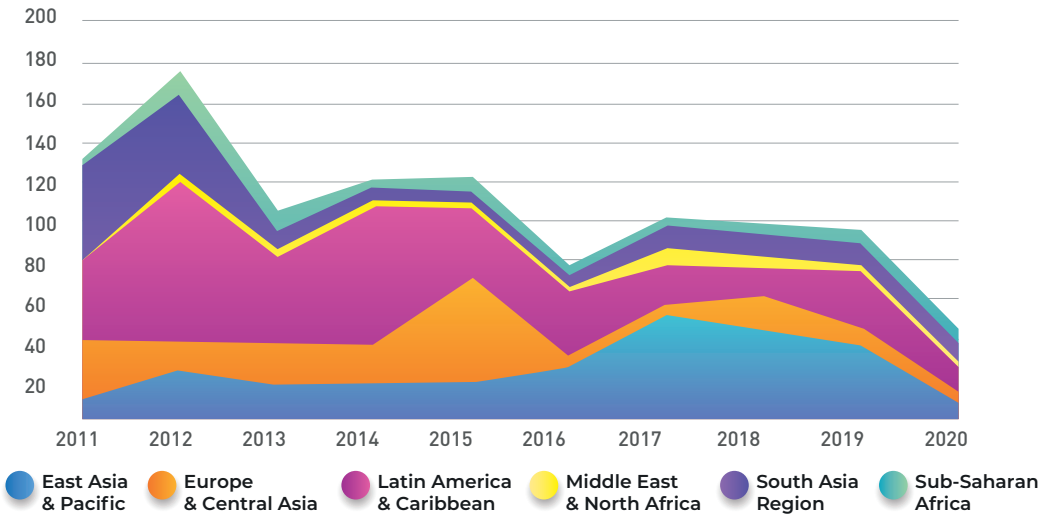


Source: World Bank, 2020

However, compared to other regions, Africa is lagging. While it received on average US$6.4 billion a year between 2015 and 2020, East Asia and Pacific received US$33.3 billion and Latin America US$14.0 billion (Figure 4).

[9] DFIs are considered a source of private finance since most self-fund through managing their investments.
[10] World Bank, Private Participation in Infrastructure, 2020 Annual Report

Figure 4: Regional share of infrastructure investment commitments with private participation in emerging markets and developing economies, 2011-2020 (source: World Bank)



Source: World Bank, 2020

3. Recent trends

There are several trends influencing infrastructure development in Africa, most of them pre COVID, but some of them accentuated by the crisis.

Rapid urbanization

A key factor is demographics. By 2050, Africa's population will reach 2.4 billion, nearly doubling from 1.3 billion in 2019[11]. The vast share of this growth will be in sub-Saharan African countries, which are expected to account for more than half of the world's population growth in this time frame. Population growth is accompanied by rapid urbanization. By 2050, 59% of the population will be urban, with more than 120 cities of more than one million. This requires that massive amounts of infrastructure be built as quickly as possible.[12]

Increased focus on sustainability and climate resilience

There is increasing demand, amplified by COVID, that governments build back better with the right kind of environmentally and socially friendly infrastructure, from renewable energy, to public transport, to improved internet connectivity. Examples are the sharing economy, the circular economy, and the green economy. With COP26 emphasizing the need to mobilize climate finance from all sources to help achieve the goals of the Paris Agreement, there should be more funding available for infrastructure projects aimed at supporting African countries' transition towards net-zero emissions.

Embracing private capital

Another trend, which is at the core of Africa50's mandate, is that governments are embracing private capital for infrastructure investment. They realize they cannot meet their needs alone and are updating legislation to encourage investment. Even though public investment in infrastructure will remain fundamental, this comes at an opportune time, since capital is moving to where the profit margins are greater adjusted for risk, which is usually the case for Africa.

[11] UNDESA (2020), Population Data Bases
[12] UNDESA (2019), World Population Prospects

Smaller scale infrastructure projects

A trend towards decentralization and the pursuit of local economic development has further amplified local needs for small-scale infrastructure finance. Technological progress, such as the decentralized generation of power from locally available renewable resources have helped provide infrastructure services cost-effectively through small-scale investments.

ICT and digital infrastructure

ICT will be a driving force both for how infrastructure is planned, delivered, operated, and maintained, and for new services and leapfrogging traditional infrastructure constraints. Smart grids, for example, will increase energy efficiency and the uptake of renewables, and digitalization is creating new opportunities in the services sectors.

AfCFTA, a boost for regional infrastructure

Large, regional projects will also be in demand and allow countries and investors to take advantage of the economies of scale offered by the AfCFTA.

4. Country and regional performance

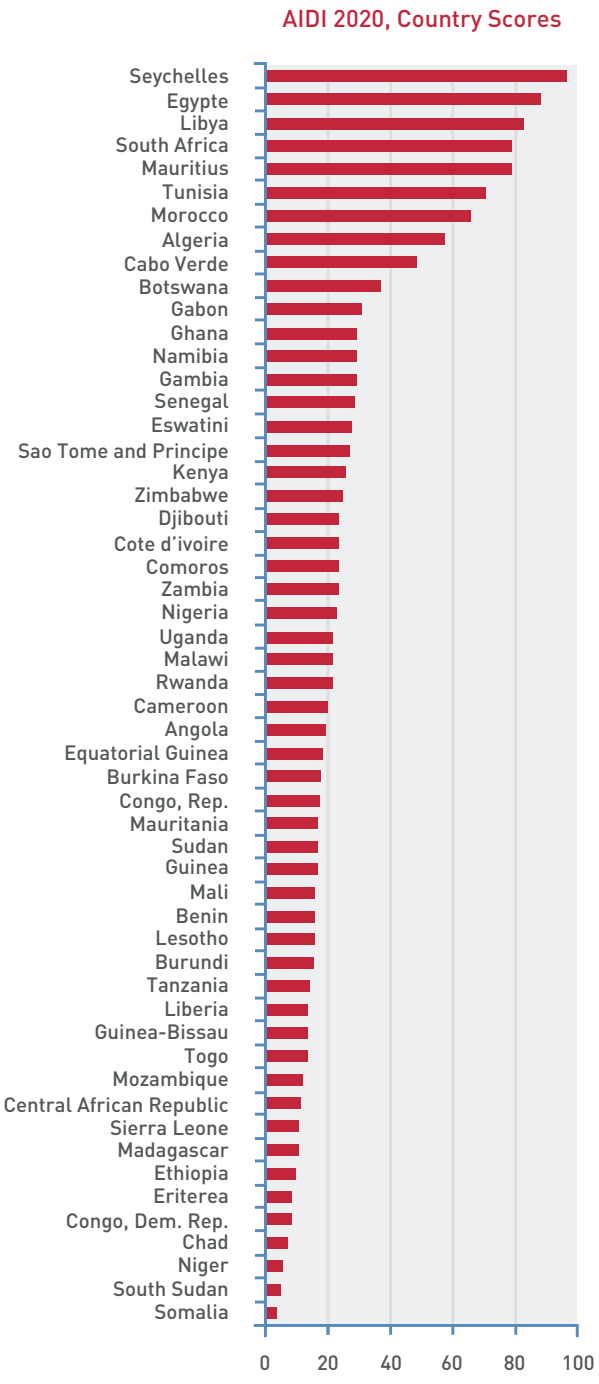
The AfDB's African Infrastructure Development Index (AIDI) monitors and evaluates the status and progress of infrastructure development across the continent for ICT, power, transport and water and sanitation, using key components and indicators (Table 1).

A data reduction method generates a single index, normalized to lie between 0 and 100. The higher the value of the index, the better a country's readiness to meet its infrastructure needs for development. The latest study shows that there is a wide variation in the infrastructure gaps of individual African countries, with a range of more than 90% between the country at the top of having good infrastructure (Seychelles) and the country at the bottom (Somalia) (Figure 5). The countries at the top are mostly from North Africa, with a few from Southern Africa.

Table 1: AIDI Components and Indicators

Component	Indicator
Transport Composite Index	• Total Paved Roads (km per 10,000 inhabitants): • Total Road Network, both paved and non-paved roads of a given country (per km2 of exploitable land area)
Electricity Index: Net Generation (kWh per inhabitant)	• The total electricity production (private and public energy generated) of a given country, including the energy imported from abroad. It is measured in millions of kilowatt-hours produced per hour and per habitant.
ICT Composite Index (ICT)	• Total Phone Subscriptions in a country both fixed telephone lines and mobile cellular telephone subscriptions, in a given year (per 100 inhabitants). • Number of Internet Users, including those using the Internt from mobile phones (per 100 inhabitants) in the last 12 months. • Total Internet subscriptions using fixed (wired) broadband technologies to access the Internet (per 100 inhabitants) • International Internet Bandwidth (Mbps): Total capacity of international Internet bandwidth in megabits per second (Mbps).
Water and Sanitation Composite Index (WSS)	• Improved Water Source (% of population with access to at least 20 liters a person per day from a source within 1 km of the dwelling). Improved sources include a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. • Improved Sanitation Facilities (% of population with access): Improved sanitation facilities refers to excreta disposal facilities (properly constructed and maintained) that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection.

Figure 5: The Africa Infrastructure Development Index 2020 country scores



Source: African Development Bank

5. Needs breed opportunities

Pre-COVID the African Development Bank estimated in 2018 that Africa needs infrastructure financing of US$130-170 billion a year (Table 2), given the continent's rapid population growth and urbanization rate The financing gap, estimated at US$68-US$108 billion annually, has widened due to the pandemic.

Closing the infrastructure quantity and quality gap relative to the best performers in the world could increase GDP growth per capita by 2.6% a year.[13] While this is challenging, Africa's infrastructure needs also create tremendous investment opportunities, with competitive returns in many sectors.

Table 2: Africa's infrastructure investment needs (US$ billion) (source: AfDB, 2018)

Infrastructure subsector	Target by 2025	Annual Cost	Notes
Power	100% urban electrification 95% rural electrification	25-50	New Deal on Energy target by 2025
Water supply and sanitation	100% access in urban area 100% access in rural area	56-66	Water access includes: piped water, public tap/standpost, safe wells/boreholes Sanitation access includes, improved latrines, safe pit latrines, septic tank, sewer
Information and communication technology (ICT)	Mobile universal coverage 50% of population with 25 km of a fiber backbone Fiber to home/premises internet penetration rate (10%)	4-7	
Road and other transport sectors (air, rail and port)	80% preservation; 20% development	35-47	Preservation: maintenance and rehabilitation Development: upgrading and new construction
Total		**130-170**	**Preliminary figures**

[13] World Bank Africa Pulse, 2017

Energy

Power generation and energy, including cooking fuels, are the most pressing need. About 565 million Africans still do not have access to reliable electricity and, despite being home to over 17% of the world's population, Africa accounts for only 4% of global power supply investment. Achieving reliable electricity supply for all would require an almost fourfold increase, to around US$120 billion a year through 2040, with around half for networks.[14] There are opportunities in all power sectors, especially renewables, with which Africa is well endowed, as well as off and on grid transmission and distribution infrastructure. Natural gas is particularly promising, both as a relatively clean transition fuel toward renewables and as an industrial and cooking fuel input. It still represents only 5% of the energy mix, even though over the past decade 40% of worldwide gas discoveries were in Africa.[15]

Transport

Investment opportunities in transport are equally abundant. There are revenue generating opportunities in railroads, ports, and logistics, with many ports and rail lines already being upgraded. In addition, most airports are reaching their capacity and will require upgrades and extensions. While rural roads will continue to require public and multilateral development banks funding, toll roads and bridges are becoming feasible due to traffic increases.

Water and sanitation

Africa has over 9% of the world's freshwater resources but they are unevenly distributed, leading to the world's lowest levels of irrigation and access to clean water and sanitation. In sub Saharan Africa, 42% of people are without a basic water supply, and 72% without basic sanitation.[16] However, water sector reforms over the last twenty years have allowed some well managed urban water utilities to extend piped water networks to a majority of the urban population they serve, at rates that make them financeable. [17]

Health

Health infrastructure has historically suffered from constrained public sector budgets and underfunding. Since those that could afford modern care would go overseas and returns were low for mass provision, the sector did not attract many private investors. However, with the growth of Africa's middle classes, growing purchasing power, increased employer provided health insurance, and rising health awareness, the sector is becoming more attractive. Helped by public funding and impact investors this can spill over into the mass market. UNECA estimates that health business opportunities in Africa will be worth as much as US$259 billion by 2030, of which an important part is for infrastructure.[18]

ICT

ICT has been one of Africa's success stories, but the pandemic has revealed a lingering digital divide, especially in internet use. To achieve universal broadband internet access by 2030, Africa will need to connect nearly 1.1 billion new users. This will require additional investments of about US$100 billion over the next decade, with a third of it in infrastructure to support the deployment of nearly 250,000 new 4G base stations and at least 250,000 kilometers of fiber-optic cables.[19]

[14] IEA, Africa Energy Outlook, 2019
[15] IEA, Africa Energy Outlook, 2019
[16] WHO/UNICEF, Progress on Drinking Water, Sanitation and Hygiene (Joint Monitoring Program) 2017
[17] GIZ, Access to Water and Sanitation in Sub-Saharan Africa, 2018 (citation of Heymans et al study, 2016)
[18] UNECA, Economic Report on Africa, 2020
[19] World Bank, 2020

This would help the continent leapfrog infrastructure constraints in several sectors, much like cell phones did with land lines twenty years ago. The pandemic has highlighted the value of ICT infrastructure. At the height of the lockdowns, 25% of the firms in sub Saharan Africa accelerated the use of digital technologies and increased investments in digital solutions.[20]

Governments partnered with the private sector to deliver online services, such as health information and e-learning, and eased the use of digital payments. Fintech, which has a head start in Africa through widespread use of mobile banking, is a particularly promising subsector, since it can sharply increase access to finance, especially for Africa's crucial micro, small, and medium enterprises (MSMEs).

Education

ICT, or the lack thereof, is also an enabler for extending the reach of education. However, buildings, classrooms, laboratories, and equipment are also crucial elements of the learning environments in schools and universities. There is strong evidence that high quality infrastructure facilitates better instruction, improves student outcomes, and reduces dropout rates, among other benefits.[21]

While, as in other social sectors such as health, private sector investments must be handled carefully to not crowd out public services, there have been many success stories of privately financed schools in Africa. Demand for them and private higher education keeps growing due to demographics and rising incomes.

6. Leveraging the African Continental Free Trade Area

While the pandemic led to a 5.3% drop in global trade in 2020 as worldwide consumption and production fell, the recovery in merchandise trade is strong, with an expected increase of 8% in 2021.[22] Intra African trade, which has been low historically, was rising prior to COVID, especially in the Regional Economic Communities, and should follow the positive worldwide trend. Full implementation of the AfCFTA can play a catalytic role for trade. Eliminating today's bilateral tariffs, coupled with simple and transparent rules of origin, would increase intra African trade by up to 15%. Furthermore, removing non-tariff barriers with countries outside Africa would increase international trade and boost tariff revenues by up to US$15 billion.[23] Freer trade will also promote the kinds of regional value chains the continent needs to speed up industrialization and employment growth. With a market of 1.3 billion people the AfCFTA will be the largest free trade area in the world if fully implemented.

However, to make free trade work, and to solve development challenges that require regional solutions, we must dramatically improve regional infrastructure. Trade in goods will take off with adequate roads, railways, logistics hubs and ports that connect countries to each other and anchor Africa further to the world economy in a competitive manner. Trade in services requires high speed internet, among other things, which is also key to boost e-commerce and digitalize logistics chains, border posts, and other related infrastructure.

[20] ITU
[21] World Bank, Africa Pulse, October, 2020
[22] World Bank, Why Education Infrastructure Matters, 2017
[23] WTO Press Release, March, 2021

Having the right cross-border infrastructure will help Africa further industrialize and diversify its exports. It will also expand market opportunities, especially for the 16 landlocked countries.

Moreover, since many of Africa's development challenges, such as electricity supply and transportation, require cross-border solutions, building regional infrastructure would not only speed up implementation of the AfCFTA but will also put the continent on a long-term growth trajectory.

However, only 2% of the approximately US$100 billion invested in African infrastructure in 2018 was for regional projects.[24]

Multiple opportunities exist for governments and private sector players to collaborate in the creation of new regional value chains and the development of cross-border infrastructure projects to support that.

Pan-African and regional economic institutions can provide the institutional support, while DFIs and the private sector can play a major role in creating innovative business models and financing new ecosystems and infrastructure. Such potential ranges across sectors such as energy, transport and logistics, healthcare, water and sanitation, education, ICT, all supported by a fast-developing African tech industry.

In this context, digital technologies that are opening up new location and connectivity options are generating innovative ways of providing basic services in Africa. These avenues have the potential of enabling Africa to leapfrog and even pioneer in some fields, with highspeed low-cost broadband services available to all.[25]

There is also an opportunity to tap into Africa's large gas reserves and hydropower capacity. They have the potential of satisfying not just local, but also regional needs. In fact, attracting the large investments these sectors require will be easier if projects are regional. This entails, for example, the construction of infrastructure that interconnects countries or industrial centers via regional transmission lines or, for gas, pipelines and LNG facilities.

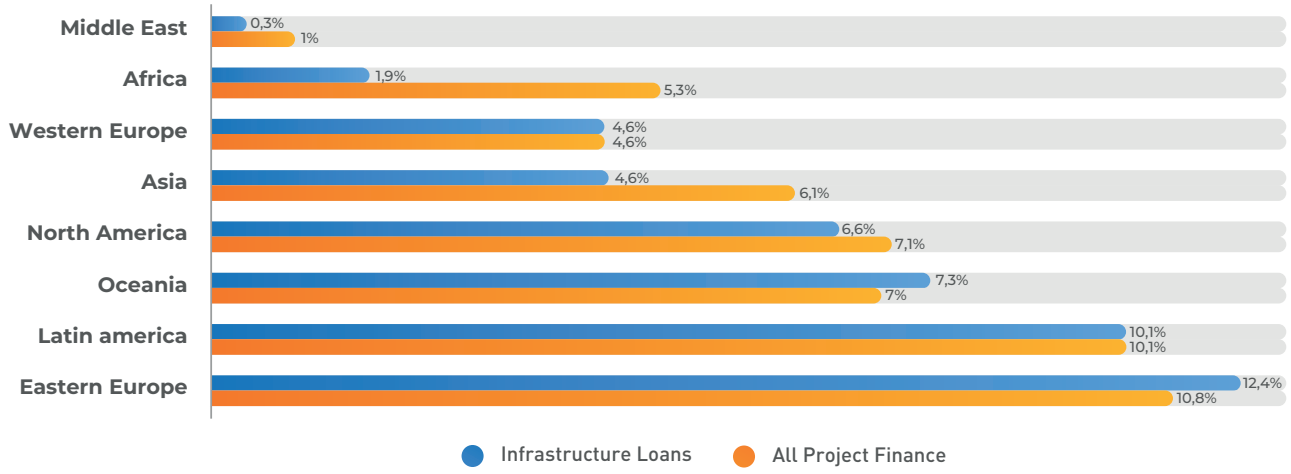
The AfCFTA is the first step to getting there. The second is to find the finance for the required infrastructure. Since the scale of regional projects is large, DFIs and the private sector must play a major role.

[24] ICA report, Infrastructure Financing Trends in Africa, 2018
[25] World Bank, Connecting Africa to Broadband: A Roadmap for Inclusive Growth, 2019

7. Addressing risk misconceptions

Investment risks in Africa are not significantly different from those in other continents but their perception is sometimes overstated. In 2020 Moody's found that Africa's cumulative 10-year infrastructure debt default rate of 1.9% was the second lowest worldwide[26], after the Middle East. To dispel the myth that the continent is too risky it is important to focus on opportunities and share success stories, while encouraging efforts to create the enabling environment investors seek. An important aspect of successful projects is the allocation of risks, which must be consistent with the development stage of the country and the sector in which the project is being implemented.

Figure 6: Infrastructure and other project finance debt performance by region: Cumulative 10-year default rate (%)



Source: Moody's Analytics 2020: Examining infrastructure as an Asset Class

[26] Moody's Analytics 2020: Examining infrastructure as an Asset Class

BROADENING THE FUNDING OPTIONS

PART 2. BROADENING THE FUNDING OPTIONS

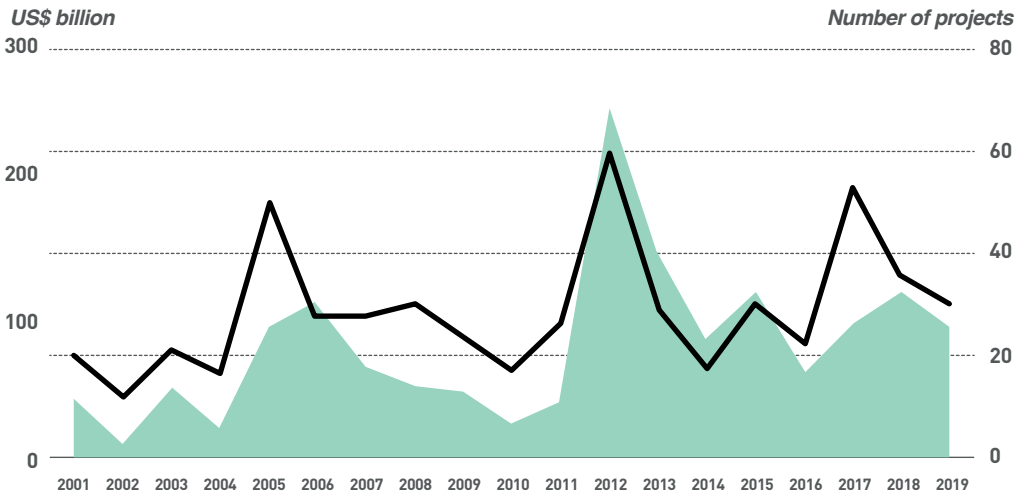
Infrastructure Investments have traditionally have been financed largely by government; however, growing debt burdens and the constraints of the pandemic led to a reduction in the level of public funds allocated to infrastructure. DFIs play a critical role in cushioning this decline and they remain a key source of financing for large-scale projects. In addition, there is a need to significantly increase private sector funding and leverage alternative sources such as institutional capital for African infrastructure, by leveraging existing and new innovative financial mechanisms.

There are both traditional and novel solutions for increasing funding for infrastructure and the share of the private sector.

1. Syndicated loans and Public Private Partnerships (PPPs)

Syndicated loans and PPPs are playing an increasingly important role in Africa's financing mix. Total investments in PPP infrastructure rose nearly six-fold from US$1.2 billion in 2004 to US$6.9 billion in 2019.[27]

Figure 7: Total investments in PPP projects in Africa, 2001–19



DFIs remain the primary providers of senior infrastructure debt in Africa, and they are increasingly collaborating with local and regional banks and specialized funds, thereby convening various players and facilitating the development of solid project finance ecosystems in Africa. The emergence of pan-African banking groups and new technologies such as mobile banking, are strengthening competition, deepening financial markets, and improving access to finance, including for larger projects. More pan-African banks are becoming lead arrangers of syndicated loans for infrastructure, finding opportunities and using their local knowledge and relationships in places where international commercial banks have pulled out. To bridge the infrastructure financing gap, it is critical to broaden the ecosystem of lenders, where DFIs can work collaboratively with international and local commercial banks as well as private equity investors, to help mitigate risks and facilitate engagements with governments.

[27]Africa Economic Outlook, AfDB 2021

2. Co-financing between private investors and DFIs

Co-financing between private investors and DFIs draws on the complementarity of all partners involved in the project to build confidence and spread risk beyond private sponsors and commercial banks. This mechanism can help mobilize capital from equity investors who have concerns relating to the liquidity of African infrastructure investments, the nature of the risks (e.g. construction risk), and the transaction costs. Governments can help in overcoming such barriers by establishing co-financing vehicles and platforms that can enable pooling of investments, provide risk mitigation, support project preparation, and perform due diligence and monitoring.

This was the vision behind the creation of Africa50, which was established as part of the African Union's Programme for Infrastructure Development in Africa (PIDA), and further to the call from African Heads of States for an innovative, agile and private sector focused investment vehicle to help bridge the continent's infrastructure gap. As a pan-African investment platform, Africa50's mandate is to crowd in private sector capital and accelerate infrastructure delivery, through three strategic pillars: (1) early-stage development of bankable infrastructure projects; (2) investing equity and quasi-equity in infrastructure projects; and (3) mobilization of long-term savings globally for investment in African infrastructure (See Appendix 1 for further details).

3. Capital markets and private equity

Capital markets are the largest source of infrastructure financing in many developed economies. They also provide investment opportunities for pension funds and other institutional investors. However, the capital markets in several African countries remain underdeveloped, with low liquidity and few new company listings. But the trends are positive, with countries increasingly venturing into innovative sources of finance, such as issuing sovereign, green, and eurobonds. The bond market grew to about US$500 billion in 2019 of which US$200 billion was in sovereign bonds in local or foreign currency.[28]

Differences between the value of the investment currency and revenues makes projects vulnerable to volatility. It is therefore critical for Africa to further develop its capital markets to provide local currency finance, thereby protecting economies from capital flow volatility, exchange rate risks, and dependence on foreign debt. Local debt and equity markets can be better leveraged when large banks or DFIs provide risk guarantees or act as anchor investors, especially in markets with deep reserves of local savings. For example, the African Development Bank recently invested NGN 3.6 billion in the Nigerian Infrastructure Debt Fund, Africa's first and only listed infrastructure debt fund that extends long-term and local currency debt to infrastructure projects.[29]

The AfCFTA can help African financial markets expand, allowing for cross listing, efficient pricing, and increased competitiveness in value chains.

[28] UNECA, Economic Report on Africa, 2020
[29] New Dynamics: Shifting Patterns in Africa's Infrastructure Funding, Backer McKinsey, 2021

Private equity investments, crowdfunding platforms, and other alternative methods of financing are also gaining momentum. The value of private equity fundraising in Africa increased to US$2.7 billion in 2018, up 10% from 2017. The total transaction value in the global crowdfunding market was US$6.9 billion in 2019 and is expected to grow 14.7% a year between 2019 and 2023.[30]

Additionally, new financial technologies (FinTech) can be leveraged to provide financing alternatives for companies and to increase saving rates and thus domestic resources. The use of FinTech, which has already been successful in Africa in the form of mobile banking, further increased during the pandemic.

4. Blended finance

Blended finance uses a mix of seed capital (which is generally concessional), from public organizations or philanthropic sources, and amplified with private funds that usually expect a market-rate return. The key focus of blended finance is therefore to achieve development impact and contribute to the Sustainable Development Goals, while also yielding a positive financial return. The concessional capital is catalyzed to lower investment risk and improve the financial return in order to attract funds from private entities. In a region like Africa where many projects are greenfield and viewed as high-risk, MDBs and DFIs can provide blended finance instruments, such as concessional capital, guarantees, technical assistance funds and design-stage grants), to make infrastructure assets' returns more attractive to private investors. There is increasing awareness of blended finance's potential to address emerging and low income market's infrastructure gaps.[31] For example, PIDG is a financial services organization funded by the governments of UK, the Netherlands, Switzerland, Australia, Sweden, Germany and the IFC, which uses blended finance to fund sustainable and commercially viable infrastructure projects in Sub-Saharan Africa and other frontier markets.

5. Unlocking institutional capital: making infrastructure an investable asset class

Infrastructure is a good investment asset class for institutional investors, since its long-term low volatility, countercyclical nature, and steady cash flow are a good match for their liabilities.

However, so far, there are too few investments in infrastructure by institutional investors, especially in developing countries. In some jurisdictions, institutional investors require a domestic investment grade rating for portfolio holdings, which most infrastructure projects or governments in Africa have not achieved. Another issue they face is a lack of clarity over the rate they will be paid, or the yield they will receive once a project is built. Therefore, some may rather buy operational assets, allowing them to enjoy a steady yield without the same level of risk.

[30] PWC, Africa Asset Management, 2020
[31] https://www.avca-africa.org/media/2894/convergence-the-state-of-blended-finance-2021.pdf

The solution is for governments or other institutions, such as MDBs, to underwrite some of the risks of greenfield projects. They can also finance the initial construction, allowing the private sector to build the project and then sell it to the funds when it is up and running.

Yet another stumbling block is that infrastructure carries different types of risks to those of asset classes that institutional investors are historically familiar with. For example, construction risks may be too unpredictable for long term investors whose main objective is preserving the wealth of their nation or pensioners. Support from DFIs, governments, and NGOs can address their regulatory concerns and fiduciary responsibilities. For example, governments and multilaterals can create the institutional environment to encourage the securitization of infrastructure assets, allowing the pooling and subsequent sale of future cash flows from a group of similar assets. This could be done through collateralized bond or loan obligations and would contribute to establishing infrastructure as a recognizable asset class.

Despite the challenges, institutional investors worldwide have been steadily increasing their allocations to alternative assets. Their appetite varies across asset classes and some investors may be eager for returns (and risks) associated with greenfield infrastructure projects, while others prefer the steady cashflow performance of brownfield assets.[32]

Africa has not only attracted foreign institutional investors but also bred its own. Prior to COVID, assets under management by African institutional investors were expected to rise to US$1.8 trillion by the end of 2020 from US$670 billion in 2012 (Table 3).[33] Pension fund assets alone in 12 African markets were to rise to about US$1.1 trillion by the end of 2020 from US$293 billion in 2008.[34] The adoption of defined contributory and universal pension schemes has contributed to this. African sovereign wealth funds are growing at a similar pace (from US$114 billion in 2009 to US$159 billion in 2015), and 20 countries now have them.[35] These home grown institutional investors can channel natural resource wealth into infrastructure and help deepen local capital markets.

The AfDB's Africa Investment Forum (AIF), started in 2018, is one of the platforms that encourages global institutional investors to invest in Africa through an investment marketplace approach. The goals of the AIF are to advance projects to bankable stage, raise capital, and accelerate the financial closure of deals. It hopes to reduce intermediation costs, improve the quality of project information and documentation, and increase engagements between African governments and the private sector. [36]

The 2018 Forum, which was attended by about 350 institutional investors from 53 countries, including 30 from African countries, secured investment interest for 49 projects worth US$38.7 billion.

[32] McKinsey, Solving Africa's infrastructure paradox, 2020
[33] AfDB, Unleashing the Potential of Institutional Investors in Africa, 2019
[34] PWC, Africa Asset Management, 2020
[35] Quantum Global, Sovereign Wealth Funds as a Driver of Africa Development
[36] AfDB, Unleashing the Potential of Institutional Investors in Africa

Table 3: African institutional investors,projections to 2020 (AfDB, 2019)

Type of Investor	2012 (US$ billion)	2020 (US$ billion)
Pension funds	300	1,100
Insurance companies	200	445
Sovereign wealth funds	170	300
Total	670	1,845

3. Using asset recycling to unlock public capital

Asset recycling is a suitable infrastructure funding mechanism for institutional investors, given their preference for brownfield projects. Asset recycling enables private and institutional investors to acquire ownership or a fixed period concession for revenue producing publicly owned brownfield infrastructure owned or financed by the public sector.

This mechanism enables governments to unlock the capital they invested in profitable infrastructure assets, such as toll-roads, power plants, airports, and fiber optic networks, by offering them to investors. The freed-up capital can then be redeployed to fund stimulus plans and new infrastructure for the post-pandemic recovery phase, including in the health sector or green infrastructure.

Governments must determine which assets they should no longer fund, own or manage themselves and are thus suitable for recycling. For potential future recycling of new projects, governments and developers can make provisions for capital market refinancing at financial close, which can also lower the overall cost of financing. The optimal investors for asset recycling would be local institutions. By virtue of their access to local currency and relationships with their governments and local stakeholders, they can better assess the opportunities and risks to protect their investments. However, in view of the current lack of depth and scale of African capital markets, it is important for global investors with access to larger and more competitive pools of capital to also be given the opportunity to participate in asset recycling in Africa.

Asset recycling has been used extensively in several mature markets, especially in Australia, but would be innovative and potentially transformative for the African context. This is an idea whose time has come, as it could help governments raise financing relatively quickly during times of crisis and reverse the effects of capital flight, by leveraging the continent's local resources alongside external ones. It would also send a powerful message to the world that Africa is prepared to do its part as it invests in its own resilience.

3. Focusing on sustainability

Adopting internationally recognized ESG standards is particularly important for infrastructure projects since most involve diverse, and potentially complex ESG risks that can affect their viability and have material implications for long-term shareholder value.

Key ESG risk factors include greenhouse gas emissions and energy consumption, soil and ground-water pollution, labor and working conditions, contractor management, occupational health and safety management, local community health, safety and security, and the involuntary economic or physical displacement of communities.

In addition, Africa is disproportionately impacted by the repercussions of climate change compared to its relatively low contribution to global emissions. Therefore having environmental safeguards in place is critical to protect African countries from natural disasters and build a sustainable development path for future generations. As seen during COP26, more investors are now focused on ESG issues, and an increasing number of DFIs have established their own standards for promoting good business practices that are being called upon in the course of project finance deals.

Investment incorporating sound environmental, social and governance (ESG) criteria, has grown rapidly over the past decade, by some counts to over US$17.5 trillion globally.[37]

The worldwide focus on the specific and pressing ESG factor of health and safety is further accelerating the trend. From January through November 2020, investors in mutual funds and Exchange Traded Funds alone invested US$288 billion globally in sustainable assets, a 96% increase over the whole of 2019.[38] The pandemic may have served as the tipping point for ESG and should have a long-term impact on the financial ecosystem. It has also put a spotlight on ESG issues beyond health, such as income inequality, diversity and inclusion, social injustice, employee welfare, and climate change.

The UN's Sustainable Development Goals (SDGs) are good targets for impact investment, including for infrastructure,[39] and assuring impact from infrastructure investments is thus another way to leverage funds. And investors have good reasons to choose Africa for impact investing. With broad development needs and unsaturated markets there are countless opportunities to make a difference while making a good return. Many of the SDGs have been met in more advanced economies, so having a significant development impact there is more difficult. Meanwhile, Africa is starting with a low base, so visible progress, measurement, and impact can be far greater. It is also increasingly in the eye of concerned consumers in developed markets who encourage the work of DFIs to support sustainable investments in Africa, including non-commercial ones.

[37] OECD ESG Investing: Practices, Progress and Challenges, 2020
[38] OECD ESG Investing: Practices, Progress and Challenges, 2020
[39] OECD ESG Investing: Practices, Progress and Challenges, 2020

4. Small-scale, replicable projects to improve the success rate

Smaller projects are also gaining favor with investors. Consumers like local projects that can solve their problems faster and are flexible enough to be able to adapt to changing demand and technology. Rather than focusing only on large projects that are more complex to implement, building a conveyor belt of smaller, replicable, manageable projects, can speed up access to modern infrastructure. Rapidly closing such deals can also catalyze reforms and further convince investors that investments in African infrastructure are bankable and can reach financial close quickly.

5. Using FinTech to improve access to finance

FinTech refers to technological innovations that enhance the way financial services are provided. They include crowdfunding, e-insurance, business software, blockchain and cryptocurrencies, electronic payments, e-commerce and trade applications, among others. It improves the speed, security, and operating costs of financial markets and reduces information asymmetries. Africa's financial markets, which have fewer legacy systems, provide fertile ground for FinTech development, as is already proven with mobile banking. It is expected to triple access to financial services in Africa, creating a new market of 350 million customers,[40] as well as alternative financing and investment mechanisms, particularly for startups and MSMEs. As the number of companies and Africans that are integrated into the financial system grows, so will local savings and capital markets. This, in turn, can help finance infrastructure.

6. Leveraging Islamic finance

Yet another source of funding for infrastructure is Islamic finance. It is based on sukuk, Islamic compliant bonds that are structured in a way to generate returns for investors. They are issued and traded in compliance with the principles of Shariah law which prohibits riba or interest. Sukuks have a long history in the Gulf Cooperation Council (GCC) and ASEAN countries, but are relatively undeveloped in Africa, with a share of total assets of only around 1%. However, there are many opportunities since almost a third of the continent's population is Muslim. Islamic finance requires a clear link with real economic activity and transactions must relate to a tangible, identifiable asset. This aligns well with long term infrastructure financing. Just as for traditional bonds, there are green sukuks that focus on renewable energy, waste management, sustainable agriculture, and green transportation.

African countries have begun to adopt legislation for the issuance of sovereign sukuk to raise funding for infrastructure projects and attract investments from the GCC and ASEAN regions. Senegal became the first country to issue a sovereign sukuk in 2014, followed by South Africa, Côte d' Ivoire, Morocco and Nigeria. Others, such as Kenya, Algeria and Gabon, have recently expressed interest in issuing sukuks to finance infrastructure projects.[41]

[40] UNECA, Economic Report on Africa, 2020
[41] Casablanca Finance City

MITIGATING RISKS AND PREPARING PROJECTS

PART 3. MITIGATING RISKS AND PREPARING PROJECTS

1. Allocating and mitigating risks

Irrespective of the type of financing used for infrastructure, correctly allocating and mitigating risks is crucial to attract investors. The private sector is usually best-placed to hold the financial, construction, and operational risk, while governments should handle foreign exchange, fuel supply, country, and force majeure risks. Investment risks in Africa are not significantly different from those in other continents. In fact, data shows that long-term infrastructure debt default rates of projects in Africa are lower than in most regions in the world (see Part 1, section 7). Countries viewed as having a stable macroeconomic environment with predictable infrastructure regulation are seen as less risky and have attracted more private financing.

When there are specific risks that the private sector is not ready to take, instruments exist to cover or mitigate them. They include instruments that are generally provided by multilateral institutions such as the AfDB, the World Bank or MIGA. These are rarely invoked, but their existence gives the private sector more confidence to proceed with project funding activities. In addition, the mere presence of a DFI in a transaction, provides de facto risk mitigation. DFIs can also help by providing advice on regulatory reforms, as well as concessional loans and blended finance for the more challenging transformational projects, or where new sectors must be developed.

One way to evaluate the risks is to do a market sounding exercise with potential lenders. Having a risk sharing protocol based on such feedback can manage expectations and facilitate funding. Governments must also assure consultations with all stakeholders and end users to minimize commercial and ESG risks.

Host government guarantees can also mitigate investment risks, from political risk to fuel supply, to natural disasters, or recessions. For a small risk, part of which they can control, governments can leverage substantial private capital, lessening pressure on public finances. Other well tested instruments are available to provide investors assurance that they will be paid. These include letters of comfort, put and call options, liquidity letters of credit, and liquidity escrow accounts.

2. Improving project development

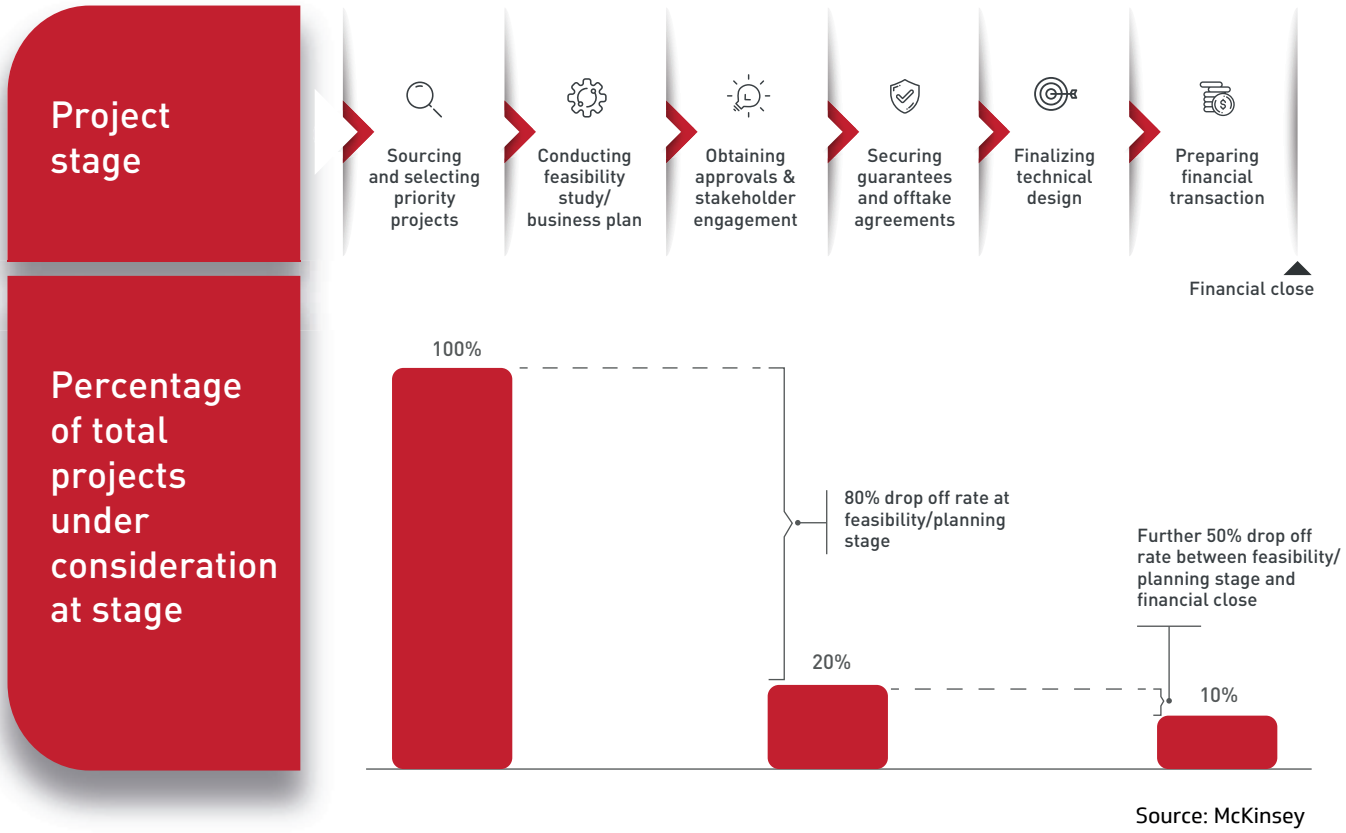
As this report makes clear, investors are increasingly looking for safe long-term investments such as infrastructure, and Africa may be the region with the greatest needs and opportunities. In fact, in some sectors there are substantial funds chasing too few viable commercial projects, leading to what McKinsey calls the African infrastructure paradox.[42] While there is great need, sufficient funding, and a large pipeline of potential projects, not enough money is being spent on project preparation and development. To take advantage of this opportunity, it is critical to create the investment ready projects investors seek. There has been progress, but 80% of projects in Africa still fail in the development stage, and only 10% reach financial close (Figure 8).[43] With such negative prospects and global competition, investors will be tempted to look elsewhere.

Most of the solutions revolve around improving project development, which requires the engagement of all stakeholders, governments, financiers, developers, and DFIs. Countries that have improved their regulatory environments are attracting more private investment and speeding up project implementation, setting an example for others. This is challenging, but even small tweaks to regulations can make a big difference, as many countries have successfully demonstrated. Investors and DFIs should play their part. With the improvement of regulatory

[42] McKinsey, Solving Africa's infrastructure paradox, 2020
[43] McKinsey, Solving Africa's infrastructure paradox, 2020

frameworks, investors can take a longer-term view and be proactive, deploying more early-stage risk capital and other resources to implement projects. DFIs and MDBs can help by providing risk guarantees and advice on regulatory reform, as well as concessional loans and blended finance in the more challenging sectors.

Figure 8: Moving infrastructure projects to financial close in Africa: 80% of infrastructure projects stop at the feasibility and business-plan stage (source: McKinsey, 2020)



Source: McKinsey

The key to increasing the number of bankable deals is project preparation. This includes feasibility studies, developing procurement documents and concession agreements, sounding out stakeholders and end-users, economic, social, technical and environmental studies, commercial and financial documentation and negotiation, strategic sponsor selection, and structuring equity and debt financing.

There are different instruments that can be used. Joint development agreements (JDAs), for example, allow costs and project development activities to be shared between the partners, and govern how the investments are remunerated and construction equity subscription rights allocated. The overarching model for private sector involvement in infrastructure worldwide remains the Public Private Partnership. This is generally used for projects where a government wants to retain some ownership. However, since most infrastructure is for public use, there is a PPP element in almost every large-scale project. PPPs have several advantages for governments. They keep budget deficits down since private sector partners make most capital investments and payments can be spread out over the duration of the project. The quality of public services can also be improved through PPPs, since competitive tendering should find the most competent partners. Moreover, the private sector can provide experience and skills not available in the public sector.

However, for PPPs to be effective they must be negotiated transparently and structured well, so governments have an interest in building their capacity in this regard. One way is to create a dedicated PPP unit that has high-level support and brings together resources from key ministries such as finance, infrastructure, and legal affairs. According to the World Bank this is progressing well. 39 African countries now have put in place PPP laws and 42 also have a PPP Unit.

A game changer will be when enough public and private sector stakeholders realize that the opportunity and financial costs of delayed project implementation are too high. It is in everyone's interest to bring projects to financial close and operation as quickly as possible, while safeguarding country and consumer interests. Citizens get services, investors get a fair return, and governments can leverage their success to attract additional investments.

There are a number of useful principles for project preparation, some of which are highlighted below.[44]

- The Project Rationale establishes the need for the project within an overall strategic infrastructure context and outlines the project scope and objectives.
- The Options Appraisal demonstrates that all relevant options have been considered and involve relevant stakeholders, and that cost-benefit analysis and other studies have been have been conducted to determine the best value for money over the lifecycle of the project.
- Showing Commercial Viability demonstrates that the project is feasible for all stakeholders, with a reliable supplier and off-taker market, transparent procurement processes, and appropriate risk allocation.
- Long-term Affordability analysis confirms that the project is cost-effective over its lifespan, taking into account available public funding, unexpected contingencies, revenue streams, and debt sustainability, among other factors.
- Deliverability and Sustainability Analysis assures the successful delivery of the project and its efficient operations over its lifespan, with sufficient staffing, financing, monitoring, and ESG safeguards, as well as a reasonable timeframe.

[44] G20, Principles for the Infrastructure Project Preparation Phase

BEST PRACTICES AND RECOMMENDATIONS

PART 4. BEST PRACTICES AND RECOMMENDATIONS

There are many ways to improve and speed up infrastructure development in Africa. Some depend on government action, but DFIs, MDBs, and developers also play important roles. The following is a compendium of recommendations as discussed in this report and in its cited sources.

Government

- Make infrastructure a national priority with high level support that transcends changes in government and integrates infrastructure funding into annual budgets backed by law, in a sustainable way.
- Formulate and consistently implement national infrastructure master plans and use them as the basis for specific sectoral plans.
- Develop project pipelines transparently and in sufficient detail to attract investors.
- Train staff in the relevant ministries and entities involved in infrastructure development in international best practices for negotiating, administering, and running infrastructure projects, including off-takers and public service providers.
- Put in place the enabling environments through appropriate reforms when necessary, to attract local and international investors, eliminating unnecessary regulations and administrative hurdles.
- Allocate risks to those best able to handle them, including counterparty risks with government entities.
- Provide prefeasibility and feasibility studies, data on the state of assets, and expected outcomes, working with DFIs and project preparation facilities as necessary.
- Assure that project procurement is transparent and consistent, with efficient bid processes and reasonable lead times.
- In addition, many governments with successful PPP programs have created a dedicated PPP unit (either as a separate entity, or within an existing department) tasked with implementing, facilitating, or advising on PPPs. The unit also acts as a knowledge center and coordinates collaboration with the private sector and all other public entities involved in a transaction, to facilitate speedy project delivery.

MDBs and DFIs

- Scale up project preparation facilities and set up co-investment platforms.
- Develop and publicize risk mitigation instruments.
- Encourage governance and regulatory reforms.
- Support domestic capital market development.
- Increase syndication of loans to help raise private sector capital while reducing balance sheet exposure for development banks.
- Provide greater financial additionality, especially in low income countries and in difficult sectors, including through concessional finance and grants.
- Leverage the expertise on financial structuring and risk management of private financial institutions such as global investment banks and major institutional investors.

Developers

- Learn about the country environment and use local advisors and DFI expertise as appropriate.
- Be more rigorous in selecting viable projects.
- Invest more capital upfront to ensure that projects are feasible and well prepared from the earliest stages.
- Examine the risk profiles of potential clients and identify financial partners that can support them with risk mitigation.
- Leverage capital from DFIs in countries or sectors with higher risk profiles.
- Formulate reasonable timelines.

In addition, below are some key recommendations[45] that can serve as further guidelines for infrastructure stakeholders:

Scale up project preparation facilities

Most global investors face challenges finding reliable information on investment opportunities in Africa, which increases the perceived risk of African markets. Another key challenge is related to the low capacity of governments to develop and execute infrastructure projects, which hinders them from offering bankable projects with appropriate risk-adjusted returns to investors. It is estimated that a high proportion of high risk capital (about 10% of total investment) is required for project preparation on the continent. MDBs are better-placed and should leverage their resources to mobilize the required high-risk capital to support project preparation and create a pipeline of bankable projects in collaboration with government, private sector, and other financial institutions. To maximize efforts to create a pipeline of bankable projects, MDBs should launch multiple programs that focus on identifying and developing projects, in engagement with governments, lenders, and private sector actors. Given the higher risk in the project preparation stage, MDBs should evaluate the performance of their existing project preparation facilities and develop a clear strategy to scale them up. In addition, as an integrated approach, MDBs should consider creating technical expertise teams along with the regional member countries \ to strengthen technical capacity at the national level.

Raising economic efficiency in view of lifecycle cost

Infrastructure investment should ensure value for money balanced with economic, environmental and social benefits. This includes choosing between upgrading existing assets or launching new projects. Construction, operations and maintenance (O&M) costs should be estimated from the outset and safeguards put in place to address cost overruns or delays. Risks should be minimized through broad stakeholder engagement, careful planning, fair risk allocation, and use of mitigation instruments. Innovative technologies should be leveraged to raise economic efficiency and monitor infrastructure use, performance, and safety.

[45] OECD, Compendium of Policy Good Practices for Quality Infrastructure Investment, 2020

Integrating environmental considerations in infrastructure investments
The impact of infrastructure projects on the environment and use of resources should be transparently incorporated into the whole project lifecycle. Projects should align with national strategies and nationally determined climate contributions, while being mindful of country circumstances.

Building resilience against natural disasters and other risks
A comprehensive disaster risk management plan should influence the design of infrastructure and its maintenance, with appropriate disaster risk finance and insurance mechanisms.

Integrating social considerations
Economic and social impacts should be prioritized and managed systematically throughout the project lifecycle via consultations and inclusive decision-making. All workers, social, and ethnic groups should have equal opportunity to access the jobs created by infrastructure, and to be compensated and treated fairly. Safe and healthy occupational conditions should be put in place at the infrastructure site and in surrounding communities.

Strengthening infrastructure governance
Sound infrastructure governance over the lifecycle of a project can ensure long-term cost effectiveness, accountability, and transparency. This requires clear, consistent regulations, robust institutions, effective intra governmental coordination, and transparent procurement processes. Consultations should involve the complete range of stakeholders, and decision-making should be transparent and based on adequate data.

CASE STUDIES

PART 5. CASE STUDIES

BENBAN SOLAR PARK - EGYPT

A 37-square-kilometer solar park so large that it can be seen from space, with over seven million photovoltaic panels, and funding of US$4 billion. In Africa. It may sound improbable. Yet 30 international infrastructure developers believed in it, and invested in Egypt's massive Benban Solar Park, which generates 1.5 GW, enough to provide renewable energy to more than 1 million homes and avoid 2 million tons of CO_2 emissions that would have been produced by thermal plants. Africa50 was among them, joining Norfund and Scatec Solar to finance the construction, through equity funding, of six of the 32 utility scale solar power plants (totaling 400 MW) in the complex. Senior debt was provided by the European Bank for Reconstruction and Development, the Netherlands Development Finance Company, the Green Climate Fund, the Islamic Development Bank and the Islamic Corporation for the Development of the Private Sector. Moreover, the consortium is pioneering new technologies such as bifacial solar modules, capturing the sun from both sides to increase generation. The plants are supported by 25-year power purchase agreements with the Egyptian Electricity Transmission Company under Egypt's Feed-in Tariff program, backstopped by a sovereign guarantee.

Benban is a demonstration of a fundamental change in the way African countries can provide power for their people. For decades, the Egyptian government had built and operated most power plants and was spending more on electricity subsidies than it was on education, healthcare, and social welfare combined. Benban proves that, with the right regulatory regime and cost structure, the private sector, supported by institutions and regional partners, can make solar power attractive.

"Benban is a good example of how we use early-stage project development expertise and financing to rapidly bring a project to financial close and then injected equity to encourage broader financing,including senior debt. We were able to help accelerate the process by acting as a bridge between the private sector partners and the national authorities," said Alain Ebobisse, Africa50 CEO. "It was the first time that our project development arm, Africa50-Project Development, had successfully exited one of its projects through a sale to our equity arm, Africa50-Project Finance, a model that we have since replicated several times".

In 2018, Africa50 acquired half of the Government of Cameroon's equity stake in the Nachtigal hydropower project in Cameroon. The project entails the construction and operation of a 420 MW hydropower plant on the Sanaga river near Nachtigal Falls, 65 kilometers from Yaoundé as well as a 50 kilometer transmission line.

NACHTIGAL HYDROPOWER PLANT - CAMEROON

The project is owned by NHPC (Nachtigal Hydro Power Company), comprised of EDF, IFC and the Republic of Cameroon, Africa50 and STOA. It will be operated under a 35-year concession, and the total cost of the project is estimated at US$1.2 billion. Debt funding was secured from a consortium of eleven development finance institutions coordinated by IFC, and four local commercial banks coordinated by Morocco's Attijariwafa Bank.

With an impressive 15 lenders committing debt, Nachtigal is a landmark Public Private Partnership in Africa s hydropower sector. The socio-economic impact will be significant, including job creation and sustainable economic growth. It will create up to 1,500 direct jobs during construction (55% locally sourced), and many permanent jobs upon completion. The plant is a national priority for Cameroon and it is expected to increase the country's generation capacity by more than 25%, improving access to electricity for consumers. The lower prices from hydropower are expected to improve the long term financial sustainability of the sector, making electricity more affordable. The power plant is expected to help raise the share of renewables to 75% by 2022 and avoid one million tons of CO_2 per year. As the largest privately funded hydropower plant in Africa, it will have a strong demonstration effect, paving the way for similar projects in the future.

SENEGAMBIA BRIDGE - GAMBIA, SENEGAL

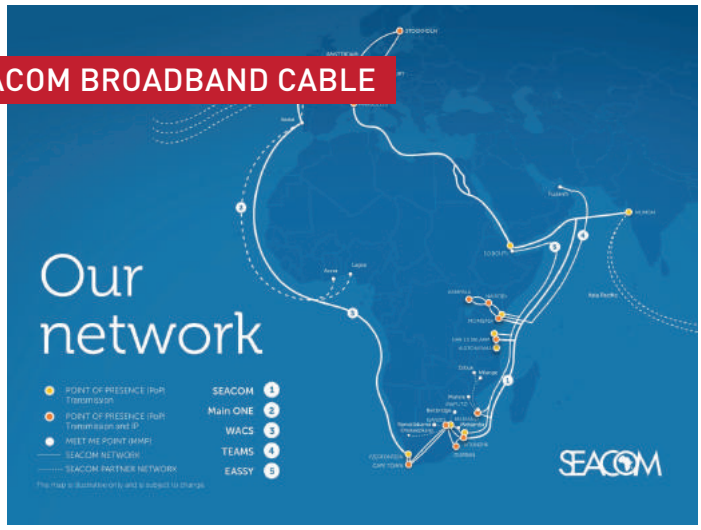
The Senegambia bridge, also known as the Trans Gambia Bridge, is a bridge in Gambia that carries the Trans Gambia Highway connecting northern and southern Gambia and providing access to Senegal's isolated Casamance province.

Construction began in 2015, led by the Spanish company Isolux Corsán and the Senegalese Arezki Group. Made of reinforced concrete, the bridge opened to light vehicles in January 2019.

The construction of the bridge (942 m long), along with two border posts, completes the first phase of the road project, at a cost of US$93.7 million. The project is almost entirely financed by the African Development Bank Group through a grant of US$88.4 million to Gambia, and a US$4.4 million loan to the Government of Senegal. The Gambia Ferries Service and the National Roads Authority jointly share the revenues from the tolls.

The Senegambia bridge forms part of the Trans West African Coastal Highway. It should improve economic cooperation between Gambia and Senegal and facilitate trade in minerals, fuels and foodstuffs. It has already cut journey times from Dakar to Ziguinchor from one day to five hours, and cut passenger and freight transport costs by more than 50%, according to the AfDB. Moreover, it has the potential to transform trade in West Africa by improving the road corridors connecting Mauritania with Senegal and Nigeria.

SEACOM BROADBAND CABLE



SEACOM, a private company that is about 75% African owned, launched Africa's first broadband submarine cable system along the continent's Eastern and Southern coasts in 2009. Initial private investment was US$375 million, with US$75 million from the developers, US$150 million from private South African investors, and US$75 million through a commercial loan from Nedbank (South Africa). The remaining US$75 million was provided by Industrial Promotion Services (IPS), an arm of the Aga Khan Fund for Economic Development, with US$15 million in equity, and US$60 million in debt from the Emerging Africa Infrastructure Fund and FMO. The current ownership structure is 30% IPS, 30% Remgro, 15% Sanlam, 15% Convergence Partners, and 10% Brian Herlihy, the developer of the project and founder of the Black Rhino investment group.[46]

The cable project, which is valued at over US$600 million, has seen a number of upgrades to landing station infrastructure, national backhaul, and carrying capacity, with an increase to 12 terabits per second in 2014. Landing points are in France, Djibouti, Kenya, Tanzania, Mozambique, South Africa, and India, covering 17,000 kilometers. SEACOM is in the process of further increasing its capacity as demand for broadband grows across Africa.

As a crucial link in Africa's growing ICT market, SEACOM has a tremendous development impact. It has helped usher in the data economy, increasing internet supply by 5000% in less than two years in the connected countries and acting as the catalyst for follow-on investment into national fiberoptic networks, fiber to the towers, and metro fiber rings. Spanning the territorial waters of twelve countries in less than 24 months, SEACOM is proof that major regional and privately-funded infrastructure projects are feasible in Africa and can significantly contribute to the continent's development.

[46] https://www.submarinenetworks.com/systems/asia-europe-africa/seacom

Glossary of Terms

AfCFTA:	African Continental Free Trade Area
AfDB:	African Development Bank
ASEAN:	Association of Southeast Asian Nations
AU:	African Union
COVID:	Corona Virus Disease
DFI:	Development Finance Institution
EMDEs:	Emerging Markets and Developing Economies
ESG:	Environmental and Social Governance
GCC:	Gulf Cooperation Council
GDP:	Gross Domestic Product
GW:	Gigawatt
ICT:	Information and Communications Technology
ICA:	Infrastructure Consortium for Africa
IFC:	International Finance Corporation
Kwh:	Kilowatt-hour
Mbps:	Megabits per second
MDBs:	Multilateral Development Banks
MSMEs:	Micro, small and medium enterprises
MW:	Megawatt
NGOs:	Non-governmental organizations
WSS:	Water supply and sanitation

Acknowledgements & Disclaimer

Africa50 would like to thank the team who prepared this report, including, from Casablanca Finance City: Manal Bernoussi, Director of Strategy, Partnerships & Communication; Mourad Fathallah, Head of Strategy; Ghita Bennani, Head of Communications; Anissa Peters, Events Coordinator; and from Africa50: Fleur Tchibota, Director of Communications; Nana Boakye-Yiadom, Senior Communications Coordinator and Oliver Griffith, Communications Consultant; and wishes to thank Tshepidi Moremong, Chief Operating Officer and Opuiyo Oforiokuma, Senior Director, Strategy and Investor Relations, for the valuable insights they provided to the team.

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