



# Large Infrastructure

## Ambitions and financing needs

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Major infrastructure projects are expensive and often unaffordable for Africa's many low-income countries. Even upper-middle-income and high-income countries can rarely pay for an infrastructure project directly from an annual budget and often face high debt-to-GDP ratios, which make lending for such projects unaffordable and unwise.[1] The estimated infrastructure financing gap of US\$68 billion to US\$108 billion per year for the continent cannot be solved by governments alone. However, a key problem with funding projects via private capital is finding bankable (commercially viable) projects in an environment where perceived risk requires large returns on investment.[2]

Analysts estimate that several hundred billion dollars worth of financing is available through institutional investors, such as major pension funds, investment corporations and government agencies seeking better returns in the context of historically low interest rates in the developed world.[3] Also, Africa is not short of ambition for infrastructure. There are up to US\$2.5 trillion worth of infrastructure projects in the pipeline by 2025, but a large number of these projects are likely to fail: 50% of them are in the feasibility phase and only 10% of projects at this phase ever make it to financial close. Half of these projects are found in only six African countries, with 17% in Nigeria alone,[4] suggesting that while some countries are pulling ahead, others are falling behind.

AUDA-NEPAD emphasises the importance of corridor-type infrastructure projects in Africa, which are often multi-country projects (such as the Lamu Port South Sudan–Ethiopia Transport Corridor) that incorporate road, rail and ICT links to facilitate regional integration. Such an approach brings hope of fewer non-tariff barriers to trade, greater economic linkages between African nations and integrated approaches to cross-border issues such as water management.[5]

PIDA is spearheading this regional integration through its Priority Action Plans (PAP), which are a kind of infrastructure master plan for Africa. Although it regurgitates many previous ambitions, some of which date from colonial times, it has seen some implementation.[6]

The concept note for a recent (November 2018) PIDA-PAP workshop at Victoria Falls revealed that the capital cost of delivering the plan was estimated at US\$68 billion, requiring the expenditure of US\$7.5 billion annually.[7] This was a relatively modest ambition compared with the infrastructure funding gap calculated by the AfDB. Of the more than 400 projects, the conference heard, 26% were moving from concept to pre-feasibility or feasibility phases; 16% were being structured for tendering; and 32% were either under construction or already operational, reflecting steady progress.

A map of PIDA projects across the continent (Chart 13) shows the prioritisation of regional integration in infrastructure development, as corridor projects criss-cross the continent, and port and border investments dot the perimeters.

Chart 13: PIDA projects across Africa

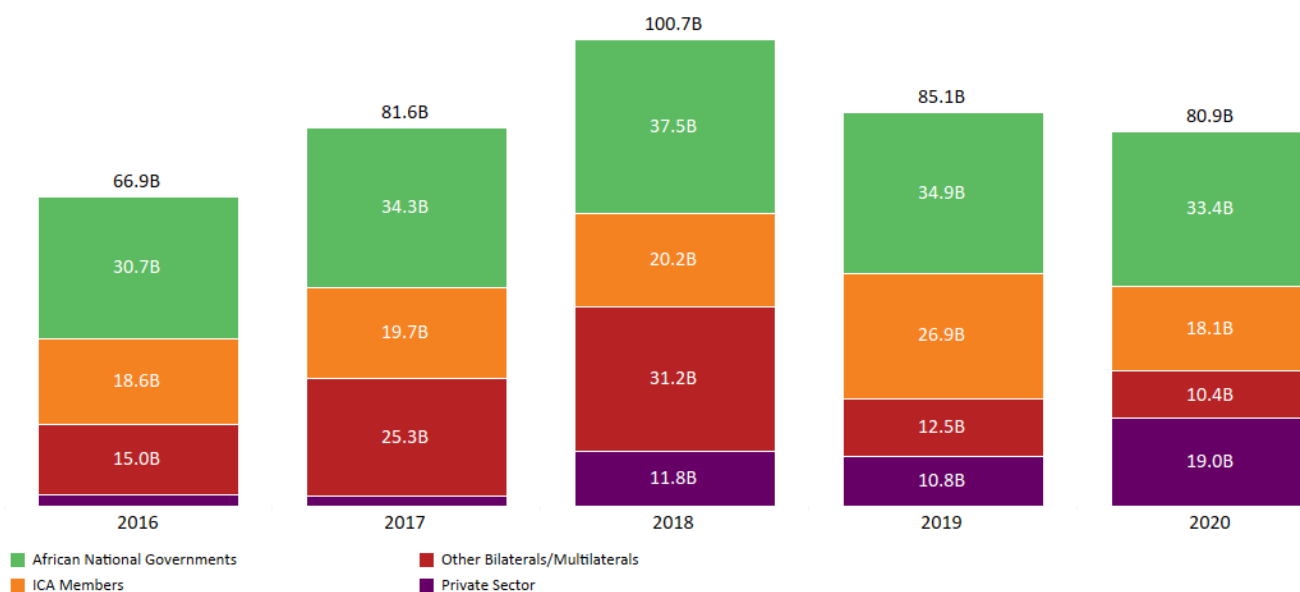


PIDA currently oversees and facilitates 409 projects across the continent, with the following major focuses:

- Transport sector: 237 projects related to airports, seaports, border posts, rail and road infrastructure.[8]
- ICT: 114 projects, of which most (71) relate to cross-country and cross-border fibre optic links.
- Energy: 54 projects, including some (but very few) focused on renewable energy generation,[9] the rest relate to cross-border power connections and gas or petroleum pipelines.
- Water management: nine projects, including reservoirs and regional river basin and aquifer management programmes, particularly in the Sahara in North Africa and the Kalahari Desert in the south.

Chart 14 shows the relative contribution to infrastructure finance in Africa from 2016 to 2020, and the extent to which the COVID-19 pandemic has negatively impacted Africa's infrastructure investment inflows, affecting the progress in reducing the annual financing gap for infrastructure. The average 2019-2020 funding of US\$83 billion was below the 2017-2018 average of US\$91.2 billion, and significantly lower than the US\$100.8 billion in 2018.

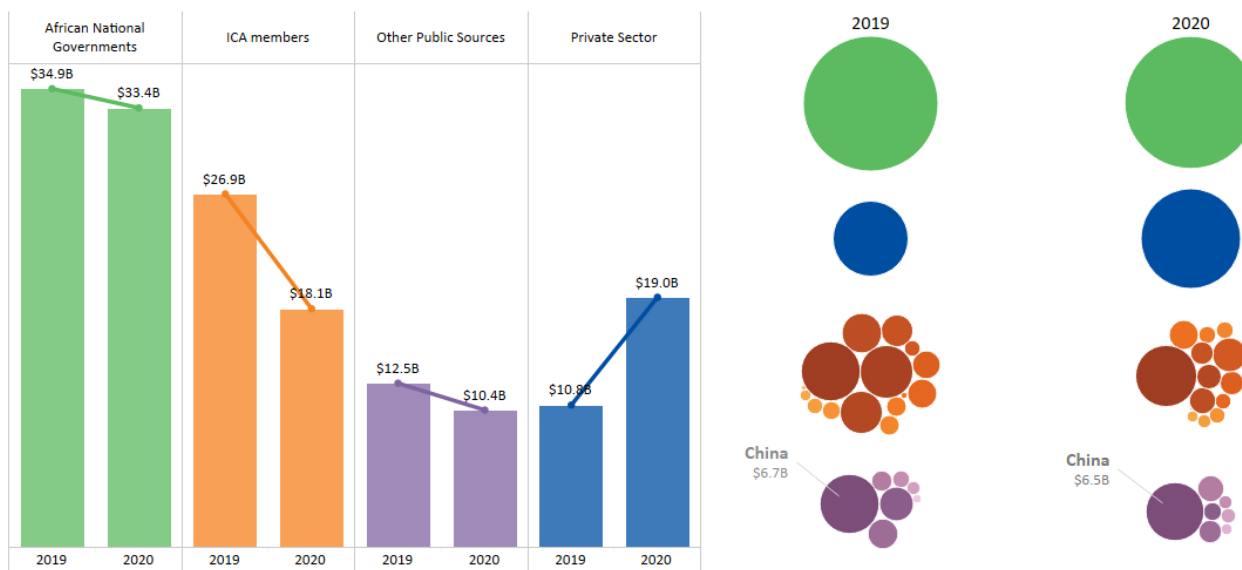
Chart 14: Contributions to infrastructure finance in Africa, 2016–2020



Source: AfDB, Infrastructure Financing Trends in Africa 2019-2020, December 2022

Total commitments in 2020 were 10% lower than in 2019, largely because of the impact of the COVID-19 pandemic. The financing gap increased from a range of US\$53 billion to US\$93 billion to a range of US\$59 billion to US\$96 billion in 2020. This was primarily due to the shift in resources to the needs of the pandemic, setting back the target for the achievement of basic public infrastructure for the continent as a result.[10]

Chart 15: Contribution to infrastructure finance in Africa by source (US\$ billion), 2019-2020

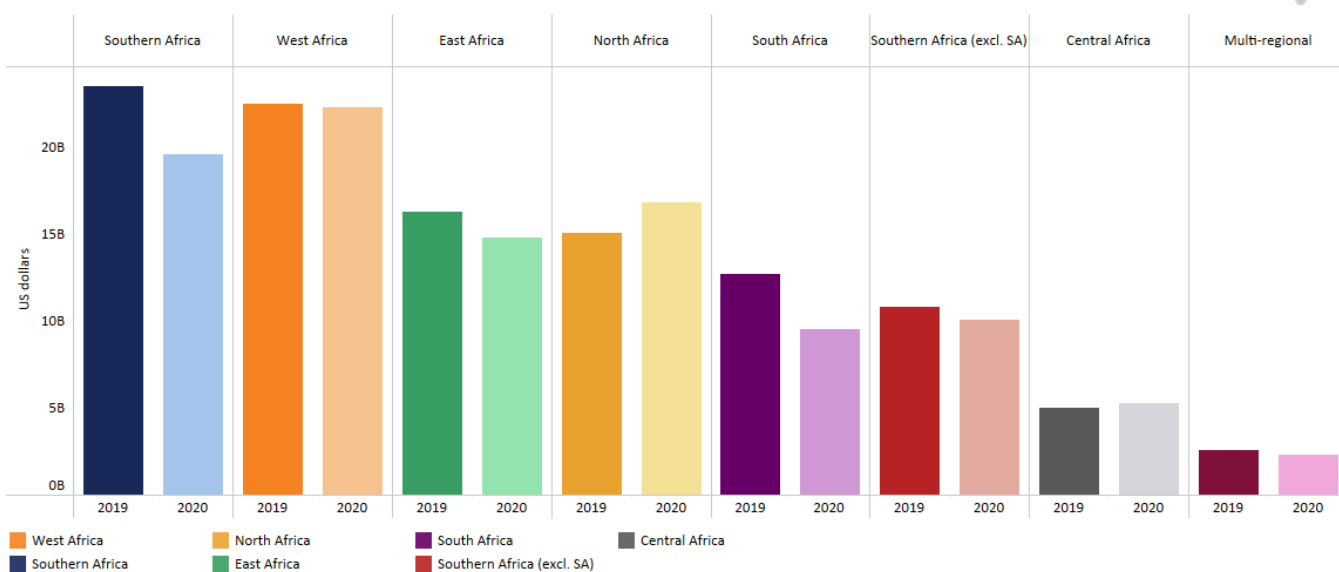


Source: AfDB, Infrastructure Financing Trends in Africa 2019-2020, December 2022

African governments continue to provide the lion's share of funds, with donors from the Infrastructure Consortium for Africa (ICA) and China as the next two biggest sources of finance. Several bilateral and multilateral organisations became ICA members in 2019, which resulted in a significant increase in the commitment level for that group in that year. China's contribution decreased significantly from US\$25.7 billion in 2018 to US\$6.7 billion in 2019 and further to US\$6.5 billion in

2020. This reduction reflects the decision by China's government to reduce their investments in Africa because of concerns about the external debt position of African countries. There was a sizeable resurgence in private sector investment in 2020—contributing about 23.5%, an increase from 12.7% in 2019.

Chart 16: Infrastructure finance in Africa by destination (US\$ billion), 2019-2020



Source: AfDB, Infrastructure Financing Trends in Africa 2019-2020, December 2022

The share of infrastructure financing allocated to transport has increased over the past few years, from 32% (US\$33.8 billion) of the total infrastructure financing in 2018 to 42% (US\$34.4 billion) in 2020. It is the only sector with an increase in 2020 and reflects a recognition of the contribution that improved connectivity makes to productivity, especially the interest in improvements in intra-continental trade.[11] It also reflects the relative maturity of the transport sector in Africa and the relative success in capacity building in the transport sector.

Given Africa's rising debt levels (also see Current Path ), together with China's declining appetite for additional loans, it is likely that government financing (using taxpayers' money) for infrastructure will necessarily expand, particularly for projects that have a larger economic than social role.

Public-private partnerships will likely also become more common in the future, with a country granting concessions to a company using a build-operate-transfer (BOT) model. Public-private partnership projects are relatively new in Africa but could allow access to more private sector finance, based on a 'user pays' principle. A port, for example, is funded by charging berthing and storage fees and a road can be funded by charging toll fees (although larger toll roads are currently limited to South Africa, Morocco and Senegal). However, the challenge is to prevent the usage fee from prohibiting access to poor people and the wisdom of embarking on large projects that have little chance of becoming commercially viable or that require considerable profits to be guaranteed to attract investment has been questioned.

Some projects serve as examples of these concerns:

- The Chinese-held loans for the US\$3.6 billion Mombasa-Nairobi Standard Gauge Railway, originally intended to run from Mombasa to Nairobi and then on to Naivasha and Kampala, were granted at commercial rather than concessional rates (in 2014). Secrecy surrounded the associated agreements. The project has put Kenya massively in debt to China and construction was halted at Naivasha, despite repeated pleas for better terms and the continuation of the project. Much of the construction was also undertaken by Chinese (not African) contractors.

- The Nairobi Expressway is a six-lane 27 km highway that cuts through the heart of Kenya's notoriously congested capital city.[12] The expressway connects Jomo Kenyatta International Airport in the east of the city to the Nairobi-Nakuru highway in the west. Although a substantial portion of the work was undertaken by local companies using local labour, some of the associated arrangements have raised eyebrows. The project grants the China Road and Bridge Corporation, which is building and will operate the highway in a 27-year concession, a guaranteed US\$988 million in profit by charging toll fees (US\$2-US\$3 per vehicle), implying that many poor Kenyans will be precluded from usage.

## Endnotes

1. K Lakmeharan, Q Manji, R Nyairo and H Poeltner, *Solving Africa's infrastructure paradox*, McKinsey & Company, 6 March 2020.
2. K Lakmeharan, Q Manji, R Nyairo and H Poeltner, *Solving Africa's infrastructure paradox*, McKinsey & Company, 6 March 2020; *The Economist*, *Is an infrastructure boom in the works?*, 2 January 2021.
3. See: I Mayaki, *Why proper structure of major infrastructure projects in Africa is priority*, AUDA-NEPAD, 24 January 2020; *The Economist*, *Is an infrastructure boom in the works?*, 2 January 2021; K Lakmeharan, Q Manji, R Nyairo and H Poeltner, *Solving Africa's infrastructure paradox*, McKinsey & Company, 6 March 2020.
4. K Lakmeharan, Q Manji, R Nyairo and H Poeltner, *Solving Africa's infrastructure paradox*, McKinsey & Company, 6 March 2020.
5. I Mayaki and B Markussen, *CBN Virtual Breakfast*, a panel discussion as part of the '6th PIDA Week' virtual event, 2021.
6. African Union, *PIDA Implementation through good governance – Realizing smart infrastructure for Africa's integration*, 26–28 November 2018.
7. Concept note for the Second Ordinary Session of the African Union Specialized Committee on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism, Cairo, Egypt, 14–18 April 2019.
8. Airports: 13; border post upgrades: 38; bridges: 5; port-related projects: 45; rail lines: 23; road projects: 113.
9. Although eight of these projects are major hydroelectric dams, PIDA does not oversee any solar, wind or other renewable energy projects.
10. African Development Bank, *Infrastructure Financing Trends in Africa 2019–2020*, December 2022.
11. African Development Bank, *Infrastructure Financing Trends in Africa 2019–2020*, December 2022.
12. I Einashe, *Letter from Africa: How the Nairobi Expressway is changing Kenya's capital*, *BBC*, 13 February 2021; see also: I Einashe, *The future of Chinese-financed infrastructure in Kenya*, *China in Africa* podcast, The China Global South Project, 17 February 2021.

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## About the authors

Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

Dr Blessing Chipanda joined the African Futures and Innovation (AFI) programme in January 2023. Before joining the ISS he worked as an assistant lecturer/research assistant at the University of Pretoria, Department of Economics. He is particularly interested in tasks within the wider realm of international trade, development economics, public policy, monetary policy, and econometric modelling. Equally interested in economic and socio-economic activities that impact social welfare. Blessing has a PhD in economics from the University of Pretoria, South Africa.

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