



# Large Infrastructure

## Conclusion

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## Conclusion

Infrastructure is far more than a physical asset; it is a catalyst for structural transformation. Well-targeted investments in transport, energy and digital systems can accelerate industrialisation, deepen regional trade and integrate African economies into global value chains. Under the Large Infrastructure and Leapfrogging scenario, these investments could increase Africa's GDP per capita by approximately US\$510 by 2050 and expand total trade volume by US\$478 billion above the Current Path forecast. By lowering transport and logistics costs, providing reliable electricity and expanding digital networks, infrastructure creates the conditions for higher productivity, employment growth and diversification into higher-value economic activities.

The social and employment impacts would be significant. Expanding services and ICT sectors can absorb millions of workers, while productivity gains in agriculture and manufacturing allow labour to shift toward higher-value activities. These dynamics would reinforce structural transformation and lift millions out of extreme poverty. In 2050, Africa could see a reduction of 63 million people living below the US\$2.15 per day poverty line compared with the Current Path. Gains will be especially pronounced in low- and lower-middle-income countries, demonstrating that strategic infrastructure investment can narrow development gaps and enhance inclusivity.

These findings are consistent with international research. A systematic review of 110 studies conducted by the OECD finds that, in aggregate, infrastructure investments in Africa have had strong positive effects on human development outcomes, poverty reduction, and access to and quality of employment. For example, every US dollar invested in climate-resilient water and sanitation infrastructure yields at least US\$7 in socio-economic returns through improvements in health and education, strengthened food security and accelerated progress toward the Sustainable Development Goals. Furthermore, evidence from 29 African countries indicates that unreliable energy access, affecting 68% of manufacturing firms, significantly reduces employment in non-agricultural and skilled occupations.

Yet, Africa's infrastructure landscape still reflects its colonial past, with networks designed to extract resources rather than link domestic markets, connect rural producers to cities or integrate neighbouring economies. Decades of underinvestment and weak maintenance have compounded these distortions, leaving significant gaps in transport, energy, water and digital systems. These deficits constrain human development, industrialisation and regional integration.

Although infrastructure investment by national governments and supported by external partners, including China and multilateral institutions, has steadily increased in recent years, growth in investment has not kept pace with rapid population expansion, urbanisation and economic ambitions. As Africa will approach a population exceeding 2.5 billion by 2050, infrastructure will determine whether demographic growth becomes a driver of prosperity or a drag on development. The continent has built extensive project pipelines and articulated ambitious regional frameworks, aligned with the African Continental Free Trade Area (AfCFTA). The core challenge now is execution: converting projects from concept to financial close and delivering functioning systems that raise productivity and improve living standards.

Addressing Africa's infrastructure deficit to realise this potential will require a coordinated shift from fragmented, short-term project implementation toward integrated, long-term infrastructure systems that directly support economic transformation. Infrastructure investment should be strategically prioritised to maximise regional connectivity, productivity gains and industrial development. Aligning national infrastructure plans with continental frameworks such as the Programme for Infrastructure Development in Africa can help ensure that projects strengthen cross-border trade corridors, energy pools and digital networks while supporting regional value chains.

Financing reform will be equally critical. Africa's infrastructure gap cannot be closed through public budgets, especially amid rising debt pressures. Governments should deepen domestic resource mobilisation, strengthen tax administration and develop local capital markets to channel pension and insurance funds into long-term infrastructure assets. Blended finance instruments, risk-mitigation facilities, and credible public-private partnership frameworks can crowd in private

capital where risks are well allocated. Innovative revenue tools—such as land-value capture around transport nodes, green bonds for climate-resilient infrastructure and regional infrastructure funds—can diversify funding sources while preserving fiscal sustainability. Transparent regulatory environments and predictable policy frameworks will be critical to enhancing investor confidence.

Strengthening governance and project preparation capacity will be equally important. Many infrastructure projects face delays or cost overruns due to weak feasibility assessments, procurement inefficiencies and limited contract management expertise. Establishing robust project preparation facilities, professionalised PPP units and independent regulatory oversight can improve bankability and accelerate implementation. Lifecycle costing and maintenance planning must be integrated at the design stage to preserve asset quality and ensure long-term returns on investment.

Regional integration should be treated as a central pillar of infrastructure strategy. Africa's fragmented transport, energy and logistics networks constrain trade and limit economies of scale. Coordinated cross-border infrastructure development, supported by regulatory harmonisation and institutional cooperation, can significantly reduce trade costs and enhance market access. Aligning infrastructure expansion with the goals of the AfCFTA will strengthen intra-African trade and deepen economic integration.

Finally, human capital development and institutional strengthening will underpin all reform efforts. Expanding technical and managerial skills in infrastructure planning, engineering, financial structuring and digital systems management will be essential for improving delivery outcomes. Governments should foster partnerships between public institutions, universities and the private sector to build a sustainable pipeline of expertise. Leveraging digital technologies, including geospatial planning tools and e-procurement systems, can further enhance transparency, efficiency and accountability.

Africa's current infrastructure reflects historical distortions, but its future can reflect deliberate strategic choice. The continent has demonstrated growing commitment and rising investment. The task ahead is to translate ambition into well-prepared, well-financed and well-governed projects that tangibly improve productivity, human welfare and economic resilience. With disciplined policy choices, sustained political commitment and strategic regional coordination, infrastructure can serve as the cornerstone of inclusive growth, economic diversification and poverty reduction, enabling Africa to harness its demographic dividend and secure long-term prosperity.

Chart 25 shows the strategic recommendations for closing Africa's infrastructure gap. Governments across the continent should focus on the following interventions:

**Prioritise infrastructure as a catalyst for transformation:**

- Recognise infrastructure as a central driver of economic transformation, boosting productivity, regional integration and inclusive growth.
- Target investments to support industrialisation, structural transformation and higher-value economic activities.
- Align national strategies with continental frameworks such as PIDA and AfCFTA to ensure coordinated regional development.
- Scale up investment in foundational and advanced infrastructure, including energy, transport, water and digital systems, to strengthen trade, industrialisation and connectivity.
- Expand electricity generation and distribution, with a focus on renewables, mini-grids, off-grid solutions and rural electrification to close urban-rural gaps.

- Modernise transport networks, roads, railways, ports and airports, to improve market access, reduce logistics costs, lower emissions and to support trade, tourism and business mobility.
- Accelerate digital infrastructure deployment, including fibre-optic networks, broadband, satellite and alternative connectivity technologies, to extend access to underserved areas.

**Promote regional integration and connectivity:**

- Develop integrated regional infrastructure corridors combining roads, rail, ports, energy systems and ICT to reduce trade costs and strengthen value chains.
- Harmonise cross-border regulations in transport, energy and aviation sectors.
- Expand regional energy pools and transmission networks to improve electricity reliability and efficiency.
- Support corridor-based development linking landlocked countries to ports and major markets.

**Strengthen financing and investment mechanisms:**

- Increase overall infrastructure spending to meet Africa's growing needs.
- Mobilise domestic resources via improved tax administration, fiscal reforms and institutional capital (pension funds, sovereign wealth funds, development banks).
- Leverage remittances, diaspora bonds, blended finance and PPP frameworks to attract private investment while ensuring transparency and fair risk allocation.
- Use innovative financial tools such as green bonds, regional infrastructure funds and land-value capture instruments.
- Improve debt management and fiscal transparency in infrastructure financing arrangements.

**Improve governance, project preparation and implementation:**

- Strengthen project preparation capacity, including feasibility studies, financial structuring and environmental assessments.
- Establish robust PPP units and project preparation facilities to improve bankability.
- Enhance procurement processes, contract management and lifecycle planning to reduce cost overruns and ensure long-term returns.
- Promote transparent and accountable regulatory frameworks to reduce corruption, political interference and investor risk.
- Integrate risk-mitigation instruments such as guarantees and insurance to crowd in private-sector participation.

**Develop human capital and institutional capacity:**

- Invest in technical and managerial skills for infrastructure planning, engineering, finance and digital management.
- Foster partnerships among governments, universities and the private sector to build sustainable expertise pipelines.

- Leverage digital tools (geospatial planning, e-procurement, monitoring platforms) to improve efficiency, transparency and delivery outcomes.

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Dr Kouassi Yeboua previously worked as a Senior Researcher at AFI, where he led significant ISS studies on the long-term development prospects of the Democratic Republic of Congo, the Horn of Africa, Nigeria, Malawi, and Mozambique. His research focuses on development economics, macroeconomics, gender, and economic modeling. He holds a PhD in Economics.

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