Gordon Institute of Business Science
Centre for African Management and Markets

DHL GIBS DEVELOPMENT SERIES:
DELIVERING DEVELOPMENT IN AFRICA
PAPER 3

NODES AND NETWORKS:

AFRICA’S CENTRES OF INVESTMENT GRAVITY AND THE TIES THAT BIND THEM

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Centre for African Management and Markets (CAMM)
CAMM at the Gordon Institute of Business Science (GIBS) conducts academic and practitioner research and provides strategic insight on African markets. Our purpose is captured in our mission of "Build. Connect. Do." We are proud to be one of the centres at the heart of GIBS, ranked as the African continent's leading business school. This embeddedness provides a credible and respected base, and a powerful network of researchers, practitioners, academics, and policy workers throughout the continent. Our footprint is driven by our conviction that Africa's innovation and competitiveness is intimately connected to traversing borders with Africa-wide trade, cross-border investment activity, and pan-African business initiatives.

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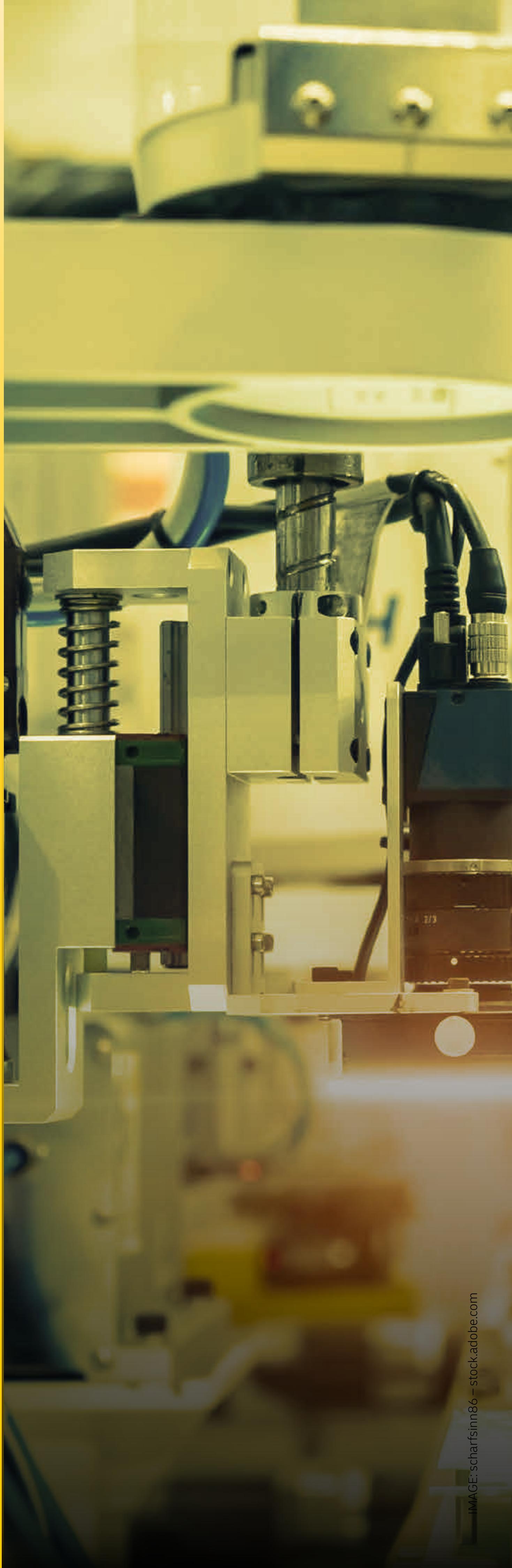


IMAGE: scharfsinn86 – stock.adobe.com

CONTENTS

FOREWORD

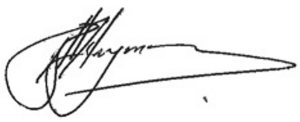
Just as the image begins to reveal itself as pieces are added to a puzzle, our series on development in Africa is telling a story. In Paper 1, the team addressed the difficult but vital matter of receding aid, concluding that the continent can turn this into an opportunity by harnessing investment.

We followed this up in Paper 2 with an analysis of the African nations that are succeeding at attracting and utilising foreign direct investment (FDI). This revealed a paradoxical landscape. Africa's share of global FDI inflows is growing. However, this is limited to a handful of countries. Egypt stands out as the top performer in recent times. Of the US$97bn of FDI that flowed into the continent in 2024, a total of US$47bn went to Egypt.

Moreover, US$35bn was consumed by a single project in that country, the Ras El Hekma development. This sprawling coastal megaproject, situated 350 km northwest of Cairo, has transformative potential. Set to include a financial hub, a global supply chain nexus, luxury tourism destinations and more, this project holds many lessons.

This leads us to the third paper in our series, where we apply a new lens. Rather than looking at the continent as a whole, or at the individual nation states, we look for specific hubs and networks of investment and growth. Some of these, such as Kenya's "Silicon Savannah", happen to be physically situated in a single country – although all of them are globally interconnected. Some are truly regional, spanning multiple countries. The aerial corridor we explore, for example, may have its physical home in Ethiopia. However, it is a truly dispersed corridor, where each spoke and node is as important as the next.

As with prior papers in this series, we conclude with guidance based on what we learned while researching and producing this paper. As a leader in connectivity across the continent, we view these learnings as opportunities to work with stakeholders from multiple sectors to make good on the continent's vast potential.



Hennie Heymans

CEO, DHL Express Sub-Saharan Africa

EXECUTIVE SUMMARY

This paper is the third instalment in our four-part development series. This collaborative effort between DHL Express Sub-Saharan Africa and the GIBS Centre for African Management and Markets (CAMM) comes at a critical time for the continent. Change is taking place at scale and speed. This undeniably generates challenges that should not be underplayed. However, it is critical that we pivot forward with vision and purpose, ensuring opportunities are found, created and taken.

In this third paper in our series, we look for opportunities in the form of investment hubs. Be they transport nerve centres, corridors of connectivity or resource deposits, we ask precisely why it is that investment is flowing to these places. And, just as importantly, how is this capital being used?

In distilling each answer, we draw out insights with general application – lessons in connectivity and growth, enabling current African investment hubs and giving rise to further successful African investment hubs.

INTRODUCTION

From the Olympic Games and legal tender to 5G spectrum and the Great Assembly Hall at the United Nations building in New York City, the nation state is an important unit of analysis. It has many qualities that lend itself as a model for enhanced productivity. It is often large enough to provide scale and coordination, yet, small enough for people to build a sense of unity, belonging, and ownership. Countries have had a decisive role in the tremendous rise in the living standards experienced over the last century. However, they share attribution with other ways in which societies and markets coalesce.

Super-national groupings, such as the G20 and BRICS, play an increasingly important role in fostering solidarity among nations agreeing to standardisation, and encouraging trade. We can also direct our attention more granularly to agglomerations. The old truism “dynamite comes in small packages” might apply in this case – and it frequently does. The impact of a port, for example, punches far above its weight. That is, its economic productivity far exceeds its square footage. This can also be said of tech hubs, resource deposits and airports.

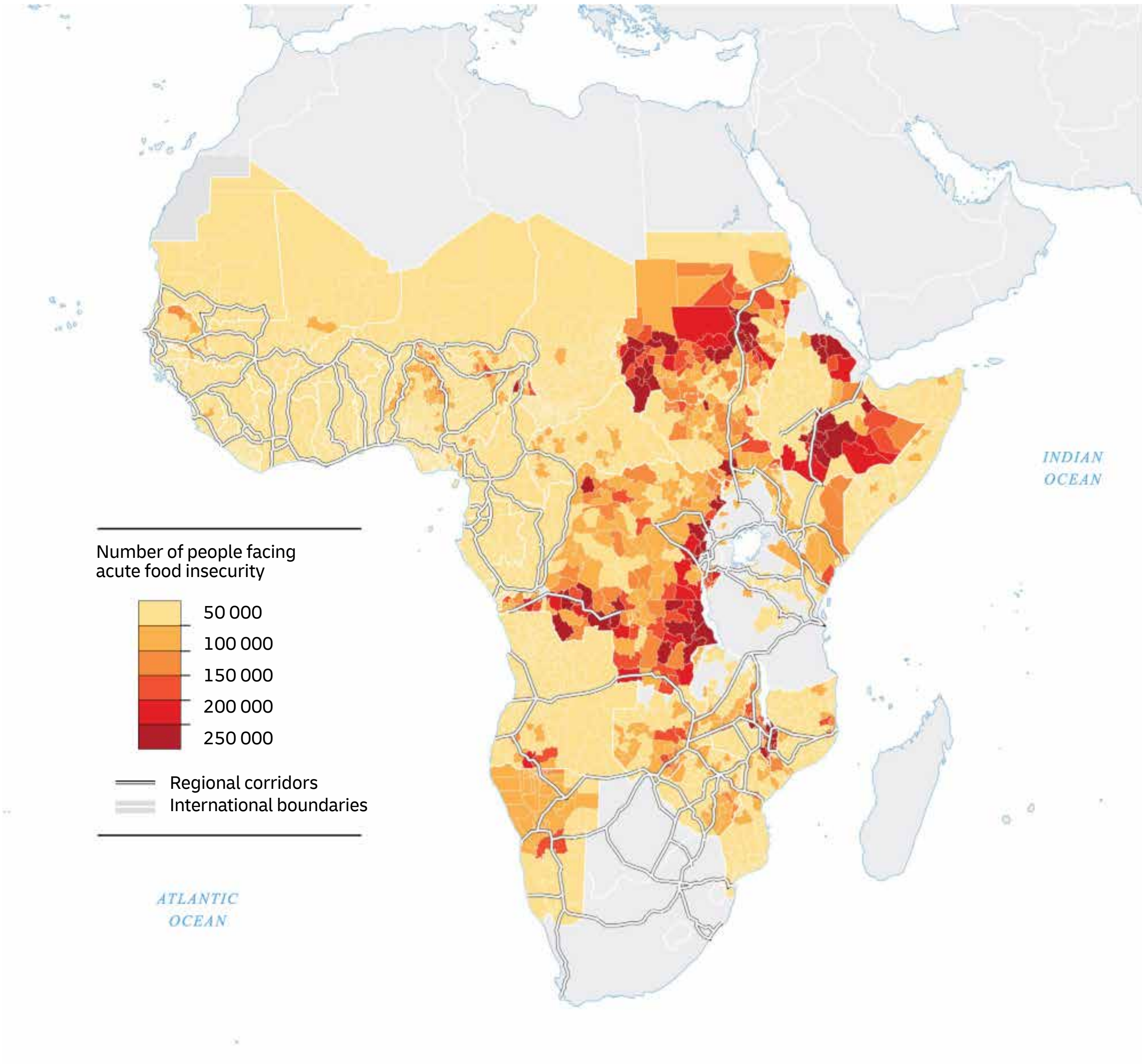
IMAGE: stock.adobe.com

Africa features a selection of these high-powered centres: Beacons on a vast continent that generate outsized output and returns. Sometimes, these centres exploit an element of geographic "luck". Mineral deposits and proximity, for example, offer a head-start, but neither of these features guarantees success. In fact, the so-called resource curse too often means resources paradoxically damage an economy, while some of these productivity champions thrive despite lacking any obvious "silver spoon".

Regardless of endowments, these centres that radiate prosperity hold lessons worth gathering and applying.

Just as important as the hubs are the connections between them. Or, as is frequently the case, the lack thereof. Comparing Africa's major corridors with zones of food insecurity highlights these challenges. Regional corridors do not correlate well with the needs of the most vulnerable people. As long as this disconnection persists, Africa will remain economically divided.

FIGURE 1
AFRICA'S REGIONAL CORRIDORS AND ACUTE FOOD INSECURITY



Source: Kunaka, Abata, Lonla, & Molla (2025). *Transport connectivity for food security in Africa: Strengthening supply chains. World Bank.*

Building investment and growth nodes presents great opportunity for the continent. Beginning with the sprawling shipping and manufacturing powerhouse that is Tanger, Morocco, on Africa's northern tip and traversing our way through the continent, we uncover these centres of economic gravity and tease out what makes them work. Success drivers for Africa's tech hubs differ from those behind a thriving mining centre. We also consider the connections between them. Aerial corridors, cold-chain systems and the like elevate and radiate the productivity that hubs generate.

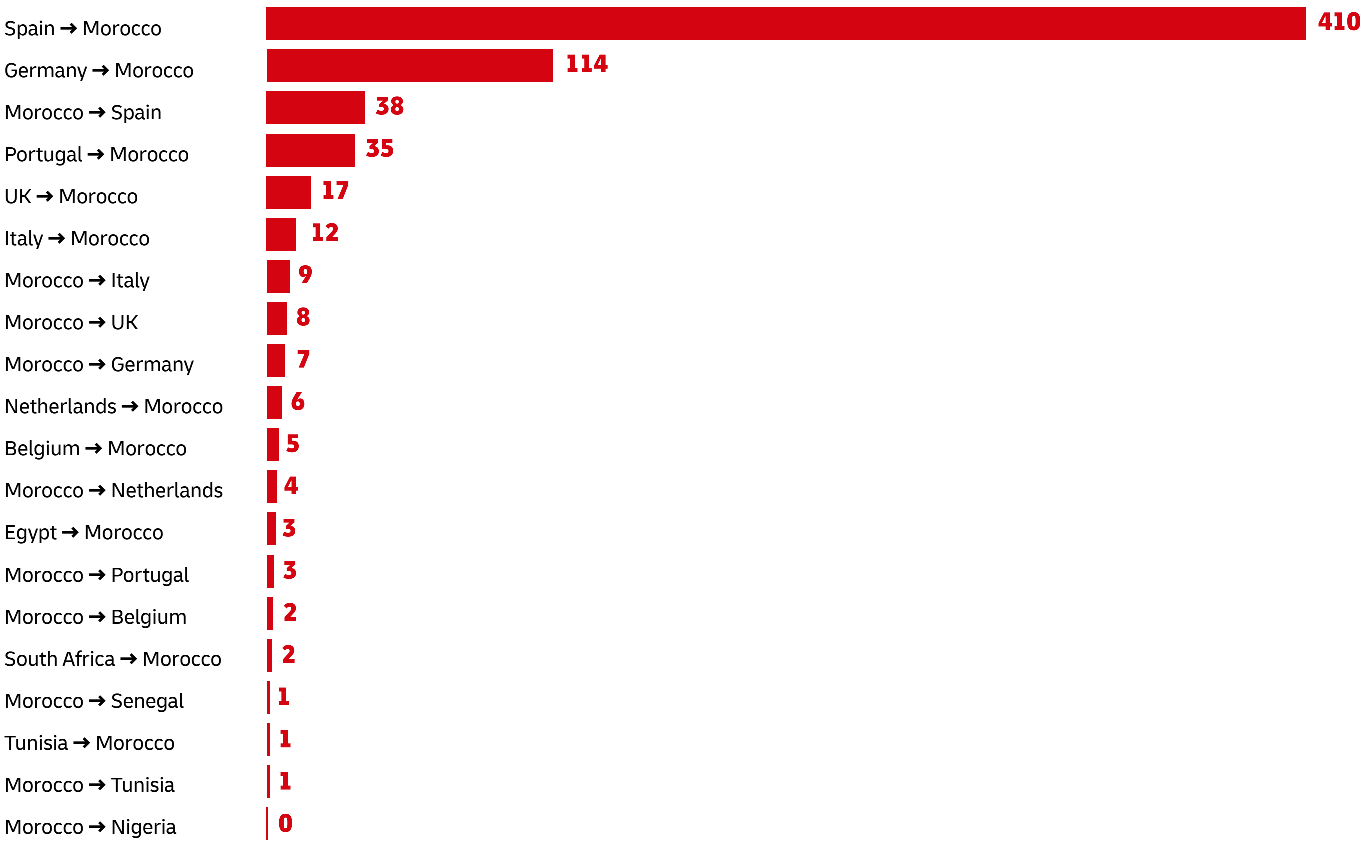
1.

TANGER MED: MOTORING MOROCCO FORWARD

On Morocco's northern shore, where the Mediterranean narrows to a mere 14 kilometres between Africa and Europe, stands the Tanger Med industrial and port complex. Some 45 km northeast of Tangier, it has become an emblem of how infrastructure and policy, properly combined, can transform an economy. Tanger Med has evolved into Africa's busiest container port and a world-class special economic zone (SEZ). Its success has shifted Morocco from a largely agricultural exporter to a hub for automotive, aerospace, and logistics, drawing investors from Europe, the Gulf, Asia, and beyond.

IMAGE: NAC, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

FIGURE 2
MOROCCO'S TOP TRADE ROUTES BY VALUE (US$ BILLION) (2023)



Source: UN Comtrade Database Data (2023)

BY THE NUMBERS

Planning began on this ambitious project in the early 2000s, with the vision of capitalising on the location – a strategic position at the crossroads of Europe, Africa and the Middle East. Planning, development and management fall under the Tanger Med Special Agency, a public institution formed by the Moroccan government in 2002. The agency thrives by using a top-down approach. "The public-private partnership has grown to encompass a port complex connected to more than 180 ports worldwide and an industrial platform spanning 20 square kilometres."[1]

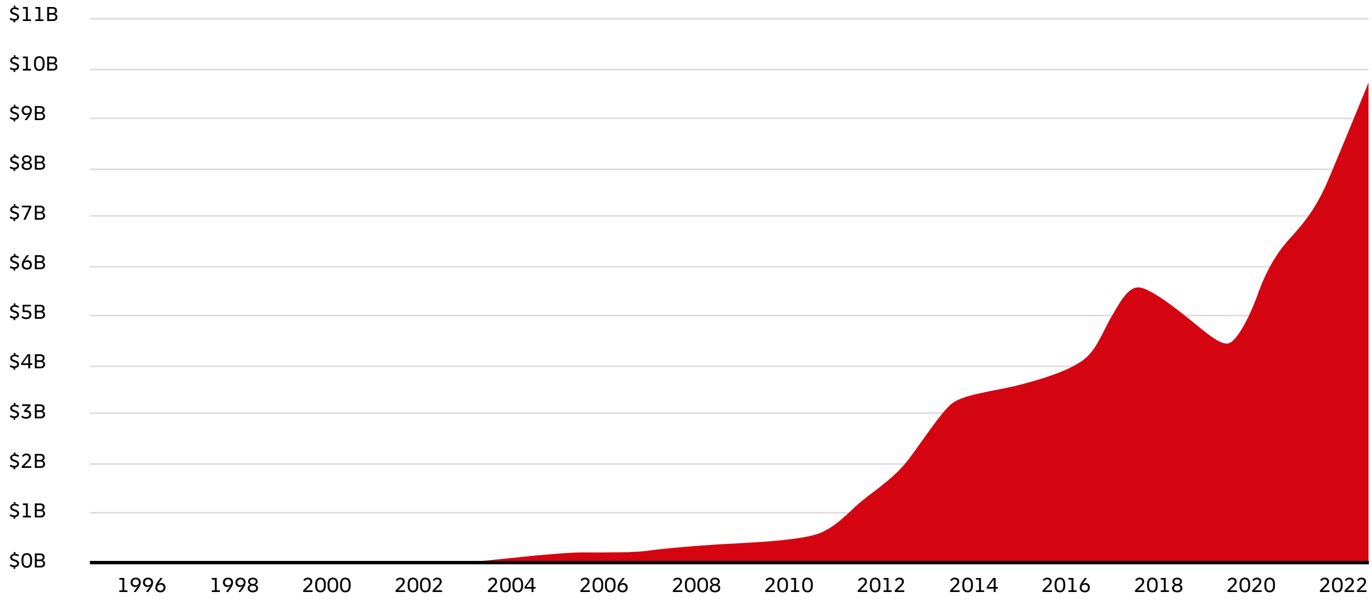
Having opened in 2007, Tanger Med has revolutionised not merely its locality, but Morocco's place in the world and Africa–Europe trade. Today, it encompasses three ports. The Tanger Med Port boasts two container terminals, a rail terminal, a hydrocarbon terminal, a general cargo terminal and a vehicle terminal. The Tanger Med Port Passengers division focuses on passengers, with eight berths for this purpose. The Tanger Med 2 Port adds a further two container terminals to the port's capacity.

The complex features nine distinct activity zones that span 3 000 hectares and host more than 1 400 companies.[2] These clusters are managed by a subsidiary of the umbrella agency, Tanger Med Zones, which is "responsible for the planning, development, and management" of a variety of activity zones, including the Tanger Free Zone, Tanger Automotive City, Renault Tanger Med, and Mohamed VI Tangier Tech City.[3]

In 2023, Tanger Med processed 8.61 million twenty-foot equivalents (TEUs),[4] a 13.4% increase on the previous year, nearly reaching its nominal current capacity of 9 million TEUs.[5] Its closest Mediterranean competitor, Spain's Algeciras, managed 4.73 million TEUs during that period.

[1] Tanger Med. (n.d.). Tanger Med's unique trajectory. fDi Intelligence.
[2] Tanger Med Zones. (n.d.). Investing in Tanger Med Zones: Top reasons why Tanger Med Zones are ideal for investments.
[3] Tanger Med Special Agency. (n.d.). Industrial clusters.
[4] A standard unit of measurement used in the shipping industry to quantify the cargo capacity of container ships and terminals. It represents the space occupied by a standard 20-foot shipping container.
[5] World Shipping Council. (n.d.). Top 50 container ports.

FIGURE 3
MOROCCO'S VEHICLE EXPORTS OVER TIME (US$ BILLION) (2023)



Source: Growth Lab at Harvard University. (2023). Atlas of Economic Complexity.

TURNING VISION INTO PROSPERITY

King Mohammed VI of Morocco is closely linked with the Tanger Med journey. The project was initiated in 2003 under his auspices. The Monarchy continues to champion infrastructure and connectivity. As one opinion writer puts it, "'Economy first' seems to be the guiding principle for King Mohammed VI as he cultivates an environment conducive to business and investment."[6]

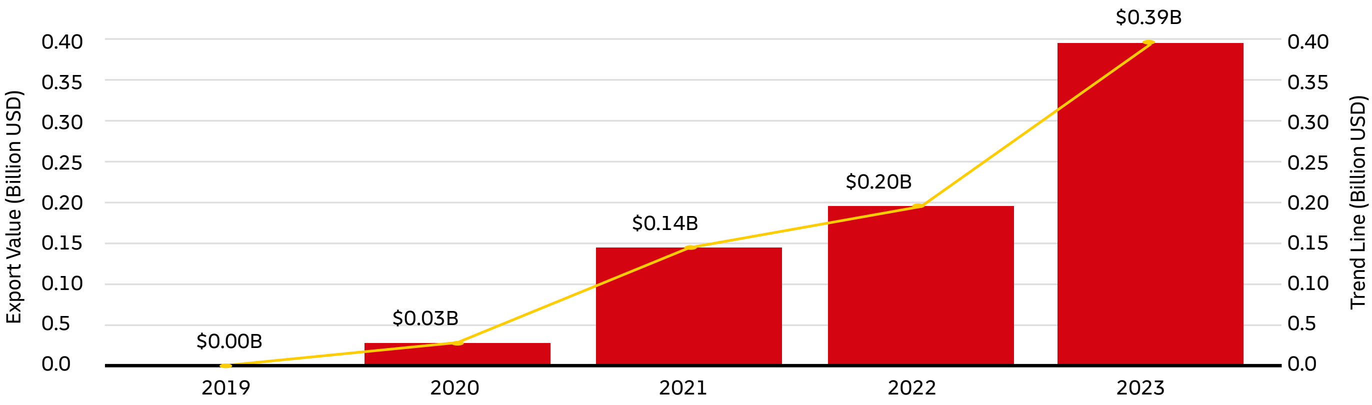
The kingdom's economic vision is underpinned by a deep appreciation for the importance of connectivity. Indeed, "from the world-class Tanger Med Port to expanding airport capacity and an ambitious road network, the kingdom has consistently positioned connectivity at the heart of its economic strategy."[7] On that score, Tanger is utilising its natural competitive advantage. The port benefits from its strategic location at the crossroads of east–west and north–south shipping routes, offering direct access to both European and African markets.

Morocco is now Africa's largest car producer, with over 500,000 vehicles exported in 2023, the same year when it overtook South Africa to become the continent's leading car exporter, mostly through Tanger Med.[8] Vehicle exports of more than US$9.5 billion in 2023 rose from only US$62.5 million 20 years prior.[9]

Tanger Med's free-zone platform has received international recognition. In 2021, it was ranked the second-best free zone globally by fDi Intelligence, behind only the UAE's DMCC.[10] A practical combination of financial incentives, such as an exemption from corporation tax for the first five years and a rate of 20% for the following 20 years,[11] and a "plug-and-play platform [which] streamlines business setup, cutting through red tape by consolidating dealings within the free-zone authority rather than via separate government departments"[12] is often the decisive factor when foreign direct investment (FDI) seeks a home. Tanger Med is also harnessing the green megatrend. It has begun deploying solar energy and exploring green hydrogen initiatives. These align with Morocco's national goal of producing 50% of its electricity from renewables by 2030. Sustainability is not simply reputational – it is strategic, ensuring competitiveness in a global trading system that is increasingly influenced by carbon border adjustments and environmental, social, and governance (ESG) standards.

[6] Temsamani, S. (2024, October 14). King Mohammed VI: Steering Morocco's rise as an African powerhouse – OpEd. Eurasia Review.
[7] Business Insider Africa. (2025, April 25). Morocco's King Mohammed VI launches Africa's longest high-speed rail line.
[8] Jivraj, H. (2025, February 21). Morocco's EVs tread fine geopolitical line. fDi Intelligence.
[9] The Atlas of Economic Complexity. (n.d.). Country profile for Morocco. Harvard Kennedy School.
[10] Dettoni, J. (2020, October 15). fDi's Global Free Zones of the Year 2020 – The winners. fDi Intelligence.
[11] Tanger Med Zones. (n.d.). Incentives.
[12] CFI.co. (2021). Tanger Med Zones: Best Industrial Free Zone Global 2021.

FIGURE 4
MOROCCO'S EXPORTS OF ELECTRIC VEHICLES (2019-2023)



Source: UN Comtrade (2025)

WINNING FORMULA

Tanger Med offers several lessons for the African continent:

1.

SCALE MATTERS

In a globally competitive landscape, major manufacturers such as Renault seek scale for efficiency. The Tanger Med vision may have appeared overzealous to some in the early 2000s. However, the country's expansive approach has paid off.

2.

INTEGRATION LEVERS UP SUCCESS

Unlike many African SEZs, Tanger Med is not an isolated mission, but part of a national FDI and industrialisation strategy. United under the Crown, the vast complex integrates multiple industries, combines the forces of the public and private sectors, and aligns industrial policy with a national macroeconomic policy.

3.

PLAY TO YOUR STRENGTHS

"Despite its proximity to Europe, wages [in Morocco] remain about a quarter of the Western European level and below those in Eastern Europe."[13]

4.

GROWTH IS GREEN

Tanger Med has "defined an energy strategy that aims to achieve 100% zero carbon by 2030."[14] They plan to achieve this with a mix of renewable energy, greater efficiency and improved water management.

Risks remain. Europe's demand is critical, leaving Morocco exposed to downturns in its primary market. Other projects, for example Egypt's Suez Canal Economic Zone and Nigeria's Lekki Free Zone, are also competing for global investors. Yet, for now, Tanger Med stands as Africa's benchmark SEZ.

WHERE TO NEXT?

Despite its marked impact on flows of trade, capital, information and people[15] already achieved, Tanger Med is not resting on its laurels. In November 2024, the IFC and MIGA, both members of the World Bank Group, announced a partnership with the Tanger Med Port Complex "to expand the truck and passenger terminal and strengthen Morocco's strategic position as a hub for regional and global trade."[16]

The IFC's loan of up to €197 million to Tanger Med will be the first sustainability-linked loan in Morocco and among the first in the port sector in emerging markets globally.[17] International banks, including JP Morgan, are joining in with a commercial loan of up to €203 million. All told, the financial package is set to increase the port's truck capacity to more than one million units, up from 477,000 in 2023.

[13] Pilling, D. (2023, October 5). Morocco's car-making sector revs up for EV era. Financial Times.
[14] Tanger Med. (n.d.). Energy transition.
[15] DHL. (2024). DHL global connectedness report 2024. DHL.
[16] International Finance Corporation. (2024, November 4). IFC, MIGA, and international banks partner with Morocco's Tanger Med Port Complex to expand truck and passenger terminal [Press release].
[17] International Finance Corporation. (2024, November 4). IFC, MIGA, and international banks partner with Morocco's Tanger Med Port Complex to expand truck and passenger terminal [Press release].

2.

YABACON VALLEY: BIRTHPLACE OF UNICORNS

Lagos is the commercial hub of Nigeria, and global data provider in Dealroom's recently published Global Tech Ecosystem Index, it pipped four cities with bigger economies to the post, taking first place as the world's number one tech ecosystem Rising Star.[18] Lagos is also where the district of Yaba is situated, on the Lagos mainland, connected to Lagos Island by the Third Mainland Bridge. It is home to Yabacon Valley, named after California tech central's Silicon Valley. Yabacon Valley has benefited from innovating from necessity to solve problems that are not only Nigerian, but African.

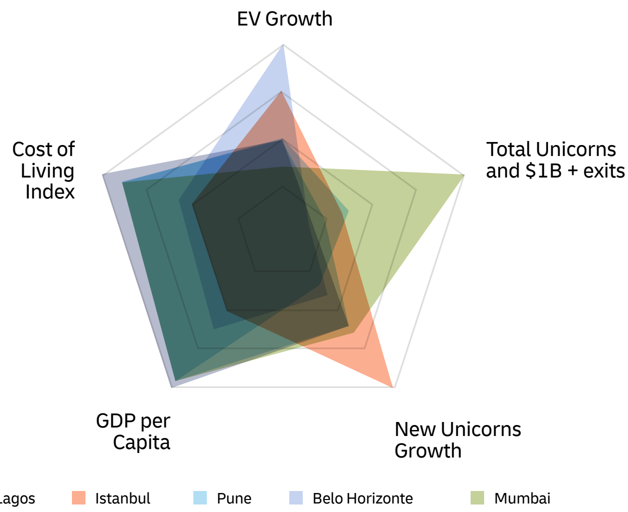
IMAGE: Omoeko Media, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

[18] Dealroom.co. (2025, May 21). Global Tech Ecosystem Index. 2025.

BY THE NUMBERS

Lagos is home to 22 million people.[19] From January 2017 to December 2024, the Nigerian city witnessed an 11.6-fold increase in enterprise value (EV), totalling US$15.3 billion of tech startups. It produced five unicorns, and came out ahead of 287 cities across 69 countries in the Global Tech Ecosystem Index.[20]

FIGURE 5
TECH RISING STARS



While this index emphasizes overall ecosystem performance over strength in any singular metric, these cities still have unique strengths and weaknesses. You can explore this and further insights in our dedicated data dashboard.

LAGOS NIGERIA

NOTABLE UNIVERSITIES
University of Lagos, Lagos State University, Covenant University

ENTERPRISE VALUE
S15.3 Billion

FIRST UNICORN
Jumia Group

METRO AREA INHABITANTS
21.3M people

ICONIC COMPANIES
Flutterwave, OPay, Moniepoint, Interswitch

COST OF LIVING
229 of New York City

11.6X	5	3	$1.6K	21.9
Enterprise Value Growth	N. of unicorns	Unicorn Production Growth	GDP per Capita	Cost of living index

Source: Dealroom Global Tech Ecosystem Index 2025

TURNING VISION INTO PROSPERITY

The origins of the Yabacon Valley can be traced back to 2011, when the Co-Creation Hub, located in one building in Yaba, was formed with financial backing from Pierre Omidyar, founder of eBay.[21] The hub was awarded a US$200,000 funding grant, and was dubbed the first open living lab and pre-incubation space in Nigeria. It also received a US$45,000 grant from the Indigo Trust, a unit of the Sainsbury Family Charitable Trusts of the U.K.[22]

The Federal Government of Nigeria (FGN) joined these investors and added another building in 2013, and this housed the Information Technology Developers Entrepreneurship Accelerator (iDEA).[23] It attracted both Google and Microsoft to run coding workshops there, but what really supercharged the Yabacon Valley was the collaboration of the Co-Creation Hub, a government and a local telecommunications outfit called MainOne, who together introduced high-speed and affordable internet via fibre optic cable.

The Yabacon Valley became home to many aspirational tech startups, and the ecosystem provided an environment that was conducive to growth. The list of Yabacon graduates is testament to this and includes notable names, such as Flutterwave, Andela, Jumia and Kuda Bank.[24]

Andela and Flutterwave, founded in 2014 and 2016, respectively, have a co-founder in common, Iyinoluwa Aboyeji. The startup began as a platform to match African software development talent with global opportunities. It was started on the premise that “brilliance is evenly distributed, but opportunity is not”. It now boasts 150,000 globally rated candidates, and claims

[19] Lagos State Government, Official Lagos State website, Lagos State Ministry of Innovation, Science and Technology.
[20] Dealroom.co. (2025, May 21). Global Tech Ecosystem Index 2025.
[21] Africa Strictly Business. (2015, July 28). The rise of Yabacon Valley.
[22] Nsehe, M. (2011, July 20). eBay billionaire Omidyar gives Nigerian tech incubator $200,000. Forbes.
[23] Africa Strictly Business. (2015, July 28). The rise of Yabacon Valley.
[24] Technocrat Media Nigeria. (2025, July). Inside Yabacon Valley: Nigeria’s answer to Silicon Valley.

that hiring through Andela is 66% faster than hiring through traditional channels.[25]

Flutterwave, a payments gateway, was also started to find an answer to an African challenge, 95% of transactions on the African continent were cash-based, effectively excluding Africans from the world's economy. The opportunity, in the words of co-founder Olugbenga Agboola, was "to build a digital payment system that would connect Africa to the global economy, enabling financial inclusion for millions of people and empowering small merchants to earn more".[26] The 'proof is in the pudding', as in 2024, Flutterwave operated in over 35 countries and over 150 currencies.[27]

WINNING FORMULA

1.

EDUCATION PAYS

Yaba is home to some impressive educational institutions, such as Yabatech, the Yaba Institute of Technology, which has a student body of 20,000[28] and the University of Lagos, or UNILAG, with just over 35,000 registered students.[29]

2.

CONNECTIVITY IS KEY

It started with MainOne's high-speed fibre optic internet cables, connecting Portugal to Lagos. Another two cables have been installed, including Google's Equiano cable.[30]

WHERE TO NEXT?

There are constraints and many of them revolve around the perennial lack of power, and increasingly around the poor roads infrastructure, affected further by the increase in traffic as the area becomes increasingly popular. A positive development is that Lagos State has published the Lagos State Innovation Master Plan and intends to pivot Lagos into a smart city, using modern technology and improved business processes.[31] The plan focuses on three key areas of resolution. The first is smart transportation to deal with traffic congestion, including intelligent traffic management systems, which include adaptive traffic lights, GPS-enabled public transportation tracking, and digital ride-sharing platforms to streamline movement. The second is digital connectivity, which aims to foster a digitally connected society by deploying broadband infrastructure and increasing digital literacy. The third is e-governance to enhance service delivery through digitised platforms for tax payment, business registration, and other public services that are key to improving efficiency and accountability.

Multiple pieces of legislation make the regulatory environment complex, and this needs to be simplified. An initiative by the FGN is to establish a digital free zone, to "drive the ease of doing business for global digital, finance, knowledge- and services-oriented enterprises in Nigeria".[32] Additionally, the Nigerian government is in the process of passing the Nigerian National Digital Economy and E-Governance Bill, and hopes are that this will make the regulatory space less congested.[33] There are a number of other pieces of legislation at various stages in the digital space. However, the concern is that the FGN is being reactive, as opposed to taking a long view on the digital and e-commerce sector.

The good news is that increasingly, global technology companies are looking to Africa as locations for remote business process outsourcing, bringing with them the promise of productive employment for a young and hungry population.[34] Reasons for this include the large and growing pool of young tech talent,[35] strategic time zones alignment and lower operating costs, and primary labour costs.[36]

[25] Andela. (2024, June 25). Meet the humans of Andela.
[26] Plug and Play Tech Center. (2025, April 10). How Flutterwave became a unicorn – Interview with CEO Olugbenga Agboola.
[27] Flutterwave. (2024). End of year 2024 recap.
[28] Yaba College of Technology. (n.d.). Message from the Rector.
[29] University of Lagos. (n.d.). UNILAG Statistics.
[30] Submarine Networks. (n.d.). Nigeria.
[31] Technocrat Media Nigeria. (2025, July). Inside Yabacon Valley: Nigeria's answer to Silicon Valley.
[32] Kanali, N. (2025, March 11). Nigeria to establish a digital free zone for tech and global service businesses. Africa Business Communities.
[33] Onanuga, B. (2025, May 19). Investment in digital economy grows nine fold, rollout of $2 billion fibre optic infrastructure begins Q4: Bosun Tijani. State House Nigeria.
[34] Jiwa, N. (2023, July). Outsourcing to Africa: Top countries for BPO. Execs in the Know.
[35] TeKnowledge. (n.d.). Outsourcing in Africa: The next IT outsourcing hub.
[36] Believe Resourcing. (2025, March 11). South Africa: The BPO powerhouse of Africa.

3.

SILICON SAVANNAH: YOUNG, WIRED, AND WORLD-CLASS

Silicon Savannah is the term coined for the East African tech hub of Nairobi, Kenya, after a number of major tech innovations originated there between 2007 and 2010, altering the global tech landscape. These range from Safaricom's M-Pesa to Ushahidi's phenomenal information centralising and sharing platform.[37] A comparison of capital raised in 2015 and in 2024 is testament to the growth of the Silicon Savannah – in 2015, just US$47 million was raised.[38] In 2024, this stood at US$638 million, accounting for 29% of Africa's total startup funding for the year.[39]

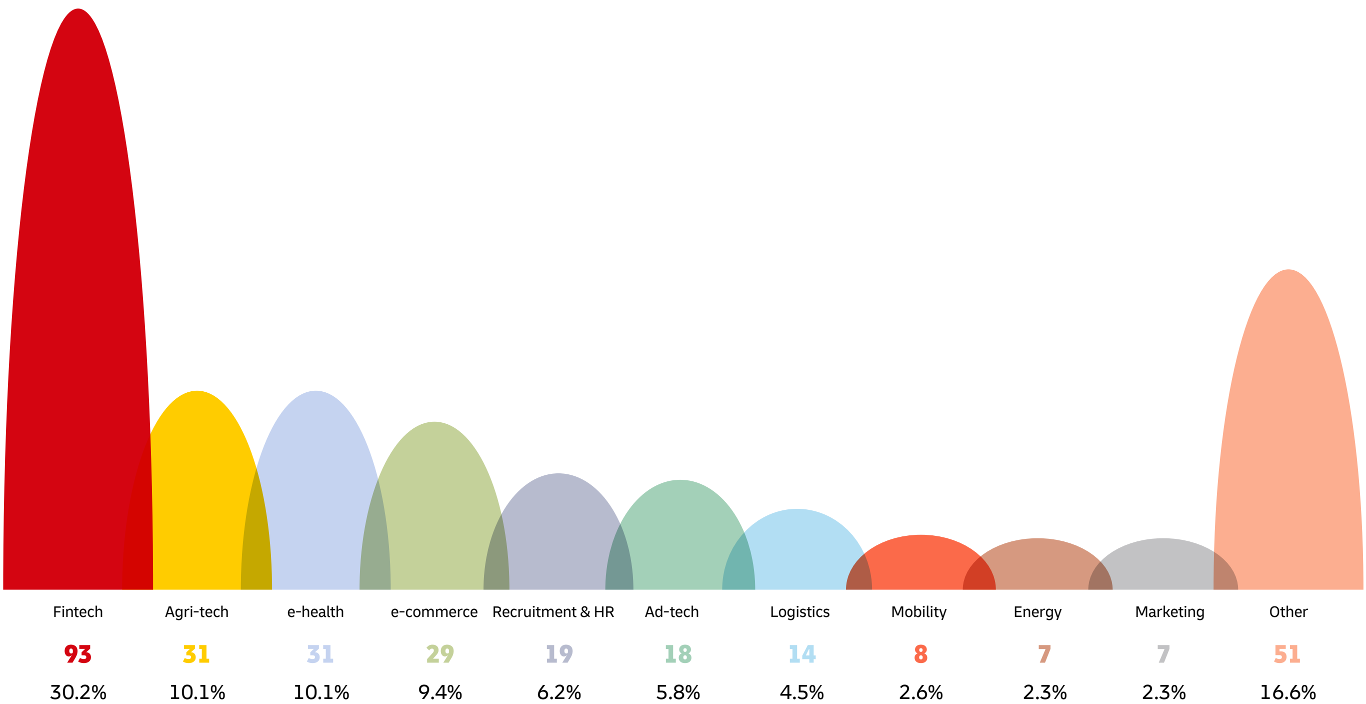
[37] Granger, L. (2014, February 26). From iHub to the BRCK: How Ushahidi became an African success story. Ventureburn.
[38] Brown Political Review. (2023, November 6). Seeds of Silicon Savannah: Supporting home-grown talent at the heart of Africa's tech industry.
[39] Techpoint Africa. (2024, May 13). Kenya emerges as Africa's top investment destination in Q1 2024.

IMAGE: stock.adobe.com

BY THE NUMBERS

Similar to Nigeria's Yabacon Valley, the tech movement in Nairobi has grown exponentially, kick-started when the TEAMS high-speed undersea fibre optic cable made landfall in 2009, connecting Kenya's Mombasa with Fujairah in the UAE.[40] The digital economy growth rate for 2025 is projected to be 8.5% – three times that of the global economy.[41] This is good news for Kenya, as the country expects ICT to contribute 25% to GDP in 2025, and aims to achieve double digit growth by leveraging ICT to attract investments and create employment opportunities.[42]

FIGURE 6
KENYAN TECH STARTUPS BY SUB-SECTOR



Source: The Kenyan Startup Ecosystem Report 2022, Disrupt Africa, Dec 2022

TURNING VISION INTO PROSPERITY

From the early days in 2007, the tech industry in Kenya has seen incredible growth, and this has been assisted by the setup of tech incubators. One impressive incubator is iHub, funded by Ushahidi, which opened its doors in 2010, after the arrival of TEAMS. The organisation, which lays claim to over 450 startups that can "trace their roots" to iHub,[43] was acquired by Nigeria's Co-Creation Hub in 2019, for an undisclosed fee.[44] Bosun Tijani, Co-Creation Hub's Chief Executive says the acquisition was made to "create a robust platform that's capable of attracting the best resources and partnerships to accelerate the application of technology and innovation for economic prosperity across Africa".[45]

Kenyans are getting behind the potential of tech for their young population. For example, this incudes service providers, such as the Moringa School in Nairobi. Their stated aim is to "nurture Africa's tech talent" and they have trained 8,000 professionals since 2014. They offer courses to high school graduates, university students and professionals on a full-time or part-time basis. Their courses are devised with input from industry players and cover qualifications in software engineering, data science, cyber security, artificial intelligence (AI) and tech leadership. They also offer boot camps for high school students.[46] This activity is underpinned by a proactive government stance, with two seminal pieces of legislation recently introduced. The

[40] The East African Marine System (TEAMS) Ltd. (n.d.). The East African Marine System – TEAMS LTD.
[41] Digital Cooperation Organization. (2024, December). Digital economy trends 2025.
[42] CNBC Africa. (2025, April 8). Kenya eyes double-digit growth fuelled by ICT investments [Video].
[43] iHUB. (n.d.). About us.
[44] Co-Creation Hub Africa. (2019, September 26). Press release: CcHUB acquires iHub.
[45] Shapshak, T. (2019, September 30). Nigeria's CcHub has bought Kenya's iHub, uniting Africa's flagship tech spaces. Forbes.
[46] Moringa School. Home.

first was the Startup Bill of 2022, passed in July 2024 by the National Assembly, offering tax breaks, easier access to credit, and essential resources for startups. The Kenyan National Artificial Intelligence Strategy was released in early 2025, with the objective of establishing Kenya as a leader in AI research and commercialisation.[47]

Innovations have attracted the big global players and their money: Google pledged over US$1 billion in 2022[48] and in 2024, AI firm G42 and Microsoft pledged $1 billion to expand the digital ecosystem in Kenya. All of this is assisted by political will from President William Ruto, who is actively positioning Kenya as a prime African tech hub.[49]

WINNING FORMULA

1.

BRING YOUR FRIENDS CLOSE

The world's biggest tech firms are hungry for growth and have the size, skills and cheque books to catalyse and foster growth wherever they go. Attracting a Google or Microsoft can create jobs and provide growth opportunities for home-grown businesses.

2.

NECESSITY IS THE MOTHER OF INVENTION.

Kenya exhibited this by building local solutions for local problems. Transacting with a feature phone and USSD code[50] is not a challenge US firms, for example, face. Yet, it helped Kenya launch its Fintech industry.

3.

TARGETED TRAINING DELIVERY

Schools like Moringa deliver tech-specific training, producing employable graduates and strengthening the Kenyan tech ecosystem. This ecosystem has attracted global interest, and Microsoft announced its intention in November 2024 to train one million Kenyans in "AI and cybersecurity by 2027."[51]

WHERE TO NEXT?

Kenya has a number of challenges that need to be addressed, and these include transport and power infrastructure. Although Kenya has also been on the radar of global technology companies seeking to outsource,[52] there have been some high profile labour-related cases brought to the courts by Kenyans against some of the big global players, for example Meta.[53] The future, though, looks bright for wannabe techies in Kenya, and with the attention and investment of global tech heavyweights, the will and the financial impetus for success may be there.

[47] Tech in Africa. (2025, September 18). These 5 African countries are leading the tech boom in 2025.
[48] Bowmans. (2022, April 20). Kenya: Google and Microsoft set up tech development hubs in Kenya.
[49] McCandless Farmer, B. (2025, June 29). How Kenya became the "Silicon Savannah". CBS News.
[50] Unstructured Supplementary Service Data (USSD), sometimes referred to as "quick codes" or "feature codes", is a communications protocol used by GSM cellular telephones to communicate with the mobile network operator's computers. USSD can be used for prepaid callback service, mobile-money services, location-based content services and menu-based information services for no charge and without the need for a smartphone.
[51] Africa Business Communities. (2024, May 14). Microsoft launches AI skilling initiative in Kenya to train 1 million people by 2027.
[52] Jiwa, N. (2023, July). Outsourcing to Africa: Top countries for BPO. Execs In The Know.
[53] Abedin, E. (2025, June 26). Content moderation is a new factory floor of exploitation – labour protections must catch up. Institute for Human Rights and Business.

4.

CRITICAL MINERALS: AFRICA'S PLAN TO ACHIEVE LONG-TERM BENEFIT

The African continent is home to substantial deposits of minerals that the rest of the world needs to shape their energy transition, digital transition and industrialisation around the world – the resources known as critical minerals.[54] Included in the list of critical minerals are lithium, cobalt, nickel, manganese, graphite, rare earth elements (REEs), copper and the platinum group metals (PGMs).

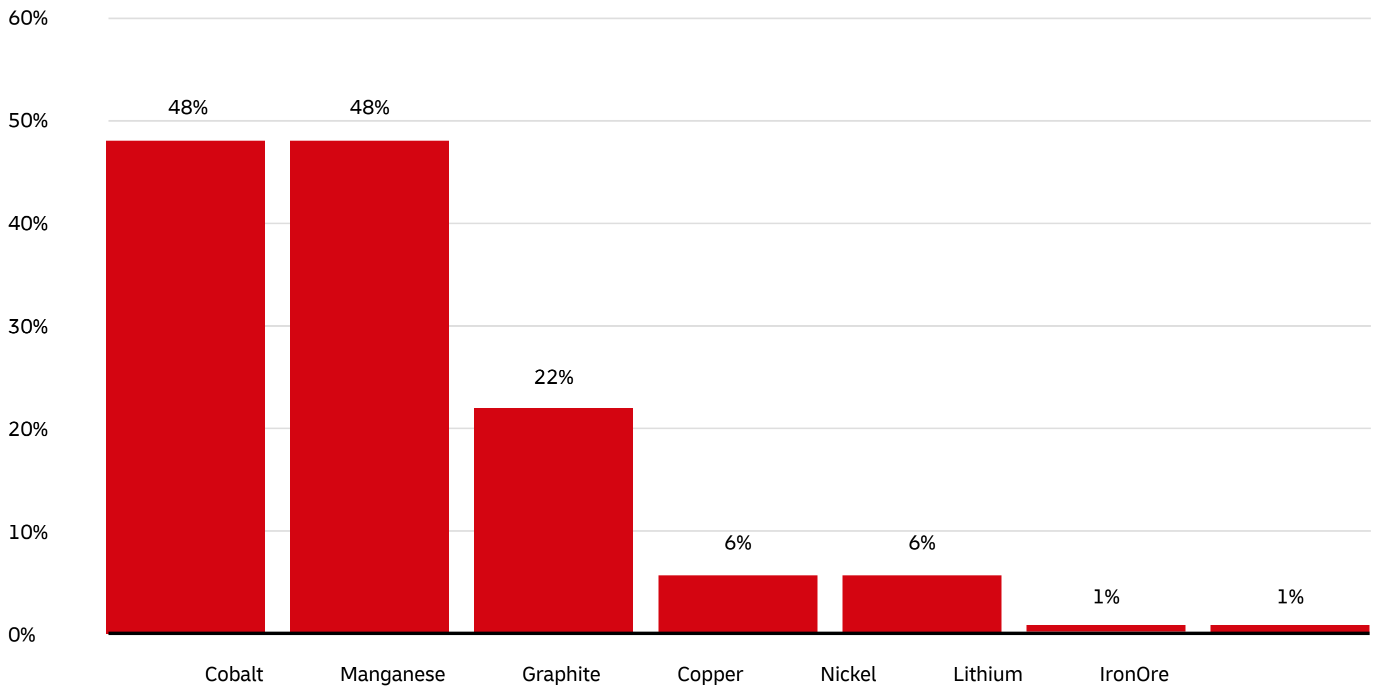
However, these resources are only as good as the manner in which they are used. Extracting and exporting raw materials has some benefit. Extracting, refining, using as inputs in advanced manufacturing for domestic use and export provides far greater benefits.

IMAGE: stock.adobe.com

[54] United Nations Conference on Trade and Development. (2025). Trade in critical minerals shapes energy transition, digital transformation and industrial development worldwide. UNCTAD SDG Pulse 2025.

BY THE NUMBERS

FIGURE 4
AFRICA'S CRITICAL MINERAL RESERVES



Africa is home to sizeable reserves of the world's critical energy transition minerals but the continent has yet to fully seize the opportunities presented by its natural resource endowments. Estimates show that African countries generate only about 40% of the revenue they could potentially collect from these resources.

Source: UNCTAD (2024)

Critical minerals are called this for a reason – they are critical to the energy and digital transition of economies. The Southern African Region (SAR) is home to almost 30% of the world's proven reserves of critical minerals, resources the continent should be using to drive its own development agenda. It is counterintuitive that the proportion of global exploration spent in Africa in 2024 was a mere 10.4% of global exploration spending. Private sector investment in Australia and Canada took 16% and 20%, respectively, of global exploration spending.[55]

TURNING VISION INTO PROSPERITY

Africa has for decades been at the back of the queue when it came to benefiting from its mineral wealth. Studies by UNCTAD show that critical minerals are exposed to high illicit financial flow risk, often through trade 'misinvoicing'. In Namibia in 2022, this practice was estimated to have been worth more than 8% of GDP.[56] Another key contributor has been an under-regulated and under-industrialised environment in many mineral producing countries. In 2022, the Democratic Republic of the Congo showed great proof of this fact with locally processed cobalt. They almost tripled cobalt's export value at US$6 billion compared to the previous value of exports for unprocessed cobalt, at US$167 million.[57]

Investment into critical mineral exploration and production in Africa is unsurprisingly on the increase, with hefty global players buying in. Two recent announcements were that in September 2024, a group of 14 countries (the Minerals Security Partnership – MSP) and the European Union (EU), agreed to finance one

[55] World Economic Forum, Development Bank of Southern Africa, & McKinsey & Company. (2025). *Securing minerals for the energy transition: Finance for Southern Africa*.
[56] World Economic Forum, Development Bank of Southern Africa, & McKinsey & Company. (2025). Securing minerals for the energy transition: Finance for Southern Africa.
[57] World Economic Forum, Development Bank of Southern Africa, & McKinsey & Company. (2025). Securing minerals for the energy transition: Finance for Southern Africa.

of the world's largest unmined nickel deposits, the Kabanga Nickel Project in Tanzania,[58] under the name of Lifezone Metals. Development costs are estimated at US$942 billion and the Tanzanian government holds a 16% stake. The revenue target over four and a half years is US$14 billion, and the government expects to earn taxes and royalties of US$3.6 billion.[59] The MSP has no African members.

Corporate players in the critical minerals space are also increasing, and one example is KoBold Metals, backed by Bill Gates and Jeff Bizos.[60] In 2024, Kobold discovered a massive copper deposit, Mingomba in Zambia. Interestingly, the company has a digital-first approach to geological exploration and mines historical geological archives (PDFs and hand-painted maps on linen) by using artificial intelligence (AI). Algorithms then assist in the decision about where to conduct physical exploration.

At Mingomba, KoBold boasts 50,000 metres drilled in 17 months, more than 250 Zambian employees and contractors, meaning more than 90% of its staff are Zambian nationals, including more than 70% of management and executives. They have also "partnered with Stanford University, the Copperbelt University and the University of Zambia to offer Masters of Science scholarships in Data Science and Exploration Geology. This two-year programme advances cutting-edge geosciences and exploration innovation in Zambia."[61] In addition to this, the government's mining-investment arm, ZCCM-IH, holds a stake in KoBold's Mingomba mine,[62] and this form of co-ownership should result in benefits for Zambia, beyond the cost of the mining licence and any export duties. One must consider that critical minerals often occur in more than one country in a region – using public markets in those countries to raise regional investment capital is an important strategy.

Copper mined in Zambia will be used for battery metal resources.[63] In a development announced in August 2025, KoBold has also secured seven lithium exploration permits in the DRC.

Although the EU buys 14% of these minerals, China is importing 56% of Africa's critical minerals.[64] This means that there is one unified buyer, which begs the question about whether Africa speaks with one voice when it comes to negotiating the terms of sale, and the clear answer is "not yet". The African Union (AU)'s Green Minerals Strategy puts the guidelines in place for policies that allow negotiations en bloc, and this will be key to Africa extracting the maximum benefit from this round of mineral resources in demand.

WINNING FORMULA

The stage on which the future of Africa and its critical minerals will play out is a work in progress. Elements of a winning formula are:

1.

AFRICAN ECONOMIES PRIORITISED

Harmonised governance must be in place to control the export of critical minerals from Africa. This moves mineral-rich countries away from historic patterns of extraction and further up the value chain, ensuring a greater value-add for exports. The roadmap provided by the Green Minerals Strategy is a starting-point to achieve this.

2.

TAKING THE LONG VIEW

Financing solutions have to be in place for critical mineral exploration, to enable countries to either finance or co-finance discoveries, so that deals can be structured to benefit local economies in the style of Botswana's arrangement that created Debswana. Regional financing instruments, raised on public capital markets, could provide the finance required for this co-investment.

WHERE TO NEXT?

KoBold Metals is exploring more than 70 projects across the globe. African nations, regions and special zones are competing to be the most productive destinations for this capital and technology. This will need to be balanced with the need to ensure local benefit. That is, meaningful local benefits and a healthy relationship with outside capital and skills.

[58] Manjonjo, K., & Mokgonyana, K. (2024, October 28). Foreign countries are lining up to exploit Africa's critical minerals. Africa at LSE.
[59] Houenou, A. S. (2025, July 21). Tanzania's Kabanga Nickel slashes costs 5% to $942m. Ecofin Agency.
[60] Staff Writer. (2025, January 1). Gates' KoBold Metals raises $537m in latest funding round. Miningmx.
[61] KoBold Metals. (2025). Zambia. KoBold Metals.
[62] Reuters. (2023, September 25). Billionaire-backed KoBold Metals plans new Zambian copper mine within a decade. Mining Weekly.
[63] Okafor, C. (2024, February 5). Bill Gates and Jeff Bezos's firm discovers largest copper deposit in Zambia. Business Insider Africa.
[64] Munoz Padros, A., & Bos, J.-M. (2025, September 15). Critical minerals could supercharge Africa's future. DW.

5.

COLD CHAIN: UNLEASHING AGRICULTURE AND HEALTHCARE

The Alexandria–Cairo axis concentrates Egypt's largest production base, its biggest consumer market, and its main export gateway. It is a high-throughput corridor, where farms, pharmaceutical plants, and logistics hubs meet. Value turns on hours and degrees. When citrus, table grapes, vaccines, and insulin move through this spine without a 1°C deviation and without an hour's delay, the corridor preserves the margins Egypt is aiming for as a regional cold-chain hub.

IMAGE: envato elements

BY THE NUMBERS

Egypt's cold-chain market is scaling fast. In 2024, it was valued at US$5,4bn and it is tracking toward roughly $10,36bn by 2032, at a forecasted growth rate of 8.6%.[65] This structural growth is a direct reflection of the powerful twin engines of agriculture and healthcare operating at scale within the corridor.

Agriculture is the primary engine and a volume anchor. In 2024, Egypt exported 8.6 million tonnes of farm goods worth US$10,6bn, up 11% year-on-year. The Delta supplies high-value crops that include citrus, grapes and strawberries, with citrus as the bellwether export, shipping a record 2.39 million tonnes worth US$1,1bn during the same year.[66] However, these numbers are undermined by inefficiencies between farms and mid-stream, as post-harvest losses reach 55%, depending on crop and stage.[67] Even a modest reduction of this spoilage would preserve hundreds of millions annually in export earnings and domestic supply.

Healthcare is the secondary, accelerating engine, and its logistical demands are growing in complexity. Egypt's pharmaceutical market was valued at US$6.5bn in 2024. It is projected to reach US$13.8bn by 2033.[68] Roughly 35% of these medicines require cold storage and distribution, which applied to Egypt's market size, puts temperature-controlled flows near US$2,3bn in 2024, with a clear upward pull from insulin, vaccines, and other temperature-sensitive medicines.[69]

TURNING VISION INTO PROSPERITY

The Alexandria–Cairo spine was built, not found. The corridor's efficiency stems from a policy turn in the late 1970s that seeded new industrial cities, such as the 10th of Ramadan City to the east and the 6th of October City to the west, and drew factories off the crowded Nile corridor and into serviced land with room to scale. Over time, those centres became anchors for food processing and fast moving consumer goods (FMCGs), and, crucial for the cold chain, home to large pharmaceutical plants, such as EVA Pharma.

Policy then shifted from establishing factories to connecting them. The National Roads Project from 2014 shortened farm-to-factory and factory-to-port runs across the Delta by upgrading existing highways and building new bypasses to alleviate the persistent road congestion that created costly bottlenecks in the supply chain.[70]

Rail and port investments then tied the spine together. In 2022, the World Bank backed a US$400m Cairo–Alexandria trade-logistics programme centred on a freight rail bypass that links Alexandria's seaport to the 6th of October Dry Port, designed for around 15 daily container trains by 2030.[71]

At sea, global operators have added berth and yard capacity. In March 2023, Hutchison Ports committed US$700m for two terminals and a new container facility at Alexandria, expanding gateway options for exporters moving perishables and pharmaceuticals,[72] while the Tahya Misr multipurpose terminal added deeper berths and bigger yards.[73]

The corridor's efficiency comes from a sophisticated national strategy that pairs large, centralised logistics hubs with specialised "first-mile" facilities built at the source of production.

The centrepiece is the 6th of October Dry Port, an inland hub that decongests the main seaport of Alexandria by handling customs and container consolidation away from the coast. This physical infrastructure is amplified by digital upgrades, such as the NAFEZA single-window system, which has successfully cut average port clearance times in half, from 16 days to about 8.[74]

This is complemented by investments in sector-specific hubs that protect product value from the very start. For healthcare, this includes modern, large-scale vaccine cold-storage complexes in industrial cities. For agriculture, it means placing packhouses and pre-cooling units directly in new farming areas, such as the New Delta programme, which shrinks the critical time from harvest to first chill.

The result is a cohesive, end-to-end logistics spine that provides the speed and temperature control that exporters of high-value pharmaceuticals and perishable goods require.

[65] Verified Market Research. (2025, August). Egypt cold chain logistics market size by type (temperature-controlled warehouses, transportation, packaging), by end-user (food and beverage, pharmaceutical, healthcare, chemicals), by geographic scope and forecast.
[66] Business Today Staff. (2025, January 28). Egypt to increase agriculture exports by 20% in 2025; FreshPlaza Staff. (2024, October 14). Egyptian citrus exports exceed 2 million tonnes mark for the first time.
[67] Chemonics Egypt Consultants, & Wageningen University & Research. (2023, August). Cold chain investment opportunities in horticulture in Egypt.
[68] Industry Today Staff. (2025, July 22). Egypt pharmaceutical market size to reach US$13,824.7 million by 2033: Trends & opportunities.
[69] Verified Market Research. (2025, August). Egypt cold chain logistics market size by type (temperature-controlled warehouses, transportation, packaging), by end-user (food and beverage, pharmaceutical, healthcare, chemicals), by geographic scope and forecast.
[70] Ahram Online. (2024, July 2). Egypt constructed 945 bridges and tunnels in last 10 years: Ministry.
[71] World Bank. (2022, October 3). Egypt: US$400 million project will help to improve and decarbonize logistics and transportation sectors.
[72] Reuters Staff. (2023, March 16). Hutchison Ports to invest $700mln in two Egyptian ports.
[73] State Information Service (Egypt). (2023, August 6). Tahya Misr multi-purpose station in Alexandria.
[74] Egyptian Customs Authority. (2024). Egypt Time Release Study II: Sea ports Alexandria, El Dekhalia and Damietta. Ministry of Finance.

WINNING FORMULA

The corridor works because scale, access, and operations line up on a single spine that feeds a virtuous cycle.

1.

TIME IS MONEY

Pre-clearance at the 6th of October Dry Port scheduled rail into Alexandria's Tahya Misr terminal, and a single cut-off window reduces the guesswork that once plagued exports. The shift from roughly 16 days of clearance to about eight gives fruit and medicines a week back when it matters most.

2.

OPTIONALITY CREATES RESILIENCE

Multiple integrated export gateways provide flexibility that allows exporters to adapt to shifting market demands or major disruptions in a volatile region.

WHERE TO NEXT?

The corridor's foundational hardware is largely in place. The strategic challenge is now shifting from construction to optimisation. The next phase of growth will not come from building more, but from making the existing system smarter, faster, and more specialised. Three live programmes point to how the spine will earn its next gains.

First, a second inland gateway is moving ahead at 10th of Ramadan. By pairing this new node with a dedicated rail link to the seaports, authorities are creating a vital alternative path to the coast that bypasses Cairo's congestion. This will ease pressure on roads and trim critical dwell time for temperature-sensitive loads.[75]

Second, attention is turning to the city's notoriously difficult "first and last mile". As new metro lines are constructed to attract passenger traffic off the roads, they will clear the way for more predictable short-haul freight deliveries. In parallel, private developers are adding a network of smaller, temperature-controlled depots in key production and retail zones. This brings critical infrastructure closer to both farms and urban shelves, reducing spoilage and closing gaps in the cold chain.[76]

Finally, the corridor's long-term competitiveness is being secured by a decisive pivot to green logistics as energy is the biggest running cost in the sector. The 6th of October City has completed a Green City Action Plan to steer investment into lower-carbon infrastructure,[77] and manufacturers in 6th of October and 10th of Ramadan are already fitting rooftop solar to cut daytime electricity bills.[78] This move provides a practical hedge against volatile energy prices, while satisfying the increasingly stringent climate standards of export markets, turning sustainability into a tangible competitive advantage.

A broader opportunity for Africa lies in one highly specialised form of connectivity with importance to Africa is the transportation of medical samples. "While Africa bears 25% of the global disease burden, only 845 of the 76,331 clinical trials initiated globally in 2023 – just 1.1% – were hosted on the African continent, according to the World Health Organization (WHO)." [79]

However, this proportion is growing. "The African clinical trials market size was valued at US$0.91 billion in 2023. It is projected to grow from US$0.96 billion in 2024 to US$1.68 billion by 2032, exhibiting a [compound annual growth rate] CAGR of 7.2% during the forecast period."[80]

Tight timelines, strict regulatory requirements to move biological materials, and large distances present barriers to meeting this demand from a logistical perspective.

DHL's Worldwide Medical Express takes on these challenges with innovation. A specialised, premium service targeted at getting samples from clinical trial sites in African locations to laboratories primarily in Europe, it has grown from initiation in 2016 to covering 33 African countries.[81]

"That attention to detail has to extend to constant monitoring of temperature and location. Any deviations need to be addressed 'stat'. Even things like patient confidentiality are built into the service. This all speaks to the integrity of life-saving clinical trials."

Bower expands on the logistical challenges in many parts of Africa. "Lagos is a great example", she says. "The traffic is notoriously bad. We had to innovate around this. We now use speedboats to get samples from Lekki/Lagos Island to the mainland for onward transport."

[75] European Bank for Reconstruction and Development (EBRD). (2024, November 20). ENR 10th Ramadan Railway Link; Sharkawy & Sarhan. (n.d.). Commercial close of 10th Ramadan Dry Port PPP Project and Logistics Centre.
[76] Enterprise Staff. (2025, September 3). Could cold storage be the future of Egypt's storage industry?
[77] EBRD Green Cities. (2024, February 8). 6th of October becomes first city in Egypt to complete the Green City Action Plan.
[78] Kapoor, L. (2025, January 30). IRSC to install 3.2 MW solar rooftop plants in Egypt. Saur Energy Middle East.
[79] World Economic Forum. (2025, July). Healthcare access in Africa: clinical trials. WEF.
[80] Fortune Business Insights. (2025, September 8). Africa clinical trials market size, share & industry analysis, 2024-2032.
[81] DHL Express. (2024, January). Dangerous Goods: UN3373 Biological Substance, Category B capability [Brochure]

6.

AIR ADDIS: AERIAL CORRIDORS OF POWER

The EU's Joint Research Centres' assessment finds the biggest gains come from investments in transport and access, with an added upside from carbon-cutting measures. Digital upgrades are harder and need to piggyback on core transport spend.[82]

IMAGE: stock.adobe.com

[82] Kavalov, B., Kučas, A., Kompil, M., Proietti, P., Sulis, P. & Maistrali, A. (2025). Global Gateway Support to Transport Corridors in Africa – Consolidated report (S. Oliete Josa & L. Georgelin, Eds.). Luxembourg: Publications Office of the European Union.

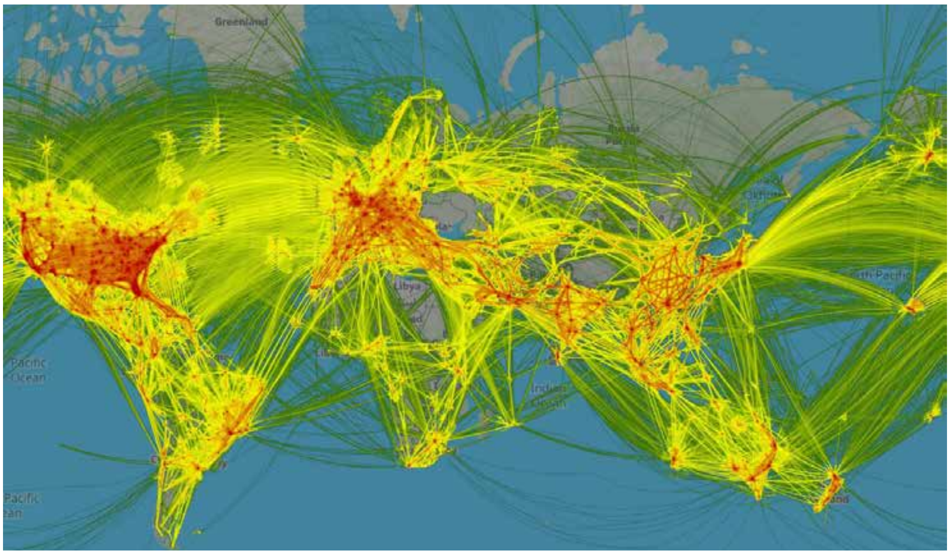
East Africa is a case in point, being central for Horn-of-Africa trade flows. Addis Ababa is one of Africa's primary aviation hubs, a status driven by the growth of its national carrier, Ethiopian Airlines.[83] However, the entire operation is currently channelled through a single gateway, Bole International Airport. While Bole has become one of the continent's busiest passenger and cargo hubs, it is a congested, in-city airport that is rapidly approaching its physical limits. It cannot accommodate the massive future growth projected by the airline, which aims to more than triple its passenger numbers.

This creates a fundamental tension between Ethiopia's strategic ambition and Bole's physical constraints. The goal is to establish Addis Ababa as a true global aviation super-hub, a central node for traffic flowing between continents. However, an incremental expansion of the existing airport is simply insufficient for a vision of this scale.

To solve this limitation, Ethiopia is pursuing a strategic pivot by creating an integrated two-airport system. The plan involves constructing a massive new greenfield airport, named Abusera, approximately 40 km outside the capital. The strategic redesign slots neatly into the Dar–Nairobi–Addis–Berbera–Djibouti corridor, and is intended to cement Addis Ababa's position as a dominant logistics and travel hub that anchors a pan-African network, which will carry long-haul passengers and time-sensitive freight between Africa, Europe, the Middle East, and Asia.[84]

The two airports will be integrated by dedicated transport links to function as a single, cohesive system. Initially, high-speed road access, followed by a future express rail link, is planned to connect the two sites. This integration offers distinct advantages. For freight, the operational split will streamline logistics by providing a direct, less congested route for time-sensitive goods to dedicated freighters at Abusera, while regional belly cargo and domestic distribution continue to operate through Bole. For passengers, the links will ensure seamless and predictable transfers between domestic arrivals at Bole and intercontinental departures at Abusera.[85]

FIGURE 5
THE WORLD BY AIR TRAFFIC DENSITY



Source: AirNavRadar (2024)

BY THE NUMBERS

Bole is already one of Africa's top airports by any measure. After a major expansion in 2019, its design capacity was boosted to handle up to 22 million passengers a year. In 2024, the airport handled 12 million passengers. By the 2025 fiscal year, Ethiopian Airlines was already moving 19 million passengers annually, and is expanding operations, straining operations at Bole and underlining the need for a second airport. To put that in perspective, it is in the same league as the continent's busiest airport, Cairo International, which handled 28.8 million passengers in 2024.[86]

[83] Ethiopian Cargo & Logistics Services. (n.d.). Addis Ababa Hub – Our state-of-the-art cargo terminal.
[84] Ethiopian Airlines. (2024, August 12). Ethiopian Airlines signs a contract with Dar Al-Handasah to develop a mega airport city.
[85] AidData. (n.d.). Project 36251: Addis Ababa–Adama Expressway Phase 2.
[86] Arab Air Carriers Organisation. (2025, January, 2). 9% increase in passenger traffic at Egyptian airports in 2024.

Bole is a dedicated logistics powerhouse. It boasts Africa's largest integrated cargo complex and handles hundreds of thousands of tonnes of freight annually, with cold-chain capacity for perishables. It aims to expand its capacity into the multi-million-tonne range by 2035.

Bole's cargo ecosystem runs 24/7. A 2018 joint venture with DHL links air freight to trucking across dry ports and industrial parks,[87] while a new e-commerce hub at Bole will add automated sortation for about 150,000 tonnes of parcels a year.[88] However, this success has become a trap. With Ethiopian Airlines projecting that passenger numbers will soar to 65 million by 2035, the land-locked, in-city airport is simply running out of room.[89] Abusera is sized to solve that constraint. Sited near Bishoftu, the greenfield hub is planned as one of Africa's largest airport projects, with an ultimate capacity of 100 to 110 million passengers a year[90] (well in excess of Heathrow's actual figures of 83.9 million passengers for 2024).[91] Phase I is designed to open with facilities sized for roughly 60 million passengers, a terminal complex on the order of 1.1 million m², and more than 100,000 m² of cargo space from day one.[92]

Abusera is a US$10bn programme that packages the airport with an adjoining airport city of roughly 40 km². The African Development Bank has committed $500m and will syndicate most of the remaining debt, while Ethiopian Airlines will contribute around 20% equity. The airport city is planned to layer hotels, retail, logistics parks, and office space to attract tenants and anchor non-aeronautical revenue.[93]

Phase 1 targets an opening by 2029.[94] The state has begun land acquisition and relocations to clear the path for full construction. Once Abusera opens, international passenger and cargo operations shift there, while Bole focuses on domestic flights.

TURNING VISION INTO PROSPERITY

Ethiopia's play is to build on a strong flag carrier to create an aviation-led growth platform, and then anchor it in a two-airport system that operates as one. A dual-airport system lets Ethiopia sort flows by aircraft type and trip purpose. Long-haul passenger banks and dedicated freighters gather at Abusera, where stands, taxiways, and high-bay warehouses are planned for rapid turns, while Bole airport will be repurposed as a convenient in-city hub for domestic and regional travel. Abusera is framed as an aerotropolis rather than a stand-alone terminal. Ethiopia is packaging the airport with an adjoining airport city to widen revenue beyond aeronautical fees, recognising that the airport alone would struggle to meet return thresholds without the real-estate and services around it. The African Development Bank is leading on financing, positioning the operation as a regional integration project aligned with continental objectives, while Ethiopian Airlines brings equity and operating know-how.

Anthony Beckley, DHL Vice President Operations and Aviation: Sub-Saharan Africa, DHL Express, offers his keystones for getting aerial hubs right:

FUNCTION BEATS FLASH

These developments can turn into vanity projects. The strategy needs to defend the primacy of function.

THE AIRLINE IS THE ENGINE

A great airport is as good as its anchor airline. This relationship must be nurtured and protected.

YOUR COMPETITION IS THE CLOCK

At the end of the day, the business model is brutally simple. It all comes down to speed.

BUILDING IS OFTEN THE EASY PART

A terrific facility is no guarantee of success. The real skill and sustainability come from ensuring all the moving parts work together as a system.

[87] Reuters Staff. (2018, July 27). Logistics firm DHL to create venture with Ethiopian Airlines.
[88] Ethiopian Airlines. (2024, February 29). Ethiopian inaugurates first-of-its-kind e-commerce logistics facility at Bole International Airport.
[89] Jonga, M. (2022, December 2). Vision 2035: Ethiopian Airlines to double fleet, network and expand partnerships.
[90] Ethiopian Airlines. (2025, August 27). Ethiopian Airlines signs a contract with Dar Al-Handasah to develop a mega airport city. [Press release]. Ethiopian Airlines Group.
[91] Heathrow. (2025, February 26). Record demand drives Heathrow growth – results for year ended 31 Dec 2024. [Press release].
[92] Zaha Hadid Architects. (2024, August 12). Ethiopian Airlines awards the design consultancy contract for Ethiopia's new global hub airport to the consortium led by Dar and Zaha Hadid Architects.
[93] Endeshaw, D., & Holland, H. (2025, August 11). African Development Bank to finance $500 million of Ethiopia's new airport.
[94] Zaha Hadid Architects. (2024, August 12). Ethiopian Airlines awards the design consultancy contract for Ethiopia's new global hub airport to the consortium led by Dar and Zaha Hadid Architects.

WINNING FORMULA

1.

COMPLEMENTARITY CREATES SYNERGIES. DIVIDE AND CONQUER:

Two hubs make sense, so long as each has a distinct role.

2.

NATIONAL ASSET WITH CONTINENTAL MISSION:

Align the hub with African Union integration and open-skies goals. That framing widens access to development finance and political backing, turning a country's asset into a connector for the wider region.

WHERE TO NEXT

The near term favours steady delivery in modular steps rather than a single grand build. Phase 1 targets an opening around 2029 with a terminal of about 1.1 million square metres, an initial capacity of approximately 60 million passengers, and more than 100,000 square metres of cargo space. The hinge is connectivity. A reliable highway link over roughly 40 km between Abusera and Bole comes first, followed by an express rail connection, so the two sites operate as a single system, with predictable transfers for passengers and time-sensitive freight. While construction proceeds, Bole continues to carry domestic and regional flights, supported by additional stands and modest facility upgrades. The commercial spine is cargo. Abusera's airport city is planned as a free zone that draws businesses that compete on speed, including pharmaceutical packaging, electronics assembly, and high-value perishables. Direct rail access to the Addis–Djibouti line shortens inland legs, trims dwell times, and widens the catchment across the Horn. Capacity then grows in measured increments as demand and financing allow, adding gates, runways, and warehouse space in sequence rather than in a single leap.

2. INSIGHTS

IMAGE: stock.adobe.com

In this paper, we purposefully depart from more typical units of analysis, such as country, region or continent. We allow the reality on the ground to guide us by asking, where is investment happening and how is connectivity aiding or inhibiting it?

This approach took us to a variety of hubs and networks. Morocco's sprawling Tanger manufacturing and export development, technology centres, and integrated aerial corridors.

This alone offers guidance from a policy perspective. While political borders are important, we should avoid being constrained by them when thinking about investment, connectivity and growth. Smaller units of analysis are often worthy of their own distinct policy environments and very often, policies should address cross-border phenomena.

Policymakers ought to focus not just on the hubs, but also on what lies between. Investment and growth are less about single points of productivity and more about the ways in which they are linked. As the old adage goes, no person is an island. A factory is only as useful as the highways and byways via which raw materials come in and finished products move out into the world.

A further lesson from the cases explored in this paper is the need to play to one's strengths. The global economy is simply too competitive to reward those who can produce an 'okay' product with moderate efficiency. Be it location or scale, resources or cost base, every place can find its niche. Successful hubs embrace that lesson.

To close, SEZs deserve special attention. Increasingly popular in the developing world, their track record in the African context is mixed. Given prominent examples of great success, however, there is a growing body of evidence outlining the winning ways of an SEZ. For instance, "African SEZ programmes that have a well-targeted strategic focus, promote institutional collaboration and take a proactive approach to create linkages with the local economy are more likely to succeed."[95] Tanger Med comes to mind.

[95] Rodríguez-Pose, A., Bartalucci, F., Frick, S. A., Santos-Paulino, A. U., & Bolwijn, R. (2022). The challenge of developing special economic zones in Africa: Evidence and lessons learnt. Regional Science Policy & Practice, 14(2), 456-482.

3. GRAND PLANS

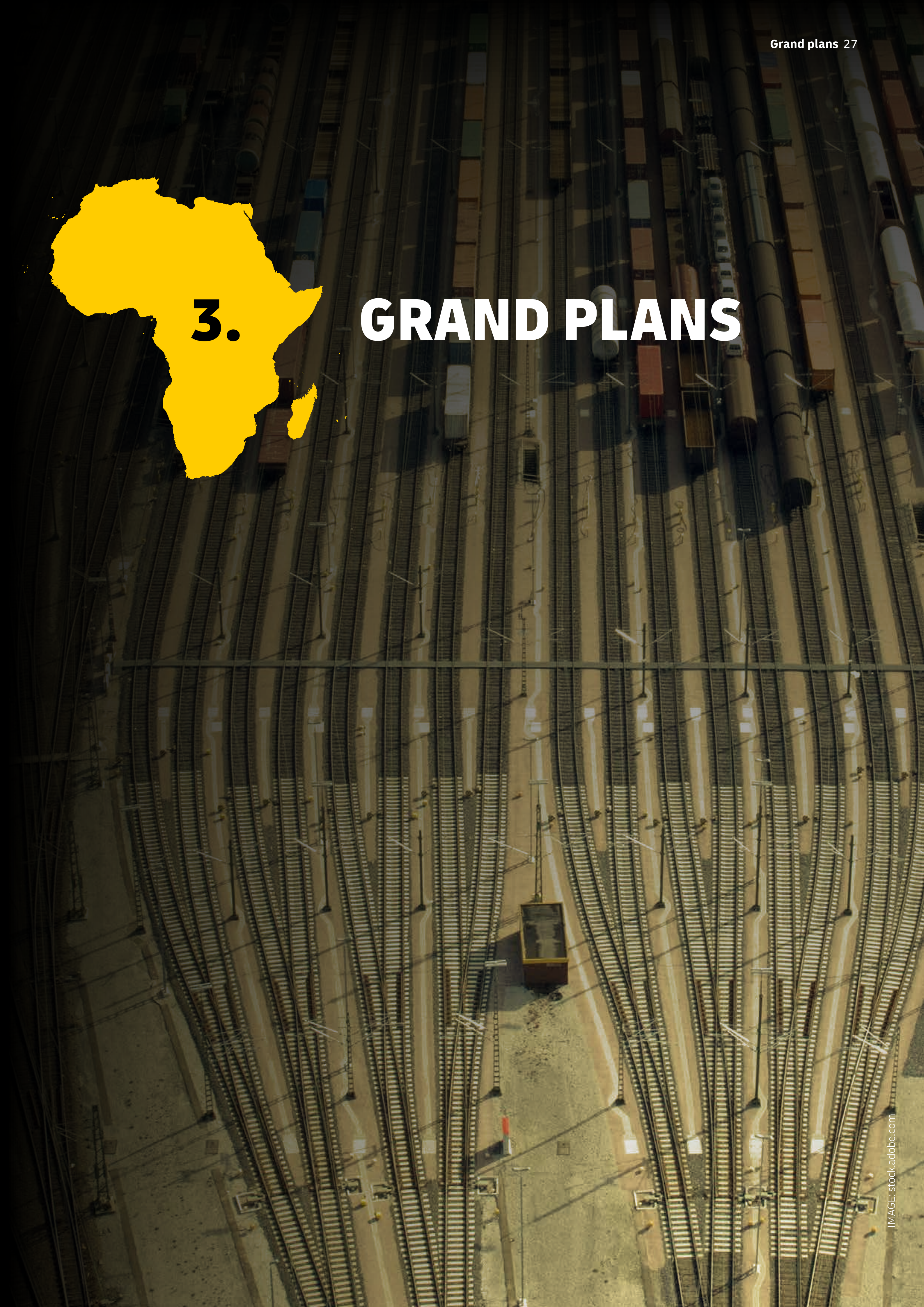


IMAGE: stock.adobe.com

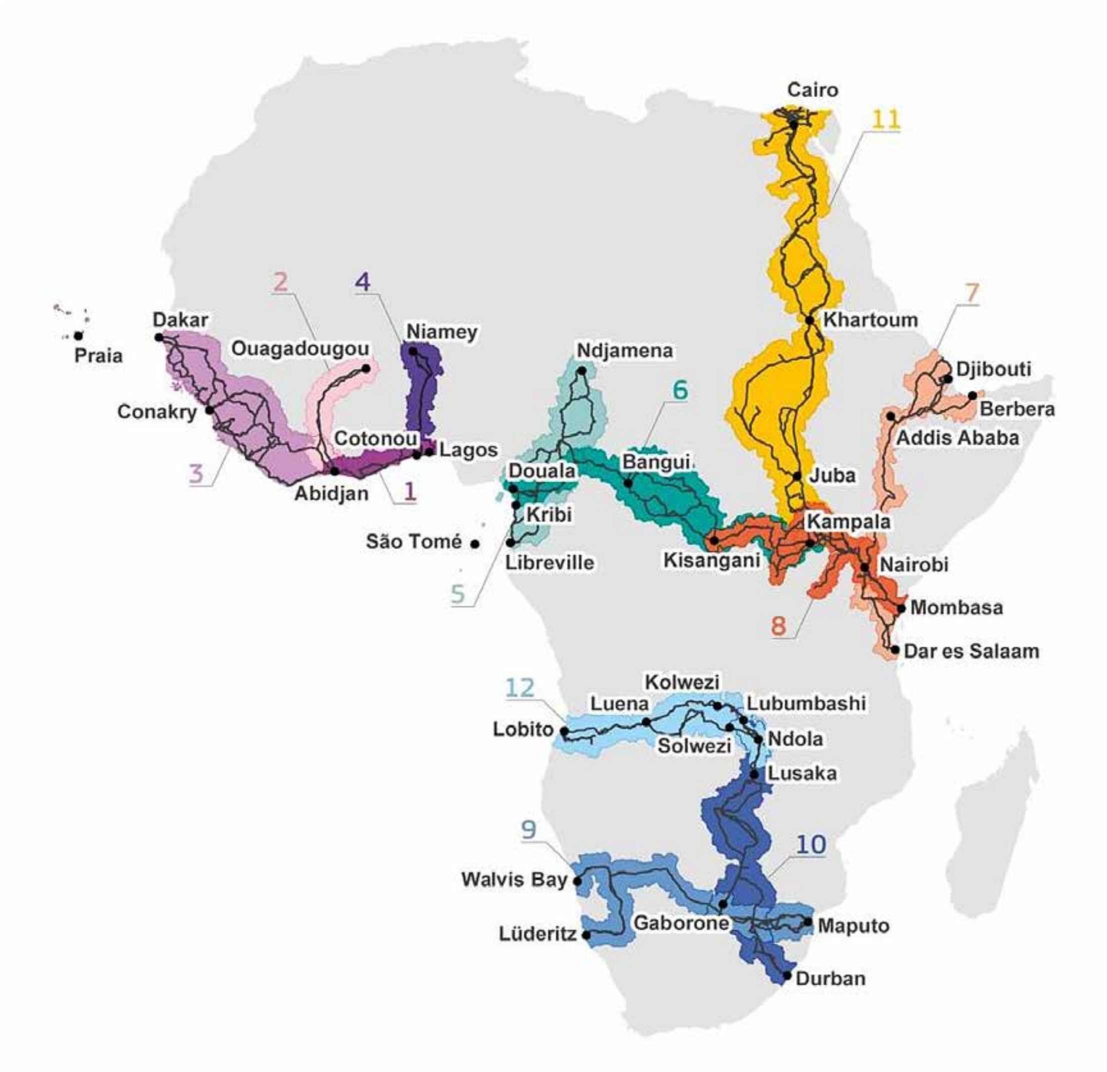
Africa has no shortage of grand plans to grow existing centres of economic gravity, establish new ones, and connect these centres with physical and digital infrastructure. Two are worth monitoring as bellwethers.

The EU's Global Gateway has mapped 12 priority transport corridors across 30-plus African countries to improve trade with Europe. The plan prioritises better transport and accessibility, lower carbon impact with biodiversity protection, smarter digital links, and support for value chains.[96]

These corridors already comprise "vast networks of roads, railways, waterways, ports, and pipelines built to connect sites of economic activity to urban centres and global markets".[97] Thus, the vision is not to begin from scratch, but to facilitate these existing networks' growth. The map of the 12 corridors therefore represents not a pipe dream, but a work in progress.

With the Global Gateway initiative, the EU "seeks to mobilise up to €300bn of investments in infrastructure projects across low-income countries."[98] Based on assessments of "the combination of characteristics, such as fast population growth, high congestion in and between urban centres, limited access to sanitation, water, education and health services, scarce transport networks, long drive times, and low natural (e.g. floods) and man-related (e.g. conflicts) risks", the EU determines that "improving transport and accessibility appears to be the most promising area for investment in all corridors."[99]

FIGURE 6
CORRIDORS ENVISIONED BY THE EU TO TRANSFORM AFRICA



Source: Kavalov, B., Kučas, A., Kompil, M., Proietti, P., Sulis, P. & Maistrali, A. . (2025). Global Gateway Support to Transport Corridors in Africa – Consolidated Report - CUSA Project, Oliete Josa, S., & Georgelin, L. (editors), Publications Office of the European Union, Luxembourg, 2025.

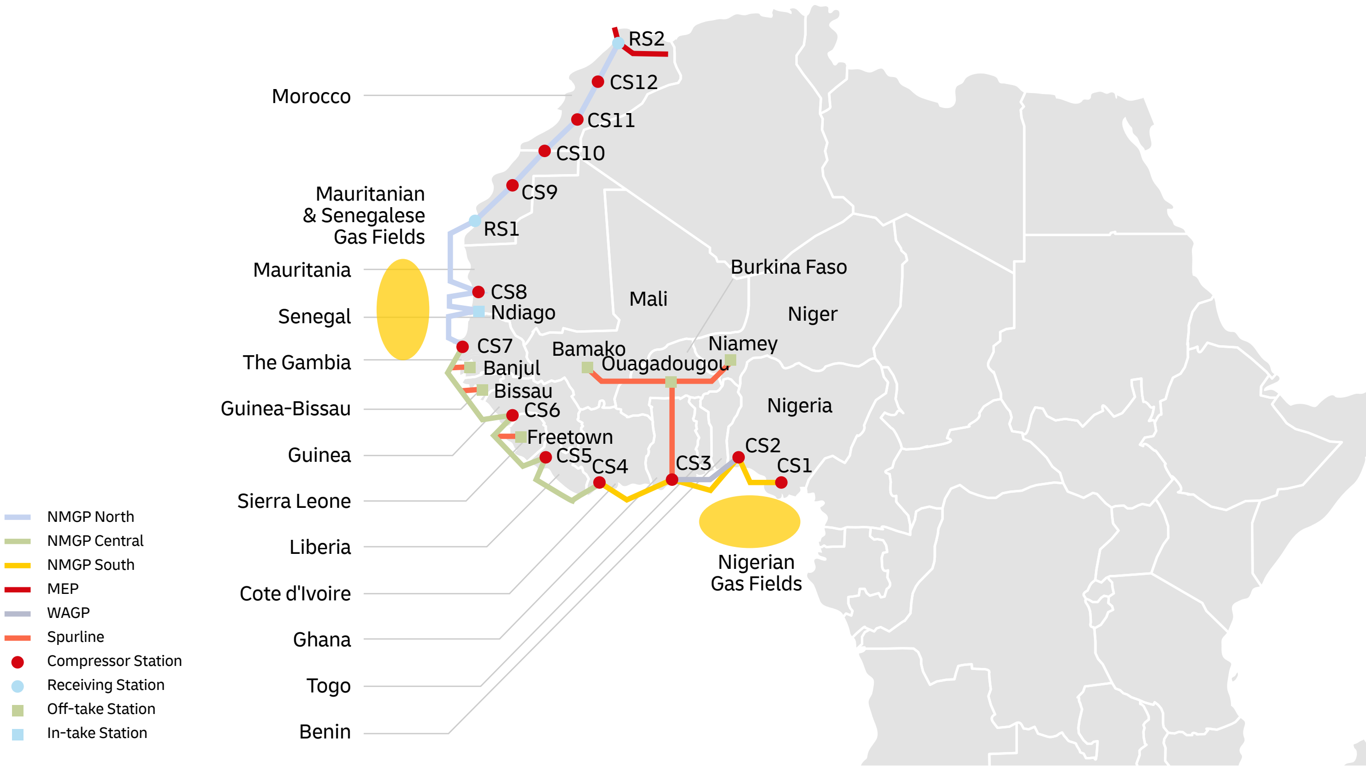
[96] Joint Research Centre. (2025, August 21). EU Global Gateway support to strengthen transport and trade between Africa and Europe. European Commission.
[97] Eickhoff, K. (2023, July 3). The politics of infrastructure development in East Africa: What challenges lie ahead for the EU Global Gateway? (Megatrends Working Paper 2023-04). Stiftung Wissenschaft und Politik (SWP).
[98] Bounds, A., & Mosolova, D. (2024, May 12). EU fighting to counter China's influence in global south, says top official. Financial Times.
[99] Joint Research Centre. (2025, August 21). EU Global Gateway support to strengthen transport and trade between Africa and Europe. European Commission.

Consider also the African Atlantic Gas Pipeline (AAGP). This US$25 billion natural gas pipeline is set to span over 6,800 km, including 5,100 km offshore, eventually linking Nigeria to Morocco and then stretching north to Europe. Agreed to in 2016, the end result would be a strategic collaboration between over a dozen nations representing nearly half a billion people.

"By traversing 16 countries, the pipeline shall not only supply the local markets with a sustainable and reliable source of energy, it will also support industrial and economic development and create a competitive regional power market."[100]

West African nations concluded rights and obligations for the project in December 2024. This represents the ability of a multitude of African nations, working with European counterparts, to coordinate around a megaproject that has the capacity to transform lives and give a foundation for new centres of investment gravity.

FIGURE 6
ENVISIONED GAS ATLANTIC COAST GAS PIPELINE



Source: ILF Consulting Engineers (2025)

[100] ILF Consulting Engineers (2025). Navigating the African-Atlantic Gas Pipeline Project. ILF Consulting engineers.

4. CONCLUSION

Hub, complex or corridor, centres of economic gravity come in multiple shapes and sizes. Closely linked with national economic strategies and fortunes, these phenomena frequently traverse political boundaries. In this sense, they can resemble living beings, feeding off of industrial forces, large and small, connecting people and places, adapting to a changing environment.

From the digital domains of the Yabacon Valley to the motoring ports of Tanger to the aerial action in East Africa, they are burgeoning in Africa. Or rather, in some parts of Africa.

To unleash the full power of interconnected hubs, national strategy should align with local action, and government efforts should combine with those of regional and super-national communities. Perhaps most of all, sources of competitive advantage should be sought out and harnessed.

Be it a strategically important location in the nexus of criss-crossing trade routes, some natural resource hidden beneath the soil, or, as is now increasingly the case, a large, youthful population bursting with energy, these represent starting points that conducive policy frameworks and public–private relationships can unleash.

REFERENCES

1. Abedin, E. (2025, June 26). *Content moderation is a new factory floor of exploitation – labour protections must catch up.* Institute for Human Rights and Business.
2. Africa Business Communities. (2024, May 14). *Microsoft launches AI skilling initiative in Kenya to train 1 million people by 2027.*
3. Africa Strictly Business. (2015, July 28). *The rise of Yabacon Valley.*
4. Ahram Online. (2024, July 2). *Egypt constructed 945 bridges and tunnels in last 10 years: Ministry.*
5. AidData. (n.d.). *Project 36251: Addis Ababa–Adama Expressway Phase 2.*
6. Andela. (2024, June 25). *Meet the humans of Andela.*
7. Arab Air Carriers Organisation. (2025, January, 2). *9% increase in passenger traffic at Egyptian airports in 2024.*
8. Believe Resourcing. (2025, March 11). *South Africa: The BPO powerhouse of Africa.*
9. Bounds, A., & Mosolova, D. (2024, May 12). EU fighting to counter China's influence in global south, says top official. *Financial Times.*
10. Bowmans. (2022, April 20). *Kenya: Google and Microsoft set up tech development hubs in Kenya.*
11. Brown Political Review. (2023, November 6). *Seeds of Silicon Savannah: Supporting home-grown talent at the heart of Africa's tech industry.*
12. Business Insider Africa. (2025, April 25). *Morocco's King Mohammed VI launches Africa's longest high-speed rail line.*
13. Business Today Staff. (2025, January 28). *Egypt to increase agriculture exports by 20% in 2025.*
14. CFI.co. (2021). *Tanger Med Zones: Best Industrial Free Zone Global 2021.*
15. Chemonics Egypt Consultants, Wageningen University & Research. (2023, August). *Cold-chain investment opportunities in horticulture in Egypt.*
16. CNBC Africa. (2025, April 8). *Kenya eyes double-digit growth fuelled by ICT investments* [Video].
17. Co-Creation Hub Africa. (2019, September 26). Press release: *CcHUB acquires iHub.*
18. Dealroom.co. (2025, May 21). Global Tech Ecosystem Index 2025.
19. Dettoni, J. (2020, October 15). *fDi's Global Free Zones of the Year 2020 – The winners.* fDi Intelligence.
20. DHL. (2024). *DHL global connectedness report 2024.* DHL.
21. Digital Cooperation Organization. (2024, December). *Digital economy trends 2025.*
22. EBRD Green Cities. (2024, February 8). *6th of October becomes first city in Egypt to complete Green City Action Plan.*
23. Egyptian Customs Authority. (2024). *Egypt Time Release Study II: Sea ports Alexandria, El Dekhalia and Damietta.* Ministry of Finance.
24. Eickhoff, K. (2023, July 3). *The politics of infrastructure development in East Africa: What challenges lie ahead for the EU Global Gateway?* (Megatrends Working Paper 2023-04). Stiftung Wissenschaft und Politik (SWP).
25. Endeshaw, D., & Holland, H. (2025, August 11). *African Development Bank to finance $500 million of Ethiopia's new airport.*
26. Enterprise Staff. (2025, September 3). *Could cold storage be the future of Egypt's storage industry?*
27. Ethiopian Airlines. (2024, February 29). *Ethiopian inaugurates first-of-its-kind e-commerce logistics facility at Bole International Airport.*
28. Ethiopian Airlines. (2024, August 12). *Ethiopian Airlines signs a contract with Dar Al-Handasah to develop a mega airport city.*
29. Ethiopian Airlines. (2025, August 27). *Ethiopian Airlines signs a contract with Dar Al-Handasah to develop a mega airport city* [Press release]. Ethiopian Airlines Group.
30. Ethiopian Cargo & Logistics Services. (n.d.). *Addis Ababa Hub – Our state-of-the-art cargo terminal.*
31. European Bank for Reconstruction and Development (EBRD). (2024, November 20). *ENR 10th Ramadan Railway Link.*
32. Flutterwave. (2024). *End of year 2024 recap.*
33. Fortune Business Insights. (2025, September 8). *Africa clinical trials market size, share & industry analysis, 2024-2032.*
34. FreshPlaza Staff. (2024, October 14). *Egyptian citrus exports exceed 2 million tonnes mark for the first time.*
35. Granger, L. (2014, February 26). *From iHub to the BRCK: How Ushahidi became an African success story.* Ventureburn.
36. Heathrow. (2025, February 26). *Record demand drives Heathrow growth – results for year ended 31 Dec 2024* [Press release].
37. Houenou, A. S. (2025, July 21). *Tanzania's Kabanga Nickel slashes costs 5% to $942M.* Ecofin Agency.
38. iHUB. (n.d.). *About us.*
39. ILF Consulting Engineers (2025). *Navigating the African-Atlantic Gas Pipeline Project.* ILF Consulting engineers.
40. Industry Today Staff. (2025, July 22). *Egypt pharmaceutical market size to reach USD 13,824.7 million by 2033: Trends & opportunities.*
41. International Finance Corporation. (2024, November 4). *IFC, MIGA, and international banks partner with Morocco's Tanger Med Port Complex to expand truck and passenger terminal* [Press release].
42. Jivraj, H. (2025, February 21). *Morocco's EVs tread fine geopolitical line.* fDi Intelligence.
43. Jiwa, N. (2023, July). *Outsourcing to Africa: Top countries for BPO.* Execs In The Know.
44. Joint Research Centre. (2025, August 21). *EU Global Gateway support to strengthen transport and trade between Africa and Europe.* European Commission.
45. Jonga, M. (2022, December 2). *Vision 2035: Ethiopian Airlines to double fleet, network and expand partnerships.*
46. Kanali, N. (2025, March 11). *Nigeria to establish a digital free zone for tech and global service businesses.* Africa Business Communities.
47. Kapoor, L. (2025, January 30). *IRSC to install 3.2 MW solar rooftop plants in Egypt.* Saur Energy Middle East.
48. Kavalov, B., Kučas, A., Kompil, M., Proietti, P., Sulis, P., & Maistrali, A.. (2025). *Global Gateway Support to Transport Corridors in Africa – Consolidated report* (S. Oliete Josa & L. Georgelin, Eds.). Luxembourg: Publications Office of the European Union.
49. KoBold Metals. (2025). *Zambia.* KoBold Metals.
50. Lagos State Government. (2024). *Official Lagos State website.* Lagos

State Ministry of Innovation, Science and Technology.

51. Manjonjo, K., & Mokgonyana, K. (2024, October 28). *Foreign countries are lining up to exploit Africa's critical minerals*. Africa at LSE.

52. McCandless Farmer, B. (2025, June 29). *How Kenya became the "Silicon Savannah".* CBS News.

53. Microsoft. (2024, May 22). *Microsoft and G42 announce $1 billion comprehensive digital ecosystem initiative for Kenya*.

54. Moringa School. (2025). *Home*.

55. Munoz Padros, A., & Bos, J.-M. (2025, September 15). *Critical minerals could supercharge Africa's future*. DW.

56. Nsehe, M. (2011, July 20). eBay billionaire Omidyar gives Nigerian tech incubator $200,000. *Forbes.*

57. Okafor, C. (2024, February 5). Bill Gates and Jeff Bezos's firm discovers largest copper deposit in Zambia. *Business Insider Africa*.

58. Onanuga, B. (2025, May 19). *Investment in digital economy grows nine fold, rollout of $2 billion fibre optic infrastructure begins Q4: Bosun Tijani.* State House Nigeria.

59. Pilling, D. (2023, October 5). Morocco's car-making sector revs up for EV era. *Financial Times.*

60. Plug and Play Tech Center. (2025, April 10). *How Flutterwave became a unicorn – Interview with CEO Olugbenga Agboola.*

61. Reuters. (2023, September 25). Billionaire-backed KoBold Metals plans new Zambian copper mine within a decade. Mining Weekly.

62. Reuters Staff. (2023, March 16). *Hutchison Ports to invest $700 mln in two Egyptian ports*.

63. Reuters Staff. (2018, July 27). *Logistics firm DHL to create venture with Ethiopian Airlines.*

64. Rodríguez-Pose, A., Bartalucci, F., Frick, S. A., Santos-Paulino, A. U., & Bolwijn, R. (2022). The challenge of developing special economic zones in Africa: Evidence and lessons learnt. *Regional Science Policy & Practice*, *14*(2), 456-482.

65. Shapshak, T. (2019, September 30). Nigeria's CcHub has bought Kenya's iHub, uniting Africa's flagship tech spaces. *Forbes.*

66. Sharkawy & Sarhan. (2025, January 9).*Commercial close of 10th Ramadan Dry Port PPP Project and Logistics Centre*. Sharkawy & Sarhan.

67. Staff Writer. (2025, January 1). Gates' KoBold Metals raises $537m in latest funding round. *Miningmx*.

68. State Information Service (Egypt). (2023, August 6). *Tahya Misr multi-purpose station in Alexandria.*

69. Submarine Networks. (n.d.). *Nigeria.*

70. Tanger Med. (n.d.). *Energy transition.*

71. Tanger Med Zones. (n.d.). *Incentives.*

72. Tanger Med. (n.d.). *Tanger Med's unique trajectory. fDi Intelligence*.

73. Tanger Med Special Agency. (n.d.). *Industrial clusters.*

74. Tanger Med Zones. (n.d.). *Investing in Tanger Med Zones: Top reasons why Tanger Med Zones are ideal for investments.*

75. Tech in Africa. (2025, September 18). *These 5 African countries are leading the tech boom in 2025.*

76. Technocrat Media Nigeria. (2025, July). *Inside Yabacon Valley: Nigeria's answer to Silicon Valley.*

77. Techpoint Africa. (2024, May 13). *Kenya emerges as Africa's top investment destination in Q1 2024.*

78. TeKnowledge. (n.d.). *Outsourcing in Africa: The next IT outsourcing hub.*

79. Temsamani, S. (2024, October 14). King Mohammed VI: Steering Morocco's rise as an African powerhouse – OpEd. *Eurasia Review*.

80. The Atlas of Economic Complexity. (n.d.). *Country profile for Morocco.* Harvard Kennedy School.

81. The East African Marine System (TEAMS) Ltd. (n.d.). *The East African Marine System – TEAMS LTD.*

82. DHL Express. (2024, January). *Dangerous Goods: UN3373 Biological Substance, Category B capability* [Brochure]. DHL.

83. United Nations Conference on Trade and Development. (2025). Trade in critical minerals shapes energy transition, digital transformation and industrial development worldwide. *UNCTAD SDG Pulse 2025*.

84. University of Lagos. (n.d.). *UNILAG Statistics*.

85. Verified Market Research. (2025, August). *Egypt cold-chain logistics market size by type (temperature-controlled warehouses, transportation, packaging), by end-user (food and beverage, pharmaceutical, healthcare, chemicals), by geographic scope and forecast.*

86. World Bank. (2022, October 3). *Egypt: US$ 400 million project will help to improve and decarbonize logistics and transportation sectors*.

87. World Economic Forum. (2025, July). *Healthcare access in Africa: clinical trials*. WEF.

88. World Economic Forum, Development Bank of Southern Africa, & McKinsey & Company. (2025). *Securing minerals for the energy transition: Finance for Southern Africa*.

89. World Shipping Council. (n.d.). *Top 50 container ports.*

90. Yaba College of Technology. (n.d.). *Message from the Rector.*

91. Zaha Hadid Architects. (2024, August 12). *Ethiopian Airlines awards the design consultancy contract for Ethiopia's new global hub airport to the consortium led by Dar and Zaha Hadid Architects.*

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