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Governing in the *Age of AI*: Unlocking a New Era of Transformation in Africa

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Executive Summary

For African leaders, harnessing the power of artificial intelligence represents the single greatest opportunity to accelerate development and drive meaningful change.

A young, rapidly growing population is placing unprecedented pressure on governments to deliver jobs, efficient public services and food security. However, traditional development models, heavily reliant on aid and limited tax revenue, are failing to keep pace. This has eroded public trust in governments across the continent and fuelled a pervasive sense of stagnation.

In this context, incremental reform is no longer sufficient. African countries require bold, systemic transformation. They must fully embrace the 21st-century technological revolution – not as an option but as a fundamental necessity for survival and progress.

Historically, development in Africa has followed a linear trajectory, hindered by infrastructural gaps, resource limitations and protracted policy implementation. This approach is no longer sustainable. AI offers a disruptive, non-linear pathway to leapfrog these constraints and accelerate progress at scale.

Embracing this technology is not simply about doing things better – it is about fundamentally redefining what is possible. And in an era where governments must achieve more with less, the focus must be on investment that unlocks tangible developmental gains.

AI-driven public-sector modernisation offers precisely this potential.

In our first paper in this series, *Governing in the Age of AI: A New Model to Transform the State*, the Tony Blair Institute for Global Change argued that AI offers a transformative pathway for reimagining how the state works, making governments more efficient, transparent and agile. Consider the possibilities: AI can enhance public-service delivery, streamlining bureaucratic processes, reducing corruption and improving citizen engagement. In health care, AI can improve diagnostics, optimise resource allocation and extend access

to quality care to remote communities. In education, AI can personalise learning, improving student outcomes at scale. In agriculture, it can increase yields, improve market access for farmers and strengthen food security.

These examples do not just represent technological advances; they are the building blocks of a new, agile, inclusive and results-oriented governing model – one that enables governments to deliver more, at lower cost and with greater impact.

The significance of leveraging AI for governance in Africa is particularly profound. While governance challenges are universal, they are often more pronounced in African nations due to a complex interplay of historical, socioeconomic and political factors – both internal and external – that weaken institutions and governance, and consequently slow development. This paper sets out a practical pathway for governing in the age of AI in Africa, recognising that each country will require a tailored approach based on its unique context to maximise AI's role as a force multiplier for sustainable and inclusive development.

Three structural governance challenges – capacity deficits, information asymmetries and fragmented institutions – stand in the way of rapid development. Though common globally, they are particularly acute in African countries that face severe resource constraints. While the recommendations we set out are not adapted to each particular set of national circumstances, they provide a broadly applicable pathway that can help guide African governments in harnessing AI to overcome such constraints, setting them on a shorter road to long-term prosperity.

To fully unlock AI's potential, African governments must adopt a dual-track strategy – one that balances immediate, high-impact interventions with the development of long-term structural readiness. This means rapidly deploying AI for impactful use cases in priority sectors including health care, education, agriculture and public administration, addressing immediate challenges and building momentum. In parallel, it means building foundational enablers including digital public infrastructure, ethical AI governance and a skilled workforce. By embedding AI into the core of governance, African countries can move beyond fragmented, short-term initiatives and drive a new era of inclusive, systemic transformation.

Successfully integrating AI into the public sector will require clear national leadership, robust institutional frameworks and forward-thinking investment. The following key policy actions provide a roadmap for African governments to drive AI adoption effectively and at scale:

1. Define a national AI vision and governance framework

- Develop a national AI strategy with clear goals, sectoral priorities and ethical AI principles.
- Establish a National AI Council as a formal mechanism to coordinate AI initiatives across ministries and align efforts with African Union-wide frameworks.

2. Invest in foundational AI infrastructure and data governance

- Prioritise digital public infrastructure by expanding nationwide connectivity and building interoperable platforms, as well as digital-identity systems to support AI-driven services.
- Establish a National Data Office to oversee data governance, interoperability and quality control, ensuring high-quality, locally relevant data inputs for AI applications.

3. Cultivate AI talent and innovation ecosystems

- Develop AI talent pipelines through integrated education, workforce training and AI research programmes, with a focus on small language models for localised, resource-efficient solutions that can run on smartphones and laptops or in low-connectivity environments.
- Establish AI Innovation Units within key ministries to foster research, incubate startups and scale AI-driven public-sector applications.

4. Adopt adaptive AI-governance and regulatory models

- Deploy AI-powered real-time policy monitoring tools to track progress on key national priorities, assess impact and enable data-driven decision-making.

- Establish regulatory sandboxes to safely test and refine AI applications before full-scale deployment.

5. Strengthen national compute capacity for AI development

- Build high-performance computing infrastructure, prioritising energy-efficient AI compute hubs to support large-scale AI applications.
- Expand compute access to underserved regions through edge computing and decentralised AI systems.
- Foster regional AI collaboration by developing shared compute networks in partnership with the private sector, academia and international organisations.
- Advocate for equitable access to AI technology and compute power, ensuring Africa is not excluded from critical AI advances.

While AI requires substantial upfront investment, it should not be seen as an isolated expense, but as a strategic enhancement of existing development spending. Many African nations are navigating high debt burdens, limited fiscal space and competing development priorities, making large-scale AI investments difficult to justify within existing financial constraints. Yet African governments already allocate significant funding to infrastructure, research and digital-public-infrastructure development – all of which are critical enablers of AI adoption. The key financing issue, therefore, is not just about securing new funds but about integrating AI investment into existing financial frameworks in a sustainable way.

For many African governments, prioritising AI amid pressing development needs and fiscal constraints will require careful navigation of trade-offs. The challenge is not just financial – it also encompasses capacity constraints, infrastructure gaps and governance readiness. Given these realities, some nations may move quickly towards comprehensive AI integration, while others may require a phased approach, starting with sector-specific AI applications in priority areas.

Innovative financing models are key to mitigating the upfront cost burden of AI adoption. Governments should leverage public-private partnerships, concessional financing and outcome-based funding mechanisms that align AI investments with tangible development returns, ensuring they do not divert resources from essential services but rather support their delivery. In addition, aligning AI investments with broader debt restructuring and concessional lending programmes – such as those offered by development-finance institutions and multilateral banks – can provide governments with financial instruments they are already familiar with, making AI adoption more accessible and financially feasible.

A dedicated AI-Financing Compact for Africa, modelled after successful frameworks like the Energy Compacts,¹ could help governments integrate AI investment into long-term economic and fiscal planning. Such a compact would link AI readiness to concessional funding, debt relief and sustainable financing mechanisms, ensuring AI investment supports national development goals while enhancing economic resilience. For instance, governments prioritising digital infrastructure and AI-driven governance reforms could access preferential funding terms, reducing the financial burden while unlocking long-term efficiency gains. This, in turn, may give lenders more reassurance that the investment will contribute to economic growth in the long run.

Most importantly, in a world increasingly shaped by AI, the greatest financial risk for African governments is not the cost of adoption, but the far greater long-term cost of inaction. Delayed AI integration will stall economic growth, weaken competitiveness and deepen reliance on external solutions. Governments that invest in AI today will unlock new economic opportunities, while those that hesitate risk falling further behind. The real question is not whether Africa can afford AI, but whether it can afford to miss out on its benefits.

02

The Three Systemic Barriers Undermining Effective Governance

African countries face a complex interplay of challenges that limit progress across all sectors. These challenges stem from a core governance deficit: the structure of governing systems prevents effective resource coordination, data utilisation and policy implementation at scale. This is not simply a matter of execution, but a structural weakness within governing systems which manifests in three interconnected ways:

- **Capacity deficits**, which restrict the ability of states to effectively deliver essential services and manage resources effectively. These include fiscal constraints, inadequate physical and digital infrastructure, and a shortage of skilled human capital. These deficits constrain both the quality and reach of public services, such as health care or education, and the availability of economic opportunities.
- **Information asymmetries**, which create significant barriers to evidence-based policymaking and effective resource allocation. Weak data collection coupled with limited analytical capacity result in a lack of actionable insights into population needs, service-delivery gaps and emerging challenges. These information deficits hinder effective planning, monitoring and evaluation, perpetuating inefficiencies and impeding progress towards development goals.
- **Fragmented institutions**, which undermine the coherence and effectiveness of public action. This fragmentation includes issues such as overlapping mandates, bureaucratic inertia, corruption and weak coordination mechanisms across government agencies and levels. It leads to duplicated efforts, wasted resources and an inability to effectively address complex, cross-cutting challenges. In addition, many institutions lack agility in responding to crises or adopting innovative solutions.²

These governing constraints exist in all governments to some extent, including in more advanced Western economies where bureaucratic silos and inefficiencies also hinder policy execution (as we describe in our paper

Governing in the Age of AI: A New Model to Transform the State). However, in many African countries, these challenges are more deeply entrenched, creating a “doom loop” of inefficiency and systemic dysfunction that stifles development, weakens service delivery and deepens inequality.

Africa’s demographic shifts are intensifying these governance constraints. More than 60 per cent of the population is under 25 and the total population is expected to double by 2050. While this demographic boom offers opportunities for economic growth and innovation, it also exposes critical weaknesses in governance, service delivery and institutional dynamism – placing unprecedented pressure on already strained systems.

Despite these challenges, recent progress demonstrates that transformation is possible. From 2000 to 2019, the continent’s GDP grew at an average annual rate of 4.2 per cent, through structural shifts from traditional sectors such as agriculture and extractive industries to a burgeoning services sector, which accounted for approximately 56 per cent of the continent’s GDP in 2019, up from 50 per cent in 2000.³ This growth coincided with social gains, including increased life expectancy (from 53 to 64 years)⁴ and improved school-enrolment rates.

These achievements underscore a key lesson: strengthened governance, strategic investment and innovation accelerate development. Successful initiatives – such as Kenya’s mobile-banking revolution, Ghana’s digital-identity system and Rwanda’s artificial-intelligence-driven agricultural solutions – demonstrate how innovation can overcome governance bottlenecks and unlock long-term growth. African countries have the capacity to modernise and build more agile, data-driven institutions capable of meeting the demands of a growing population. The challenge lies in replicating and scaling these successes through systemic, technology-driven reforms that go beyond short-term interventions.

Breaking the “doom loop” represents the central governing challenge for Africa – one that cannot be solved by relying on the same fragmented, reactive and short-term approaches. In the age of AI, successful governing in Africa requires a clear understanding of these structural constraints and the region’s distinct governance challenges. While development

gaps persist, AI should not be seen as a competing priority but as a force multiplier, enhancing efficiency, optimising resources and accelerating progress in essential sectors. Integrating AI into governance frameworks ensures that foundational investments in priority sectors achieve greater reach and impact.

By leveraging real-time data analytics, predictive modelling and automated service delivery, AI can empower governments at both local and national levels to overcome capacity deficits, bridge information gaps and improve governance coordination. This shift is essential for building and sustaining a 21st-century governance model in Africa.

03

AI's Role in Transforming Key Challenges and Sectors

Building upon the structural barriers we have identified – capacity deficits, information asymmetries and fragmented institutions – we next analyse the interplay of these barriers with critical African public-sector challenges: public-service and governance efficiency, youth unemployment and job creation, and agriculture and food security. We then explore targeted AI solutions designed to overcome these challenges and drive impactful, systemic change.

Public-Service and Governance Efficiency

Citizens bear the greatest burden of systemic issues in public services, including frequent delays, inconsistent service quality and limited accountability from public institutions. At the core of these inefficiencies is fragmentation; government ministries and agencies operate in silos, leading to policy misalignment, redundant efforts and inefficient resource use. Initiatives across sectors like health care, education and infrastructure are rarely aligned, further compounding service-delivery challenges.

Service-delivery backlogs are among the most visible and frustrating outcomes of these inefficiencies. For example, in South Africa patients frequently endure two-to-four-hour waiting times in outpatient departments, with some waiting an entire day only to be turned away at closing time without receiving care.⁵ In Kenya's judiciary, efforts to clear case backlogs have reduced pending cases from more than one million in 2011 to slightly over 276,000 in 2023,⁶ yet persistent underfunding and understaffing remain significant barriers, with the judiciary receiving less than 50 per cent of required resources and operating at only 45 per cent of its optimum capacity⁷ – further slowing judicial processes. These inefficiencies, which are seen in numerous other public services, have created opportunities for non-state actors – including private firms, NGOs and development agencies

– to fill critical service-delivery gaps and blur lines of accountability. Over time, this dynamic erodes trust in public institutions and weakens government capacity.

Opacity remains a pervasive issue, particularly at the local-government level, where weak or non-existent accountability mechanisms⁸ leave citizens disempowered. Many people lack awareness of their rights, entitlements and the status of their service requests, making it difficult to hold authorities accountable. The absence of transparent, real-time service tracking, compounded by slow, bureaucratic workflows, creates fertile ground for corruption and exploitation.

Despite increasing calls for digitalisation, many government agencies hesitate to embrace digital tools and processes due to regulatory limitations, internal resistance from civil servants linked to fear of job displacement, insufficient support for digital innovation and a compliance-focused bureaucratic culture.^{9,10} For example, in Zambia, efforts to implement e-government services under the National ICT Policy of 2006 faced significant challenges due to civil servants' resistance, driven by inadequate digital skills and a reluctance to adopt new technologies.¹¹ Without internal buy-in, institutions miss the transformative potential of technology to improve service delivery, streamline workflows and reduce delays. As a result, many governments still rely on manual, paper-based systems, frustrating citizens who expect more modern, responsive and accessible public services.

STRUCTURAL BARRIERS DRIVING INEFFICIENCIES

The degree to which the structural constraints we have set out shape the governance landscape, and thus contribute to public-sector and governance inefficiencies, varies across African countries. This variability stems from a complex interplay of factors including historical legacies, political stability and the maturity of institutional frameworks, as well as external factors like global geopolitics.

Capacity deficits: African governments often operate under severe fiscal constraints, driven by low tax revenues, high debt burdens and heavy reliance on foreign aid. These limit investment in infrastructure, public

services and digital-transformation efforts. For example, local governments frequently lack the financial autonomy¹² and resources to address community-specific needs, resulting in underfunded and inaccessible services, especially in rural areas. The lack of adequate physical and digital infrastructure further limits government reach and responsiveness, exacerbating existing inequalities and preventing governments from delivering equitable, high-quality services to all citizens.

Information asymmetries: Effective governance relies on accurate, real-time data to inform policy decisions and resource allocation. However, Africa faces a critical shortage of data infrastructure, with demand for data-processing and storage facilities projected to exceed supply by more than 300 per cent.¹³ Data that are collected are often fragmented, incomplete or inaccurate, leading to “dirty data” with limited utility for predictive analytics and strategic planning. Much of these data are also not openly accessible, restricting cross-sectoral collaboration and preventing governments, researchers and innovators from leveraging them for evidence-based policymaking and AI-driven solutions. Additionally, with around 83 per cent of Africa’s workforce (and 85 per cent in sub-Saharan Africa (SSA)) in the informal economy,¹⁴ large portions of economic activity remain undocumented, complicating efforts to develop inclusive policies and social protections.

In addition to domestic data gaps, a lack of interoperability between data systems across African regions complicates regional coordination. Addressing governance issues with cross-border implications – such as pandemics, climate change and migration – requires interoperable systems that enable seamless data-sharing and collaboration among countries.

Fragmented institutions: Many African governments operate with rigid, centralised bureaucracies that prioritise compliance with bureaucratic procedures over adaptability and performance outcomes. Without accurate, timely data or robust mechanisms to support localised delivery, public administrations default to maintaining strict control, making inflexibility the norm. This restricts institutions’ ability to adapt policies and services to regional needs or implement reforms effectively. With decision-making power concentrated at the national level in a majority of African countries,

local administrators – who are often more attuned to their communities’ specific challenges – lack the autonomy to act independently, limiting their ability to drive responsive and context-specific solutions.

An ageing workforce and limited recruitment of tech-savvy personnel further impede innovation within public institutions. Public-sector jobs often lack competitive salaries, benefits and professional-development opportunities, making it difficult to attract and retain skilled talent, particularly in IT and data management. Consequently, many public institutions remain staffed by an ageing civil service with limited capacity to adapt to new digital tools, perpetuating inefficiencies in public administration.

AI-DRIVEN SOLUTIONS FOR SYSTEMIC CHANGE

To overcome these systemic challenges, governments must modernise service delivery through AI-powered platforms that enhance coordination, automate workflows and enable real-time decision-making. Rather than deploying isolated AI applications, an integrated AI ecosystem should be established – one that learns, adapts and continuously optimises governance for greater efficiency, transparency and responsiveness to citizens.

AI-powered platforms that optimise public-service delivery: Unified, AI-powered governance platforms can transform public administration by breaking down inter-agency silos, enabling seamless information-sharing, automation and real-time coordination. Rwanda’s Irembo platform, which offers access to more than 100 government services, including civil-registration, identity, land and property services, has reduced processing times by 80 per cent, saving citizens 40 million working hours annually¹⁵ – demonstrating the impact of digital governance platforms. While Irembo achieved this without the use of AI, integrating machine learning and predictive analytics could elevate it into an intelligent, adaptive system that continuously enhances service delivery. AI-driven chatbots and virtual assistants could personalise interactions with citizens by simplifying service navigation, anticipating users’ needs and proactively recommending relevant services, improving both accessibility and responsiveness. Machine-learning models could detect fraud in social-welfare payments and reduce corruption, while AI-powered automation could streamline approvals and

decision-making. Additionally, predictive analytics could optimise resource allocation and service distribution, ensuring services reach those who need them most. Embedding AI into Irembo's proven framework would help Rwanda transition to a smarter, more responsive and data-driven public-service model – one that continuously learns, adapts and improves governance efficiency.

Real-time dashboards that track performance and foster trust: Enhancing transparency and accountability through AI-powered real-time dashboards allows governments to track budget allocations, project progress and service-delivery metrics with greater accuracy. AI can monitor institutional performance, ensuring efficiency benchmarks are met, while sentiment analysis of citizens' feedback can help governments prioritise spending based on public needs. For example, in Kenya's participatory budgeting process,¹⁶ where consultations are often limited in scope, accessibility and transparency, AI integration with Huduma Centres (one-stop government service centres in Kenya) could transform public engagement. AI-driven platforms can aggregate public input from mobile apps, short message service (SMS) systems and AI-enabled kiosks, using natural language processing to analyse and prioritise feedback. Real-time dashboards could then visualise citizens' priorities, track budget allocations and monitor project progress, fostering greater trust and transparency.

Automation that streamlines tasks and improves user experience: AI-driven automation can transform public-service delivery by eliminating inefficiencies, reducing processing times and optimising workflows. Governments can streamline approvals, minimise bureaucratic delays and improve service accessibility by automating routine administrative tasks and integrating AI-powered self-service tools. One good example comes from Lagos, Nigeria, where Madam Shikini, a tax-revenue AI chatbot, is improving public-service efficiency. By automating tax-related enquiries and facilitating interactions with all ministries, departments and agencies in Lagos, Madam Shikini has reduced response times, optimised workflows and enhanced citizens' experiences.¹⁷

Youth Unemployment and Job Creation

The challenge of job creation in SSA is not just a numbers game – it is a systemic crisis with far-reaching economic and social implications. With nearly 12 million young people entering the labour market annually and only 3 million formal jobs created each year,¹⁸ the gap between labour-market demand and supply is stark. This gap expands the informal economy as well as driving economic migration. By 2050, Africa’s working-age population (15–64 years) is expected to nearly double, rising from 849 million in 2024 to 1.56 billion. This represents 85 per cent of the increase in the global working-age population by 2050¹⁹ – a demographic shift that presents both a challenge and an opportunity for economic transformation.

The job-creation crisis in SSA is driven by a dual challenge: managing both labour supply and demand. On the supply side, a persistent skills mismatch weakens labour-market productivity. Approximately one-third of workers in SSA are under-skilled for their roles, while 17.5 per cent are over-skilled,²⁰ creating inefficiencies that lower productivity, raise hiring costs and constrain business growth.²¹ This skills deficit stems from three key factors. First, despite increased school enrolment due to free primary and secondary education, learning outcomes remain critically low, creating a weak foundation for future skills development. More than 20 per cent of children in SSA aged 6 to 11 years old are out of school, rising to a third of children aged 12 to 14.²² Worse, only one in ten of ten-year-old children in SSA can read and understand simple text,²³ highlighting fundamental gaps in basic literacy and numeracy.

These foundational deficits carry over into secondary and tertiary education, leaving many young people without the core competencies needed for technical training, vocational education or knowledge-based industries. As a result, workers entering the labour market lack basic skills required for productive employment, further deepening the supply-side skills mismatch.

Second, skills development is misaligned with industry needs. Many curricula lag behind evolving job-market demands, leaving many graduates ill-prepared for high-productivity sectors. In Kenya, for example, only 8.8 per cent of industry partners believe that technical, vocational education and

training (TVET) is demand-driven and competency-based.²⁴ In addition, with the majority of Africa's workforce engaged in the informal economy, access to lifelong learning and upskilling opportunities are limited. This perpetuates a low-skills trap, limiting both workforce productivity and job mobility.²⁵

Lastly, inefficiencies in the labour market deepen the disconnect between skills demand and supply,²⁶ preventing economies from fully utilising their available talent. Weak job-matching mechanisms and information asymmetries make it difficult for employers to identify qualified candidates and for job seekers to access available opportunities. Many hiring processes remain informal and network-based, favouring connections over skills, while the lack of comprehensive labour-market data and structured job-placement services further compounds the mismatch. Additionally, outdated labour policies and limited career-mobility support make it even harder for workers to move into higher-paying roles or transition between industries. These barriers disproportionately affect young job seekers and informal workers. As a result, businesses struggle to fill critical roles, while many skilled workers remain trapped in low-wage, informal jobs, reinforcing underemployment, talent misallocation and economic stagnation.

On the demand side, the pace of job creation is grossly inadequate to absorb SSA's burgeoning workforce. Governments struggle to foster private-sector growth, as weak economic policies, inadequate infrastructure and limited institutional support constrain businesses' ability to scale and hire. The private sector – a critical engine for job creation – faces high operational costs, limited access to financing, and regulatory bottlenecks that stifle investment and expansion. Furthermore, complex tax systems and restrictive labour regulations discourage formalisation, driving employment into the informal sector where jobs are often low quality and unstable.

In many countries, manufacturing and industrialisation – key drivers of large-scale employment – remain underdeveloped due to inconsistent policies, weak supply chains and unreliable energy infrastructure. Similarly, investor confidence remains low, largely due to macroeconomic instability, unpredictable regulations and weak legal protections. High borrowing costs and inadequate infrastructure further discourage long-term investment in high-potential sectors such as technology, agribusiness and renewable

energy. Without comprehensive economic reform, including streamlined regulations, infrastructure investment and improved access to credit, job creation will remain insufficient, leaving millions underemployed or locked in precarious informal work.

Tackling these supply-and-demand issues can create a virtuous cycle of job creation, higher productivity and economic expansion. On the supply side, each additional year of education in Africa can boost learners' earnings by up to 11.4 per cent – the greatest return on education globally.²⁷ Expanding access to quality education and industry-aligned skills training can boost productivity in both the formal and informal sectors, close the skills gap and incentivise businesses to create jobs.²⁸ On the demand side, streamlined regulations, infrastructure investment and stronger public-private partnerships (PPPs) are critical to creating a business-friendly environment that attracts investment, drives innovation and sustains job creation.

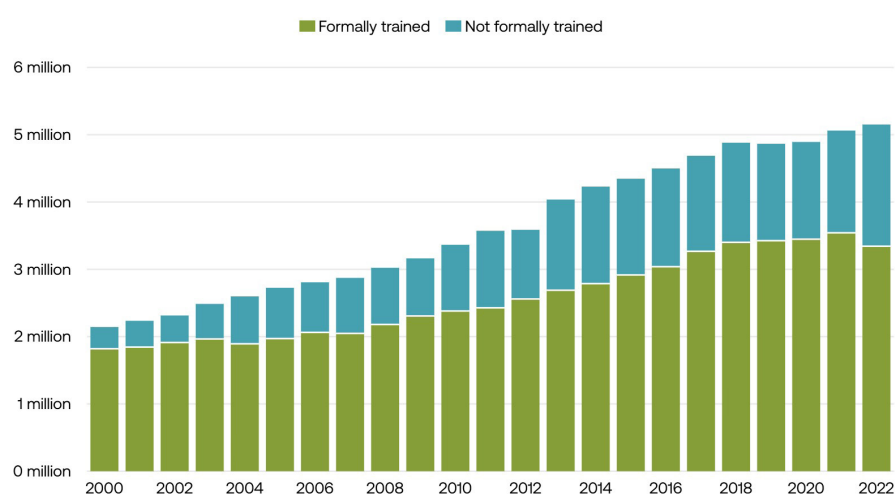
STRUCTURAL BARRIERS DRIVING YOUTH UNEMPLOYMENT

Despite governments recognising the importance of tackling both demand- and supply-side issues, traditional approaches to addressing these challenges are bureaucratic, labour-intensive and often reactive. This results in severe trade-offs and suboptimal returns on public investment aimed at skills development and job creation.

Capacity deficits: Resource constraints limit governments' ability to design, implement and monitor effective labour policies to tackle youth unemployment. A labour-intensive approach to service delivery forces governments to choose between expanding access and maintaining quality, weakening the impact of job-creation policies. To meet rising demand for primary education, for example, many governments have prioritised hiring more teachers over improving teachers' qualifications, leading to weaker learning outcomes.²⁹ Figure 1 illustrates this concerning trend in SSA between 2000 and 2022.

FIGURE 1

Teacher numbers are rising in sub-Saharan Africa – but a growing proportion are not formally trained



Source: World Bank³⁰

Similar trade-offs exist in job-training and business-development support; expanding technical and vocational education without ensuring that courses are relevant and linked to industry leaves graduates without in-demand skills, limiting their employment prospects. Likewise, initiatives to support small businesses and entrepreneurship often prioritise short-term funding and loan distribution over capacity-building programmes that help businesses scale, innovate and create sustainable jobs. In labour-market interventions, resources are often directed towards temporary employment schemes rather than long-term workforce development, which fails to address structural unemployment. These fragmented, short-term approaches dilute policy effectiveness, preventing the education and employment ecosystem from driving sustained job creation.

Information asymmetries: A lack of reliable, timely labour-market data hinders workforce planning, curriculum development and job matching. On the demand side, limited and infrequent labour-market surveys, especially those excluding

the informal sector, offer an incomplete and outdated view of the skills that are needed. On the supply side, an overreliance on educational qualifications as a proxy for skills, coupled with incomplete and paper-based educational records, obscures actual workforce capabilities. Furthermore, the lack of predictive data on skills needed in the future prevents education systems and individuals from adapting proactively, leading to longer job searches, higher unemployment and inefficiencies in labour-market absorption. This disproportionately affects informal workers who lack access to formal credentials and employment networks.

Fragmented institutions: Governments, businesses and labour-market stakeholders – such as trades unions, employment agencies and skills-development institutions – often operate in isolation, resulting in misaligned policies, inefficiencies and weak execution of job-creation strategies. Siloed decision-making between education, labour, and trade and industry agencies prevents coordinated workforce planning, leaving skills development disconnected from market demands. Limited private-sector engagement further weakens job-readiness efforts, restricting access to industry-aligned training and employment pathways. In addition, at the departmental level, weak oversight and opaque procurement processes enable corruption and misallocation of funds in education, training programmes and business-support initiatives, reducing their intended impact.³¹ In some cases, favouritism in public contracts and politically motivated hiring displace merit-based recruitment or favour well-connected firms over high-potential enterprises that could drive job creation, undermining labour-market efficiency. Without stronger institutional coordination, transparency and accountability, job-creation efforts remain fragmented, limiting their ability to drive sustained employment growth.

AI-DRIVEN SOLUTIONS FOR SYSTEMIC CHANGE

AI provides a powerful tool for tackling youth unemployment and fostering scalable, data-driven job creation. By enhancing efficiency, improving policy targeting and better aligning workforce skills with market needs, AI can enable governments to optimise resources, close skills gaps, and expand employment opportunities at scale through predictive analytics, automation and AI-driven job matching.

AI applications that bridge capacity gaps: Capacity deficits can be overcome using AI, enabling governments to do more with less, particularly in education and workforce training, where resource constraints often hinder both quality and accessibility. Solutions include deploying AI-powered adaptive-learning platforms that tailor educational content to individual students' needs, providing personalised support and the potential to improve accessibility, inclusion and learning outcomes.³² AI-driven virtual tutoring and teacher-training tools can provide targeted support, strengthening literacy, numeracy and instructional quality in remote or under-resourced areas.

Real-world applications are already demonstrating AI's potential to bridge capacity gaps. For example, TBI partnered with Rising Academies, a Sierra Leone-based education provider, to pilot adaptive-learning technology from Khan Academy, a US non-profit educational organisation, aimed at improving educational outcomes for students in secondary schools in Sierra Leone – augmenting the learning conducted by teachers. By integrating local curriculum requirements with an AI-powered mastery-based learning platform, the programme provided personalised learning pathways to students alongside real-time insights for educators, enabling targeted interventions for struggling students, particularly those who lacked foundational knowledge for the secondary-school curriculum. This pilot highlighted the potential for scaling AI in African countries' education systems to improve learning outcomes.³³ Although more longitudinal studies are required to understand the sustained benefits, the programme showed that, even under severe resource constraints, this type of platform can provide effective learning support to students in schools.

This mirrors findings that using an AI maths tutor for half an hour, twice a week over eight months led to significantly higher maths scores for students compared with peers who did not use the AI tutor.³⁴ Similarly, the World Bank in 2024 funded a pilot project in Nigeria that deployed generative-AI chatbots to support students in an after-school programme, with a focus on English, AI knowledge and digital skills. After the six-week intervention, students in the programme outperformed their peers, although the sustained impact is yet to be ascertained.³⁵

Real-time insights on supply and demand for skills: AI can transform workforce planning by aggregating education records, job postings, employer-demand data and economic indicators to provide real-time insights into evolving needs for skills. These AI-powered skills-intelligence platforms can predict emerging demand for skills, identify gaps and inform curriculum development, training programmes and industrial policy, bridging information asymmetries and ensuring a data-driven approach to workforce planning. Additionally, in partnership with the private sector, governments can develop AI-enabled labour-market platforms that go beyond basic job matching. These platforms should provide personalised career guidance, training recommendations and job-matching services for the formal and informal sectors.

For example, Harambee, a South African job-matching platform, uses AI to assess candidates' skills, match profiles to jobs using geolocation and transport data, and support job seekers with CV building and interview preparation. Harambee not only supports formal job placements but also links candidates to informal-economy opportunities. To date, the platform has facilitated 1.2 million job opportunities, significantly improving youth labour-market outcomes.³⁶ The project was co-developed with Google, which provided the compute capacity and technical expertise to train the model, and the cloud platform to host data, which reduced data-centre costs by 70 per cent.³⁷

Predictive analytics that drive strategic planning: To tackle government fragmentation, governments should consider integrating AI into strategic-planning processes. AI-powered predictive analytics can help governments pinpoint high-impact investments in education, training and infrastructure, ensuring smarter resource allocation. For instance, in Sierra Leone, the government piloted a geospatial-analysis tool to determine optimal school locations based on poverty levels, population density and flood-risk data, ensuring that investments in education were more effectively targeted.³⁸ To tackle corruption, AI anti-corruption technologies are increasingly being trialled across African countries to detect irregularities, predict conflicts of interest and flag fraudulent suppliers.³⁹ By automating the detection of suspicious patterns in public spending, these tools enhance transparency,

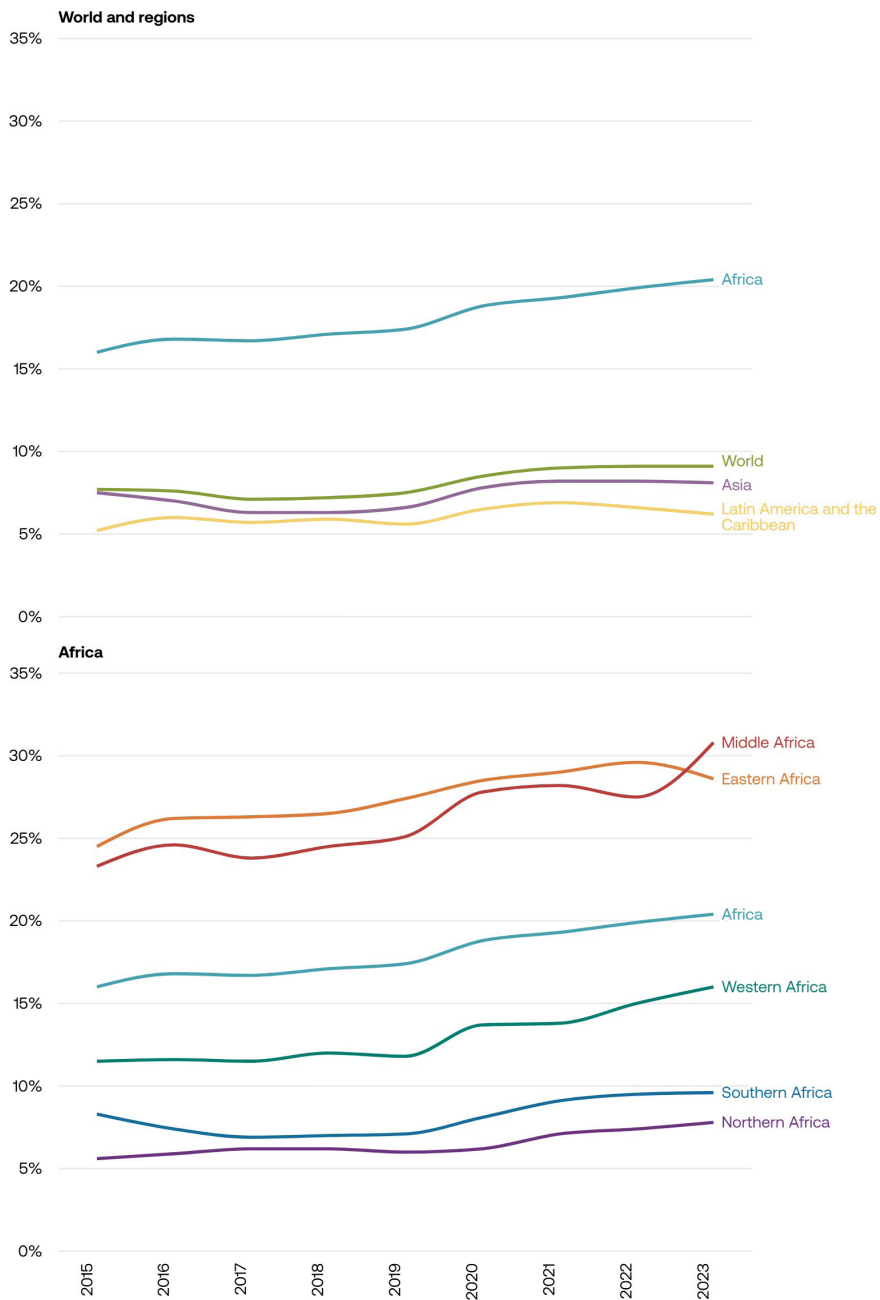
reduce financial leakages and strengthen public accountability – ensuring that funds meant for job creation, training programmes and business development reach their intended recipients.

Agriculture and Food Security

Africa faces a severe and worsening food crisis, in stark contrast to the trend of plateauing or declining hunger in many regions. Undernourishment affects around one in five people across the continent.⁴⁰ As Figure 2 illustrates, most of Africa's sub-regions have seen an increase in undernourishment in recent years, and there is no imminent prospect of a solution. According to the African Union's (AU) Comprehensive African Agriculture Development Programme's Fourth Biennial Review Report, no African country is on track to meet all the Malabo Declaration targets aimed at improving food security.⁴¹ (These goals include, among others, doubling intra-African trade in agricultural products, halving the proportion of people who are hungry, promoting agricultural research and development (R&D) and improving infrastructure to support agriculture.) Demand for food will only grow as Africa experiences a surge in its population: having already grown from 1.19 billion in 2014 to 1.52 billion in 2024, it is projected to rise further – to around 2.5 billion – by 2050.^{42,43}

FIGURE 2

Rates of undernourishment across Africa are increasing



Source: Food and Agriculture Organisation of the United Nations, 2024⁴⁴

Food insecurity in Africa has multiple, complex drivers. The pace of agricultural-productivity growth in most African countries has been sluggish.⁴⁵ This is partly driven by limited access to key amenities such as energy and electricity, but underinvestment and mismanagement also play a part. Water, for example, is not always widely available to farmers even in areas where it could be sourced.⁴⁶ And only 4 per cent of Africa's agricultural land is irrigated, compared with 42 per cent in South Asia, leaving vast agricultural potential untapped.⁴⁷ But low productivity also reflects farmers' lack of access to cutting-edge machinery and inputs (the resources that are used in farm production). Many are unable to benefit from genomic innovations, such as climate-resilient crop varieties or automated input technologies that could reduce labour-intensive tasks for farmers such as seeding or applying agrochemicals. One reason for this is that most of Africa's farmers are smallholders,⁴⁸ many of whom lack funds to invest in these technologies. Without sufficient credit profiles or collateral, they struggle to secure loans, limiting their ability to adopt modern techniques.⁴⁹

Even where modern tools and inputs are available, many farmers struggle to adopt them effectively due to limited access to training, technology and advisory support through extension services.⁵⁰ For example, tools for soil analysis, pest tracking and precision farming could enhance yields, but without affordable access, hands-on training and consistent support systems, these innovations remain out of reach for many, reinforcing productivity gaps and limiting farmers' ability to adapt to evolving challenges.

And even when harvests are plentiful, inadequate storage and cooling facilities lead to staggering levels of post-harvest losses. In SSA, annual grain losses alone exceed the value of food aid received over the past decade.⁵¹ These inefficiencies not only reduce the available food supply but also inflate food prices for the produce that does reach the market, presenting a double blow to food security.

Distribution networks are also often underdeveloped, limiting the movement of produce to market and disincentivising farmers from producing to their capacity. According to the Ibrahim Index of African Governance, governments have generally made little progress in advancing their transport networks, apart from in rail. For example, in many countries the size of road networks

and the prevalence of paved roads per capita have dropped, while shipping facilities have deteriorated.⁵² Where transport is available, costs can be prohibitively high, with local transport expenses accounting for as much as 50 per cent of the final food price in some areas.⁵³

The agricultural value chain sits within a complex mesh of trade agreements, the terms of which also shape food security. Many countries rely heavily on imports to meet food demand,⁵⁴ yet volatile trade environments and protectionist policies can disrupt supply chains and inflate prices. Although efforts have been made to boost intra-African agricultural trade, the agreements in place are not always sufficiently robust,⁵⁵ which deprives would-be purchasers of affordable food and undermines farmers' income in producer countries. More broadly, many food markets operate inefficiently, as many farmers lack access to real-time market intelligence like demand trends, pricing and key actors in the supply chain.⁵⁶ This lack of information makes it harder for farmers to price their products reliably and identify suitable wholesale and consumer outlets.

Exogenous shocks, particularly those linked to climate change, present additional obstacles to food security. Extreme weather events have degraded soil quality, disrupted water supplies and reduced biodiversity, making some areas unsuitable for farming. Agricultural-productivity growth in Africa has been reduced by 34 per cent since 1961 due to climate change.⁵⁷ While much of this damage results from global environmental changes, Africa's reliance on expanding inputs rather than improving productivity has placed additional strain on fragile ecosystems,⁵⁸ increasing their vulnerability to shocks.

Although it is not always possible to mitigate the effects of such shocks, smallholder farmers often lack the means to plan strategically and adapt to these shifting conditions.⁵⁹ Traditional financial products, which might otherwise cushion the blow, remain largely inaccessible due to the difficulties of assessing credit profiles and verifying claims in remote areas.⁶⁰

STRUCTURAL BARRIERS DRIVING FOOD INSECURITY

While food insecurity in Africa is shaped by many forces, many of its main drivers can be traced to three core structural constraints.

Capacity deficits: Capacity constraints are at the root of food insecurity. Broadly speaking, these manifest in three main ways. First, governments often lack the financial resources to adequately support farmers with inputs and machinery. Subsidy programmes, such as Uganda’s Operation Wealth Creation, provide some assistance, but their scale is insufficient to meet the needs of all farmers.⁶¹ Meanwhile, investment in agricultural R&D remains critically low, with many African countries allocating less of their agricultural GDP to R&D than the AU’s target.⁶²

Second, the financing gaps for key amenities and infrastructure are vast. Irrigation projects, which often require significant capital for dams, canals and pumps, remain underfunded in many countries.⁶³ The African Development Bank estimates that Africa’s infrastructure needs amount to \$130–170 billion annually, with an estimated financing gap of \$68–\$108 billion.⁶⁴ These deficits extend to distribution networks,⁶⁵ which are critical for reducing post-harvest losses and improving market access. These financing shortfalls limit the continent’s ability to scale productivity, reinforcing low yields and persistent food insecurity.

Third, limited institutional capacity weakens agricultural planning and support for farmers. Many governments are constrained by insufficient access to tools such as geographic information systems (GIS), remote-sensing technologies, data-analytics software, as well as the associated expertise required to use them. Agricultural extension officers are often overstretched, with ratios as high as one officer per 10,000 farmers in some countries,⁶⁶ and frequently lack advanced training in areas such as climate-smart agriculture.⁶⁷

Information asymmetries: Data gaps and fragmented information systems also drive food insecurity by hindering effective decision-making across the agricultural sector. For example, official data sets are often outdated, incomplete or inconsistent⁶⁸ and many African countries have not conducted an agricultural census for more than a decade.⁶⁹ This makes it

harder for policymakers to classify land use, register farmer demographics or track productivity, which in turn undermines the allocation of subsidies.⁷⁰ Many other examples exist across the value chain. For example, a lack of contextual data (such as satellite imagery or weather data) restricts the development of finance markets, as lenders cannot reliably assess farmers' risk profiles, making it harder for farmers to access credit and therefore to invest in productivity-enhancing technologies.⁷¹

Even where data are available, governments often lack the tools and expertise to leverage them effectively. For example, while extension services are potentially an effective way to improve farmers' know-how, their success depends on the quality of the insights that flow from them. Yet governments often lack the diagnostics tools and predictive capabilities needed to generate insights that farmers can use – for example, to manage their resources strategically or adapt to changing climates.⁷²

Fragmented institutions: Many drivers of food insecurity can also be traced to institutional fragmentation. One prominent example is a lack of coordination between government agencies. All too often, departments have overlapping mandates and lack integration, which means resources are not suitably deployed to boost food security. For example, oversight of water-management systems can span multiple ministries and agencies, which leads to inter-ministerial tension and long bureaucratic processes. Work is often duplicated and decisions are overcomplicated.⁷³

Governments also often suffer from inertia and lack the dynamism required to reform outdated regulations and systems that undermine food security. For example, confusing land-tenure systems in some countries, which fuse customary and statutory rules, obfuscate land ownership. This disincentivises farmers from making long-term investments because they cannot be confident of returns.⁷⁴ Unclear land rights also make it harder for farmers to obtain loan finance and insurance, as clear proof of ownership often serves as collateral for such products.⁷⁵ They are also linked to corruption, because they create greater scope for fraudulent land claims.⁷⁶

AI-DRIVEN SOLUTIONS FOR SYSTEMIC CHANGE

Governments should deploy the following changes to overcome the structural barriers that currently drive food insecurity.

AI tools that optimise agricultural productivity: To overcome capacity deficits, governments must ensure agricultural spending is data driven, treating investments in infrastructure and human capital as down payments on future productivity. They should undertake an audit of existing agricultural-support programmes to identify inefficiencies and inform scalable, AI-powered alternatives that boost productivity.

One way to do this would be to enhance traditional extension services with AI tools, helping farmers to optimise their limited resources. For example, the Virtual Agronomist (an AI-powered tool which provides farmers with tailored advice on soil fertility, crop management and inputs) and PlantVillage (an app that uses AI, image recognition and mobile technology to help farmers diagnose and manage crop diseases and pests) have been used extensively in Kenya to optimise existing resources and boost yields.⁷⁷

Real-time data collection that enhances insights and drives innovation: To overcome information asymmetries, governments first need to collect more accurate, real-time data across the agricultural value chain. To do this, they need to deploy a range of collection tools (including, for example, remote-sensing technology to gather more precise data on land use, and real-time market and trade data to improve agtech services). A comprehensive evaluation of existing data systems will help identify gaps and areas for improvement. Governments should invest in in-house capabilities where suitable, while also considering arrangements to procure data from external parties where more economical.

Governments must also develop better ways to analyse and extract insights from data. Investing in-house expertise in areas such as data analytics, modelling and AI platforms will be critical. With appropriate guardrails in place to preserve privacy and ensure ethical use, governments should also establish public-private partnerships, sharing anonymised data with research institutions and agribusinesses to drive agricultural innovation. For example, the Kenyan government has partnered with Agrivision to build an

AI-enabled crop-monitoring platform, which will collect data from high-resolution satellite imagery and drones and use advanced analytics to give policymakers and farmers real-time insights into crop health, soil moisture and weather patterns.⁷⁸

A key element of governments' data infrastructure should be a system of digital farmer IDs, with appropriate privacy-preserving guardrails, to register data about farmers and map land use. This would allow farmers to prove land ownership and therefore access financial services, ensure that subsidies reach farmers who need them most and allow governments to introduce personalised, AI-enabled extension services, which would substantially improve the quality and reach of advice to farmers.

AI-driven solutions to improve coordination: Food-security challenges often span multiple agencies, requiring an integrated approach. Governments should establish a single agricultural-data hub, which would integrate disparate official data sets across departments based on interoperable systems and common data standards. This new hub would dismantle data silos and allow officials to share information in real time, which would enable more coherent, joined up policy.

Reducing fragmentation can lead to substantial gains. For example, TBI worked closely with the government of Malawi to improve the efficiency of its farmers' subsidy programme, which was hampered by a lack of cohesive data. The team integrated various data sources into a centralised farmer registry, introduced a custom mobile app to verify almost 3 million farmers' records, and developed a machine-learning model to classify farmers by productivity and land availability, all of which enabled them to allocate subsidies more efficiently (see our commentary *Transforming Agriculture Through Data: Insights From Malawi*).

More generally, governments should reform their bureaucracies so that departments have clearer jurisdictions and can make decisions without undue friction – for example, to support R&D sign-off for frontier research. They should alter ways of working so that decision-making is more data driven. They could, for example, use predictive analytics to help inform infrastructure decisions, or use digital farmer-ID systems to mitigate land-title fraud by improving the range and quality of land-registration data.⁷⁹

04

Building AI-Powered Foundational Systems for Cross-Sectoral Impact

Solving Africa’s systemic challenges requires bold reform that tackles the self-reinforcing “doom loop” of capacity deficits, information asymmetries and government fragmentation. AI-powered foundational systems, built on digital public infrastructure (DPI) and guided by ethical AI frameworks, offer scalable solutions that can unlock new capacity across sectors to deliver systemic impact.

DPI’s interconnected components – digital-ID systems, digital-payment platforms and interoperable data networks – provide the foundation for streamlined government operations, improved transparency and more effective citizen-centric services. Digital-ID systems provide verifiable credentials for seamless access to public- and private-sector services, driving significant improvements in health care, welfare and other services in countries such as Ghana,⁸⁰ Rwanda, South Africa⁸¹ and Ethiopia.⁸² AI can further enhance these identity-linked services by enabling proactive service delivery, fraud detection and prevention, and predictive analytics for resource allocation and policy optimisation.

AI-powered data interoperability can transform fragmented systems into cohesive networks, unlocking synergies across sectors and fostering seamless collaboration. Linking data across sectors such as health, education and social protection enables governments to create holistic interventions. For example, integrating school-attendance data with health-care records can target malnourished children more effectively than standalone interventions by either the education or health ministries. In Rwanda, Ubudehe – a social-classification system for poverty reduction and community development that categorises households based on their socioeconomic status – has been integrated into Irembo. These data, used to determine eligibility for government support, are linked with various services, such as health insurance (*mutuelle de santé*), enabling targeted interventions. For example, individuals in lower-income brackets (identified through Ubudehe) can be

automatically enrolled in subsidised health-insurance programmes via Irembo. This seamless data flow between social protection and health ensures vulnerable populations receive necessary support.⁸³

In decentralised systems, AI can synchronise data across municipal and national governments, improving service delivery for underserved populations. Kenya, for example, has developed a Health Information Systems Interoperability Framework to facilitate seamless data exchange across county and national health systems. Integrating AI into this platform could allow health officials to monitor disease trends in real-time, facilitating quicker responses to public-health emergencies and optimising resource distribution – including medical supplies, funding and personnel.

Looking beyond national borders, regional data interoperability is fundamental to achieving meaningful African integration. Seamless data-sharing across the continent’s eight primary Regional Economic Communities and specialised bodies is crucial for advancing key objectives, such as driving intra-African trade – which is projected to increase by \$450 billion by 2035 under the African Continental Free Trade Area⁸⁴ – and strengthening public-health systems (see our paper *Unlocking Africa’s Trade Potential: The TWIN Digital Trade Platform*). However, fragmented data standards, infrastructure deficits and divergent legal frameworks across the continent present formidable barriers to integration. AI offers a decisive advantage in overcoming these barriers by automating data harmonisation,⁸⁵ enabling seamless cross-border exchange, improving data quality and reducing integration complexities. Beyond cost efficiency, AI-driven data systems can bolster security and real-time analytics, enabling more effective regional policymaking.

While fewer than ten African countries currently have formal AI strategies or policies, the importance of AI governance is increasingly recognised. African AI-policy frameworks should address the continent’s key challenges by prioritising data quality and representativeness, fostering local expertise and promoting regional cooperation. Addressing data scarcity and quality is essential, requiring tailored strategies to ensure the fairness and reliability of AI systems trained on limited or unrepresentative data sets. Techniques such as data augmentation, bias detection and algorithmic fairness must be adapted to local contexts for robust and relevant AI solutions. These frameworks must be actionable, incorporating clear metrics for fairness, transparency and accountability, supported by practical tools, capacity-building programmes and effective governance structures.

05

The AI-Financing Compact for Africa: A New Model for AI Investment

While AI presents a transformative opportunity for African governments, financing remains a critical barrier. African governments face a vicious cycle of high debt burdens, limited fiscal space and costly borrowing, which constrains their ability to invest in long-term development. This challenge applies directly to AI adoption: governments need access to financing structures that allow them to invest in AI without worsening debt distress or diverting resources from essential public services.

TBI's recent report *A New Debt Deal for Africa: Breaking the Vicious Cycle* advocates for financing mechanisms that prioritise long-term, high-impact investments. AI adoption must be integrated into this vision, positioning AI not as an additional burden but as a strategic investment for economic growth. To bridge this gap, we propose an AI-Financing Compact for Africa, a structured financing mechanism that integrates AI adoption into development financing models. Instead of treating AI as an isolated cost, the compact would align AI financing with concessional funding and long-term economic planning, ensuring that governments can leverage familiar financial instruments to take the first steps towards AI-driven transformation.

This compact builds on principles from successful financing models, such as the Energy Compacts,⁸⁶ adapted to Africa's digital and AI landscape. The compact would operate as a multi-stakeholder initiative involving national governments, development-finance institutions (DFIs), multilateral lenders, the AU and private-sector partners. To ensure sustainable and scalable AI financing, the compact introduces three key financial levers:

1. **Concessional financing tied to AI adoption:** Multilateral lenders and DFIs already use governance-reform benchmarks in debt-restructuring agreements. The compact would expand this model by mandating AI-driven governance and digital transformation as core criteria for concessional financing and debt relief, ensuring that countries prioritising AI adoption

can access preferential funding. Several African and global initiatives demonstrate the feasibility of this model, highlighting how concessional financing, blended finance and PPPs can drive AI adoption. In Ghana, the government successfully leveraged \$200 million in concessional financing from the World Bank and private investors to build Ghana.GOV, a centralised digital-services platform that integrates tax payments, business registration and digital public services.⁸⁷ This demonstrates that large-scale DPI projects that serve as foundational enablers for AI adoption can be funded through concessional lending.

2. **Public-private partnerships for AI infrastructure:** Given the continent's limited fiscal space, governments can de-risk AI investment through PPPs while avoiding excessive public spending. The compact would facilitate compute-sharing agreements, AI-infrastructure bonds that would mobilise long-term capital for national AI-ecosystem development and green AI investments. Kenya, for example, has partnered with Microsoft and G42 to establish a local East Africa cloud region, improving affordable AI and compute access for both public- and private-sector stakeholders across Kenya and East Africa.⁸⁸ The \$1 billion investment will see the development of a green data centre running entirely on renewable geothermal energy.
3. **AI-readiness scorecards and governance reforms:** To track progress and align AI financing with broader development objectives, the compact would introduce AI-readiness benchmarks in debt negotiations that would incentivise AI-driven public-sector modernisation, dedicated AI investment funds that offer long-term, low-interest financing for governments prioritising AI adoption, and AI-readiness scorecards that allow countries to track progress and align AI funding with broader fiscal planning.

06

Strengthening the Central Government's Role in AI-Driven Transformation

The leadership of the president or prime minister, supported by the cabinet and specialised coordinating units, must play a central role in unlocking AI's transformative potential to address governance challenges. With executive power often concentrated in the head of government, high-level backing is essential for driving major policy reforms. A coordinated approach – leveraging the cabinet's collective decision-making and the strategic planning of specialised units – can lead systemic reforms and align sectoral efforts towards a unified vision for development. Beyond national priorities, these central leadership structures can also play a crucial role in advancing regional integration, ensuring that national systems are interoperable and aligned with broader continental goals.

The effective implementation of AI-driven transformation will vary across national contexts, influenced by capacity constraints and resource availability. Some nations must first invest in digital infrastructure and reliable connectivity, while others may need innovative financing models to support AI integration (though smaller-scale “quick wins” will be available to any government). Varying levels of institutional maturity will influence implementation, with stronger governance frameworks enabling faster adoption and weaker institutions requiring foundational reforms. Political stability, regulatory clarity and public trust will also determine AI's long-term success.

Given these complexities, there is no one-size-fits-all model for AI in Africa. Governments must tailor strategies to their specific needs, dismantling silos and institutionalising accountability to maximise AI's role as a force multiplier for sustainable and inclusive development. Sustaining these efforts will require the right mix of innovative funding models, including PPPs and strategic resource allocation to supplement existing resources and drive successful implementation.

The following recommendations outline the critical steps governments must take to enable AI-powered systemic transformation:

1. DEFINE A NATIONAL AI VISION AND GOVERNANCE FRAMEWORK

The centre of government must take the lead in establishing a clear national vision and a robust governance framework to guide the development of a national AI ecosystem. This will involve:

- Articulating and championing a compelling national AI vision with clear goals and targets for AI adoption, signalling its centrality to the national development agenda to citizens, private-sector partners and international stakeholders. This vision must be embedded in a comprehensive national AI strategy that prioritises high-impact sectors where AI can deliver transformative change and leverages cross-sectoral opportunities.
- Embedding AI adoption into national economic strategies to qualify for concessional AI financing under an AI-Financing Compact, ensuring governments can access preferential funding linked to governance modernisation and digital transformation.
- Establishing a National AI Council (NAIC) – a high-level, executive-led body chaired by the centre of government with direct backing from the head of state or government. The NAIC should comprise senior representatives from relevant government ministries and regulatory bodies and be responsible for:
 - Strategic oversight and formal coordination of the implementation of the national AI strategy. The council would develop a centralised AI-governance framework to ensure coherence and prevent fragmentation across ministries, agencies and local governments, ensuring effective inter-ministerial coordination on AI initiatives.
 - Ethical AI governance, by developing ethical guidelines based on fairness, inclusivity, accountability and transparency. This would also include a clear grievance mechanism for citizens affected by AI systems.

- Setting up a dedicated unit or task force focused on regional and continental alignment. The task force would ensure interoperability with AU standards for AI technologies, data governance and digital infrastructure. This would include harmonising legal frameworks for data protection and cross-border data flows, as well as exploring joint infrastructure projects such as shared data centres.

2. INVEST IN FOUNDATIONAL INFRASTRUCTURE AND DATA GOVERNANCE

Achieving widespread AI adoption and innovation requires critical investment in digital infrastructure and data-governance frameworks. The government should:

- Invest strategically in digital public infrastructure by prioritising interoperable data-exchange platforms, a secure digital-ID system and AI-integrated services. These should be scalable, privacy-preserving and inclusive, leveraging private-sector partnerships to enhance adoption and financial sustainability.
- Establish a National Data Office responsible for implementing a national data-governance framework (developed in close coordination with data-privacy and protection agencies and aligned with AU standards on sovereignty, privacy, interoperability and secure data use), managing public data assets, ensuring data quality, portability and interoperability, and providing data services to government agencies and the private sector.

3. CULTIVATE AI TALENT AND INNOVATION ECOSYSTEMS

Building local expertise is crucial for the long-term sustainability of AI-driven initiatives. Without stronger public-sector engagement, governments risk overreliance on foreign technology, limiting homegrown solutions and missing opportunities to tailor AI to local needs. To achieve this, governments in Africa must lead efforts to:

- Build national AI talent pipelines through comprehensive AI education and training at all levels. This includes integrating AI into school curricula, fostering public-private partnerships for knowledge exchange and providing targeted training on developing and deploying small language

models (SLMs). SLMs are particularly well-suited for Africa due to their lower compute requirements, ability to run on smartphones and laptops or in low-bandwidth environments, and alignment with data privacy and cost-efficiency needs. These SLM-focused skills enable the creation of localised and resource-friendly AI solutions for public-sector tasks such as summarising documents, extracting data and providing chatbots that serve citizens.

- Embed an AI Innovation Unit within the ministry or agency responsible for digitalisation, focused on advancing national priorities through AI-driven innovation. This unit can incubate startups, foster collaboration among researchers, entrepreneurs and government agencies, and serve as a scalable model for other ministries. To ensure coherence, the scaled units should integrate into a national network coordinated by the National AI Council, which will oversee alignment with national strategies, resource allocation and performance monitoring. Each unit must have a clear mandate, access to dedicated expertise and resources, and measurable goals tied to key outcomes. In countries with limited AI capacity, capacity-building and sector-specific solutions should be prioritised, ensuring scalability is both context-sensitive and impactful.

4. IMPLEMENT ADAPTIVE AI GOVERNANCE AND REGULATORY MODELS

In today's rapidly evolving environment, traditional policymaking cycles in Africa – characterised by infrequent reviews, lengthy implementation timelines and limited feedback mechanisms – are no longer sufficient for effective governance. Enabling agile, responsive governance will require governments to:

- Establish a national oversight mechanism that would leverage a National Policy Twin, a platform that aggregates data from multiple sources to inform policy planning and enable real-time monitoring of policy implementation (see our paper *Governing in the Age of AI: A New Model to Transform the State*). This mechanism will provide actionable insights to the National AI Council as well as the head of government,

allowing for timely policy adjustments. This will ensure that public policy evolves alongside rapidly changing socioeconomic conditions, fostering resilience, effectiveness and accountability across government systems.

- Implement regulatory sandbox and testbed approaches for controlled experimentation with new AI solutions in specific sectors. This “test-and-learn” environment minimises risks by allowing for controlled trials, generates valuable insights for practical applications and ensures policies are informed by real-world outcomes.

5. STRENGTHEN NATIONAL COMPUTE CAPACITY FOR AI DEVELOPMENT

As highlighted in TBI’s *State of Compute Access 2024* paper, strengthening national compute capacity is critical for unlocking AI-driven innovation and data-driven governance. African governments must take proactive leadership in building the necessary technical infrastructure, establishing operational frameworks and navigating strategic geopolitical dynamics required for transformative AI adoption. This involves:

- Establishing access to scalable compute infrastructure by leveraging national high-performance computing (HPC) systems, cloud-based compute resources and on-premise or regional data centres based on data sensitivity, cost efficiency and scalability. Instead of relying solely on large-scale national HPC, a flexible, decentralised approach – including regional AI hubs, federated learning and hybrid cloud solutions – will ensure equitable access for public institutions, researchers and businesses. To meet sustainability goals and reduce costs, governments should prioritise energy-efficient and renewable-powered infrastructure. Additionally, compute-sharing agreements, where private firms contribute excess capacity to public-sector AI initiatives, can optimise compute access while lowering infrastructure costs. These measures will drive AI innovation, enable large-scale data analysis and support advanced simulations.
- Ensuring compute access for underserved areas by leveraging edge computing and other decentralised technologies. This approach will expand AI capabilities to regions with limited connectivity, bridging the digital divide and enabling localised AI solutions tailored to community needs.

- Promoting collaborative compute networks through strategic partnerships with the private sector, academia and international organisations. This will enable governments to build distributed networks of shared computational resources, pooling capacity and optimising costs for national and regional AI initiatives.
- Building capacity for compute management using targeted training programmes to equip public-sector employees and technical professionals with the skills to manage, optimise and maintain compute infrastructure effectively.
- Advocating for equitable global technology access in international negotiations to address restrictive practices on access to advanced AI technologies and computational hardware. Governments should work through global frameworks to secure inclusive technology-sharing agreements that ensure African countries are not excluded from critical technological advancements.

07

Conclusion

The future of AI in Africa is not just about technology. It is about reshaping governance to meet the needs of a growing, dynamic population, ensuring equitable progress and long-term resilience. AI represents a once-in-a-generation opportunity for African governments to modernise their institutions, accelerate service delivery and unlock new economic frontiers. By adopting a dual strategy targeting sector-specific interventions while building foundational systems for cross-sectoral impact, AI can become a catalyst for innovation, institutional resilience and inclusive growth, empowering governments to deliver scalable and sustainable citizen-focused solutions.

Successfully harnessing AI to drive transformative change will depend on proactive leadership, strategic investments and a governing model rooted in innovation, adaptability and accountability. Failing to act risks widening the global development gap, leaving Africa further behind in the digital economy. The choice is clear: embrace AI as a driver of transformation or risk being left behind in an increasingly AI-powered world.

Endnotes

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