REMAKE
AFRICA

THE AFRICA 21ST CENTURY CLOCK

REAWAKENING
AFRICA AT 6AM!

Remake Africa Consulting
www.remakeafrica.org

Table of Contents

Preface

The Africa 21st Century Clock was conceived in 2021 as a strategic reflection on Africa's 21st century prospects in response to the Year-2000 report, **"Can Africa Claim the 21st Century?"** Coauthored by five leading institutions, that report, which I first encountered in 2011, inspired the founding of Remake Africa Consulting 10 years later, 21 years into the 21st century, as one wondered how far into claiming the 21st century Africa had truly gone.

As the year 2025 approached, the urgency to assess Africa's progress against the backdrop of the Year-2000 report grew more pressing. While I initially considered the prospects of engaging the five institutions that authored the report and possibly reconvening the over 50 experts involved, I realised that there was an even greater need for action—an urgent challenge to African leaders and citizens alike. It is this sense of urgency and the universal participation imperative that inspired the creation of this white paper. While independent of the Year-2000 report—*Can Africa Claim the 21st Century?*—this paper echoes its challenge with a renewed call to action as we enter the second quarter of the century: **Wake up, Africa! It's 6 AM!**

The paper draws on data from diverse sources to assess Africa's progress over the first quarter of the 21st century. The segment titled, **"Twenty-Five Years into the Twenty-First Century: Assessing Progress, Analysing Trends, Repositioning for the Future"** is based on the broad objectives of the World Bank–published Year-2000 report, while introducing the "Digital and Sustainability Indicator" to cater to emerging trends.

Much of the baseline data, broadly defined as information from the latter half of the 20th century through to its end, has been drawn from the World Bank–published report which serves as a key reference for this initiative. Where such data was unavailable in that report, or where more contextually appropriate data was sourced—as well as for for all data related to the first quarter of the 21st century—the paper draws on a variety of reputable sources, including multilateral institutions, policy papers, data portals, and media publications.

In the progress report segment, data is presented in infographic format to enable comparative visual analysis between the baseline and the quarter-century milestone. To ensure the intended visual effect, the infographics do not include citations. However, all data sources used in the creation of this paper are listed in the Reference section. Nonetheless, where data is presented as a list, sources are cited in brackets to provide immediate context.

We recognise that this paper may be received in various forms—whether as a working document, a concept note, or an inception report. Regardless of the format it evokes for the reader, the concept of the Africa 21st Century Clock remains an evolving idea, one that calls for collaborative development and collective execution. It is our hope that readers will find this paper thought-provoking; that its content—though sobering in parts—will also offer reassurance; that its aspirations—though bold—will be met with strategic optimism; and that its vision will inspire both African leaders and citizens to take decisive action toward enabling Africa to truly claim the 21st century.

Omoaholo Omoakhalen
Founder and Principal Consultant,
Remake Africa Consulting

Acknowledgement

About 25 years ago, a group of over 50 experts on Africa developed a seminal report titled *Can Africa Claim the 21st Century?* Backed by the African Development Bank (AfDB), African Economic Research Consortium (AERC), Global Coalition for Africa (GCA), United Nations Economic Commission for Africa (UNECA), and the World Bank, the report was published on July 13, 2000, by the World Bank. I came across the report in 2011, at the early stage of my career in development, and it deeply inspired the founding of Remake Africa Consulting and the concept of the Africa 21st Century Clock. I remain deeply grateful to these five institutions; to the over fifty resource persons who contributed to that report; to the Steering Committee—comprising Ali A.G. Ali, Ibrahim Ahmed Elbadawi, Augustin Fosu, Alan Gelb, Kupukile Mlambo, and the late Tesfaye Dinka, former Prime Minister of Ethiopia, who passed away in 2016; and to all the thought leaders who, alongside the Committee members, played a pivotal role in producing that thought-provoking report—especially Charles Soludo (now Governor of Anambra State, Nigeria) and Gene Tidrick.

In 2024, the Africa 21st Century Clock concept was presented to the School of International Futures (SOIF), organisers of the Next Generation Foresight Practitioners Fellowship. That submission—which led to an invitation to join the Next Generation Foresight Practitioners Global Network—was, until now, the most detailed proposition of the concept. The questions posed by SOIF set me on a path to concretising my thoughts and transitioning them from ideation to strategic conceptualisation. I gratefully acknowledge the role SOIF played in facilitating my imagination of an alternative future for Africa in the 21st century.

This paper's technology-enabled, pluralistic approach to co-creating a people-driven vision for the continent through civic technology, draws conceptual and strategic inspiration from models advanced by leading plurality advocates affiliated with the Harvard GETTING Plurality Network, founded by Danielle Allen, the James Bryant Conant University Professor at Harvard University. I am grateful to Professor Allen and the members of the GETTING Plurality Network, particularly E. Glen Weyl whose co-authored piece with Professor Allen, *The Real Dangers of Generative AI*, influenced my appreciation of technology-driven pluralistic governance and the responsible deployment of emerging technologies like Artificial Intelligence.

Special thanks go to the Remake Africa team: Temitope "TBOG" Omoakhalen for report design, and Oluwaseun Ogundeko for infographic design. Gratitude is also extended to Victor Olamigoke for the cover page design

List of Abbreviations

AI – Artificial Intelligence
ACF – African Climate Foundation
AERC – African Economic Research Consortium
AfCFTA – African Continental Free Trade Agreement
AfDB – African Development Bank
AEF – Africa-Europe Foundation
AIVAS – Africa Impact Value as a Service
AU – African Union
AUDA – African Union Development Agency
AUDA-NEPAD – African Union Development Agency - New Partnership for Africa's Development
CSI – Corporate Social Innovation
CSR – Corporate Social Responsibility
DRC – Democratic Republic of the Congo
EAC – East African Community
ECOWAS – Economic Community of West African States
GCA – Global Coalition for Africa
HDI – Human Development Index
IMD – International Institute for Management Development
MDGs – Millennium Development Goals
ML – Machine Learning
ODA – Official Development Assistance
SADC – South African Development Community
SDGs – Sustainable Development Goals
SMS – Short Message Service
UN – United Nations
UNECA – United Nations Economic Commission for Africa
USA – United States of America
USAID – United States Agency for International Development
USSD – Unstructured supplementary Service Data

Executive Summary

If Africa is to claim the 21st century by transitioning from the Third World to the First within this century, how can the continent more effectively and strategically mobilise its social, economic, and political resources toward a compelling, people-driven vision of a 21st-century Africa? This is the question that the Africa 21st-Century Clock seeks to answer. The Africa 21st Century Clock is a data-driven, technology-enabled, foresight-informed, people-owned, intergovernmentally moderated, and pluralistically governed proposition for shaping an alternative African future within the 21st century.

In the year 2000, at the start of the 21st century, Africa's developmental crisis was captured in a landmark report titled **"Can Africa Claim the 21st Century?"** According to this report by the World Bank in conjunction with the African Development Bank, the African Economic Research Consortium, the Global Coalition for Africa, and the United Nations Economic Commission for Africa, the continent had gloomy social, economic, and political conditions. The report highlighted the continent's dismal state at the time. For instance, 200 of every 1,000 children died before age five, foreign aid constituted nearly half of public spending, and at least one in five Africans lived in a country disrupted by war. It was against the backdrop of these and similar negative indicators at the turn of the century that Africa was presented with the formidable challenge of reclaiming its future.

Twenty-five years into the 21st century, as the first quarter of the century concludes and exponential technologies like Artificial Intelligence (AI) redefine global engagement parameters, Africa stands at a critical inflection point—analogous to 6 a.m. if the entire century were fitted into a 24-hour clock, a time which, in circadian rhythm terms, is characterised by a transition from sleep to wakefulness. Consequently, the dawn of the second quarter compels renewed urgency. More than a decade since the emergence and waning of the "Africa Rising" phenomenon, the Africa 21st-Century Clock seeks to activate vitality on the continent.

The Africa 21st-Century Clock will be a multi-platform project hosting a dynamic century-long African vision, tracking progress across time against defined benchmarks, and inspiring governments, businesses, and a critical mass of Africans globally toward the possibilities of a 21st-century Africa.

The project comprises three core components, corresponding to the three parts of a clock:

- **The Regulator** is the dynamic vision of a 21st-century Africa—progressively, iteratively, and collaboratively shaped by the African people under the moderation of the African Union (AU), with the aid of deliberative civic technology in the mode of Pol.is. The collaboratively crafted vision will serve as the blueprint of the Africa we want to see by the end of the 21st century and as the benchmark for measuring progress across three future milestones: 2050, 2075, and 2100, building on the foundation of 2025 as a first-quarter milestone from 2000.
- **The Timekeeper** is the data analytics system that will aggregate, analyse and visualise data in real time, assessing progress against the benchmarks of the vision. It will track progress across three sets of indicators—social, economic, and political—mirroring the three arms of the clock.
- **The Alarm** will build awareness, mobilise participation, and stir a sense of urgency through advocacy, communications, and capacity-building interventions across various platforms.

Pluralistic in its design, at its launch—proposed for Africa Day, May 25, 2026—the Africa 21st Century Clock's digital platform will enable citizens across the continent to co-create a vision of Africa by articulating aspirations across thematic areas drawn from frameworks like Agenda 2063 and the SDGs. Through AI- and ML-enabled tools, the platform will translate these aspirations into a dynamic map of short-, medium-, and long-term goals (2026–2100), which states can adopt and be held accountable to. The process will be iterative and participatory, with annual "Village Square" convenings on Africa Day to review progress and renew goals.

This bold project envisions an Africa that transitions in this century across three transformative milestones:

- **Development**: All 54 African countries reaching at least the High Human Development category of the United Nations Development Programme's Human Development Index by 2050.
- **Competitiveness**: Africa emerging as the epicentre of global commerce, with intra-African trade and African-led exports together constituting 50% of total world trade by 2075.
- **Power**: Africa reshaping the world with its unique values, with at least four African countries ranking among the world's top ten Great Powers by 2100.

Audacious and ambitious, these are aspirations, not forecasts, and they should challenge African leaders and citizens to ask the salient question: what interventions are required to create such an Africa, the 21st century Africa?

1.0 The Backdrop: "Can Africa Claim the 21st Century?"

Africa trails the rest of the world in most development indicators. This fact was reflected in a July 13, 2000, report that presented the continent with a daring challenge couched in the title of a report: ***Can Africa Claim the 21st Century?*** The making of the report convened more than 50 experts on African development and saw the collaboration of a set of development institutions, namely the African Development Bank (AfDB), African Economic Research Council (AERC), Global Coalition for Africa (GCA), United Nations Economic Commission for Africa (UNECA), and the World Bank. Published by the World Bank, the report set the stage for some degree of optimism for the continent as Africa, along with the rest of the world, raced into the 21st century.

According to this report, at the turn of the 21st century, Africa had gloomy social, economic and political conditions:

- The region was the poorest in the world, with average real income per capita (PPP) one-third less than South Asia and a dwindling average output per capita.
- Africa had less than 2% of world trade, with exports less diversified and primary-product-based.
- The continent was highly aid-dependent and hugely indebted, with net transfers from foreign assistance averaging 9% of GDP and almost 50% of public spending, and with foreign debt of over 80% of GDP in net present value.
- Africa had a declining savings rate of 13% of GDP, as well as low investments.
- The continent had high inequality and social exclusion, with more than 40% living below $1 a day and with an average income of $0.65 a day in PPP terms.
- There was low access to health, education, and infrastructure, as 200 of every 1,000 children died before the age of 5, while more than 2 million children died a year before their first birthday due to poor nutrition.

- More than 200 million lacked access to health services.
- More than 140 million African youth were illiterate, and less than one-quarter of Africa's poor, rural females attended primary school.
- There was low social spending, with $50 average education spending compared to $11,000 in more developed countries.
- There were 165 per 100,000 annual deaths from malaria.
- The continent had 70% of the world's cases of HIV/AIDS
- The continent was strewn with conflicts, with at least 1 in 5 Africans living in a country severely disrupted by an ongoing war at the time. Angola, Burundi, Congo (DRC), Eritrea, Ethiopia, Guinea-Bissau, Liberia, Sierra Leone, Somalia, and Sudan were particularly conflict-stricken

Published by the World Bank, the report set the stage for some degree of optimism for the continent as Africa, along with the rest of the world, raced into the 21st century. According to this report, at the turn of the 21st century, Africa had gloomy social, economic and political conditions:

While independent of the Year 2000 report—"Can Africa Claim the 21st Century?"—this paper echoes its challenge with a renewed call to action as we enter the second quarter of the century: ***WAKE UP AFRICA! IT'S 6 AM!***

1.1 Vistas of Reforms at the Turn of the Century

Notwithstanding the negative indicators at the turn of the century, certain 20th-century trends propelled optimism toward Africa's 21st-century prospects:

- The trend towards macroeconomic stabilisation in the last decade of the 20th century, with Mozambique, for instance, achieving inflation reduction and sustained economic growth after transitioning from a centrally planned economy to a market-oriented one in the 1990s.
- The opening up of African economies to market forces, as evidenced in the elimination of price controls in Ghana, for instance, as a result of structural adjustments.
- The rationalisation of trade taxes from arbitrary to trade-weighted tariffs, even as the continent saw a move towards regional economic integration with common external tariffs in some subregions—Kenya, Uganda, and Tanzania formed the East African Community (EAC) in 1999, with common external tariffs.
- The trend towards private initiative and private sector friendliness, with private investment increasing by almost 3% of GDP in the build-up to the 21st century, even as business networks emerged across the continent.
- A rapidly changing political landscape and indicators of governance reforms and state-building, as evidenced by popular demand for multiparty democracy, with multiparty elections held in 42 out of 48 African countries in the decade leading to the 21st century.

Nelson Mandela casting his ballot as South Africa became a democracy in 1994. Mandela was president till 1999.
Image source: The Guardian

1.2 Theory of Change: The Report's Insights into How Africa Can Claim the 21st Century

The report hinged Africa's 21st-century transformation prospects on four "circles of cumulative causation," namely,

1. **Improving Governance and Resolving Conflict;**
2. **Investing in People;**
3. **Increasing Competitiveness and Diversifying Economies; and;**
4. **Reducing Aid Dependence and Strengthening Partnerships.**

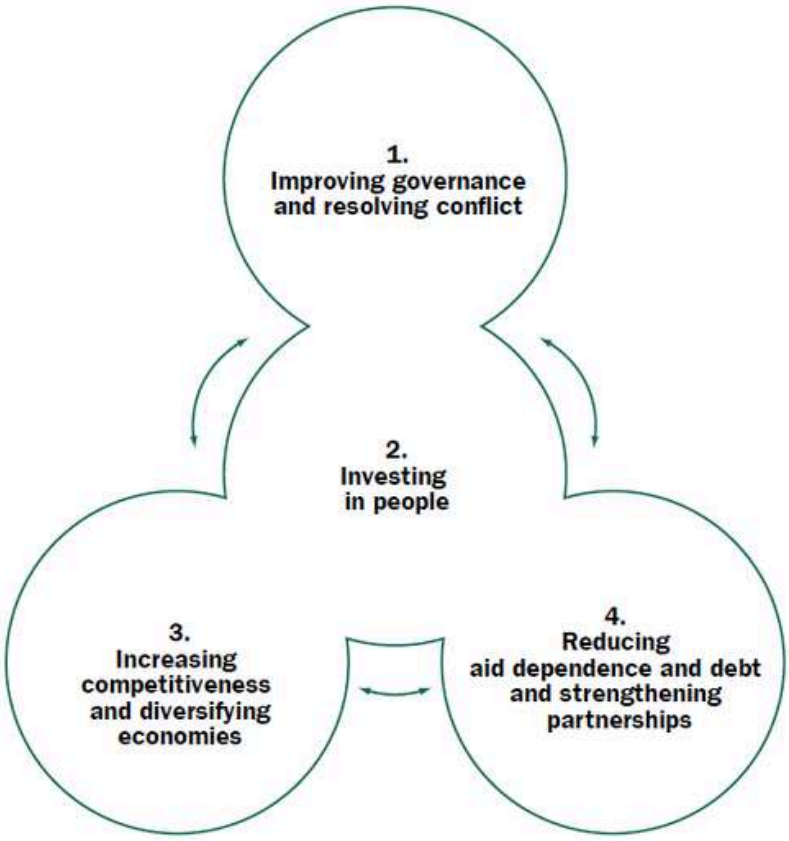


Figure 1: Circles of cumulative causation. Image source: World Bank,

1.3 Broad Objectives for the 21st Century

Based on the theory of change, the report set the following broad objectives for the 21st-century Africa:

1. Improving Governance, Managing Conflict, and Rebuilding States
2. Addressing Poverty and Inequality
3. Investing in People (Human Development)
4. Lowering Infrastructure, Information, and Finance Barriers
5. Spurring Agricultural and Rural Development
6. Diversifying Exports, Reorienting Trade Policy, and Pursuing Regional Integration
7. Reducing Aid Dependence and Debt and Strengthening Partnerships

2.0 Africa Rising: A Nocturnal Awakening?

An "Africa Rising" magazine cover montage. Image source: Geneva Graduate Institute's Global Challenges

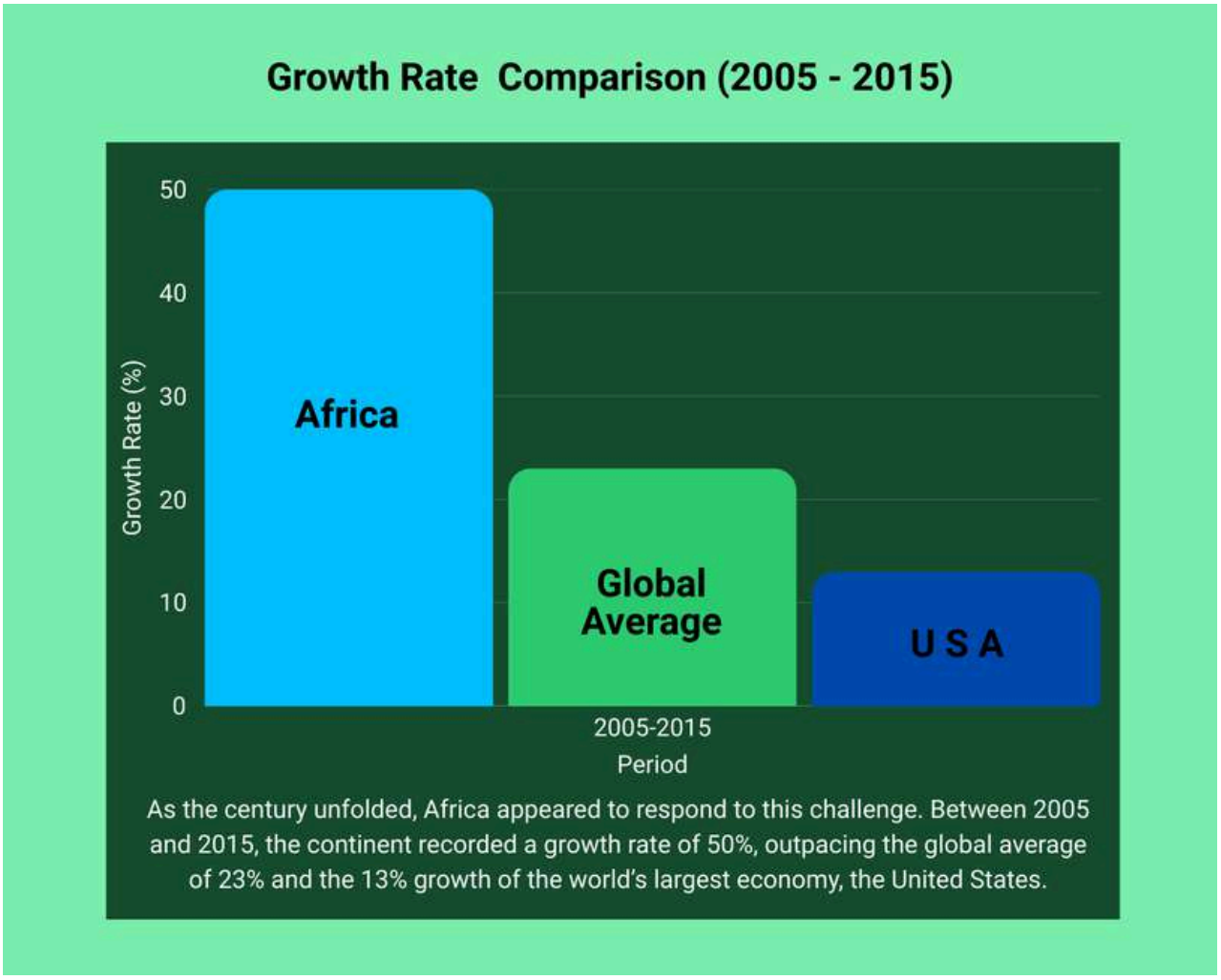


Figure 2: Comparative Growth Rates (2005 - 2015)

As the century unfolded, Africa appeared to respond to this challenge. Between 2005 and 2015, the continent recorded a growth rate of 50%, outpacing the global average of 23% and the 13% growth of the world's largest economy, the United States of America. This period of robust economic performance—coupled with rapid democratisation, improved governance, the emergence of a growing middle class, and similar positive indicators, gave rise to the narrative, "Africa Rising," a phrase popularised by The Economist in 2011. In the second decade of the century, among other developments, the "Africa Rising" phenomenon was reflected in the following outcomes and prospects:

- Valued at $5.1 billion as of 2013, Nigeria's "Nollywood" was the second largest movie industry in the world (NFI).
- African tech startups received over $186 million in funding in 2015 (Forbes).
- 400 companies operating in Africa had revenues worth over $1 billion, with combined annual income of $1.4 trillion in 2015 (McKinsey).
- Sub-Saharan African fashion and footwear market was worth $31 billion as at 2015 (Euromonitor).
- Africa's pharmaceutical industry was worth $30 billion in 2016 (AfDB).
- Africa's household expenditure totalled $1.4 trillion in 2016 (Brookings).
- 444 million mobile phone subscribers in Sub-Saharan Africa in 2017 (GSMA).

Africa's thriving fashion industry. Image souce: Ben Iwara

However, with governance challenges, regional instability, cyclical factors, and the pandemic, the Africa Rising era soon faded and the continent seemed to have returned to slumber.

3.0 Twenty-five Years into the Twenty-First Century: Assessing Progress, Analysing Trends, Repositioning for the Future

3.1. On Improving Governance, Managing Conflict, and Rebuilding States

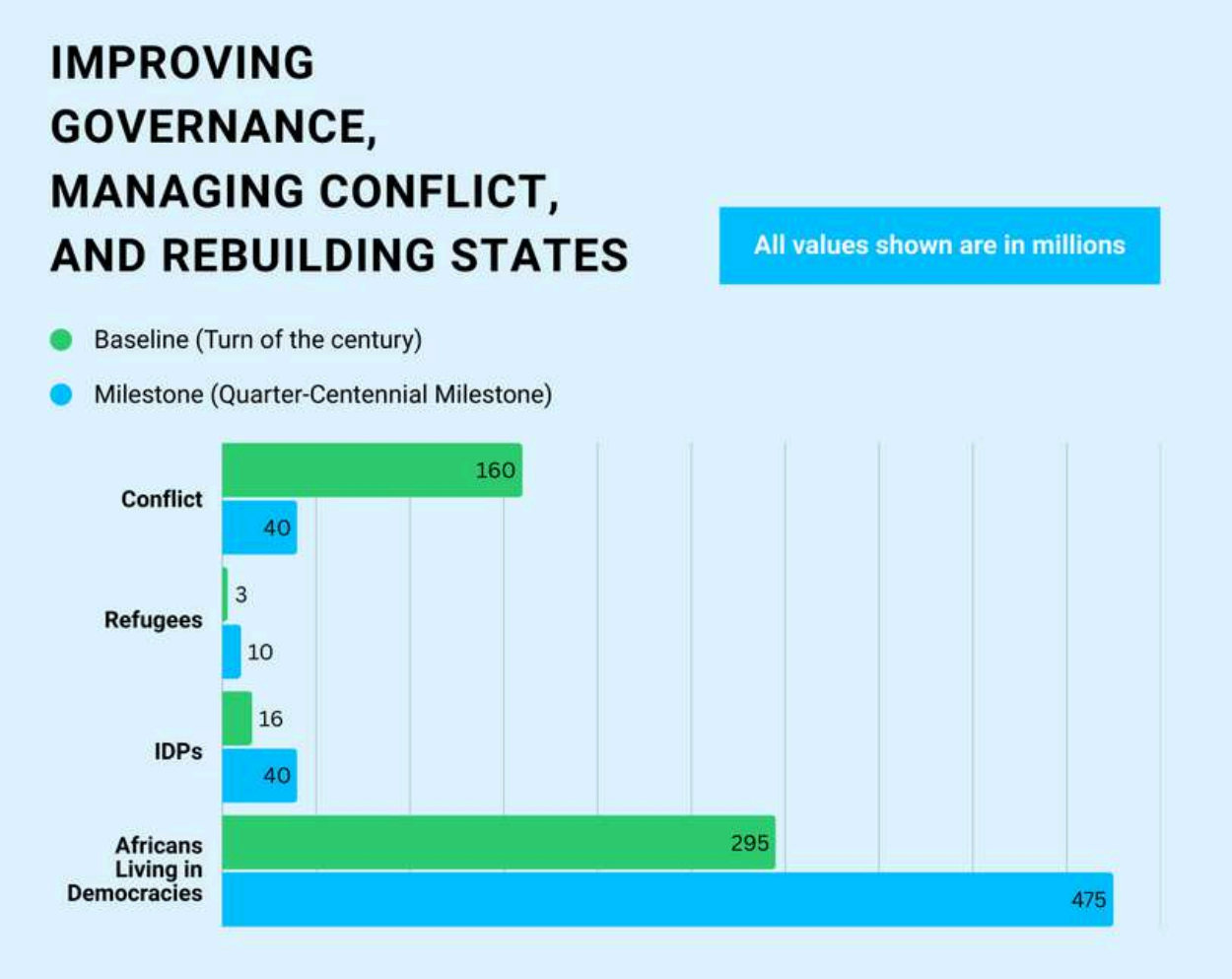


Figure 3; Comparative Governance and Stability Indicators

The rise in the number of refugees and displaced persons—despite a reduction in populations living in areas of severe conflict—highlights the growing intensity of conflict. This trend is linked to the increasing capabilities of belligerents and malicious actors, as well as to rising conflict-induced migration pressures enabled by greater cross-border mobility. It also reflects the expanding influence of other migration drivers, particularly climate-related and economic factors.

Africa must remain alert to the risk of proxy wars and externally driven conflicts. These dynamics raise the likelihood of the continent becoming a market for emerging weapons systems or a testing ground for their deployment.

As the second quarter of the century commences, a key trend that stakeholders in a stable Africa must monitor and prepare against is the rising intensity and impact of conflict. Accordingly, a critical metric to monitor in the second quarter of the 21st century is not simply the number of countries experiencing conflict, but the impact of conflict per square kilometre/mile—a measure that captures intensity and geospatial concentration. This escalation is expected to be driven, in part, by the redistribution of legacy 20th-century weapons—such as main battle tanks, man-portable air defence systems, light and medium machine guns, mortars, howitzers, rocket launchers, manned sniper rifles, AK-47s, recoilless rifles, early versions of drones, and night vision equipment—through secondary supply chains into Africa's fragile states.

As these systems become increasingly displaced in advanced contexts by data-driven, precision-guided, AI-enabled, autonomous and networked weaponry, their downstream flow into less stable regions, particularly into the arsenals of terrorists and malicious belligerents in Africa, may significantly amplify the destructiveness of future conflicts on the continent. Moreover, in an era where geopolitical rivalries are accelerating technological advancements in military applications—undermining bilateral moderation protocols and weakening multilateral stabilising institutions—Africa must remain alert to the risk of proxy wars and externally driven conflicts. These dynamics raise the likelihood of the continent becoming a market for emerging weapons systems or a testing ground for their deployment.

Historically, resource control has been linked to conflicts in Africa, including the ongoing conflicts in Sudan and the Democratic Republic of Congo (DRC). As the world embraces the fifth industrial revolution with its new set of inputs, conflicts on the continent are likely to be concentrated in zones whose minerals are embedded in the global supply chains of emerging technologies like AI and electric vehicles (EVs).

The decline in the democratic scorecard reflects a global trend. For Africa, with seven successful coups since 2020, a combination of internal power distribution dynamics and external diffusion factors is slowing—and, in some cases, reversing—democratic acculturation. As the continent transitions into the second quarter of the 21st century, the institutional fragility in many African democracies renders them increasingly susceptible to the global decline in democratic values and the global resurgence of autocracy—a trend closely linked to shifting geopolitics and the political economy of innovation.

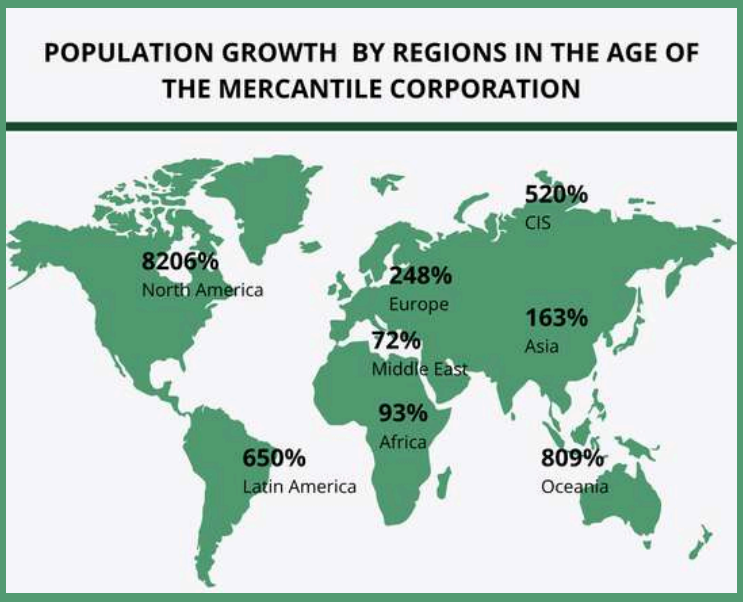
Additionally, as the continent becomes more integrated with the rest of the world in an era of exponential technologies, the role of technology billionaires in reshaping democratic institutions must concern the region. As this trend takes effect in a technology epicentre like the United States, as manifest in the redesign of public institutions through the Department of Government Efficiency (DOGE) under Elon Musk, it is important to consider what roles could be played by local and global technology giants in the evolution of institutions across the continent. This is even more pertinent considering the impacts of social media platforms, algorithms and executives on recent disruptive political and social movements in Africa, from the Arab Spring in the second decade of the century to Nigeria's #EndSARS and Kenya's Finance Bill Protests in the current decade.

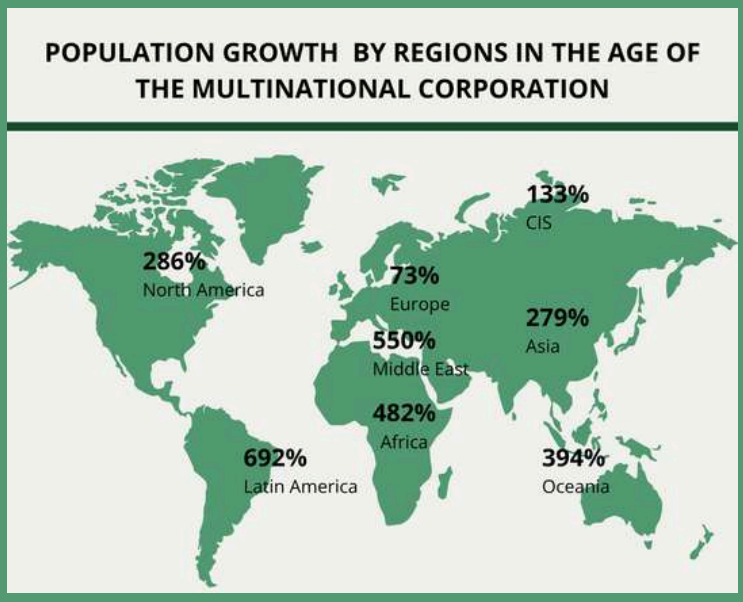
As the continent transitions into the second quarter of the 21st century, the institutional fragility in many African democracies renders them increasingly susceptible to the global decline in democratic values and the global resurgence of autocracy—a trend closely linked to shifting geopolitics and the political economy of innovation.

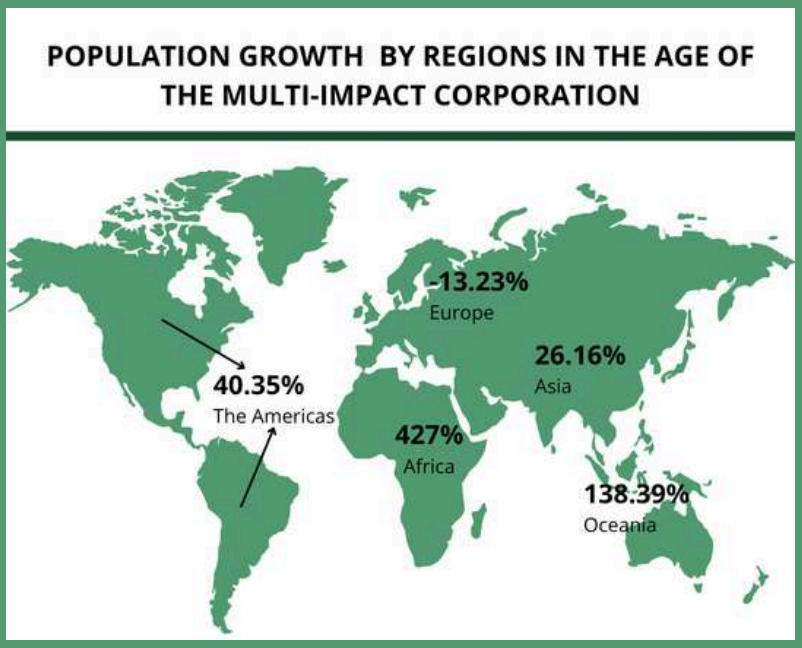
In a 2022 Remake Africa report, the concept of the Multi-Impact Corporation was introduced as the expected outgrowth of the 21st-century evolution of the corporation—following the pre-20th-century Mercantile Corporation and the 20th-century Multinational Corporation models, both of which have cumulatively shaped the present state of Africa. The Multi-Impact Corporation was described as having the potential to mobilise entrepreneurial capacity and generate value across six spheres: reshaping societal values, generating profit, facilitating development, driving policy change, enabling the civic space, and transforming the political landscape. Envisioned as a catalyst for the emergence of 21st-century Africa, this new model was projected to become the defining strategy of global business in the current century. Its particular relevance to Africa's transformation through AIVAS—a data-analytic framework that proposes evaluating 21st-century corporations based on their multidimensional impact on the continent—was presented.

The growing discourse on socio-politically powerful technology entrepreneurs, barely two years after that report, signals the emergence of the Multi-Impact Corporation. However, two "genetic" strains of this model seem to have emerged in the global business ecosystem—the benefit strain, which is pluralistic in orientation and seeks to create and distribute public value, and the oligarchic strain which seeks to concentrate social, economic and political power. Africa, with its multidimensional problems, is in dire need of the benefit strain of this global business model. This places a challenge on the African business leader, a challenge for which the Africa 21st Century Clock initiaitve offers a strategic response mechanism.

The growing discourse on socio-politically powerful technology entrepreneurs... signals the emergence of the Multi-Impact Corporation. However, two "genetic" strains of this model seem to have emerged in the global business ecosystem—the benefit strain, which is pluralistic in orientation and seeks to create and distribute public value, and the oligarchic strain which seeks to concentrate social, economic and political power. Africa, with its multidimensional problems, is in dire need of the benefit strain of this global business model.







Figures 4-6: Comparative Population Growth Across Eras by Prevailing Business Model.
Africa had one of the world's lowest population growth rates in the age of the Mercantile Corporation and the world's third largest population growth rates in the age of the Multinational Corporation. The continent will have the world's highest population growth rate in the age of the Multi-Impact Corporation.

The age of the Multi-Impact Corporation is projected to coincide with Africa's era of exponential population growth. The multidimensional impact orientation of this business model has the potential to harness this quantitative growth into meaningful qualitative transformation.

3.2 On Addressing Poverty and Inequality

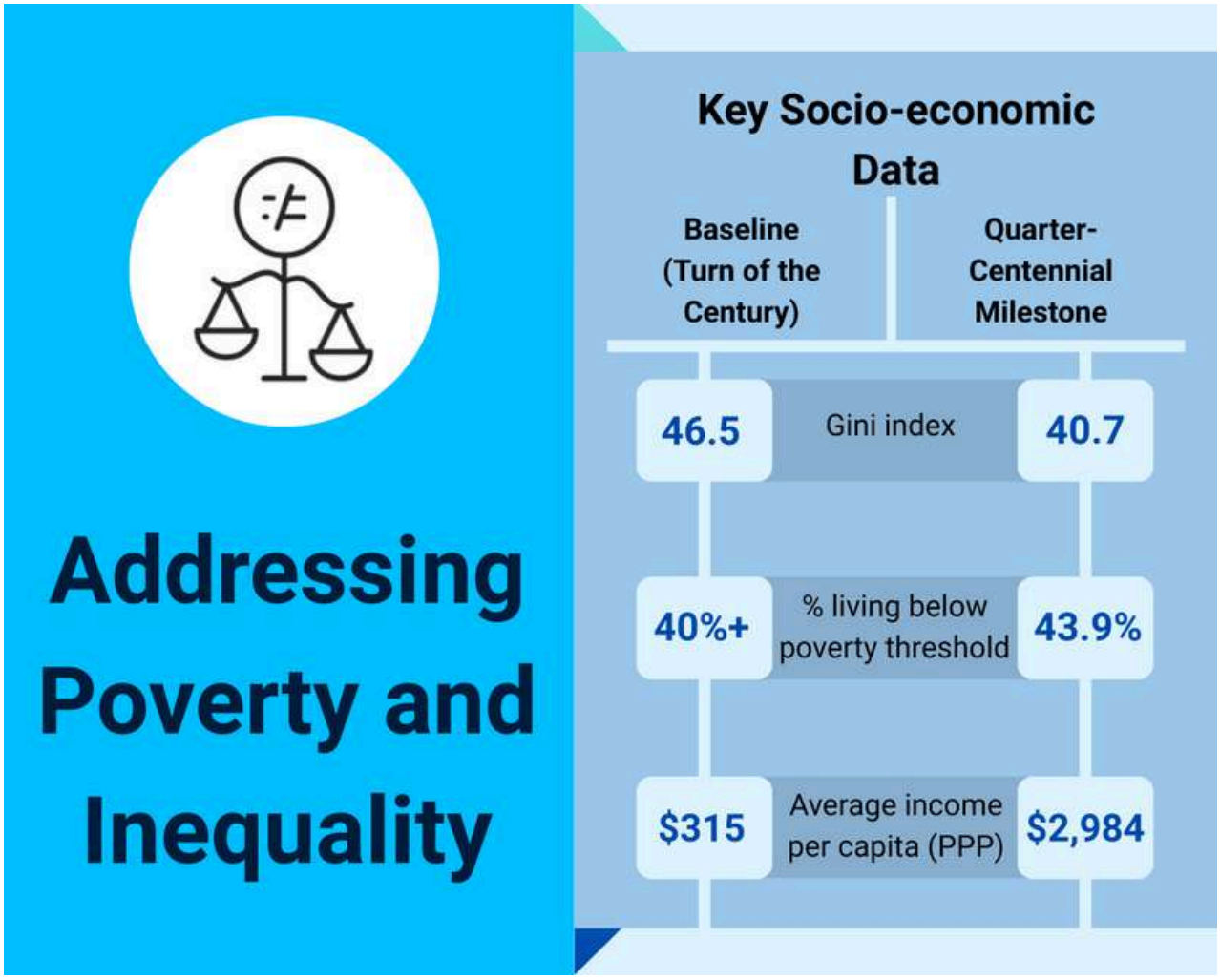


Figure 7: Comparative Poverty and inequality Indicators

Not withstanding the nuanced application of these insights—especially due to the uneven expressions of these indicators across Africa's 54 countries, as illustrated by South Africa's high inequality rate of 63% compared to Algeria's low rate of 27.6%—the continent has recorded a slight improvement in its average equality scorecard and an increase in average per capita income in the first quarter of the century. However, per capita income remains highly unevenly distributed due to significant inequality. Moreover, the poverty count indicates a rise in the absolute number of people living within the poverty threshold, with over 600 million projected to be in poverty by 2025. This trend is driven by several factors, including the lingering effect of the COVID-19 pandemic, insurgency, climate change, and persistent governance challenges with structural implications. In evaluating poverty in the second quarter of the century, Africa must keep tabs on these factors in addition to emerging triggers of global economic shifts, such as the impact of automation on supply chains, jobs and purchasing power and rising economic nationalism.

3.3 On Investing in People (Human Development)

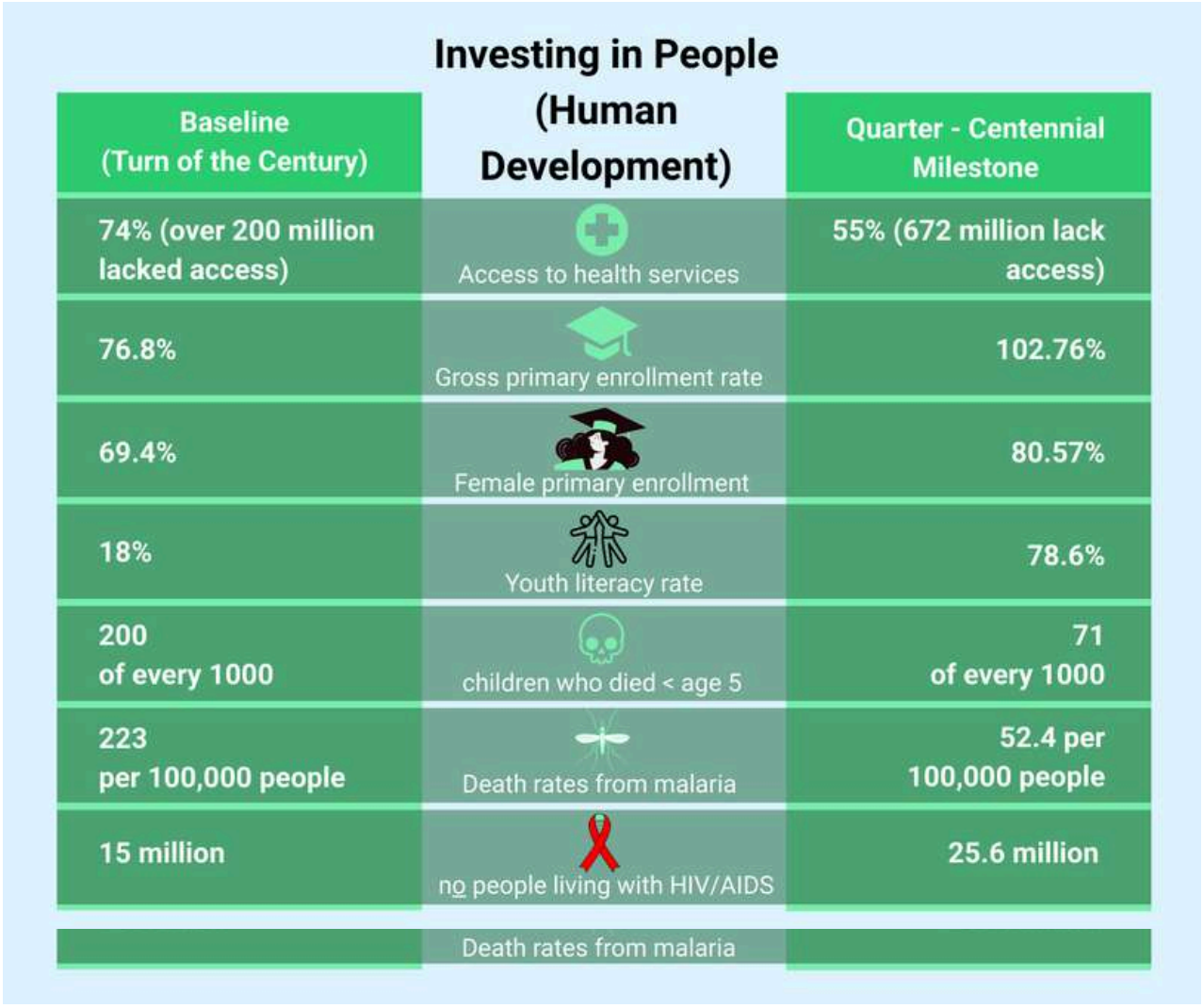


Figure 8; Comparative Human Development Indicatorss

The first quarter of the 21st century saw Africa confront the Ebola epidemic in Liberia, Sierra Leone, and Guinea, as well as in Nigeria, Mali, and Senegal. Less than a decade later, the continent, along with the rest of the world, was engulfed by the COVID-19 pandemic. Although morbidity and mortality rates were ultimately lower than initially feared for Africa, the pandemic and earlier epidemics together redirected or stalled investments in legacy health needs and cumulatively impeded access to healthcare. As the continent works to reclaim pre-pandemic gains and repurpose pandemic-driven investments—among other goals—to improve healthcare access, lingering questions remain: will another pandemic emerge in the next 25 years? What is Africa's current level of preparedness? Africa must therefore proactively upgrade and continuously update pandemic-focused public health defense systems, even as it continues to combat long-standing health challenges such as HIV/AIDs and tropical diseases such as malaria.

Additionally, the continent must explore the integration of AI into health systems—particularly in diagnostics and bioinformatics—to support gene-editing solutions for conditions such as sickle cell anaemia and for diseases such as malaria. At the same time, it must confront the risks associated with the targeted application of biological AI, including its potential misuse for eugenic purposes. These emerging trends must be addressed without neglecting the longstanding challenges of improving basic and primary healthcare access, especially in rural areas.

Meeting the human capital demands of the 21st century requires accelerated improvements not only in access to education but also in its quality and relevance. Going into the second quarter of the century, Africa must address persistent gaps in basic education access—including gender disparities and the rural-urban divide in education access—while also responding to the urgent need to upskill its population for the digital economy in an age of exponential technologies. This dual challenge presents an opportunity to embed digital capacity building not only within conventional primary, secondary, technical, and tertiary education pathways but also within traditional, locally adaptive learning systems such as the *Imu-Ahia* (Igbo apprenticeship scheme), the nomadic education system, and the Mouride system of Senegal and The Gambia. Addressing these challenges and harnessing these opportunities will require integrating local context into algorithmic design and using locally sourced datasets to train large language models. It also calls for developing locally responsive user interfaces in digital devices and learning tools. Beyond leapfrogging, this approach will help bridge the existing education gaps while meeting emergent needs.

...Africa must address persistent gaps in basic education access—including gender disparities and the rural-urban divide in education access—while also responding to the urgent need to upskill its population for the digital economy in an age of exponential technologies.

3.4. On Lowering Infrastructure, Information, and Finance Barriers

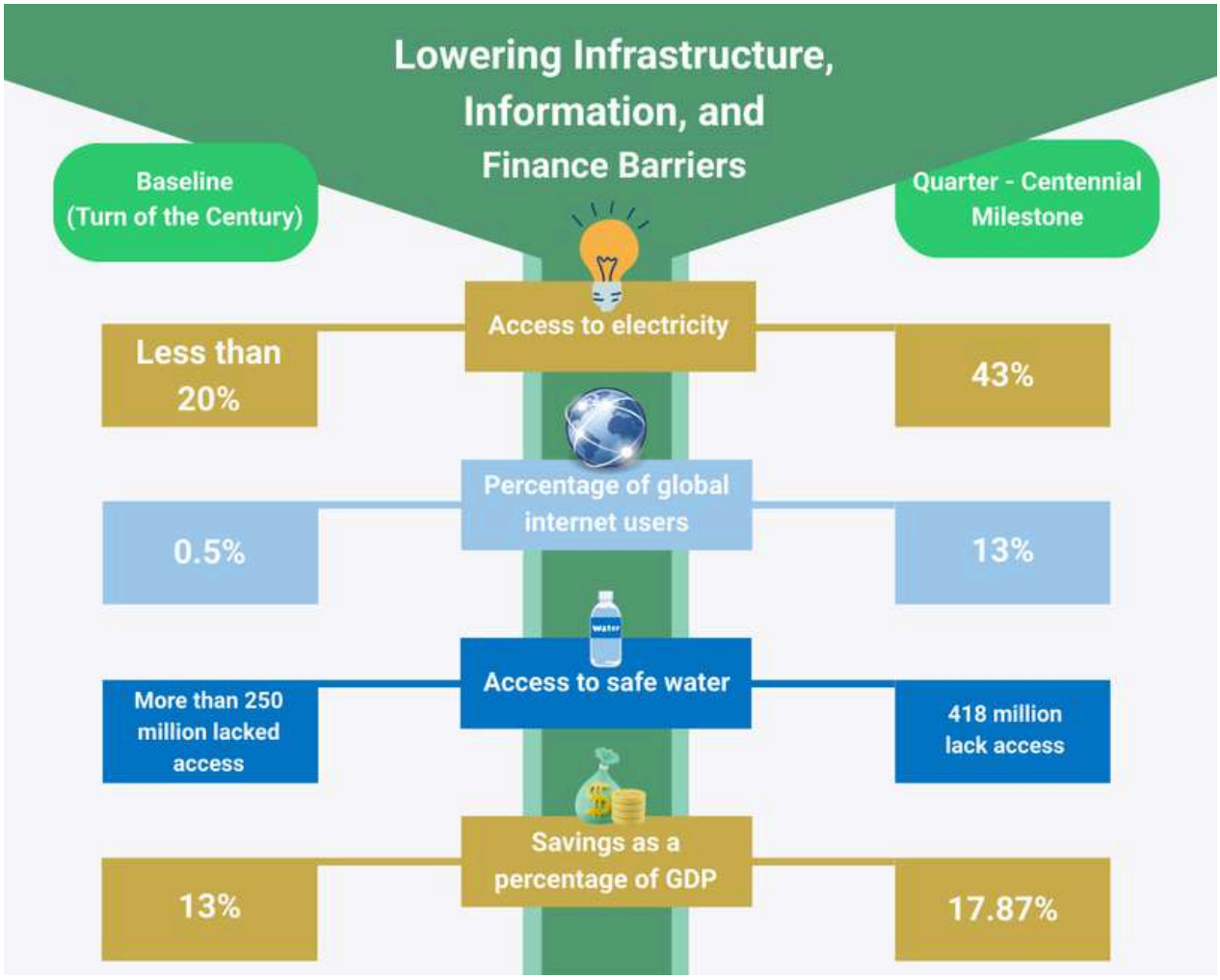


Figure 9: Comparative Infrastructure and fFinance Indicators

Africa enters the second quarter of the 21st century in an era of rising energy demand tempered by the imperative of sustainability. The continent faces not only an access challenge but also a global energy market that is rapidly transitioning toward renewables—driven by a sense of urgency even greater than at the turn of the century.

Despite improvements in electricity access, fewer than 50% of Africans have reliable access to power. While this deficit is a negative indicator, it also presents a unique opportunity: the majority of Africans could receive their first electricity supply from sustainable sources, drawing on the continent's vast and diverse energy resources.

However, electricity access is just one dimension of a broader infrastructure deficit. A joint report by the Africa-Europe Foundation (AEF), the African Union Development Agency (AUDA), and the African Climate Foundation (ACF) estimates that bridging Africa's infrastructure deficit will require annual investments of $170 billion. With low domestic savings rates, infrastructure financing options are constrained. Hence, as the century unfolds, Africa must closely examine emerging financing opportunities and associated risks, particularly in the light of the geopolitical dynamics surrounding foreign infrastructure investment. Furthermore, the existing infrastructure governance gaps must be bridged to fully harness the potential for integrated infrastructure development through frameworks like the Africa Continental Free Trade Agreement (AfCFTA). Equally critical is the establishment of effective public-private partnerships, alongside sustained public investment in public-good infrastructure—such as safe drinking water—to unlock inclusive growth.

An additional imperative is that of digital infrastructure for the new economy. At the turn of the century, Africa accounted for 0.5% of global internet accounts. By 2021, Africa's share had risen to 13%. For a continent that is home to 23% of the world's youth population, this indicates much room for digital infrastructure growth. Hence, the task of bridging gaps in legacy infrastructure—such as roads, railways, airports, electricity, housing, and water—must go hand in hand with meeting the infrastructure demands of the digital age. This entails not only access to the utility of emerging technologies but also the platform infrastructure that enables their development and deployment, from continent-wide broadband infrastructure to data centres and AI research labs. In engaging the geopolitically charged global chips market, Africa must reactivate a 20th-century non-aligned model by adopting strategic plurality

In engaging the geopolitically charged global chips market, Africa must reactivate a 20th-century non-aligned model by adopting strategic plurality as guiding doctrine.

Furthermore, the changing global financial landscape presents risks as well as opportunities for the continent. The emergence of alternative currencies, including digital currencies, challenges the dominance of the dollar and will reshape global economic dynamics in the 21st century. For Africa, this shift could open doors to greater financial autonomy, necessitating renewed prospects for a common African currency—an initiative that could not only lubricate domestic production but also facilitate intra-African trade.

3.5 On Spurring Agricultural and Rural Development

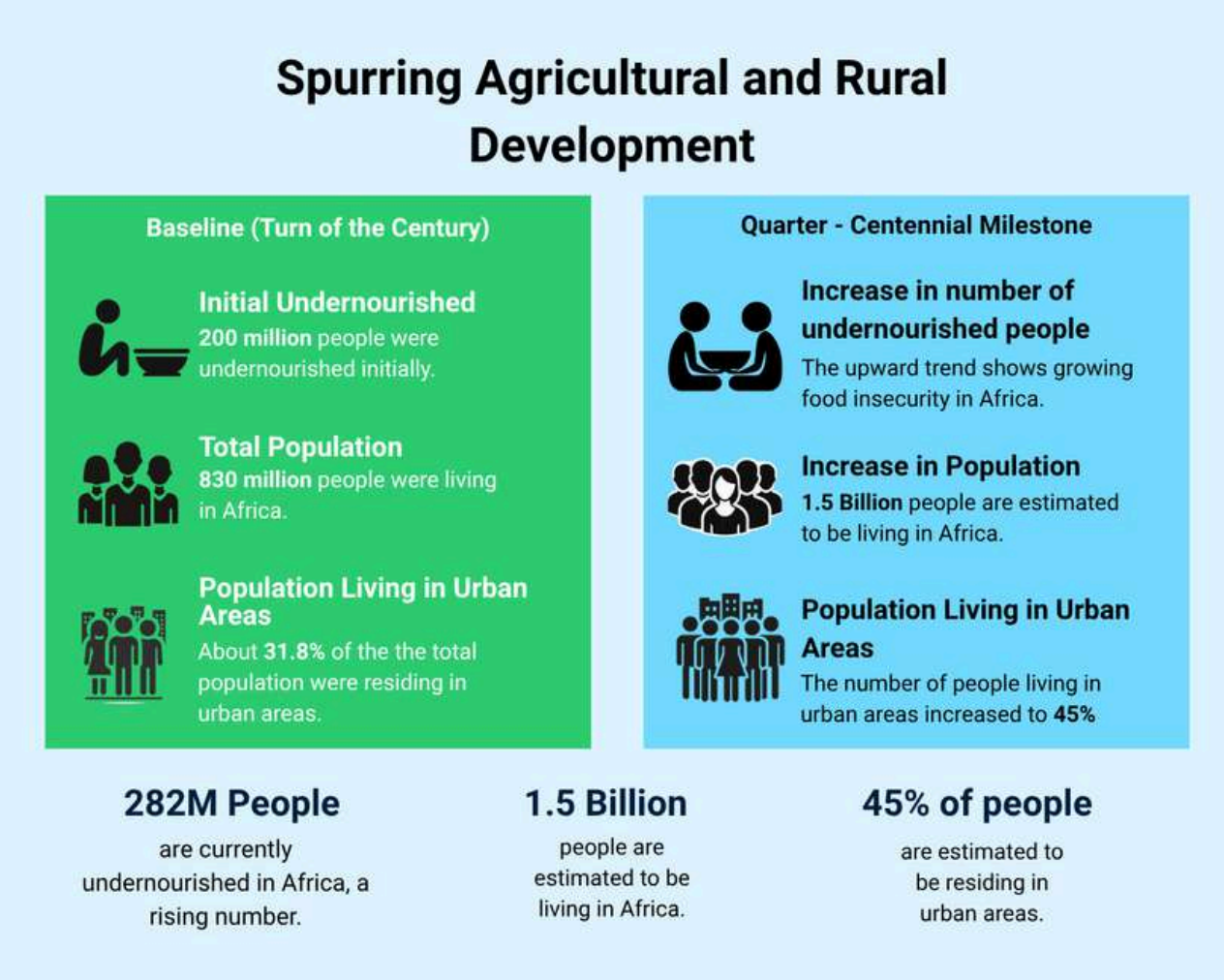


Figure 10; Comparative Agricultural and Rural Development Indicators

Although population growth between the turn of the 21st century and its first quarter has led to a decrease in the percentage of Africans affected by food insecurity and undernourishment—from 25% to 20%—the absolute number of affected people has increased. This indicates that while there has been growth in food systems, it has not matched up with population growth and thus, has been insufficient to reduce the nominal figures. From farmer-herder conflicts and terror attacks to trade wars and civil or interstate conflicts, from drought owing to climate change to the subsistent scale of farming on the continent, from the low level of agricultural technology adoption to low access to extension services, Africa continues to face disruptions to local and global food supply chains. Africa must confront these and similar constraints In the second quarter of the century to achieve food sufficiency as a core aspect of rural development.

The suboptimal scorecard in agriculture is closely linked to the low level of rural development across the continent, albeit with diverse manifestations across countries and regions. Even as Africa's subsistence-based farming takes place in rural areas, the continent is experiencing rapid rural-to-urban migration, as increasing numbers of young people leave rural communities for congested cities. As of 2020, an estimated 51.3% of Africa's urban population lived in slums—more than double the global average of 24.4%. Looking ahead to the second quarter of the 21st century, this rural-urban drift could be mitigated—or even reversed—through sustainable policies aimed at transforming rural areas into idyllic, liveable countrysides featuring mechanised farms, ranches, game reserves, angler's havens, and ecotourism centres that leverage local environmental peculiarities..

3.6. On Diversifying Exports, Reorienting Trade Policy, and Pursuing Regional Integration

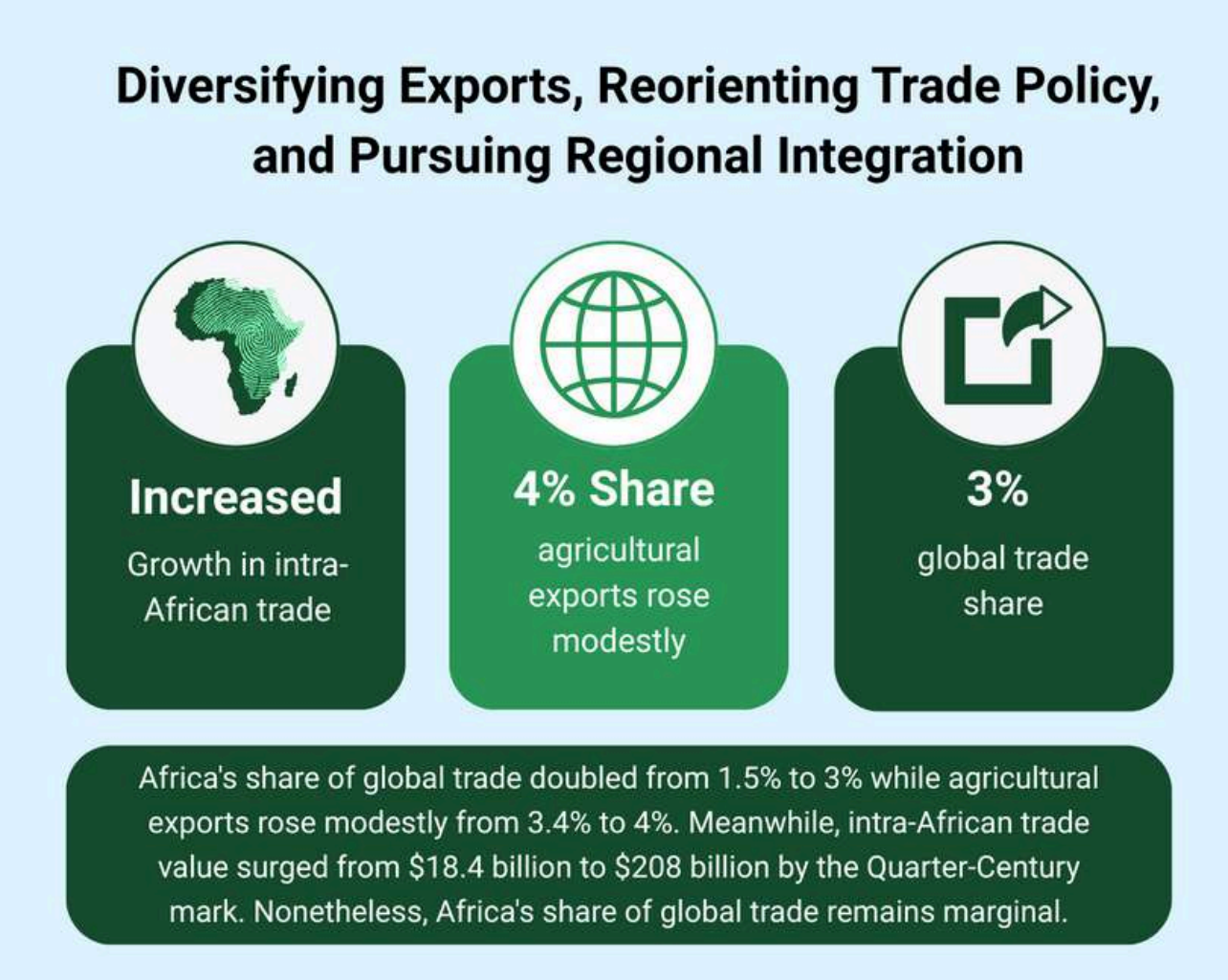


Figure 11: Comparative Trade Indicators

Meanwhile, Africa's share of global agricultural exports remains paltry, with only marginal growth recorded in the first quarter of the century. A similar pattern holds for the continent's overall share of world trade. However, notable progress has been made in intra-African trade, largely fuelled by increased regional integration through frameworks such as the AfCFTA. The second quarter of the century presents Africa with an opportunity to consolidate these gains through investments in the logistical and digital infrastructure required to support online trade. A key area of opportunity lies in developing digital platforms that can unlock the value of the continent's vast but largely dormant contextual data—warehoused across sectors, from telecommunications to banking, and stored in large data centres. Leveraging this data to bridge information asymmetry and to enable precision commerce aligns with the GaApGaAb proposition, a Remake Africa framework available for collaborative development and deployment.

3.7 On Reducing Aid Dependence and Debt and Strengthening Partnerships

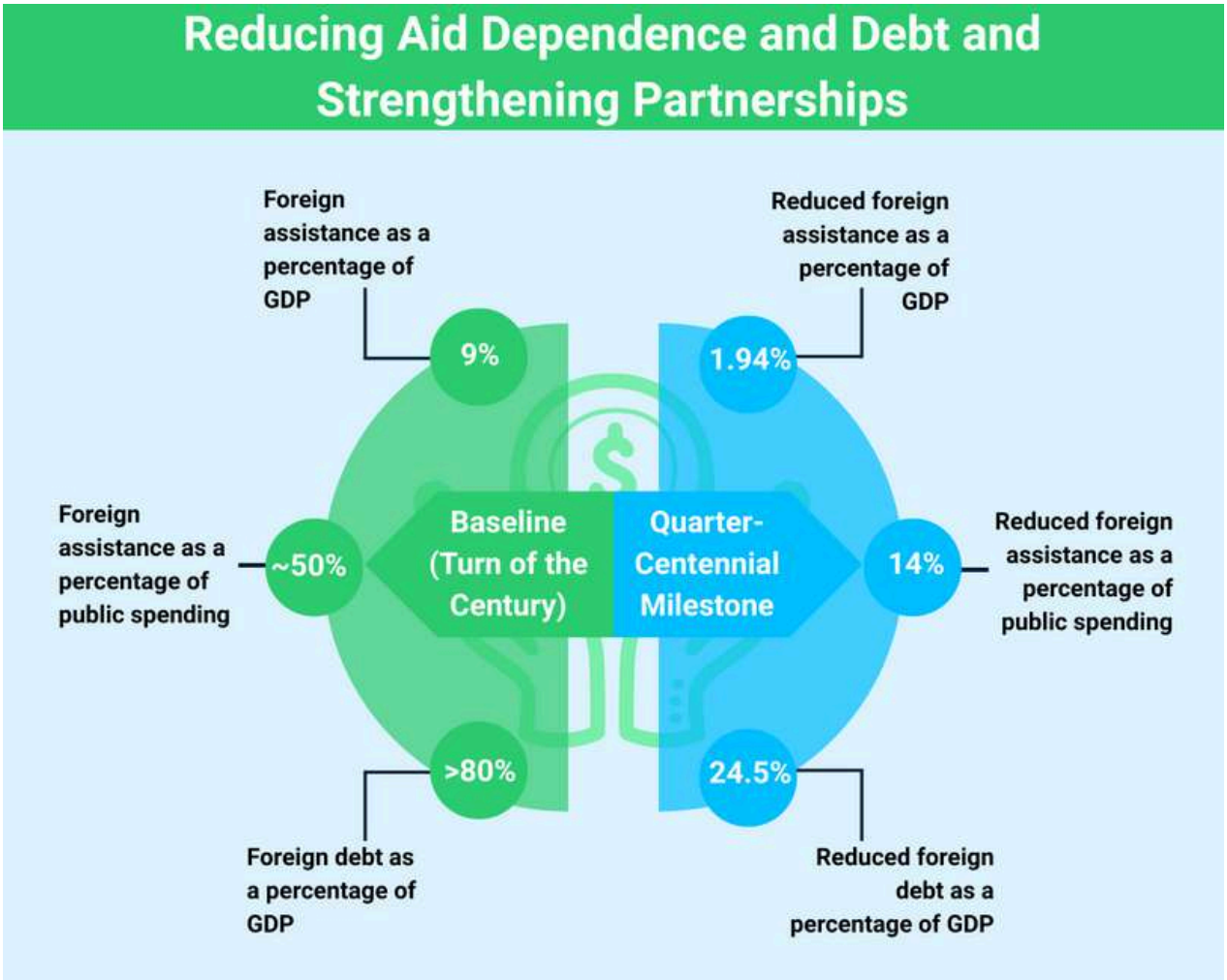


Figure 12; Comparative Aid and Debt Indicators

The decline in Africa's percentage reliance on foreign assistance and debt occurs alongside the continent's significant debt burden—estimated at $1.152 trillion in 2023 and projected to rise to $1.17 trillion in 2024. As the second quarter of the 21st century begins, Africa must intensify efforts to find viable alternatives to foreign assistance, especially considering the shrinking Official Development Assistance (ODA) window, following the policy shifts introduced under President Donald Trump's administration towards the United States Agency for International Development (USAID). These efforts must also navigate the sovereignty risks that are often associated with debt and external aid.

3.8 Digital and Sustainability Indicators

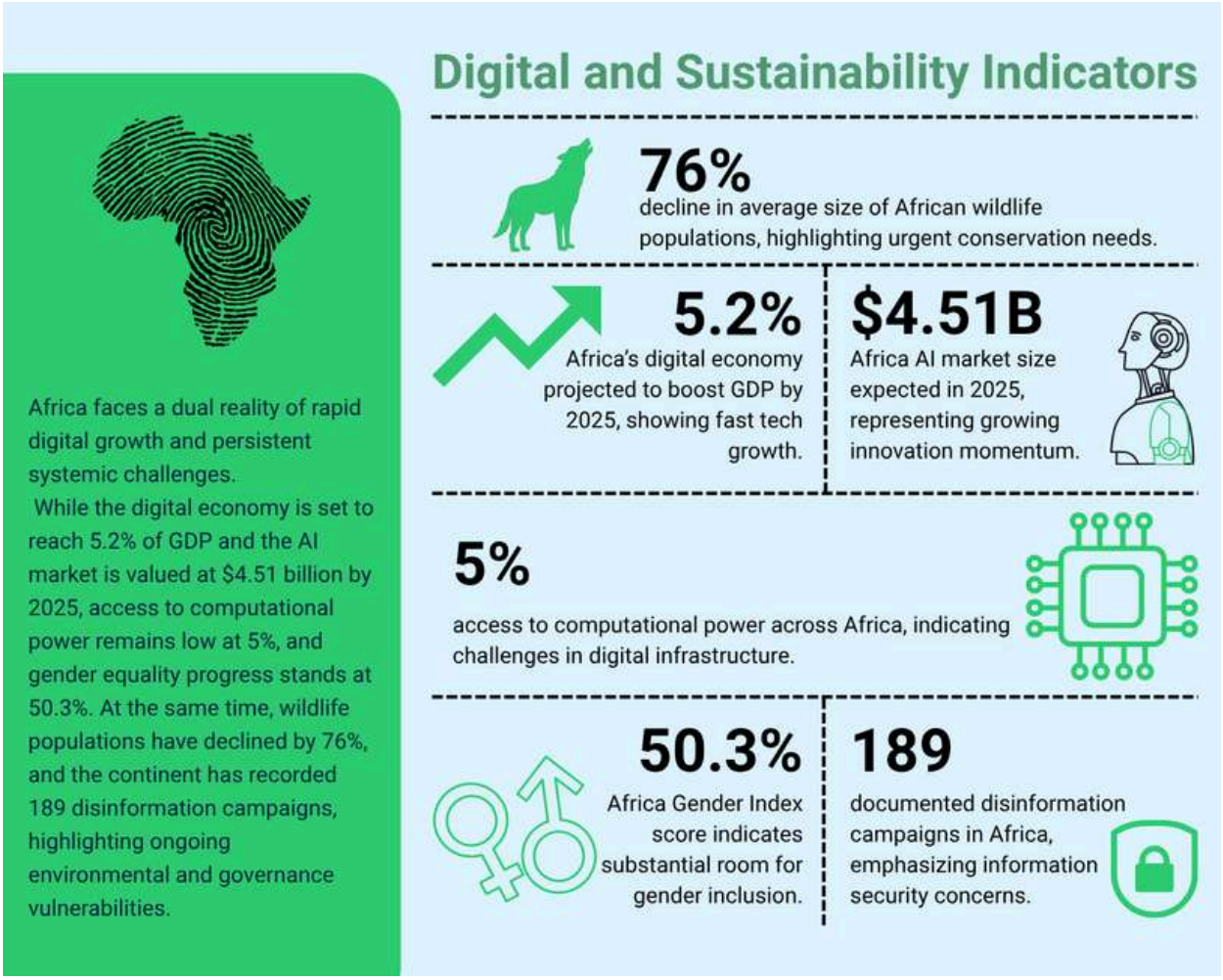


Figure 13:; Digital and Sustaiinability Indicators

The turn of the century was marked by the burst of the dot-com bubble. At the time, Africa had no known billion-dollar startup technology companies. Today, however, the continent boasts nine tech startup unicorns, and the digital economy is projected to contribute 5.2% to total GDP by 2025. Meanwhile, with only 5% global access to computational power, Africa's AI market is currently valued at $4.51 billion, supported by around 2,400 AI startups as of 2024.

Going into the second quarter of the century, with only three African countries—Mauritius, South Africa, and Rwanda—scoring above average on the latest Oxford Insights AI Readiness Index, the year 2025 must become ground zero for Africa's emergence in an era defined by exponential and emerging technologies.

At the same time, the continent must focus on new and evolving development indicators. In the Gender Equality Index, Africa currently scores an average of 50.3%, indicating substantial room for gender inclusion across sectors. Moreover, in an era when technology-enabled disinformation threatens national security and global stability—for instance, 189 disinformation campaigns were reported across the continent in 2022—Africa must closely monitor and manage the emerging threats.

3.9 The Sense of Urgency

The year 2025 marks a major milestone—a quarter-centennial checkpoint—for assessing Africa's trajectory in the 21st century. If we were to compress the entire century into a 24-hour clock by dividing 25 years by 100 years and multiplying the outcome by 24 hours, 2025 would correspond to 6:00 a.m.—the dawn of the day. This moment in the circadian rhythm represents the transition from sleep to wakefulness, the point at which the body is naturally primed to rise. For African development observers, this metaphor is jolting yet instructive. More than a decade since the "Africa Rising" narrative gained prominence, 2025 offers an opportunity not just to reflect but to reawaken the continent to its vast potential. The symbolic urgency of this moment underscores the necessity of the Africa 21st Century Clock, a strategic framework to guide timely, coordinated, and ambitious action.

4.0 The Africa 21st Century Clock

Where do we envision Africa by the end of the 21st century—by the year 2100? Where does the continent currently stand in relation to that centennial destination? And at what pace is Africa progressing towards such long-term goals, if at all? Measuring speed requires two variables: time and distance. While we have time—measured in years—we lack a clearly defined sense of distance—the specific developmental milestones expected per year or decade. Without a shared understanding of where we want Africa to be by 2100, it becomes impossible to calculate how far or how fast we are moving. Beyond relying on forecasts and projections, the future must be actively shaped—by Africans, for Africa. This means that the process of defining Africa's long-term goals must be democratic, inclusive, and visionary. In essence, it must be pluralistic. This is where the Africa 21st Century Clock project comes in.

The Africa 21st-Century Clock is conceived as a set of institutions, tools, and processes to drive and monitor a collaboratively and iteratively created century-long African vision. It is designed to enable real-time progress-tracking against well-defined benchmarks, supported by an accountability framework and a mobilisation system for delivering impact. The framework is built around three core institutional components, each corresponding to a part of a clock:

This vision will be developed progressively, iteratively, and collaboratively, with active citizen participation enabled by civic technology.

1. The Regulator: In a clock, the regulator is the governing mechanism controlling speed and ensuring accuracy. In the Africa 21st-Century Clock, the Regulator refers to a dynamic vision of the 21st-century Africa designed by the African people with the moderation and oversight of an intergovernmental institutional driver. This vision will be developed progressively, iteratively, and collaboratively, with active citizen participation enabled by civic technology. It will serve as the blueprint for the 21st-century Africa and provide a basis for tracking Africa's progress across the next quarter-centennial milestones: 2050, 2075, and 2100. The African Union (AU)—through its Assembly and Executive Council is expected to provide institutional oversight while AUDA-NEPAD is best positioned to provide operational leadership as part of of the Regulator.

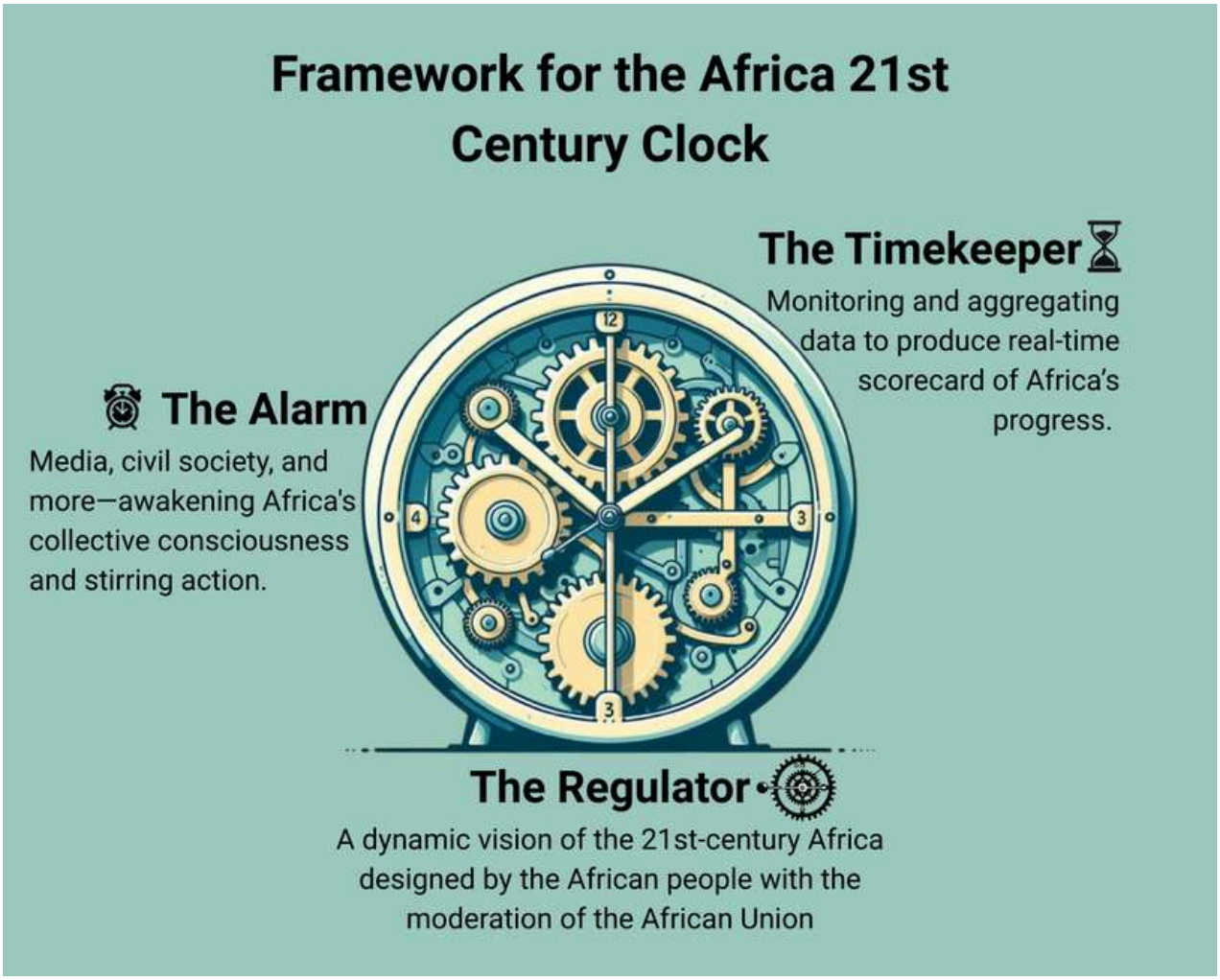


Figure 14: Framework of the Africa 21st Century Clock

2. The Timekeeper: In a clock, the timekeeper measures the passage of time—typically in hours, minutes, and seconds. For the Africa 21st-Century Clock, the Timekeeper is the institutional mechanism that monitors and aggregates data to produce real-time scorecard of Africa's progress. This scorecard will be structured along three broad indicators.

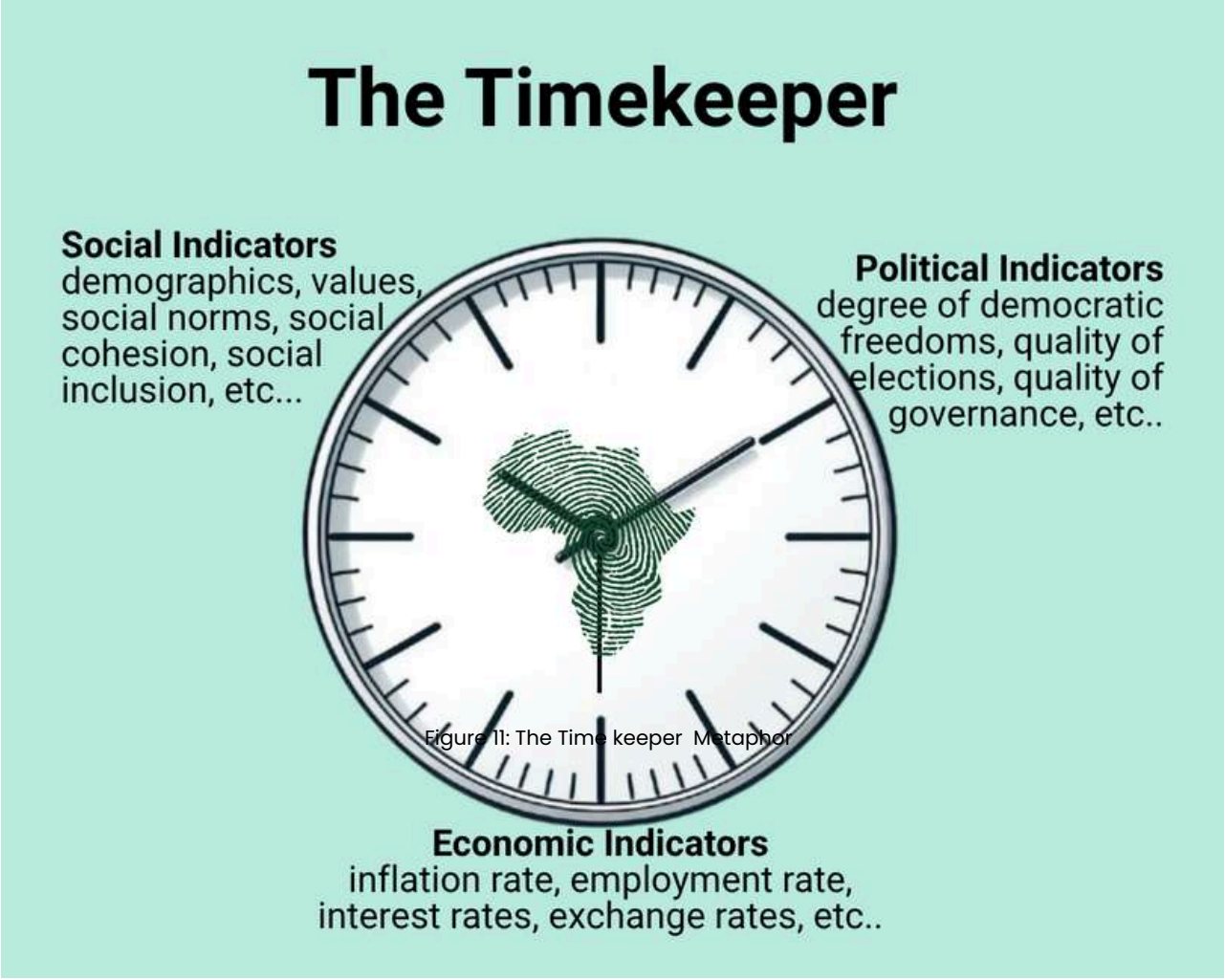


Figure 11: The Time keeper Metaphor

Figure 15: The Timekeeper component of the Africa 21st Century Clock depicting the social, political and economic indicators metaphorically represented by the hour, minute and seconds hands respectively

- **Social indicators** as the **"Hours"** digit: Social indicators include demographics (population dynamics), values (such as education and health as thematic areas of social wellbeing), social norms (such as attitudes to corruption), social cohesion (such as rate of internal displacements) and social inclusion across themes (from class to gender to age and more). These indicators, which change relatively slowly, directly shape the political landscape. Whereas political indicators also conversely impact on social indicators, creating a chicken and egg situation of sorts, citizens, when enabled by social institutions, can reshape political institutions.
- **Political Indicators** as the **"Minutes"** digit: These indicators, which include degree of democratic freedoms and quality of governance, are shaped, sustained or changed by social indicators and, in turn shape economic indicators through public policy.
- **Economic indicators** as the "**Seconds**" digit: Metrics such as inflation rate, employment rate, interest rates, exchange rates, and so on, change rapidly, and readily indicate the performance of a polity (this is notwithstanding the fact that structural metrics such as GDP change relatively more slowly). Economic indicators, in turn, shape social indicators which shape political indicators.

To operationalise the Timekeeper function, a consortium of data analytics organisations is envisaged. It is proposed that this role be led by a five-member consortium comprising the AfDB, AERC, GCA, UNECA, and the World Bank, who jointly sponsored the *Can Africa Claim the 21st Century?* report in 2000.

3. The Alarm: In a clock, the alarm emits a sound loud enough to awaken the sleeper. For the *Africa 21st-Century Clock*, the Alarm refers to the institutional mechanism responsible for awakening the continent's collective consciousness and stirring timely action. It is envisaged that this role be played by a consortium of civil society and media organisations, who will raise public awareness, mobilise citizen participation, and sustain a sense of urgency. Leveraging data from the Timekeeper, these actors will drive evidence-based advocacy, foster informed public discourse, and hold institutions accountable to the century-long African vision.

5.0 The Plurality Mechanism of the Africa 21st Century Clock

Collective intelligence emerged as a conceptual construct as thinkers conceived of society as an aggregation of individual cognitive abilities, endowed with the capacity to collaboratively solve problems on a scale no individual could achieve alone. Although often associated with Western thinkers like William Morton Wheeler, Émile Durkheim, and Hannah Arendt, this pluralistic approach to envisioning society has deep roots in African communal culture. The village square motif exemplifies this, serving as a veritable symbol of collective conscience and cognition — with built-in mechanisms for adjudication and governance.

From the Igbo proverb, *Ọra na-azụ nwa*, meaning, "it takes a whole village to raise a child," to the Zulu saying, *Umuntu ngumuntu ngabantu*, meaning, "a person is a person through other people," to the Swahili concept of *Ujaama*, meaning "familyhood" or "community," to the Berber term, *Jemaa*, meaning "community" in the context of the Council of Elders, Africa embodies plurality not as an abstraction but as a lived and shared ethic — plurality as a way of life.

In the age of emerging technologies — where Big Data captures the human activity footprint, where compute power grows exponentially in speed and efficiency, and where intelligent machines acquire the capacity to self-teach from the wellsprings of human data (as does AI) — this collaborative ethos has found renewed urgency. The plural approach to the development and deployment of technology for human flourishing is gaining momentum, even as the world grapples with exponential technology used for good versus its weaponisation for harm.

Africa embodies plurality not as an abstraction but as a lived and shared ethic — plurality as a way of life.

A critical construct enthused and demonstrated by modern plurality advocates is the need to collaboratively engage these technologies for human flourishing as against their control by few powerful technology entrepreneurs. This is the crux of the Power Sharing Liberalism ethos by Danille Allen. Also, in their book, Plurality: The Future of Collaborative Technology and Democracy, Audrey Tang (former Digital Minister of Taiwan) and E. Glen Weyl (Founder of RadicalXChange and Microsoft Plurality Collaboratory), alongside a community of over one hundred contributors (including the author of this paper), not only document the historical, current and future possibilities of collaborative digital platforms but also demonstrate it in the making of the book – an open-source process in which anyone everywhere in the world can contribute to its content while content adoption is moderated using the Gov4Git distributed ledger system – a community voting and governance process in which contributors, like citizens, determine what emerges as the output of the book.

As captured in the book, one of the foremost testimonials of plural governance mechanisms is the Taiwanese experience. During the 2014 Sunflower Movement, in which citizens occupied the Taiwanese Legislative Yuan, members of g0v (Gov-Zero), a civic tech collective, deployed collaborative digital tools to broadcast events, facilitate communication, and educate the public through simplified visualisations of the issues at stake. In the aftermath of the protest, the Taiwanese government engaged some members of the movement to co-develop vTaiwan—a digital platform and process (with an offline component) designed to enhance collaborative governance through technology.

vTaiwan is a four-stage process comprised of: the Proposal Stage in which citizens discuss online and offline which issues to be addressed; the Opinion Stage in which citizens express their agreement, disagreement or indifference to statements made by other participants on the issue; the Reflection Stage involving two in-person stakeholder meetings with virtual participation to determine if the issue is set for advancement; and the Ratification Stage in which the relevant government agency either passes a draft bill to the legislative Yuan or releases a policy statement explaining why the issue cannot be legislated upon.

Several digital tools are deployed in this process notable among which is Pol.is. Deployed in the Opinion Stage, Pol.is is a Machine Learning (ML)–enabled, open-source participatory platform that enables governments to survey citizen opinion on specific issues. On the platform, individual opinions are expressed, supported, opposed or passed over by others, and algorithmically clustered to determine areas of consensus. The collective preferences are then visualised in real time, enabling transparent public decision-making.

Pol.is—and AI-enabled deliberative democracy tools inspired by it—have since been used in various contexts: in France, in cities across Germany and the United States, and by the UNDP in Tunisia and Jordan.

While Pol.is has not yet been tested at the scale of over one billion citizens—as envisioned by the Africa 21st Century Clock—its core model offers a compelling foundational framework for the Regulator component of the initiative. In this model, an organ of the African Union—preferably AUDA-NEPAD—would lead the institutionalisation of a vTaiwan-type mechanism adapted to the African context. This would entail the development and operationalisation of an AI- and machine learning-enabled, Pol.is-inspired platform designed to collect and collate opinions, sort and cluster patterns, visualise consensus and divergence, build bridges, and facilitate compromise on themes related to the Africa we want to see by 2050, 2075, and 2100.

At its launch—proposed for Africa Day, May 25, 2026—the Africa 21st Century Clock's digital platform will present thematic areas around which citizens can articulate the Africa they want to see. These themes may be drawn from the pillars of Agenda 2063 and the Sustainable Development Goals (SDGs). Factoring in assumptions and constraints, the platform will qualify and quantify aspirations, moderate optimism within data-guided parameters, generate thematic scenarios based on the diversity and convergence of citizens' inputs, and present each set of scenarios in various formats—including text, graphics, infographics, and audiovisuals—for public selection across the continent. The outcome will be an AI- and ML-enabled map of short-, medium-, and long-term goals across themes, spanning 2026 to 2100, derived from citizens' input—goals that states can adopt and against which governments can be held accountable.

As a semi-structured deliberative platform, it will also allow citizens to propose new themes if they feel their aspirations are not captured within the set themes, enabling the coding and categorisation algorithms to integrate new inputs. Designed to be iterative, this collaborative goal-setting process will be revisited annually at a "Village Square" convening—online and offline gatherings across the continent during Africa Day celebrations—where progress will be reviewed and goals renewed. Notably, the first consensus-building exercise on the platform should be the collective choice of an indigenous African name for the Africa 21st Century Clock's platform.

Meanwhile, at any point in time, the platform—activated through user prompts—will initiate the Timekeeper function and provide real-time assessments of the continent's progress towards each of the three milestone stages (2050, 2075, and 2100). Based on this data, the Alarm component is expected to keep Africa on its toes through timely mobilisation and public accountability.

6.0 The Africa 21st Century Clock in Comparison with Existing Vision Frameworks

1. SMART and Long-Term Goal Setting

While there are existing global and continental blueprints propelling Africa's development and providing context for monitoring and evaluating progress in the 21st century—including the Millenium Development Goals (MDGs, 2000–2015), their successor blueprint, the Sustainable Development Goals (SDGs, 2015–2030), the continental Agenda 2063 (2013–2063) and the various subregional visions—the Africa 21st-Century Clock creates a strategic path that spans the entire century.

Whereas Agenda 2063—the continent's current leading development framework—corresponds to the centennial milestone of the African Union, and while it makes symbolic and ideological sense to situate the timelines of the continent's trajectory on its liberation history, the definite shifts that occurred at the turn of the century, with its unique set of opportunities and threats, makes it more strategic to contextualise the continent's transformation blueprint and trajectory across the 21st century.

Without losing touch with the continent's historical realities, founding aspirations, Pan-African ethos, and unique values, the opportunities and threats of the 21st century necessitates a shift from idealism to pragmatism, from ideology to strategy, and from a paradigm constrained by liberation struggles to one soaring towards exponential transformation. The start of the 21st century gave Africa a baseline for this shift.

...the definite shifts that occurred at the turn of the century, with its unique set of opportunities and threats, makes it more strategic to contextualise the continent's transformation blueprint and trajectory across the 21st century.

Moreover, while Agenda 2063 is inspirational and articulates Africa's qualitative aspirational future, with few exceptions—including the goals on intra-African trade and gender parity—the laudable aspirations could be more data-delineated and quantifiable, with measurable milestones. Nonetheless, Agenda 2063 provides a strategic springboard from which the African people can craft a measurable vision for claiming the 21st century. Furthermore, its seven aspirations can be the starting point for people-driven conversations on Africa's 21st-century goals on the online and offline deliberative platforms envisaged for the Africa 21st Century Clock.

Meanwhile, the SDGs, though meeting the SMART (Specific, Measurable, Achievable, Realistic, and Time-bound) criteria for goal setting, are not a century-long vision and, though reflective of African aspirations, still require contextualisation for the continent's unique trajectory.

In contrast, the Africa 21st-Century Clock will be a century-long African-led transformative framework providing automated access to the continent's state at any point within the century while enabling citizens to iteratively create the vision against which progress is measured throughout the rest of the century.

At any given time — measured against a dynamic and progressive vision — the clock will indicate what time it is for Africa, whether the continent is in time, ahead of time, or behind time. It will also guide what governments, businesses, and civil society can do to close existing gaps and accelerate progress.

Nonetheless, Agenda 2063 provides a strategic springboard from which the African people can craft a measurable vision for claiming the 21st century. Furthermore, its seven aspirations can be the starting point for people-driven conversations on Africa's 21st-century goals on the online and offline deliberative platforms envisaged for the Africa 21st Century Clock.

2. Bottom-Up Collaborative and Democratised Goal Setting

The existing development frameworks tend to follow a top-down approach—shaped by political leaders, policymakers, thought leaders and development experts—raising concerns of people ownership. Like the preceeding MDGs, Africa's low scorecard on several SDGs may be an indicator of the need to rethink development goal-setting from a top-bottom approach to a bottom-up strategy. The Africa 21st-Century Clock will take a bottom-up path. Its social, economic, and political indicators will be benchmarked against a vision of Africa defined by its people using deliberative civic technology augmented by offline platforms.

While the project will be coordinated by intergovernmental platforms such as the African Union and while its thematic areas will be informed by established frameworks like the SDGs and Agenda 2063, the Africa 21st Century Clock will ultimately reflect a vision crafted through widespread citizen participation. It is the people's Africa that this clock will measure, track, and advance. Moreover, we anticipate local, national and regional iterations of the project emerging across the continent, integrated into the broader, continent-wide platform.

3. Inclusive Technology-Enabled Envisioning of Africa

The Regulator component of the project will facilitate an inclusive, iterative, man-machine collaborative vision of Africa by the year 2100. It will leverage open-source tools and actively engage Africans across the continent and the diaspora. Collective input from diverse sources will be automatically sorted, processed, and integrated into the evolving blueprint throughout the century.

To ensure participation from the vast majority of Africans who may lack access to high-tech tools, the project will also utilise more accessible platforms—such as social media and low-tech communication channels like Short Messaging Service (SMS)—to crowdsource contributions to the Regulator Component, thereby shaping a shared vision for the 21st-century Africa.

4. Visibility and Accessibility

In line with the injunction to "Write the vision And make it plain on tablets, that he may run who reads it" (Habakkuk 2:2, NKJV), the Africa 21st Century Clock will utilise a range of multimedia platforms to communicate the vision and report progress. These will include an interactive web portal, a mobile application, social media engagement, intelligent digital billboards strategically located across the continent, SMS, broadcast and print media content, and indigenous media. The infographic interface on the visual platforms will present data in a visually accessible and easily interpretable format, while the clock model itself will serve as a visual metaphor, reinforcing the urgency of the moment and the call to collective action.

7.0 Building the Clock: Institutional Framework and Responsibility Map

The design, implementation and governance of the technical and non-technical dimensions of the Africa 21st Century Clock will require multi-stakeholder collaboration between intergovernmental bodies (notably the AU), Africa's burgeoning digital and AI startup ecosystem, the continent's telecommunications service providers, plural technology governance experts within and outside the continent, international development partners, media, civil society, and governments. The following institutional stakeholders are envisaged for the development and operationalisation of the Africa 21st Century Clock:

1. African Union Assembly and Executive Council
As the highest decision-making body of the AU, it assumes political ownership and provides overarching leadership for the Africa 21st Century Clock.

2. AUDA-NEPAD.
As the AU's development agency, AUDA-NEPAD is the appropriate institution in which the vision can be administratively domiciled and operationalised, guarantee planning expertise and programme coordination.

3. The Founding Five Consortium
Comprising the AfDB, AERC, GCA, UNECA, and the World Bank—which jointly authored the "Can Africa Claim the 21st Century?" report in 2000—this group can reconvene to provide independent institutional leadership, ensuring independent tracking of progress. Furthermore, by providing data access, this consortium, alongside other data custodians, will facilitate the "Time-Keeper" component of the Clock.

4. Competitively Selected Technical Partners
This should comprise AI startups and labs selected through an open, merit-based process and charged with designing the AI and ML-enabled and interoperable digital infrastructure for citizen engagement and real-time monitoring. This technical ecosystem will also involve Africa's telecom service providers.

5. Consortium of Civil Society and Media Organisations

This consortium will be competitively selected and transparently funded to ensure the execution of public communication, data-driven advocacy, citizen mobilisation, and capacity building across the continent. This consortium will drive the "Alarm" component of the Clock. However, the Alarm component of the Clock is not restrictive. Media and civil society across the continent and the rest of the world should have unhindered access to information that will enable them to hold governments accountable and to scrutinise the project.

6. Private Sector Consortium

Including platforms such as the Africa CEO Forum and the Africa Business Roundtable, this consortium will mobilise private-sector resources, align business interests with long-term continental goals, and contribute to sustained economic leadership.

7. Consortium of Academia and Policy Think Tanks

We recognise the critical role of Africa's intellectual and research communities in shaping the long-term future of the continent. This consortium will consist of African universities, policy institutes, and innovation hubs tasked with providing thought leadership, strategic foresight, and data-driven insights, thereby anchoring the intellectual foundation of the Africa 21st Century Clock. As the initiators of the Africa 21st Century Clock, we at Remake Africa Consulting will contribute to this consortium as design partners. Our role will be to facilitate knowledge integration, promote inclusive participation, ensure that the visioning process reflects Africa's aspirations, offer a continuous flow of ideas, insights and intelligence, and inspire project execution. We see ourselves not as proprietors of the vision, but as enablers of a collaborative, people-driven framework for Africa's century-long transformation.

We see ourselves not as proprietors of the vision, but as enablers of a collaborative, people-driven framework for Africa's century-long transformation.

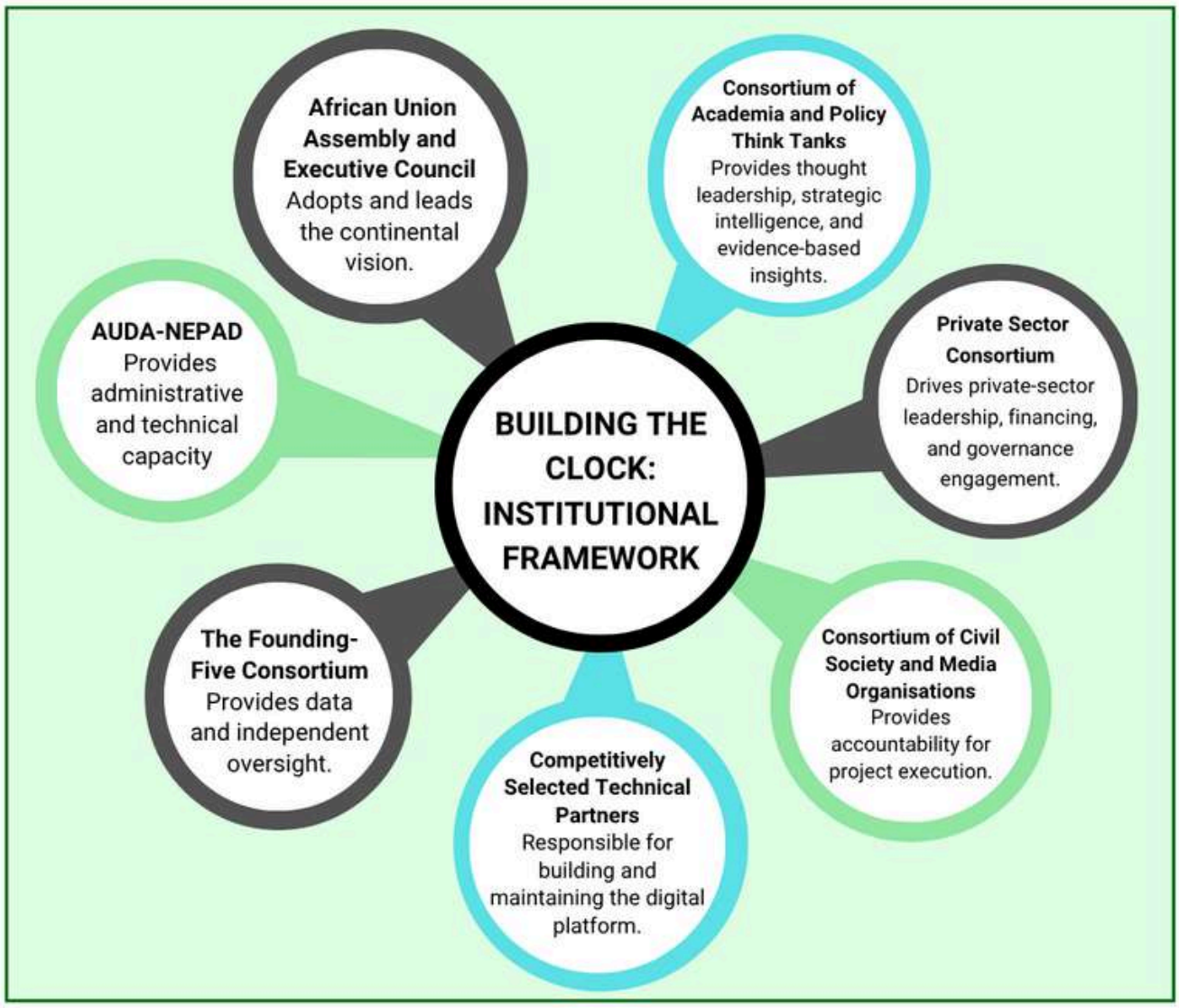


Figure 16: Institutional Framework for Operationalising the Africa 21st Century Clock

The design, implementation and governance of the technical and non-technical dimensions of the Africa 21st Century Clock will require multi-stakeholder collaboration between intergovernmental bodies (notably the AU), Africa's burgeoning digital and AI startup ecosystem, the continent's telecommunications service providers, technical plural governance partners within and outside the continent, international development partners, media, civil society, and governments.

8.0 Tripartite Transformative Milestones: Development, Competitiveness, and Power

In a research paper published by Remake Africa Consulting, titled *Navigating the Geopolitics of Innovation: Policy and Strategy Imperatives for the 21st Century Africa*, a tripartite transformative milestone framework was first introduced. The framework outlines three major phases of Africa's strategic transformation over the course of the century: Development, Competitiveness, and Power. These milestones are now proposed as the strategic objectives for each successive quarter of the Africa 21st Century Clock. These milestones are not forecasts. They are foresights—visions of alternative African futures that governments and citizens can aspire to and actively shape.

1. The Development Milestone (Target Year: 2050)

The first milestone is benchmarked against the UNDP's Human Development Index (HDI), which assesses development through life expectancy, education, and income. Countries are ranked in four categories: Very High, High, Medium, and Low Human Development.

In the most recent HDI report:

- Only two African countries—Seychelles and Mauritius—are classified under Very High Human Development.
- Eight are in the High category.
- Twenty-one are in Medium.
- Twenty-three countries fall into the Low category.

Under the Africa 21st Century Clock, the *Development Milestone* envisions a continent where **all 54 African countries attain at least *High Human Development***, with **a majority reaching *Very High Human Development*** by the year 2050.

2. The Competitiveness Milestone (Target Year: 2075)

Various indices have attempted to measure national competitiveness, including:

- The World Bank's (now discontinued) *Ease of Doing Business* rankings,
- The World Economic Forum's *Global Competitiveness Index*, and
- The IMD *World Competitiveness Center Rankings* which currently includes only 67 countries.

Due to limitations in these indices and their changing methodologies, we propose a simplified, unifying measure of competitiveness: trade, especially intra-African trade. In the Competitiveness Milestone, Africa becomes a trading powerhouse in which **Africa-led exports and intra-African trade constitute at least 50% of global trade. This milestone targets the year 2075.**

3. The Power Milestone (Target Year: 2100)
Global power is traditionally assessed by indicators such as military strength, economic capacity, population, resource endowment and control, and diplomatic influence. Several indices illustrate Africa's current standing:

- In the 2025 Global Soft Power Index, which ranks 193 countries based on 55 soft power metrics, 10 African countries are in the top 100, with Egypt leading Africa at 38th position, followed by South Africa, Morocco and Nigeria at 41st, 50th and 77th, respectively.
- In the Global Firepower Index, which ranks countries by military strength, 13 African countries make the top 100, with the continent's top countries, Egypt, Algeria, Nigeria, South Africa and Ethiopia ranking 19th, 26th, 31st, 40th and 52^{nd,} respectively.
- The 2022 World Power Index by Daniel Morales Ruvalcaba ranks South Africa 32nd globally with a score of 0.623 (with 1.0 as the perfect score). Egypt and Algeria follow at 47th and 60th, respectively. Nigeria, despite its population and economic scale, ranks 68th with a score of 0.495.
- The Great Power Index by Ray Dalio includes only South Africa, ranked 23rd, among 24 leading powers.

In the Power milestone of the Africa 21st Century Clock, we envisage an Africa with the capacity to shape global affairs with distinctly African values. By the year 2100, we envision at least **four African countries consistently ranking in the global top 10 of any credible great power index.**

The framework outlines three major phases of Africa's strategic transformation over the course of the century: Development, Competitiveness, and Power

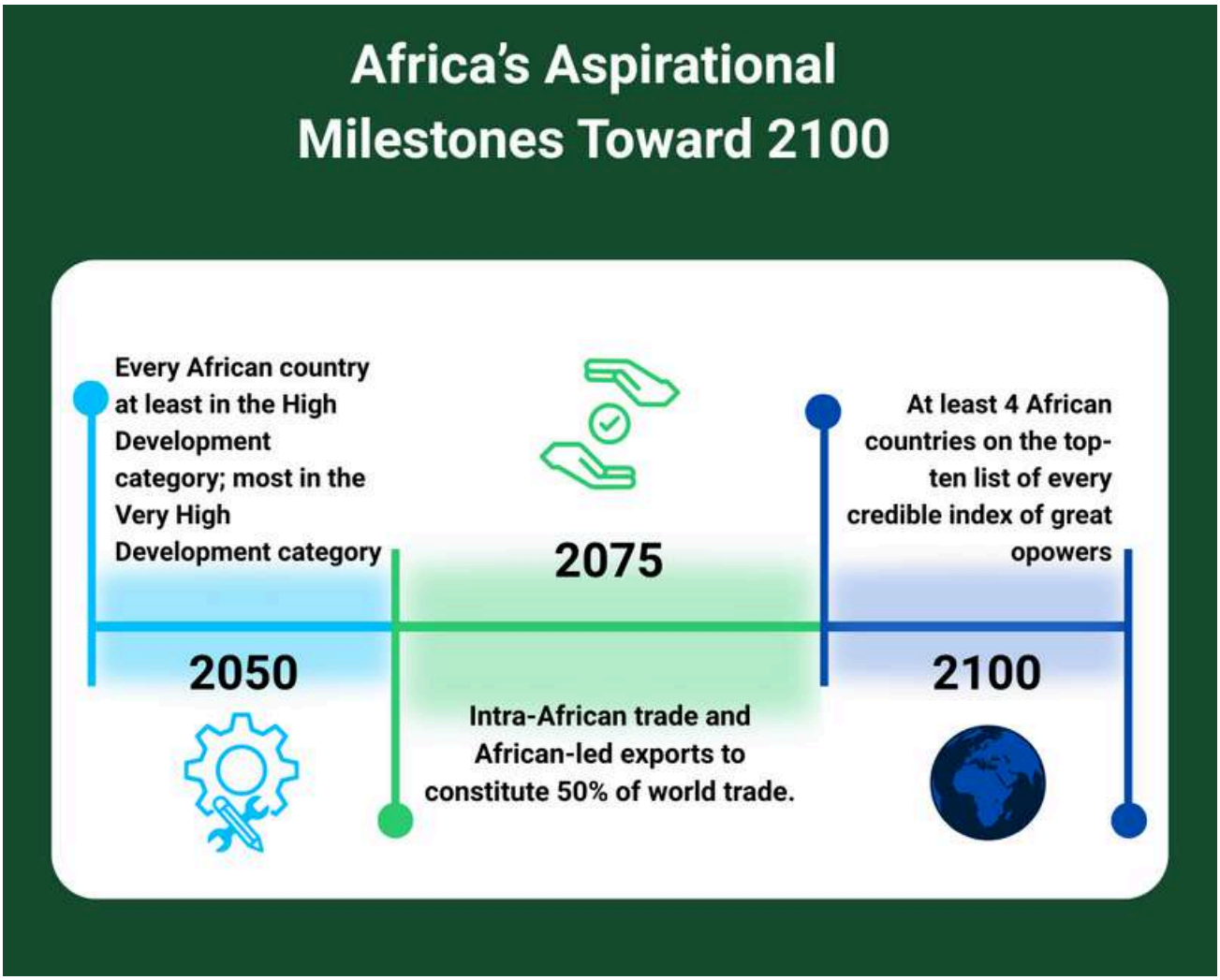


Figure 17: Africa's Projected Aspirational Milestones

These milestones are not forecasts. They are foresights—visions of alternative African futures that governments and citizens can aspire to and actively shape.

9.0 Anticipated Implementation Challenges and Mitigation Strategies

One of the foremost challenges envisaged in the execution of this initiative is the limited availability and uneven reliability of data systems across much of the African continent. To address this, the implementation framework envisages partnerships with multilateral institutions—including the five consortia responsible for the seminal "Can Africa Claim the 21st Century?" report, which provided a foundational impetus for the "Remake Africa" thrust and the Africa 21st Century Clock. These institutions are positioned to play a critical role in supporting access to robust, standardised data essential for planning, monitoring, and decision-making.

Additionally, the deployment of a range of conventional and emerging technologies, from USSD to AI and ML in operationalising the Africa 21st Century Clock may present technical, infrastructural, and adaptation challenges.

The framework, therefore, also envisages the integration of Africa's leading technology hubs and innovation ecosystems to ensure the necessary technical capacity, contextual understanding, and local ownership.

Furthermore, recognising the scale and cost of executing such an ambitious undertaking, the framework envisages a key role for development finance institutions as well as mechanisms for private sector–enhanced financing. These actors are critical to the sustained financing of the century-long project.

The Africa 21st Century Clock brings together Africans from a wide range of communities towards the progressive transformation of Africa from Third World to First.

9.1 Assumptions

The project and its projections are based on the following assumptions:

- The challenge of claiming the 21st century requires a coordinated pluralistic movement involving the citizens and governments of Africa
- The AU possesses the capacity to lead the project while allowing the project's institutional independence and data-guided, people-driven governance
- The multilateral institutions that authored the initial report, "Can Africa Claim the 21st Century," are committed to seeing through Africa's response to the challenge
- The multi-stakeholder approach can sustain momentum and throughput throughout the century
- The continent's active, youthful population guarantees continuity and an intergenerational supply of leadership for the project throughout the century
- With a 20% contingency and inflation buffer, the project is estimated—using AI-enabled projections—to cost $5.64 billion over 75 years.

9.2. Expected Outcomes

The Africa 21st Century Clock brings together Africans from a wide range of communities towards the progressive transformation of Africa from Third World to First. These communities include a critical mass of Africans leveraging new and traditional media systems and engaging key agents of socialisation, including educational institutions, religious institutions and professional bodies across Africa towards a pluralistically designed Africa for Africans. It will also converge the data community in the quest for evidence-based tools that will enhance the capacity of policy communities in policymaking for African development. Furthermore, it will enable investment communities to target investments in critical sectors backed by evidence.

Ultimately, assuming a transformation scenario in which the continent transitions from Third World to First over the next 75 years, Africa's GDP is projected —based on AI modelling—to exceed $100 trillion by the end of the 21st century.

... assuming a transformation scenario in which the continent transitions from Third World to First over the next 75 years, Africa's GDP is projected—based on AI modelling—to exceed $100 trillion by the end of the 21st century.

10.0 Conclusion

In 1957, a trend began in Africa with the independence of one country. By 1960—the Year of Africa—seventeen African countries had gained independence, marking the tipping point of political liberation. This was followed by a period of rapid economic growth. However, the continent's economy soon went down a sleepy slope and took an undulating path. For Sub-Saharan Africa, a sustained economic decline began around 1980 and, by the 1990s, it had converged with the rest of the continent at one of Africa's lowest points of economic performance, returning to levels similar to those in 1960. By the end of the 20th century, the continent's socioeconomic indicators were so dire that former British Prime Minister Tony Blair remarked, "The state of Africa is a scar on the conscience of the world."

As Africans committed to the continent's transformation, we are jolted by the fact that 2025 would mark the first quarter of 21st-century Africa. While acknowledging that Africa has made some progress since the dawn of the century, we recognise that many of the continent's problems have persisted. The Africa 21st Century Clock is a response to these realities.

The Africa 21st Century Clock is a continental visioning and accountability mechanism. It will mobilise Africans to imagine and shape the future through three key milestones — Africa by 2050, Africa by 2075, and Africa by 2100.

...the Africa 21st Century Clock answers that question affirmatively: Africa can still claim the 21st century!

It will measure, in real time, the extent of implementation of that vision and build a continental sense of urgency. It is a reminder that every moment counts, every decision matters, and every action is crucial if Africa must claim the 21st century.

The Africa 21st Century Clock is a response to a question asked at the turn of the century: Can Africa Claim the 21st Century? It indicates how Africa can mobilise multiple stakeholders towards the articulation, execution, tracking and realisation of a people-driven vision by the Year 2100. By so doing, 25 years into the century, the Africa 21st Century Clock answers that question affirmatively: Africa can still claim the 21st century!

Postscript: Why Africa Can Claim the 21st Century (A Flashback to History)

Some propositions see the 22nd century, not the 21st, as Africa's probable century to claim. To such viewpoints, the tripartite milestones set in this paper may seem too ambitious, but our position is that such an African transformation is possible in the 21st century. To buttress this point, we leave with you with a flashback on the race of civilisations through history and innovation eras as articulated in the paper, "Navigating the Geopolitics of Innovation: Policy and Strategy Imperatives for the 21st Century Africa," researched by the author of this paper at Tekedia Institute in 2023, and published on the Remake Africa portal:

> *Archaeological accounts indicate that Africa evolved with the world in the stone, bronze and iron ages and even led the world in the Bronze Age, with ancient Egypt emerging as an epicentre of civilization. Aksum became the capital of a powerful centralized territory by the 3rd Century CE, with its political authority reported to have, at some point, extended across the Red Sea to the Yemeni Highlands while its prosperity scorecard included a thriving local metal industry bolstered by import-stimulated technology adoption (Phillipson, 2001). Breunig and Rupp (2016) report that Nok Culture in Central Nigeria experienced iron technological transition within a productive economy that was indicative of social complexity and development within the first millennium, a period that coincides with Buchanan (2023)'s Greco-Roman era of the revival of iron.*
>
> *Archaeological findings have been reported as indicators that Sub-Saharan African societies evolved with, and in some cases, outpaced the West during the Stone and Iron Ages. Notable among these is the finding of a separate Sub-Saharan African iron technology that was independent of Asia or Europe and which dates as far back as 4000 BCE (Pringle 2009). Pringle (2009) further argues that this contradicts the traditional notion that iron smelting originated in Anatolia (Asian part of present-day Turkeye) in 1800 BCE and diffused through the Nile Valley and eventually to Sub-Saharan Africa in 500 BCE. Similarly noteworthy is the discovery of superior steel technologies in Tanzania dating back as early as 500 BCE or 1500-2000 years from the time of discovery (Sertima, 1998).*

> *These findings suggest that the continent's significant divergence into relative underdevelopment and uncompetitiveness occurred sometime within the Iron Age and that the divergence widened as society evolved through the agricultural revolution to the Industrial Age. In other words, taking a cue from Ekekwe (2023), Africa's comparative developmental and growth lag is traceable to an arrested, delayed and slowed transition from an Invention Society to an Innovation Society*

The challenge before Africa is to reignite its potential for innovation leadership—a mission that must be actively embraced by Africa's leaders and people. And what better moment than the 21st century, an age defined by exponential innovation? Yet, we are reminded of the words of Frantz Fanon: "Each generation must, out of relative obscurity, discover its mission, fulfill it, or betray it." Today's generation of Africans must decide. Will it rise to its historic mission—or pass the challenge to those yet unborn?

Yet, we are reminded of the words of Frantz Fanon: "Each generation must, out of relative obscurity, discover its mission, fulfill it, or betray it." Today's generation of Africans must decide. Will it rise to its historic mission—or pass the challenge to those yet unborn?

About the Author

Omoaholo Omoakhalen has a unique multidisciplinary approach to problem-solving and innovation, deploying models from complex systems in addition to a broad range of competencies spanning research, policy analysis, statecraft, international law, strategy, political economy, philosophy, branding, and business development. He has more than a decade of experience in development, facilitating solutions in diverse sectors, including politics and governance, peacebuilding, national and international security, science, technology and innovation, infrastructure delivery, education, healthcare, youth development, community development, and the creative industries.

In the course of his career, Omoaholo has served as Director of Research and Policy Development at the International Centre for Reconstruction and Development (ICRD) and has provided policy and political strategy solutions to individual and institutional stakeholders in Nigerian and African politics and governance. An award-winning alumnus of the Nigerian Economic Summit Group (NESG)-LEAP Africa Bridge Fellowship, Omoaholo was engaged in the Infrastructure Policy Commission of the NESG as well as the Infrastructure Thematic Working Group of the Federal Government of Nigeria's Medium Term National Development Plan (2021-2025). In 2023, Omoaholo emerged as the Overall Best Fellow at the Emerging Political Leaders Fellowship (EPLF).

Omoaholo Omoakhalen is engaged in thought leadership on the evolution of democracy and technology. He is a member of the Allen Lab for Democracy Innovation's Governance of Emerging Technology and Tech Innovations (GETTING-Plurality) Network at Harvard University and, by that involvement, is an affiliate of Harvard University's Ash Center for Democratic Governance and Innovation.

At the Allen Lab, he engages in discourses and research on the governance of Artificial Intelligence and other emerging technologies. As part of the Plurality Community, he contributed to the book, *The Future of Collaborative Technology and Democracy* and facilitated collaborations between the movement's leaders and some of Africa's thought leaders. In 2024, Omoaholo joined Professor Danielle Allen, the James Conant University Professor at Harvard Kennedy School, and other thought leaders from the Harvard GETTING Plurality Network to coauthor the paper, *A Roadmap for Governing AI: Technology Governance and Power-Sharing Liberalism*, published in the Springer AI and Ethics journal. He is also a member of the Next Generation Foresight Practitioners (NGFP) Network at the School of International Futures (SOIF) as well as a member of #FixPolitics. Omoaholo has also featured on and made insightful presentations on physical and virtual panels on Africa.

In addition to a Bachelor of Science in Cell Biology and Genetics and a Master of International Law and Diplomacy (MILD) from the University of Lagos, Nigeria, Omoaholo has a Certificate in Public Leadership and Policy (CPLP) from the School of Politics, Policy and Governance (SPPG). He also holds certificates from the Harvard XSeries Program on United States Government, courtesy of Harvard Kennedy School, United States; certificates in Global Business as well as Business and Culture in Sub-Saharan Africa from Nexford University, United States; a certificate on the Fourth Industrial Revolution (Industry 4.0) and its business application, courtesy of the Hong Kong Polytechnic University; and an mMBA and a certificate in Business Innovation, Growth, and Sustainability from Tekedia Institute, Boston, Massachusetts.

References

- Adejoro, L. (2023, April 6). 672 million Africans lack access to health care – WHO. Punch Nigeria. https://punchng.com/672-million-africans-lack-access-to-health-care-who/Healthwise
- Africa Center for Strategic Studies. (2024, March 13). Mapping a surge of disinformation in Africa. https://africacenter.org/spotlight/mapping-a-surge-of-disinformation-in-africa/
- Africa Center for Strategic Studies. (2024, May). Mapping a surge of disinformation in Africa. https://africacenter.org/wp-content/uploads/2024/05/Mapping-Disinformation-2024.pdf
- African Affairs. (2018). Africa rising? A historical perspective. African Affairs, 117(469), 543–568. https://doi.org/10.1093/afraf/ady022Oxford Academic
- African Development Bank. (2016, June 13). Fashion and textile industries can grow African economies. https://blogs.afdb.org/fr/investing-in-gender/fashion-and-textile-industries-can-grow-african-economies-15
- African Development Bank. (2018, January 29). Malaria is bad for business, invest in the local manufacturing of low-cost generic medicines, President Adesina tells African leaders. https://www.afdb.org/en/news-and-events/malaria-is-bad-for-business-invest-in-the-local-manufacturing-of-low-cost-generic-medicines-president-adesina-tells-african-leaders-17802
- African Development Bank. (2025, March 8). Gender in Focus: How my African Development Bank journey brings Africa Gender Index statistics to life. https://www.afdb.org/en/news-and-events/gender-focus-how-my-african-development-bank-journey-brings-africa-gender-index-statistics-life-81620
- African Export-Import Bank. (2024). African Trade Report 2024: Climate Implications of the AfCFTA Implementation. https://media.afreximbank.com/afrexim/African-Trade-Report_2024.pdfAfreximbank Media+2Afreximbank Media+2African Export-Import Bank+2
- African Export–Import Bank. (2024). Intra-African trade and macroeconomic performance of Africa: Implications for the African Continental Free Trade Area (Afreximbank Policy Research Working Paper Series No. APRWPS/2024/09). https://media.afreximbank.com/afrexim/APRWPS202409_Intra-African-Trade-and-Macroeconomic-Performance-of-Africa-Implications-for-the-African-Continental-Free-Trade-Area-4.pdf

- African Export-Import Bank. (2025, February). African Debt Outlook: A Ray of Optimism. https://www.tralac.org/documents/resources/africa/5813-african-debt-outlook-a-ray-of-optimism-afreximbank-february-2025/file.html
- African Union. (n.d.). Assembly/AU/5(XXIV). https://portal.africa-union.org/DVD/Documents/DOC-AU-WD/Assembly%20AU%205%20(XXIV)%20_E.pdf
- AfriLabs. (n.d.). Ecosystem Insights. Retrieved May 10, 2025, from https://www.afrilabs.com/ecosystem-insights/
- Ajakaiye, O., & Jerome, A. (2014). Economic development: The experience of Sub-Saharan Africa (Figure 1). In Public–Private Interface for Inclusive Development in Africa (Chapter 43). Retrieved from https://www.researchgate.net/figure/Annual-GDP-Growth-Rates-Africa-and-Other-Developing-Regions-1960-1985_fig1_283451508
- Agwaibor, S. (2024, June 27). African AI startups: Navigating growth amidst infrastructure gaps. TechCabal Insights. https://insights.techcabal.com/african-ai-startups-navigating-growth-amidst-infrastructure-gaps/TC Insights
- Allen, D., Hubbard, S., Lim, W., Stanger, A., Wagman, S., Zalesne, K., & Omoakhalen, O. (2025). A roadmap for governing AI: Technology governance and power-sharing liberalism. AI and Ethics. https://doi.org/10.1007/s43681-024-00635-ySCite+5ResearchGate+5OUCI+5
- Brand Finance. (2025, February 20). Global Soft Power Index 2025. https://static.brandirectory.com/reports/brand-finance-soft-power-index-2025-digital.pdf
- Blair, T. (2001, October 2). Leader's speech, Brighton 2001. British Political Speech. https://www.britishpoliticalspeech.org/speech-archive.htm?speech=186
- CEIC Data. (2023). Nigeria gross savings rate. https://www.ceicdata.com/en/indicator/nigeria/gross-savings-rate
- Dalio, R. (2024). The Great Powers Index: 2024 – How the Leading 24 Countries Are Doing and Their Prospects for the Next 10 Years (Appendix). Economic Principles. https://economicprinciples.org/downloads/DalioRay_Power_Index_Appendix.pdfchandlernguyen.com+5economicprinciples.org+5LinkedIn+5
- Digital Realty. (n.d.). Africa's Digital Economy & Transformation. Retrieved May 10, 2025, from https://www.digitalrealty.com/resources/articles/africas-digital-economy
- Ecofin Agency. (2025, April 11). Intra-African trade hits $208bn in 2024, driven by regional integration. https://www.ecofinagency.com/news/1104-46622-intra-african-trade-hits-208bn-in-2024-driven-by-regional-integration

- Eggel, D., Mallard, G., & Galvin, M. (2024). Africa's rising: The 21st century promise? Global Challenges, Issue 15. Geneva Graduate Institute. https://globalchallenges.ch/issue/15/africas-rising-the-21st-century-promise/
- El-Sadr, W. M., Justman, J., & Beyrer, C. (2020). Africa in the path of Covid-19. International Journal of Infectious Diseases, 93, 244–246. https://doi.org/10.1016/j.ijid.2020.04.075
- Food and Agriculture Organization of the United Nations. (2003). The dire state of Africa's food security and agriculture. https://www.fao.org/4/Y9483E/Y9483E00.htmFAOHome
- Freedom House. (2025, February). List of electoral democracies: Freedom in the World 2025 [Data set]. https://freedomhouse.org/sites/default/files/2025-02/List_of_Electoral_Democracies_FIW24.xlsx
- Global Firepower. (2025). 2025 Military Strength Ranking. https://www.globalfirepower.com/countries-listing.php
- GSMA. (2018). The Mobile Economy: Sub-Saharan Africa 2018. https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2024/05/ME-SSA-2018.pdf
- Harcourt, S., Rivera, J., & Robertson, F. (2025, March 11). African debt. ONE Campaign. https://data.one.org/analysis/african-debt
- IndexMundi. (2019, December 28). Adjusted net enrollment rate, primary, female (% of primary school age children) – Africa [Data set]. UNESCO Institute for Statistics. https://www.indexmundi.com/facts/indicators/SE.PRM.TENR.FE/map/africaIndexMundi - Country Facts+1IndexMundi - Country Facts+1
- International Energy Agency. (2022). Africa Energy Outlook 2022. https://www.iea.org/reports/africa-energy-outlook-2022
- Joint United Nations Programme on HIV/AIDS (UNAIDS). (2000). HIV surveillance report for Africa, 2000. https://data.unaids.org/publications/external-documents/hiv-surv-rpt-2000_en_pdf.pdf
- Karatnycky, A. (Ed.). (2000). Freedom in the world: The annual survey of political rights and civil liberties, 1999–2000. Freedom House. https://freedomhouse.org/sites/default/files/2020-02/Freedom_in_the_World_1999-2000_complete_book.pdfAbeBooks+5WorldCat+5AbeBooks+5
- Leke, A., Chironga, M., & Desvaux, G. (2018, November 15). Africa's overlooked business revolution. McKinsey & Company. https://www.mckinsey.com/featured-insights/middle-east-and-africa/africas-overlooked-business-revolutionMcKinsey & Company

- Malcolm, B. (2025, April 9). Who bears the cost of Africa's conflicts? African Leadership Magazine. https://www.africanleadershipmagazine.co.uk/who-bears-the-cost-of-africas-conflicts/
- Moghadam, S. T., & Amini, M. (2023). Urban resilience in Africa: Challenges and opportunities. Sustainable Cities and Society, 96, 104567. https://doi.org/10.1016/j.scs.2023.104567
- Morales Ruvalcaba, D. (2023). WPI Database. World Power Index. https://www.worldpowerindex.com/wpi-database/
- National Film Institute. (n.d.). Nollywood: Everything you need to know. https://www.nfi.edu/nollywood/#:~:text=According%20to%20its%20%245.1%20billion,the%20third%2Dmost%20lucrative%20one
- Nsehe, M. (2016, January 13). African tech startups raised $185.79M in 2015: Report. Forbes. https://www.forbes.com/sites/mfonobongnsehe/2016/01/13/african-tech-startups-raised-185-79m-in-2015-report/:contentReference[oaicite:4]{index=4}
- Odjo, S., Berthe, A., & Diallo, M. H. (2024). Africa in world agricultural trade: Recent trends and carbon footprint (Chapter 2). In Africa Agriculture Trade Monitor 2024. ReSAKSS. https://www.resakss.org/sites/default/files/2024_aatm_individual_chapters/Chapter%202_AATM%202024.pdfresakss.org+4resakss.org+4resakss.org+4
- Omoakhalen, O. (2022, October 5). Corporate impact intelligence: Mapping Africa's corporate impact opportunities using the SOS matrix. Remake Africa Consulting. https://remakeafrica.com/2022/10/05/corporate-impact-intelligence-corporate-impact-intelligence-mapping-africas-corporate-impact-opportunities-using-the-sos-matrix/
- Omoakhalen, O. (2022, November 28). The multi-impact corporation. Remake Africa Consulting. https://remakeafrica.com/2022/11/28/the-multi-impact-corporation/
- Omoakhalen, O. (2024, September 9). Navigating the geopolitics of innovation: Policy and strategy imperatives for the 21st century Africa. Remake Africa Consulting. https://remakeafrica.com/2024/09/09/navigating-the-geopolitics-of-innovation-policy-and-strategy-imperatives-for-the-21st-century-africa/
- ONE Campaign. (2025, April 17). Official Development Assistance (ODA). https://data.one.org/analysis/official-development-assistance
- Oniang'o, R. K. (2009). Feeding the hungry in Africa: Not all is lost. UN Chronicle, 45(3), 21–24. https://doi.org/10.18356/11401441-en
- Oxford Insights. (2024). Government AI Readiness Index 2024. https://oxfordinsights.com/wp-content/uploads/2024/12/2024-Government-AI-Readiness-Index-2.pdf

- Signé, L., & Johnson, C. (2018, December). Africa's consumer market potential: Trends, drivers, opportunities, and strategies. Brookings Institution. https://www.brookings.edu/wp-content/uploads/2018/12/Africas-consumer-market-potential.pdfBrookings+1Brookings+1
- Silverman, D. (2020, February 24). The Global Health Security Index for African countries, by population. Energy Blog. https://sites.uci.edu/energyobserver/2020/02/24/the-global-health-security-index-for-african-countries-by-population/
- Statista. (2021). Share of internet users in Africa. https://www.statista.com/statistics/1189931/share-of-internet-users-in-africa/
- Statista. (n.d.). Artificial Intelligence in Africa. Retrieved May 8, 2025, from https://www.statista.com/outlook/tmo/artificial-intelligence/africa
- Statista. (n.d.). Artificial Intelligence in Africa. Statista. Retrieved May 8, 2025, from https://www.statista.com/outlook/tmo/artificial-intelligence/africa
- Statista. (n.d.). Child mortality rate in Africa from 1960 to 2012. Statista. https://www.statista.com/statistics/1072803/child-mortality-rate-africa-historical/
- Statista. (n.d.). Total GDP value in Africa from 2010 to 2027. Statista. https://www.statista.com/statistics/1300858/total-gdp-value-in-africa/
- Statista. (n.d.). Total population of Africa from 2000 to 2023. https://www.statista.com/statistics/1224168/total-population-of-africa/
- Statista. (n.d.). Urbanization rate in Africa 2000-2023. https://www.statista.com/statistics/1226106/urbanization-rate-in-africa/
- Subramanian, A., & Tamirisa, N. (2001). Africa's trade revisited (IMF Working Paper No. WP/01/33). International Monetary Fund. https://www.imf.org/external/pubs/ft/wp/2001/wp0133.pdf
- Tang, A., & Weyl, E. G. (2024). Plurality: The Future of Collaborative Technology and Democracy. Retrieved from https://www.plurality.net/v/eng/Time
- The Economist. (2011, December 3). Africa rising. https://www.economist.com/leaders/2011/12/03/africa-rising
- TheGlobalEconomy.com. (2022). Primary school enrollment, percent of all eligible children – Africa [Data set]. https://www.theglobaleconomy.com/rankings/Primary_school_enrollment/Africa/
- TheGlobalEconomy.com. (n.d.). Government spending, in dollars in Africa. Retrieved May 8, 2025, from https://www.theglobaleconomy.com/rankings/government_spending_dollars/Africa/?utm_source=chatgpt.comTheGlobalEconomy.com

- TheGlobalEconomy.com. (n.d.). Government spending, in dollars in Africa. Retrieved May 8, 2025, from https://www.theglobaleconomy.com/rankings/government_spending_dollars/Africa/
- The GovLab. (n.d.). vTaiwan: Using digital technology to write digital laws [Case study]. CrowdLaw for Congress. Retrieved May 10, 2025, from https://congress.crowd.law/case-vtaiwan.html
- The Guardian. (2024, April 26). The day apartheid died: South Africa's first free elections – archive, 1994. https://www.theguardian.com/world/2024/apr/26/the-day-apartheid-died-south-africa-elections-april-1994
- Thomas Nelson. (1982). Holy Bible: New King James Version. Bible Gateway. https://www.biblegateway.com/passage/?search=Habakkuk%202%3A2&version=NKJV (Original work published 1611)
- Tsado, A., & Lee, C. (2024, November 12). Only five percent of Africa's AI talent has the compute power it needs. United Nations Development Programme. https://www.undp.org/digital/blog/only-five-percent-africas-ai-talent-has-compute-power-it-needs
- UNICEF. (2022, March 22). Africa to drastically accelerate progress on water, sanitation and hygiene – report. https://www.unicef.org/wca/press-releases/africa-drastically-accelerate-progress-water-sanitation-and-hygiene-reportUNICEF+7UNICEF+7UNICEF+7
- United Nations Children's Fund (UNICEF). (2024, December). Data snapshot of migrant and displaced children in Africa: 2024 update. https://data.unicef.org/wp-content/uploads/2024/12/Data-snapshot-of-migrant-and-displaced-children-in-Africa-2024.pdf
- United Nations Economic Commission for Africa. (2024, November 6). Africa Gender Index Analytical Report reveals progress, but gender equality remains only half achieved. https://www.uneca.org/stories/africa-gender-index-analytical-report-reveals-progress%2C-but-gender-equality-remains-only
- United Nations High Commissioner for Refugees (UNHCR). (2025, January 12). Projected global resettlement needs 2025. https://www.unhcr.org/sites/default/files/2024-05/projected-global-resettlement-needs-2025.pdf
- World Bank. (2000). Can Africa claim the 21st century? The International Bank for Reconstruction and Development / The World Bank. https://documents1.worldbank.org/curated/en/273521468211482503/pdf/20469-v1-REPLACEMENT-PUB-PUBLIC-Box59.pdf
- World Bank. (2024). Gini index (World Bank estimate) – Africa [Data set]. https://data.worldbank.org/indicator/SI.POV.GINI?locations=A9

- World Bank. (n.d.). Africa Overview: Development news, research, data. Retrieved May 9, 2025, from https://www.worldbank.org/en/region/afr/overview
- World Bank. (n.d.). Digital Economy for Africa Initiative. Retrieved May 8, 2025, from https://www.worldbank.org/en/programs/all-africa-digital-transformation
- World Bank. (n.d.). Gross savings (% of GDP). World Bank national accounts data, and OECD National Accounts data files. https://data.worldbank.org/indicator/NY.GNS.ICTR.ZS
- World Health Organization. (2024, December 11). Reinvigorated global efforts needed to curb rising malaria threat. https://www.who.int/news/item/11-12-2024-reinvigorated-global-efforts-needed-to-curb-rising-malaria-threat
- World Health Organization. (n.d.). HIV/AIDS. WHO Regional Office for Africa. https://www.afro.who.int/health-topics/hivaids
- World Wildlife Fund Kenya. (2024, October 11). Catastrophic 76% decline in the average size of African wildlife populations in just 50 years reveals WWF's Living Planet Report 2024. https://www.wwfkenya.org/?237410/Catastrophic-76-decline-in-the-average-size-of-African-wildlife-populations-in-just-50-years-reveals-WWFs-Living-Planet-Report-2024