

Follow Up Paper for *The Africa Roundtable*

Foundations for Africa's Future: Digital Infrastructure, Digital Public Infrastructure, and Data Sovereignty for Economic Growth

December 2024



BILL & MELINDA
GATES foundation



TAKEAWAYS & RECOMMENDATIONS

1. Digital Infrastructure and Digital Public Infrastructure must be developed through **coordinated approaches that prioritize accessibility, affordability, and inclusivity**. The focus must shift from basic coverage to meaningful access through affordable devices, relevant content, and skills development.
2. **Public-private partnerships are essential for sustainable digital development**. Collaboration between government and private sector actors can drive innovation while ensuring **digital public goods** remain accessible to all citizens, particularly focusing on rural and underserved areas.
3. **Regional harmonization is crucial for realizing Africa's digital potential**. African nations and their partners should work together to develop interoperable systems and unified standards that enable seamless cross-border services while supporting continental integration goals.
4. **Data sovereignty requires balanced frameworks that protect African interests** while enabling participation in the global digital economy. Countries need to develop approaches that maintain control over their digital assets while fostering international cooperation and trade.
5. **Digital skills development must match infrastructure growth**. Countries should establish comprehensive programs for building digital capabilities across all levels of society, integrating digital skills training into educational systems and professional development.
6. **Trust and security frameworks are essential for digital adoption**. These should be built into system design from the start, with clear governance structures that protect user privacy and data rights while enabling innovation.
7. International partnerships must evolve beyond traditional models to focus on co-creation and knowledge exchange. **Future collaborations should emphasize sustainable financing models, technology transfer, and capacity building** while respecting African ownership of digital infrastructure and data.

INTRODUCTION

For its 7th edition, *The Africa Roundtable* returned to the African continent. Hosted by *Global Perspectives Initiative* in Nairobi, Kenya, on December 2nd, 2024, the event convened a diverse group of decision-makers, thought leaders, and experts from politics, business, civil society, media, and academia to explore “**Foundations for Africa’s Future: Digital Infrastructure, Digital Public Infrastructure (DPI), and Data Sovereignty for Economic Growth.**”

While Africa’s digital landscape has made significant progress, with mobile services reaching 45% of the population in sub-Saharan Africa, substantial gaps in digital infrastructure and services persist. *The Africa Roundtable* focused on three interconnected pillars essential for the continent’s digital transformation: the **fundamental physical and technological foundations** of digital infrastructure, the **critical systems of digital public infrastructure** that enable essential services, and **frameworks for data sovereignty** that ensure African nations maintain control over their digital future while participating in the global economy.

In offering a platform for open dialogue, *The Africa Roundtable* aimed to identify actionable pathways for accelerating Africa’s digital transformation and identifying opportunities for collaboration between African and European stakeholders for economic growth.

With **data emerging as the key driver of future economic power**, Africa’s development of robust digital infrastructure, DPI, and data frameworks is critical and urgent. The continent’s ability to realize its digital potential and unlock new opportunities for growth will reshape global (power) dynamics and determine its position in the digital age.

OPENING REMARKS

H.E. Veronica Nduva (Secretary General of the East African Community), presented an insightful case for digital transformation in East Africa, highlighting remarkable achievements in regional integration. She noted that EAC trade has grown by 67% from USD 65 billion in 2017 to USD 109 billion in 2023, demonstrating the impact of digital integration through interoperable payment systems and harmonized policies. Hon. Nduva emphasized that **digital public infrastructure could create 4.5 million jobs** and add approximately USD 2.6 billion in economic growth by 2030 in East Africa alone, and pointed to successful examples like M-Pesa, which contributes over USD 20 billion annually to the regional economy, while noting that **challenges remain in addressing fragmented payment systems** that still pose high costs for cross-border e-commerce.

State Secretary Stefan Schnorr (German Ministry for Digital and Transport), emphasized the importance of **creating a common international framework for sustainable digital transformation**. He highlighted Germany’s active pursuit of this goal through bilateral digital dialogues with key partner countries including Kenya, Ghana, and soon South Africa. The State Secretary particularly commended Kenya’s achievements in public administration, where the digitization of over 13,000

government services has significantly enhanced efficiency and accessibility. State Secretary Schnorr also underscored that **digital sovereignty cannot be achieved in isolation**, but only through value-based partnerships, with clear, robust regulations needed to ensure secure use of technology and data.

Principal Secretary John Tanui (Kenya's Ministry of Information, Communications, and the Digital Economy), outlined Kenya's ambitious digital transformation agenda, founded on the Vision 2030 Transformation Program and the bottom-up transformation agenda. He also detailed Kenya's digital infrastructure plans, centered on laying 100,000 kilometers of fiber to connect every part of the country and highlighted Kenya's rapid progress in digitizing government services, increasing from 390 to over 20,000 accessible digital services. The Principal Secretary emphasized **Kenya's focus on renewable energy for sustainable digital infrastructure**, particularly in attracting investment in green data centers. He also addressed data governance and cross-border data flows, noting Kenya's work toward **EU adequacy status for data protection** and efforts to enhance regional data privacy arrangements within the East African Community.

SETTING THE SCENE: BUILDING A DIGITAL TRUST FRAMEWORK FOR THE CONTINENT

The discussion was guided by an expert input from Smart Africa, the knowledge partner of *The Africa Roundtable*. Through their [paper "Creating Foundations for Africa's Digital Future"](#) and insights from Director General Lacina Koné and Unit Manager Oliver Twagirayezu, Smart Africa presented a **comprehensive vision for the continent's digital transformation** and set the framework for discussions on **building a trusted digital ecosystem**.

According to Smart Africa's analysis, Africa's youthful population of 1.4 billion people offers unmatched potential for innovation and growth. The continent has already demonstrated its capacity for digital innovation, becoming a global leader in mobile money solutions that inspire the world. Smart Africa projects that **Digital Public Infrastructure could increase Africa's GDP by 30%**, contributing to a global economic boost of US\$19.2 trillion by 2030.

However, Smart Africa's assessment identifies significant challenges. Nearly half of Africa's population lacks legal identification, leaving millions excluded from the digital economy. The fragmentation of digital regulations and policies across more than 50 African countries creates silos and barriers to integration. Limited trust in digital infrastructure continues to discourage businesses and citizens from fully participating in the digital economy.

Smart Africa's vision emphasizes the need for unity and integration in unlocking the continent's full potential. The organization advocates for **creating a single digital market** where interoperable systems support seamless access to services across borders. Digital Public Infrastructure is central to this vision, serving as the backbone of the digital economy and connecting people to essential services while boosting trade.

Through initiatives like the **Smart Africa Trust Alliance (SATA)**, the organization is taking concrete steps toward this vision, developing secure, interoperable digital systems that bridge divides and create opportunities for everyone, regardless of location or demographic. This initiative demonstrates how regional cooperation can address critical infrastructure needs while maintaining a people-centered approach to digital transformation.

Smart Africa's framework emphasizes that these foundations are essential for building trust in digital systems and **enabling broader participation in the digital economy**. Their approach focuses on creating solutions that are not just technologically advanced, but also inclusive, secure, and beneficial for all of Africa's citizens.

SHAPING AFRICA'S DIGITAL PATH: BUILDING INFRASTRUCTURE THAT SERVES THE CONTINENT

Digital Infrastructure

The dialogue on infrastructure development revealed both the tremendous progress made and the significant challenges that remain in building digital infrastructure that truly serves Africa's needs. While 84% of Africa's population lives within 3G coverage areas and 63% within 4G service areas, only 22% actually access these services, highlighting critical gaps in affordability and adoption.

The discussion highlighted several transformative infrastructure initiatives across the continent. Kenya's ambitious project to lay 100,000 kilometers of fiber and establish digital hubs in every ward demonstrates the scale of vision needed. The development of green data centers leveraging renewable energy shows how infrastructure development can align with broader sustainability goals. Local manufacturing initiatives, such as the East African Device Assembly plant producing affordable devices under \$50, represent concrete steps toward making digital access more affordable.

Participants emphasized that **infrastructure development must be viewed through the lens of inclusion**, ensuring that digital transformation reaches beyond urban centers to benefit all communities. This requires thinking about infrastructure not just in terms of technology deployment but as part of a broader ecosystem that includes **skills development, content creation, and community engagement**. Microsoft's ambitious program to train one million citizens in AI and digital skills shows the scale of capacity building required. Similarly, Google has established AI research centers in Ghana and Kenya, where African engineers and scientists are developing locally-relevant AI solutions that are now being exported to other markets. These initiatives demonstrate how Africa is not just adopting AI technology but actively contributing to its development.

The role of innovation hubs in fostering local solutions emerged as a crucial component of infrastructure development. These hubs, when distributed across both urban and rural areas, can serve as **catalysts for local innovation and skill development**, ensuring that digital infrastructure serves the specific needs of different communities.

Digital Public Infrastructure

The development of Digital Public Infrastructure should respond directly to local contexts and immediate needs, rather than attempting to create comprehensive solutions from the start.

Drawing from India's experience, several crucial insights emerged for building effective and inclusive digital systems that can operate successfully in low-resource contexts while serving diverse populations: Success in implementing DPI requires careful attention to fundamental design principles. **Privacy, accountability, transparency, and interoperability** must be built into systems from the beginning, rather than added as afterthoughts. This approach not only builds user trust but also reduces the need for excessive regulation later. Furthermore, experience shows that **different components of DPI can be developed simultaneously rather than sequentially**, allowing for faster deployment of services where they are most needed.

Kenya's transformation of government services demonstrates the transformative potential of DPI when implemented effectively. The expansion from 390 to over 20,000 digital services has revolutionized citizen-government interaction, reducing service delivery time by 80% and significantly improving accessibility for rural populations. Successful examples include the e-subsidy program for agriculture, which has achieved record-high production levels through digital distribution of fertilizer subsidies, and initiatives in healthcare digitization that are expanding access to medical services.

The East African Community's experience shows how **DPI can accelerate regional integration, with interoperable systems** enabling 60% of the region's 300 million citizens to engage in cross-border trade. However, challenges remain in achieving full interoperability, particularly in payment systems where fragmentation still creates barriers to cross-border e-commerce. These challenges highlight the need for coordinated approaches to DPI development that consider both national and regional requirements.

Success stories from the region demonstrate that DPI initiatives work best when they solve specific local challenges while maintaining the flexibility to scale. Examples include digital payment systems that began by addressing particular needs in specific sectors but evolved into comprehensive platforms serving multiple purposes. This approach allows for rapid deployment of essential services while building toward more comprehensive solutions.

The World Bank emphasized that successful DPI implementation requires three interconnected elements: **interoperable and safe data platforms** that serve as rails for digital service delivery, robust **digital identification systems** that ensure inclusive access, and **high-impact digital services** that improve governance and public service delivery. This framework helps ensure that DPI investments deliver tangible benefits to citizens while building trust in digital systems.

A critical insight from the discussion was the importance of **positioning DPI as a public good** while creating incentives for private sector investment in common infrastructure. Successful public-private

partnerships, like M-Pesa's evolution from a simple money transfer service to a comprehensive financial platform, demonstrate how private sector innovation can serve public interests when properly aligned through policy frameworks. The platform now processes over 15 million transactions daily, showing how trust-based digital solutions can achieve massive scale.

The development of DPI requires **strong partnerships between the public and private sectors**, with governments providing vision and regulatory frameworks while private sector partners contribute technical expertise and implementation capabilities. This includes building capacity not just for technical implementation but also for governance and oversight. Government officials must understand what they are buying or building to effectively direct these programs and ensure they serve the public interest. Participants proposed the term 'Digital Public-Private Infrastructure' to better reflect the essential partnership needed between public and private sectors.

Youth participation in shaping DPI emerged as a critical factor for success. The discussion emphasized the importance of **involving young people in regulatory spaces and policy discussions** to ensure digital solutions meet the needs of Africa's predominantly young population. This includes creating opportunities for youth to participate in innovation and development processes across all regions, not just in major urban centers.

Data Sovereignty and Regulatory Frameworks

The discussion revealed complex tensions between the need for regulation to protect Africa's digital sovereignty and concerns about over-regulation potentially stifling innovation and growth. From the African Union's perspective, Europe's regulatory strength, exemplified by general data protection regulation (GDPR) and the EU AI Act, provides valuable models for Africa's regulatory framework development. However, industry representatives cautioned that Europe's regulatory environment sometimes limits room for innovation and entrepreneurship, suggesting that Africa has an **opportunity to learn from both the successes and limitations of the European approach**.

The **development of AI technologies in Africa** presents both opportunities and challenges. The discussion emphasized the importance of developing regulatory frameworks that encourage innovation while establishing appropriate safeguards. This requires educating policymakers about AI's potential benefits while ensuring regulations protect public interests without stifling development.

The challenge of **data sovereignty** emerged as a critical concern, particularly given Africa's current dependency on foreign infrastructure and technology. With Africa holding less than 1% of global data center capacity, the continent faces significant challenges in maintaining control over its data. While partnerships with international technology firms bring crucial expertise and investment, participants emphasized the importance of **building local capacity** and ensuring these relationships support rather than hinder Africa's digital sovereignty.

A more nuanced approach to regulation emerged from the discussion, suggesting that the focus should be on identifying critical safeguards that need to be in place from the start, while allowing space for innovation and growth. Kenya's approach to data protection, aligning with GDPR while maintaining flexibility for local context, was highlighted as a potential model. This alignment is already creating new opportunities, potentially positioning Kenya to become "the 28th member of the EU" in terms of data protection adequacy.

PARTNERSHIPS FOR ECONOMIC GROWTH: ADVANCING CROSS-CONTINENTAL DIGITAL ALLIANCES

A significant part of the discussion focused on concrete ways to advance cross-continental partnerships for digital transformation. State Secretary Jochen Flasbarth emphasized that **digital public infrastructure is the "21st century's equivalent of railways and roads and bridges,"** highlighting the fundamental importance of digital collaboration between Europe and Africa.

A key talking point was made regarding the need to transform traditional development cooperation into true partnership models.

Initiatives like the East African Alliance for Digital Skills, AI Research and Innovation, supported by €34 million in German funding, exemplify this evolving approach to collaboration.

The German-African digital dialogue, launched with several key partner countries including Kenya, Ghana, and soon South Africa, exemplifies the potential of bilateral cooperation. These dialogues serve as platforms for comparing digital policy agendas, addressing challenges in bilateral economic relations, and aligning positions for multilateral forums. The successful collaboration between Kenya and Germany on digital government services demonstrates how **knowledge exchange can benefit both sides**, with participants noting that European nations can learn from Africa's rapid progress in certain areas of digital transformation.

In parallel, private sector investments are demonstrating strong commercial potential in Africa's digital sector. Microsoft's Africa Development Center, which grew from 19 to 600 employees, shows how direct private sector engagement can create substantial employment and foster local tech capabilities.

Innovation partnerships between European companies and African startups were highlighted as particularly promising. The key is to ensure these partnerships focus on co-creation and mutual learning rather than one-way technology transfer. This includes recognizing and supporting Africa's growing software developer community, while working to expand opportunities beyond the current concentration in a few countries.

Looking ahead, participants called for more concrete **mechanisms to facilitate European-African digital collaboration**. This could include dedicated investment platforms, technical cooperation frameworks, and regular dialogue forums to align digital development priorities. The success of such partnerships will depend on maintaining a long-term perspective while delivering tangible short-term benefits for both continents.

OUTLOOK

The Africa Roundtable on “Foundations for Africa's Future: Digital Infrastructure, Digital Public Infrastructure, and Data Sovereignty for Economic Growth” underscored both the tremendous opportunities and critical challenges in **building a prosperous, inclusive, and digitally empowered future** for the continent, while highlighting that collaborative efforts between governments, the private sector, and civil society are essential in realizing the full potential of digital infrastructure and DPI. However, the discussion also revealed several critical questions that require further exploration: how to effectively **balance regulation with innovation** in emerging technologies like AI, how to **scale successful pilot projects** to national and regional levels, and how to **create sustainable financing models** for digital infrastructure development. These and other open questions underscore the complexity of Africa's digital transformation and the need for continued dialogue among diverse stakeholders.

Global Perspectives Initiative remains committed to fostering this important dialogue on digital innovation and economic growth among key decision-makers across sectors, borders, and continents. A follow-up Circle on the topic of Digital Public Infrastructure will be held in 2025 in Berlin, providing an opportunity to deepen the discussions and develop more concrete action plans. Through these initiatives and Roundtables, Global Perspectives will continue to explore how international cooperation can evolve and adapt to foster more win-win partnerships, not only in the area of DPI but also in other key fields.

The Commission “Changing World, Germany, and the Global South,” chaired by the former German minister of defense Annegret Kramp-Karrenbauer will incorporate insights from this Roundtable into its work on developing policy recommendations for the evolution of international cooperation to meet today's challenges.

These continued efforts reflect the understanding that building Africa's future requires sustained engagement, concrete action, and genuine partnership between African and European stakeholders. Collaboration and partnership between the two neighboring continents is not just an option, but a necessity for both Africa and Europe to thrive in the 21st century global economy.

Publisher

Global Perspectives Initiative
gemeinnützige UG (haftungsbeschränkt)
Dorotheenstraße 3
10117 Berlin, Germany

office@globalperspectives.org
+49 (0)30 55 57 80 530

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