Why Connectivity Alone Isn't Enough: Rethinking Digital Inclusion in Africa

by **Akolade Oladipupo** *[January 2026]*

Chimdindu Onwudiegbu, Angelique Ezeilo, Naomi E. Nwokolo (virtual), and Abimbola Ogundare during their panel session at the 12th SIPA. [Source: LEAP Africa]

Bridging a Continent's Most Consequential Gap

Africa is at a turning point in its digital journey. More than 40% of Africans are still offline, mostly in rural areas where data, devices, and internet costs are too high for many families.[1] While Africa leads the world in mobile money innovation and has one of the fastest-growing tech ecosystems, the continent's digital divide persists as a structural inequality, one that determines who can access public services, participate in the modern economy, and fully benefit from emerging opportunities such as artificial intelligence, remote work, and digital entrepreneurship.[2]

At LEAP Africa's 12th Social Innovators Programme and Awards (SIPA), held in November 2025, a panel session titled ***From Village to Virtual: Closing Africa's Digital Divide with Smart Policy and Investment***, brought together leaders working at the intersection of policy, technology, social innovation, and investment. The conversation, moderated by Chimdindu Onwudiegbu (Dalberg), featured insights

[1] International Telecommunication Union. (2024). Measuring digital development: Facts and figures 2024. Geneva: ITU Publications.

[2] GSMA. (2024). State of the Industry Report on Mobile Money 2024. London: GSMA; 2024.

from Angelique Ezeilo (Ashoka Africa), Abimbola Ogundare (Deloitte West Africa), Elhadji Malick Soumaré (Entrepreneuriat & Investissement, Senegal) and Naomi Emeka Nwokolo (UN Global Compact Network Nigeria).

The panel addressed a key question: *What will it take for Africa to build a digitally inclusive future where location, income, and circumstance no longer determine access to opportunity?*

Across the discussion, five interconnected themes emerged:

1. The digital divide is a human divide, shaped by disparities in skills, mindsets, and power.
2. Micro-change unlocks macro-impact, highlighting the behavioural foundations of digital progress.
3. Regulatory clarity and stable investment climates remain prerequisites for digital infrastructure deployment.
4. Blended finance and sustainable revenue models are essential for last-mile connectivity.
5. Community ownership and governance determine the long-term viability of digital access.

This article draws from the panel discussion, explores relevant case studies from across Africa and beyond, and provides strategic recommendations for policymakers, investors, social innovators, and development leaders working to bridge the digital divide.

1.

Defining the Digital Divide: People, Skills, and Mindsets

Shifting the conversation from infrastructure to inclusion

A recurring theme in the panel was that the digital divide is not merely an infrastructure gap; it is a human gap. “Who is not connected to the internet? Who are these people?” Ms. Ezeilo asked, urging the audience to remember that statistics represent real families, youth, farmers, and women excluded from the digital economy.

The digital divide shows up in several ways:

- **Connectivity** – unreliable networks, high data costs, or absence of broadband.
- **Affordability** – devices and data remain prohibitively expensive for low-income communities.
- **Capabilities** – insufficient digital literacy, particularly in last-mile communities.
- **Mindsets** – limited awareness of digital opportunities or fear of new technologies.
- **Policy and power** – governance structures that do not prioritise equity or innovation.

These challenges feed into each other. For instance, without basic digital skills, connectivity alone does not result in meaningful use, a phenomenon documented across Sub-Saharan Africa.[3]

The future of work demands skills Africa is not yet building at scale

Ms. Ezeilo highlighted how rapidly the labour market is changing, noting that roles such as ESG analysis, data governance, cybersecurity and digital marketing, which were barely recognised two decades ago, now sit at the centre of the global economy. This shift is echoed in wider evidence. The World Economic Forum estimates that nearly 40% of the core skills required in today’s jobs will be transformed or become outdated over the next five years as AI, automation and digital technologies continue to evolve.[4] A study by the International Finance Corporation also projects that 230 million jobs across Africa will require some level of digital skills by 2030 to meet growing market demand.[5] The message is clear. Connectivity alone does not create opportunity. Without the capabilities to use technology in meaningful ways, the digital divide becomes even wider. True inclusion requires investment in both

[3] Broadband Commission. (2023). The State of Broadband 2023: Accelerating Digital Inclusion. UNESCO/ITU
[4] World Economic Forum. (2025). The Future of Jobs Report 2025. Geneva: WEF.
[5] International Finance Corporation. (2019). Digital skills in Sub-Saharan Africa: Spotlight on Ghana. Washington, DC: IFC.

digital skills and the human skills that allow people to navigate a fast-changing world.

Mindsets as infrastructure

Ms. Ezeilo's argument, echoed by other panellists, was that digital inclusion requires a shift in how young people and adults see themselves in the digital economy. Without this shift:

- communities may not adopt digital tools even when accessible,
- policymakers may underinvest in digital literacy, and
- organisations may treat technology as an optional add-on rather than a strategic foundation.

This thinking aligns with a report from the International Telecommunications Union (ITU), which notes that digital transformation succeeds where "social norms, values, and expectations evolve alongside technological capabilities."[6]

2.

Micro-Change Driving Macro Impact

A behavioural lens for digital transformation

Abimbola Ogundare drew attention to an important part of digital inclusion that is frequently overshadowed by conversations about infrastructure and policy. While Africa's digital transformation is often described in large structural terms, such as national broadband strategies, major infrastructure investments, regulatory reforms, or international financing agreements, she argued that these macro efforts are only one part of the picture. What eventually drives long-term progress are the small, everyday behavioural shifts that take place within individuals, teams, and institutions.

Ms. Ogundare explained that transformation begins when people develop the confidence to ask better questions, step outside their usual routines, experiment with unfamiliar tools, and commit to ongoing learning. It also depends on groups being willing to share knowledge more openly, rather than treating information as something held within a single department. These micro-changes may appear modest, but they gradually create environments where innovation feels possible and where technology becomes a natural part of how work is planned and delivered.

Her point reflects wider evidence from McKinsey, which notes that successful transformation relies on shifts in mindsets, habits, and capabilities across an organisation, rather than simply introducing new technologies.[7]

Embedding technology at the heart of strategy

Ms. Ogundare cautioned against treating digital inclusion as a "mid-year review tag-on item." She stressed that for governments, companies and NGOs, technology should sit at the centre of how strategies are designed and delivered, shaping go-to-market approaches, operational systems, public-service delivery, citizen engagement and social-sector programmes. Her point echoes the African Union's Digital Transformation Strategy for Africa (2020–2030), which calls for digital systems to be treated as foundational infrastructure for governance, education, health, agriculture and commerce.[8]

Governance and boardroom capacity

One striking contribution from Ms. Ogundare focused on boardroom dynamics. Many boards across Africa are led by seasoned decision-makers who excel in traditional industries but may lack the digital fluency needed to recognise and accelerate innovation.

She advocated for intergenerational governance models, where older executives provide strategic experience while younger, digitally savvy leaders contribute forward-thinking perspectives.

This mirrors Kenya's work on youth advisory councils within government ministries and Rwanda's

[6] International Telecommunication Union. (2021). ITU-D Digital Transformation Framework. Geneva: ITU.

[7] McKinsey & Company. (2019). Digital transformation: Improving the odds of success. McKinsey & Company.
[8] African Union. (2020). Digital Transformation Strategy for Africa (2020–2030). Addis Ababa: AU Commission.

integration of young technocrats into national ICT governance structures.[9,10]

3.

Regulatory Predictability and Investment Climate

Regulatory unpredictability as a barrier to digital access

Naomi Emeka Nwokolo described regulatory unpredictability, especially shifting tax regimes, opaque approval processes and inconsistent rules, as one of the strongest deterrents to private investment in Africa's digital sector. This concern is backed by global evidence. The GSMA Mobile Connectivity Index shows that regulatory instability can raise the cost of network deployment by as much as 20 to 30 percent[11], while the World Bank identifies unstable tax environments as a major risk factor for telecom investors across Africa.[12] Ms. Nwokolo emphasised that without clear, harmonised and long-term policies, investment in towers, fibre infrastructure and last-mile connectivity will remain slow and uneven.

The case for regulatory sandboxes

The panel highlighted the value of policy experimentation, particularly through the use of regulatory sandboxes. These controlled environments allow innovators to test new solutions without being subjected to full regulatory requirements from the outset. Several African countries are already applying this approach in practical ways. Kenya has introduced a sandbox for fintech and digital financial services, Nigeria operates one through the Central Bank to support digital payment innovations, and South Africa has an Intergovernmental Fintech Working Group that provides a similar testing space.[9,13,14] Across these examples, the purpose remains the same. Sandboxes help reduce risk, make it easier for new ideas to enter the market, and create room for social innovators to pilot models for rural connectivity, community Wi-Fi networks or digital financial services in areas that are often underserved.

Dialogue between regulators and industry

Ms. Nwokolo described efforts by the UN Global Compact to convene private–public dialogues, a practice shown to improve policy coherence and investment confidence. Research from the OECD confirms that multi-stakeholder policy design improves regulatory effectiveness and reduces misalignment between government priorities and industry realities.[15]

4.

Financing Last-Mile Connectivity: Revenue Models and Blended Capital

Why rural connectivity struggles to attract investment

Elhadji Malick Soumaré offered an investor's perspective, noting that rural connectivity is often viewed as high risk because many households have limited and unpredictable incomes. As a result, investors look closely at factors that signal whether a project can be viable. They examine the strength and sustainability of the revenue model, the extent to which communities genuinely need and will use the service, and whether the affordability and financing structures match local realities. They also consider if households can generate some economic value from having access to the internet, and whether there are plans for community training and demand stimulation to support long-term uptake. These considerations are consistent with evidence from the Alliance for Affordable Internet, which shows that rural deployment is rarely financially viable without targeted interventions that build demand and ensure continued use.[16]

[9] Republic of Kenya (2009). National Youth Council Act 2009 (revised 2022).
[10] Rwanda ICT Chamber. (2023). Youth and ICT Policy Engagement. Kigali: Rwanda ICT Chamber.
[11] GSMA. (2023). Mobile Connectivity Index 2023. GSMA Intelligence
[12] World Bank. (2019). Connecting Africa Through Broadband: A strategy for doubling connectivity by 2030. Washington DC: World Bank.
[13] Central Bank of Nigeria. (2021). Framework for Regulatory Sandbox Operations. Abuja: CBN.
[14] Intergovernmental Fintech Working Group. (2021). South Africa Fintech Regulatory Sandbox Framework. Pretoria: IGF.
[15] OECD (2020). The OECD Digital Government Policy Framework: Six dimensions of a Digital Government. OECD Public Governance Policy Papers, No. 02, OECD Publishing, Paris.
[16] A4AI (2022). Meaningful Connectivity for Rural Communities: Geographic Barriers & Policy Strategies for Digital Inclusion. Alliance for Affordable Internet.

Blended finance as an enabler

Mr. Soumaré stressed that blended finance, which combines development funding with private capital, is becoming a critical tool for reducing risk and encouraging investment in low-income and rural areas. He noted that this approach is already gaining ground in some African countries. The Smart Africa Alliance has been promoting blended finance models to support cross-border broadband projects, while Universal Service Funds in countries such as Rwanda, Ghana and Nigeria are being used to subsidise rural deployment.[17,18] The World Bank's Digital Economy for Africa (DE4A) programme also applies blended finance across more than thirty countries, helping to make large-scale digital infrastructure more affordable and more attractive to private investors.[19]

Revenue models that work

Mr. Soumaré shared an example from Senegal that demonstrated how creative business models can strengthen the case for investment. In one community, households that received internet access began using it as a small enterprise, charging neighbours a modest fee to connect. This created an additional income stream and showed investors that connectivity could stimulate local economic activity, not simply meet a social need. Similar patterns have been observed elsewhere, including community Wi-Fi kiosks in Rwanda, and wireless for communities in India.[20,21] Each example shows how communities can turn connectivity into both a service and an economic asset.

Low-cost, scalable technologies

The panel also discussed the relevance of low-cost technologies for countries trying to expand connectivity despite high operating costs. They drew attention to India's village roadmap pilot, which used approaches such as TV white spaces to tap unused spectrum, solar-powered equipment to overcome electricity challenges and youth-led community asset management to keep systems running efficiently.[22] These methods are increasingly important for African contexts where unreliable grid power and high right-of-way costs often make traditional infrastructure difficult to sustain.

5.

Community Ownership and Multi-Stakeholder Models

Why top-down approaches fail

Ms. Ezeilo cautioned that many well-intentioned digital initiatives fail because decisions are made from afar, with implementers selecting locations "on the map" rather than engaging directly with the people who will use the technology. When communities are not consulted, infrastructure often ends up underused, risks of vandalism and theft increase, training programmes do not match local realities and long-term sustainability becomes unlikely. Her point reflects the UNDP Digital Strategy, which stresses that communities must act as co-designers, not passive recipients, of digital solutions.[23]

Community stewardship improves sustainability

Ms. Ogundare built on this by explaining how community stewardship strengthens digital investments over time. She referenced India's approach, where youth and village administrative units were given responsibility for managing digital assets.[24] This produced better maintenance, greater accountability, stronger local adoption and more durable systems. African experience supports this insight. Examples include Zenzeleni Networks in South Africa, where a community-owned internet service provider offers affordable connectivity; TunapandaNET in Kenya, which equips informal settlements with locally managed networks and digital tools; and Pamoja Net in the DRC, where community engagement underpins the funding and

[17] Smart Africa Alliance. (2021). BLOC Smart Africa Impact Fund. Kigali: Smart Africa; 2021.
[18] Smart Africa Alliance. (2022). Recommendations to Smart Africa Alliance Member Countries: Digital Infrastructure Financing Strategy. Kigali: Smart Africa.
[19] World Bank. (2020). Diagnostic Tool for the Digital Economy for Africa (DE4A). Washington DC: World Bank.
[20] CNN. (2019). Solar powered kiosks are charging phones in Rwanda.
[21] Digital Empowerment Foundation. (2025). Wireless for Communities.
[22] Karandikar, A. (2019). TV White Space Solution for Affordable Internet in India. Indian Institute of Technology Bombay.
[23] UNDP. Digital Strategy. (2022). 2022–2025. New York: UNDP.
[24] 1World Connected. (2020). Digital Village Squares: Locations in Rural India for Digital Literacy Training.

operation of shared Wi-Fi services.[25,26,27] In each case, making communities custodians rather than bystanders has improved sustainability and relevance.

6.

Policy Transparency and Institutional Capacity

Members of the audience raised concerns about trust, clarity, and accountability in government policy, echoing global challenges.

Improving policy transparency

Ms. Ezeilo emphasised the importance of greater honesty about what has and has not worked in previous digital investment efforts. She noted that transparency helps restore confidence among private investors and encourages governments and institutions to mobilise more of their own resources rather than depending heavily on external support. Clear guidelines for how infrastructure should be deployed, stronger monitoring and evaluation practices and the publication of regular ICT sector reports all contribute to a more predictable environment. When governments are open about progress and challenges, investors can plan with more confidence.

Building institutional capacity

Ms. Ogundare pointed out that institutional capacity remains one of the most significant barriers to digital transformation. She highlighted two sides of the capacity challenge:

1. Innovators must simplify and clearly communicate solutions. When ideas are overly technical or unclear, they struggle to gain traction or attract funding
2. Policymakers and fund managers need a stronger level of digital fluency to properly assess opportunities and make informed decisions about what to support.

Towards a Digitally Inclusive Africa: A Strategic Agenda

Bringing the discussion together, five priorities emerged:

Key Priority	Focus Areas	Responsible Stakeholders
Create Regulatory Clarity & Enable Experimentation	• Establish stable, long-term ICT policy frameworks. • Reduce unpredictable taxes and approval bottlenecks. • Introduce regulatory sandboxes to encourage innovation.	Governments, ICT regulators, policy bodies
Develop Viable, Community-Centred Business Models	• Combine affordability with revenue-generation potential. • Support micro-enterprise models for connectivity. • Adopt pay-as-you-go and tiered pricing options.	Private sector (telcos, tech co's), local entrepreneurs, NGOs
Expand Blended Finance for Digital Public Infrastructure	• Use development capital to de-risk private investment. • Promote digital instruments like e-vouchers and digital IDs. • Channel Universal Service Funds effectively to rural areas.	Development finance institutions, governments, donors
Embed Community Engagement & Ownership	• Co-design programmes with local leaders and youth. • Develop stewardship models for asset management. • Recruit local talent for infrastructure deployment and maintenance.	Local communities, NGOs, governments, civil society, social entrepreneurs
Build Mindsets, Skills, & Institutional Capacity	• Integrate digital literacy and changemaking skills into education. • Establish leadership programmes for policymakers. • Promote intergenerational governance and digital fluency.	Educational institutions, governments, professional associations, private sector, social entrepreneurs

[25] Zenzeleni Networks. (2022). Our Model. 2022.
[26] Metri, N. (2019). TunapandaNET: A scalable solution to address global challenges.
[27] Kivuva, M. (2020). Pamoja Net – Community Network with GSM telephony.

A Future Built from Many Small Steps

The panel closed with a reminder that digital transformation is not defined solely by fibre cables, towers, or data costs. It is shaped by people—young innovators, policymakers, investors, teachers, communities, and community leaders willing to take small steps with courage and vision. Africa's digital future will depend on the interplay of smart policy, bold investment, human-centred design, and community-driven innovation. From village kiosks to virtual platforms, from boardrooms to classrooms, the opportunity to bridge the digital divide is immense. As the continent continues to navigate a rapidly evolving global landscape, digital equity is not just an economic imperative, it is a social one. By acting today, Africa can ensure that its people are not merely connected, but empowered.