www.ticonafrica.org

Issue 1 2026

AFRICA'S TECH PULSE

PROGRESS:
Africa's Single Digital Market

TRENDS:
Cyber Resilience & Cybersecurity

UPDATE:
2026 Conference

TICON AFRICA

AFRICA'S A.I. MOMENT IS HERE!

IMPROVING FOOD SECURITY; ENHANCING HEALTHCARE

INFORMATION SECURITY SURVEY | TICON AFRICA MASTERCLASS | CODING CARAVAN | TICON AFRICA MEMBER NEWS

TICON AFRICA

Your Excellence Deserves Its Moment.

The TICON Africa Awards
honour individuals and organisations shaping Africa's digital future with influence, integrity and impact - recognition that strengthens credibility and places your work before the leaders shaping policy, investment and progress.

Nominations are Open

TICON AFRICA AWARDS

Where Africa's digital leaders are recognised.

THE CREATIVITY AND AMBITION DRIVING AFRICA'S A.I. EVOLUTION

It is a privilege to welcome you to this edition of *Africa's Tech Pulse*, the official magazine of the Technology Information Confederation Africa (TICON Africa). In this issue, a key focus is on one of the most transformative forces shaping our continent: Artificial Intelligence (AI) and its growing influence across critical sectors of African society.

Over the past year, Africa has made significant progress in positioning itself not only as a consumer of emerging technologies but also as a driver of AI-enabled innovation. Continental instruments such as the African Union's *Continental AI Strategy* and the *Africa Declaration on Artificial Intelligence* are helping establish an ethical, responsible and Africa-centred approach to AI development. Complementing these frameworks is the *Malabo Convention on Data Protection and Cybersecurity*, which strengthens trust and data governance, and forms a foundation for sustainable digital growth.

As AI adoption accelerates, international and regional platforms are fostering collaboration, capacity building and responsible use. Events such as the *AI for Good Impact Africa Summit*, the *AI for Peace Africa Summit* and UNDP's *Africa Takes off with AI* are advancing discussions on skills, governance and inclusion. These efforts are reinforced by major investments, including the African Development Bank (AfDB) and UNDP's *AI 10 Billion Initiative*, which aims to mobilise US$10-billion by 2035 to expand digital infrastructure, strengthen compute capacity, promote AI entrepreneurship and create up to 45-million jobs in Africa. Within this wider ecosystem, this edition highlights two sectors where AI is already delivering meaningful, real-world benefits: healthcare and agriculture.

Our feature on *AI in Healthcare* shows how AI-powered diagnostics, mobile screening tools and intelligent disease surveillance systems are helping to close long-standing gaps in access. These tools extend the reach of health professionals and demonstrate how AI can save lives when applied to local challenges.

In agriculture, AI is enhancing productivity and climate resilience. Intelligent crop monitoring, predictive pest modelling, precision irrigation and data-informed advisory systems empower farmers to make timely decisions, improve yields and reduce losses. These innovations bring Africa closer to achieving food security and progress toward Zero Hunger (SDG 2).

This edition of *Africa's Tech Pulse* captures the momentum, creativity and ambition driving Africa's AI evolution. I invite you to explore the insights shared and to join us in working toward a unified, future-ready Africa where AI becomes a catalyst for empowerment, resilience and shared prosperity.

David Gowu
President
Technology Information Confederation Africa

IN THE PAST YEAR, AFRICA HAS MADE SIGNIFICANT PROGRESS AS A DRIVER OF A.I.-LED INNOVATION

LA CRÉATIVITÉ ET L'AMBITION QUI FAVORISENT L'ÉVOLUTION DE L'IA EN AFRIQUE

C'est un privilège de vous accueillir dans cette édition d'*Africa's Tech Pulse*, le magazine officiel de la Technology Information Confederation Africa (TICON Africa). Ce numéro met l'accent sur l'une des forces transformatrices les plus importantes qui façonnent notre continent : l'intelligence artificielle (IA) et son influence croissante dans des secteurs clés de la société africaine.

Au cours de l'année écoulée, l'Afrique a réalisé des progrès significatifs en se positionnant non seulement comme consommatrice de technologies émergentes, mais aussi comme moteur de l'innovation permise par l'IA. Des instruments continentaux tels que la *Stratégie continentale de l'Union africaine en matière d'IA et la Déclaration africaine sur l'intelligence artificielle* contribuent à établir une approche éthique, responsable et centrée sur l'Afrique du développement de l'IA. Ces cadres sont complétés par la *Convention de Malabo sur la protection des données et la cybersécurité*, qui renforce la confiance et la gouvernance des données et constitue un fondement pour une croissance numérique durable.

Avec l'accélération de l'adoption de l'IA, les plateformes internationales et régionales encouragent la collaboration, le renforcement des capacités et une utilisation responsable. Des événements tels que le Sommet « IA pour un impact positif en Afrique, le Sommet « *IA pour la paix en Afrique* » et *L'Afrique prend son envol avec l'IA* font progresser les discussions sur les compétences, la gouvernance et l'inclusion. Ces efforts sont renforcés par d'importants investissements, notamment de la Banque africaine de développement (BAD) et de *l'initiative « AI 10 Billion »* du PNUD, qui vise à mobiliser 10 milliards de dollars américains d'ici 2035 pour développer l'infrastructure numérique, renforcer les capacités informatiques, promouvoir l'entrepreneuriat dans le domaine de l'IA et créer jusqu'à 45 millions d'emplois en Afrique. Au sein de cet écosystème plus vaste, cette édition met en lumière deux secteurs où l'IA apporte déjà des avantages concrets et significatifs : la santé et l'agriculture.

Notre article sur *l'IA dans le secteur de la santé* montre comment les outils de diagnostic basés sur l'IA, les outils de dépistage mobiles et les systèmes intelligents de surveillance des maladies contribuent à combler les lacunes d'accès qui persistent depuis longtemps. Ces outils étendent la portée des professionnels de la santé et démontrent comment l'IA peut sauver des vies lorsqu'elle est appliquée à des problématiques locales.

En agriculture, l'IA améliore la productivité et la résilience climatique. La surveillance intelligente des cultures, la modélisation prédictive des ravageurs, l'irrigation de précision et les systèmes de conseil basés sur les données permettent aux agriculteurs de prendre des décisions opportunes, d'améliorer les rendements et de réduire les pertes. Ces innovations rapprochent l'Afrique de la réalisation de la sécurité alimentaire et des progrès vers l'objectif Faim Zéro (ODD 2).

Cette édition d'*Africa's Tech Pulse* reflète la dynamique, la créativité et l'ambition qui animent l'évolution de l'IA en Afrique. Je vous invite à explorer les idées partagées et à vous joindre à nous pour œuvrer à une Afrique unifiée et prête pour l'avenir, où l'IA devient un catalyseur d'autonomisation, de résilience et de prospérité partagée.

David Gowu
Président de la Technology Information Confederation Africa

AU COURS DE L'ANNÉE ÉCOULÉE, L'AFRIQUE A RÉALISÉ DES PROGRÈS SIGNIFICATIFS EN TANT QUE MOTEUR DE L'INNOVATION BASÉE SUR L'IA

DO GABINETE DA SECRETÁRIA-GERAL DA CONFEDERAÇÃO DE TECNOLOGIA E INFORMAÇÃO DA ÁFRICA

FROM THE SECRETARY GENERAL OF THE TECHNOLOGY INFORMATION CONFEDERATION AFRICA

TOGETHER WE ARE BUILDING AN AFRICAN ICT MOVEMENT

Welcome to the first issue of *Africa's Tech Pulse* for 2026. To our TICON Africa member countries and to all readers committed to Africa's digital future, thank you for your continued support. *Africa's Tech Pulse* shares practical insights, showcases innovation, and tracks the policy, skills and technology shifts shaping Africa's role in a fast-moving global digital era.

In 2026, TICON Africa is strengthening continental ICT compliance through our Compliance Chapter and a practical Compliance Toolkit, supporting privacy, cybersecurity, and regulatory readiness across member countries. We are also driving outcome-focused research, including baseline work on ICT laws and compliance readiness, the Women in TICON Africa leadership representation study, and Youth in TICON Africa research on skills pathways and transitions into ICT careers and entrepreneurship.

We are expanding engagement through masterclasses, youth competitions, regular newsletters, and monthly articles released across the continent, while building stronger partnerships with like-minded international bodies.

We are also launching the TICON Africa Job Portal to connect talent to employment opportunities. In September, we will run, for the first time, a full academic track alongside the main conference to showcase research results and applied learning. We also continue working towards establishing the Chartered ICT Professional Africa qualification as a future pathway for professional recognition and mobility.

Thank you for reading, contributing and helping us grow this platform. Let's keep building together.

Dr Jannie Zaaiman

JUNTOS ESTAMOS A CONSTRUIR UM MOVIMENTO AFRICANO DE TIC

Bem-vindos à primeira edição do *Africa's Tech Pulse* de 2026. Aos países membros da TICON África e a todos os leitores comprometidos com o futuro digital da África, agradecemos o seu apoio contínuo. O*Africa's Tech Pulse* partilha informações práticas, apresenta inovações e acompanha as mudanças nas políticas, habilidades e tecnologias que moldam o papel da África em uma era digital global em rápida evolução.

Em 2026, a TICON África está a fortalecer a conformidade continental em matéria de TIC por meio do nosso Capítulo de Conformidade e um Conjunto de Ferramentas de Conformidade prático, apoiando a privacidade, a segurança cibernética e a preparação regulatória em todos os países membros. Também estamos a conduzir pesquisas focadas em resultados, incluindo trabalhos de base sobre leis de TIC e prontidão para conformidade, o estudo de representação de liderança das mulheres no TICON África e a pesquisa do Juventude no TICON África sobre trajectórias de habilidades e transições para carreiras em TIC e empreendedorismo.

Estamos a ampliar a participação por meio de masterclasses, competições para jovens, boletins informativos regulares e artigos mensais publicados em todo o continente, ao mesmo tempo em que construímos parcerias mais sólidas com entidades internacionais que partilham os mesmos ideais.

Estamos também a lançar o Portal de Empregos TICON África para conectar talentos a oportunidades de emprego. Em Setembro, iremos realizar, pela primeira vez, uma programação académica completa paralela à conferência principal para apresentar resultados de pesquisa e aprendizagem aplicada. Continuamos também a trabalhar para estabelecer a qualificação de Profissional de TIC Certificado para África como um caminho futuro para o reconhecimento profissional e a mobilidade.

Obrigada por ler, contribuir e ajudar-nos a expandir esta plataforma. Vamos continuar a construir juntos.

Dr Jannie Zaaiman

AFRICA'S TECH PULSE

PUBLISHER
Technology Information Confederation Africa
https://ticonafrica.org
info@ticonafrica.org

TICON AFRICA PRESIDENT
David Gowu

SECRETARY GENERAL
Dr Jannie Zaaiman

EDITORIAL
Simpson Media
Mike Simpson & Fiona Zerbst
mike@media-simpson.com

ADVERTISING
Avenue Advertising
barbara@avenue.co.za

DESIGN & LAYOUT
Tamlin Lockhart Design
tamlin@tamlinlockhart.co.za

COVER DESIGN
Jean-Mari Bell, UXi-Creative; Tamlin Lockhart

PRODUCTION
Reproduction: Tamlin Lockhart Design
Digital Edition: UXi-Creative
Print Edition: Law Print

IN ASSOCIATION WITH
- Botswana Information Technology Society (BITS)
- Computer Society of Zimbabwe (CSZ)
- Eswatini Information and Communication Technology Association (EICTA)
- ICT Association Ethiopia (ICT-ET)
- ICT Association of Malawi (ICTAM)
- ICT Association of Uganda (ICTAU)
- Information Communication Technology Association of Kenya (ICTAK)
- Information and Communications Technology Association of Zambia (ICTAZ)
- Information Communication Technology Association of Zimbabwe
- Institute of ICT Professionals Ghana (IIPGH)
- Núcleo Operacional da Sociedade de Informação (NOSi), Cape Verde
- Lesotho Information and Communication Technology Association (LICTA)
- Nigeria Computer Society
- Rwanda ICT Chamber
- South African ICT Association (SAICTA)
- Tanzania Computer Society
- TogoTech

ISSUE 1 2026

CONTENTS

OUR COVER STORIES

8 2026 CONFERENCE
In a landmark coming together of three key sectors, TICON Africa hosts the ICT conversation alongside the AMC and ASCON

10 INCLUSIVE A.I. FUTURE
AI in Africa should be people-centric. The expertise is there – now it must be translated into consultation and action

14 A.I. USE CASES
As Africa confronts population growth and climate variability, AI is emerging as a powerful ally in agriculture

20 A.I. IN HEALTHCARE
Artificial intelligence is transforming healthcare across Africa – improving access, diagnosis and treatment

OUR FEATURE STORIES

6 THIS IS TICON AFRICA
Introducing TICON Africa as the powerful and united voice of ICT professionals across our emerging continent

30 MEMBER NEWS: ZAMBIA
Zambia is on track to have a US$60-billion economy by 2031 – a transformation powered by tech and AI

32 MEMBER NEWS: BOTSWANA
BITS has commenced nationwide consultations on the proposed ICT Profession Regulation Framework

34 CODING CARAVAN
An exciting new initiative in Ghana aims to ensure that disability is not a barrier to a digital career

47 MASTERCLASS SERIES
TICON Africa's February Masterclass featured insights by a seasoned product leader and ICT specialist

36 DIGITAL INCLUSION
There's a paradox: Despite expanding mobile coverage, nearly two-thirds of Africans still remain offline

38 SINGLE DIGITAL MARKET
Smart Africa is driving a multinational initiative to create a single, integrated digital market in Africa

44 CYBERSECURITY
A recent international conference highlights the top 10 cybersecurity trends to be aware of in 2026

52 CYBER RESILIENCE
The threat to Africa's critical infrastructure networks due to their high hack value requires greater cyber resilience

48 INFORMATION SECURITY
Digital threats are not amongst most Ghanaians biggest security worries, annual Sherrif Security Indicator finds

54 THE LAW
From data privacy breaches to digital fraud, it often takes a crisis to discover legal boundaries in the digital space

58 DIGITAL SKILLS
There's a dangerous assumption that growing up with technology makes you competent to use it

62 GLOBAL I.C.T.
At a global crossroads, the Caribbean is leveraging digital connectivity to compete on the world stage

64 MOBILE TECHNOLOGY
More than 3,000 delegates from 99 countries attended the Mobile World Congress Kigali 2025 in Rwanda

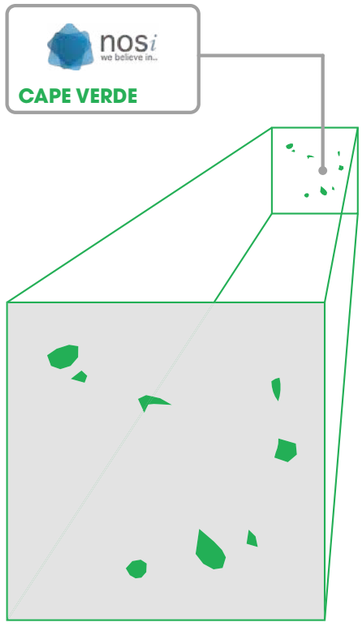
NEXT ISSUE:
- 2026 Conference latest
- TICON Africa research projects

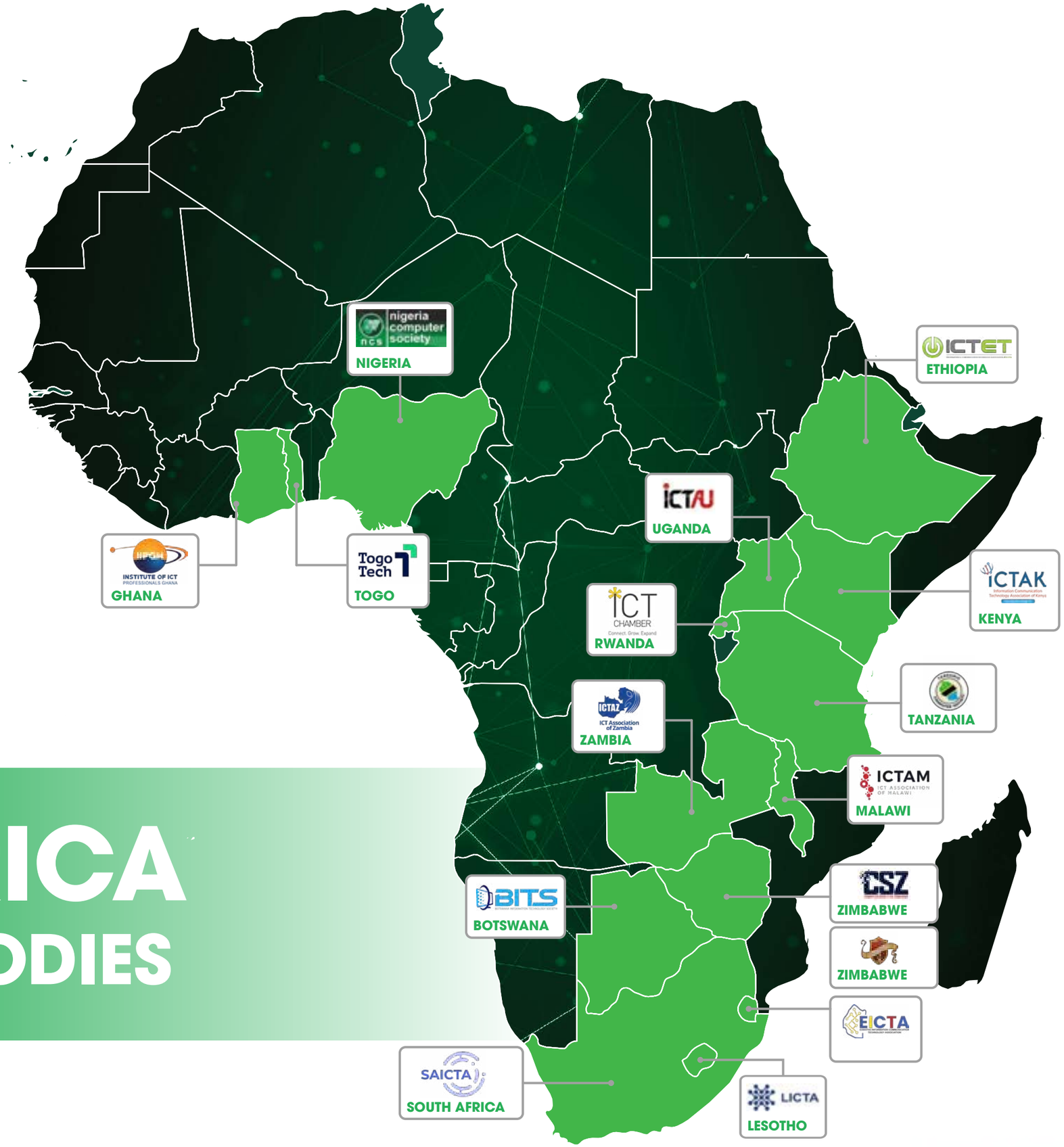
PRIMARY MEMBERS

Primary member organisations are key players in their respective countries, serving as pivotal figures in local technology ecosystems. They drive innovation, foster collaboration and champion the development of ICT professionals, playing a crucial role in shaping both TICON Africa and the broader ICT landscape.

SECONDARY MEMBERS

Secondary membership represents the dynamic influx of new energy and ideas into TICON Africa from a constantly evolving industry, offering diverse perspectives, innovative approaches, and a hunger for knowledge and growth.





TICON AFRICA
OUR MEMBER BODIES

TICON Africa delegates at the 2025 conference in Accra, Ghana

Zambian delegates at the 2025 conference in Ghana celebrate the handing over of the baton to the 2026 conference organisers

'AFRICA RISING' AT VIC FALLS: TICON AFRICA HOSTS THE ICT DIALOGUE ALONGSIDE AMC AND ASCON

'*Africa Rising*' is more than just the theme for 2026; it reflects how competitiveness is built through connected systems that must move forward together.

From 23-25 September 2026, Livingstone, Zambia, gateway to Victoria Falls, becomes the meeting point for a distinctive continental format: one conference week, three parallel conferences, with joint opening and closing plenaries, shared meals, and integrated networking and social events.

Under the overarching theme '*Africa Rising: From Continental Strengths to Global Impact*', each confederation brings its own sector lens:

- AMC: *...through Marketing Leadership, Brand Power and Value Creation*.
- ASCON: *...with Supply Chain (Collaboration & Integration)*.
- TICON Africa: *...into Global Digital Impact with ICT*.

WHY THREE CONFERENCES TOGETHER AND WHY THE ICT TRACK MATTERS SO MUCH

'*Africa Rising*' is more than a theme; it reflects how competitiveness is built through connected systems that must move forward together.

Marketing shapes how African products, services and destinations compete globally, and how demand is grown sustainably. **Technology** determines how quickly Africa builds digital capability, trusted infrastructure and future-ready skills. **Supply chains** decide whether trade integration, industrialisation and cross-border delivery work in practice as African markets deepen.

That is the strategic value of Livingstone's three-track format: it creates a multi-track leadership space where a marketing leader can step into digital-readiness discussions, where ICT governance connects directly to procurement and trade enablement, and where partnerships can form across the full value chain – from demand creation to digital systems, to delivery. In effect, the week operates as a commerce convergence across brand, digital and execution, without losing the depth of each professional track.

CONFIRMED DATES AND ZAMBIA'S HOST PARTNERS

All three conferences run from 23-25 September 2026 in Livingstone, with host partners for each conference as follows:

- **AMC Conference:** hosted by the Zambia Institute of Marketing (ZIM).
- **TICON Africa Conference:** delivered in partnership with the ICT Association of Zambia (ICTAZ).
- **ASCON Conference:** with local hosting support from ZIPS, the Zambia Institute of Procurement and Supply.

TICON AFRICA'S CORE PROPOSITION: CONVERTING DIGITAL MOMENTUM INTO POWERFUL GLOBAL IMPACT

Within the three-track week, TICON Africa brings the continent's ICT leadership conversation into one place at one time. Policy, innovation, skills, standards and global influence are explicitly framed around Africa's ability to convert digital progress into measurable economic and societal outcomes.

TICON Africa's own positioning makes the priorities clear. Focus areas include Data Sovereignty & Africa's Digital Value, Cybersecurity & Resilient Digital Nations, and Africa's Digital Workforce: AI, Skills & Jobs. This is a practical agenda that speaks to infrastructure, trust and talent as the foundations of scale.

The conference experience is designed to be action-oriented: cutting-edge keynotes, practical workshops, live demos, policy dialogue, and networking intended to accelerate adoption and partnership across Africa's ICT ecosystem.

The setting is also part of the message: Avani Victoria Falls Resort, just steps from the magnificent Falls, becomes a place where Africa's digital future is discussed not as a distant ambition, but as a programme of work shaped on African soil.

THE RESEARCH TRACK: EVIDENCE ALONGSIDE LEADERSHIP AND INDUSTRY

A major strength of the TICON Africa programme is the inclusion of a dedicated Research Track, adding an academic and evidence-based layer alongside policy, leadership and industry engagement.

In a continent where digital policies and investments must deliver real inclusion and productivity gains, this matters: research helps separate what is popular from what is proven, and it gives decision-makers comparable insights across countries – skills pipelines, governance models, cybersecurity readiness, platform interoperability, and the practical conditions for scaling trusted digital services.

AMC AND ASCON ADD POWER TO THE ICT CONVERSATION

Co-locating the conferences strengthens the ICT programme precisely because it brings the 'adjacent systems' into the same week.

AMC and ZIM bring marketing leadership and brand power into the same space as digital readiness. That matters because digital services only create impact when people trust them, understand them and adopt them, whether the service is public, private or cross-border. The brand and value-creation conversation become part of digital inclusion, 'productisation' and market uptake.

ASCON, with ZIPS as the local host body in Zambia, adds the delivery layer: procurement, logistics, operations and integration. Digital transformation is often won or lost in execution – how goods move, how procurement performs, how systems interoperate across borders, and how resilience is built into supply networks.

Bringing supply chain leadership into the same week makes it easier for ICT leaders to connect standards, platforms, and skills directly to trade enablement and measurable performance.

ONE SPONSORSHIP BUT THREE TIMES THE IMPACT

For sponsors and partners, the co-located structure is a practical advantage: it's one integrated investment across shared exhibitions, executive engagements, networking functions and gala moments, while still reaching three distinct professional communities through the parallel tracks.

ICTAZ projects that the 2026 co-located gathering will attract 1,100+ ICT professionals, marketers, supply chain executives, policymakers and industry leaders from 35 African countries, demonstrating the scale of pan-African reach, cross-market visibility and relationship-building potential that a single, integrated platform can deliver.

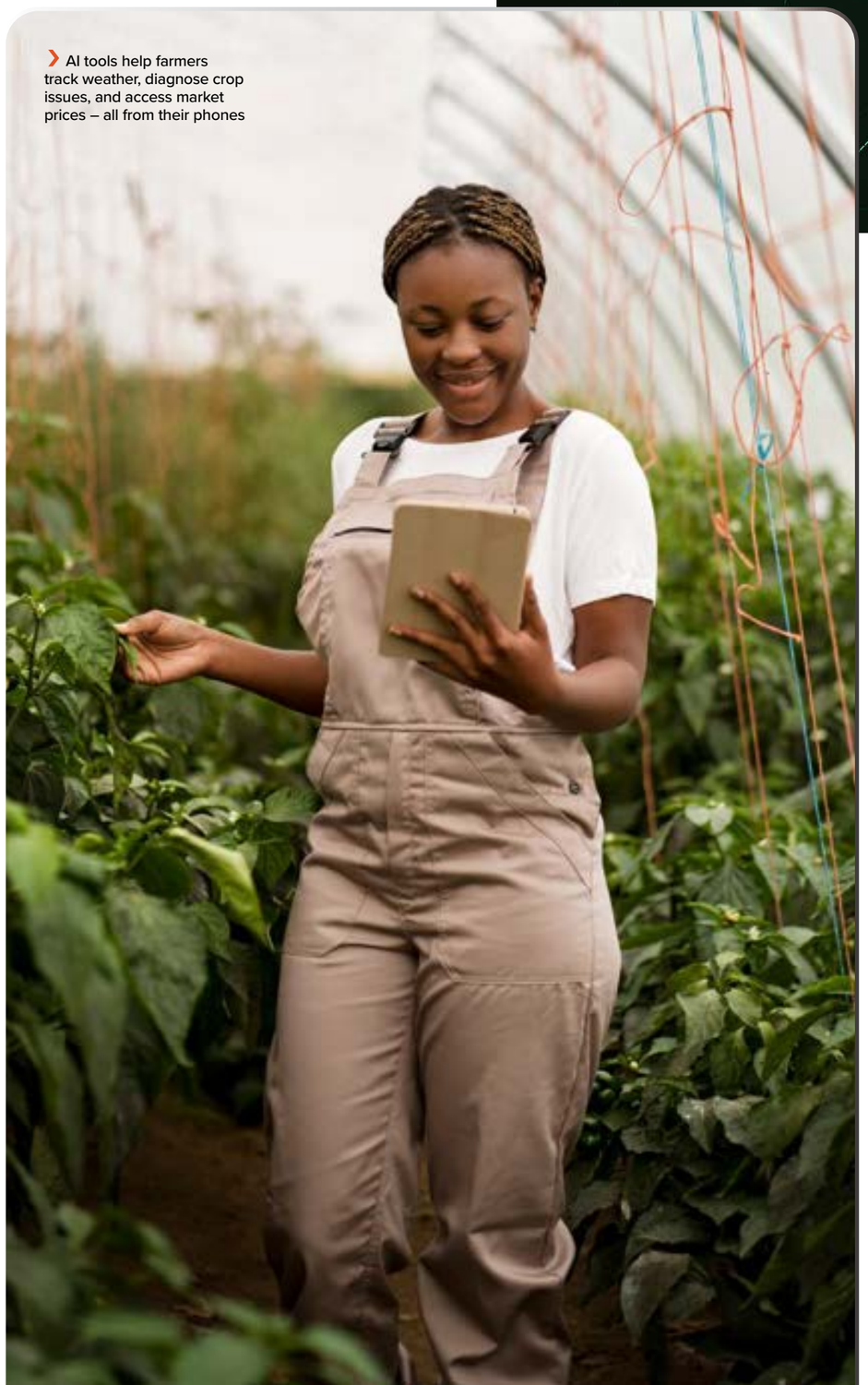
Sponsors benefit from concentrated access to leaders shaping infrastructure and platforms (ICT), building demand and brand trust (marketing), and driving trade performance and delivery (supply chain). Value is amplified through integrated marketing and PR, targeted communications and structured lead-capture touchpoints backed by measurable indicators such as campaign reach, delegate engagement, leads generated and media activity.

In Livingstone, on the edge of Victoria Falls, this becomes more than visibility. It becomes a high-trust setting designed for deeper engagement, longer interaction time and partnerships that continue well beyond the closing plenary. ●

PHOTOS: TICON AFRICA

A RIGHTS-BY-DESIGN PLAYBOOK FOR AFRICA'S INCLUSIVE A.I. FUTURE

AI in Africa should be people-centric. The expertise is there – but now it must be translated into consultation and action. By **Desmond Israel**.



AI tools help farmers track weather, diagnose crop issues, and access market prices – all from their phones

Africa's AI moment is here, and the stakes are human. Across the continent, algorithms are beginning to shape who gets credit, how patients are triaged, which crops get insured and what news we see. The African Union and individual countries such as Ghana and Rwanda now have strategy documents that endorse inclusion.

Yet inclusion declared is not inclusion delivered. If AI is to expand opportunity, Africa must move beyond aspirational language toward the practical craft of participatory design and the discipline of rights-by-design (the embedding of human rights safeguards in AI policies). It is not too late; indeed, it is precisely the right time to harmonise continental guidelines that promote responsible self-regulation and put people in the design room.

IDENTIFYING THE GAP

Ghana's National Artificial Intelligence Strategy, Rwanda's National Artificial Intelligence Policy and the African Union (AU) Continental Artificial Intelligence Strategy share a welcome premise: AI should be people-centric and development-oriented. They speak to fairness, accountability and inclusion. The gap is in implementation.

Few binding mechanisms compel decision-makers to co-create with the communities most affected by AI. Consultations too often concentrate expertise in capital cities or among a handful of 'the usual suspects'. The result is ambitious rhetoric, thin process and systems that risk missing the realities of users whose languages, livelihoods and local contexts are not reflected in datasets or design teams.

Years of digital policy experience in Africa have shown that when participation is episodic rather than embedded, systems inherit the blind spots of their makers. Similarly, when rights are appended as afterthoughts, harms are discovered in production rather than prevented in design. The remedy is an equally practical shift in who sits at the table and when.

CONSULTATIONS TOO OFTEN CONCENTRATE EXPERTISE IN CAPITAL CITIES OR AMONG A HANDFUL OF 'THE USUAL SUSPECTS'. THE RESULT IS AMBITIOUS RHETORIC, THIN PROCESS AND SYSTEMS THAT RISK MISSING THE REALITIES OF AFRICAN CIRCUMSTANCES

PARTICIPATORY DESIGN IN PRACTICE

Participatory design is a method. Communities define problems, shape success metrics and test prototypes early. Designers learn from users in their own settings. Feedback loops are formalised and ongoing. In Africa, this means designing in indigenous languages; understanding access constraints such as prepaid data, device fragility and intermittent power; and surfacing cultural norms that alter the meaning of 'consent', 'risk' and 'benefit'.

We already have working examples. Masakhane, a Pan-African grassroots organisation that aims to strengthen natural language processing research in African languages, mobilises volunteers across the continent to build translation models for Africans by Africans.

Its impact comes from treating speakers of African languages not as edge cases but as first-order design partners. Mbaza, Rwanda's Kinyarwanda chatbot, initially deployed for public Covid-19 information, also demonstrates how a language-first design multiplies reach and trust. These are blueprints: when we centre participation, we find that quality improves, bias narrows and adoption climbs because people recognise themselves in the product.

Masakhane teaches that representation in data and developers is not a moral luxury; it is a performance requirement.

Co-creating Africa's people-first AI future

When African languages and lived contexts shape models, accuracy improves for everyone those models intend to serve.

Mbaza shows that rights can ride on usability: the fastest way to protect a right to information is to make it accessible in your language on your phone, with the lowest possible friction and cost. Neither case is perfect or complete. But both are proof that an inclusive process is the shortest route to practical impact.

RIGHTS-BY-DESIGN IS A NON-NEGOTIABLE

Where participatory design determines 'who' and 'how', rights-by-design determines 'what must never be traded away'. It is the discipline of baking human rights equality, non-discrimination, privacy, due process and freedom of expression into system requirements from day one.

Think of it as a technical and governance specification: perform human rights and privacy impact assessments before deployment; define transparency and explanation thresholds for automated decisions; set red lines for biometric surveillance and social scoring; and require recourse and remedy when algorithms err.

Rights-by-design is not anti-innovation. It is pro-legitimacy. Systems that can explain themselves, be challenged and be corrected earn durable public trust. Because Africa is still early in its regulatory journey, codifying rights-by-design now allows us to avoid the costly retrofits that have dogged other regions.

SELF-REGULATE, HARMONISE AND LOCALISE

'Self-regulation' has a mixed reputation because it can devolve into box-ticking.

BELGIUM CAMPUS iTversity

ADVANCE YOUR CAREER

Lead with a Postgraduate Diploma in IT

Elevate Your Credibility:

Postgraduate Diploma in Cybersecurity

Advanced Diploma in Cybersecurity

Master the skills to navigate Africa's evolving IT landscape:

Master the skills to navigate Africa's evolving IT landscape by building industry-ready expertise you can apply from day one, developing the strategic insight needed to tackle modern cybersecurity and technology challenges, and strengthening your professional standing as a recognised leader in the digital sector.

Visit www.belgiumcampus.ac.za for more information

Africa can do better by defining self-regulation as accountable co-regulation. Industry codes of conduct should be public, measurable and tied to independent audits.

Developer pledges should include timetabled bias testing, community red-team reviews for high-risk systems and plain-language model cards that disclose data provenance, known limitations and intended uses. Civil society and universities can serve as third-party evaluators. Regulators can recognise accredited codes to accelerate responsible innovation while retaining the authority to sanction non-compliance. This is self-regulation with teeth, not a smokescreen.

A continental baseline is now essential. The AU can lead by issuing model guidelines for participatory and rights-by-design AI that member states can adopt and adapt.

The baseline should set process and outcome standards: documented community co-creation for public-sector AI; mandatory impact assessments for high-risk use cases; disclosure and appeal rights for automated decisions that affect livelihoods; and minimum transparency for procurement, datasets and models used by governments.

Regions and countries can then localise by adding language, sector and cultural specifics without fragmenting core protections. Harmonisation lowers compliance costs for innovators, raises safety floors for citizens and gives Africa a coherent voice in global AI standard-setting.

CONSTRUCTIVE PATH FORWARD

Ghana's strength is its vibrant civic and startup ecosystem. It can turn that energy into process by requiring line ministries to prove participatory co-design for public-facing AI projects, with published summaries of what communities said and what changed in response.

Rwanda's advantage is delivery discipline. It can extend the Mbaza lesson across sectors by creating standing user panels in rural and peri-urban areas to pressure-test prototypes and stress-test rights risks before scale.

The AU can knit these approaches together by convening a standing African forum on participatory AI. On this rotating platform, communities, regulators, firms and researchers could share patterns, datasets and failures so others don't repeat them.

FIVE DESIGN COMMITMENTS

Africa can lock in momentum with five commitments that travel well across borders and sectors:

1. Require participation where the stakes are highest. Any public-sector AI used for eligibility, benefits, policing or healthcare should document community co-creation and undergo an independent rights impact assessment before launch.

2. Demand explainability that humans can use. People must be able to understand, challenge and correct consequential automated decisions. Explanation is not a PDF; it is a pathway to remedy.

3. Publish what you can. Model and data cards, risk registers and post-deployment incident reports should be normal. Sunlight disciplines – practices that promote visibility and transparency – hype and accelerate learning.

4. Invest in languages and local context as critical infrastructure. Fund African-language datasets, annotation jobs and benchmark suites. Diversity is not a downstream fairness patch; it is an upstream engineering choice.

5. Align incentives. Tie public procurement and regulatory sandboxes to adherence with participatory and rights-by-design standards. Make the easiest money the most responsible money.

A PEOPLE-FIRST ADVANTAGE

This is not just about ethics; it is about strategy. Africa can differentiate by exporting trustworthy AI systems that are demonstrably safer, fairer and more locally attuned than global competitors. Investors and multinationals already price in governance risk.

A continent that can credibly say "our AI is built with communities and constrained by rights" will attract quality capital and partnerships. That reputation is compounding: each transparent deployment lowers the next adopter's fear, grows a cadre of experienced designers and auditors, and strengthens a market for responsible tools and services.

Sceptics warn that participation and rights slow innovation. The opposite is true when you build them in from the start. Participation reduces costly rework and public backlash. Rights clarity lowers legal uncertainty. Harmonised guidance reduces duplication for companies building across borders. Most importantly, these approaches make AI work in real lives, in real languages, under real constraints. That is the difference between a pilot that demonstrates well in a capital city and a service that quietly serves a million people.

Desmond Israel

Africa is not behind; it is well placed to leapfrog. We can avoid importing other regions' regrets by committing now to design with people and for rights. Ghana, Rwanda and the AU have set the narrative. The next chapter must be methods, mandates and measurable outcomes.

The most valuable AI Africa can build is AI that we can defend publicly. That requires communities in the room, not just in the impact statement. It requires rights that shape code, not footnote it. And it requires a continental cadence – clear, shared guardrails that still leave room for local texture and experimentation.

If we choose participatory design and rights-by-design as our north stars, 'inclusive AI' will stop being a slogan and become the daily experience of farmers, teachers, nurses and small businesses from Accra to Kigali and beyond. That is not only a just future; it is a winning one. ●

Desmond Israel is a member of the Institute of ICT Professionals, Ghana, and volunteers for the Regulatory and Policy Working Group. He is a Partner of AGNOS Legal Company and a Law Lecturer at the Ghana Institute of Management and Public Administration Law School. He is a former research fellow with the Center for AI and Digital Policy in Washington DC.

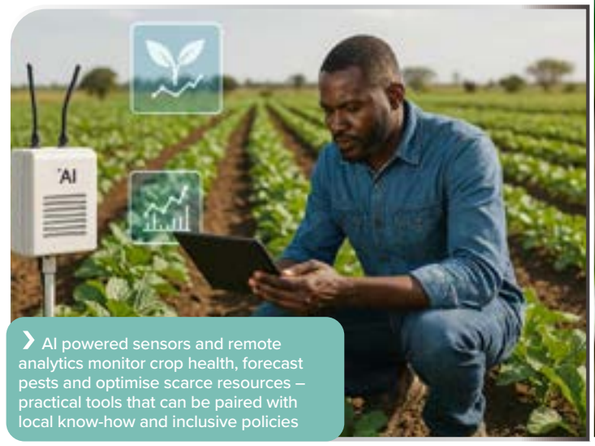
PHOTOS: DESMOND ISRAEL; FREEPIK

A.I. ON THE FARM: TOWARDS DELIVERING ZERO HUNGER FOR AFRICA

As Africa confronts population growth and climate variability, A.I. is emerging as a powerful ally in agriculture. By **Dr Alfred Mazorodze** and **Desire Sundire**.

Robots and smart sensors transform African agriculture, enabling precision crop monitoring and resource optimisation to advance the fight against hunger

Lush green fields signal Africa's growing crop wealth and a future of abundance



AI powered sensors and remote analytics monitor crop health, forecast pests and optimise scarce resources – practical tools that can be paired with local know-how and inclusive policies

Sustainable Development Goal 2 (Zero Hunger) calls for an end to hunger, food insecurity and malnutrition by 2030 – a tall order that demands innovation at scale. Artificial intelligence (AI) is not a silver bullet, but it can transform food production across the Africa when paired with local knowledge, mobile connectivity and sensible policies.

SMARTER FIELDS THROUGH CONSTANT CROP MONITORING

Traditionally, farmers have assessed crop health by walking their fields and inspecting plants, which is a slow, subjective process. AI changes that with remote sensing and computer vision.

Satellite imagery, drones and low-cost camera systems feed high-resolution images into machine-learning models that detect stress signals like water shortages and nutrient deficiencies far earlier than the human eye. This enables targeted interventions: spot watering, selective fertiliser application, or localised treatment of diseases.

Sensor networks measuring soil moisture, temperature and humidity feed data into AI systems that learn each plot's microclimate. Farmers then receive timely, data-driven advice on planting dates, crop varieties and harvest timing, boosting yields and reducing post-harvest losses. Countries like South Africa, Kenya, Nigeria and Zimbabwe are already piloting these tools.

PESTS AND DISEASES

Pests and plant diseases are major sources of yield loss in many African cropping systems. AI models trained on historical weather, crop calendars, pest life cycles and real-time field reports can forecast pest outbreaks and disease risk windows.

Early warning systems delivered via SMS or mobile apps empower farmers to act in good time, using biological controls or shifting planting dates to avoid peak pest periods. This reduces reliance on broad-spectrum pesticides, saves money and protects ecosystems and human health. In Kenya, AI models have been integrated with satellite data to predict locust movements, allowing for early interventions.

RESOURCE OPTIMISATION: SMARTER USE OF WATER, FERTILISER AND LABOUR

Water scarcity and inefficient fertiliser use remain big hurdles. AI-driven systems optimise irrigation by combining weather forecasts, evapotranspiration (the combined process of water transferring from the Earth's surface to the atmosphere through evaporation and transpiration) models and soil moisture sensors. Precision irrigation reduces water consumption while maintaining yields, essential in semi-arid and drought-prone regions.

Similarly, AI can guide precision fertilisation by mapping soil nutrient variability and recommending variable-rate application. This reduces costs and runoff while improving crop nutrition. On the labour side, scheduling algorithms and mechanisation planning help smallholder cooperatives allocate tractors and harvest crews efficiently, reducing losses and speeding crops to market.

In Egypt, AI-based irrigation systems are being used to manage scarce Nile water resources more efficiently. Meanwhile, Morocco's agricultural innovation programmes are testing AI tools that monitor soil fertility and optimise fertiliser application across large wheat and barley farms.

PHOTOS: THERESA UDE/UNSPLASH; MICROSOFT COPILOT

BUILDING THE SKILLS TO HARNESS THE POTENTIAL

For Africa to fully benefit from AI in agriculture, investment in skills development is crucial. AI systems are only as effective as the people who design, deploy and interpret them.

Across the continent, there is a growing need for data scientists, agricultural technologists and digital extension officers who can bridge the gap between technology and the field. Governments, universities and private sector actors must therefore collaborate to:

- Introduce AI and data literacy programmes within agricultural colleges and vocational institutions.
- Train extension officers in digital tools to provide localised AI-driven advisory services.
- Support innovation hubs and startups that experiment with affordable AI applications in agriculture.

Without strong human capacity, Africa risks becoming a passive consumer of imported AI tools that are poorly adapted to local realities. With the right skills ecosystem, however, African innovators can design home-grown AI solutions that address the continent's unique agricultural challenges.

LIMITATIONS WITHIN THE AFRICAN CONTEXT

For all its promise, AI faces real constraints in Africa. Data scarcity, poor digital infrastructure, intermittent power and affordability are immediate barriers. Models trained on data from other geographies may not generalise to local varieties, soils or cropping practices.

There is also the danger of exacerbating inequalities: large commercial farms may capture disproportionate benefits unless smallholders are explicitly included.

WHAT IT WILL TAKE TO DELIVER SDG 2

To translate AI's technical gains into real progress toward Zero Hunger (SDG 2), interventions must be systemic:

- Invest in local data ecosystems: support national agricultural data platforms, extension services and standardised data collection to improve model relevance.
- Prioritise affordable, accessible tools: mobile-first solutions, community hubs and cooperative models can spread benefits to smallholders.
- Build human capacity: train farmers in basic data literacy so AI augments, not replaces, local expertise.

Artificial intelligence (AI) offers powerful tools for improving crop monitoring, predicting pests and optimising scarce resources – all important levers for achieving SDG 2 in Africa. But technology alone will not end hunger in Africa.

The real opportunity lies in combining AI with investments in infrastructure, skills development and active participation from small and large-scale farmers. When designed for local realities and scaled equitably, AI can be a game-changer on the farm, accelerating resilient production, reducing losses and moving the African continent closer to Zero Hunger. ●

Dr Alfred Mazorodze is Programme Coordinator – Academic at Belgium Campus iTversity. Desire Sundire is Department Head – Data Science at Belgium Campus iTversity.

IA NA MACHAMBA: RUMO A UM FUTURO COM FOME ZERO EM ÁFRICA

À medida que a África enfrenta o crescimento populacional e a variabilidade climática, a **IA** surge como uma poderosa aliada na agricultura. Por **Dr. Alfred Mazorodze** e **Desire Sundire**.

Robôs e sensores inteligentes transformam a agricultura africana, permitindo a monitoria precisa das colheitas e a optimização de recursos para avançar na luta contra a fome

Os campos verdejantes sinalizam a crescente riqueza agrícola da África e um futuro de abundância

O Objectivo de Desenvolvimento Sustentável 2 (Fome Zero) exige o fim da fome, da insegurança alimentar e da desnutrição até 2030, uma tarefa árdua que demanda inovação em grande escala. A inteligência artificial (IA) não é uma solução mágica, mas pode transformar a produção de alimentos em toda a África quando combinada com conhecimento local, conectividade móvel e políticas sensatas.

CAMPOS MAIS INTELIGENTES ATRAVÉS DA MONITORIA CONSTANTE DAS CULTURAS

Tradicionalmente, os agricultores avaliam a saúde das plantações caminhando pelos campos e inspeccionando as plantas, um processo lento e subjectivo. A IA muda isso com o sensoriamento remoto e a visão computacional.

Imagens de satélite, drones e sistemas de câmeras de baixo custo alimentam modelos de aprendizagem de máquina com imagens de alta resolução, capazes de detectar sinais de estresse, como escassez de água e deficiências nutricionais, muito antes do olho humano. Isso possibilita intervenções direccionadas: irrigação localizada, aplicação selectiva de fertilizantes ou tratamento localizado de doenças.

Redes de sensores que medem a humidade do solo, a temperatura e a humidade relativa do ar alimentam sistemas da IA com dados que aprendem o microclima de cada parcela. Os agricultores recebem aconselhamento oportuno e baseado em dados sobre datas de plantio, variedades de culturas e época de colheita, aumentando os rendimentos e reduzindo as perdas pós-colheita. Países como África do Sul, Quénia, Nigéria e Zimbabwe já estão a testar essas ferramentas.

PRAGAS E DOENÇAS

Pragas e doenças das plantas são as principais causas de perda de produtividade em muitos sistemas de cultivo africanos. Modelos da IA treinados com dados históricos de clima, calendários de cultivo, ciclos de vida de pragas e relatórios de campo em tempo real podem prever surtos de pragas e períodos de risco de doenças.

Sistemas de alerta precoce enviados via SMS ou aplicativos móveis permitem que os agricultores ajam em tempo hábil, utilizando controlos biológicos ou alterando as datas de plantio para evitar os períodos de pico de pragas. Isso reduz a dependência de pesticidas de amplo espectro, economiza dinheiro e protege os ecossistemas e a saúde humana. No Quénia, modelos da IA foram integrados a dados de satélite para prever os movimentos dos gafanhotos, permitindo intervenções precoces.

Sensores com IA e análises remotas monitoram a saúde das plantações, prevêem pragas e optimizam recursos escassos – ferramentas práticas que podem ser combinadas com conhecimento local e políticas inclusivas

CRÉDITO: THERESA UDE/UNSPLASH; MICROSOFT COPILOT; ALEX GAMALIEL/PEXELS

OPTIMIZAÇÃO DE RECURSOS: ÁGUA, FERTILIZANTES E MÃO DE OBRA

A escassez de água e o uso ineficiente de fertilizantes continuam a ser grandes obstáculos. Sistemas baseados em inteligência artificial optimizam a irrigação combinando previsões meteorológicas, modelos de evapotranspiração (o processo combinado de transferência de água da superfície da Terra para a atmosfera por meio da evaporação e da transpiração) e sensores de humidade do solo. A irrigação de precisão reduz o consumo de água, mantendo a produtividade, o que é essencial em regiões semiáridas e propensas à seca.

Da mesma forma, a IA pode orientar a fertilização de precisão mapeando a variabilidade dos nutrientes do solo e recomendando a aplicação em taxa variável. Isso reduz custos e escoamento, ao mesmo tempo que melhora a nutrição das culturas. No que diz respeito à mão de obra, algoritmos de agendamento e planeamento de mecanização ajudam as cooperativas de pequenos agricultores a alocar tractores e equipas de colheita de forma eficiente, reduzindo perdas e acelerando a chegada das safras ao mercado.

No Egipto, sistemas de irrigação baseados em inteligência artificial estão a ser usados para gerir os escassos recursos hídricos do Nilo de forma mais eficiente. Entretanto, os programas de inovação agrícola do Marrocos estão a testar ferramentas da IA que monitoram a fertilidade do solo e optimizam a aplicação de fertilizantes em grandes plantações de trigo e cevada.

DESENVOLVER AS COMPETÊNCIAS PARA APROVEITAR O POTENCIAL DA IA

Para que África possa beneficiar plenamente da IA na agricultura, é fundamental investir no desenvolvimento de competências. Os sistemas da IA são

A inteligência artificial (IA) não é uma solução milagrosa, mas pode transformar a produção alimentar

tão eficazes quanto as pessoas que os projectam, implementam e interpretam.

Em todo o continente, há uma crescente necessidade de cientistas de dados, tecnólogos agrícolas e extensionistas digitais que possam preencher a lacuna entre a tecnologia e o campo. Governos, universidades e actores do sector privado devem, portanto, colaborar para:

- Introduzir programas de IA e alfabetização de dados em faculdades agrícolas e instituições de ensino profissionalizante.
- Capacitar agentes de extensão rural no uso de ferramentas digitais para fornecer serviços de consultoria localizados, orientados pela inteligência artificial.
- Apoiar centros de inovação e empresas emergentes e recém-criadas que experimentam aplicativos da IA acessíveis na agricultura.

Sem uma capacidade humana robusta, a África corre o risco de se tornar uma consumidora passiva de ferramentas da IA importadas e mal adaptadas às realidades locais. Com o ecossistema de competências adequado, no entanto, os inovadores africanos podem conceber soluções da IA locais que respondam aos desafios agrícolas únicos do continente.

LIMITAÇÕES NO CONTEXTO AFRICANO

Apesar de todo o seu potencial, a IA enfrenta limitações reais em África. A escassez de dados, a infra-estrutura digital precária, a energia intermitente e a acessibilidade financeira são barreiras imediatas. Modelos treinados com dados de outras regiões geográficas podem não ser generalizáveis para variedades, solos ou práticas de cultivo locais.

Existe também o perigo de agravar as desigualdades: as grandes explorações agrícolas comerciais podem apropriar-se de benefícios desproporcionais, a menos que os pequenos agricultores sejam explicitamente incluídos.

O QUE SERÁ NECESSÁRIO PARA ALCANÇAR O ODS 2?

Para traduzir os ganhos técnicos da IA em progresso real rumo à Fome Zero (ODS 2), as intervenções devem ser sistémicas:

- Investir em ecossistemas de dados locais: apoiar plataformas nacionais de dados agrícolas, serviços de extensão rural e recolha de dados padronizada para melhorar a relevância dos modelos.
- Priorizar ferramentas acessíveis e com preços razoáveis: soluções que priorizam dispositivos móveis, centros comunitários e modelos cooperativos podem disseminar os benefícios para os pequenos agricultores.
- Desenvolver a capacidade humana: capacitar os agricultores em conhecimentos básicos de análise de dados para que a IA complemente, e não substitua, o conhecimento local.

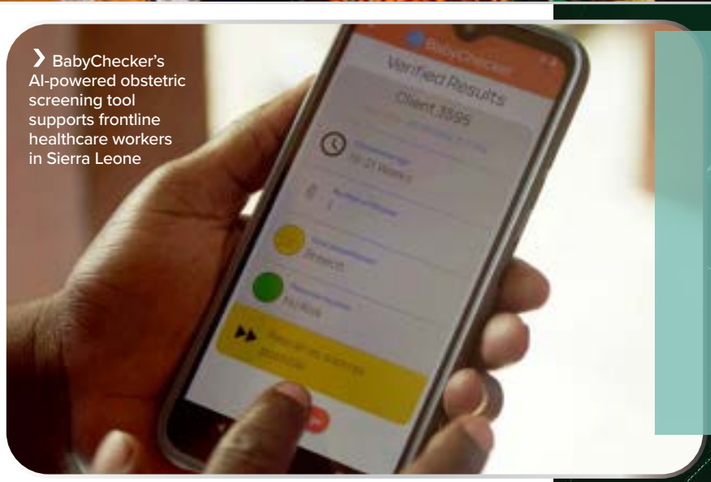
A inteligência artificial (IA) oferece ferramentas poderosas para melhorar a monitoria de culturas, prever pragas e optimizar recursos escassos – todos factores importantes para alcançar o ODS 2 em África. Mas a tecnologia sozinha não acabará com a fome em África.

A verdadeira oportunidade reside em combinar a IA com investimentos em infra-estrutura, desenvolvimento de habilidades e participação activa de pequenos e grandes agricultores. Quando adaptada às realidades locais e implementada em escala equitativa, a IA pode ser um agente de mudanças no campo, acelerando a produção resiliente, reduzindo perdas e aproximando o continente africano da Fome Zero. ●

O Dr. Alfred Mazorodze é Coordenador de Programas Académicos no Campus da iTversity na Bélgica. Desire Sundire é Chefe do Departamento de Ciência de Dados no campus belga da iTversity.

HOW A.I. HELPS TO REVOLUTIONISE HEALTHCARE ON THE CONTINENT

Artificial intelligence is transforming healthcare across Africa – improving access, diagnosis and treatment, and accelerating progress toward the Sustainable Development Goals (SDGs). By **Fiona Zerbst**.



› BabyChecker's AI-powered obstetric screening tool supports frontline healthcare workers in Sierra Leone

For decades, healthcare in Africa has faced seemingly insurmountable challenges – among them the burdens of HIV/AIDS, tuberculosis and malaria; chronically under-resourced health systems; and limited access to diagnostics and specialist care.

Infrastructure constraints and funding gaps have slowed progress, leaving frontline health workers to shoulder immense responsibility.

There is currently one doctor for every 3,000 patients in Africa, with a projected shortage of 4.3-million doctors by 2035, according to the World Health Organization. So, with just 3% of the global healthcare workforce serving 17% of the world's population, technology is increasingly stepping in to close critical gaps.

SHAPING PROGRESS ONE INNOVATION AT A TIME

Although under-five mortality has declined significantly in the past 50 years, Africa still faces preventable deaths due to late diagnoses and limited access to routine care. Now, the convergence of the Internet of Things, cloud computing, mobile platforms and artificial intelligence is accelerating change.

AI tools alone are projected to save more than one million African lives by 2030, with 700 million people expected to benefit from remotecare innovations, according to World Future Health Africa.

Tuberculosis (TB), one of the continent's most persistent health threats, is an area where rapid progress is being made due to technology. Africa accounts for nearly a quarter of global TB cases, and detection gaps continue to drive transmission.

Delft Imaging's CAD4TB software, which analyses chest X-rays to flag abnormalities, has helped screen more than 55-million people and is now used in over 90 countries, including a growing number in Africa.

Delft is a Netherlands-based company specialising in accessible, portable and AI-driven medical imaging solutions, particularly for tuberculosis screening in low-resource environments. In Africa, it recently partnered with EPCON, a multinational impact company that uses AI to quantify health risks in specific regions and population groups.

The partnership pairs Delfts CAD4TB imaging analysis with EPCON's surveillance, hotspot mapping and predictive analytics.

EPCON's Epicontrol platform has pinpointed TB hotspots across several Nigerian states, with TB positivity rates up to 103% higher than those detected through conventional approaches. In South Africa, AI-enhanced targeting has reduced the cost of identifying active cases from US$1,748 to $437 cost per TB case, Delft says.

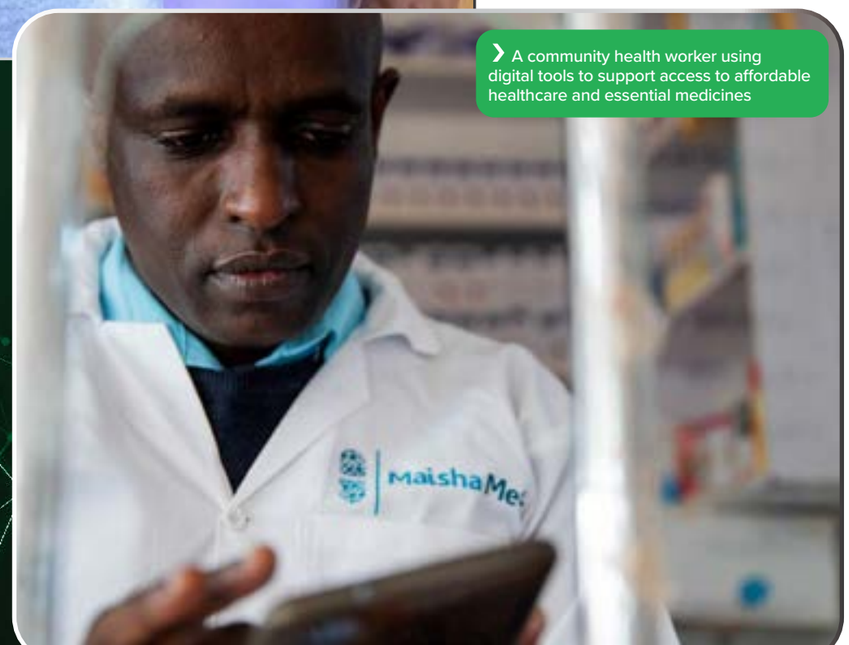
"By seamlessly integrating imaging data with surveillance intelligence, CAD4TB+ transforms every screening into an insight that helps close the detection gap and accelerate the path toward TB elimination," comments Guido Geerts, President and CEO of Delft Imaging.

The benefits are indisputable for Africa's health outlook – integrating screening with surveillance yields faster diagnoses and significantly more cost-effective public health responses.

REDUCING MATERNAL MORTALITY THROUGH SMART TECHNOLOGY

Maternal mortality remains one of Africa's most urgent challenges. Every two minutes, a woman dies from pregnancy related causes, nearly 70% of these in sub-Saharan Africa. Lack of access to basic ultrasound scans means many risks go unnoticed until women go into labour.

BabyChecker, also developed by Delft Imaging, brings obstetric screening to the frontline. Six simple sweeps across the abdomen allow the tool to identify risks in real time – from a placenta blocking the baby's way out to a baby lying in the wrong position for birth. The tool requires only a charged smartphone, operates offline, and requires around two hours of training to use, making it viable for rural clinics with unreliable electricity.



› A community health worker using digital tools to support access to affordable healthcare and essential medicines

Scanning for tuberculosis in Ghana

In rural Sierra Leone, a health aide uses an AI-guided ultrasound tool to screen for pregnancy risks

PHOTOS: AUDERE AFRICA;

More than 13,000 scans have already been conducted in at least 15 countries, from Ethiopia to Sierra Leone, demonstrating how low-cost ultrasound can transform pregnancy care in regions with limited access to specialists.

Tools like CAD4TB+ and BabyChecker are showing that cost-effective solutions can be deployed in everyday settings, from prisons to rural clinics.

TAKING ON AN ENDEMIC MALARIA CHALLENGE

Malaria remains endemic in large swathes of Africa, with the WHO African Region recording 251-million cases and 579,414 deaths in 2023. Nigeria alone accounts for 27% of global cases.

Audere's HealthPulse AI uses mobile-based computer vision to interpret malaria rapid diagnostic tests (mRDTs).

Audere is a US-based digital health nonprofit organisation which develops solutions to improve global health outcomes in the world's most underserved communities. It combines smartphone technology, computer vision and machine learning, and cloud-based services to deliver tailored healthcare technology solutions

In a peer-reviewed 2025 BMC Digital Health study in Kano State, Nigeria, HealthPulse AI achieved 90.2% accuracy in identifying faintpositive tests – outperforming frontline workers who achieved 76.1%.

Like BabyChecker, HealthPulse AI works without a continuous internet connection, enabling health workers to accurately diagnose even in remote settings.

LIFESTYLE A.I. COMPANION GIVING HEALTH GUIDANCE

AI-driven health companions are becoming more common, but Audere's Self-Cav stands out for its focus on sexual and mental health support.

Launched in South Africa with the Department of Health and Shout-It-Now, the always-on chatbot offers judgement-free guidance on HIV prevention, treatment adherence, mental wellbeing and related issues.

Shout-It-Now is a donor-funded organisation which delivers free community-based health services to South African youth.

The Centre for HIV/AIDS Prevention Studies' Voluntary Medical Male Circumcision (VMMC) programme now uses Self-Cav for pre and post-procedure support, giving young men a discreet, reliable place to ask questions they may be uncomfortable raising with clinicians.

By meeting users on their phones – privately, and on their own terms – Self-Cav is becoming a trusted companion in a space often marked by stigma and silence.

DIAGNOSTICS AT PRIMARY CARE CLINICS IN AFRICA

Kenya's Ilara Health, founded in 2019 to improve access to diagnostics and primary care across Africa, is another example of AI-enabled innovation improving everyday care. Partly funded by the Philips Foundation, Ilara partners with over 3,000 clinics across 46 counties in Kenya, providing access to diagnostic devices, pharmaceuticals and clinic management software.

These tools help rural and peri-urban clinics deliver more reliable and affordable care.

"Our goal is to assist independent providers in delivering superior healthcare through access to essential equipment and digital services," co-founder Maximilian Mancini is quoted as saying in a 2024 article published by the Netherlands-based Philips Foundation.

Despite funding constraints – a common hurdle in African healthtech – the company says it intends to expand to thousands more clinics as countries pursue stronger universal health coverage systems.

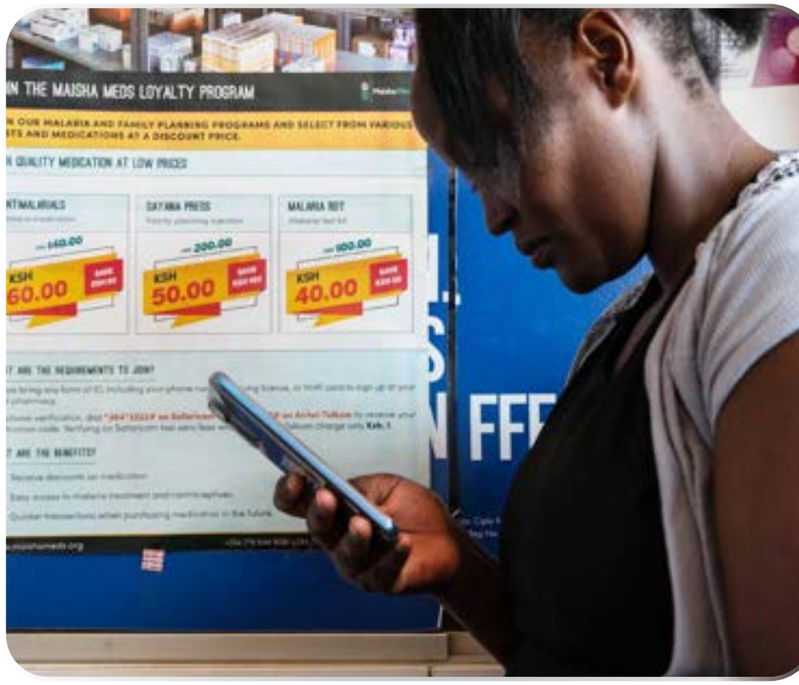
STRATEGIC SOLUTIONS THAT DON'T REINVENT THE WHEEL

Across Africa, AI is not replacing doctors, nurses or community health workers. Instead, it is amplifying their work by giving midwives access to ultrasound insights, enabling community workers to interpret malaria tests accurately, and helping small clinics offer diagnostics they could not previously afford.

Tools like CAD4TB+, BabyChecker, HealthPulse AI, Self-Cav, and Ilara's clinic support systems demonstrate that meaningful progress doesn't depend on dramatic infrastructure overhauls. Often, it starts with something far simpler: a connected phone, a portable device, or a digitised clinic with the tools it needs to make early detection, timely referral and dignified care the rule rather than The exception.

If Africa's health systems are to meet the demands of the next decade, the path forward will be built on these practical, scalable innovations that are already quietly saving lives every day across the continent. ●

Fiona Zerbst has been a journalist and editor for over 20 years. She has worked for publications and clients in South Africa, Botswana, Zambia, Nigeria, Canada, Finland, Germany, the US and the UK.



COMMENT L'IA RÉVOLUTIONNE LES SOINS DE SANTÉ SUR LE CONTINENT

L'intelligence artificielle transforme les soins de santé en Afrique, améliorant l'accès, le diagnostic et le traitement, et accélérant les progrès vers les objectifs de développement durable (ODD). Par **Fiona Zerbst**

› Des membres de la communauté au Burundi participent à une session de formation sur un outil de diagnostic du paludisme basé sur l'IA

Depuis des décennies, les soins de santé en Afrique sont confrontés à des défis apparemment insurmontables, parmi lesquels le fardeau du VIH/SIDA, de la tuberculose et du paludisme ; des systèmes de santé chroniquement sous-financés ; et un accès limité aux diagnostics et aux soins spécialisés.

Les contraintes infrastructurelles et les déficits de financement ont ralenti les progrès, laissant aux agents de santé en première ligne une immense responsabilité.

L'Afrique compte actuellement un médecin pour 3 000 patients, et l'Organisation mondiale de la santé prévoit une pénurie de 4,3 millions de médecins d'ici à 2035. Ainsi, alors que seulement 3 % du personnel de santé mondial dessert 17 % de la population mondiale, la technologie intervient de plus en plus pour combler les lacunes critiques.

FAÇONNER LE PROGRÈS, UNE INNOVATION À LA FOIS

Bien que la mortalité des enfants de moins de cinq ans ait considérablement diminué au cours des 50 dernières années, l'Afrique est toujours confrontée à des décès évitables en raison de diagnostics tardifs et d'un accès limité aux soins de routine. Aujourd'hui, la convergence de l'Internet des objets, du cloud computing, des plateformes mobiles et de l'intelligence artificielle accélère le changement.

Selon World Future Health Africa, les outils d'IA devraient à eux seuls sauver plus d'un million de vies africaines d'ici à 2030, et 700 millions de personnes devraient bénéficier des innovations en matière de télésanté.

La tuberculose (TB), l'une des menaces sanitaires les plus persistantes du continent, est un domaine où des progrès rapides sont réalisés grâce à la technologie. L'Afrique représente près d'un quart des cas de tuberculose dans le monde, et les lacunes en matière de dépistage continuent d'alimenter la transmission.

Le logiciel CAD4TB de Delft Imaging, qui analyse les radiographies pulmonaires pour détecter les anomalies, a permis de dépister plus de 55 millions de personnes et est désormais utilisé dans plus de 90 pays, dont un nombre croissant en Afrique.

Delft est une entreprise basée aux Pays-Bas, spécialisée dans les solutions d'imagerie médicale accessibles, portables et basées sur l'IA, notamment pour le dépistage de la tuberculose dans les environnements à faibles ressources. En Afrique, elle s'est récemment associée à EPCON, une multinationale à impact social qui utilise l'IA pour quantifier les risques sanitaires dans des régions et des groupes de population spécifiques.

Ce partenariat associe l'analyse d'images CAD4TB de Delft aux systèmes de surveillance, de cartographie des zones à risque et d'analyse prédictive d'EPCON.

La plateforme Epicontrol d'EPCON a permis de localiser des foyers de tuberculose dans plusieurs États nigérians, avec des taux de positivité à la tuberculose jusqu'à 103 % supérieurs à ceux détectés par les méthodes conventionnelles. En Afrique du Sud, le ciblage amélioré par l'IA a permis de réduire le coût d'identification des cas actifs de tuberculose de 1 748 $US à 437 $US par cas, selon l'université de Delft.

« En intégrant de manière transparente les données d'imagerie aux renseignements de surveillance, CAD4TB+ transforme chaque dépistage en une information qui contribue à combler le déficit de détection et à accélérer le chemin vers l'élimination de la tuberculose », commente Guido Geerts, président et chef de la direction de Delft Imaging.

Les avantages sont indéniables pour les perspectives sanitaires de l'Afrique : l'intégration du dépistage à la surveillance permet des diagnostics plus rapides et des réponses de santé publique nettement plus rentables.

RÉDUIRE LA MORTALITÉ MATERNELLE GRÂCE AUX TECHNOLOGIES INTELLIGENTES

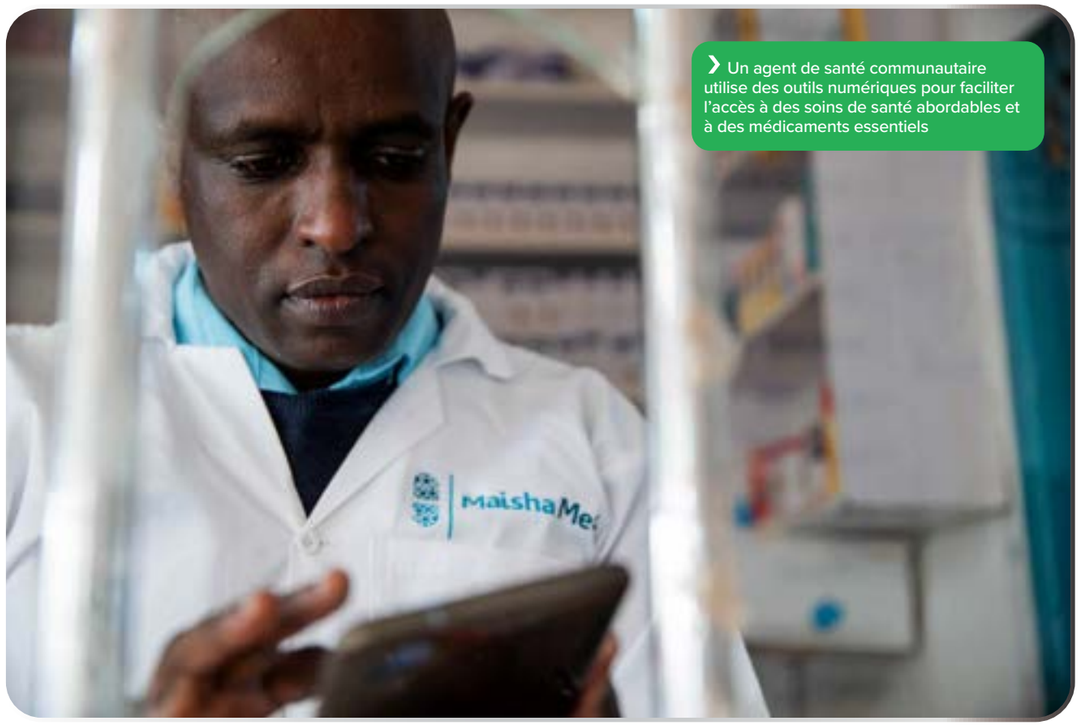
La mortalité maternelle demeure l'un des défis les plus urgents de l'Afrique. Toutes les deux minutes, une femme meurt de causes liées à la grossesse, dont près de 70 % en Afrique subsaharienne. Le manque d'accès aux échographies de base fait que de nombreux risques passent inaperçus jusqu'à ce que les femmes accouchent.

BabyChecker, également développé par Delft Imaging, place le dépistage obstétrical en première ligne. Six simples balayages de l'abdomen permettent à cet outil d'identifier les risques en temps réel, d'un placenta bloquant le passage du bébé à un bébé mal positionné pour l'accouchement. Cet outil ne nécessite qu'un smartphone chargé, il fonctionne hors ligne et requiert environ deux heures de formation pour être utilisé, ce qui le rend viable pour les cliniques rurales disposant d'une alimentation électrique peu fiable.

Plus de 13 000 examens ont déjà été réalisés dans au moins 15 pays, de

De nombreux outils technologiques sont utilisés dans la lutte contre la tuberculose en Afrique

En Sierra Leone, une agente de santé utilise un outil d'échographie guidée par l'IA pour dépister les risques de grossesse



Un agent de santé communautaire utilise des outils numériques pour faciliter l'accès à des soins de santé abordables et à des médicaments essentiels

CRÉDIT : AUDERE AFRICA

l'Éthiopie à la Sierra Leone, démontrant comment l'échographie à bas coût peut transformer les soins de grossesse dans les régions où l'accès aux spécialistes est limité.

Des outils comme CAD4TB+ et BabyChecker démontrent que des solutions rentables peuvent être déployées dans des contextes quotidiens, des prisons aux dispensaires ruraux.

RELEVER LE DÉFI DU PALUDISME

Le paludisme reste endémique dans de vastes régions d'Afrique, la Région africaine de l'OMS ayant enregistré 251 millions de cas et 579 414 décès en 2023. Le Nigéria représente à lui seul 27 % des cas mondiaux.

HealthPulse AI d'Audere utilise la vision par ordinateur mobile pour interpréter les tests de diagnostic rapide du paludisme (mRDT).

Audere est une organisation à but non lucratif basée aux États-Unis, spécialisée dans la santé numérique et qui développe des solutions pour améliorer les résultats sanitaires mondiaux dans les communautés les plus défavorisées du monde. Elle combine la technologie des smartphones, la vision par ordinateur et l'apprentissage automatique, ainsi que les services basés sur le cloud, pour fournir des solutions technologiques de santé sur mesure.

Dans une étude de 2025 publiée dans BMC Digital Health et évaluée par des pairs dans l'État de Kano, au Nigéria, HealthPulse AI a atteint une précision de 90,2 % dans l'identification des tests faiblement positifs, surpassant ainsi les travailleurs de première ligne qui ont atteint 76,1 %.

À l'instar de BabyChecker, HealthPulse AI fonctionne sans connexion internet permanente, permettant ainsi aux agents de santé d'établir des diagnostics précis même dans des environnements isolés.

UN COMPAGNON IA DE STYLE DE VIE FOURNISSANT DES CONSEILS EN MATIÈRE DE SANTÉ

Les assistants de santé pilotés par l'IA se répandent de plus en plus, mais SelfCav d'Audere se distingue par son approche axée sur le soutien à la santé sexuelle et mentale.

Lancé en Afrique du Sud en partenariat avec le ministère de la Santé et ShoutItNow, le chatbot « alwayson » offre des conseils sans jugement sur la prévention du VIH, l'observance du traitement, le bien-être mental et les questions connexes.

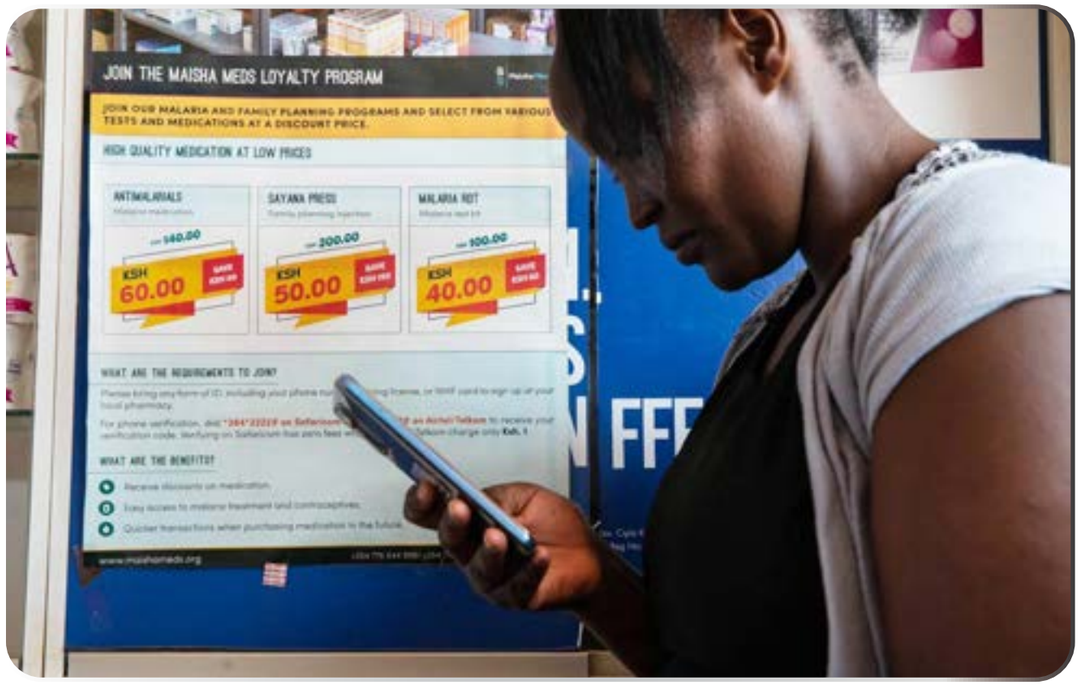
Shout-It-Now est une organisation financée par des donateurs qui offre gratuitement des services de santé communautaires aux jeunes sud-africains.

Le programme de circoncision masculine médicale volontaire (VMMC) du Centre d'études sur la prévention du VIH/SIDA utilise désormais SelfCav pour le soutien avant et après l'intervention, offrant aux jeunes hommes un endroit discret et fiable pour poser des questions qu'ils pourraient hésiter à aborder avec les cliniciens.

En rencontrant les utilisateurs sur leurs téléphones, en toute confidentialité et selon leurs propres conditions, SelfCav devient un compagnon de confiance dans un espace souvent marqué par la stigmatisation et le silence.

DIAGNOSTICS DANS LES CLINIQUES DE SOINS PRIMAIRES

Ilara Health, une organisation kényane fondée en 2019 pour améliorer l'accès aux diagnostics et aux soins primaires en Afrique, est un autre exemple d'innovation permise par l'IA qui améliore les soins quotidiens. Financée en partie par la Fondation Philips, Ilara collabore avec plus de 3 000 cliniques réparties dans 46 comtés du Kenya, leur fournissant un accès à des dispositifs de diagnostic, des produits pharmaceutiques et des logiciels de gestion de clinique.



Ces outils aident les cliniques rurales et périurbaines à offrir des soins plus fiables et plus abordables.

« Notre objectif est d'aider les prestataires indépendants à fournir des soins de santé de qualité supérieure grâce à l'accès à des équipements essentiels et à des services numériques », a déclaré le cofondateur Maximilian Mancini dans un article de 2024 publié par la Fondation Philips, basée aux Pays-Bas.

Malgré les contraintes de financement, un obstacle courant dans le secteur de la santé numérique en Afrique, l'entreprise affirme qu'elle a l'intention de s'étendre à des milliers de cliniques supplémentaires à mesure que les pays mettent en place des systèmes de couverture sanitaire universelle plus robustes.

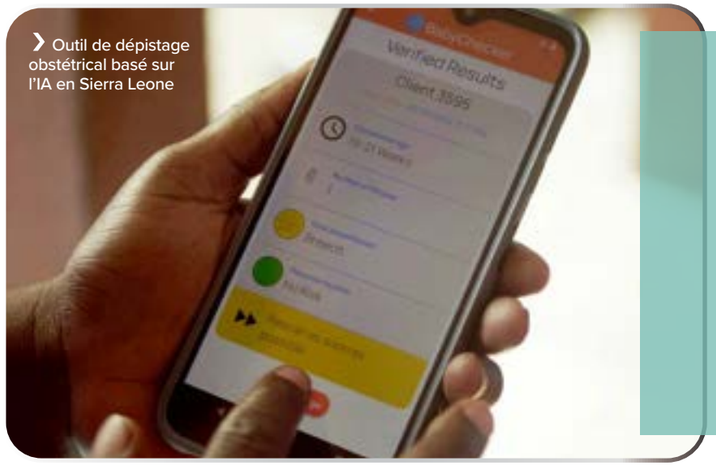
DES SOLUTIONS STRATÉGIQUES INNOVANTES TOUT EN RESTANT SIMPLES.

En Afrique, l'IA ne remplace pas les médecins, les infirmières ni les agents de santé communautaires. Au contraire, elle amplifie leur travail en donnant aux sages-femmes accès à des informations échographiques, en permettant aux agents communautaires d'interpréter avec précision les tests de paludisme et en aidant les petites cliniques à offrir des diagnostics qu'elles ne pouvaient pas se permettre auparavant.

Des outils comme CAD4TB+, BabyChecker, HealthPulse AI, Self-Cav et les systèmes de soutien aux cliniques d'Ilara démontrent que des progrès significatifs ne dépendent pas de refontes radicales des infrastructures. Souvent, tout commence par quelque chose de beaucoup plus simple : un téléphone connecté, un appareil portable ou une clinique numérisée dotée des outils nécessaires pour faire du dépistage précoce, de l'orientation rapide et des soins dignes la règle plutôt que l'exception.

Pour que les systèmes de santé africains puissent répondre aux exigences de la prochaine décennie, la voie à suivre reposera sur ces innovations pratiques et adaptables, qui sauvent déjà discrètement des vies chaque jour sur tout le continent. ●

Fiona Zerbst a été journaliste et éditeur depuis plus de 20 ans. Elle écrit principalement sur les affaires et finance et a travaillé pour des publications et clients en Afrique du Sud, au Botswana, Zambie, Nigéria, Canada, Finlande et le Royaume-Uni.



› Outil de dépistage obstétrical basé sur l'IA en Sierra Leone

HOW THE ICT SECTOR IS RESHAPING ZAMBIA'S FUTURE

Zambia is on track to have a US$60-billion economy by 2031. As **Dr Clement Sinyangwe** points out, it's a transformation being powered by tech and AI.

The 2026 Information and Communications Technology Association of Zambia (ICTAZ) Tech Conference, held on March 17-20 in Livingstone, proved more than just another industry gathering. Rather, it was a defining moment in Zambia's digital transformation journey.

Themed *Zambia's USD60-Billion Economy by 2031: Powered by Technology and AI*, the conference placed innovation at the center of national productivity and economic ambition.

This year's event carried historic significance. For the first time, His Excellency President Hakainde Hichilema graced an ICTAZ event. This was not a coincidence; it was a clear testament to the growing relevance of ICTAZ and the ICT sector in Zambia's economic development narrative.

The presence of the Head of State signals national recognition that technology and artificial intelligence are no longer peripheral industries, they are foundational pillars of Zambia's future economy.

The 2026 conference hosted the 17th Annual General Meeting (AGM), specialised technical training sessions, and a mini-expo showcasing innovation across sectors.

But beyond the programme, the underlying story is about momentum and ICT's rising dominance in Zambia's GDP performance. Over the past two years, Zambia's information and communication technology (ICT) sector has shifted from a promising subsector to a central engine of economic growth.

Zambia's young people are being digitally empowered through robotics and programming

In 2024, when traditional pillars such as agriculture and electricity supply faced contractions due to drought and energy constraints, ICT emerged as the fastest-growing sector in the economy, expanding by an impressive 17.4%. More significantly, the sector contributed approximately 1.8 percentage points to overall GDP growth, the largest contribution by any single industry during the year.

FROM MODEST BEGINNINGS

This performance did not occur overnight. Prior to 2023, ICT accounted for approximately 2.6–2.7% of GDP, modest in size but rapidly expanding. By mid-2024, mobile subscriptions, broadband penetration and internet usage had grown sharply, reflecting deeper digital adoption across households, businesses and government institutions.

Digital financial services, mobile money transactions and data-driven platforms became embedded in everyday economic activity, demonstrating that ICT was no longer supporting the economy, it was actively driving it.

Government policy has played a decisive role in this transformation. Through progressive regulation, digital infrastructure expansion, support for telecommunications development, and initiatives such as the *Digital Zambia Agenda*, the government has created an enabling environment for digital innovation.

PHOTOS: ICTAZ; FREEPIK/AI

Local innovation can reduce import dependence

ICTAZ President, Dr Clement Sinyangwe

Continued ICT sector surveys and strategic investments by the Ministry of Technology and Science further demonstrate a long-term commitment to building a technology-powered economy.

Regulatory oversight from bodies such as the Zambia Information and Communications Technology Authority (ZICTA) has strengthened sector confidence, while rising broadband access and digital payments infrastructure have catalysed private sector participation. The result is a more vibrant, resilient and competitive ICT ecosystem.

STRATEGIC INFLECTION POINT

Within this dynamic environment, ICTAZ stands at a strategic inflection point. The association's 2025-2027 Strategic Plan marks a deliberate shift from institutional consolidation to measurable economic impact. ICTAZ is positioning itself not merely as a professional body, but as a strategic partner in Zambia's national development agenda.

Its growing membership base, expanding regional influence and increasing policy engagement reflect its elevated role in shaping the country's digital future. For ICTAZ members, from agile startups to established technology firms, the opportunity is immense. Digital solutions can now accelerate productivity across agriculture, education, health, finance and public administration.

Zambia's future path will be powered by innovation, digital infrastructure, AI and a unified technology ecosystem

ICTAZ IS POSITIONING ITSELF AS A STRATEGIC PARTNER IN ZAMBIA'S BRIGHT DIGITAL FUTURE

Artificial intelligence can transform service delivery. Local innovation can reduce import dependence. Skills development and certification programmes can strengthen Zambia's digital workforce. Policy advocacy can remove barriers while safeguarding consumer trust and cybersecurity standards.

The 2026 Tech Conference was therefore not just a convening; it was a declaration. It signalled that Zambia's path to a US$60-billion economy by 2031 will be powered by innovation, digital infrastructure, artificial intelligence and a unified technology ecosystem led by ICTAZ.

The future of Zambia's economy is digital. The moment is now. And ICTAZ is at the centre of that transformation. ●

Dr Clement Sinyangwe is the Current President of ICTAZ. He also serves as Chairperson of Research for TICON Africa. Recognised across Africa for his forward-thinking vision and results-driven leadership, he has championed digital transformation through platforms that shape both institutional frameworks and national agendas.

Those who attended the first consultative meeting at Botho University in Gaborone in late January

BOTSWANA I.T. SOCIETY LEADS HISTORIC I.C.T. PROFESSION REGULATION CONSULTATIONS

Botswana's ICT sector has for many years operated without a formalised professional regulatory framework. BITS is working to change that.

In what marks a historic turning point for Botswana's digital transformation journey, the Botswana Information Technology Society (BITS) has commenced nationwide consultations on the proposed ICT Profession Regulation Framework – a milestone initiative aimed at professionalising and standardising the ICT profession.

The first consultative meeting was held on 29 January 2026 at Botho University in Gaborone, bringing together ICT practitioners, academics, policymakers and industry representatives. The session officially launched a structured national dialogue on the future of ICT professional standards in Botswana.

A DEFINING MOMENT FOR THE I.C.T. SECTOR

For years, Botswana's ICT ecosystem has grown rapidly – driven by digital transformation initiatives, e-government systems, fintech innovation, cybersecurity expansion and AI adoption. However, the sector has operated without a formalised professional regulatory framework comparable to other professions such as law, medicine, accounting and engineering.

The consultative meetings led by BITS seek to address this gap by establishing clear professional standards and ethical guidelines, introducing competency based registration models, protecting public interest in ICT service delivery, aligning ICT practice with Botswana's *Vision 2036* goals and positioning Botswana within regional and global digital competitiveness.

The 29 January consultation provided stakeholders with an opportunity to interrogate the draft framework, propose refinements, and debate key provisions affecting practitioners, employers and academic institutions.

EXECUTIVE ENGAGEMENT & FOLLOW-UP DISCUSSION

The momentum continues with a high-level engagement with industry executives and the general ICT ecosystem in March 2026 to continue the consultations.

The industry executive engagement sessions focus on the corporate perspectives on ICT regulation, employer readiness for professional certification standards and industry participation in regulatory governance. The executive consultation is an intention to underscore strong support for a professionalised ICT sector, with recognition that regulation can enhance credibility, investor confidence, cybersecurity resilience, and service quality across public and private sectors.

A follow-up consultation for the general ICT ecosystem will enable further conversation with more practitioners, educators, SMEs and digital entrepreneurs to contribute their voices. The session is intended to reinforce that regulation must be inclusive and progressive, development-oriented rather than restrictive, responsive to emerging technologies such as AI and data science, and gender-sensitive and youth-inclusive.

The dialogue demonstrated a growing consensus that ICT regulation is not about limiting participation – but about raising standards and strengthening Botswana's digital future. The conversation is intended to also open dialogue about concerns that have been raised. Among these concerns:

- *"We are proposing solutions without articulating challenges first – from multiple perspectives. A leading reason why there are many ineffective policies around."*
- *"I'd like to add that around the world ICT has many bodies that credit the quality of their people – such as AWS, Azure and CompTIA. These bodies already do those things. I don't see any additional value being added. Additionally, those other bodies, from what I understand, don't make it mandatory and they have frameworks of their beliefs so people join of their own volition because the value add is apparent."*
- *"Citing that other countries have regulated professionals does not help. Different environments, different challenges, different times … hard to find relevance in copycatting."*
- *"My gripe with this is very simple. I don't doubt the people involved mean well, but the process has an end in mind. This is not co-creation. I will always support an agenda that BITS genuinely shape with [the involvement of] all."*

Whilst most of the questions are lengthy and against the regulation, others are in support of the intervention and the ICT profession regulation end goal.

BITS council shall then present and submit the proposal to the Ministry of Communications and Innovation for their appreciation and engagement in addressing the ICT profession regulation.

ALIGNED WITH *VISION 2036* & OTHER PRIORITIES

The ICT Profession Regulation Framework aligns strongly with:

- *Vision 2036* – Sustainable Economic Development Pillar.
- Botswana's Digital Transformation Strategy.
- Human Capital Development priorities.
- Regional SADC professional harmonisation efforts.

By professionalising ICT practice, Botswana takes a bold step toward building a knowledge-driven, innovation-led economy.

A HISTORIC MILESTONE

These consultations represent more than policy discussions. They signify:

- The maturation of Botswana's ICT profession.
- The elevation of ICT practitioners to recognised professional status.
- A unified effort between academia, industry and government.
- A foundation for future digital economy leadership in Africa.

As BITS continues refining the draft framework, the Botswana Information Technology Society has reaffirmed its commitment to transparency, collaboration and national development.

This milestone positions Botswana not only as a participant in Africa's digital transformation, but as a leader shaping the governance of the digital profession itself. While also ensuring that the ordinary ICT professional, whether at entry level or elite status, understands their role in the ecosystem. ●

There was lively debate among the Botswana ICT fraternity at the January meeting

PHOTOS: BITS

CODING A FUTURE WHERE EVERYONE HAS A VOICE

A new initiative in Ghana aims to ensure that disability is not a barrier to a digital career. By **Dorothy Klutse**.

Demonstrating how code can control real-world objects

WHAT DOES AMBITION SOUND LIKE?

Sometimes it sounds like nothing at all. In a bright classroom in Mampong-Akuapem, Ghana, ambition sounded like the rapid, graceful dance of hands signing in unison. It sounded like the quiet hum of a 3D printer bringing a digital design to life. It sounded like the focused silence of 120 students who, for the first time, were being given the tools to build their own futures, line by line of code.

THIS IS THE STORY OF A SILENT REVOLUTION

Coding Caravan was born from a simple but powerful idea: that digital skills should not be the privilege of a few, but a right accessible to all. Talent, we knew, was everywhere. Opportunity, however, was not. Too often, the distance between potential and possibility is defined by geography, circumstance or access. Our response was to take the classroom on the road, to bring learning directly to the doorsteps of those who needed it most.

THE CODING CARAVAN ROLLS ACROSS GHANA

Since its inception, the Coding Caravan has rolled across the country, arousing curiosity. In bustling urban classrooms where resources are plentiful but guidance is limited, we showed students that their laptops can be used for more than just entertainment. We also visited remote village schools, where a single laptop is a treasure and the arrival of our team an event.

In each place, from the streets of Accra to the towns in the Ashanti region, we saw the same spark ignite – the same hunger to create, build and understand the language of the digital world. Yet as our journey continued, we began to notice a troubling pattern. A shadow followed the light we were trying to bring.

In every community, there was a group of students who were almost always absent from the conversations: those with disabilities.

We saw a widening gap, not just in resources but in belief. We saw brilliant minds implicitly and explicitly told that the world of technology wasn't for them. We realised that if our mission were to succeed, we had to visit the places that were hardest to reach, not just geographically, but societally. This led our caravan to the gates of the Demonstration School for the Deaf in Mampong-Akuapem.

When we arrived, we were not there simply to teach. We were there to listen, learn and co-create.

The most powerful moments of the day did not appear on any timetable or lesson plan. They unfolded quietly. They were visible in the face of a student named Abigail, who discovered she could command light with a few lines of code. She confidently declared: "I want to work with electronic gadgets, refrigerators and computers in the future."

They were present in the sense of awe among our facilitators, who watched students grasp complex concepts quickly and creatively and left with a renewed understanding that disability is not inability.

They were echoed by the assistant headmaster, who watched his students sit captivated for three hours, engaged with materials they could finally interact with.

PHOTOS: SUPPLIED

An enthusiastic group of students get to grips with the coding platform Scratch

The Coding Caravan made a special stop at the Demonstration School for the Deaf, Mampong-Akwapim, to introduce over 100 students and teachers to the exciting worlds of Animation, Internet of Things (IoT), and 3D Printing

A PROMISE TO THE YOUTH OF GHANA

What we witnessed that day in Mampong was not the end of a story. It was the first line in a new chapter for Ghana. It was proof that, when you provide the right tools and the right belief, genius ignites, regardless of a person's ability to hear.

Now, we are turning that proof into a promise. Our Coding Caravan will visit all 16 regions of Ghana, seeking out communities that have been overlooked. We are developing curricula taught in sign language and are already working to build a similar programme for visually impaired students, ensuring the screen reader is no longer a barrier but a gateway.

This is our vision for the future: a Ghana where a disability is not a barrier to entry but a unique perspective that enriches our digital landscape. A future where every child, whether they hear the world or see it through a screen, has the opportunity to become a creator, an innovator and a leader.

But a vision is just a dream without action. This is a revolution, and every revolution needs revolutionaries. We cannot build this future alone. We need partners who believe that talent is universal, but opportunity is not. We need companies, non-governmental organisations and individuals who are ready to invest in a more inclusive and innovative Ghana.

We invite you to join us. Help us equip the next generation with the laptops they need. Partner with us to develop the curricula that will change lives. Support our caravan as it rolls into the next town, ready to ignite another spark of brilliance.

Let's not just report on change. Let's build it together. ●

Dorothy Klutse is a digital skills trainer and member of IIPGH. Contact her at dorothy.klutse@iipgh.org or info@iipgh.org to join the silent revolution.

❮ Delegates and officials pose during the opening of the summit

❯ Ousmane Diagana, World Bank Vice-President for West and Central Africa

AFRICA SHIFTS ITS DIGITAL STRATEGY TO TARGET THE INCLUSION GAP

About 70% of unconnected Africans live in areas that have mobile coverage. A single digital market could help to level the playing field, says **Fiacre E. Kakpo**.

At Cotonou, Benin, the diagnosis left no ambiguity: Africa's digital challenge is no longer mainly about infrastructure but about adoption, now the core battleground for digital inclusion.

At the *Regional Summit on Digital Transformation in West and Central Africa*, held in Cotonou, Benin, from 17 to 18 November 2025, governments, the World Bank, and several regional institutions highlighted a growing paradox. Despite expanding mobile coverage, nearly two-thirds of Africans remain offline. According to data presented by the World Bank, about 70% of people who are not connected already live in covered areas.

PERSISTENT ECONOMIC AND SOCIAL BARRIERS

In a region long described as suffering from a shortage of towers, fibre or backbone networks, this shift in analysis marks a turning point. "The challenge is no longer to cover, but to include," summarised Ousmane Diagana, World Bank Vice-President for West and Central Africa, during the opening session.

Behind this statement lies a new certainty: the connectivity battle now depends on economic accessibility, digital skills and relevant uses. "The first challenge is to reduce the digital divide to connect more Africans," he added.

Throughout the opening day in Cotonou, interventions converged. Networks exist. Digital tools are expanding. But demand has not followed.

Today, 4G covers more than 76% of the West African population, and up to 90% in major cities along the Gulf of Guinea. Yet only 38 to 40% of the population actually uses the internet.

This gap, which the World Bank now calls the 'user gap', has become one of the main hurdles of Africa's digital decade. "These vulnerable populations still face difficult choices between daily needs and connectivity," Diagana reminded attendees.

Economic factors remain the main barrier. Mobile internet still costs an average of 4.6% of monthly income, more than twice the international affordability threshold. Fixed broadband accounts for 21.5% of monthly income, an unprecedented level. Liberia, an extreme case, has prices reaching up to 153% of average monthly income for fixed access, making subscriptions largely inaccessible.

In most countries in the region, the price of an entry-level smartphone equals one to two weeks of income for an urban household, and much more in rural areas.

"Digital technology can only be a driver of prosperity if it is economically accessible," said Sangbu Kim, World Bank Vice-President for Digital and AI.

Social factors are equally significant. In many countries, levels of digital literacy remain too low to fully benefit from online services. Women in particular fall far behind: they are 35% less likely to be connected than men and are less likely to own a smartphone, according to the World Bank.

In some rural areas of the Sahel, fewer than one in five adults can use a browser or fill out an online form. This lack of skills, which curbs demand, also limits businesses.

PHOTOS: PRÉSIDENCE DE LA RÉPUBLIQUE DU BÉNIN, FLICKR

Few have staff trained to manage digital tools, and even fewer are equipped to use advanced solutions such as artificial intelligence. "The lack of digital skills is a real barrier, especially for young people and women," Kim stressed.

A SHIFT IN APPROACH

Against this backdrop, the Cotonou summit took on strategic significance. For the World Bank, the change in approach is deliberate. For 20 years, the institution largely financed infrastructure: national fibre networks, regional interconnections, transport networks, 3G and 4G projects.

It now intends to tackle usage directly. This means financing digital public goods – digital IDs, payment systems, unified registries, interoperable platforms – that make services more accessible and stimulate demand. "Digital identity, payment systems and interoperability are public goods: when they work, markets connect to them," Diagana said.

Diagana explained that without reliable identification systems, digitalised public services and affordable electronic payments, populations see little reason to go online. By expanding service offerings – online health, connected agriculture, digital taxation, online learning – usage should naturally increase, creating a virtuous circle beneficial to telecom operators and states.

"Digital technology can become a tool for economic transformation if services become useful in daily life," said Abdoulaye Bio Tchané.

BUILDING DIGITAL SKILLS

Another major priority, widely discussed, is digital skills. World Bank estimates show that by 2030, 230 million jobs in Africa will require digital or AI-related skills. Yet most education systems are not aligned with these needs.

Aurélie Adam Soulé Zoumarou, Benin's Minister of Digital Economy, stressed the urgent need for training. She told the story of Merveille, a young Beninese woman recognised at the International Artificial Intelligence Olympiad. "It is for Merveille and for all the young people of our countries that our collaborations must deepen," she said, noting that talent exists but must be multiplied to compete globally. "Digital is no longer a choice: it is an economic, social and strategic necessity," she added.

Benin, the host country, used the event to showcase its own progress. State Minister Abdoulaye Bio Tchané outlined reforms carried out since 2016, including the digitalisation of more than 800 administrative procedures, the establishment of training centres for digital professions, and the adoption of regulatory reforms to support the start-up ecosystem.

"Digital technology can become one of the strongest pillars of sustainable growth and regional integration," he said, arguing that the time has come to harmonise digital policies to create a true regional market. "We have a unique opportunity if we mobilise our skills and partnerships," he added.

SINGLE DIGITAL MARKET

The prospect of an African Single Digital Market, supported by the African Union, occupied a central place in the discussions. The summit is expected to produce a joint declaration committing countries to reduce access costs, pool cross-border infrastructure, strengthen interoperability, and develop shared services.

Several speakers noted that private investment in data centres, cloud services and terrestrial fibre networks can accelerate only if the region offers a harmonised, predictable regulatory framework. "The time for isolated projects is over: our countries must create regional synergies," said Aurélie Adam Soulé Zoumarou. ●

Fiacre E. Kakpo is Editor in Chief, Finance Desk at Ecofin Agency. Ecofin is a specialised economic news agency providing daily intelligence on Africa's key economic sectors.

THE RACE TO BUILD AFRICA'S SINGLE DIGITAL MARKET BY 2030

Smart Africa is driving a multinational initiative to create a single, integrated digital market in Africa. **Fiona Zerbst** examines progress made to date.

Secure digital payments are a cornerstone of trust and interoperability

It sounds like a dream – but Smart Africa's vision of a Single Digital Market (SDM) is increasingly taking shape across the continent.

Launched by seven heads of state at a 2013 meeting in Rwanda to accelerate Africa's digital transformation, the Smart Africa Manifesto was endorsed by the African Union in 2014 and placed at the heart of the continent's ICT agenda.

The initiative aims to create a continent-wide digital market by 2030 – enabling services, data and capital to move seamlessly across borders, and allowing individuals and businesses to participate in the digital economy regardless of where they are based.

The manifesto sets out ambitious targets. Africans should be digitally empowered, with safe and secure internet access by 2030, no matter where they live. Connectivity is envisaged to be affordable, with costs as low as one US cent per megabyte, and accessible via smart devices manufactured in Africa and priced at around 10% of an average monthly household income. This access would support essential digital services, with a target of ensuring that at least 30% of digital content is developed and hosted within Africa.

Rather than imposing a single centralised system, the strategy focuses on harmonisation, interoperability, and shared digital public infrastructure, implemented progressively by member states.

The scale of the challenge becomes clear when one considers that roughly two-thirds of Africans – around 900-million people – remain offline, according to the World Bank. Internet penetration in many countries is still below 50%, while mobile internet adoption across sub-Saharan Africa is around 25-30%. Yet with 42 of Africa's 54 countries already signed up, the initiative has moved well beyond aspiration.

"We follow a demand-driven approach as this is a coalition of the willing," says Thelma Efua Quaye, Director of Infrastructure, Skills and Empowerment at Smart Africa, and a member of the Global Future Council on Cybersecurity at the World Economic Forum.

"If a country chooses to participate, it must then commit to leading a specific pan-African project – for example, Rwanda has taken the lead on the Smart Cities initiative, Ghana developed a continental e-payments blueprint, and Burkina Faso focused on digital skills and capacity building. All of which we have seen tangible pilot implementations come out of."

Projects are organised under three overarching programmes – Connect, Innovate and Transform – that provide clear strategic direction. Together, they translate the digital transformation agenda into practical focus areas spanning infrastructure, policy, skills, innovation, service delivery and trust.

These pillars form the foundation for a functioning pan-African digital economy, aligned with African Union priorities, including *Agenda 2063* and the African Continental Free Trade Area (AfCFTA).

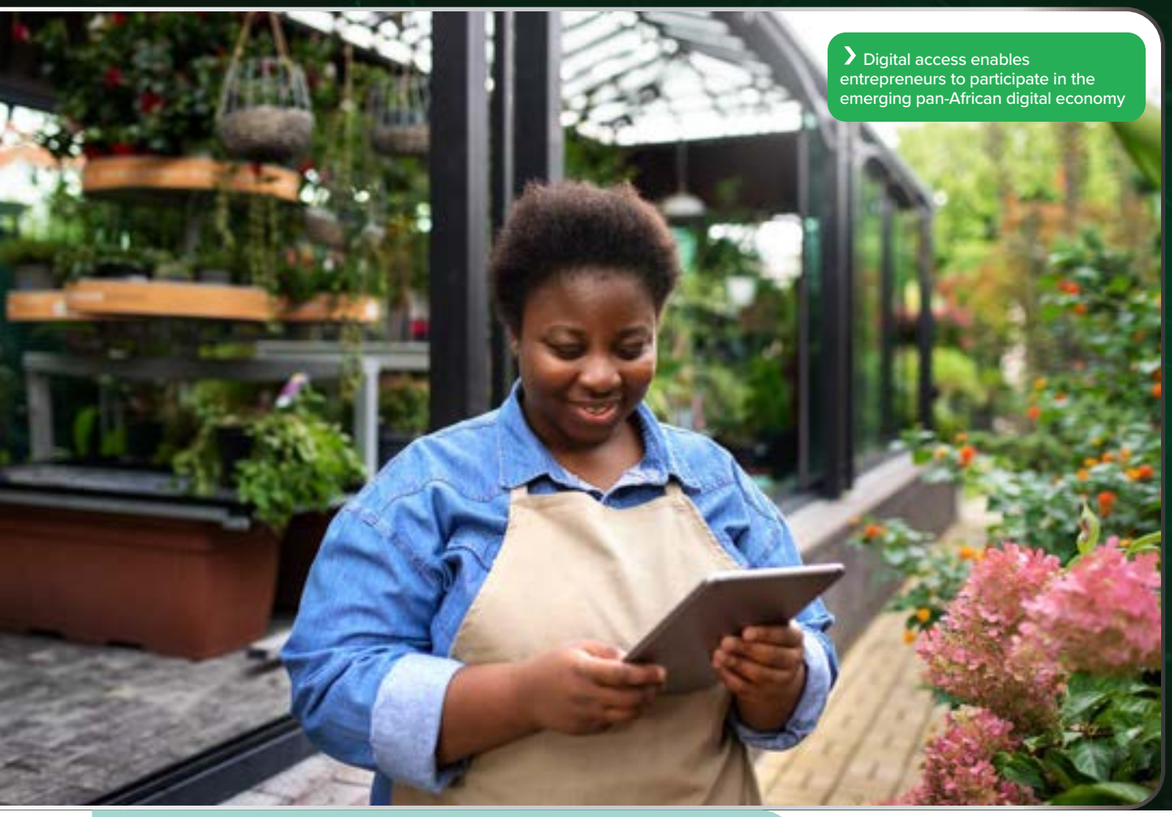
Each project is driven by a working group comprising government, private sector and international stakeholders, sometimes joined by additional African countries and supported by independent

Single Digital Market stats

KEY NUMBERS:

- Smart Africa now at 42 member states, up from 7 in 2013.
- Smart Africa has over 60 private sector members.
- 34+ digital initiatives under three programmes.
- 15,000+ policymakers trained through SADA.
- Africa has approx. 1.3-billion people, median age under 20.
- Only 38% internet penetration.
- Intra-African trade approx. 15–18% vs EU approx. 60–70%.

Smart Africa aims to create a continent-wide digital market by 2030



Digital access enables entrepreneurs to participate in the emerging pan-African digital economy

What is Smart Africa?

The Smart Africa alliance is a commitment by African heads of state and governments to accelerate sustainable socio-economic development on the continent through ICT and digital transformation. Its vision is to create a single digital market for Africa that drives innovation, competitiveness and inclusive growth.

Smart Africa's highest decision-making body is its Board, composed of heads of state from 42 member countries, alongside representatives from its platinum private-sector members. Institutions such as the African Union and the International Telecommunication Union (ITU) also sit at Board level, providing strategic direction.

Below the Board is the Steering Committee, led jointly by the ITU and the African Union Commission. It includes ICT ministers from member states and senior leaders from Smart Africa's platinum and gold private-sector partners. While the African Union sets the broader continental frameworks, Smart Africa focuses on pragmatic implementation-driven delivery.

Day-to-day operations are managed by the Secretariat, led by CEO Lacina Koné and supported by four directors. Through consultative organs – including regular meetings of ICT Ministers and telecoms regulators from across Africa – Smart Africa aligns policy, regulation and implementation across borders.

consultants. As a result, the final project blueprints reflect broad, multi-country input and deliver practical, pan-African recommendations that can be applied across the continent, says Quaye.

WHERE STRATEGY MEETS DELIVERY

One clear example of this approach is Smart Africa's work on digital skills and capacity building. A pan-African ICT skills blueprint identified the need for a shared digital skills platform, which led to the creation of the Smart Africa Digital Academy. Since its launch, the academy has reached around 12,000 beneficiaries, primarily policymakers from across the continent.

This focus on skills runs alongside other flagship initiatives. These include a broadband blueprint led by Senegal, as well as projects to expand access to affordable devices, roll out community Wi-Fi, and increase girls' participation in STEM fields.

What distinguishes Smart Africa's approach is that it does not stop at strategy documents.

"We pilot these initiatives with countries to demonstrate that they are practical and achievable," says Quaye. "The idea is to prove that something works, and then encourage countries to take these models forward and scale them nationally, whether through commercial models or public interest approaches."

NON-NEGOTIABLE BUILDING BLOCKS

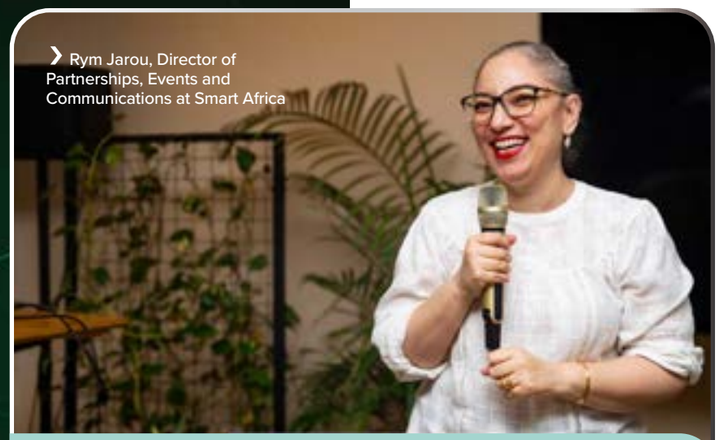
From a technical perspective, three building blocks are non-negotiable for Africa to function as a Single Digital Market: connectivity, cybersecurity and trust.

"Connectivity is obvious. You can't talk about a digital market without networks," says Quaye. However, connectivity alone is not enough. "I often say that giving connectivity without cybersecurity is like pushing people off a cliff. You have connected them, but you have not protected them," Quaye says.

The final ingredient is trust. A single market only works when people can transact across borders with confidence. "Trust allows payments to move and data to be exchanged safely, the reason why we brought about the Smart Africa Trust Alliance (SATA)," she explains.

"The three non-negotiables are therefore reliable broadband infrastructure, built-in cybersecurity, and a trusted interoperability layer that includes identity, payments and data exchange. Without those three, a Single Digital Market remains theoretical."

This is especially important as Africa has a youthful population and many young people become entrepreneurs because formal workplaces can't absorb them all. "For me, meaningful connectivity is about ensuring there is a socio-economic benefit for the user," says Quaye.



Rym Jarou, Director of Partnerships, Events and Communications at Smart Africa

The need for collaboration

Rym Jarou, Director of Partnerships, Events and Communications at Smart Africa, says building a Single Digital Market is not something any organisation can do alone – it requires trusted partners who believe in the vision and are willing to build with and for Africa.

She stresses that Africa's markets are often small. "Cross-border collaboration and integration are not optional – they are the only way these markets can grow and compete at scale," she explains.

"Data sharing, interoperability, and cooperation on issues such as cybersecurity, digital identity and KYC are essential, not only for efficiency but also for strengthening sovereignty."

Jarou sees Smart Africa's work as complementary to broader continental initiatives. Smart Africa concentrates on the digital foundations that enable integration, including infrastructure, skills, digital government services, trust frameworks and data interoperability. Digital, she argues, is the real breakthrough that can unlock Africa's integration ambitions and the promise of a 1.4-billion-person market.

She emphasises that the roles of various stakeholders are complementary. "Governments are responsible for setting clear, transparent policy frameworks and delivering digital public services, while development finance institutions (DFIs) and other development partners bring funding, experience and technical expertise," she states.

"The private sector plays a leading role by driving innovation, implementation and practical solutions, guided by a results-oriented mindset. Universities and training institutions are critical for building digital and STEM skills. And citizens are the final beneficiaries – the reason the system exists at all."

She illustrates this with a simple example.

"Imagine a woman in Ghana producing shea butter. She wants to sell to a buyer in Rwanda. For that to happen digitally, she must have reliable internet. She must be able to prove her identity. She must be able to receive payment across borders. The transaction data must be protected. The buyer must trust the system.

"That is what seamless digital borders really mean. It's not about removing sovereignty – it's about building interoperable systems so that digital transactions feel natural across countries."

By 2030, success should be visible in daily life, says Quaye. An SME should be able to register digitally and trade across borders, use compliant cloud services hosted within Africa, and move data securely under recognised frameworks.

"Today, Africa hosts less than 1% of global data centre capacity, and internet penetration remains below 50% in many countries on the continent – but demand is growing rapidly and will require significant expansion by 2030," she notes.

For Africa to secure a meaningful place in the AI value chain, she argues, the focus must be on building capacity in cloud infrastructure, computing power and reliable energy to support AI services.

BOTTLENECKS HAMPER OUR INFRASTRUCTURE

Despite significant progress, practical obstacles remain.

Extending networks into rural and low-income areas is expensive, making universal connectivity difficult. Cross-border data flows are still inefficient, with some African internet traffic routed outside the continent. In many places, networks remain fragile, with outages caused by single points of failure.

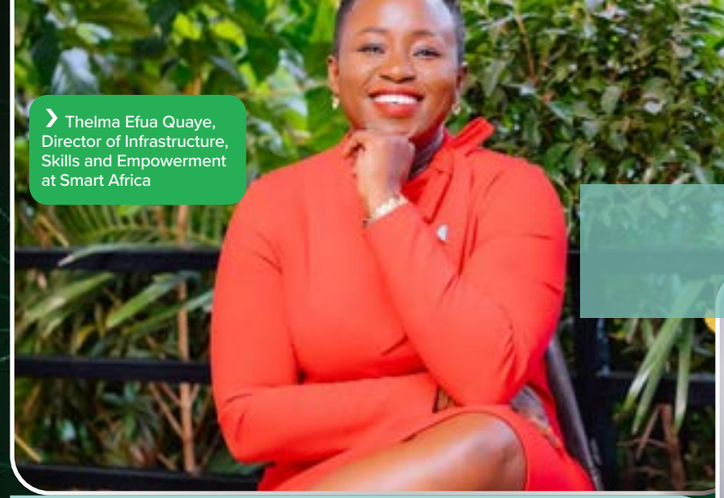
Reliable electricity is another major constraint, as data centres and telecoms infrastructure cannot function without stable power. Finally, device affordability remains a barrier: smartphones are still out of reach for many Africans, limiting who can participate in the digital economy.

At its core, the challenge comes down to cost, reliability and quality.

OTHER CHALLENGES TO BE OVERCOME

Quaye argues that the biggest obstacle is not a lack of technical knowledge but the persistence of national silos.

"Regulations, infrastructure planning and digital strategies are often national – but digital systems don't respect



Thelma Efua Quaye, Director of Infrastructure, Skills and Empowerment at Smart Africa

The role of ICT associations

ICT associations have a critical role to play – and it is more practical than people sometimes think. "Governments can set frameworks and regional bodies can push harmonisation, but implementation ultimately happens through industry," says Quaye.

"ICT associations sit at the intersection between policy and practice. They understand what is happening on the ground. They see where regulations create friction, and they know where infrastructure gaps are affecting real businesses."

It was for this reason that Smart Africa established the Council of African IT Agencies (CAITA), which brings together national IT agencies across the continent to coordinate on implementation, digital service delivery, interoperability and standards.

"It is one of our consultative organs because we recognise that digital transformation is not only about ministers and regulators – it's also about the institutions that build and operate digital systems," says Quaye. She adds that there is a real opportunity for ICT associations to work more closely with CAITA.

"First, associations can provide structured feedback to CAITA on where systems are not interoperable or where implementation challenges exist across borders. Secondly, they can align on standards and technical priorities. If industry and national IT agencies are aligned early, harmonisation becomes smoother and more realistic," she explains.

"Thirdly, associations can help accelerate adoption. National IT agencies may design platforms and digital public infrastructure, but industry scales them."

Finally, associations can help shape mindset. "If ICT ecosystems begin to think regionally, not only nationally, the transition to a Single Digital Market becomes far more achievable," emphasises Quaye.

"CAITA is a bridge between policy ambition and operational delivery. ICT associations should see it not as a distant institutional body, but as a partner. If we want a truly interoperable African digital ecosystem, industry and national IT agencies must move in sync. That coordination is where scale begins."

borders," she says. "One country can build the most advanced digital platform, but if it can't interoperate with its neighbour, its value is limited."

If Africa continues to optimise only for national efficiency, it will build 50 small digital markets. Optimising for continental interoperability, however, unlocks scale. "The biggest challenge is not capability – it's alignment," says Quaye. "It's the willingness to move from 'my system' to 'our system.' Once that shift happens, the technical pieces become much easier to solve."

For Rym Jarou, Director of Partnerships, Events and Communications at Smart Africa, another challenge is that countries are at very different stages of digital maturity. Smart Africa addresses this by consulting closely with countries before major strategic decisions, ensuring that each can engage at its own pace and find value in different initiatives.

Reliable broadband and telecoms infrastructure form the backbone of Africa's emerging Single Digital Market

A further hurdle is the lack of harmonised policies across more than 50 countries. "Smart Africa works closely with partners on the continental level to align efforts and move steadily towards harmonisation," notes Jarou.

While regulatory fragmentation, infrastructure gaps and energy constraints are real, Quaye believes the deeper issue is mindset. "Sometimes we approach integration cautiously because we equate harmonisation with loss of control. But in the digital era, sovereignty is not about isolation – it's about strength within interdependence."

Despite the tight deadline, both Jarou and Quaye remain optimistic. "The foundations are in place, milestones are being tracked, and momentum is building," says Jarou.

PHOTOS: SUPPLIED; SMART AFRICA; FREEPIK; WAYHOMESTUDIO /FREEPIK; MIKE SIMPSON VIA FREEPIK/AI

Lacina Koné, CEO of Smart Africa

Q&A WITH LACINA KONÉ, CEO OF SMART AFRICA

Q: What are the biggest obstacles to a harmonised African Single Digital Market?

A: Let me start with a simple premise: the African Single Digital Market is not a technology project – it is an economic sovereignty project. By 2030, we must position Africa as one coherent digital economy. There are three major obstacles to achieving this.

First, regulatory fragmentation. Divergent licensing regimes, data protection frameworks and cybersecurity standards create significant friction. This is why alignment with the Phase II digital trade and e-commerce protocols under the African Continental Free Trade Area is critical: digital integration must reinforce, not lag, physical trade integration.

Second, infrastructure asymmetry. While some countries are developing advanced broadband networks and data centre ecosystems, others are still building foundational connectivity. Harmonisation is inherently more complex when digital baselines differ so widely.

Third, and most critically, trust. Regional integration depends on trust in institutions, regulatory frameworks and cross-border data governance. Without it, integration remains cautious and incremental.

Through the Smart Africa Trust Alliance (SATA), countries retain full control over their data and infrastructure. Through the Smart Africa Data Exchange (SADX), we are operationalising a live cross-border digital public infrastructure platform. By year-end, we expect to begin processing real cross-border transactions. Integration will be phased – not every country will move at the same speed.

Q: How critical is regulatory convergence for attracting private investment in data centres and cloud services? How can governments accelerate this?

A: Governments can take three concrete steps.

First, align national frameworks with continental reference instruments, such as the African Union Data Policy Framework and Smart Africa's model regulations, to ensure coherence without undermining national authority.

Second, introduce mutual recognition mechanisms so compliance in one jurisdiction can be recognised in others, reducing costs and accelerating expansion.

Third, provide clear rules for cross-border data flows. Investors need trusted, rules-based systems rather than uncertainty. Through SATA and SADX, we are building a secure, encrypted, auditable cross-border trust layer that preserves national sovereignty.

Infrastructure policy must address fundamentals. Energy reliability and cost per kilowatt-hour are decisive for hyperscale investors.

Q: How will Smart Africa support member states to implement these priorities?

A: Smart Africa exists to translate coordination into implementation. We do not replace governments; we align them. Our approach is practical.

First, we create policy platforms that allow regulators to compare frameworks, share lessons and converge over time.

Second, we develop implementation blueprints – reusable tools aligned with international standards that prevent duplication and vendor lock-in.

Third, we accelerate the development of interoperable digital public infrastructure. Digital ID systems, cross-border payments and secure data exchange mechanisms such as SATA and SADX are the backbone of a Single Digital Market.

Harmonisation must also be supported by innovative financing models, including blended finance and structured public-private partnerships, to de-risk capital and accelerate deployment.

The next frontier is AI governance convergence. As Secretariat of the Africa AI Council, we are aligning AI readiness, computer access, and regulatory frameworks to build sovereign AI capacity across Member States. ●

Lacina Koné is CEO of Smart Africa. He was previously ICT advisor to the Côte D'Ivoire President.

CYBERSECURITY: THE TOP 10 TRENDS TO BE AWARE OF IN 2026

Cybersecurity professionals work around the clock to safeguard critical systems and protect organisations from evolving cyber threats

African companies and individuals must be equipped to detect potential cyber risks and act pre-emptively and quickly, says **Jeanette Simpson**.

Cyber risk is accelerating fast. This was the strong message to delegates attending the annual Fortinet *Fast & Secure* conference held in Vienna, Austria, from 19 to 21 November 2025. And while the event took place in Europe, the message is equally – and particularly – relevant to Africa.

Analysis of dark web data reveals a 25% year-on-year increase in ransomware activity, while the number of infostealers via phishing emails has increased by 84% per week, according to the *IBM X-Force 2025 Threat Intelligence Index*.

Generative artificial intelligence (AI) is enabling more sophisticated attacks. The World Economic Forum's *Global Cybersecurity Outlook 2025* report notes that, in 2024, there was a sharp increase in phishing and social engineering attacks, with 42% of organisations reporting such incidents and 72% of survey respondents saying cyber risks had risen in the previous year.

Here, in my opinion, are the 10 key cybersecurity trends for 2026 that emerged from the Vienna conference.

1. CONTINUOUS SCANNING IS REPLACING OPPORTUNISTIC DISCOVERY

Cybercriminals are no longer stumbling across weaknesses by chance. They use automated tools to scan the internet for exposed systems, misconfigurations, and forgotten digital assets.

2. ATTACKERS ARE LOGGING IN RATHER THAN BREAKING IN

Credential theft, session hijacking and token abuse have become leading access techniques, with infostealer malware (which harvests sensitive data) targeting login credentials, personal information and financial data.

3. AI-ENABLED PHISHING IS STEPPING UP THE THREAT

Scalable generative AI means phishing, impersonation and fraud are becoming more targeted and easier to automate. Language and other barriers are no longer limitations on the actions of fraudsters – a very worrying development.

4. MANY SMALL RANSOMWARE OPERATIONS EQUAL MORE VARIED CYBER ATTACKS

Big ransomware operations are splintering into smaller groups and short-lived operations while still profiting from attacks. When groups are disrupted, the hacker market adapts quickly.

AFRICA LACKS CYBERCRIME INVESTIGATIVE TECHNIQUES

Cybercrime is accelerating across Africa, threatening public safety, financial systems and digital trust, according to a recent Interpol report.*

African countries are increasingly responding to cyber threats, but many still face serious challenges that hamper their ability to detect, investigate and disrupt them.

The report assesses law enforcement capacity as uneven, with most countries lacking cybercrime investigative skills, limited access to digital forensic tools, and insufficient infrastructure. Several states do have cybercrime units, but they often operate with limited resources and personnel.

While legal frameworks are improving, progress is fragmented, the report notes. Some countries have modern cybercrime legislation, but often frameworks and prosecution capacity need improvement, and laws could be better aligned with regional and international standards.

A lack of cross-border coordination is another obstacle. Formal cooperation channels – such as mutual legal assistance processes – remain slow and underused, while issues such as a lack of trust and limited access to global digital platforms further complicate regional enforcement efforts.

Many agencies do not have the capacity to respond to criminals' use of AI, synthetic media and mobile-enabled fraud schemes.

But there are signs of progress: several countries have strengthened public-private partnerships, updated legislation to more effectively prosecute cybercrimes, and participated in successful regional operations.

** Interpol Africa Cyberthreat Assessment Report 2025 (4th Edition).*

Delegates at the Fortinet *Fast & Secure* Conference in Vienna grappling with the reality that cyber risk is a fast-growing threat in every country

Industry leaders exchanged insights on strengthening cyber resilience in an increasingly complex threat landscape at the *Fast & Secure* Conference

5. TRUST IS NOW A TARGET

Deepfakes and impersonation are used to exploit trust. Criminals may pose as familiar voices or trusted authorities in voice notes, video calls and emails. Once again, a very worrying development that is a product of the AI age.

6. COMPANIES PUT 'ZERO-TRUST' INTO PRACTICE

Companies are putting 'zero trust' into practice. Tools such as phishing-resistant authentication, conditional access controls and device-linked credentials make stolen passwords less useful.

7. DETECTION & RESPONSE

More organisations are turning to extended detection and response (XDR), managed detection and response (MDR), and AI-assisted triage to support confident decision-making.

8. CONTINUOUS THREAT EXPOSURE MANAGEMENT

Annual audits and point-in-time assessments can't keep pace with continuous scanning and weaponisation by cyber attackers. Continuous threat exposure management relies on a real-time view of risk.

9. A.I. NEEDS PROTECTING

As companies adopt AI tools and models, they also create new risks, including data leaks, misuse of AI systems and governance gaps. In response, they are starting to treat AI risk as a core part of their security strategies.

10. VERIFICATION IS ESSENTIAL

To guard against digital deception, companies are implementing stronger verification processes. These include using content-verification standards and double-checking high-risk requests on the assumption that messages, voices and images can be faked. ●

Jeanette Simpson is Head of Product Management at Armata Cyber Security, based in South Africa. Armata specialises in cyber essentials and advanced cyber defences for small businesses and large enterprises. She was a delegate at the 2025 Fast & Secure Conference.

Disclosure: Jeanette Simpson is married to Mike Simpson, the Editor of *Africa's Tech Pulse*.

PHOTO: DC STUDIO/FREEPIK; SUPPLIED

Jeanette Simpson, Head of Product Management at Armata Cyber Security

Training a spotlight on losses due to cybercrime on the continent

Africa lost more than US$3-billion to cybercrime between 2019 and 2025 and remains vulnerable, according to the Interpol *Africa Cyberthreat Assessment Report 2025*, which states that detection and response capabilities across the continent are limited and lag the pace and scale of emerging threats.

The report notes that 90% of African businesses operate without adequate cybersecurity protocols and only 30% of countries on the continent have incident reporting systems. In Kenya, more than 8.4-million attempted cyber intrusions were reportedly recorded in the second half of 2025.

Here's a snapshot of just a few recent cyber-attacks in Africa.

- Telecom Namibia was crippled by a ransomware attack in December 2024.
- Kenya's M-Tiba digital health wallet suffered a breach involving hackers publishing stolen data on public channels.
- Hackers hit South African mobile company Cell C with a cybersecurity breach, potentially exposing customer data.
- A cyber attack knocked municipal systems offline in Otjiwarongo, Namibia, and residents were blocked from accessing basic services.
- Senegal's tax authority was hit by ransomware that threatened to erase and leak sensitive fiscal records.
- At Access Bank in Nigeria, it was alleged that staff colluded to divert ₦826-million through a fake internal revenue account.

ICT SOLUTIONS: VALUE IDENTIFICATION, CREATION AND 'PRODUCTISATION'

TICON Africa's February 2026 Masterclass featured insights by seasoned product leader and ICT specialist Mario Paes, Founder and Director of Synergy Digital Solutions in Johannesburg.

Introduced by moderator Lebo Khanda-Wiktor of the Botswana Information Technology Society, Paes drew on extensive experience driving innovation, strategy and market intelligence in digital solutions to explain how market entrants can turn their technical capabilities into scalable, market-ready offerings.

Even with AI and new technology, entrepreneurs still must identify opportunities, drive product development and bring products to market. However, the definition of value is being rewritten.

"What worked in the past won't be enough for the future," said Paes. "We've moved from the IT optimisation period of around 2016 into a cloud-first, platform-type environment where AI and machine learning have a profound impact. Ultimately, the purpose of a business is to create a customer. And your customer's customer is yours, too."

Paes listed three lenses for value identification: (1). you must understand your operating environment, including the priorities of your end customer; (2). you must understand what products and services they need; and (3). you should understand their mission-critical priorities.

THE PATH TO VALUE

There are two distinct modes for addressing the path to value: (1). through financial value – reducing or eliminating cost factors; or (2). through customer value – raising, creating or adding benefits. "It's all about how you can do things better and improve revenue streams," Paes noted.

You must also understand the nuances of launching a cloud-based product in different African locations.

Once you've launched your product, you should know who you're selling to. Are they top-tier clients? What is their ICT spend? Does your service extend to support and maintenance? You must also decide if you are you going directly to market, or with partners.

CRITICAL QUESTIONS INCLUDE:

- Who are your target customers?
- What problems do they have?
- How do you create the right solutions?
- How will you convince them of your product's value?
- Does the customer want your product?
- Will it be profitable?
- Will it be feasible?

TESTING YOUR PRODUCTS

A minimal viable product (MVP) is a quick way to test your product or service with potential customers, he advised. But you must communicate it in the real world – for example, through sales meetings, brochures, your digital presence and your website.

"Embrace the MPV mindset and let your customers' needs drive your business innovation," Paes said.

To a question from Khanda-Wiktor on mistakes innovators make when going to market, Paes responded, "Go through a pre-sales journey rather than a launch journey. Get the contracts and sales in, and then do the proper launch. Then you have a revenue stream."

She then asked what a successful African product would look like in future. Responded Paes: "Anything that enhances our well-being as people, how we communicate with one another and how we do good for one another ... Those are good products to have." ●

DIGITAL THREATS ARE NOT AMONGST MOST GHANAIANS' BIGGEST SECURITY WORRIES

The annual Sherrif Security Indicator (TSSI) reveals Ghanaians' most pressing security concerns. **Alhaji Sherrif Issah** examines the latest survey results.

Hacking and other information security threats featured lower in Ghanaians' security priorities in the 2025 Sherrif Security Indicator survey

Now in its sixth year, the Sherrif Security Indicator (TSSI) is an annual online survey that tracks how Ghanaians prioritise security risks affecting their daily lives. The study coincides with National Cyber Security Awareness Month (held during October 2025) and offers insight into shifting perceptions of risk.

The 2025 edition of the survey measured nine security threats: disaster or epidemic, hacking, identity theft, inability to meet financial obligations, payment card fraud, personal safety, security of online banking or shopping, transport accidents, and national security. Transport accidents were introduced as a new category in 2025, while mobile money fraud was excluded from the survey.

Across all categories, financial insecurity and personal safety emerged as the most significant concerns, while information security related threats ranked substantially lower.

THE SURVEY METHODOLOGY

The survey was conducted in August and September 2025, primarily through online questionnaires distributed via social media. A smaller number of respondents were interviewed in person, with questionnaires completed on their behalf.

Of the 4,500 people targeted, 1,475 valid responses were received – an increase of approximately 19% over the previous year. All respondents were resident in Ghana and were asked about their gender, age range, highest level of education, and which of the nine security factors concerned them most and least.

PHOTOS: FREEPIK; SUPPLIED

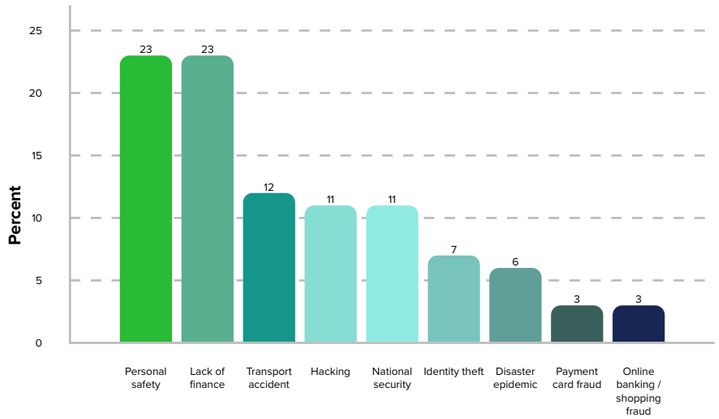


Figure 1: Greatest security concern to respondents

THREATS RELATED TO INFORMATION SECURITY RANKED NOTICEABLY LOWER THAN MANY OTHER THREATS IN THE DAILY LIVES OF ORDINARY PEOPLE. PERSONAL SECURITY IS DEEMED THE BIGGEST THREAT

ABOUT THE RESPONDENTS

Of the 1,475 respondents, 60% were male and 40% female. The largest age group was 26-35 (38%), followed by those aged 18-25 (37%). Respondents aged 36-45 accounted for 16%, while those over 45 accounted for a much smaller share of the sample.

EDUCATIONAL LEVEL

The survey population was highly educated, with 85% of respondents having completed tertiary education. A further 12% had completed form 5 or senior high school, and 3% had completed first or second-cycle education.

GHANAIANS' BIGGEST SECURITY CONCERNS

When asked to rank the nine security threats, respondents most frequently identified the inability to meet financial obligations and personal safety as their greatest concerns, each cited by 23% of respondents. Transport accidents ranked third at 12%, followed by hacking and national security, both at 11% (see Figure 1).

Information security-related threats ranked noticeably lower. Identity theft was cited by 7% of respondents as their greatest concern, while disasters or epidemics was at 6%. Payment card fraud and online banking/shopping fraud ranked lowest overall, at 3%.

Clear demographic patterns emerged. Most male respondents ranked the inability to meet financial obligations as their top concern, followed by personal safety, whereas female respondents ranked personal safety as their top concern, followed by the inability to meet financial obligations. Age also influenced responses: those aged 18-25 and 46-55 prioritised personal safety, respondents aged 26-45 were most concerned about financial obligations, and those aged 55 and above ranked national security as their primary concern.

Educational attainment showed a similar pattern: respondents who had completed first and second-cycle education prioritised personal safety, whereas those with tertiary education focused on financial insecurity.

SECURITY CONCERNS LEAST IMPORTANT TO GHANAIANS

When asked which threats concerned them least, respondents most frequently cited disasters or epidemics (19%), followed by payment card fraud (17%). Identity theft and lack of financial security were each cited at 14%, while security of online banking and shopping was cited by 12%.

National security and hacking were each ranked least important by 8% of

ICTAM
ICT ASSOCIATION OF MALAWI

UNDP
Irish Aid
An Roinn Gnóthaí Eachtracha
Department of Foreign Affairs
National Bank of Malawi plc

INCLUSIVE DIGITAL TRANSFORMATION FOR MALAWI (IDT4M)

Internship and Certifications program

Community Digital Advocates

Digital Ambassadors

Innovation and Incubation

Advancing digital transformation through gender equality and inclusion for all

Email: secretariat@ictam.org.mw
Website: www.ictam.org.mw
ictam265 @ICTAM265 ICTAM MW ICT Association of Malawi

Filimoni House, City Centre, P.O. Box 31076, Lilongwe 3, Malawi.

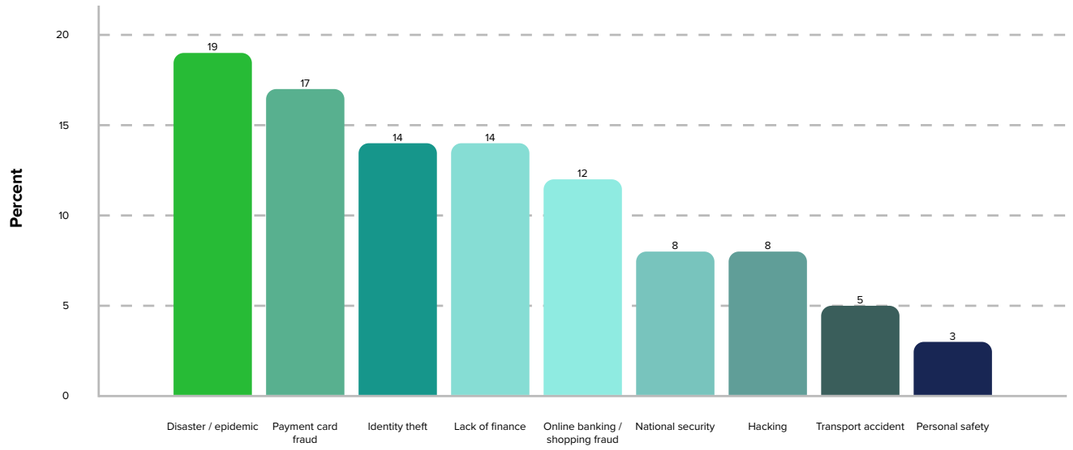


Figure 2: The security concerns of least importance to respondents

respondents, while transport accidents (5%) and personal safety (3%) were least likely to be viewed as low-priority risks (see Figure 2).

Demographic differences again emerged. Male respondents most often ranked disasters or epidemics as their least concerning threats, whereas female respondents more frequently selected the lack of financial resources and concerns about the security of online banking and shopping. Respondents aged 18-45 also ranked disasters or epidemics lowest, while those aged 46-55 identified inability to meet financial obligations as least concerning. Among respondents aged 55 and older, identity theft ranked lowest.

WHAT THE FINDINGS REVEAL

The results confirm a consistent trend observed over the past six years: financial insecurity and personal safety dominate Ghanaian security concerns, far outweighing information security-related threats. Despite growing public discourse on cybercrime, issues such as identity theft and payment card fraud remain low priorities for respondents.

The introduction of transport accidents as a new category – and its immediate rise to third place – highlights increasing concern about the safety of road, rail and air transport. Overall, the findings suggest that economic pressures and physical safety shape perceptions of risk far more strongly than digital threats among Ghanaian residents.

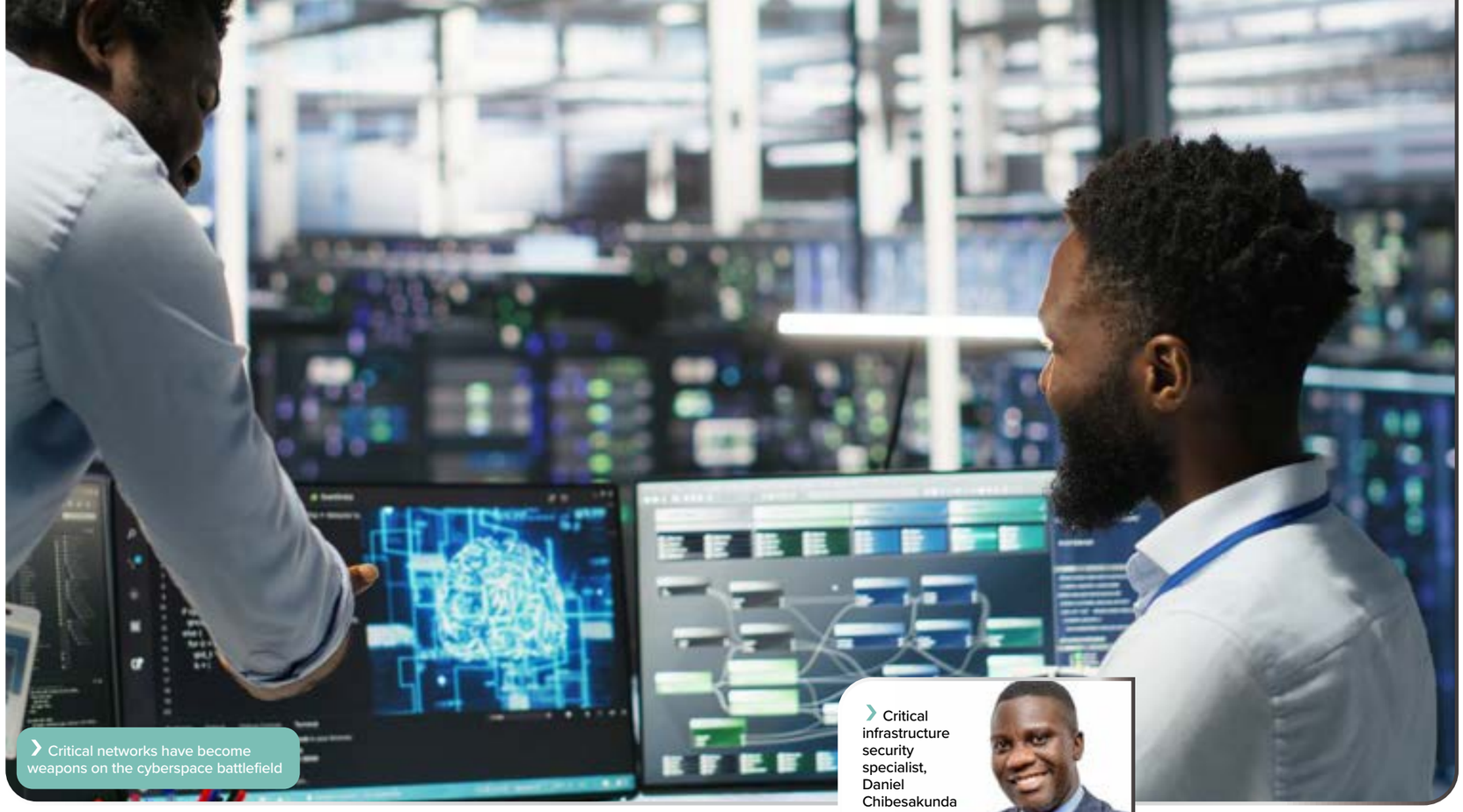
Alhaji Sherrif Issah is the Director of Information Security and Data Protection at IIPGH, and a Senior Manager (Cybersecurity) at Deloitte.

ACKNOWLEDGEMENTS
The author would like to express his appreciation to the dedicated individuals who supported the 2025 survey: Jude Aryertey Atter, Ebenezer Okroh Junior Akutteh, Richard Arthur, Elvis Anane, Abdul Karim Issah, Emmanuella Kwebu Dadzie, Michael Tornyie, Jemimah Odame Mensah, Yvette Klu, and Owusu Sekyere Kwadwo Marfo.

In 2025, Ghanaians participated in a national survey to gauge perceptions of personal safety and security

BUILDING CYBER RESILIENCE IN THE AGE OF DIGITAL THREATS

Daniel Chibesakunda discusses the growing threat to Africa's critical infrastructure networks due to their high hack value – and the attendant need for increased cyber resilience.



Critical networks have become weapons on the cyberspace battlefield

The digital era is highly dependent on data which is of increasingly high value and needs to be protected. This has caused an increase of the cyberattack surface beyond the networks of companies and into the networks upon which wider society depends.

From electricity and mass transit, to water and medical care, critical networks have become weapons on the cyberspace battlefield, making them unique targets highly appealing to cybercriminals. They have high hack value, in that the combination of challenge, prestige and impact makes them irresistible to certain adversaries.

This article highlights the evolving intersection of hack value, critical infrastructure and cyber resilience. It describes why these systems are targeted, who targets them, and what can be done by organisations and governments to secure these systems amid an ever-changing threat landscape.

EXPLAINING 'HACK VALUE'

The term 'hack value' refers to how interesting an organisation or person is to cybercriminals. If they are perceived to be of value, the cybercriminal will attempt to hack them.

The concept has matured with the growth of cybercrime and cyberwarfare and, in today's digital era, hack value aligns closely with strategic impact as an attack on a critical system can disrupt a population, influence political narratives, or serve as retaliation in geopolitical conflicts.

Cybercriminals – whether motivated by ideology, money or state-sponsored activities – are increasingly pursuing targets where the payoff is as much about power and recognition as it is about access or money.

EXPLAINING CRITICAL INFRASTRUCTURE

Critical infrastructure can be defined as the life-sustaining and vital assets, systems and networks of a society or economy. These include:

- Energy (power plants, electricity grids, pipelines).
- Water and wastewater systems.
- Transportation (railways, airports, seaports).
- Communications.
- Healthcare.
- Finance and banking.

These systems are appealing as a target to cybercriminals for multiple reasons:

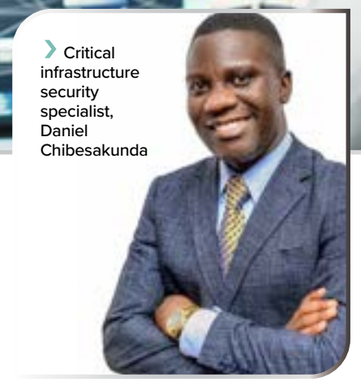
1. They have systemic impact: Once compromised, they can have catastrophic consequences for entire populations.
2. They are a generally under-defended: Many are still operating on old systems and IT/OT networking is not well integrated, coupled with practices not advancing at the same pace as the technology.
3. They are an expression of national power: Attacking critical infrastructure can undermine public confidence and weaken the government's legitimacy.
4. They form part of a wartime or geopolitical strategy: Sabotaging infrastructure is a time-tested wartime tactic, now replicated in cyberspace.

Examples of high-profile cyberattacks on critical infrastructure include the 2015 and 2016 cyber-intrusions into Ukraine's power grid, the ransomware attack against the Colonial oil pipeline in the US in 2021, and the compromise of the SolarWinds supply chain in 2020. All of these illustrate the growing scale and sophistication of the threats.

THE ADVERSARIES

A variety of adversaries target critical infrastructure. They include:

PHOTOS: DC STUDIO ON FREEPIK; SUPPLIED



Critical infrastructure security specialist, Daniel Chibesakunda

- Nation-state adversaries seeking to secure cyber dominance and pre-position forces for potential conflict.
- Hackers trying to profit from dislocation through ransomware and extortion attacks by cybercriminal organisations.
- Hackers who act as political or environmental 'hacktivists'.
- Insider threats from disgruntled staffers or contractors.
- Insidious, relationship-based penetration of an organisation over months or years, as practiced by advanced persistent threats (APTs).

These actors do not simply want money, though that is a factor. They also seek power, influence, leverage, revenge or ideological satisfaction. Hack value goes up when it's a high-profile breach that's hard to patch up.

CYBER RESILIENCE IS THE NEW IMPERATIVE

Traditional cybersecurity is all about defence and prevention. However, with threats ongoing and increasing in complexity, it's time now for businesses to take a cyber-resilience posture, to prepare themselves not just to prevent, but also to endure and recover from attacks when they do come.

Critical infrastructure cyber resilience comprises:

1. Architecture hardening
- Physically isolated from IT and OT networks.
- Zero Trust models and identity-based access control.
- Ongoing asset discovery and vulnerability management.

2. Intelligent monitoring and detection
- Behaviour-driven analytics with live tracking.
- AI-driven threat detection.
- Integration with security information and event management (SIEM) tools.

3. Incident response and recovery
- Response playbooks for important systems.
- Frequent red team and simulations exercises.
- Offline backup and instant failover capabilities.

4. Workforce readiness
- Cybersecurity awareness training.
- OT-specific security training for engineers and operators.
- IT, security and ops collaboration (cross-discipline).

5. Information sharing and coordination
- Participation in ISACs.
- Co-operation with national cyber defence institutions.
- Public-private Partnerships for situational awareness.

BUILDING RESILIENCE IS A STRATEGIC NECESSITY

In a world where adversaries are calculating the hack value of every target, resilience becomes a form of strategic deterrence. And the harder, riskier and costlier it is to disrupt infrastructure, the more unattractive a target it becomes. That doesn't eliminate risks, but it does alter the cost-benefit analysis for potential attackers.

Cyber resilience is more than just a new version of technology. It's a strategic necessity for national defence, economic security and public safety. Resilience must be a baseline performance characteristic for government agencies, utilities and the private sector entities that operate vital systems and must be embedded in their culture, policy and practice.

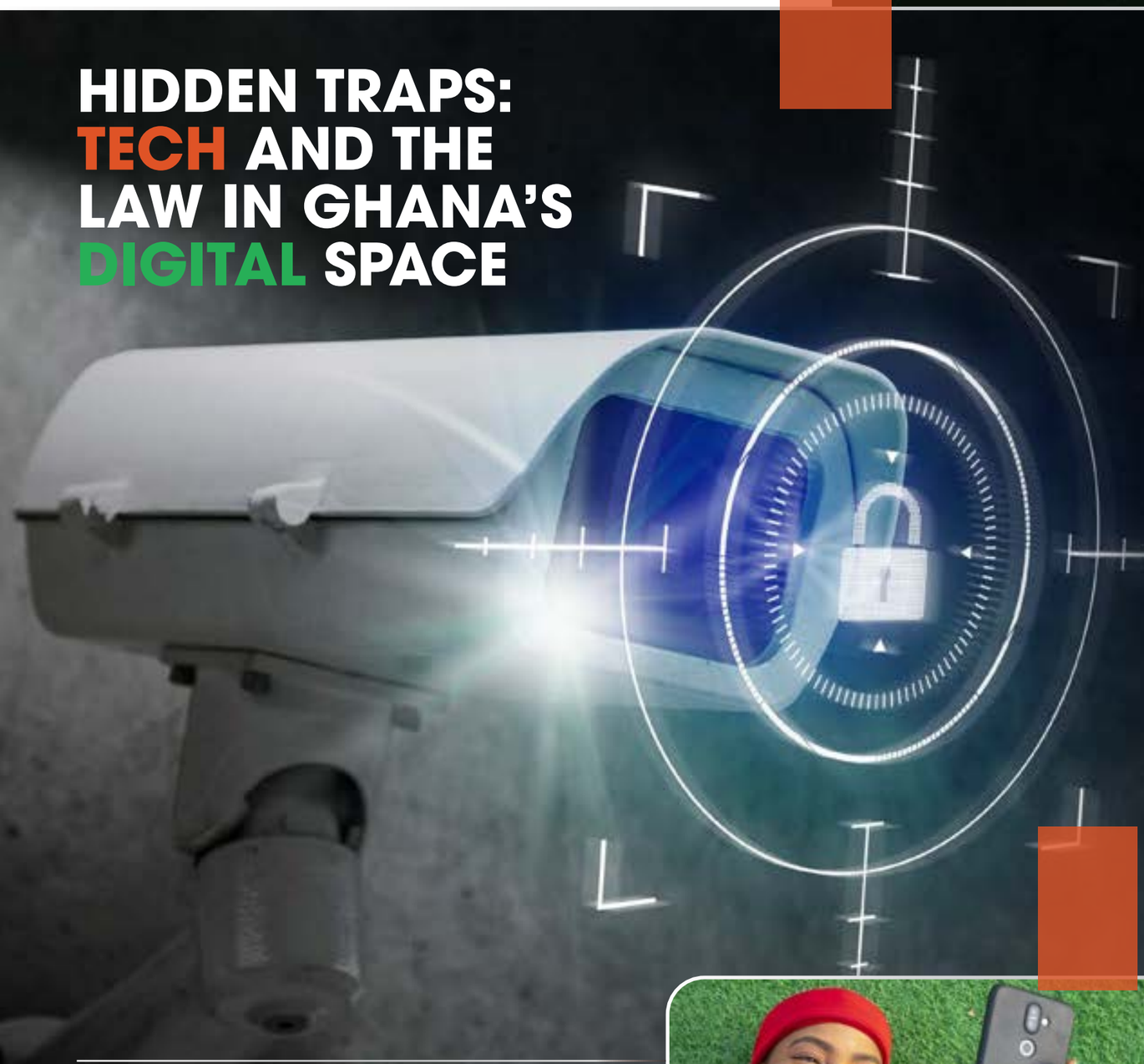
CONCLUSION

Cyber criminals are constantly adapting to the evolution of the digital ecosystem. Add in the high value of hacking and weak points in critical systems, and you have a perfect storm – one whose impact may surge if we do not respond with urgency and coordination.

The answer is cyber resilience. It takes investment, leadership and a relentless commitment. It is the makers and the takers in competition, and only the resilient will endure. ●

Daniel Chibesakunda is a technology architect and critical infrastructure security specialist. He is also Chairperson for the Technical, Operations and Professional Development Committee of the ICT Association of Zambia Executive Council.

HIDDEN TRAPS: TECH AND THE LAW IN GHANA'S DIGITAL SPACE



Despite a decade of tech laws, Ghanaian citizens and businesses remain largely unaware of their scope until legal issues arise, says cybersecurity analyst **Jeffrey Vava**.

A CCTV camera captures personal data in shared spaces. Everyday security measures are firmly placed within the scope of Ghana's data protection and privacy laws

From data privacy breaches to digital fraud, it often takes a crisis for individuals to discover the legal boundaries of Ghana's digital space. Yet, as the saying goes, "ignorance of the law is no excuse".

As Ghana continues to embrace digital innovation in finance, education, health and governance, the intersection between technology and the law has become a critical frontier.

This article explores the legal landscape of Ghana's digital economy, including existing regulations, the challenges in awareness and enforcement, and how the nation can better balance innovation with legal accountability.

EXAMINING LEGAL RISKS

Technology is evolving rapidly, and Ghana's legal system has not been left behind. Laws regulating digital tools and platforms have existed for years, but many individuals and institutions remain unaware of them. Often, people only realise the law's presence when they've already crossed a line.

The legal implications of daily tech use are numerous yet remain invisible to many. Installing a closed-circuit television (CCTV) camera, flying a drone, sending promotional messages, or simply sharing content on social media can all carry legal consequences, depending on how they are done.

Consider the widespread use of CCTV cameras. Many shop owners and homeowners install surveillance systems equipped with audio recording features. What they may not realise is that these devices collect personal data, including facial images and voice recordings, placing them within the scope of Ghana's Data Protection Act.

This law requires individuals and organisations collecting such data to register with the Data Protection Commission (DPC), notify those being recorded through clear signage, and secure the data to prevent breaches. Failure to meet these obligations can result in substantial penalties. Many fall into this trap unknowingly, but that doesn't remove the liability.

Drone use is another area riddled with legal risks. Drones may seem like harmless gadgets for photography or leisure, but they are classified as aircraft under Ghanaian law. This means users must obtain permits from the Ghana Civil Aviation Authority (GCAA) before operating them, especially in urban areas or near sensitive installations.

Flying drones without authorisation or in restricted airspace can result in confiscation, fines or even prosecution. Drones are not toys under Ghanaian law. The GCAA treats drones as aircraft subject to airspace regulations. Flying above 400ft (122m) in uncontrolled airspace, near airports, or without a commercial permit violates aviation regulations and may result in confiscation or legal action. Unfortunately, many enthusiasts only discover these rules after being confronted by law enforcement.

Hidden GPS trackers and call-logging apps often slip under the radar but are illegal. Section 31(1) of the Cybersecurity Act, 2020 (Act 1038) prohibits unauthorised acquisition or disclosure of another person's geolocation or communication data, punishable by up to five years in prison and heavy fines.

ELECTRONIC COMMUNICATIONS ALSO POSE A RISK

Social media, widely seen as an informal space, also has legal boundaries that are commonly crossed. Posting screenshots of private conversations, sharing photos or videos without consent, or falsely accusing others online can breach data protection laws and defamation statutes. What may start as a heated exchange or viral joke can quickly become a legal matter.

Even creating parody accounts or using someone else's name or likeness without permission may constitute identity fraud under Ghana's cybercrime legislation.

There are also hidden risks in using messaging platforms for marketing. Small businesses frequently send mass WhatsApp messages or unsolicited SMS advertisements to promote goods and services. Many small businesses use text or WhatsApp promotions without explicit consent. Under the Electronic Transactions Act, 2008 (Act 772) and the Unsolicited Electronic Communications Code of Conduct issued by the National Communications Authority, unsolicited marketing without opt-in or clear opt-out options can result in fines of up to 60,000 Ghanaian cedi per incident.

Under Ghana's Electronic Communications Act, sending unsolicited messages without recipients' prior consent is illegal. Similarly, storing customer data on platforms such as Google Drive, Dropbox, or AWS may violate privacy regulations if data residency and protection standards aren't clearly communicated or consistently applied.

Social media users must rethink their habits. Before posting that image, voice note or private message, consider whether it violates another person's rights. Avoid making unverified claims, impersonating others or launching giveaways without understanding the legal requirements, including licenses from the National Lottery Authority.

What feels like ordinary phone use is part of a wider digital world governed by laws many people only discover when something goes wrong

BUYING AND SELLING TECHNOLOGY DEVICES

Even in the procurement and sale of tech gadgets, there are legal loopholes that unsuspecting buyers fall into. People import or purchase surveillance devices, such as hidden cameras or listening devices, unaware that selling or using them can violate privacy and surveillance laws. For example, installing a CCTV system with audio capabilities in a shared space without prior notice could expose the user to lawsuits or sanctions. Biometric devices, such as fingerprint scanners used in schools or offices, also raise legal concerns when consent is not explicitly obtained from those being scanned.

ANYONE CAN FAMILIARISE THEMSELVES WITH THE LAW

The reality is that most of these laws aren't obscure; they are publicly available. The real challenge lies in the lack of awareness and enforcement. For the average citizen or small business, understanding data protection, digital consent, or legal compliance for tech use can feel like navigating a legal minefield.

The laws are often written in complex language and the cost or difficulty of

ICTAU INFORMATION COMMUNICATION TECHNOLOGY ASSOCIATION OF UGANDA

ICT ASSOCIATION OF UGANDA (ICTAU)

ELIZABETH NTEGE
CHAIRPERSON

JAMES BYARUHANGA
VICE. CHAIRPERSON

GRACE LABONG ACHIRE
DIRECTOR

HENRY K. WAVAMUNNO
DIRECTOR

MICHAEL NIYITEGEKA
DIRECTOR

JACKIE NAMARA RUKARE
DIRECTOR

PATRICK KADAMA
DIRECTOR

MEMBERSHIP CATEGORIES WITH RESPECTIVE ANNUAL FEES;

PRIVATE COMPANY/ GOVERNMENT BODIES/ NGOS	PROFESSIONAL MEMBERSHIP	STUDENTS MEMBERSHIP
UGX 2 million	UGX 200,000	UGX 20,000

BANK DETAILS

Account Name: ICT Association of Uganda
Account Number: 1040006744842
Bank Name: Housing Finance Bank
Branch: Ntinda
Swift Code: HFINUGKA
Currency: UGX

❮ Drones are regulated as aircraft in Ghana, and even recreational flights can carry legal obligations around permits and restricted airspace

❮ Cybersecurity challenges highlight the growing need to balance technological innovation with legal accountability

registration or compliance pushes many to ignore the process altogether. Moreover, enforcement has historically been weak, reinforcing a false sense of security until something goes wrong.

However, awareness and education can bridge this gap. Schools, businesses and digital platforms should take steps to learn the basics of data and tech-related laws. Any individual or institution handling customer information – including names, photos or contact details – should study the Data Protection Act and consider registration.

Those installing surveillance or tracking devices should always ask: are people being informed, and have they consented? Are there measures in place to secure the data collected?

Ghana's digital future holds immense promise, but it also carries responsibility. The hidden legal traps in tech use – from casual posts to commercial surveillance – can no longer be ignored. It's time for individuals, businesses and regulators alike to come together to raise awareness, simplify compliance and foster a tech space that thrives within legal boundaries.

The law is not just for lawyers. It's a tool for protecting innovation, rights and trust in our digital society.

WHY THESE LAWS MATTER

These legal risks are not speculative – the laws are enforceable. The DPC has begun audits and penalties for unregistered data controllers. The Cyber Security Authority has the power to intercept devices, block illicit content and impose sanctions. Courts take defamation and fraud seriously, even in digital spaces.

WHAT YOU CAN DO

Educate yourself and your team on data and technology regulations. Register with the DPC if you collect personal data of staff or customers. Avoid using hidden surveillance without notice or consent. Fly drones responsibly with permits. Ensure promotions get opt-in permissions. If you store data overseas, state this clearly and obtain consent. And always think twice before posting anything online. Checking even one key question can keep you far out of trouble: "Am I collecting someone's data and have I informed them?"

Ghana's digital future is bright, but its foundation must be built on accountability and awareness. These laws are not hidden in the dark – they're just not part of everyday conversation. But they are the guardrails that protect innovation, privacy and trust.

Remember, ignorance of the law is no excuse. ●

Jeffrey Vava is Cybersecurity Analyst at Eprocess International and a member of the IIPGH.

It's the law!

While this article examines Ghana's legal framework with regard to daily tech use, it's worth remembering that many of the key points discussed here will be applicable, to a greater or lesser degree, in many other African countries. Do your homework!

Editor

PHOTOS: WIRESTOCK/FREEPIK; RAWPIXEL.COM/FREEPIK; KJPARGETER/FREEPIK; SUPPLIED

Individuals become digitally empowered when they are supported to assess their own skills, learn safe and effective digital practices, and use technology confidently to think, create and solve problems

DIGITAL NAÏVES ABOUND: SURROUNDED BY TECH, BUT NOT SKILLED AT IT

Growing up in a digital world doesn't guarantee digital competence. **Emmanual K. Gadasu** explores why proximity to technology often masks a lack of fluency.

In our age of hyperconnectivity, there's a dangerous assumption embedded in our hiring practices, classrooms and daily conversations: that growing up with technology makes you competent to use it.

We label today's youth 'digital natives', a term coined to capture the idea that individuals born into a digital world are inherently fluent in using digital tools. However, this ignores the plight of the 'digital naïve'.

Digital naïves are individuals immersed in technology but lacking the skills, judgement or critical thinking to use it effectively, productively or ethically. They may swipe through TikTok with ease, navigate social media blindfolded, or download a new app in seconds, but struggle with basic digital problem-solving, cybersecurity hygiene, digital communication norms, or productivity software.

This isn't just an academic observation – it's a pressing issue in workplaces, schools and boardrooms, and one which we urgently need to address.

IT IS NOT JUST A PROBLEM FOR OUR YOUNG PEOPLE

The problem transcends age. Anyone can become digitally naïve when they assume familiarity equals proficiency, or when their digital habits are shaped more by entertainment than purpose.

A young graduate who can create a viral Instagram Reel but can't use Excel formulas. A mid-career professional who forwards every suspicious link without thinking. A manager who believes 'digital transformation' means buying the latest gadgets. These are all examples of digital immersion without digital competence.

ILLUSION OF PRODUCTIVITY

Many managers assume that younger hires will naturally 'get' technology. After all, they grew up with it. However, digital naïves often lack:

- Foundational digital literacy (proper file naming, managing cloud folders).
- Strategic thinking with tools (choosing the right software for a task).
- Understanding data privacy and security.
- Collaborative etiquette in digital environments (knowing when to use email vs. chat vs. meetings).

This results in lost time, repeated errors, cyber risks and poor digital communication – all of which impact business performance.

THE PSYCHOLOGICAL TRAP: "I KNOW THIS ALREADY"

Digital naïves live with a unique cognitive bias: that belief equates to expertise. They've used Google Docs since school, so they think they understand cloud collaboration. They've had smartphones since they were 12, so they assume they know digital etiquette. They've been online all their lives, so they think they know how to navigate misinformation.

However, real digital fluency is not about being fast. It's about being intentional, discerning and adaptable. Overconfidence can become a barrier to learning, especially when it's validated by organisations that never assess or challenge it.

PHOTO: WAYHOMESTUDIO, FREEPIK; SUPPLIED

THE HIDDEN COST FOR ORGANISATIONS

For managers, overlooking digital naivety comes at a cost. Some of the most common hidden impacts include:

- Increased IT help desk tickets for basic tasks.
- Security breaches from phishing attacks or poor password practices.
- Miscommunication and project delays due to poor tool usage.
- Underperformance in data-driven tasks or digital collaboration.
- Frustration among teams with uneven digital skills.

These gaps are rarely addressed because digital naïves are expected to already 'know it all'. This leads to embarrassment, resistance to training, or even disengagement. Organisations pay the price in inefficiency, team conflict and missed opportunities.

EDUCATION SYSTEMS DON'T ADDRESS THE PROBLEM

Educational systems often focus on using tech rather than understanding it. Students are provided with iPads and laptops but are not taught information evaluation, digital literacy, responsible social media use, data privacy and ownership, productivity workflows, or digital organisation.

By the time they reach the workplace, these students can scroll and swipe like experts, but they don't know how to manage digital overload, prioritise effectively in digital spaces, or protect their digital identity. We've created a generation of technology consumers, not digital thinkers.

WHAT CAN MANAGERS DO?

With the right strategies, we can transform digital naïves into digitally empowered contributors. Here are some pointers:

1. Don't assume – assess
Stop assuming digital competence based on age or confidence. Create baseline assessments or onboarding tasks that measure actual tool fluency (creating a pivot table, scheduling a Zoom meeting, formatting a professional email thread).

2. Teach digital hygiene
Offer training that covers essential digital practices: password managers, phishing detection, version control, safe file sharing and responsible data handling. Make this mandatory for all staff.

3. Embed digital fluency into culture
Make digital mastery a part of performance reviews and professional development. Encourage knowledge-sharing forums where team members can share shortcuts, tools and workflow hacks.

4. Mentor, don't mock
When someone struggles with tech, don't roll your eyes. Pair them with a patient colleague. Create a psychologically safe environment where asking tech-related questions isn't embarrassing.

5. Design inclusive digital workflows
Choose tools with an intuitive design and provide cheat sheets or walkthroughs. Don't just say, "use Notion". Show how and why. Help teams connect the tool to their task and goals.

6. Redefine 'digital native'
Start using 'digitally fluent' or 'digitally literate' as your benchmark. Being born into tech doesn't matter. Being able to use it to think, create, protect and solve problems does.

PROVIDING GUIDANCE CAN CHANGE THE STATUS QUO

It's easy to be dazzled by someone who seems effortlessly at home in the digital realm. However, real digital power isn't just about using technology; it's about a profound understanding of its underlying principles, implications and limitations.

This distinction is vital. Simply being able to operate a device or an application doesn't equate to digital literacy, critical thinking, or the ability to truly leverage technology for meaningful impact. Even the most connected generation is not inherently equipped with this deeper understanding. It needs deliberate guidance, structured learning and thoughtful mentorship to transition from casual users to truly discerning, influential digital citizens.

Our role as leaders is to provide crucial guidance, fostering not just competence but genuine understanding and wisdom in the digital age. ●

Emmanuel K. Gadasu holds an MSc IT and Law. He is a member of the Institute of ICT Professionals Ghana (IIPGH), a data protection and cybersecurity consultant, and a practitioner and trainer.

Emmanuel K. Gadasu is a member of IIPGH

Crescer num mundo digital não garante competência digital. **Emmanual K. Gadasu** explora por que a proximidade com a tecnologia muitas vezes mascara a falta de fluência.

Rodeado por telas, mas com dificuldades em desenvolver habilidades – imersão digital não significa fluência digital

HÁ MUITOS INGÉNUOS DIGITAIS: CERCADOS PELA TECNOLOGIA, MAS SEM HABILIDADE PARA A USAR

Na nossa era de hiperconectividade, existe uma premissa perigosa embutida nas nossas práticas de contratação, salas de aula e conversas diárias: a de que crescer com a tecnologia torna alguém competente para a usar.

Chamamos os jovens de hoje de "nativos digitais", um termo criado para capturar a ideia de que indivíduos nascidos num mundo digital são inerentemente fluentes no uso de ferramentas digitais. No entanto, isso ignora a situação difícil dos 'ingénuos digitais'.

Os ingénuos digitais são indivíduos imersos em tecnologia, mas que não possuem as habilidades, o discernimento ou o pensamento crítico necessários para a usar de forma eficaz, produtiva ou ética. Eles podem navegar pelo TikTok com facilidade, se orientar nas redes sociais de olhos vendados ou baixar um novo aplicativo em segundos, mas têm dificuldades com a resolução básica de problemas digitais, higiene em cibersegurança, normas de comunicação digital ou softwares de produtividade.

Esta não é apenas uma observação académica, é uma questão premente em locais de trabalho, escolas e salas de reuniões, e que precisamos de abordar com urgência.

NÃO É APENAS UM PROBLEMA DA JUVENTUDE

O problema transcende a idade. Qualquer pessoa pode se tornar digitalmente ingénua quando presume que familiaridade equivale a proficiência, ou quando os seus hábitos digitais são mais moldados pelo entretenimento do que por um propósito.

Um jovem recém-formado que consegue criar um vídeo viral para o Instagram, mas não sabe usar fórmulas do Excel. Um profissional de meia-carreira que encaminha todos os links suspeitos sem pensar. Um gestor que acredita que "transformação digital" significa comprar os gadgets mais recentes. Todos esses são exemplos de imersão digital sem competência digital.

ILUSÃO DE PRODUTIVIDADE:

Muitos gestores presumem que os funcionários mais jovens irão naturalmente "entender" a tecnologia. Afinal, eles cresceram com isso. No entanto, ingénuos digitais geralmente carecem de:

- Noções básicas de alfabetização digital (nomeação correcta de arquivos, gerenciamento de pastas na nuvem).
- Pensamento estratégico com ferramentas (escolher o software certo para uma tarefa).
- Entendendo a privacidade e a segurança de dados.
- Etiqueta colaborativa em ambientes digitais (saber quando usar e-mail, chat ou reuniões).

Isso resulta em perda de tempo, erros repetidos, riscos cibernéticos e comunicação digital deficiente, tudo isso impactando o desempenho dos negócios.

FOTO: WAYHOMESTUDIO, FREEPIK

A ARMADILHA PSICOLÓGICA: "EU JÁ SEI DISSO"

Os ingénuos digitais convivem com um viés cognitivo peculiar: que crença é sinónimo de conhecimento especializado. Eles usam o Google Docs desde a escola, então acham que entendem de colaboração na nuvem. Eles têm smartphones desde os 12 anos, então presumem que conhecem a etiqueta digital. Eles passaram a vida toda online, então acham que sabem como lidar com a desinformação.

No entanto, a verdadeira fluência digital não se resume à velocidade. Trata-se de ser intencional, criterioso e adaptável. O excesso de confiança pode se tornar uma barreira para a aprendizagem, sobretudo quando é validado por organizações que nunca o avaliam ou questionam.

O CUSTO OCULTO PARA AS ORGANIZAÇÕES

Para os gestores, ignorar a ingenuidade digital tem um preço. Alguns dos impactos ocultos mais comuns incluem:

- Aumento no número de chamados ao suporte de TI para tarefas básicas.
- Violações de segurança decorrentes de ataques de roubo de identidade ou práticas inadequadas de senhas.
- Falhas de comunicação e atrasos no projecto devido ao uso inadequado de ferramentas.
- Desempenho abaixo do esperado em tarefas baseadas em dados ou em colaboração digital.
- Frustração em equipas com habilidades digitais desiguais.

Essas lacunas raramente são abordadas porque se espera que os ingénuos digitais já 'sabem tudo'. Isso leva a constrangimento, resistência ao treinamento ou até mesmo ao abandono do projecto. As organizações pagam o preço com ineficiência, conflitos de equipa e oportunidades perdidas.

OS SISTEMAS EDUCACIONAIS NÃO ABORDAM O PROBLEMA

Os sistemas educacionais muitas vezes se concentram no uso da tecnologia em vez de na sua compreensão. Os alunos recebem iPads e laptops, mas não aprendem sobre avaliação de informações, alfabetização digital, uso responsável das redes sociais, privacidade e propriedade de dados, fluxos de trabalho de produtividade ou organização digital.

Quando chegam ao mercado de trabalho, esses estudantes conseguem navegar e deslizar na tela como especialistas, mas não sabem como lidar com a sobrecarga digital, priorizar tarefas de forma eficaz em espaços digitais ou proteger a sua identidade digital. Criamos uma geração de consumidores de tecnologia, não de pensadores digitais.

O QUE OS GESTORES PODEM FAZER?

Com as estratégias certas, podemos transformar ingénuos digitais em colaboradores capacitados digitalmente. Aqui vão algumas dicas:

1. Não faça suposições – avalie.
Pare de presumir competência digital com base na idade ou na confiança. Crie avaliações iniciais ou tarefas de integração que avaliem a fluência real na ferramenta (criar uma tabela dinâmica, agendar uma reunião no Zoom, formatar uma sequência de e-mails profissionais).

2. Ensine higiene digital
Ofereça formação que abranja práticas digitais essenciais: gerenciadores de senhas, detecção de roubo de identidade, controlo de versão, partilha segura de arquivos e tratamento responsável de dados. Torne isso obrigatório para todos os funcionários.

3. Incorpore a fluência digital na cultura.
Incorpore o domínio digital às avaliações de desempenho e ao desenvolvimento profissional. Incentive fóruns de partilha de conhecimento onde os membros da equipa possam partilhar atalhos, ferramentas e dicas para optimizar o fluxo de trabalho.

4. Mentore, não goze.
Quando alguém tem dificuldades com tecnologia, não revire os olhos. Junte-o a um colega paciente. Crie um ambiente psicologicamente seguro onde fazer perguntas relacionadas à tecnologia não seja constrangedor.

OFERECER ORIENTAÇÃO PODE MUDAR O STATUS QUO

É fácil ficar deslumbrado por alguém que parece se sentir à vontade no mundo digital sem esforço algum. No entanto, o verdadeiro poder digital não se resume apenas ao uso da tecnologia; trata-se de uma compreensão profunda dos seus princípios subjacentes, implicações e limitações.

Essa distinção é vital. A simples capacidade de operar um dispositivo ou aplicativo não equivale à alfabetização digital, ao pensamento crítico ou à capacidade de realmente aproveitar a tecnologia para gerar um impacto significativo. Nem mesmo a geração mais conectada possui inerentemente essa compreensão mais profunda. É necessária orientação deliberada, aprendizagem estruturada e mentoria atenciosa para que a transição de usuários casuais para cidadãos digitais verdadeiramente exigentes e influentes seja possível. ●

Emmanuel K. Gadasu possui mestrado em TI e Direito. Ele é membro do Instituto de Profissionais de TIC do Gana (IIPGH), consultor de protecção de dados e cibersegurança, além de profissional e instrutor na área.

ELEVATING THE CARIBBEAN: FROM CONNECTIVITY TO GLOBAL COMPETITIVENESS

At a global crossroads, the Caribbean is leveraging digital connectivity to compete on the world stage, says **Teresa Wankin**, Secretary General of CANTO.

The 2026 CANTO Annual Conference & Trade Exhibition takes place in Punta Cana, Dominican Republic, in August

Teresa Wankin, Secretary General of CANTO

At the crossroads of North America, Latin America, Europe and Africa lies a region of more than 40-million people across the Greater Caribbean basin – a region that serves as a digital bridge between continents and an increasingly vital node in the global connectivity ecosystem.

This is why the Caribbean matters. It is home to critical submarine cable routes powering international traffic. Its telecommunications markets are highly liberalised and competitive. Fibre networks are expanding. Spectrum policy is evolving. Next-generation mobile infrastructure is advancing. Satellite integration is strengthening resilience. Cybersecurity frameworks are maturing. Fintech ecosystems are growing. Digital public services are scaling.

For Small Island Developing States, digital infrastructure is not optional; it is existential. It underpins tourism, financial services, education, energy, disaster resilience and economic competitiveness.

At the centre of this digital transformation stands CANTO, the region's leading ICT association – a trusted platform where policy aligns with investment and strategy translates into action.

For more than four decades, CANTO has united telecommunications operators, ICT providers, regulators, policymakers, technology companies and development partners across the Caribbean.

SHAPING THE DIGITAL FUTURE OF THE REGION

In August 2026, the 41st CANTO Annual Conference & Trade Exhibition will be hosted at the Hard Rock Hotel & Casino in Punta Cana, Dominican Republic, under the theme: '*Elevate the Caribbean: From Connectivity to Global Competitiveness*'. The theme reflects a decisive shift. The Caribbean has moved beyond the question of access and is now focused on resilience, regulatory maturity, innovation ecosystems and global positioning.

CANTO 2026 will convene prime ministers, ICT ministers, regulators, CEOs of telecom operators, global technology firms, infrastructure investors, fintech innovators, satellite providers, cybersecurity leaders and development institutions – all within one strategic forum.

For companies seeking to engage the Caribbean market, the conference will provide access to more than 30 jurisdictions on one platform. It is where infrastructure partnerships will be initiated, regulatory insights gained, investment conversations started and regional collaboration strengthened.

READY TO COMPETE

A defining highlight of the conference will be the prestigious CANTO ICT Ministerial Award. This award recognises a regional minister whose leadership has accelerated digital transformation, modernised regulatory frameworks, expanded broadband access, strengthened investor confidence and advanced regional cooperation.

By celebrating visionary public leadership, CANTO reinforces accountability, transparency and policy environments that support sustainable ICT growth. For international partners, the award signals markets where political will and digital ambition align.

The Caribbean is a region of agility and reform. Collectively, it represents an interconnected digital economy spanning telecommunications, fintech, energy technology, tourism technology, digital identity, cybersecurity, cloud infrastructure and e-government transformation.

Individual island states may appear small, but together, the Greater Caribbean represents a coordinated, investment-ready ecosystem strategically positioned between major global markets. Its geographic scale may be compact, but its strategic influence is expanding.

CANTO provides structured access to policymakers, regulators and operators. It offers exposure to multiple markets in a single setting. It creates a trusted space for public-private dialogue. And it positions partners within a coordinated regional framework rather than fragmented island-by-island engagement.

> "THE CARIBBEAN IS NOT DEFINED BY SIZE. IT IS DEFINED BY CONNECTIVITY, RESILIENCE AND STRATEGIC RELEVANCE."

As continental bodies strengthen professional standards, research and certification frameworks across Africa and the Caribbean, the region is advancing coordinated policy dialogue, infrastructure investment, and regional digital resilience models tailored for Small Island Developing States.

There is a tremendous opportunity in deeper cross-regional collaboration, from infrastructure partnerships and professional exchange to joint research, innovation alignment and digital governance dialogue.

The future of global ICT growth will increasingly depend on strategic cooperation between dynamic regions. The Caribbean is ready to be part of that conversation.

CANTO invites global stakeholders to join it in Punta Cana in August 2026 to see how connectivity can evolve into competitiveness, policy can align with investment, and partnership can drive progress. ●

Exploring a collaboration

"TICON Africa would welcome the opportunity to explore a collaboration with CANTO, a respected organisation with four decades of leadership in advancing ICT across the Caribbean and beyond," says Dr Jannie Zaaiman, Secretary General of TICON Africa.

"A partnership grounded in mutual respect and shared purpose could enable practical two-way exchange, connecting professionals, educators, institutions and industry leaders across regions to share best practices, strengthen skills development and digital trust, and contribute meaningfully to a more connected, capable and globally engaged ICT profession."

PHOTOS: MARKO RAJEVIC/UNSPLASH; SUPPLIED

International Telecommunication Union (ITU) Secretary-General Doreen Bogdan-Martin at the AI for Good Global Summit 2025 in Geneva

KIGALI CONGRESS SHINES SPOTLIGHT ON AFRICA'S FUTURE CONNECTIVITY

Influential African digital connectivity event draws industry leaders, government representatives and innovators focused on collaboration, investment, policy and more.

More than 3,000 delegates from 99 countries and more than 1,300 companies attended the Mobile World Congress (MWC) Kigali 2025 in Rwanda to discuss how to shape rapid digital and mobile innovation across the continent.

The three-day event held at the Kigali Convention Centre from 21-23 October 2025 featured four dedicated summit platforms focused on fintech, 5G, security and AI, with more than 230 speakers, almost 80 exhibitors and 58 expert-led sessions.

MWC Kigali 2025 aimed to highlight the impact of mobile technology in driving change and inclusion across African industries and societies.

Speaking at the opening ceremony, International Telecommunication Union (ITU) Secretary-General Doreen Bogdan-Martin called for substantial investment in digital infrastructure on the continent.

She noted that the ITU's Digital Infrastructure Investment Initiative was launched to connect data with solutions, build skills and mobilise finance.

In his keynote address, Rwanda President Paul Kigali told the audience he strongly believed in the power of technology to connect people and drive real transformation. In a short period, Africa had gone from having limited connectivity to becoming a mobile-driven economy, he said. With new technologies taking the continent even further ahead, the possibilities were endless.

AFRICA'S DIGITAL FUTURE

In an interview with MWC 2025's official media partner, *TechAfrica News*, Rwanda Minister of ICT and Innovation Paula Ingabire said, "You can't think of Africa's digital future without talking about AI. It's already here. So, as a continent, we're also preparing how we put in the foundational pieces to make sure that we're not exacerbating the digital divide ..."

Ingabire stressed the importance of Africa's digital future being inclusive and responsive to local needs, for example, through ensuring that people have access to affordable devices and by building content in local languages.

Noting Rwanda's position as a "proof-of-concept hub" for the continent, she added that much of the country's digital progress had been thanks to partnerships. "And it's partnerships that will also take us forward on some of the ambitions that we have."

Developing skills and finding African solutions to African problems were vital, she stressed. "If we don't have our young people ... trained and skilled to leverage these digital technologies and then use those skills to solve our problems, we'll have a generation that is disconnected from this opportunity ..."

Rwanda's President Paul Kagame

Importantly, it was not just about implementing technology for its own sake – it was about solving problems.

"What is left for us is to get the work done and to take risks to make sure we can really benefit from the promises that technology gives us," she said.

MWC Kigali 2026 will take place in June, in partnership with the Rwanda Ministry of ICT & Innovation. Find out more or register your interest here: https://www.mwckigali.com/

PHOTOS: ITU PICTURES/FLICKR; FLICKR

Our Vision

To become the most reliable partner in ICT development in Ghana and beyond.

The Institute of ICT Professionals, Ghana (IIPGH) is a professional association made up of professionals in various domains of Information and Communication Technology (ICT) practice. The Institute is a connector of ICT professionals from government MDAs, educational institutions, corporate organizations, start-ups, investors and the civil society organizations to create a vibrant ICT ecosystem.

The Coding Academy

The IIPGH Coding Academy is a structured, paid training program designed to equip learners of all ages - children (6yrs +), teenagers, adults, and professionals, with essential coding and digital skills. Offering flexible online and in-person learning options, the academy provides customized learning paths to meet the needs of every student, from beginners to advanced learners.

Professional Skills Development

ICT skills training and continous professional development for students, young graduates and professionals. Emerging technology training and other forms of capacity building to support the digital transformation agenda of the country.

Industry-led Public education

ICT public education and sensitisation through media engagements and publications online, on radio, television, newspaper and social media.

The Coding Caravan

The Coding Caravan is a nationwide digital inclusion initiative that has, over the years, delivered hands-on ICT and coding education to underserved and underserved communities across Ghana. Bringing digital opportunities to all.

The Coding Caravan at the Demonstration School for the Deaf, Mampong-Akuapem

Inclusion took center stage on July 11, 2025, as 120 students and 15 teachers at the Demonstration School for the Deaf, Mampong-Akwapem experienced a full-day digital skills training workshop like never before. This landmark event, organized by the Institute of ICT Professionals Ghana (IIPGH) in partnership with the Ghana Chamber of Telecommunications and sponsored by Helios Towers Ghana, marked a significant milestone in bridging digital gaps for Ghana's deaf community.

@iipgh.org @iipgh1 iipgh Institute of ICT Professionals, Ghana (IIPGH) @IIPGH

info@iipgh.org

WWW.IIPGH.ORG

Scan QR code to become a member

Digital skills that keep up with the speed of change.

Building digital capacity through globally certified training for the modern workplace.

We provide internationally recognized certification and training across key areas like data literacy, rartificial intelligence, robotics and cloud computing, preparing Zimbabweans for work that works anywhere.

Future-ready skills start here.

CONTACT US
08612 001 800
info@csz.org.zw

csz.org.zw

ICDL
The Digital Skills Standard

CSZ
COMPUTER SOCIETY OF ZIMBABWE