

Uganda's Artificial Intelligence & Emerging Technologies Strategy

CIPESA Submission to the National Emerging Technology Strategy Taskforce Ministry of ICT and National Guidance

March 2026

Introduction

The Collaboration on International ICT Policy for East and Southern Africa (CIPESA) is pleased to contribute to the ongoing call for inputs to Uganda's National Artificial Intelligence (AI) and Emerging Technologies Strategy spearheaded by the Ministry of ICT and National Guidance. This input builds on CIPESA's broader work that supports context-relevant, future-looking and human-centered ICT policy thinking in Uganda and across Africa.

AI and other emerging technologies can provide pathways for Africa to address its development challenges and deliver equitable growth, a vision reflected in the [Continental AI Strategy](#). At the same time, these technologies also pose significant threats to societies, civic spaces and democratic governance. Across Africa, AI adoption is already underway with measurable results in sectors like public administration, agriculture, and healthcare, but [research](#) also shows that AI is outpacing regulation, with instances of surveillance misuse, opaque decision-making, and exclusionary outcomes, amidst weak governance. In Uganda, systems such as AI-enhanced customs risk profiling at the Uganda Revenue Authority (URA) demonstrate tangible administrative benefits, while concerns about surveillance technology (e.g., facial recognition cameras deployed post-2020 protests) highlight governance gaps. This dual reality of promise and peril underscores the need for a strategy that is both developmental and rights-protective.

This submission is organised around clear issue areas, each starting with context and logic, followed by actionable recommendations, with examples to make the rationale transparent and useful for policymakers.

1. Inclusive Citizen Engagement and Social Accountability

AI presents a transformative opportunity to deepen inclusive citizen engagement and social accountability, two pillars of democratic governance that have historically been constrained by linguistic, literacy and accessibility barriers in Uganda. AI-powered tools, particularly Natural Language processing (NLP), text-to-speech, and speech-to-text technologies, can [bridge the communication gap between government and citizens](#) by enabling feedback, grievances reporting and oversight to be relayed in local languages without requiring fluency in English or formal literacy. This would empower millions of citizens, including those in rural areas, those with low literacy levels, and youths, to actively participate in governance processes such as tracking public expenditures and reporting service delivery failures in real time. This recommendation supports Uganda's Digital Vision 2040, which advances the need to leverage Information and Communication Technologies (ICT) to enhance citizen participation and feedback in government programmes.

For example, in South Africa, civil society uses AI-assisted tools to [monitor government expenditure and flag irregularities](#) in public procurement. In Nigeria, Neuro-Linguistic Programming (NLP) systems have been piloted to translate government service interfaces into multiple local languages to broaden citizen access.

Recommendations for the Strategy

1.1 Adopt "rights-by-design" as a binding condition for all AI-powered citizen engagement tools deployed by or on behalf of the government to ensure accessibility, avenues for redress and independent oversight.

1.2 Conduct comprehensive AI literacy and awareness campaigns to ensure that all citizens understand the opportunities, risks, rights, and responsibilities associated with using AI-mediated tools.

Provision should be made for the private sector, media, local leaders and civil society organisations (CSOs) in promoting and contributing to AI literacy through their programming and tailored trainings.

1.3 Mandate and provide for multilingual feedback channels capable of receiving and processing input in Uganda's major local languages across public service portals and call centres. This means expansion of actionable strategies to go beyond portals to integrating all AI system-based platforms including SMS, USSD Codes and Interactive Voice Response (IVR) systems.

1.4 The strategy should provide for Human Rights Impact Assessments to ensure systems are based on community participation before deployment.

2. Public Service Delivery and Governance Transformation

AI and emerging technologies also offer pathways to fundamentally transform public service delivery and governance by making government systems more transparent, accountable and accessible. Through use cases such as the automation of repetitive tasks which can free up civil servants for higher value work, to advanced data analytics, which lend greater precision, speed and accuracy in government processes, AI systems can streamline processes currently suffering from delays and also enable traceability and transparency of these same processes to citizens and businesses. This can allow for reductions in bureaucratic bottlenecks as well as help to build trust in public institutions.

For example, URA uses AI in its Automated Systems for Customs Data (ASYCUDA) to conduct market price research, identify high-risk shipments, and improve compliance. In Rwanda, the government leverages AI analytics for performance management in public services, guided by a National AI Policy.

Recommendations for the Strategy

2.1 Enact comprehensive AI legislation that has specific provisions on algorithmic transparency, human oversight, human rights impact assessment, digital sovereignty, and the right to redress for citizens in public AI use cases.

2.2. Establish an interoperable government data framework that enables secure data sharing across agencies while protecting citizens' rights. Any such framework that leverages UGHub must be preceded by an independent governance audit of UGHub's access controls, data sovereignty provisions, and civilian oversight mechanisms, with findings published before integration is adopted as policy. Until that audit is complete and its findings addressed, UGHub should not be recommended as the default integration pathway. Privacy protections, data minimisation principles, and independent oversight are preconditions for operationalisation, not considerations to be addressed after deployment.

2.3 Require that all public sector AI deployments are transparent and auditable, including conducting and publishing Human Rights Impacts Assessments, procurement disclosures and clear explanations of each system's purpose, scope, and safeguards. Canada's Ontario Human Rights Commission has, for instance, provided a [dedicated human rights impact assessment tool](#) that focuses on compliance in federal service by developers and administrators of AI systems.

2.4 Provide for the integration of AI in resource allocation and countering corruption. AI can optimise budgeting and flag financial irregularities. Provision should be made for maximum deployment of AI algorithm-based systems such as machine learning in key financial agencies such as the Ministry of Finance, Planning and Economic Development and the Ministry of Local Government for data analysis.

2.5 In addition, existing mechanisms provide for the shift from paper-based systems to complete embrace of the AI-powered Optical Character Recognition (OCR) and document processing tools in order to promote digitisation of all key sectors such as health and land for precision and accuracy.

3. Development of Critical Sectors to Ugandan Society and Economy

AI and emerging technologies can advance critical sectors central to Uganda's development. The strategy should identify priority development sectors, such as health and agriculture.

Uganda's health system faces workforce shortages and unequal access to diagnostics. AI could expand diagnostic reach, support health workers with decision-support tools, and improve patient triage, especially in resource-limited districts. Indeed, AI is already demonstrating value, [including in Uganda](#), for instance, through a novel [AI-powered](#) medical supply chain data system. Elsewhere, Rwanda's AI-assisted triage systems have been used to support nurses in rural clinics to prioritise care and manage patient loads. In Ghana, AI chatbots provide basic health information and referrals where health personnel are scarce.

In agriculture, where smallholder farmers constitute the backbone of the economy, AI-powered predictive analytics [enable](#) real-time pest and disease diagnosis, yield forecasting and personalised advice to farmers. In Cameroon, smartphone-based AI tools help farmers diagnose crop diseases from photos; whereas in Rwanda, precision agriculture systems combine satellite data with AI to provide localised weather and soil insights to smallholder farmers.

Recommendations for the Strategy

3.1 Provide for Human Rights Impact Assessments for high-risk AI systems in critical sectors such as agriculture, education and healthcare to prevent discriminatory and harmful outcomes and to ensure equitable access to services.

3.2 Adopt a phased approach to establish sector-specific AI sandboxes for priority sectors such as agriculture, education, and health, to pilot context-relevant solutions under supervised environments before full-scale deployment.

Sandboxes should be done in partnership with universities and other recognised tech hubs under a government-controlled and safe environment that allows for testing , including of common bias against vulnerable populations to ensure safety, inclusions, ethical and cultural alignment of AI systems.

3.3 Prioritise the development of localised training datasets to ensure AI tools are suited to the local contexts they are deployed in. Research has shown that AI systems that are trained on non-localised datasets often do not reflect local geography (soil, crop types, climate and pest prevalence) and health demographics (fertility, mortality, nutritional habits, etc.). Efforts to map publicly available datasets

such as [this one](#) would be a useful starting point in understanding critical data gaps to these sectors and how to address them.

4. What Success Would Look Like

If Uganda fully utilised the opportunities created by AI and emerging technologies, success would mean:

1. A rights-respecting digital society: Success would mean Uganda has moved beyond high-level ethical principles to implement a "rights-by-design" approach. All AI systems are transparent, auditable, subject to independent oversight, and aligned with human rights principles. This ensures that the deployment of AI and emerging technologies never comes at the expense of human rights. A learning example is the 2023 enforcement of Kenya's Data Protection Act (2019), which halted [WorldCoin's](#) biometric data collection and mandates human rights impact assessments.

2. An inclusive digital economy: A thriving local AI ecosystem with local startups, sufficient local data storage capacity, exportable digital solutions, and AI solutions that directly improve the lives of millions of Ugandans. [India's Digital Public Infrastructure \(DPI\)](#) approach has enabled scalable, population scale, low-cost solutions underpinned by public-private partnerships and open architecture. Uganda can pick some lessons.

3. Meaningful participatory governance: Every Ugandan, including communities that are often marginalised, can engage in governance at various levels, including through their native languages, in online and offline platforms. Public fora such as social media platforms, which increasingly mediate civic engagement unofficially, should be leveraged in citizen-government relations since they are already de facto public squares. The [Kampala Pothole Exhibition](#), a citizen-led social media campaign that elicited government response to the road and drainage infrastructure issues, offers lessons.

4. A citizen-responsive state: Evidence-driven decisions using advanced analytics and other automated processes inform policy and public services, and engender a culture of greater transparency. A case study such as this [citizen-led initiative, TARA](#), with the private sector, can be benchmarked to inform how evidence-based decision-making could be operationalised.

5. Inclusive development: priority sectors such as agriculture, education, and health demonstrate measurable improvements in outcomes and create benefits for all, not some.

5. What Would Stop AI and Emerging Technologies from Benefiting Ugandans

1. A persisting digital divide, characterised by limited digital infrastructure, high internet costs, gendered access and use, as well as the rural-urban access gap limit how much the majority of the population can benefit from AI and other emerging technologies.

2. Unrepresentative and biased datasets are prone to replicating and magnifying existing societal prejudices and inequalities, especially to the most marginalised groups and individuals.

3. Low AI and digital literacy skills necessary for harnessing AI will limit usage both in the private and public sectors.

4. Uganda's data protection and cybercrime laws do not cover AI-specific risks. Opaque algorithms in tax, health, and content moderation can create exclusion and discrimination, and pose a threat to citizen trust in AI systems.

5. Local AI startups lack access to affordable finance, meaning foreign AI systems dominate. Uganda could become a raw-data provider for foreign platforms, thereby capturing minimal economic value.
6. AI-driven disinformation, including through generative AI technologies, can threaten public discourse, undermine civic participation and erode democratic integrity.
7. Opaque surveillance systems or human modelling enabled by AI systems, undermine fundamental freedoms and create mistrust in some emerging technologies.
8. AI-driven exploitation in the form of lack of meaningful decisional control over data usage, unbridled data extractive practices as well as worker exploitation in the form of ‘ghost labour’ in the back of AI systems.
9. Lack of a specific law to provide for and regulate the use and deployment of AI, promote and foster local innovation and economic growth while protecting human rights of citizens and protecting them against exploitation and digital colonialism.
10. Unaccountable AI-adjacent infrastructure already operating at scale. Uganda's mobile money platforms such as MTN MoMo and Airtel Money have deployed AI-adjacent credit decisioning and behavioural profiling for millions of citizens with no algorithmic transparency, no independent audit, and no meaningful redress mechanism. These platforms are probably the closest existing precedent for the governance challenges this strategy seeks to address: they scaled without a regulatory sandbox, without civil society oversight, and without a halt authority. A strategy that applies its proposed standards only to future deployments while leaving incumbent platforms ungoverned creates a two-tier system by design. The standards proposed in the National Strategy on AI must apply retrospectively to AI-adjacent systems already operating at scale.

6. Additional Strategic Recommendations

This section provides additional recommendations to Uganda’s National AI and Emerging Technologies Strategy by addressing cross-cutting foundations, governance mechanisms, and structural realities that influence AI adoption beyond sectoral use cases. The recommendations are grounded in CIPESA research, lessons from African experiences, and international normative frameworks such as the UNESCO Recommendation on the Ethics of Artificial Intelligence,, and the African Union (AU) [Continental AI Strategy](#).

6.1 Human Rights-Centered AI Governance

AI systems are already shaping access to employment, credit, public services, and national identification in Uganda. However, traditional privacy and data protection laws are insufficient to prevent discrimination or exclusion where AI exclusively sorts, classifies, and influences citizens’ lives. Uganda must adopt a governance approach that embeds human rights and social justice principles at the core of AI ecosystem design.

Recommendations

6.1.1 Adopt a [data justice approach](#) framework that balances collective and individual rights, preventing algorithmic discrimination in areas such as credit scoring, employment, and identity verification.

6.1.2 Anchor Uganda’s AI governance values such as agency, dignity, equality, and non-discrimination in national policy, informed by the [UNESCO’s Recommendation on the Ethics of Artificial Intelligence](#).

6.1.3 Introduce risk-based thresholds for AI use in public and private sectors, learning from the [European Union \(EU\) AI Act](#), so that high-impact systems are subject to ethical review and human oversight.

6.2 Foundations for Inclusive and Sovereign AI Development

Long-term success depends on building human and institutional capacity, representative data, and interdisciplinary teams that treat AI as a socio-technical phenomenon. Uganda's AI ecosystem must prioritise skills development, local infrastructure, and ethical data practices to ensure inclusive adoption and prevent dependency on foreign providers.

Recommendations

6.2.1 Promote standardising curation practices and prioritising inclusion of women, minorities, and rural populations to ensure representative and de-biased datasets. Example: AI health diagnostics in Uganda require local datasets to avoid misdiagnosis in under-served communities.

6.2.2 Invest in human and institutional capacity through dedicated national AI research & innovation funds supporting local research labs, university partnerships, and incubators.

6.2.3 Build local data infrastructure, including national AI research centres and data centres to enhance data sovereignty and operational independence from foreign AI platforms and cloud providers.

6.2.4 Launch AI-for-development pilots in agriculture, health, and education to generate context-specific lessons and ensure evidence-based scale-up. Examples include Rwanda's AI-assisted agricultural advisories and offline-first AI health triage in Uganda.

6.2.5 Provide AI and data literacy training for public servants, regulators, judges, and extension workers to improve oversight and service delivery.

6.3 AI for Socio-Economic Transformation

AI can expand economic opportunities for youth, digital entrepreneurs, and informal workers when governance systems are supportive and inclusive. Leveraging AI for sectors like agriculture, health, and education can produce tangible development outcomes.

Recommendations

6.3.1 Prioritise youth-led digital entrepreneurship and AI startups through enabling policies, access to finance, and AI skills development, in line with Uganda's [National Development Plan IV](#).

6.3.2 Promote AI for evidence-driven governance across ministries, leveraging data analytics to inform policy and service delivery. Example: Kampala Pothole Project used citizen-generated data to inform municipal decisions.

6.3.3 Establish formal partnerships between government, private sector, and academia to scale AI solutions with measurable development indicators (e.g., productivity gains, poverty reduction).

6.3.4 Prioritise high-impact use cases such as precision agriculture advisories, rural health triage systems, and education delivery in low-connectivity areas, ensuring tools are affordable and accessible.

6.3.5 Link AI deployment to Uganda’s digital trade and economic diversification goals, enhancing the country’s participation in the global digital economy.

6.4 Safety, Accountability, and Citizen Protection

Unchecked AI adoption can exacerbate inequities, undermine democratic processes, or damage the environment. Safeguards are essential to ensure AI serves citizens’ interests. Notably, opaque AI systems create “invisible injustices” where citizens cannot identify, challenge, or correct automated harms. Ensuring explainability and accessible redress builds confidence and protects rights.

Recommendations

6.4.1 Conduct forward-looking impact assessments of AI’s social, educational, and environmental effects, including [climate footprints](#) of data infrastructures (drawing on lessons from Kenya’s biometric data restrictions on WorldCoin, 2023).

6.4.2 Embed monitoring and redress mechanisms into all AI systems, with independent review by civil society and experts. Redress mechanisms should be clear and legally backed to enable the timely reporting and handling of AI-related grievances.

6.4.3 Ensure transparency and contestability: require plain-language notices for AI-influenced decisions, mandatory human review for critical decisions (eligibility, tax, content moderation), and create a national AI complaints portal to register, track, and resolve citizen complaints related to AI systems.

6.4.4 Establish risk classification and “red-line” AI categories that prohibit or tightly regulate harmful uses such as public surveillance, including [state-deployed surveillance systems](#); predictive policing, and election-related algorithmic targeting, building on lessons from the EU AI Act risk tiers, UNESCO and regional guidance.

6.4.5 Require all public institutions that deploy or procure AI systems to publish internal AI use policies covering data handling, staff accountability, human oversight, and redress mechanisms. These policies must be publicly accessible, reviewed annually, and subject to independent audit. Institutions that cannot demonstrate compliance should not be permitted to deploy AI systems. Including CSOs

6.5 Continental Considerations

AI development intersects with critical minerals, security technologies, and continental market dynamics. The [Africa Mining Vision](#) highlights the need to integrate natural resource planning with technology sovereignty. Similarly, the market dominance of global Big Tech platforms in Africa necessitates coordinated regulatory responses. Uganda must align national strategies with regional priorities to avoid economic marginalisation and ensure Africa benefits from global AI advances.

Recommendations

6.5.1 Integrate AI planning with national critical minerals strategies (e.g., for cobalt, lithium, rare earth elements) aligned with the Africa Mining Vision, to safeguard Uganda’s interests in emerging tech hardware supply chains.

6.5.2 Collaborate with African Union member states to develop continental frameworks for Big Tech accountability, including algorithmic transparency, intellectual property rights, consumer protections, antitrust enforcement, access to information, and labour protections for platform workers.

6.5.3 Align Uganda’s national AI strategy with the African Union Continental Artificial Intelligence Strategy, 2024, to ensure that Uganda easily navigates the complex AI landscape within Africa and

across the globe. Issues such as regional cooperation, borderless digital economy, harmonising data protection and governance and global equating alongside commonalities in AI ethics will be attained.

References

1. CIPESA. *State of Internet Freedom in Africa 2025* — [https://cipesa.org/wp-content/files/reports/State of Internet Freedom in Africa Report .pdf](https://cipesa.org/wp-content/files/reports/State_of_Internet_Freedom_in_Africa_Report_.pdf)
 2. CIPESA. *An Artificial Intelligence Eco-System for Uganda Policy Brief* — [https://cipesa.org/download/briefs/An Artificial Intelligence Eco-System for Uganda Policy Brief.pdf](https://cipesa.org/download/briefs/An_Artificial_Intelligence_Eco-System_for_Uganda_Policy_Brief.pdf)
 3. UNESCO. *Recommendation on the Ethics of Artificial Intelligence* — <https://unesdoc.unesco.org/ark:/48223/pf0000373434>
 4. African Union. *Continental Artificial Intelligence Strategy* — <https://au.int/en/documents/continental-ai-strategy>
-
-

Further information: Dr. Wairagala Wakabi, wakabi@cipesa.org, programmes@cipesa.org