



E-GOVERNANCE IN UGANDA 2025

PROSPECTS AND CHALLENGES

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This report provides an overview of Uganda's e-governance initiatives, from early ICT policies to modern platforms, such as the UGHub portal for public services integration. It analyzes key sectors such as taxation, immigration, licensing, agriculture, and procurement. The report also notes the launch of AI and environmental data projects. Persistent issues include limited Internet access, insufficient infrastructure, lack of system integration, and low public awareness. Priorities include expanding digital inclusion, interoperability, and user-centered service design.

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Introduction

The beginning of the 2000s in Uganda was marked by the ICT importance trend in the development of governance and economy. Two successive Uganda national IT policies (Uganda National ICT Policy Framework¹, 2003, and the National Information Technology Policy², 2009) stressed a pivotal role of information and IT in socio-economic development of the country, including an increase in efficiency and effectiveness in service delivery.

The e-Government implementation encountered a number of challenges due to lack of electricity and poor internet penetration — especially in rural communities, lack of skilled IT personnel and low digital literacy in general, insufficient equipment, limited usage of the internet in offices and mainly static web-sites of government ministries, and other problems.

To drive e-governance development numerous initiatives were launched, including e-taxes and revenue collection systems, online portal for public procurement, business support system, etc.

One of the new aspirations is the Uganda e-Government Interoperability Framework which stipulates interoperability, aiming at cooperation, exchanging information for legal and political purposes, sharing and using it for the efficient delivery of public services and the reduction of administrative burden for citizens and businesses.

The Artificial Intelligence sector is mainly driven by private and multinational companies, however the government has also been gaining a certain momentum in this field in the past two years.

Despite the ambitious efforts, today e-service delivery is still facing the challenges of poor infrastructure, high costs of the Internet, low investment, and low citizens' awareness of e-government advantages.

Moreover, disintegration of services and systems remains significant: there are no catalogs of registries and data services even in the form of a list as it exists for public services. The duplicated functions of different ICT systems and difficulties in data sharing between these heterogeneous systems and low development of shared information systems, paper documents management are also mentioned as weaknesses of the present-day e-Government practice.

From the start the e-Government projects in Uganda have been aligned with East African Community programmes, it has been monitored by the UN and supported by the funding of the UN Development Programme, U.S. Agency for International Development, and the World Bank.

Regulations

In terms of legal and regulatory framework, a number of acts were passed. In 2014, Uganda established a National Information and Communications Technology Policy³. One of the proposed updates concerns the Legal and Regulatory Framework (4.5.2), and the policy priority to review the existing legislation on cyber-crime and other forms of Information Security.

The general legal framework regarding cybercrime and electronic evidence is set out in the Computer Misuse Act 2011⁴. In addition, other legislations such as the Copyright and Neighboring Rights Act 2006, Regulation of Interception of Communications Act 2010 and Penal Code Act of Uganda also provide for laws related to cybercrime and electronic evidence.

The Electronic Signatures Act⁵ 2011 makes provision for and regulates the use of electronic signatures,

1 Uganda National ICT Policy Framework 2003. URL: http://www.ist-africa.org/home/files/Uganda_NationalICTPolicyFramework_Oct2003.pdf
 2 National Information Technology Policy 2009. URL: <http://library.health.go.ug/>
 3 National Information and Communications Technology Policy 2011. URL: https://researchictafrica.net/countries/uganda/National_Information_Security_Strategy_2011.pdf
 4 Computer Misuse Act 2011. URL: <https://ict.go.ug/ims/public/2019/12/03/the-computer-misuse-act-2011>
 5 Electronic Signatures Act 2011. URL: <https://ict.go.ug/ims/public/2019/12/03/the-electronics-signatures-act-2011>



E-Government in Uganda

2024

Ministry of ICT and National Guidance and MTN Uganda launched the Phase II of MTN Africa Centre for Excellence Program



2023



Launch of the Uganda Registration Services Bureau



Digital Transformation Roadmap for 2023–2027 developed in collaboration with United Nations Development Programme

2022

Adoption of a draft of the Digital Government Strategy



2021



Adoption of the Uganda e-Government Interoperability Framework



Launch of Uganda Systems and Data Integration Platform (UGHub) allowing seamless data sharing between Government systems



Launch of the e-Government Procurement System by the Public Procurement and Disposal of Public Assets Authority (PPDA)

2019

Establishment of a Tier III Data Centre



2018



Launch of the Uganda Trade Portal, a one-stop shop for trade information, providing step-by-step guides for import, export, and transit of a commodity (steps taken, institutions involved, results, documents, costs, etc.)

2016

Launch of the e-Immigration System with electronic visa/permits and citizenship applications



Launch of the Uganda Business information licensing portal, an online database of business licences



2015



Launch of the eCitizen Portal by NITA-U. The portal serves as a one-stop shop for Government online services

2014

Launch of e-taxes service by the Uganda Revenue Authority



2011



Launch of the National Electronic Government Policy Framework

2009

Establishment of the National Information Technology Authority (NITA-U). Its mission is outlined as developing a technical and regulatory environment for reliable and secure e-services delivery throughout the country



National Information Technology Policy

2006



Establishment of the Ministry of Information and Communications Technology and National Guidance

2002

The first Uganda National ICT Policy Framework



whereas the Electronic Transactions Act 2011⁶ provides a legal and regulatory framework to enable and facilitate electronic communications transactions and to provide legal recognition to electronic records.

The protection under the Constitution is supplemented by the Data Protection and Privacy Act, 2019 and the Data Protection and Privacy Regulations, 2021, which regulate the collection, processing, use, storage, and disclosure of personal data. The Uganda E-Government Regulations (2014)⁷ can serve as an example of an attempt to consolidate regulations in the sector.

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One of the new aspirations is the Uganda e-Government Interoperability Framework (2021)⁸ which stipulates interoperability, aiming at cooperation, exchanging information for legal and political purposes, sharing and using it for the efficient delivery of public services and the reduction of administrative burden for citizens and businesses

Rankings

According to the 2024 UN E-Government Development Survey, Uganda ranked 150 with an EGD I (E-Government Development Index) of 0.45 (compared to the Sub-Region average of 0.39).

In 2022 the country was placed 144 on the Survey's list with an EGDI of 0.44. As per the World Bank's GovTech Maturity Index (GTMI), the country's GTMI reached 0.85 placing Uganda among the GovTech Leaders.

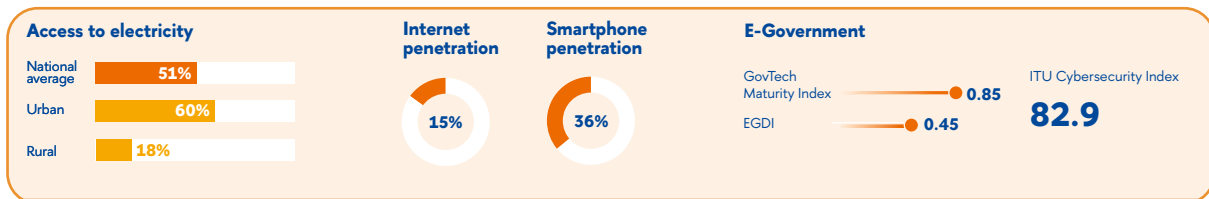
According to the International Telecommunication Union (ITU) rankings for 2024, Uganda is among Tier-3 (establishing) countries with a cybersecurity index rate of 82.94.

Regulators

The Ministry of Information and Communications Technology and National Guidance was established in June 2006 with a mandate of providing strategic and technical leadership and overall coordination for the ICT sector. It runs the National ICT Initiatives Support Program (NIISP)⁹ whose aim is to facilitate the creation of an ICT Innovation ecosystem and marketplace for Ugandan innovative digital products.

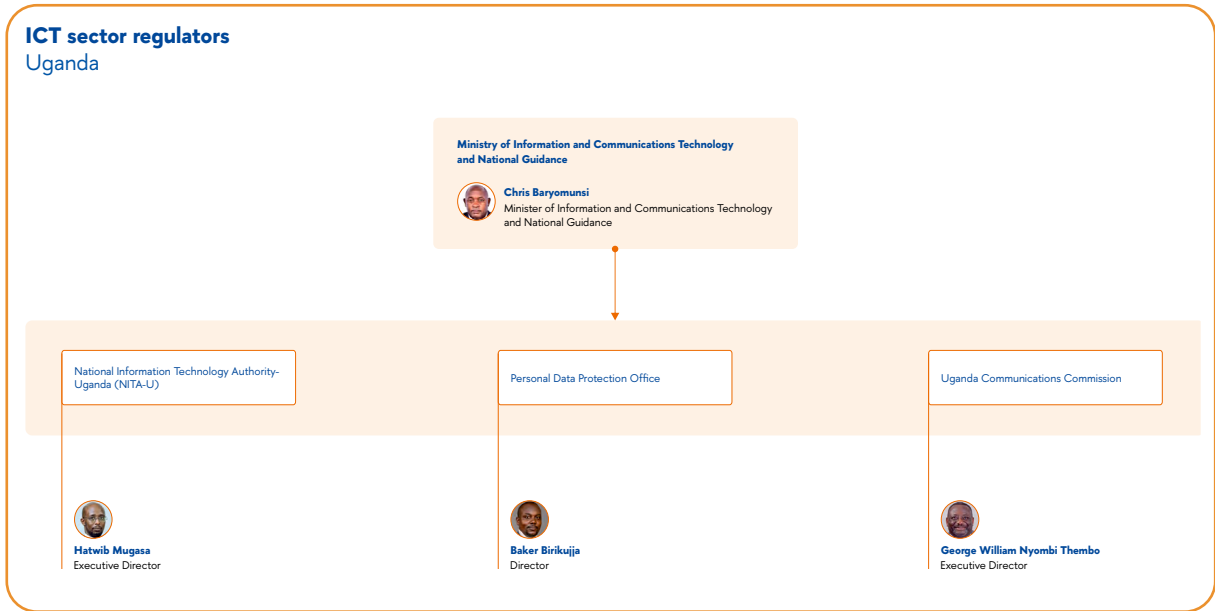
The Ministry comprises seven departments, including Research and Development, Electronic Services, Data Networks, ICT Infrastructure Development, National Guidance, Information and Communication, Finance & Administration.

The National Information Technology Authority-Uganda (NITA-U) is an autonomous statutory



Source: prepared by the Center for African Studies based on ITU, World Bank and government agencies data.

6 Electronic Transactions Act 2011. URL: <https://ict.go.ug/site/documents/UGANDA-Electronic-Transactions-Act-No.-8-of-2011.pdf>
 7 E-Government Regulations 2014. URL: <https://ict.go.ug/wp-content/uploads/2018/06/electronic-government-regulations-2014.pdf>
 8 Uganda e-Government Interoperability Framework 2021. URL: <https://qualityassessmentofeservices.com/GEAGIF/eGIF-Final/1%20e-GIF-%20eGovernment%20Interoperability%20Framework.pdf>
 9 National ICT Initiatives Support Program (NIISP). URL: <https://niisp.ict.go.ug/>



body established under the NITA-U Act 2009, to coordinate and regulate Information Technology services in Uganda. NITA-U is under the general supervision of the Ministry of ICT and National Guidance. It is in charge with ensuring an integrated national IT infrastructure as well as providing e-government services in MDAs, regulation of IT environment in public and private sector, capacity building and awareness creation, information security and development of information technology enabled services/business, process outsourcing (ITES/BPO) industry.

The Personal Data Protection Office established by the Data Protection and Privacy Act and the Data Protection and Privacy Regulations is responsible for personal data protection. The Office operates under the National Information Technology Authority-Uganda (NITA-U) and was operationalized in 2021.

Computer Emergency Response Team/Coordination Center (CERT.UG/CC)¹⁰ is the national CERT for Uganda, established in 2014, and is managed by the NITA-U. Among other roles, the CERT-UG/CC ensures the protection of Uganda's Critical Information

Infrastructure and facilitates communication with local and international experts in solving security incidents.

Strategies

2012–2016 — e-Government Master Plan

Being the first comprehensive national e-Government strategy, the document set out the strategic goals for the sector development and laid the foundation for the implementation of ICT projects. As of 2025, the document is not publicly available.

2022–2026 — National Cybersecurity Strategy¹¹

The National Cybersecurity Strategy sets a framework to foster a trusted digital economy. It is structured around six strategic pillars. The first pillar aims to build a safe and trusted digital economy by implementing secure digital identities and public key infrastructure (PKI) while supporting small and medium enterprises (MSMEs) with cybersecurity resources. The second pillar focuses on threat preparedness and response, including

¹⁰ Computer Emergency Response Team/Coordination Center (CERT.UG/CC). URL: <https://www.cert.ug/about-us-0>

¹¹ National Cybersecurity Strategy 2022 - 2026. URL: <https://ega.ee/wp-content/uploads/2022/08/Ugandan-national-cybersecurity-strategy.pdf>

establishing a central incident register, national and sectoral incident response teams, and robust risk management processes.

The third pillar targets a robust cybersecurity ecosystem centered on protecting national critical information infrastructure through risk assessments, baseline security standards, and strong public-private partnerships. The fourth pillar emphasizes building cyber skills through education, professional training, and awareness campaigns. The fifth pillar strengthens international collaboration to enhance information sharing and capacity building, and the final pillar establishes an enabling governance framework to coordinate efforts, update legislation, and promote shared responsibility across government, private sector, and communities.

The implementation matrix lays out a phased approach. In the short term (2022–2023), the focus was on piloting digital identity systems, setting up incident reporting, building capacity, and establishing governance structures. Medium-term actions (2024–2025) include scaling PKI deployment, enforcing cybersecurity baselines and expanding awareness. Long-term efforts (2026 and beyond) prioritize continuous updating of security standards, institutionalizing incident management, fostering local industry growth, and expanding international partnerships.

2022–2027 — Digital Government Strategy¹²

The Uganda Digital Government Strategy sets a goal to transform the country into a digitally empowered society by 2027, promoting an innovative, productive, and competitive digital environment

Among the key components of the strategy is amelioration of the legal framework, which implies continuous updates of laws and regulations to encourage innovation and secure digital identity and data exchanges.

Enhanced coordination among ministries and agencies, digitization of records with standardized identifiers and classifications, as well as integration of digital skills into all education levels and awareness programs targeting all demographics are of utmost priority. The Government also aims to progress in development and enhancement of critical infrastructure like national digital ID, secure data exchange platforms (such as the UgHub), public service portals, and cloud hosting. Expansion and improvement of broadband infrastructure and strengthening cybersecurity frameworks, enforcing data protection policies, and conducting ongoing security audits to protect against cyber threats are stated to be the critical areas of operation.

2022 — Vision for A Digital Uganda 2040¹³

Developed by the Ministry of Information, Communications Technology and National Guidance, the Digital Uganda Vision outlines a roadmap to achieve a digitally empowered society by 2040, grounded in five strategic pillars. The first pillar, Digital Infrastructure and Connectivity, focuses on developing an integrated, high-capacity digital infrastructure to meet current and future needs. This aims to provide 90% connectivity coverage to households, government institutions, SMEs, and private enterprises, alongside comprehensive broadband expansion nationwide.

Complementing this, the second pillar centers on Digital Services, emphasizing the creation and delivery of citizen-, business-, government-, and employee-centric e-services accessible via multiple platforms including web and mobile devices. The goal is to ensure 90% of citizens access e-services online and that 95% of government services are available and interoperable digitally, fostering efficient and user-friendly public service delivery.

Ensuring safety and trust, the third pillar addresses Cybersecurity, Data Protection, and Privacy.

¹² Digital Government Strategy. URL: <https://nita.go.ug/sites/default/files/2023-03/Digital-Strategy.pdf>

¹³ Vision for A Digital Uganda 2040. URL: <https://ict.go.ug/site/documents/digital-vision-uganda-2040.pdf>

It mandates robust safeguards across 90% of institutions and compliance with data protection laws to secure digital interactions and protect personal and business information, essential for widespread adoption and confidence in digital technologies.

The fourth pillar promotes Digital Skills development, targeting a digitally literate citizenry of 90% and addressing 70% of the nation's industry ICT skill requirements. By integrating digital literacy and professional ICT training into education and awareness programs, Uganda aims to build an agile, future-ready workforce capable of leveraging emerging technologies.

The fifth pillar, Innovation and Entrepreneurship, drives commercialization of local ICT innovations and the growth of indigenous ICT enterprises. It seeks to foster the use of local ICT products and services by at least 60% of government and private entities, stimulating economic growth and technological independence.

2023 — Digital Transformation Roadmap 2023/2024–2027/2028¹⁴

Uganda's Digital Transformation Roadmap outlines a strategic plan to accelerate the country's digital revolution, aligned with the Digital Uganda Vision 2040. The roadmap focuses on five key objectives: promoting digital services by developing e-services across government priority sectors; enhancing digital infrastructure and connectivity through investments in broadband networks, data centers, and cloud computing to ensure access across urban and rural areas; fostering innovation and entrepreneurship by creating a supportive environment for research, startups, and collaboration among academia, industry, and government; empowering citizens with digital skills and literacy via education, upskilling, and STEM promotion to bridge the digital divide; and

promoting cybersecurity, data protection, and privacy by establishing strong frameworks.

In line with the Roadmap, amelioration of digital services involves developing integrated digital registries and single identifiers to enhance data interoperability and eliminate silos, promoting efficiency through the 'once-only' data principle. The strategy emphasizes citizen engagement via e-service creation to ensure user-centric digital solutions. Implementing a National Big Data Strategy and requiring Ministries, Departments, and Agencies to deploy flagship integrated e-services will drive broader digital adoption. Quality assurance is also prioritized through a testing and certification scheme for software, ensuring export standards are met. Capacity building for ICT professionals and policymakers is critical to sustain government-led transformation.

Roadmap enablers include automating end-to-end government processes, expanding e-governance access (including e-cities), promoting digital literacy, and facilitating digital identity verification for smoother service rollout. A Digital Service Standard will enforce user-centric design, transparency, and inclusivity, accommodating vulnerable populations and diaspora users.

This comprehensive approach aims to deliver 85% of government services online, automate 85% of transactions, and ensure 75% of entities comply with enterprise architecture standards by 2030, while enhancing citizen participation.

One-stop shop portal

In 2021, NITA-U launched a Data Integration Platform (UGHub) — eCitizen portal¹⁵ as a one-stop shop platform for a significant number of government services

¹⁴ Digital Transformation Roadmap 2023/2024 - 2027/2028. URL: <https://ict.go.ug/site/documents/Digital%20Transformation%20Roadmap.pdf>

¹⁵ eCitizen portal. URL: <https://www.ecitizen.go.ug/>

The development of the platform was financed by the World Bank under the Regional Communication Infrastructure Program.

The platform is structured to facilitate access to all 86 e-services by means of an online search, by subject, by topic, or through a link to a ministry, department, or agency. Besides, the portal offers other options for a search, namely Services to Citizens, Business, and Non-Residents. The design of web-pages on the platform is more or less unified, with either the name of a government institution or the list of services, or both, and the logo of the institution. Some services on the platform are accessed through signing up, with a unique registration form and procedure for each public body, delivering a service.

Signing-up is required on the platform for users to access the services.

Open data is searched through a link to a required institution website, sometimes without redirecting, or with contents being outdated, or claimed unavailable. The portal allows users to report wrongdoing (terrorism, money laundering, corruption), suspected adverse drug reactions, to get monetary and financial information on the website of the Bank of Uganda¹⁶, trade data on the Trade information portal¹⁷, register for taxes on the Revenue Authority website¹⁸ and others.

Identification and Biometrics

Uganda has made significant investments in national identification systems. The country's National ID system is a cornerstone of its digital

identity infrastructure. Managed by National Identification and Registration Authority (NIRA), the system issues a unique National Identification Number (NIN) and a biometric ID card to every citizen 16 years and older. The ID card, first rolled out¹⁹ in 2014-2015 (Ndaga Muntu), contains the holder's biometrics (fingerprints and photograph) and personal details, and it is required for accessing numerous services – from SIM card registration to voting and banking.

As of 2025, Uganda is undertaking a mass Digital ID renewal and expansion campaign ahead of the next general elections

NIRA launched this nationwide exercise in May 2025 to replace expiring ID cards and register those who never had one. The goal is to process²⁰ about 33 million people — renewing 15.8 million existing IDs and enrolling 17.2 million first-time applicants. This massive update is crucial because a valid national ID will be *mandatory* for voter registration in the 2026 elections. To support the campaign, the government has deployed²¹ 5,665 upgraded biometric kits and introduced new technology like iris recognition in addition to fingerprints and facial recognition.

Uganda's ID system is evolving toward greater integration and usability. The government is aligning the national ID with the Modular Open-Source Identity Platform (MOSIP). Moreover, Uganda is developing a Unified Payments Interface (UPI) to link the national ID credentials with digital payments and e-wallet services. In effect, the national ID could serve as a key to not only public services but also financial transactions, boosting inclusion in the digital economy. Authorities are also using this renewal to clean up data inaccuracies (such as spelling errors or wrong birthdates) that had plagued the earlier ID records.

16 Bank of Uganda. URL: <https://www.bou.or.ug/bou/bouwebsite/BOU-HOME>

17 Trade information portal. URL: <https://ugandatrades.go.ug/>

18 Uganda Revenue Authority. URL: <https://ura.go.ug/en/>

19 The South African Institute of International Affairs. Digital Identification and Biometrics In East Africa: Opportunities and Concerns. URL: <https://saiaa.org.za/research/digital-identification-and-biometrics-in-east-africa-opportunities-and-concerns/>

20 ID Tech.Uganda Launches Mass Digital ID Renewal Campaign Ahead of 2026 Elections. URL: <https://idtechwire.com/uganda-launches-mass-digital-id-renewal-campaign-ahead-of-2026-elections/>

21 Ibid.

APPLY ONLINE

1 STEP 1 Application type 2 STEP 2 Fill the form 3 STEP 3 Add documents 4 STEP 4 Submit

Step 1 of 4: Select type of application

Required fields are indicated by a red asterisk *

Visa or permit type * Category *
 Student Pass 3 months

Subcategory *
 3 months

Supporting documents

The following documents are mandatory and should be uploaded

Supported formats are : JPEG, PNG, BMP, PDF

Minimum file size is 5 KB. Maximum file size is 250 KB

- Valid Student ID Card
- Recent Passport-size Photograph
- Valid admission letter from school
- Passport Copy (Bio Data Page)
- Support Letter from School

Source: e-Immigration portal (e-Visa application page)²²

e-Visa

Visas/permits and citizenship can be applied for through the Electronic Visa/Permit Application System on the immigration portal²³ of The Directorate of Citizenship and Immigration Control. The website of the DCIC provides the list of services and the detailed information on the steps taken to apply for visas and permits as well as links to electronic forms to get e-services.

e-Elections

Uganda has been gradually adopting digital technology into its electoral processes. While voting itself remains paper-based (with paper ballots cast and counted manually), several other aspects of elections now use ICTs. Ahead of the 2016 general elections, the Electoral Commission (EC) implemented a new biometric voter management system. All eligible voters were registered with their fingerprints and

photographs captured into an electronic register. On Election Day, the EC deployed Biometric Voter Verification Kits (BVVK) at polling stations nationwide. These devices used fingerprint scanners to verify each voter's identity against the digital voter roll before they are allowed to vote. In 2016, the EC acquired²⁴ over 32,000 BVVK devices to cover 28,000+ polling stations. Poll workers reported that the system also helped direct voters to their correct polling station if there was confusion.

Another significant innovation was the use of an Electronic Results Transmission and Dissemination System (ERTDS) for sending election results from districts to the national tally center. After votes are counted locally and results forms filled, the figures are transmitted via a secure electronic system (using scanned forms or typed results) to the EC headquarters. In 2016, the ERTDS transmitted²⁵ presidential and parliamentary results from each district to the national tally center at Nambole Stadium, speeding up the compilation of national results.

²² Uganda Electronic Visa/Permit Application System. URL: <https://visas.immigration.go.ug/#/>

²³ Immigration portal. Electronic Visa/Permit Application System. URL: <https://visas.immigration.go.ug/%20migration.go.ug>

²⁴ Citizen Digital. Uganda to introduce technology in February elections. URL: <https://www.citizen.digital/news/uganda-to-introduce-technology-in-february-elections-112878>

²⁵ Ibid.

This electronic relay reduces delays associated with physically transporting results and adds an extra layer where results can be cross-verified.

Looking ahead, Uganda is considering an even more digitized approach for the 2026 general elections.

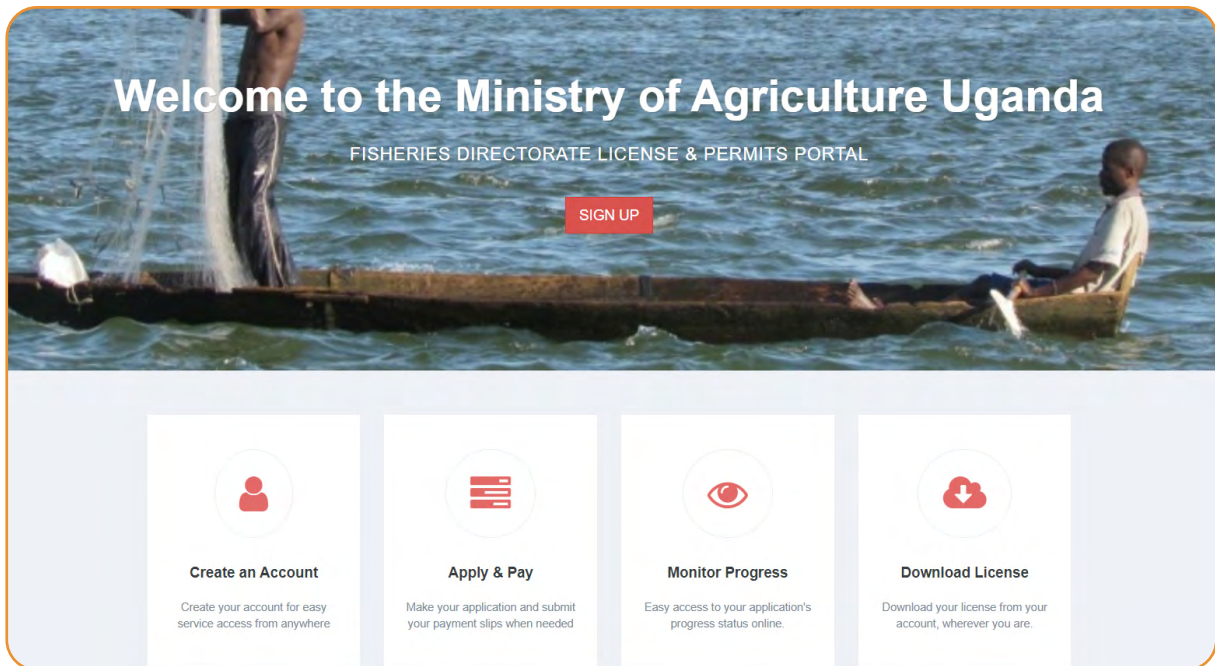
In early 2025, the government announced intentions to implement mandatory electronic voting in 2026, meaning voters might cast their votes via electronic machines instead of paper

As of late 2025, the idea is still under scrutiny, with calls²⁶ for extensive stakeholder consultation and piloting before any implementation. It remains to be seen if Uganda will proceed with full electronic voting or focus on improving the existing biometric verification and transmission systems.

The Ministry of Agriculture website²⁷ is not only an informational resource, containing the certification guidelines, but also a transactional one, redirecting the user to the portals for online application and certification for crops and fisheries.

In 2024, Ministry of Agriculture Animal Industry and Fisheries, Department of Crop Inspection and Certification in partnership with the Swiss non-profit organization Swisscontact launched the Re-engineering of Uganda’s Sanitary and Phytosanitary Inspection of Horticulture Exports (RUSH) initiative aimed at improving the tracking of fresh produce from the point of origin to Entebbe International Airport. Starting from September 2024, agriculture inspectors accept only commodities processed through the RUSH system, relying on this digital platform to verify consignments, thus streamlining operations and enhancing efficiency.

e-Agriculture



Source: The Ministry of Agriculture Fisheries Directorate Portal²⁸

26 ID TECH. Growing Opposition to Uganda’s Mandatory Biometric Voter System Plans for 2026 Elections. URL: <https://idtechwire.com/growing-opposition-to-ugandas-mandatory-biometric-voter-system-plans-for-2026-elections/>

27 Ministry of Agriculture. Guidelines and Online Certification. URL: <https://www.agriculture.go.ug/online-certification/>

28 Ministry of Agriculture Fisheries Directorate Portal. Online certification. URL: <https://www.agriculture.go.ug/online-certification/>

It allows real-time data collection on key metrics, such as the quantity and value of exported horticultural commodities. The pilot phase, conducted from June to November 2024, engaged 117 export companies, 71 quality controllers, and numerous inspectors and farmers across Uganda. This integration provides a strong foundation for both public and private stakeholders to work together toward sectoral improvements.

Additionally, to improve farmers' access to seeds, fertilizer, and other inputs, the Ministry of Agriculture with the support from World Bank rolled out an electronic voucher system under the Agriculture Cluster Development Project. Starting in 2017, this e-voucher system provides farmers with digital vouchers that subsidize a portion of the cost of inputs at approved agro-dealers.

By 2021, around 425,000 farmers had enrolled²⁹ in the e-voucher program and over 200,000 of them had redeemed subsidized inputs using the system

The government covers up to two-thirds of the input cost initially, while farmers pay the rest, with the subsidy share tapering off over time. This smart subsidy approach, enabled by digital vouchers, has helped ensure that subsidies reach intended beneficiaries. It has shown positive short-term results — farmers participating in the e-voucher scheme saw yield increases³⁰ (e.g. 30% higher maize yields) compared to those outside the program.

The Uganda Communications Commission, through the Universal Service fund (UCUSAF), runs an ICT for Agriculture program³¹ to enhance farming productivity with technology. This includes the development of a dedicated "ICT4Farmer" mobile app, a farmer toll-free call center for agricultural advice, and websites/portals for farmer organizations at the district level. Farmers can call in to consult on pest outbreaks,

weather information, or best practices, and get expert guidance remotely. UCC has also supported a digital Agricultural e-Learning Platform (e-Academy) to train farmers in modern farming techniques. These tools are meant to supplement the traditional agricultural extension system, which often has too few officers to reach all communities.

G2B Services

With e-Licensing business entities and individuals can obtain information about licences, permits, and fees, required to start up a business, and apply for them online. The Uganda Business information licensing portal³², which can also be accessed through the eCitizen portal, is an online database of business licences issued by government agencies and local authorities for individuals, business entities, and investors striving to learn about a particular licence, or a certificate. On the platform the data on 521 licenses and permits are available, including the name, the issuing authority, the downloadable content, fees, laws, duration, etc.

Other procedures of licensing via the e-licensing portal (applying and paying for licensing, viewing the application status, uploading required documents, and getting notifications) are to be developed. Moreover, the portal provides links to online applications. They duplicate the ones provided on the e-Citizen platform (among them are³³ applying for a passport, an electronic visa/permit, applying for crops and fisheries certification on the website of the Ministry of Agriculture, Animal Industry and Fisheries, getting the identification numbers for payment registration on the online platforms and others), but their shortened list makes the information graspable and easily accessible.

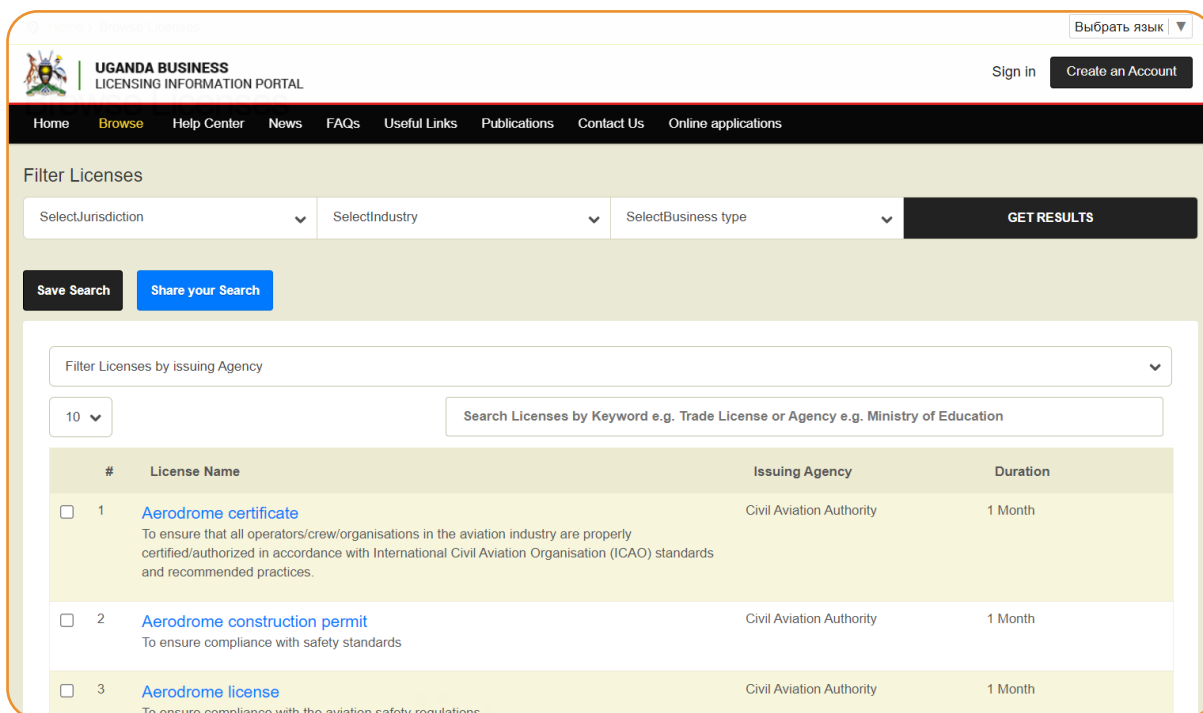
29 Economics observatory. Boosting agricultural productivity: what lessons from policies in Uganda?. URL: <https://www.economicsobservatory.com/boosting-agricultural-productivity-what-lessons-from-policies-in-uganda>

30 Ibid.

31 Uganda Communications Commission. ICT for Agriculture. URL: <https://www.ucc.co.ug/ucusaf/ict-for-agriculture/>

32 Uganda Business information licensing portal. URL: <https://businesslicences.go.ug/index.php/>

33 Uganda Business information licensing portal. Online applications. URL: <https://businesslicences.go.ug/index.php/press/30>



Source: Business information licensing portal³⁴

Besides e-licensing, a number of portals were designed to facilitate starting up and operating business. On the platform of The Uganda Registration Services Bureau³⁵ a company can be registered, the procedure beginning from name reservation to generating payments, applying for registration and uploading all required documents.

The Uganda Trade Portal³⁶ is claimed to be a one-stop shop for trade information, providing step-by-step guides for import, export, and transit of a commodity (steps taken, institutions involved, results, documents, costs, etc.)

The electronic One Stop Centre³⁷, which was established by The Uganda Investment Authority, is the web portal providing e-services (e.g. applying for investment licenses), the links to e-services on other

portals (e.g. reserving a business name, registering a company, applying for a work permit, tax registration, etc.), business ideas and information on investment opportunities. The transactions via the portal require signing up. The SME portal³⁸ provides information and services for small and medium enterprises.

In 2020, Uganda went live with the Automated System for Customs Data (ASYCUDA World), the UNCTAD integrated customs management system for international trade and transport operations in a modern automated environment. The system is available throughout the country via the Internet with paperless cargo submission.

The ASYCUDA system in Uganda is linked with the Kenyan and Rwandan system through Single Custom Territory

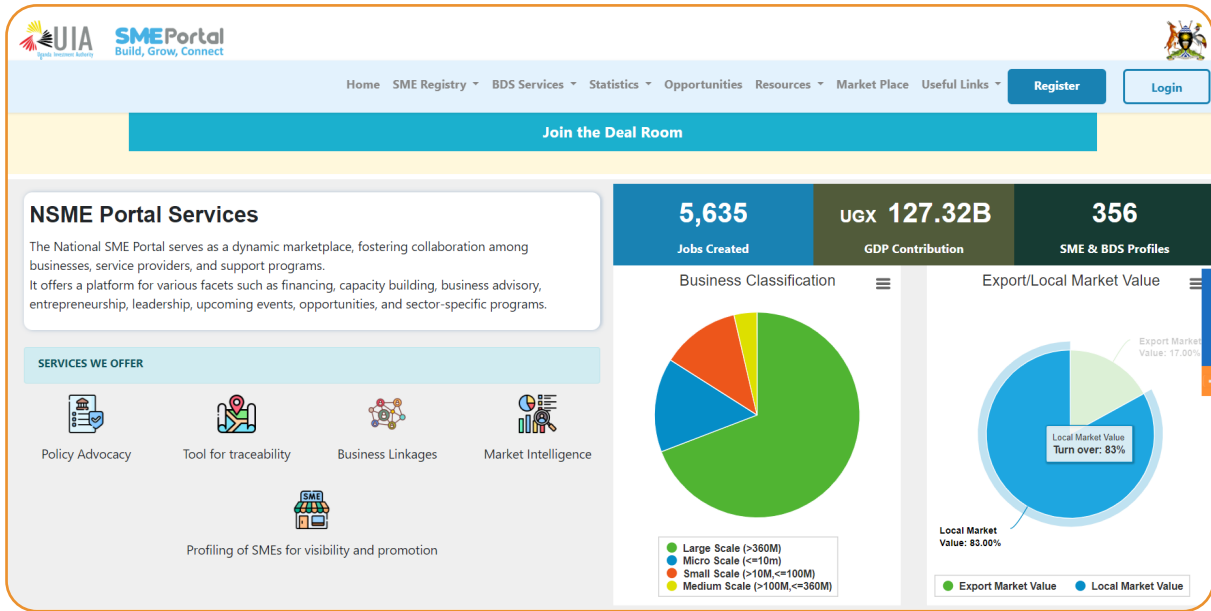
34 Uganda Business information licensing portal. Browse Licenses. URL: <https://businesslicences.go.ug/index.php/browse/licenses>

35 The Uganda Registration Services Bureau. URL: <https://obrs.ursb.go.ug/search>

36 The Uganda Trade Portal. URL: <https://ugandatrades.go.ug/>

37 eBiz. URL: <http://www.ebiz.go.ug/>

38 SME portal. URL: <https://mybusiness.go.ug/>



Source: SME portal³⁹

Healthcare

Uganda developed⁴⁰ a National eHealth Policy (2016) and a 5-Year eHealth Strategic Plan (2017), recognizing ICT as a key enabler in the Health Sector Development Plan. Building on those, in May 2023 the MoH inaugurated⁴¹ the National Health Information and Digital Health Strategic Plan, aligned with the country's National Development Plan. This plan's ambitious goal is to leverage digital tools to move towards Universal Health Coverage. It focuses on strengthening health information systems, ensuring that every level of healthcare — from community clinics to national hospitals — can capture and use data for decision-making. By 2025, the aim is to have patient-level electronic systems institutionalized at points of care and robust data exchange across the health sector.

Besides, Uganda has implemented the District Health Information Software 2 (DHIS2) as its national

health management information system since 2012. DHIS2 is used in all districts to aggregate data on health service delivery (immunizations, disease incidence, etc.), which has improved reporting and surveillance. However, until recently, many health information systems were siloed by disease program or donor. Recognizing this, the new strategic plan calls for integrating these systems and developing a Health Information Exchange (HIE) so that data can flow between systems (for example, linking laboratory systems with patient record systems).

e-Taxes

The Integrated Tax Administration System⁴² (e-Tax) was introduced by the Uganda Revenue Authority (URA) in 2018 to provide online services to taxpayers, including tax registration (TIN registration) and payments. URA also developed a digital platform for delivering educational content⁴³, training materials, and online courses.

³⁹ Ibid.

⁴⁰ CIPESA. How Technology is Impacting Health Data Governance in Africa: The Case of Uganda. URL: <https://cipesa.org/2023/07/how-technology-is-impacting-health-data-governance-in-africa-the-case-of-uganda/>

⁴¹ ICTworks. Moving From e-Chaos to Uganda's New Digital Health Strategy. URL: <https://www.ictworks.org/moving-from-e-chaos-to-ugandas-new-digital-health-strategy/>

⁴² The Integrated Tax Administration System (e-Tax). URL: <https://ura.go.ug/beforeLoginRedirectionController/eService>

⁴³ Uganda Revenue Authority. URL: <https://ura.go.ug/en/opportunities/e-learning-platform/e-learning/>

Source: URA website (Generate a Payment Slip page)⁴⁴

Source: URA e-Learning platform (course on Taxation for Small Businesses)⁴⁵

Payments can also be generated on the Integrated Revenue Administration System (IRAS)⁴⁶, the online payment platforms of KCCA⁴⁷ and the Ministry of Local Government⁴⁸, which provide

access to online transactions, reference materials on local services, electronic application submission and tracking of application.

44 Uganda Revenue Authority. Payment Registration. URL: <https://ura.go.ug/en/domestic-taxes/make-a-payment/generate-a-payment-slip/>

45 Uganda Revenue Authority. URL: <https://ura.go.ug/en/opportunities/e-learning-platform/e-learning/>

46 Integrated Revenue Administration System (IRAS). URL: <https://iras.go.ug/>

47 eCite.KCCA. URL: <https://ecite2.kcca.go.ug/portal/payment/>

48 Ministry of Local Government. URL: <https://e-logrev.go.ug/dashboard/>

The online payment system is designed for paying taxes, fees, rents (national and local ones) as a series of procedures, including payment registration (getting a payment reference number which is necessary for making a payment in a bank or using mobile payment), online payment, and checking the payment status.

e-Justice

On March 1, 2022, the Judiciary officially launched ECCMIS (Electronic Court Case Management Information System), a fully-featured system that automates, tracks all aspects of a case life cycle from initial filing through disposition

Among main features of ECCMIS is e-Filing which provides a public portal for users to file documents electronically with access to information for all case types across all jurisdictions. It also provides access to a case status via Mobile Phone and SMS.

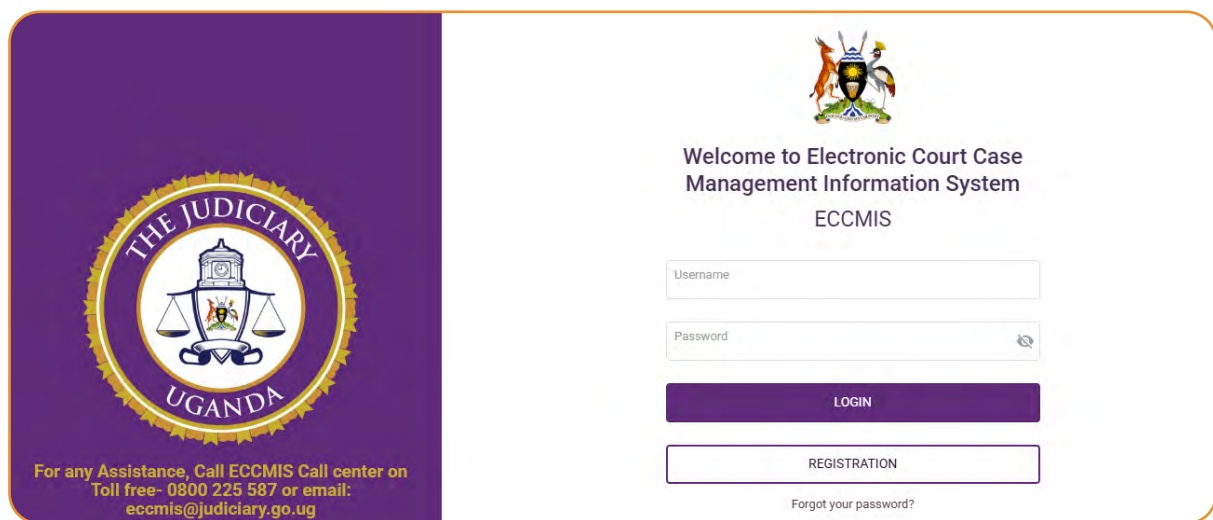
Parties also receive notifications in 3 formats namely SMS, e-mail, and Internal System Notifications.

Public Procurement

In 2021, The Electronic Government Procurement System⁴⁹ was launched by The Public Procurement and Disposal of Public Assets Authority (PPDA) as a pilot project⁵⁰ in 12 selected entities.

In 2022, 26 ministries, agencies, and departments of the government, two local governments signed up for the system, about 6308 local companies registered on the public procurement platform⁵¹

The current procurement systems (e.g. GPP, IFMS, ROP) are semi-automated, largely paper based, and they handle a few components of the procurement process. The e-GP is being developed to improve the current systems and integrate with them⁵² while making all the procurement processes electronic.

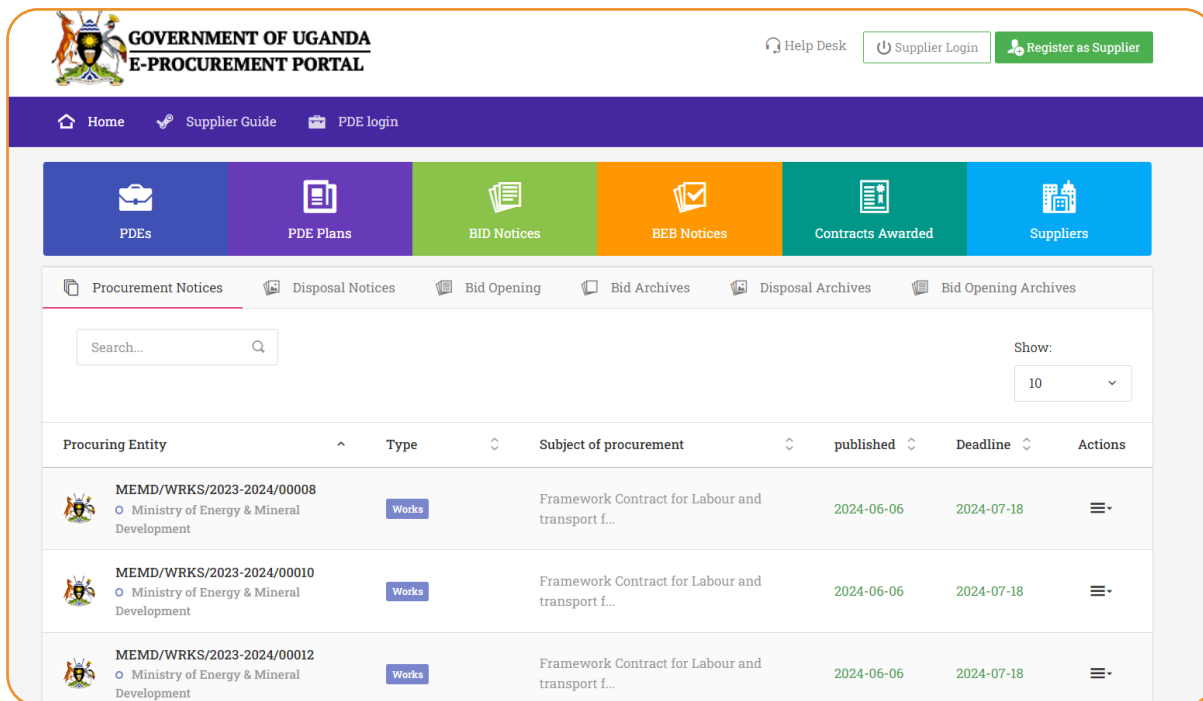


49 Electronic Government Procurement Uganda. URL: <https://egpuganda.go.ug/bid-notices>

50 New Vision. URL: https://www.newvision.co.ug/category/blogs/what-you-need-to-know-about-the-electronic-go-NV_111952

51 New Vision. 6308 local companies registered on the platform. URL: https://www.newvision.co.ug/category/blogs/over-6300-local-companies-register-for-electr-NV_136004

52 PPDA. URL: https://www.ppda.go.ug/wp-content/uploads/2023/01/UPDATED-FAQS_compressed-2.pdf



Source: The Electronic Government Procurement System⁵³

Education

Integrating ICT in education is a major focus for Uganda as it seeks to equip learners with digital skills. The government, through the Ministry of Education and Sports (MoES) and agencies like UCC, has launched programs to modernize both the educational content and the infrastructure in schools:

Under the Uganda Communications Universal Service Access Fund (UCUSAF), the ICT in Education Program has been installing ICT labs in secondary schools across the country. Hundreds of schools (especially in rural and underserved areas) have received computer laboratories with internet connectivity and power backup⁵⁴. Alongside the hardware, the program provides Digital Science

and Math content aligned to the national curriculum, which teachers can use for interactive teaching.

In 2021, the Ministry of Education and Sports launched the Digital Agenda for Education (2021–2025), emphasizing ICT infrastructure, digital literacy, and e-learning platforms⁵⁵. During the COVID-19 closures (2020–2021), the National Council for Higher Education (NCHE) issued emergency Open, Distance and e-Learning (ODEL) guidelines during the COVID-19 lockdown. In 2022 the ministry of education announced that ODeL would be mainstreamed into all higher education institutions⁵⁶.

On 25 January 2023, the Ministry of Education and Sports, in partnership with MTN Uganda and Continuum Financial Group, launched the U-Learn (ULEARN) platform, a self-paced e-learning system for teachers and teacher educators

53 Electronic Government Procurement Uganda. URL: <https://egpuganda.go.ug/bid-notice>

54 UCUSAF. ICT in Education Program. URL: <https://www.ucc.co.ug/ucusaf/ict-in-education-program/>

55 Ministry of Education & Sports. Digital Agenda. URL: <https://www.education.go.ug/digital-agenda/>

56 Ugandan Observer. Ugandan schools must continue with e-learning post-Covid, govt insists. URL: <https://observer.ug/education/ugandan-schools-must-continue-with-e-learning-post-covid-govt/>

It features interactive lessons, quizzes, and collaboration tools; more than 1,200 teachers were trained in its rollout, covering 41 National and Primary Teacher Colleges⁵⁷. MTN zero-rated data usage so teachers could access the platform free of charge⁵⁸.

Despite notable achievements in the field, persistent challenges include limited connectivity in rural areas, high data costs, unreliable electricity, and uneven teacher digital literacy, which exacerbate inequalities between urban and rural schools.

Data Management

At the Mobile World Congress with Huawei Technologies in Spain on 27th Feb to 2nd March 2023 the Minister of ICT and National Guidance Dr. Chris Baryomunsi pointed⁵⁹ to the importance of implementing e-Government and creating a national cloud platform and data centers for storing data. The Government of Uganda has a Tier III (Level 3) Data Center which was opened⁶⁰ in 2019. It relies on various cloud solutions (IAAS, PAAS, SAAS, Disaster Recovery AS A Service and BAAS) and serves 132 Government and Local public institutions. The National Data Centre allows to enhance security of the information and makes government services more available and efficient.

E-Government services are possible due to creating and developing the requisite platforms that secure Government communication and information sharing (e.g. Unified Messaging and Communications System), services delivery to citizens (e.g. Ughub), online payments (e.g. e-Pay).

AI in Use

Several government agencies have adopted AI to streamline service delivery and operations. The Uganda Investment Authority (UIA), for instance, integrated an AI-powered customer relationship management (CRM) and queue management system at its One-Stop Center. According to a 2024 public service study, UIA's AI queue system significantly cut waiting times for investors and provided managers real-time data to deploy staff efficiently⁶¹. By automating appointment scheduling and routing clients to available officers, the system improved throughput and reduced congestion in service halls.

Ugandan authorities are also deploying AI in financial regulation and compliance, especially to combat fraud and improve revenue collection.

The Uganda Revenue Authority (URA) has begun using AI to analyze large datasets and detect patterns of tax evasion or anomalies that humans might miss

URA's Commissioner General John Musinguzi noted in early 2025 that AI can accomplish in seconds what would take auditors years, and that URA is integrating AI into "over 90%" of its operations to expose fraudsters and plug revenue leakages⁶². A practical example is URA's use of AI within its ASYCUDA customs system⁶³. AI algorithms automatically cross-check import/export declarations against market price databases and flag undervalued invoices or high-risk shipments. This has sped up customs clearance (through targeted inspections and an electronic cargo tracking system) while improving compliance, as automated alerts replace the old labor-intensive manual verifications.

57 The Independent. MTN Uganda partners education ministry to provide free online learning platform. URL: <https://www.independent.co.ug/mtn-uganda-partners-education-ministry-to-provide-free-online-learning-platform/>

58 Explorer Uganda. Education Ministry Launches U-Learn Platform. URL: <https://explorer.co.ug/12714-2/>

59 Ministry of ICT and National Guidance URL: <https://ict.go.ug/ims/public/2023/03/13/the-ministry-of-ict-ng-represents-uganda-in-the-2023-mobile-world-congress-2023>

60 Tech Point Magazine. NITA-U unveils the first Government owned tier III data center in Uganda. URL: <https://techpointmag.com/nita-tier-iii-data-center/>

61 Nucamp. How AI Is Helping Government Companies in Uganda Cut Costs and Improve Efficiency. URL: <https://www.nucamp.co/blog/coding-bootcamp-uganda-uga-government-how-ai-is-helping-government-companies-in-uganda-cut-costs-and-improve-efficiency>

62 Mulengera News. No More Hiding as URA Deploys Super-Brain AI to Smoke Out Tax Defaulters. URL: <https://mulengeranews.com/no-more-hiding-as-ura-deploys-super-brain-ai-to-smoke-out-tax-defaulters/>

63 Nucamp. How AI Is Helping Government Companies in Uganda Cut Costs and Improve Efficiency. URL: <https://www.nucamp.co/blog/coding-bootcamp-uganda-uga-government-how-ai-is-helping-government-companies-in-uganda-cut-costs-and-improve-efficiency>

Internet of Environment

Uganda also has a system for monitoring water in reservoirs in real time. In 2019, the United Nations High Commissioner for Refugees launched a project to monitor water levels in Ugandan reservoirs. The system uses level sensors supporting LoRaWAN technology (a new open energy-efficient long-range network protocol developed by IBM in 2015). Data from these sensors is transmitted through Kerlink network⁶⁴ gateways to a cloud network within which constantly updated dashboards are formed⁶⁵, on the basis of which any decisions can then be made.

Furthermore, in Eastern Uganda, the River Manafwa has caused extensive damage to farmlands, houses and other property in Butaleja District through recurring flooding. In response to this ongoing issue, the Government of Uganda, in collaboration with the International Telecommunication Union (ITU),

deployed solar-powered flood early warning systems⁶⁶ to alert residents about rising water levels. The first system was established on the Namulo Bridge in Butaleja District in 2014, the second one was installed in 2015.

The warning system consists of three key components:

1. A sensor situated in the river
2. A solar-powered siren located near the river
3. A solar-powered control center at the district headquarters, equipped with backup computers to oversee the functioning of the siren system and sensors.

Upon reaching a threshold on the sensor, the siren is automatically activated, emitting a loud sound audible within a 10-mile radius. Additionally, staff at the control center use the siren system to issue messages in both English and Lunyole, the local language, to provide guidance to residents on safe evacuation procedures.

64 Kerlink. Kerlink LoRaWAN gateway technology powering UN water-monitoring program serving refugees. URL: <https://www.kerlink.com/blog/2020/02/26/kerlink-lorawan-gateway-technology-powering-un-water-monitoring-program-serving-refugees/>

65 Smart water magazine. UN refugee agency successfully implements water-monitoring pilot program using Kerlink Gateways. URL: <https://smartwatermagazine.com/news/kerlink/un-refugee-agency-successfully-implements-water-monitoring-pilot-program-using-kerlink>

66 ITU. Early Warning Systems for floods in Uganda. URL: https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Pages/Projects/EWS_UGANDA.aspx

Challenges



Despite the ambitious initiatives, Uganda still faces various challenges in its process of digitalization of public services:

- **Infrastructure Gaps and Cost of Access:** A fundamental challenge is the limited ICT infrastructure in some parts of the country. Many rural areas still suffer from poor internet connectivity and unreliable power supply. Broadband penetration remains low (internet users were roughly 15% of the population as of 2024), and the digital divide between urban and rural is noticeable. This is compounded by the high cost of internet data and devices, which makes access unaffordable for a large portion of Ugandans⁶⁷. Smartphone penetration, while growing, is not yet universal – many citizens still use basic phones that limit them from using advanced e-services.
- **Shortages and Digital Literacy Barriers:** A chronic shortage of ICT professionals within government ministries limits the ability to design, maintain, and expand e-services. At the citizen level, limited awareness and low digital literacy reduce uptake of available services. Without widespread training and digital inclusion programs, e-governance will remain underutilized.
- **Disintegration of services and systems remains significant:** there are no catalogs of registries and data services even in the form of a list as it exists for public services. Difficulties in data sharing between these heterogeneous systems and low development of shared information systems, paper documents management are also weaknesses of the present-day e-Government practice.

Prospects



Building on ongoing reforms, several areas offer promising opportunities for Uganda's digital governance transformation:

- **Digital Agriculture:** Expansion of e-voucher programs, ICT4Farmer apps, and digital certification systems (like RUSH) can boost productivity, ensure subsidies reach farmers, and connect producers to markets. Leveraging drones, satellite data, and mobile advisory services will strengthen food security and rural inclusion.
- **Public-Private Innovation Partnerships:** Hackathons, innovation labs, and sandboxes for startups can generate low-cost digital solutions for government challenges such as healthcare queue management or education technology. Uganda's growing tech ecosystem (supported by NIISP and private accelerators) could play a vital role.
- **Regional Integration:** As a member of the East African Community (EAC), Uganda can harmonize digital IDs, e-signatures, and customs platforms with neighbors, expanding cross-border services and trade efficiency. Initiatives like Single Customs Territory can serve as a foundation for broader regional interoperability.
- **Infrastructure Expansion & Sustainability:** Extending electricity transmission lines and broadband coverage to rural areas remains central. Policies promoting cloud-first adoption, open-source software, and scaling local data centers will improve sustainability while reducing reliance on donor-funded projects.

67 UNESCO.Digital uganda vision. URL: <https://www.unesco.org/creativity/en/policy-monitoring-platform/digital-uganda-vision>

- **Fragmented landscape:** Uganda has many e-government systems, but ensuring they complement one another is an ongoing challenge. The current landscape has some fragmentation – for example, one might have separate accounts for URA, NIRA, NSSF, etc., and data is siloed in each agency. The absence of a comprehensive data exchange may lead to duplication of functions and difficulty sharing data between systems. This can frustrate users (having to submit the same personal information repeatedly to different agencies) and is inefficient for the government.
- **Financial Sustainability:** Many e-government platforms were developed with external funding, raising concerns about sustainability. For example, the eCitizen portal and UGHub were built with World Bank financing under RCIP. This dependence risks leaving systems underfunded or abandoned if donor priorities shift.
- **Human Capital & Digital Skills:** Nationwide digital literacy campaigns and integration of ICT into education can build a skilled workforce. Government training for civil servants and specialized 4IR courses will help address the chronic shortage of ICT professionals in the public sector.
- **Environmental Monitoring & Smart Solutions:** Uganda’s “Internet of Environment” projects (flood early warning systems, reservoir monitoring) provide a model for scaling smart, sensor-based governance in climate resilience, water management, and disaster response.

Knowledge-Sharing Opportunities

National Best Practices

There are some national best practices from Uganda in the field of digitalization of citizen services that can be shared with other countries.

Open Data Portal

The establishment of an open data portal allows citizens to access government data and information freely through a significant number of government services. The development of the platform was financed by the World Bank under the Regional Communication Infrastructure Program.

Public Procurement System

Uganda has developed a digital public procurement system, known as the Public Procurement and Disposal of Public Assets Authority (PPDA) e-procurement platform. This system promotes transparency and accountability in government procurement processes. By enabling online submissions and evaluations, it reduces the opportunities for corruption while allowing businesses, especially small and medium enterprises, to access government contracts more easily. The system also provides real-time data and analytics on procurement activities, which helps improve planning and resource allocation.

Regional Inspirations

As Uganda seeks to improve digital health and education tools, examining successful implementations in other African countries can provide valuable insights and inspiration. Here are notable examples:

Digital Health Solutions

Rwanda

Rwanda has developed a comprehensive health management information system (HMIS) that facilitates real-time data collection and sharing across healthcare facilities. The government's investment in infrastructure allows for better health resource allocation and quick responses to outbreaks. Uganda can adopt similar integrated systems to enhance data-driven decision-making in healthcare.

South Africa

South Africa's implementation of the District Health Information System (DHIS) utilizes digital tools for monitoring and evaluation of health programs across the country. The system improves data usage at local health facilities to enhance patient care. Uganda could consider this model to strengthen its health monitoring capabilities.

Digital Education Tools

Nigeria

Nigeria's NECO has developed online examination and assessment tools that have streamlined the evaluation process for students. The use of technology in assessments allows for greater efficiency and transparency. Uganda can explore similar online assessment techniques to enhance its educational evaluation methods.

Ghana

Ghana has embraced digital learning through the Ghana Education Service's integration of technology in classrooms. The use of e-learning platforms and mobile apps to provide educational resources has improved accessibility, especially in rural areas. Uganda can replicate this model by investing in digital platforms that connect educators and students to comprehensive learning materials.

