

Tax technology

How tax authorities can harness technology to drive tax compliance and boost revenue collection



eliance on manual processes poses significant challenges for revenue authorities, making it difficult to effectively administer tax collection and meet revenue targets. To address these issues, revenue authorities are increasingly recognizing the value of integrating technology into their operations. Technologies such as advanced data analytics and Artificial Intelligence (AI) enable revenue authorities to analyze taxpayer data, identify patterns, and uncover potential tax gaps or fraud. Integrated digital platforms and mobile applications simplify tax filing, provide real-time notifications to taxpayers, and enhance accessibility. Robotic Process Automation (RPA) improves efficiency and accuracy, while blockchain technology ensures transparency, immutability, and secure transactions.

There are several ways through which revenue authorities in East Africa can utilize the above technologies to widen their tax base by improving tax compliance, reducing tax evasion, and enhancing overall efficiency.

By employing advanced data analytics and artificial intelligence algorithms, the revenue authorities can gain valuable insights into taxpayer behaviour, identify high-risk areas, and implement targeted enforcement strategies. This includes risk profiling, targeted audits, and predictive modelling for taxpayer segmentation and risk analysis. These technologies would enable the revenue authorities to detect patterns of tax evasion, recover undeclared assets and income, close tax evasion loopholes, and enhance overall tax compliance.



Leveraging cloud-based solutions and modern system integration frameworks, the revenue authorities can ensure seamless communication and data exchange between different tax collection and reporting systems enabling real-time information sharing and streamlined operations. In Kenya, for example, the transition from iTax to the new system, iTax 2.0, presents an opportunity for the Kenya Revenue Authority to address pain points associated with data migration and system interfacing.

With technology, seamless collaboration and data sharing between different government agencies can help identify discrepancies and uncover tax evasion schemes. Combining data from country governments, ministries, state corporations, financial institutions, and other relevant agencies can provide a holistic view of an individual's or business's financial activities, enabling better enforcement and risk assessment. This collaboration can lead to streamlining of the tax compliance process and reducing fraudulent activities thus increasing the tax base.

Cooperative compliance, establishing a trust-based relationship between taxpayers and the revenue authorities can be a very effective strategy for tackling tax evasion and widening the tax base.. Digital collaboration platforms that facilitate secure information sharing, document exchange, and online discussions enable tax authorities and businesses to work together more efficiently and effectively. Such platforms can also provide a centralized repository for resources, guidelines, and best practices, ensuring consistent compliance across all entities. Additionally, collaborating with fintech companies and digital platforms can significantly enhance the revenue authorities' ability to reach a broader tax base.

Robotic Process Automation (RPA) enables tax authorities to achieve greater efficiency, accuracy, and compliance in their operations. By automating repetitive rule-based tasks such as data entry, data reconciliation, and report generation, RPA eliminates errors and streamlines processes, allowing the revenue authority to allocate resources to more valuable activities: it offers scalability, improves customer service, ensures auditability, and enhances overall productivity.

As data becomes more central to tax authorities' operations, ensuring robust cybersecurity and data privacy measures is paramount. The revenue authorities must invest in state-of-the-art cybersecurity infrastructure, data encryption, and access controls to safeguard taxpayer information. Building trust and ensuring compliance with data protection regulations will foster taxpayer confidence and encourage voluntary compliance.

Integrating technology into the tax authorities' operations offers numerous benefits for the authorities, businesses, and citizens. Examples from other countries such as Estonia's e-Tax System, Sweden's Mobile Tax App, Australia's tax virtual assistant, Singapore's real-time digital auditing, South Korea's electronic invoicing system, and India's GSTN demonstrate the transformative power of technology in tax administration.

Locally, implemented innovations such as iTax and eTIMS in Kenya and EFRIS in Uganda demonstrate the need for digital transformation. Building upon these innovations and fully deploying technology in the collection and management of taxes, revenue authorities in East Africa can maximize the tax base by leveraging accurate and real-time data for informed decision-making.

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