

# **DESIGNING AN INTELLIGENT REVENUE ECOSYSTEM IN NIGERIA: THE ROADMAP TO ESTONIA**

## **POLICY PAPER**

**UNIVERSITY OF LAGOS 2025 NATIONAL TAX  
DEBATE TEAM<sup>1</sup>**

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## **EXECUTIVE SUMMARY**

Nigeria's tax system is at a critical juncture. With a tax-to-GDP ratio of just 9.4%, far below Africa's 16% average and the OECD's 34%, the country loses over ₦3 trillion annually to non-compliance and tax evasion. This systemic failure stems from fragmented data systems, manual processes, technological obsolescence, and limited enforcement capacity that allows widespread revenue leakage, particularly from the vast informal economy. Nigeria's traditional tax administration suffers from four core deficiencies: data silos that prevent comprehensive taxpayer profiling; outdated manual systems that discourage voluntary compliance; insufficient technical capacity across most tax authorities; and widespread evasion schemes that exploit system weaknesses. These failures force excessive reliance on oil revenues and constrain fiscal sustainability.

This policy paper proposes transforming Nigeria's revenue ecosystem through Intelligent Revenue Systems that integrate real-time data analytics, automated workflows, and predictive modelling. The IRS framework, which draws from international successes in Estonia, India, Brazil, and Rwanda, provides five key capabilities: automated compliance monitoring, AI-driven risk assessment and fraud detection, unified data integration across government tiers, predictive analytics for policy-making, and simplified taxpayer services. The roadmap is hinged on five pillars: consolidating BVN, NIN, TIN, and corporate data into a unified platform; implementing security-first architecture with zero-trust protocols; deploying results-based Public-Private Partnerships for sustainable financing; building digital talent through fellowship programs; and ensuring inclusive stakeholder engagement with market unions and civil society.

This transformation could help Nigeria achieve its ambitious 18% tax-to-GDP target within three years, potentially generating hundreds of billions in additional revenue. Beyond maximising revenue, the system would allow data-driven governance across fiscal and monetary policy, formalise the informal economy, and improve the business climate by streamlining compliance. Nigeria's recent digital and AI-backed initiatives - TaxPro Max, e-invoicing systems, and AI-powered solutions, which are currently at pilot stages—demonstrate the country's readiness for this transformation. The legal framework exists, global models provide proven pathways, and the economic imperative is urgent. The time for intelligent revenue transformation is now.

## 1.0 INTRODUCTION

It is safe to say that Nigeria's tax system stands at a precipice. With the recently passed tax law reforms, the future of taxation in Nigeria has never been more anticipated. Notably, the reforms have been accompanied by a promise to transform Nigeria's tax administration. These bold promises, however, need a series of complementary policies to materialise grandly. With a historically low tax-to-GDP ratio,<sup>2</sup> far below the Organisation for Economic Co-operation and Development (OECD)'s average (33.9%),<sup>3</sup> the government faces urgent pressure to modernise tax administration and boost revenue. One of the reasons for this low tax-to-GDP ratio is the fact that, to a large extent, a huge chunk of Nigeria's potential tax base evades the capture of tax administration, especially the informal economy.

In response to the rising pressures, the Nigerian government has introduced some technological innovations over the years to increase the efficiency of tax administration in Nigeria. This is in recognition of administrative efficiency as one of the cardinal principles of taxation. That is to say, a government must ensure that taxes are capable of being administered easily, efficiently and sustainably.<sup>4</sup> However, this cardinal principle of taxation faces some challenges in developing economies like Nigeria. In fact, research has shown that poor tax collection and administration in developing countries can be attributed to the presence of a large informal sector, weak administrative capacity, weak administrative checks, and a poor social inclination towards compliance.<sup>5</sup>

In light of the above, this policy paper discusses the potential of Intelligent Revenue Systems (IRS) to improve Nigeria's tax administration. It highlights the importance of the IRS and its relevance, examining recent tax reforms and proposing a comprehensive implementation design for key taxes like VAT, Companies Income Tax, and Personal Income Tax. The paper also

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<sup>2</sup> National Bureau of Statistics, 'National Bureau of Statistics Tax-to-GDP Ratio Revised Computation' (2023) available at: <https://www.nigerianstat.gov.ng/pdfuploads/TAX-TO-GDP%20RATIO%20REVISED%20COMPUTATION-2021.pdf> (accessed 20 July 2025).

<sup>3</sup> OECD, 'Revenue Statistics 2024: Health Taxes in OECD Countries' (2024), OECD Publishing, Paris, <https://doi.org/10.1787/c87a3da5-en>. (accessed 20 July 2025).

<sup>4</sup> Vito Tanzi and Howell Zee, 'Economic Issues No. 27 -- Tax Policy for Developing Countries' (March 2021) <https://www.imf.org/external/pubs/ft/issues/issues27/> (accessed 20 July 2025).

<sup>5</sup> T. Besley, and T. Persson, "Why do developing countries tax so little?" (2024) 28(4) *The Journal of Economic Perspectives*, 99-120.

outlines safeguards for IRS adoption, including robust data protection frameworks and developmental strategies.

## **2.0 INTELLIGENT REVENUE SYSTEMS IN TAXATION**

In the context of tax administration, an Intelligent Revenue System (IRS) is a technology-driven, integrated platform that uses cutting-edge tools like real-time analytics, machine learning, artificial intelligence, and unified data systems to automate and optimize the entire revenue cycle.

1. *Enable tax authorities to assess, collect, and monitor taxes efficiently and transparently:*

The IRS combines disparate tax processes into a unified digital ecosystem, enhancing efficiency and transparency. It transforms manual processes into automated workflows, improving accuracy and adaptability. AI and automation can increase revenue yield, reduce leakages, improve taxpayer experience, prevent tax evasion, and respond to new economic activities like digital commerce.

2. *Data Integration and Unified Platforms:* IRS can also be used to aggregate data from numerous sources (tax filings, bank records, invoices, customs, etc.) and apply advanced analytics to derive insights from that data. By integrating expanded third-party data, such as banking and payroll information, modern tax systems can even automate parts of tax assessment and more effectively identify underreported income. For instance, the South African Revenue Service (SARS) uses expanded data integration to close the tax gap and improve overall compliance.<sup>6</sup> The system consolidates taxpayer information from multiple sources, ensuring consistency and reducing duplication. It provides a centralised database accessible in real-time by tax authority modules, breaking down silos and ensuring consistent data.

3. *Advanced Analytics and Machine Learning:* The IRS uses machine learning algorithms and data analytics to detect patterns, assess risks, and generate insights, with over 70% of

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<sup>6</sup> IFC, 'SOUTH AFRICA: Existing Tech Tools Enough to Tackle Tax-Dodgers, Says SARS' (*IFC Review* 13 June 2025)

<<https://www.ifcreview.com/news/2025/june/south-africa-existing-tech-tools-enough-to-tackle-tax-dodgers-says-sars/>> accessed 20 July 2025.

tax administrations using AI for compliance management and tax evasion detection.<sup>7</sup> Machine-learning models can segment taxpayers by risk profile and flag anomalies (such as under-reported income or suspicious refund claims) for further investigation.<sup>8</sup> Predictive analytics also enables forecasting of revenues and taxpayer behaviour, allowing proactive measures (e.g., sending nudges to likely late filers).

4. *Automation and Workflow Optimisation:* The IRS utilises AI-driven automation to streamline repetitive tax tasks, including registration, return processing, payments, and enforcement. This not only accelerates processing times but also minimises human errors, allowing tax officials to focus on more complex duties.
5. *Natural Language Processing (NLP) and Taxpayer Service:* Natural Language Processing (NLP), a branch of AI, enables the system to interpret and generate human language, enabling chatbots and virtual assistants to provide taxpayer support 24/7 in multiple languages. NLP can also be used internally to parse legal documents and interpret free-text data.
6. *Real-Time Analytics and Fiscal Monitoring:* Unlike traditional systems that rely on periodic filings, the IRS emphasises real-time data capture and analysis. Through tools like electronic invoicing, point-of-sale systems, and integration with banking/payment platforms, transactions are reported in real-time to the tax authority. This real-time flow of information enables continuous tax assessment (e.g. calculating VAT as sales happen) and early detection of compliance issues. Ultimately, the vision is a “real-time tax administration” where the need for after-the-fact declarations is minimised.<sup>9</sup> Another application of the IRS is through secure digital infrastructure like blockchain technology to ensure data integrity, transparency, and tamper-proof record-keeping. Blockchain can be particularly relevant in tracking value-added tax invoices or ensuring proper allocation

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<sup>7</sup> OECD, ‘Tax Administration Digitalisation and Digital Transformation Initiatives: Executive Summary’ <[https://www.oecd.org/en/publications/tax-administration-digitalisation-and-digital-transformation-initiatives\\_c076d776-en/full-report/component-5.html](https://www.oecd.org/en/publications/tax-administration-digitalisation-and-digital-transformation-initiatives_c076d776-en/full-report/component-5.html)> accessed 20 July 2025.

<sup>8</sup> SAS, ‘How Governments Are Using AI and Analytics for Proactive Fraud Risk Management’ (Govinsider.asia2025) <<https://govinsider.asia/intl-en/article/how-governments-are-using-ai-and-analytics-for-proactive-fraud-risk-management>> (accessed 17 July 2025).

<sup>9</sup> e-Estonia, ‘Digitising Taxation Secures Estonia’s #1 Position in Tax Competitiveness Index - E-Estonia’ (2023 available at: ) <<https://e-estonia.com/digitising-taxation-secures-estonias-nr-1-position-in-tax-competitiveness-index/>> (accessed 17 July 2025).

of shared revenues, as it creates an immutable ledger of transactions visible to all stakeholders in the network. By deploying appropriate technology and digital platforms, a tax authority can automate processes end-to-end while maintaining trust and security.

### **3.0 SHORTCOMINGS OF TRADITIONAL TAX ADMINISTRATION**

#### **a. Low tax compliance rate**

According to the International Monetary Fund (IMF), Nigeria's tax-to-GDP ratio as of 2023 stood at about 9.4%, still one of the lowest in the world and even on the African continent.<sup>10</sup> One reason for this is that Nigeria's tax administration architecture is not designed for ease and efficiency, which accounts for the low tax compliance rate. However, there are other factors that contribute to this state of affairs.

*Firstly*, on the side of the taxpayers, complex procedures and a lack of guidance discourage voluntary filing. *Secondly*, the manual and traditional systems used by the tax authorities make it difficult to verify income and often lead to arbitrary assessments, undermining fairness and compliance.<sup>11</sup> *Thirdly*, tax authorities of various states in Nigeria are not on equal footing in terms of capacity to enforce tax compliance. That is, many states lack data or tools to identify potential taxpayers or monitor compliance beyond formal PAYE (Pay-As-You-Earn) payroll systems. *Fourthly*, poor infrastructure and a large informal sector makes it hard to monitor transactions, leading to high compliance costs, low voluntary compliance and limited enforcement capability.

#### **b. Data Fragmentation**

The World Bank notes that collaboration between tax administrations and law-enforcement agencies is hindered by incompatible IT systems, legal restrictions, agencies' desire for autonomy and differing organisational objectives.<sup>12</sup> Without data sharing (e.g., between tax

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<sup>10</sup> Desmond Okon, 'IMF: At 9.4% in 2023, Nigeria's Tax Revenue to GDP Ratio among Lowest in the World' ( May 2024) <<https://www.thecable.ng/imf-at-9-4-in-2023-nigerias-tax-revenue-to-gdp-ratio-among-lowest-in-the-world/>> (accessed 20 July 2025).

<sup>11</sup> Blessing Oladipo and others, 'International Journal of Research Publication and Reviews Tax Administration and Personal Income Tax Compliance in Nigeria' (2025) 6 International Journal of Research Publication and Reviews 9337 <<https://ijrpr.com/uploads/V6ISSUE4/IJRPR42798.pdf>> (accessed 20 July 2025).

<sup>12</sup> World Bank, 'Inter-Agency Collaboration to Detect Corruption' [2020] EXCHANGE AND COLLABORATION WITH TAX ADMINISTRATIONS <<https://thedocs.worldbank.org/en/doc/851631611673900662-0090022021/original/InterAgencyCollaborationtoDetectCorruption.pdf#:~:text=lack%20of%20interoperability%20among%20different,bear%20on%20each%20agency%3B%20%C2%BB%C2%BB>> (accessed 20 July 2025).

authorities, customs, banks and corporate registries), tax administrations cannot build complete taxpayer profiles, which in turn helps to identify suspicious patterns and combat tax evasion schemes.

In Nigeria, data is housed in unconnected, siloed structures (e.g. banks, government agencies, ministries). This fragmentation creates loopholes and duplications. For years, agencies like the Independent Corrupt Practices Commission (ICPC) only learned of tax evaders through separate investigations. For example, ICPC had to manually pass hundreds of suspect companies to FIRS. In practice, there is little automatic data-sharing between institutions like banks, customs, tax, corporate registries, and other agencies.<sup>13</sup>

### **c. Tax Evasion**

In the area of Value Added Tax, businesses (especially small, nano or informal businesses) either do not charge VAT or underreport sales, leading to significant revenue leakage. According to the Director General of the Budget Office of the Federation, Ben Akabueze, in 2022, Nigeria lost over ₦3 trillion to VAT non-compliance.<sup>14</sup> The absence of proper recording and reporting technology in manual invoicing leads to delays in VAT settlement and distribution, allowing fraud to go undetected and making input VAT claims unverifiable and often necessitating audits.

Companies and individuals always find ways to evade tax liabilities. The Nigerian Financial Intelligence Unit (NFIU) lists common evasion indicators: non-remittance of collected taxes, overstated expenses, under-invoicing, heavy reliance on cash transactions and use of offshore loans or shell companies.<sup>15</sup> Companies often under-declare profits and manipulate accounts, hindering effective enforcement in Nigeria. The informal economy, which includes unregistered businesses, rural work, and hidden income sources, evades taxes and undermines revenue collection. Among individuals, especially high-net-worth individuals (HNWIs), under-reporting is common, especially in the case of multiple streams of income not declared.<sup>16</sup> Nigeria's tax

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<sup>13</sup> Idowu Bankole, 'FIRS Launches Intelligence System to Track Tax Evaders' (*Vanguard News* 12 February 2020) <<https://www.vanguardngr.com/2020/02/firs-launches-intelligence-system-to-track-tax-evaders/>>.

<sup>14</sup> Kasarahchi Aniagolu, 'Over N3trn Lost to Non-Compliance with Value Added Tax Act - FG' (*The Whistler Newspaper* 10 January 2023) <<https://thewhistler.ng/over-n3trn-lost-to-non-compliance-with-value-added-tax-act-fg/>> accessed 28 July 2025.

<sup>15</sup> NFIU, 'GUIDANCE on TAX EVASION INDICATORS in RELATION to MONEY LAUNDERING and TERRORISM FINANCING' (2015) <<https://www.nfiu.gov.ng/images/Downloads/downloads/taxindicators.pdf>> accessed 28 July 2025.

<sup>16</sup> TaxJusticeNetworkAfrica, 'Taxing Nigerian Fair Tax Monitor Thematic Report the Rich' (2024) <[https://www.taxjusticeafrica.net/sites/default/files/publications/Taxing-the-Rich-Final\\_Nigeria-3.pdf](https://www.taxjusticeafrica.net/sites/default/files/publications/Taxing-the-Rich-Final_Nigeria-3.pdf)>.

realisations stand at about 40% due to evasive tax practices.<sup>17</sup> Collectively, these issues distort economic data and shift tax burdens onto compliant taxpayers, hindering effective enforcement and limiting revenue generation.

#### **d. Unequal Capacity of Tax Authorities**

Some state tax authorities lack trained auditors and the technologies to monitor modern transactions. They even struggle with traditional businesses, much less digital or virtual asset transactions. Apart from the FIRS and the IRS of states such as Lagos and Abuja, other IRSs may struggle with onboarding and utilising advanced tech systems. Consequently, the government cannot easily detect hidden incomes or audit complex corporate accounts.

Also, Personal Income Tax in Nigeria suffers from narrow coverage and enforcement difficulties. In the area of digital/virtual assets, Nigeria has one of the highest crypto usage rates globally,<sup>18</sup> yet these largely go untaxed currently due to anonymity and lack of reporting. Additionally, digital services like online streaming subscriptions, digital advertising, and app-based services often come from foreign providers who have no physical presence in Nigeria, complicating VAT and income tax enforcement. Lastly, despite the introduction of significant economic presence,<sup>19</sup> compliance still depends on voluntary registration or the cooperation of payment intermediaries.

### **4.0 RELEVANCE OF THE IRS TO NIGERIA'S TAX ADMINISTRATION AND FISCAL FRAMEWORK**

Implementing an Intelligent Revenue System in Nigeria will serve as a strategic lever for enhancing the country's fiscal capacity and economic governance. In this section, this policy paper focuses on the scope and relevance of an IRS to Nigeria's national tax administration, its fiscal framework, and even broader monetary and economic planning goals.

- 1. Enhancing Domestic Revenue Mobilisation:** Nigeria has historically grappled with low tax-to-GDP ratios and heavy reliance on oil revenues.<sup>20</sup> Relying on the IRS, Nigeria will significantly boost domestic revenue mobilisation by improving compliance and

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<sup>17</sup> Ogbediga, J.O & Oscar, P.C, 'Revenue size: An investigation of the role of tax compliance behaviour of taxpayers in Nigeria' Journal of Accounting and Business 1(3), 48-61.

<sup>18</sup> Chainalysis Team, 'Sub-Saharan Africa: Nigeria Takes #2, South Africa Grows Crypto-TradFi' (October 2024) <<https://www.chainalysis.com/blog/subsaharan-africa-crypto-adoption-2024/>>.

<sup>19</sup> Finance Act 2019; Significant Economic Presence Order 2020; S17 of the Nigeria Tax Act.

<sup>20</sup> World Bank, 'Taxation and State Participation in Nigeria's Oil and Gas Sector' (2004) Energy Sector Management Assistance Programme (ESMAP) Technical paper; no. ESM 057.



broadening the tax base. To achieve this, Nigeria should use the data analytics component of the IRS system to (a) identify non-compliant taxpayers and, (b) use AI to detect their evasion patterns.

In Italy, the tax authorities leverage the VeRa algorithm to compare financial data, including tax returns and bank records, to detect discrepancies and curb evasion. In 2022, over a million high-risk cases were detected, and the algorithm was used to prevent fraud of over EUR 6.8 million.<sup>21</sup> These successes suggest that a Nigerian IRS could greatly increase non-oil revenues by finally capturing taxes that are uncollected in the informal sector or through tax evasion schemes.

2. **Improving Tax Administration Efficiency and Compliance:** Nigeria's current tax administration faces challenges such as fragmented data, manual processes, and limited enforcement capacity. The IRS addresses these challenges in the following respects: *Firstly*, through advanced data analytics and automation, Nigeria could develop a unified, centralized data infrastructure that incorporates tax user data from various sources, including TIN, NIN, Voter's Card, and even local government registration servers such as the Lagos State Neighbourhood identity card. With a comprehensive database of potentially taxable persons, the IRS can then help Nigeria identify taxable persons who have not been complying with their civic obligation to pay taxes. Already, the FIRS has an AI system that does this, however, the absence of a comprehensive and centralised database makes the functionality of the system limited, thereby limiting the ability of the FIRS to detect non-tax payers on a national level. *Secondly*, the IRS reduces administrative costs and processing time, freeing up staff to focus on high-value activities that require human focus and simply reviewing tax assessments of AI systems. This way, taxpayer services become more efficient as returns are processed faster and with fewer errors. *Thirdly*, the simplicity that the IRS offers will incentivise taxpayers to voluntarily comply with their tax obligations.
3. **Integration with Broader Economic Efforts Like Fiscal Policy and Monetary Planning:** A modern IRS will strengthen the broader fiscal and monetary framework in

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<sup>21</sup> PricewaterhouseCoopers, 'Role of AI in Transforming How Tax Authorities Work' (2024) <<https://www.pwc.com/tv/en/about/services/IT-services/related-articles/Role-of-AI-in-transforming-how-tax-authorities-work.html>> (accessed 20 July 2025).

Nigeria. This will occur in two ways. *Firstly*, a better revenue collection mechanism contributes to fiscal sustainability,<sup>22</sup> reducing the need for deficit financing or excessive borrowing. *Secondly*, an IRS provides reliable data that can support monetary and economic planning. This could look like when a comprehensive tax data improves visibility into various sectors of the economy (consumption patterns via VAT, corporate performance via CIT, etc.), which then inform monetary policy (e.g. understanding inflation drivers from consumption data) and economic modelling. Additionally, by formalising more of the economy through better tax compliance, the IRS can indirectly aid monetary policy since more transactions occur through traceable, digital channels rather than the informal cash economy.

4. **Unified National Fiscal Architecture:** The scope of the IRS in Nigeria could cover federal, state, and local government revenues, aligning with Nigeria's fiscal federalism. A well-designed IRS would provide a national integrated platform for tax administration that different levels of government can leverage. This is particularly relevant given Nigeria's multi-tier tax structure. With a unified national fiscal architecture, which would necessarily include a national database, state governments can easily administer taxes that they are constitutionally empowered to administer (such as Personal Income Tax) by drawing from the centralised database to identify taxpayers within their states (and those that from other states but now resident in their states) and tax them accordingly. This reduces tax evasion and boosts revenue generation.
5. **Support for Economic Growth and Ease of Doing Business:** Modernising Nigeria's tax administration through the IRS can boost the business climate and economic growth. Existing research shows a correlation between the willingness of foreign investors to invest and the simplicity of tax systems in the host country. This means that opaque, complex tax processes, which is what currently obtains in Nigeria, discourages foreign direct investments. An intelligent system offers simplified compliance and predictability, reducing administrative burdens and supporting economic growth and ease of doing business in Nigeria.

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<sup>22</sup> James Daniel and others, "Fiscal Adjustment for Stability and Growth" (2006) available at: <<https://www.imf.org/external/pubs/ft/pam/pam55/pam55.pdf>> (accessed 13 July 2025).

## **5.0 LEGAL FRAMEWORK FOR ADOPTING IRS IN NIGERIA'S TAX SYSTEM**

With the new tax reforms, the Nigerian government now has an ample legal basis for adopting the IRS; thus, a fertile ground for implementation exists. *Sections 22(10) and 23 of the Nigerian Tax Administration Act (NTAA)*, and *Section 156 of the Nigerian Tax Act (NTA)* provide a basis for the use of technology for filing VAT returns and the Electronic Fiscalisation System (EFS) as deployed by the Service for recording and reporting all taxable supplies. Notably, *Section 71(1) of the NTAA* provides for the deployment of technology to automate tax administration processes, including tax assessment, collection, accounting and information gathering.

*Section 71(2)* further provides for the use of technology, including a third-party payment processing platform or a computer application to collect or remit taxes due on the supply of digital services to any person in Nigeria, whether or not such supply originates from within or outside Nigeria. The presence of a legal basis precludes unnecessary constitutional challenges of the government's adoption of the IRS, solidifying its legitimate exercise of taxing powers through technology.

## **6.0 LESSONS FROM OTHER JURISDICTIONS: THE ROAD TO ESTONIA**

The adoption of an IRS is no easy task, and the implementation plan and scope of adoption is still rather abstract in Nigeria. Moreover, there exist a number of factors that must be carefully considered before taking steps to implement an IRS. Accordingly, this section of the policy analyses success stories from other jurisdictions (India and Estonia) to extract notable lessons and strategies that Nigeria can use to develop a workable implementation plan and how to surmount potential challenges.

### **6.1 India**

India's scope of adoption, federal system, complexity of taxes, infrastructure challenges, and demographics make its tax digitalisation efforts instructive to Nigeria. In 2017, India introduced its flagship reform by introducing Goods and Services Tax (GST), which replaced a web of state and federal indirect taxes with a unified GST. This came with the creation of the GST Network (GSTN), a massive IT system connecting tax administrations of 28 states and the centre.<sup>23</sup> The

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<sup>23</sup> Bhushan D, "Impact of IT on Tax Compliance in India: A Case Study of GST" (2019) Tax Law Review.

GSTN processes billions of invoices monthly, using built-in validation and invoice-matching algorithms, AI and data analytics to curb tax evasion.<sup>24</sup> In terms of gathering data, India also leverages its unique ID (Aadhaar) and Permanent Account Number (PAN) linkage, which feeds into a unified database, to track the financial transactions of taxpayers. Additionally, India deployed *Project Insight*, a big-data analytics platform that consolidates data from banks, credit card companies, government records, and social media to flag discrepancies in lifestyles and declared incomes.<sup>25</sup> These efforts led to the recovery of billions of rupees in just three years.<sup>26</sup>

## 6.2 Estonia

Approximately 96% of individual taxpayers and 99% of companies file taxes online in Estonia. This is facilitated by a user-friendly portal and extensive pre-filing of data (since 98% of third-party data is available digitally to the tax system). The pre-filing of data means that before a taxpayer comes to declare, the tax authority already has a pre-filed form which estimates the taxpayer's liability, their total income, and the applicable tax rates. The result is very low compliance costs and a high degree of trust since over 90% of Estonians believe paying taxes is a civic duty. Estonia was among the first to craft a dedicated *Tax Authority AI Strategy*. Rather than ad-hoc projects, they mapped 40+ AI use cases and prioritised them.

One challenge they identified is integrating a growing number of data sources (170+ databases) into risk analysis. This is a process that, with traditional programming, would take 2 years per risk model, but with AI, it can be done in just 6 months. They have also deployed AI agents to combat specific issues like “envelope wages” (unreported cash salaries) and VAT fraud. A partnership with an AI firm (MindTitan) yielded a machine learning model that recognises suspicious patterns with 97% accuracy. These models uncovered large-scale VAT fraud and significantly improved enforcement productivity.

Estonia is pushing towards a real-time tax system, which represents a shift from declaration-based reporting to data-based reporting. Instead, data flows directly from business accounting software to the tax authority continuously. They already have ubiquitous digital

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<sup>24</sup> Vidya V Devan, ‘An Analysis of Goods and Services Network (GSTN) - The Technological Backbone of GST’ (2023) 10(3) Journal of Emerging Technologies and Innovative Research (JETIR).

<sup>25</sup> Amrita Das, ‘Catching Tax Evaders: “Insight” into I-T Dept Algorithm That’s Scanning Social Media Posts - CNBC TV18’ (14 March 2022)

<<https://www.cnbcvtv18.com/finance/an-insight-into-the-algorithm-taxmen-are-using-to-nab-tax-evaders-12822542.htm>>.

<sup>26</sup> Economic Times & Finance Ministry Briefings (2024).

invoicing as a step in this direction. Additionally, Estonia introduced innovative services like a Business Account for small entrepreneurs (in partnership with a bank) that automatically calculates and remits taxes when they receive income, requiring no additional filing.<sup>27</sup> This sort of integration of banking and tax systems simplify compliance for SMEs immensely.

## **7.0 LAYING THE FOUNDATION FOR INTELLIGENT REVENUE SYSTEMS IN NIGERIA**

Nigeria has made meaningful strides in upgrading its tax administration, laying a foundational infrastructure for a future shift towards intelligent systems. The FIRS launched the TaxPro Max in 2021, a consolidated platform for tax filing, payments, registration, and Tax Clearance Certificate validation.<sup>28</sup> This marked a critical step in reducing bureaucratic inefficiencies and enhancing basic compliance services.

In January 2025, the FIRS introduced the Tax Account Codes (TACs), which are essentially digital tags that will be assigned to specific items in a company's financial statement. This means tax data will be standardized, codified, and classified in a digital format, making it easier for systems (like TaxProMax) to process, analyse, and interpret.<sup>29</sup> The primary objective is to enhance data centricity and analytics, and provide the FIRS with the data to perform certain types of analytics and gain better insights into the financial performance of taxpayers across the board.

In April 2025, the FIRS also rolled out the Merchant Buyer Solution (called the FIRSMBS) e-Invoicing system, which is to replace traditional paper invoices with structured digital invoices for all business transactions, standardise invoice creation and exchange across both public and private sectors. The pilot programme was scheduled for July 2025, with selected large

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<sup>27</sup> e-Estonia, 'Digitising Taxation Secures Estonia's #1 Position in Tax Competitiveness Index - E-Estonia' (25 January 2023) available at: <https://e-estonia.com/digitising-taxation-secures-estonias-nr-1-position-in-tax-competitiveness-index/> (accessed 22 July, 2025).

<sup>28</sup> Amarachi Orjiude, "FIRS launches new tax returns platform" (The Punch, 5 June 2021) <https://punchng.com/firs-launches-new-tax-returns-platform/> accessed 26 July 2025.

<sup>29</sup> Akaoma Osele and Oluwakemi Gbadebo, "Digitizing Tax Administration In Nigeria With The Introduction Of Tax Account Codes" <https://www.mondaq.com/nigeria/tax-authorities/1542500/digitizing-tax-administration-in-nigeria-with-the-introduction-of-tax-account-codes> accessed 26 July 2025.

taxpayers.<sup>30</sup> This initiative aims to enhance tax compliance, prevent revenue leakages, and improve transparency in tax administration by utilising technology to monitor and evaluate taxable goods and services accurately.

The FIRS has also collaborated with fintech companies, such as Flutterwave, to power digital tax collections, supporting the government's bid to modernise the country's tax payment system.<sup>31</sup> And more recently, in late July 2025, reports emerged that the FIRS has developed a real-time portal, called the Transaction Monitoring System, to track all VAT-eligible electronic transactions and is mandating integration from banks, card schemes, fintechs, and payment service providers as part of an aggressive push to plug tax leakages in the fast-growing digital economy.<sup>32</sup>

Even at the subnational level, the LIRS operates through a technology solution called the "Eco Fiscal System (EFS)".<sup>33</sup> This system is specifically tailored to businesses operating in the Hospitality sector, such as hotels, event centres, restaurants, bars, and related facilities in Lagos State. These operators are required to download and install the EFS software, which will interface only with the Point of Sale (PoS) of the taxpayer and transmit records of all sales transactions to the LIRS Online Tax System (OTS) in real-time. The system will issue invoices with unique numbers. The primary purpose of this software is to automate and monitor in real-time the collection of consumption tax in Lagos State.

While these efforts represent commendable progress in digitalising core processes, it is crucial to underscore that they do not yet constitute Intelligent Revenue Systems (IRS). Digital platforms like the TaxPro Max and Transaction Monitoring System enable operational efficiency and reduce paperwork, but the Intelligent Revenue System goes further; it integrates real-time data analysis, machine learning, and predictive modelling to enhance decision-making, compliance targeting, and fraud detection.

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<sup>30</sup> PWC Nigeria, 'E-invoicing Implementation in Nigeria: Driving Digital Transformation Together' <[https://pwc-nigeria.typepad.com/tax\\_matters\\_nigeria/2025/05/e-invoicing-implementation-in-nigeria-driving-digital-transformation-together.html](https://pwc-nigeria.typepad.com/tax_matters_nigeria/2025/05/e-invoicing-implementation-in-nigeria-driving-digital-transformation-together.html)> accessed 26 July 2025.

<sup>31</sup> 'Flutterwave Powers Digital Tax Collections for Nigeria's Federal Inland Revenue Service (FIRS)' <<https://ffnews.com/newsarticle/paytech/flutterwave-powers-digital-tax-collections-for-nigerias-federal-inland-revenue-service-firs/>> accessed 26 July 2025.

<sup>32</sup> Muktar Oladunmade, "FIRS wants banks and fintechs to share transaction data for VAT monitoring" (TechCabal, 25 July 2025) <<https://techcabal.com/2025/07/25/firs-launches-portal-for-vat/>> accessed 26 July 2025.

<sup>33</sup> Lagos State Inland Revenue Service, "Eco Fiscal System (EFS)" <<https://lirs.gov.ng/efs>> accessed 26 July 2025.

A recent presentation by FIRS officials at a stakeholder conference indicates that Nigeria is beginning to move beyond basic digitisation and into the early pilot stages of intelligent tax administration. Although not yet publicly announced, this signals a quiet but strategic shift toward more data-driven and automated approaches within the country's tax system.<sup>34</sup> Importantly, the FIRS has begun experimenting with artificial intelligence (AI) tools to flag high-risk taxpayers and segment taxpayers by behavioural patterns. These pilots are still nascent but show a clear commitment to embedding intelligence into tax operations. Nigeria is not alone in this journey—countries like Brazil, India, and Estonia have transitioned through similar phases: from manual systems, to basic digital platforms, to intelligent, self-learning tax infrastructures.

Some of the AI-driven solutions currently in the pilot phase, outlined by Mr. Kola Okunola, Director of the Intelligence, Strategic Data Mining and Analysis Department at the FIRS, reflect Nigeria's gradual shift toward intelligent revenue systems (IRS) in tax administration. Speaking at the ICT Summit on Taxation 2025, themed *"Building Smart Tax Infrastructure for Economic Growth"* and organised by the CITN,<sup>35</sup> Mr. Okunola highlighted several key initiatives, including:

- **The Analysis Portal** – a platform designed to streamline the process of requesting and retrieving taxpayer information, improving access to structured financial data for compliance and audit purposes.
- **The Intelligence Operations System** – an AI-enabled profiling tool aimed at enhancing taxpayer risk assessment by generating behavioural and financial risk profiles across different taxpayer segments.
- **'Analyst To Go'** – a mobile application being tested by authorised FIRS personnel that applies machine learning algorithms to segment taxpayers into high-risk and low-risk

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<sup>34</sup> The ICT Summit on Taxation 2025, themed "Building Smart Tax Infrastructure for Economic Growth" organised by the Chartered Institute of Taxation of Nigeria (CITN) in collaboration with UNITEs Cisco Networking Academy. The team watched the recording uploaded on YouTube <<https://youtu.be/vOtwrSnz9Fk?si=sma1OWu7nzi60PjD>> (accessed 25 July 2025). This summit brought together industry experts, policymakers, tech innovators, and finance professionals to explore how digital transformation and smart infrastructure can reshape Nigeria's tax ecosystem for sustainable economic growth.

<sup>35</sup> Mr Kunle Okunola's presentation on AI in Compliance and Fraud detection, available at: <<https://youtu.be/vOtwrSnz9Fk?si=sma1OWu7nzi60PjD>> (accessed 20 July 2025).

categories. This tool is intended to support real-time, field-level decision-making and improve the efficiency of enforcement and audit activities.

Nigeria's tax administration strategy is shifting from reactive enforcement to predictive, risk-based oversight, marking a shift from reactive enforcement to a more responsive, data-centric tax system aligned with global best practices. Nigeria is transitioning from manual processes to a data-driven tax ecosystem, utilising data capture systems, API infrastructure, stakeholder engagement, and AI pilots. The challenge now is to integrate these components into a coherent strategy that scales across government tiers, addresses institutional bottlenecks, and delivers intelligent automation results.

Despite these strides, Nigeria's tax-to-GDP ratio remains critically low, recovering to only 8.06% by 2024 after a drastic fall to 5.11% in 2022. This is significantly below the African average of 16% and the OECD average of 34%.<sup>36</sup> The administration of President Bola Ahmed Tinubu has set an ambitious goal of reaching a minimum tax-to-GDP ratio of 18% within three years.<sup>37</sup> Bridging even half of this 10-percentage-point gap could translate into hundreds of billions of naira in additional annual revenue. The digital infrastructure is beginning to take shape, but the real challenge lies in scaling these innovations into a fully integrated and intelligent tax ecosystem that delivers measurable results.

## **7.1 Cracks in the Foundation: Confronting the Barriers to Tax Intelligence in Nigeria**

Despite the encouraging trajectory, several structural and operational challenges confront Nigeria's efforts to transition into an intelligent revenue system. These challenges span data, infrastructure, public trust, human capital, and legal-regulatory gaps. In this section, this policy paper highlights these existing challenges to the adoption of IRS, and how other countries surmounted them.

- a. Data Fragmentation and Quality:** One of the most critical barriers is the fragmentation and poor quality of taxpayer data. Although there have been policy-level discussions

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<sup>36</sup> Dataphyte, "Tinubu at Mid-Term: Nigeria's 2024 Tax Reform Bill and Fiscal Future" <https://dataphyte.com/issue/data-dives/2025/05/tinubu-at-mid-term-nigerias-2024-tax-reform-bill-and-fiscal-future> > accessed 26 July 2025.

<sup>37</sup> 'FG targets 18% tax-to-GDP ratio in three years – Oyedele' (The Punch) <https://punchng.com/fg-targets-18-tax-to-gdp-ratio-in-three-years-oyedele/>



about harmonising key databases such as TINs, BVNs, and NINs, there is no confirmed national linkage or coordinated implementation strategy. As a result, taxpayer records remain scattered across ministries, departments, and agencies (MDAs) without a common data exchange protocol. This leads to widespread duplication, inconsistencies in format, and incomplete records, which compromise the performance of AI systems and predictive analytics that rely heavily on clean, unified, and high-quality data. This compromises the potential of AI models and predictive analytics, which rely on high-quality, clean, and unified datasets.

**Estonia's success in deploying an intelligent e-tax system** hinged on the X-Road framework, a secure data exchange layer that enables real-time interoperability across over 1,000 public and private databases. The system ensures data integrity, confidentiality, and auditability, and has been instrumental in reducing tax fraud, increasing compliance, and improving administrative efficiency. Notably, the X-Road infrastructure allows different government agencies, such as the tax office, population registry, and business registry, to exchange information automatically, eliminating duplication and improving service delivery.<sup>38</sup>

- b. Infrastructure and Technology Gap:** The deployment of an IRS requires substantial infrastructure—scalable cloud storage, application programming interfaces (APIs), big data analytics engines, and real-time transaction monitoring. Budget constraints mean many of these resources are unavailable in-house. Nigeria risks a lopsided implementation unless partnerships or outsourcing strategies are pursued.

**Brazil's rollout of its national e-invoicing system** - Nota Fiscal Eletrônica (NF-e), demonstrates how government-led digital infrastructure can succeed through extensive private sector collaboration. Introduced in 2006, the system replaced traditional paper invoices with a mandatory electronic invoicing framework that requires taxpayers to issue machine-readable invoices validated in real time by the federal revenue authority (Receita Federal).<sup>39</sup>

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<sup>38</sup> eEstonia, 'X-road – Interoperability services' <<https://e-estonia.com/solutions/interoperability-services/x-road/>> accessed 27 July 2025.

<sup>39</sup> 'E-Invoicing in Brazil: the "Carnaval" of Digital Transformation' <<https://blog.eezi.io/e-invoicing-in-brazil-the-carnaval-of-digital-transformation/>> accessed 27 July 2025.

The NF-e operates as a clearance-based system where taxpayers must generate electronic files with detailed fiscal information that must be validated by tax authorities before transactions are considered complete. The system was designed to reduce tax evasion, improve tax collection, and simplify the invoicing process, creating a comprehensive digital transaction trail for revenue monitoring.

Implementation required significant collaboration between government authorities, domestic software developers, state tax administrations, and businesses. While the government provided the core infrastructure and regulatory framework, private companies bore substantial implementation costs by investing in compliance systems—developing or acquiring software to generate the required XML invoices and integrate with government validation systems. This collaborative model distributed the burden of digital transformation while maintaining centralised oversight and standards.

The NF-e system has proven highly effective in reducing invoice fraud, streamlining revenue collection, and establishing reliable digital transaction records across Brazil's economy.

- c. **Cybersecurity and Data Privacy Risks:** As Nigeria expands into Intelligent Revenue Systems, cybersecurity and data protection become critical pillars for sustaining public trust and ensuring compliance. Under the *Nigeria Data Protection Act (NDPA) 2023*, the FIRS, or soon to be Nigeria Revenue Service (NRS), and allied agencies qualify as major data controllers. This designation imposes strict obligations, including data encryption, the conduct of Data Protection Impact Assessments (DPIAs), and the maintenance of audit trails for all information processed.

As these intelligent systems scale, the cybersecurity infrastructure required to secure real-time taxpayer data becomes increasingly complex. Without proactive investment in cyberdefense and regulatory enforcement, the system risks exposing large volumes of personal and commercial data to breaches, manipulation, or unauthorized access. As of now, the enforcement architecture under the NDPA remains nascent, and there is limited evidence of sector-wide audits, redress mechanisms, or technical readiness reviews by FIRS. This poses concerns because global experience shows that data breaches can derail

digital tax reform by eroding public trust. Nigeria must, therefore, view cybersecurity not as an add-on but as a foundational design principle of its IRS transformation.

**Singapore has established a comprehensive institutional framework for cybersecurity in public systems** through its Smart Nation initiative<sup>40</sup> and the Government Technology Agency (GovTech). The government has implemented a Government Zero Trust Architecture (GovZTA)<sup>41</sup> that enforces continuous verification by examining each request and ensuring credentials are legitimate, while assessing contextual attributes such as device health to ensure compliance.

The cybersecurity framework is built around internationally recognised standards, with systems mapped to ISO/IEC 27001 information security standards. GovTech serves as Singapore's first Common Vulnerabilities and Exposures (CVE) Numbering Authority, demonstrating the government's active role in vulnerability management and threat intelligence. Singapore's digital infrastructure incorporates layered security measures, including continuous authentication, audit trails, and encrypted data transmission. The private sector is required to conduct vulnerability assessments and penetration testing, with vulnerability assessments conducted quarterly and penetration testing annually or biannually for systems handling personal data. This regulatory approach extends Singapore's security-first culture across both public and private digital ecosystems.

This comprehensive approach has positioned Singapore as a recognised leader in digital governance and cybersecurity, providing a model for countries seeking to integrate robust security frameworks into their digital transformation initiatives.

- d. Public Trust and Technology Adoption Barriers:** Taxpayer mistrust of government digital systems, especially among Nigeria's vast informal sector, presents a formidable hurdle. This mistrust is not limited to technical design issues such as complex interfaces, opaque data practices, and limited language accessibility. It also stems from deeper concerns about how tax revenues are used. Many taxpayers are sceptical about whether their contributions result in tangible public goods, such as infrastructure, education, or

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<sup>40</sup> Singapore Government Agency, "Smart Nation 1.0" <<https://www.smartnation.gov.sg/about/our-vision/sn1>> accessed 27 July 2025.

<sup>41</sup> Singapore Government Developer Portal 'Government Zero Trust Architecture (GovZTA)' <<https://www.developer.tech.gov.sg/guidelines/standards-and-best-practices/government-zero-trust-architecture.html>> accessed 27 July 2025.

healthcare. In the absence of visible accountability and service delivery, even well-designed digital systems may face resistance or apathy from potential users.

**Rwanda's approach to taxpayer inclusion demonstrates the importance of simplicity and accessibility.** The Rwanda Revenue Authority in 2013 developed a mobile-based Electronic Billing Machine (EBM) system that includes smartphone versions specifically designed for non-VAT registered taxpayers and micro or small enterprises. The system functions **both online and offline**, addressing connectivity challenges that had previously excluded informal and small-scale vendors from formal tax systems.

The EBM system's design prioritises minimal digital literacy requirements, making it accessible to traders with limited technological experience. Rwanda's implementation strategy emphasised community engagement through comprehensive sensitisation campaigns conducted across educational institutions and trading communities. The Rwanda Revenue Authority introduced strengthened approaches to promote EBM adoption among taxpayers, focusing on building understanding and trust at the grassroots level.<sup>42</sup>

This user-centred approach achieved significant results; research by the International Growth Centre showed that the adoption of the EBMs was rapid, reaching 77.8% of active VAT-paying firms within a year, and increased a firm's VAT payments by an average of 5.4%, with particularly strong effects in sectors like hotels, retail, and construction.<sup>43</sup> Official data indicate that VAT revenue has surged by over 170% between 2013 and 2022. This dramatic increase correlates with phased EBM implementation across the tax base.<sup>44</sup>

Rwanda's experience illustrates that successful digital inclusion requires not just technological solutions, but sustained community engagement and systems designed around user capabilities rather than technological sophistication. On the deeper layer of

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<sup>42</sup> 'RRA launches a nationwide campaign to promote EBM usage'

<[https://www.rra.gov.rw/en/details?tx\\_news\\_pi1%5Baction%5D=detail&tx\\_news\\_pi1%5Bcontroller%5D=News&tx\\_news\\_pi1%5Bnews%5D=1800&cHash=b718932593aba063c94b112fcc3e90e](https://www.rra.gov.rw/en/details?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=1800&cHash=b718932593aba063c94b112fcc3e90e)> accessed 27 July 2025.

<sup>43</sup> 'The incidence and impact of Electronic Billing Machines for VAT in Rwanda' (15 April 2016)

<[https://www.theigc.org/blogs/incidence-and-impact-electronic-billing-machines-vat-rwanda?utm\\_source=chatgpt.com](https://www.theigc.org/blogs/incidence-and-impact-electronic-billing-machines-vat-rwanda?utm_source=chatgpt.com)> accessed 27 July 2025.

<sup>44</sup> AfriBusinessNews, 'Rwanda considers lowering Value Added

Tax' <<https://afribusinessnews.com/rwanda-considers-lowering-value-added-tax/>> accessed 27 July 2025.

trust and accountability, the Nigerian government can leverage social media platforms and billboards to graphically represent how much of tax revenue is used to fund public infrastructures at the federal, state, and local levels.

- e. **Talent and Human Capital Deficit:** The IRS requires data scientists, machine learning engineers, cybersecurity experts, and digital transformation managers; skills in short supply within Nigeria's public sector. Without significant talent acquisition and in-house capacity building, Nigeria risks excessive reliance on external vendors, jeopardising sustainability.

**India provides useful lessons on digital talent integration.** Through initiatives like the Smart Cities Fellowship,<sup>45</sup> launched in 2018 by the Ministry of Housing and Urban Affairs, professionals from the private sector and academia serve one- to two-year terms embedded within city administrations, working on digital governance projects, policy research, and user-centric design processes. This model leverages public-private collaboration to upskill municipal agencies and accelerate innovation.

Similarly, India's National Informatics Centre<sup>46</sup> collaborates with academic institutions, technology startups, and consultants to co-develop e-governance platforms, supporting tool development, deployment, and on-the-job training through structured project engagements rather than formal civil service recruitment.

Nigeria can draw from these models by launching fellowship programmes and consultancy pipelines that bring private-sector digital experts into agencies such as FIRS. This would enable technology transfer, innovation, and sustained public sector capability over time, creating a pathway for expertise to flow from Nigeria's vibrant technology sector into government institutions that need digital transformation.

## 8.0 PROPOSED RECOMMENDATIONS

To build a resilient and intelligent tax system, Nigeria's policy approach should rest on five foundational pillars: data harmonisation, digital security and privacy, sustainable funding,

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<sup>45</sup> 'India Smart Cities Fellowship Program' <[https://smartcities.gov.in/India\\_Smart\\_Cities\\_Fellowship\\_Program](https://smartcities.gov.in/India_Smart_Cities_Fellowship_Program)>

<sup>46</sup> National Informatics Centre (NIC) under the Ministry of Electronics and Information Technology (MeitY) is the technology partner of the Government of India <<https://www.nic.gov.in/>> accessed 27 July 2025.

capacity development, and inclusive stakeholder engagement. Each recommendation below integrates global best practices and local realities.

### **8.1 Harmonisation of Data with Real-Time and API-Driven Infrastructure**

Nigeria should consolidate BVN, NIN, TIN, voter registration, and CAC data into a unified tax data lake—prioritising real-time updates and system interoperability through API frameworks. This harmonisation enables single-view taxpayer profiles and supports automation of assessments and compliance monitoring. The FIRS, allied agencies and financial institutions can collaborate through a centralized but segmented tax data platform. API integrations will allow secure, real-time data pulls—for example, verifying an individual’s TIN against their BVN and NIN during onboarding. A taxpayer registering for VAT would automatically trigger the backend to pull in identity and financial history, allowing discrepancies to be flagged for review.

This reduces fraud, supports targeted enforcement, and enhances operational efficiency. Estonia offers a compelling model through its X-Road framework, which allows public and private institutions to exchange data securely and seamlessly. This infrastructure eliminates data silos, enhances efficiency, and ensures interoperability across multiple services.

### **8.2 Safeguarding Privacy and Securing the System**

As tax authorities process large volumes of sensitive personal and financial data, compliance with the **Nigeria Data Protection Act (NDPA)** must be non-negotiable. The legal basis, public interest,<sup>47</sup> as it centres on tax administration, permits processing but must be supported by strong safeguards. Nigeria should implement data pseudonymization, anonymisation and privacy impact assessments (DPIAs) for all IRS operations.

From a cybersecurity standpoint, protecting taxpayer data requires a layered and proactive approach. The system must adopt a zero-trust architecture that continuously verifies user access, supported by encryption protocols and regular vulnerability assessments to detect and resolve weak points before they are exploited. One essential security strategy is network segmentation, often referred to as 'fencing.' This method establishes isolated zones within the digital infrastructure so that sensitive taxpayer databases are compartmentalised away from public-facing systems. Therefore, if an intrusion occurs in one area, fencing prevents lateral

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<sup>47</sup> Section 25(1)(b)(iv) of the NDPA 2023.

access to critical data, limiting the blast radius of any attack. These protected zones also operate with separately managed encryption keys and monitoring systems. To further fortify resilience, redundancy frameworks ensure that backup servers automatically activate in the event of system failure. Furthermore, during analytics or profiling, anonymisation and pseudonymization techniques are used to mask personal identifiers, guaranteeing data privacy even when used for internal evaluations.

In Estonia, citizens benefit from encrypted dashboards and real-time notifications when their data is accessed. Similarly, Singapore mandates ISO 27001 compliance and annual vulnerability assessments for public digital infrastructure, strengthening resilience against breaches.

### **8.3 Sustainable Financing through Results-Based Public-Private Partnership (PPPs)**

IRS implementation is capital-intensive. To address this, the federal government should adopt a concession-based Public-Private Partnership (PPP) model. Under this structure, private sector players fund and operate IRS infrastructure or services in exchange for long-term usage rights or performance-based payments. This aligns private incentives with public outcomes, as the revenue model for service providers is directly linked to the success of the tax system.

Brazil's implementation of the Nota Fiscal Eletrônica demonstrates the effectiveness of this approach. The government collaborated with local tech developers to deliver e-invoicing infrastructure, reducing evasion and improving compliance. This type of collaboration lowers upfront government costs and accelerates deployment.

In addition to private sector investment, Nigeria should actively pursue multilateral financing for digital upgrades in tax administration. Institutions such as the World Bank and International Monetary Fund (IMF) have dedicated funding for digital governance reforms, public financial management improvements, and data systems modernisation. Accessing these grants or low-interest loans would not only ease the fiscal burden but also signal credibility and technical rigour, attracting further investment.

### **8.4 Building a Digital Talent Pipeline**

FIRS and allied agencies must cultivate a workforce capable of building and maintaining IRS solutions. This includes hiring and training AI engineers, data scientists, product managers, and

cybersecurity analysts. Nigeria should launch a Digital Tax Fellowship programme—akin to India’s Smart Cities Fellowship—where tech professionals are seconded into tax agencies to co-develop digital tools while mentoring in-house staff.

India’s National Informatics Centre (NIC) complements this model by building partnerships between academia, startups, and government to advance digital public infrastructure. Such efforts allow governments to modernise their digital stack while embedding capacity for long-term sustainability. Partnerships between the FIRS, NITDA, and universities could facilitate hands-on learning through practical projects and apprenticeships. Contracts with private sector vendors should include a skill-transfer clause to build institutional knowledge.

### **8.5 Strengthening Trust through a Stakeholder Advisory Framework**

Building trust is critical for adoption, especially within Nigeria’s informal sector. A Revenue Transformation Advisory Council, comprising representatives from market unions, civil society, cooperatives, and digital innovators, should guide the IRS’s implementation. Their insights would ensure tools are accessible, available in local languages, and designed for the devices citizens already in use.

Rwanda’s success with EBM Lite illustrates this clearly. The Rwanda Revenue Authority engaged small business owners and market leaders to develop a simplified tax app requiring no internet access. Community-based training and word-of-mouth promotion led to rapid uptake, contributing to growth in VAT collections.

A similar approach can be used in Nigeria. In places like Balogun or Ariaria markets, simplified mobile tax tools, translated into Yoruba, Hausa, and Igbo, can be rolled out alongside in-person sensitisation. Feedback channels such as WhatsApp or USSD codes can allow quick fixes, enhancing user satisfaction. By meeting people where they are and involving them in the process, IRS adoption becomes more organic and sustainable.

## **9.0 CONCLUSION**

The future of Nigeria’s tax administration hinges not merely on incremental upgrades but on a strategic leap toward intelligent revenue systems. As the global economy grows more interconnected and technology-driven, Nigeria cannot afford to lag in reforming how it collects, manages, and secures its public revenues. This policy paper has shown that by adopting proven



international models, investing in secure digital infrastructure, harmonising existing data sets, and empowering people and institutions, Nigeria can unlock the vast untapped potential of its tax system. The proposed roadmap is not a silver bullet but a practical, inclusive, and adaptive strategy that matches ambition with capability. With deliberate and coordinated action across public and private sectors, Nigeria has the opportunity to build a more intelligent and equitable fiscal future. And the time to act is now.