



Procedural bottlenecks to digital justice: Institutional adaptation, technological modernization and judicial reform in Nigeria

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Abstract

This paper examined the transition of the Nigerian judicial system toward digital justice, with emphasis on institutional, legislative and technological measures for case management and court administration. The research applied doctrinal analysis to review legal frameworks, court automation systems and technological initiatives introduced over the last two decades. Key statutes considered included the Administration of Criminal Justice Act (2015), the Cybercrimes Act (2015) and the NITDA Act (2007), which provided legal foundations for electronic evidence, cybercrime management and information technology governance. Court automation platforms such as LSJIS, RIVCOMIS and the Court Administration and Case Management (CACM) system were assessed for their roles in e-filing, virtual hearings, transcription and recordkeeping. Findings indicated that digital transformation was constrained by unreliable electricity, limited internet access, inadequate digital literacy among judicial personnel, non-interoperable platforms, cybersecurity vulnerabilities, insufficient funding and incomplete legal provisions for digital evidence. The study recommended stronger digital infrastructure and equitable access, a unified national judicial digitalisation framework, continuous digital capacity development and change-management programmes, as well as sustainable financing, robust cybersecurity and effective accountability mechanisms.

Keywords: Digitalization, technologization, institutional reform, Nigeria, judicial system

Introduction

The administration of justice in Nigeria has undergone a process of legal reforms aimed at improving court operations, criminal procedure efficiency and public access to judicial services. Over the last years, the Nigerian judicial system has experienced a shift from traditional, paper-based practices toward digitized procedures shaped by legislative interventions and technological policies. Legislative enactments such as the Administration of Criminal Justice Act (ACJA) 2015^[5], the Cybercrimes (Prohibition, Prevention, etc.) Act 2015^[5] and the Nigerian Information Technology Development Agency Act (NITDA) 2007^[11] have created a legal environment intended to improve case management, expedite trials and enhance digital evidence processing (Okpom, 2021; Agbor, 2016; Atoyebi, 2007). The ACJA 2015^[6, 11] consolidated procedural provisions applicable to federal courts and the Federal Capital Territory, repealing earlier acts such as the Criminal Procedure Act, Criminal Procedure Code and Administration of Justice Commission Act where applicable. The Act addresses procedural disparities between southern and northern jurisdictions, providing a standardized framework for trial procedures, case assignments, arraignment timelines and trial adjournments (Okpom, 2021; Fortes, 2022). Sections 35 and 36 of the 1999 Constitution, as provided for in the ACJA, guarantees personal liberty, presumption of innocence and fair hearing (Adebayo, 2005)^[2].

The legislation prescribes that charges must be promptly communicated to arrested individuals, who should have access to legal counsel and appear before a court in 24 to 48 hours of arrest (Okpom, 2021)^[21]. The ACJA also accommodates plea bargaining, non-custodial sentencing, probation, community service and pre-trial supervision

agreements under judicial oversight (Agbor, 2016; ACJA, 2015)^[6]. Sections related to video testimony and electronic recording of confessional statements provide procedures for vulnerable witnesses and remote participation, exemplified by the trial of former Governor Murtala Nyako (Nyako, 2024). The Cybercrimes Act 2015^[5, 31] regulates offenses related to computer systems and internet-based activity, establishing procedures for investigation, prosecution and the admissibility of electronic evidence. The Act defines electronic signatures, data integrity, cybercafé monitoring and the designation of critical national information infrastructure (Sections 2, 3, 7, 14, 17) (Uzoka & Umejiaku, 2024)^[44]. Sections 20,23 address internet fraud, identity theft and child protection, while Sections 24,29 regulate digital hate speech, software liability and corporate responsibilities.

Enforcement mechanisms involve the establishment of a Cybercrime Advisory Council and a Cybersecurity Fund, with ex parte powers for cross-border evidence retrieval and victim restitution (Alley, 2020)^[10]. Federal courts have exclusive jurisdiction over cyber offenses, including recognition of foreign-certified electronic evidence and a 24-hour point of contact for international cooperation (Cybercrime Act, 2015)^[5]. The establishment of the Nigerian Information Technology Development Agency (NITDA) in 2001 and its statutory authority under the NITDA Act 2007^[11], introduced an administrative body for planning, coordinating and regulating IT adoption nationwide (Atoyebi, 2007)^[11]. NITDA has promoted IT access in rural and urban communities, supported digital literacy programs and facilitated modernization of governance processes, including legal systems (Abdullahi, 2025). Furthermore, Abdullahi (2025)^[1], stated that community IT centers have been implemented to narrow the

digital divide, while capacity-building initiatives target public service and judiciary personnel. NITDA interventions aim to create a demographic advantage by equipping Nigerians with skills aligned to emerging digital economies. In 2012, the Chief Justice of Nigeria inaugurated the Judicial Information Technology Policy Committee (JITPO) to develop IT policies for court administration, emphasizing digitized case management, registry automation and real-time document access (Dahiru, 2012; Eze, 2023; Yu & Xia, 2021) ^[18, 22, 46]. State-level implementations such as the Lagos State Judiciary Information System (LSJIS), enables digital tracking of case progression, court diary management and e-filing for criminal matters (Omodele & Olugasa, 2023) ^[38]. In Abuja, court automation platforms incorporate electronic registration, scheduling, evidence digitization and automated transcription services (Banyawa, 2024) ^[13]. The Court Administration and Case Management (CACM) system, reintroduced in 2024 ^[24] by the Public and Private Development Centre, integrates speech-to-text transcription, secure cloud storage and virtual hearing capabilities, expanding its use to six states with a target to digitize 50 percent of courts in five years (Banyawa, 2024) ^[13]. The system uses satellite connectivity via Starlink to provide continuous access and centralized records management. Electronic Filing Systems (EFS) have been introduced in Rivers State through the Rivers State Court Management System (RIVCOMIS), for online payments, e-affidavits and virtual hearings (Shima & Aboho, 2017) ^[41]. National-level e-filing in Lagos requires activation of Legal Mail accounts for submission of electronic affidavits while maintaining physical verification during transition (Admin, 2025) ^[3]. The LagosCoMiS platform combines e-affidavits, electronic forms and real-time case tracking. Audio-Visual Links (AVL) have been utilized since the 1990s for remote witness participation, evolving during the COVID-19 pandemic to support full virtual court proceedings, allowing judges, attorneys and defendants to participate without physical presence (Rossner, Tait & McCurdy, 2021; Davies & Olugasa, 2022). Emudainohwo (2021), Davies and Olugasa (2022) ^[19, 21, 40], maintained that virtual hearings facilitate timely bail hearings, arraignment and trials while reducing transport and security risks for inmates and judicial personnel. Court Recording and Transcription Systems (CRTS) have replaced manual note-taking, allowing automated transcription and secure storage of audiovisual proceedings, providing appellate review and research capabilities (Nwosu, 2024; Nwapi, 2020) ^[29, 30]. CRTS in the FCT High Court, under Justice Ishaq Bello, has replaced handwritten records with digital transcriptions, supporting accuracy, witness demeanor review and procedural auditing. Open-source software enables keyword indexing, chronological retrieval and verification of court records, improving procedural oversight and supporting consistent adjudication (Atoyebi & Akpan, 2024) ^[12]. In China, AI-assisted systems such as Smart Judge, e-Law kiosks, blockchain-based evidence management and biometric identification has been deployed for correctional service, urban surveillance and smart courtroom integration (Li & Chen, 2023; Wang & Wang, 2022; Yu & Xia, 2021; Davydova *et al.*, 2023) ^[20, 25, 45, 46]. In Kenya, electronic evidence frameworks, integrated police command centers, court case tracking systems, e-Courts initiatives and forensic laboratories support evidence admissibility, real-time monitoring and virtual hearings (Barasa & Muhindi, 2024)

^[14]. Kenya National Police Service IC4 facilitates nationwide coordination, while judicial reforms include ICT master planning and Human Resource performance management integration (Barasa & Muhindi, 2024) ^[14]. Kenyan courts have established protocols for electronic evidence authentication, such as chain-of-custody verification and certification under Section 106B. Forensic and biometric technologies, GIS-based crime mapping, Automated License Plate Recognition and cyber-intelligence tools have been deployed to enhance law enforcement capacities and coordination with correctional management (Kirui, 2024; Barasa & Muhindi, 2024) ^[14, 24]. In Nigeria, courts lack reliable electricity, internet connectivity, or hardware required for automated case management (Omodele & Olugasa, 2023) ^[38]. Digital literacy among judges, magistrates and administrative staff remains limited, affecting operational performance and increasing the likelihood of errors in e-filing and remote hearing management (Okonkwo, 2024) ^[33]. Fragmentation of electronic platforms reduces interoperability and case tracking continuity from trial to appellate courts (Okonkwo, 2024) ^[33]. Budgetary limitations constrain software updates, technical support and cybersecurity investment, leading to incomplete deployments (Bello & Ogufere, 2024) ^[15]. Cybersecurity weaknesses, exemplified by breaches in the Lagos High Court e-filing portal in 2023 ^[38], expose sensitive judicial data (Bello & Ogufere, 2024) ^[15]. Operational mismatches arise where off-the-shelf systems do not conform to Nigeria legal frameworks, requiring manual workarounds (Mohamad & Sule, 2021) ^[27]. Urban-rural disparities and limited internet penetration restrict cloud-based system use and virtual hearings, as observed during the COVID-19 lockdown (Olubukola & Abimbola, 2022) ^[36]. Existing legal provisions have not fully accommodated electronic evidence processes and feedback mechanisms to monitor technological adoption remain underdeveloped, leaving unresolved concerns about data integrity and procedural fairness (Aidonojie *et al.*, 2021a) ^[7].

Historical Development of Judicial Technology Systems

The development of technological tools in judicial systems has evolved through distinct historical stages, each reflecting shift in the production, management and dissemination of legal knowledge. The introduction of the printing press in the 15th century enabled mass reproduction of statutes, judicial opinions and legal doctrines (Zyhrii *et al.*, 2023) ^[47]. Printed legal texts standardized procedural practices and supported the codification of legal norms, strengthening consistency in courts, professionalizing judicial work and consolidating shared understanding across common law and civil law systems (Zyhrii *et al.*, 2023) ^[47]. Legal hermeneutics and doctrinal coherence were enhanced as courts, scholars and practitioners could reference the same authoritative materials, creating continuity in judicial reasoning. During the Industrial Revolution, mechanical innovations such as typewriters, carbon paper and stenographic machines enhanced the accuracy, traceability and legibility of legal documentation (Ontanu, 2019) ^[39]. These tools reduced clerical delays, improved coordination between judicial offices and formalized legal document formats.

The use of telephonic communications, telegrams for urgent notifications and microfilm archives facilitated the

management of growing caseloads while preserving judicial records for long-term reference (Zyhrri *et al.*, 2023) ^[47]. These innovations shifted routine judicial functions from manual recordkeeping to mechanized processes, increasing reliability and administrative efficiency. The mid-20th century introduced digital computing, systems engineering and legal informatics, enabling courts to automate registries and digitize records (Omodele & Olugasa, 2023) ^[38]. Electronic case management systems (CMS) allowed courts to track dockets, maintain interoperable procedures and archive information digitally. Legal databases such as Westlaw and LexisNexis expanded access to case law, statutes and regulatory materials, supporting deeper analysis and precise argumentation (Canick, 2002) ^[16]. Desktop computing and judicial software facilitated drafting judgments, generating court orders electronically and retrieving legal records instantly, reducing administrative bottlenecks and accelerating case processing (Aidonioje *et al.*, 2021b) ^[7]. Online portals and email notifications extended service delivery beyond physical courtrooms, enabling litigants and practitioners to interact with judicial processes remotely and efficiently (Smith, 2023) ^[42]. The 21st century has witnessed further transformations through internet technologies, real-time digital communication and cybersecurity frameworks (Sule, Olorunyomi, Ajah & Usman, 2024) ^[43]. Case initiation, evidence submission, virtual hearings and judgment dissemination increasingly occur on integrated electronic platforms. Digital evidence such as electronic signatures, metadata trails, forensic logs and audiovisual recordings supports procedural accuracy and strengthens fact-finding in cases involving cybercrime, digital civil liberties and e-commerce disputes (Ogwezzy, 2025) ^[32]. The incorporation of artificial intelligence, blockchain, natural language processing and cloud computing now assists courts in case triaging, precedent mapping, predictive analytics for sentencing and bail and automated document summarization (Aidonioje, Wakili & Ayuba, 2023) ^[9]. Blockchain ensures record immutability and chain-of-custody, while cloud infrastructure provides cross-jurisdictional access and resilient archiving (D'Anna *et al.*, 2023) ^[17]. These technological systems have reconfigured judicial workflows, enhanced administrative reliability and enabled courts to respond to complex legal challenges in an increasingly digital environment.

Judicial Digitalization Reform Dynamics in Nigeria

The judicial reform process in Nigeria has progressed through historical precedents, contemporary realities and legislative interventions aimed at positioning the judiciary as an independent and technologically responsive arm of government capable of safeguarding constitutional rights, ensuring access to justice and addressing complex criminal challenges. Over the last two decades, procedural codification, institutional restructuring and legal framework adjustments have reshaped criminal justice administration. The enactment of the Nigerian Information Technology Development Agency Act (NITDA) 2007 ^[11], the Administration of Criminal Justice Act (ACJA) 2015 ^[5] and the Cybercrimes (Prohibition, Prevention, etc.) Act 2015 ^[5] have transformed justice processes from delay-prone systems to more process-oriented models. The ACJA 2015 consolidates and harmonizes criminal procedure laws applicable in federal courts and the Federal Capital Territory

(FCT), repealing the Criminal Procedure Act, Criminal Procedure Code and Administration of Justice Commission Act where applicable at the federal level (Okpom, 2021) ^[7]. The Act comprises 495 sections across 49 parts, addressing procedural differences between the southern and northern jurisdictions. Its provisions apply to all federal and FCT courts except Courts Martial.

The ACJA addresses inefficiencies such as trial delays, procedural fragmentation, custodial congestion and lack of coordination among the police, prosecution and judiciary (Agbor, 2016). It enshrines constitutional guarantees including the presumption of innocence, liberty and fair hearing under Sections 35 and 36 of the 1999 Constitution (Adebayo, 2005) ^[2]. Arrest procedures require prompt notification of charges, access to legal representation and arraignment in 24 to 48 hours, safeguarding due process and limiting arbitrary detention (Okpom, 2021). The Act mandates daily trial progression after arraignment, restricting parties to five adjournments of no more than two weeks each, with subsequent adjournments limited to seven-day intervals (ACJA, 2015). Case assignments by the Chief Judge must occur in 15 days and trial notices issued in 10 working days (Fortes, 2022). Confessional statements require electronic recording or written documentation in the presence of legal counsel or an independent adult (Okpom, 2021) ^[7]. Witness testimony via video link is authorized under Section 234, exemplified in the trial of former Governor Murtala Nyako (Nyako, 2024) ^[31].

The ACJA integrates plea bargaining, pre-trial agreements under judicial supervision and non-custodial sentencing, including probation and community service (ACJA, 2015; Agbor, 2016). Evidentiary safeguards protect witnesses in cases involving terrorism, corruption, or sexual offences, ensuring trial integrity and participant protection (Okpom, 2021). The Cybercrimes Act 2015 ^[5] addresses cybercrime and computer-related offences, comprising 59 sections across eight parts and two schedules. The Act establishes a framework for the prevention, detection, investigation and prosecution of cybercrime (Uzoka & Umejiaku, 2024) ^[44]. Section 2 affirms nationwide applicability, ensuring legal uniformity (LPELR, 2013). Section 3 empowers the President to designate critical national information infrastructure (CNII), while Sections 7 and 14 address cybercafé registration, log retention and insider cyber fraud (Cybercrime Act, 2015) ^[5]. Section 17 recognizes electronic signatures in commercial transactions, with exclusions for wills and court orders. Sections 20-23 address internet fraud, identity theft and child protection (Section 58). Sections 24-29 cover cyberstalking, cybersquatting, digital hate speech, software developer liability and corporate accountability (Cybercrime Act, 2015) ^[5]. Sections 30-36 regulate financial technology-related offences, including ATM fraud and phishing, with mandatory retrieval of access credentials and KYC obligations (Alley, 2020) ^[10]. Sections 37-44 create enforcement structures, Cybercrime Advisory Council and a Cybersecurity Fund financed by levies on electronic transactions. Sections 45-49 provide powers for ex parte orders, cross-border asset recovery and victim restitution.

The Federal High Court holds exclusive jurisdiction over cyber offences, validating foreign-certified electronic evidence and mandating a 24-hour contact point for international collaboration (Cybercrime Act, 2015) ^[5]. Part VIII allows the Attorney General to issue interpretive

guidance (Cybercrime Act, 2015) ^[5]. The establishment of NITDA in April 2001 and its statutory authority under the NITDA Act 2007 ^[11] created the apex regulatory organ for IT policy in Nigeria. NITDA mandate includes planning, standardization, coordination, regulation and application of IT systems nationwide (Atoyebe, 2007) ^[11]. The agency promotes access to IT in rural and urban communities, facilitates digital transformation across governance, commerce, education and legal systems and supports modernization of the criminal justice system (Abdullahi, 2025) ^[1]. NITDA has established community-based IT centres, enhancing digital literacy and narrowing the digital divide (Abdullahi, 2025). At the 2023 ^[1, 17] Global Tech Africa conference, NITDA Director General Kashifu Inuwa highlighted the role of digital skills development in transforming Nigeria demographic advantage into global competitiveness (Abdullahi, 2025) ^[1].

In 2012, the Chief Justice of Nigeria inaugurated the Judicial Information Technology Policy Committee (JITPO) to formulate IT policies for court administration, aiming to improve productivity and public confidence in the judiciary (Dahiru, 2012) ^[18]. Case Management and Court Automation Systems were introduced to digitize case flows, automate registry processes and enable real-time access to legal documentation and judicial schedules (Eze, 2023; Yu & Xia, 2021) ^[22, 46]. In Lagos State, the Lagos State Judiciary Information System (LSJIS) allows courts to track proceedings, manage digital court diaries and support e-filing of criminal cases (Omodele & Olugasa, 2023) ^[38]. In Abuja, court automation platforms integrate electronic case registration, judicial calendar coordination, digitized evidence management and automated transcription services (Banyawa, 2024) ^[13]. The Court Administration and Case Management (CACM) system, reintroduced by the Public and Private Development Centre (PPDC) in November 2024 ^[30], integrates speech-to-text transcription, digital case scheduling and secure cloud storage (Banyawa, 2024) ^[13]. The system, deployed in six states, supports virtual hearings, rapid case processing and centralized record management, with Starlink providing internet connectivity. The CACM initiative aims to digitize 50 per cent of Nigerian courts in five years, enabling future virtual court sessions (Banyawa, 2024) ^[13].

Electronic Filing Systems (EFS) have reduced reliance on physical documentation and in-person submissions. In Rivers State, the Rivers State Court Management System (RIVCOMIS) introduced e-filing, online payments, virtual hearings and e-affidavits (Shima & Aboho, 2017) ^[41]. The COVID-19 pandemic highlighted the limitations of manual processes, prompting adoption of digital systems for sustainability and efficiency. At the federal level, phased rollout of e-filing began in Lagos, with lawyers required to activate Legal Mail accounts and submit e-affidavits, while physical appearance before Commissioners for Oaths remained necessary during transition (Admin, 2025) ^[3]. LagosCoMiS platform integrated e-affidavits, electronic forms and letters, providing real-time case information. Audio-Visual Links (AVL) were first deployed in the 1990s for expert and vulnerable witnesses (Rossner, Tait & McCurdy, 2021) ^[40]. Virtual court proceedings now allow judges, prosecutors, defense counsel and defendants in correctional centres to participate in trials without physical presence, reducing inmate transport delays, escape risk and courtroom disruption (Davies & Olugasa, 2022) ^[19]. Prior to

COVID-19, virtual proceedings were limited in Nigeria (Matthew & Tali, 2024). In March 2020 ^[10, 26], the Chief Justice of Nigeria issued Circular NJC/CIR/HOC/11631 to suspend court activities for two weeks except urgent matters, which initiated trials of virtual court proceedings (Muhammad, 2020) ^[28]. Lagos State introduced the Remote Hearing Practice Direction on 4 May 2020 ^[35], allowing urgent cases to be heard via Zoom, Skype, or other approved platforms (Matthew & Tali, 2024) ^[26].

The first virtual trial occurred in Borno State on 27 April 2020 ^[28], where Justice Fadawu Umar presided over State v Ali Mohammed (Oluwajobi & Omoyajowo, 2025 ^[37]; Olambitan, 2024). On the same date, Lagos State issued a practice direction enabling virtual hearings with consent of parties and counsel. Virtual proceedings facilitate timely bail hearings, arraignments and trials, reduce correctional facility congestion and ensure safety of judicial personnel, litigants and witnesses, particularly in sensitive criminal cases (Emudainohwo, 2021; Davies & Olugasa, 2022) ^[19, 21]. Court Recording and Transcription Systems (CRTS) standardize courtroom documentation, enabling real-time audio-visual recording, automated speech-to-text conversion and secure storage of proceedings for appellate review and research (Nwosu, 2024; Nwapi, 2020) ^[29, 30]. CRTS were introduced in the FCT High Court under Justice Ishaq Bello, replacing longhand notes with digital transcription, reducing delays, minimizing errors and enabling review of witness demeanour (Nwapi, 2020) ^[29]. Open-source software supports virtual courtrooms, indexing audiovisual records for keyword search, chronological retrieval and procedural audits, strengthening oversight and ensuring fair adjudication (Atoyebe & Akpan, 2024) ^[12]. These developments show a sustained trajectory toward the modernization of judicial administration in Nigeria, characterized by legal harmonization, digital infrastructure, procedural automation and accessibility improvements. The integration of ACJA provisions, Cybercrimes Act regulations, NITDA-facilitated IT frameworks, case management systems, e-filing, AVL and CRTS has collectively redefined the mechanisms of justice delivery, promoting efficiency, transparency and protection of constitutional guarantees while addressing operational inefficiencies historically associated with manual court processes.

Digital Transition Challenges Facing the Nigerian Judicial System

The Nigerian Judiciary System (NJS) has implemented several initiatives to integrate technology into court operations to improve efficiency, transparency and public access to justice. Despite these initiatives, practical implementation has encountered several challenges that limit the effectiveness of digital solutions. One major obstacle is the inadequacy of technological infrastructure across many courts. Only a small number of High Courts and appellate courts have adopted electronic case management systems (CMS), whereas most lower courts continue to rely on manual recordkeeping and physical documentation. Challenges such as unreliable electricity, poor internet connectivity, insufficient hardware and outdated computing systems impede broader implementation (Omodele & Olugasa, 2023) ^[38]. Digital literacy and technical competence among judicial officers, magistrates and support staff are also insufficient.

According to the 2023^[17] National Judicial Council (NJC) report, judges in several jurisdictions lacked training to use e-filing systems and digital interfaces. This deficiency affects operational performance and introduces risks of errors and delays in digital case processing (Okonkwo, 2024)^[33]. Fragmentation of digital systems presents another problem. Different courts often operate non-interoperable electronic platforms, which prevents seamless data exchange and limits comprehensive case tracking from trial courts to appellate levels. This fragmentation reduces collaboration and weakens institutional cohesion (Okonkwo, 2024)^[33]. Chronic underfunding of ICT infrastructure compounds these challenges. Digital platforms require continuous investment in software updates, cybersecurity, user training and technical support. However, inconsistent budget allocations have led to abandoned digital initiatives and incomplete systems that fail to support modern e-justice practices (Bello & Ogufere, 2024)^[15].

Cybersecurity threats further complicate judicial digitalization. Legal documents, case files and litigant data are highly sensitive, yet the judiciary has limited capacity to protect information and respond to incidents. For example, the Lagos High Court e-filing portal breach in late 2023^[38] exposed case information and personal data. This event highlighted gaps in cybersecurity personnel and risk management frameworks (Bello & Ogufere, 2024)^[15]. The absence of a binding national policy on judicial digitization has resulted in uneven adoption across states. Reforms remain voluntary, leading to inconsistent practices in procurement, training and system integration. Coordinating reform initiatives nationwide is therefore difficult (Aidonojie *et al.*, 2021)^[7]. Resistance to change among judicial officers and administrators also delays adoption. Some stakeholders perceive digital transformation as a threat to traditional authority or fear exposure of inefficiencies, particularly in rural courts where conservatism remains strong (Olubukola & Abimbola, 2022)^[36].

Operational misalignment presents additional challenges. Many off-the-shelf CMS platforms are not adapted to Nigeria legal framework, which combines civil, criminal and customary law. This mismatch often requires manual overrides or duplicate paper processes, reducing automation benefits and slowing case progression (Mohamad & Sule, 2021)^[27]. A digital divide exists between urban and rural courts. Urban centers often benefit from better infrastructure, trained personnel and donor support, while rural courts remain largely analog, disconnected and unable to provide modern judicial services, resulting in disparities in access to justice (Olubukola & Abimbola, 2022)^[36]. Limited internet penetration and unreliable electricity also restrict the use of cloud-based systems and virtual hearings, reducing the judiciary ability to maintain services during emergencies. During the COVID-19 pandemic, courts in certain regions were unable to continue functioning due to these constraints (Olubukola & Abimbola, 2022)^[36]. Legal and procedural frameworks have not been updated to accommodate electronic processes. This situation fosters skepticism about electronic evidence and leads litigants and practitioners to continue using manual processes despite the availability of digital tools (Aidonojie *et al.*, 2021b)^[7].

The lack of centralized data repositories and performance analytics limits administrators' capacity to monitor case trends, evaluate court performance and allocate resources

effectively. Manual reports remain time-consuming, error-prone and incapable of supporting informed decision-making. Although pilot programs for remote hearings and video conferencing exist, technical problems, user inexperience and unstable connectivity reduce their functionality and credibility. Concerns about data integrity and procedural fairness in virtual courts remain unresolved (Aidonojie *et al.*, 2021b)^[7]. Feedback and evaluation mechanisms for digital initiatives are also underdeveloped. Judicial technology users, including judges, lawyers and litigants, rarely provide structured input, leaving technical gaps unresolved. Reports of digital manipulation, such as deliberate corruption of electronic systems to delay cases or distort outcomes, underscore the need for accountability mechanisms to prevent misuse and ensure that technology-driven processes align with ethical standards and justice objectives (Aidonojie *et al.*, 2021b)^[7].

Strategie for Nigerian Judicial Digitalization Reform

Based on the findings of the study, the following recommendations were made:

1. Strengthen digital infrastructure and equitable access by investing in reliable electricity, broadband connectivity, modern hardware, secure cloud infrastructure and dedicated ICT facilities, with priority given to underserved rural and lower courts.
2. Establish a unified national judicial digitalisation framework that standardises e-filing, electronic case management, virtual hearings, data interoperability and electronic evidence procedures across all levels of the Nigerian Judiciary while allowing adaptation to civil, criminal and customary law.
3. Build digital capacity and institutional readiness through continuous training, technical support, change-management programmes and user participation for judges, magistrates, lawyers and court staff to reduce resistance, improve digital competence and ensure effective utilisation of judicial technologies.
4. Strengthen sustainable financing, cybersecurity and accountability mechanisms through dedicated ICT budgets, regular system maintenance, cybersecurity risk management, data-protection measures, performance analytics and structured feedback systems to ensure secure, transparent and continuously improved digital judicial services.

Conclusion

The move toward digital justice had improved the prospects for faster case administration, electronic records, virtual hearings and wider public access to court services, but several barriers had limited the full use of these tools in Nigeria. Weak electricity supply, poor internet connectivity, inadequate computer facilities and low digital skills among court personnel had restricted the use of electronic systems, especially in lower and rural courts. Separate platforms without reliable data exchange had also created difficulties in case tracking and information sharing. Cybersecurity weaknesses and limited protection of sensitive court records had exposed digital services to misuse and data loss. Gaps in laws and court procedures had created uncertainty about electronic evidence and other digital processes. Limited and irregular funding had further affected system maintenance, staff training and technical support. The study showed that judicial digitalisation required reliable infrastructure, a

common national digital system, regular training for judges and court staff, stable financial support, stronger cybersecurity controls and clear rules for electronic court procedures. Such measures would help the Nigerian Judiciary improve case administration, protect court information, reduce delays and extend access to justice to users in both urban and rural communities.

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