

**Enhancing Public Access to Justice Through Digital Tools: Empowering Citizens
with Technology-Driven Legal Services**

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Abstract:

The digital evolution of judicial systems presents a unique opportunity to enhance public access to justice. This paper explores the critical role of Information and Communication Technology (ICT) in empowering citizens with technology-driven legal services. It examines the current challenges in traditional judicial systems, analyzes the potential of digital tools to address these challenges, and proposes strategies for implementing effective technology-driven solutions. The paper further discusses the ethical considerations, infrastructural requirements, and the necessity of digital literacy initiatives for ensuring equitable access and efficiency. Drawing on case studies and comparative analyses from various countries and incorporating insights from a strategic session on establishing a **proposed** Justice Information Management System in Nigeria, it aims to provide a comprehensive framework for leveraging digital tools to foster a more accessible, transparent, and efficient judicial system.

1. Introduction:

The theme of this workshop, "The Digital Evolution of Judicial Systems: Technology, Access, and Efficiency," underscores the imperative for modernizing our legal frameworks to meet the evolving needs of society. Access to justice is a fundamental human right, yet traditional judicial systems often face challenges related to cost, time, and geographical limitations. In an increasingly digital world, leveraging technology offers a promising avenue to bridge these gaps and empower citizens with seamless access to legal services. This paper focuses on ***"Enhancing Public Access to Justice through Digital Tools: Empowering Citizens with Technology-Driven Legal Services,"*** aiming to provide practical insights and strategies for realizing this vision within the Nigerian context.

2. What are the Challenges to Public Access to Justice in Traditional Systems:

- i. **Cost and Affordability:** Legal services are often expensive, creating a barrier for those with limited financial means. This financial burden includes legal fees, transportation costs, and other associated expenses, making justice seem like a privilege rather than a right (Khan, Sharif, & Shahid, 2024). For example, in many developing countries, the cost of hiring a lawyer for a civil dispute can exceed the annual income of an average citizen, effectively denying them legal representation.
- ii. **Geographical Barriers:** Vast geographical expanses can hinder access to justice, especially in countries with diverse terrains. Citizens in remote areas often face

arduous journeys, sometimes spanning hundreds of miles, to reach legal aid centers or courts, limiting their ability to seek timely and convenient legal assistance (Djuraev et al., 2025; Gilani & Zahoor, 2023; Khan, Sharif, & Shahid, 2024). For instance, individuals residing in hard to reach areas or isolated rural communities may need to travel long distance to reach the nearest court, making legal recourse impractical.

- iii. **Time Delays and Backlogs:** Traditional court processes can be time-consuming, leading to delays and backlogs that impede timely justice delivery. The intricacies of legal procedures, paperwork, and bureaucratic processes present another formidable challenge, often requiring assistance to navigate the system efficiently (Djuraev et al., 2025; Hussain & Ghazanfar, 2015; Khan, Sharif, & Shahid, 2024). In Nigeria, for example, the absence of a centralized criminal registry and ineffective case management systems contribute to persistent inefficiencies, with cases sometimes taking years to resolve (SGF/PS, 2024).
- iv. **Lack of Transparency and Information:** Citizens may lack adequate information about legal processes, rights, and available resources, creating a gap in understanding and engagement with the legal system.
- v. **Language and Literacy Barriers:** Language differences and low literacy rates can create significant obstacles to understanding and navigating the legal system effectively, particularly for marginalized groups (Ogunsan & Godwill, 2025; Djuraev et al., 2025).

3. The Potential of Digital Tools in Enhancing Access to Justice:

- i. **Online Legal Assistance Platforms:** These platforms provide a virtual bridge between citizens and legal experts, offering guidance and resources. They extend legal assistance beyond physical courtrooms, making it accessible through digital devices (Khan, 2023; Khan & Ali, 2021; Khan, Sharif, & Shahid, 2024; Muigua, 2020; Qazi, 2023).
- ii. **AI-Powered Legal Chatbots:** Virtual assistants offer instant information and preliminary guidance on legal queries. They engage in natural language conversations, providing clarity on legal concepts and procedures (Khan, 2021; Khan, Sharif, & Shahid, 2024; Qasim et al., 2023).
- iii. **E-filing and Case Management Systems:** Digital platforms streamline case filing, document management, and scheduling, reducing delays and administrative burdens (Djuraev et al., 2025; Kalanauri & Kalanauri, 2021).

- **Example:** Brazil's Processo Judicial Eletrônico (PJE) is an electronic court management system that automates case filings and court procedures, enhancing efficiency and reducing costs (Djuraev et al., 2025).
- **Example:** India's E-Courts Mission Mode Project has digitized case records and established online court services to improve judicial productivity and transparency (Djuraev et al., 2025).
- iv. **Virtual Courts and Remote Hearings:** Video conferencing and online platforms facilitate remote hearings, reducing travel costs and time for litigants (Khan, Sharif, & Shahid, 2024; Muigua, 2020).
 - **Example:** During the COVID-19 pandemic, many jurisdictions successfully adopted virtual hearings to ensure continuity of legal proceedings, demonstrating the feasibility and benefits of remote court processes (Muigua, 2020).
- v. **Online Dispute Resolution (ODR):** ODR platforms offer alternative methods for resolving disputes online, reducing the need for physical court appearances (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024).
- vi. **Blockchain Technology:** Blockchain enhances transparency, security, and efficiency in legal processes through secure document storage and transparent case tracking. Its decentralized and tamper-proof nature ensures the integrity of legal documents and reduces the risk of corruption (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024; Lal et al., 2023).

4. Strategies for Implementing Technology-Driven Legal Services:

- i. **Develop a National Digital Justice Strategy:** A comprehensive strategy should outline goals, priorities, and implementation plans for integrating technology into the judicial system, ensuring a coordinated and effective approach (Djuraev et al., 2025).
 - **Importance of JMIS:** A well-implemented Justice Management Information System (JMIS) is crucial for this strategy. It serves as a centralized platform for information sharing, case management, and collaboration across justice sector institutions, improving efficiency, transparency, and accountability (Ayoola-Daniels, 2024). While Nigeria is currently proposing the establishment of a National Database through JIMS, the development of a cohesive strategy is essential for its effective implementation (SGF/PS, 2024).
- ii. **Invest in Infrastructure Development:** Reliable internet connectivity, digital devices, and secure data storage are essential for effective implementation,

particularly in bridging the digital divide between urban and rural areas (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024; McConnell & Gasteyer, 2016; Parker, 2000; Soomro & Soomro, 2023).

- iii. **Promote Digital Literacy and Training:** Training programs should be provided for judges, lawyers, court staff, and citizens to enhance their digital literacy and skills, enabling them to navigate and utilize digital legal platforms effectively (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024; Muigua, 2020; Okello, 2023).
- iv. **Ensure Data Privacy and Security:** Robust security measures, including firewalls, data encryption, role-based access levels, and regular cybersecurity audits, should be implemented to protect sensitive legal data and maintain the confidentiality of legal processes (Djuraev et al., 2025; Gul & El Nofely, 2021; Khan, Sharif, & Shahid, 2024; NITDA, 2024).
- v. **Foster Collaboration and Partnerships:** Collaboration between government agencies, technology companies, civil society organizations, and academic institutions is crucial for successful implementation, leveraging diverse expertise and resources (Djuraev et al., 2025).
- vi. **Develop User-Friendly Interfaces:** Digital platforms should be designed with user-centric interfaces that are accessible to individuals with varying levels of digital literacy, ensuring inclusivity and ease of use (Djuraev et al., 2025).
- vii. **Pilot Projects and Scalable Solutions:** Implement pilot projects to test and refine digital solutions before scaling them nationwide, allowing for iterative improvements and minimizing risks (Djuraev et al., 2025).
 - o **Examples of Successful JMIS:**
 - i. **Singapore:** Singapore's integrated electronic litigation system has significantly enhanced court efficiency and transparency, providing a model for comprehensive digital justice solutions (Djuraev et al., 2025).
 - ii. **Estonia:** Estonia's X-Road platform facilitates secure data exchange between various government agencies, including the judiciary, streamlining legal processes and improving access to information (Djuraev et al., 2025).
 - iii. **United States:** The United States employs various case management systems at the federal and state levels, with some jurisdictions achieving significant success in reducing case backlogs and improving court administration through technology (Akpobome et al., 2018).

- iv. **Nigeria (Proposed):** The proposed Justice Information Management System (JIMS) in Nigeria aims to integrate key institutions like the police, correctional services, courts, and the Federal Ministry of Justice to streamline information flow and enhance efficiency (Ota-Okojie, 2024; SGF/PS, 2024).

4.1 Key Technology-Driven Legal Service Tools

Several digital innovations can significantly improve access to justice for Nigerian citizens:

Tool	Function	Local/National Example
Online Legal Aid Portals	Provide free legal information and case consultation	Legal Aid Council Nigeria (proposed)?
E-Filing Systems	Enable remote case filing and document uploads	Lagos State Judiciary e-Filing Platform
Virtual Courtrooms	Allow remote hearings via video conferencing	Supreme Court Virtual Hearings
Mobile Justice Apps	Offer legal information and chatbot support	Citizens Gavel, JusticeBot
Case Management Systems	Track case progress, schedules, and deadlines	NJC's Case Management System?
Digital Identity Integration	Link citizens' legal records with NIMC ID	In development through NIMC-NJI synergy?

These tools not only modernize the judiciary but also simplify the citizen's journey through the legal system, improving legal empowerment and reducing dependence on intermediaries.

4.2 What Digital Tools should be considered first?

a. Prioritization of Judicial Services for Enhanced Public Access to Justice

To effectively implement e-governance and digital tools within the judicial system, it's crucial to prioritize which services and processes to digitize first. This prioritization ensures that efforts are focused on areas that will provide the greatest benefit to citizens and improve access to justice. The general principles of service prioritization remain the same, but their application is tailored to the unique functions of the judiciary.

- i. **Compiling a list of judicial services:** The first step involves a comprehensive inventory of all services provided by the court system. This goes beyond just "hearing cases" and breaks down the specific interactions citizens have with the judiciary.

- Examples of judicial services to list:
 - Filing a new case (civil, criminal, etc.)
 - Obtaining a court date/hearing schedule
 - Accessing case documents and records
 - Paying court fees and fines
 - Submitting evidence
 - Requesting adjournments
 - Accessing legal aid information
 - Obtaining certified copies of judgments
 - Filing appeals
 - Providing feedback or complaints on court services
- ii. **Collecting service information and statistics:** Once the services are listed, gather data to understand their usage and impact.
 - Examples of data to collect for judicial services:
 - Number of cases filed per type (civil, criminal, etc.) annually
 - Average time for case processing (from filing to resolution)
 - Number of in-person visits to court for specific tasks (e.g., filing documents)
 - Number of requests for case file information
 - Percentage of litigants who are self-represented (to gauge the need for user-friendly systems)
 - Citizen satisfaction rates with court processes
- iii. **Identifying high-value judicial services:** This is where we pinpoint which digitized services will most significantly improve access to justice. "Value" in this context is defined by:
 - **Value to Citizens:**
 - Reducing the time and cost of accessing legal services
 - Making court processes more transparent and understandable
 - Increasing convenience (e.g., ability to file documents online)

- Empowering citizens with information about their cases and the law
- **Value to the Judiciary:**
 - Reducing administrative burden on court staff
 - Improving efficiency of case management
 - Enhancing data accuracy and security
 - Reducing physical storage needs
- Examples of high-value judicial services:
 - **E-filing:** Reduces time and cost for lawyers and litigants, decreases paper handling for courts.
 - **Online case tracking:** Increases transparency and reduces the need for inquiries at the court counter.
 - **Digital court scheduling:** Streamlines scheduling and minimizes delays.
 - **Publication of court decisions online:** Enhances transparency and public legal education.
- iv. **Prioritizing implementation of high-value judicial services:** Not all high-value services can or should be implemented simultaneously. Prioritization is key.
 - **Service Visibility:**
 - Which services are used by the largest number of people?
 - *Example:* Online case tracking is likely higher visibility than a specialized commercial court filing system.
 - Which services have the greatest impact on public perception of the courts?
 - *Example:* Delays in getting court dates are a major source of frustration; therefore, digital court scheduling has high visibility in terms of impact.
 - **Service Complexity:**
 - How easy is it to digitize the service?
 - *Example:* Providing online access to court decisions might be less complex than implementing a full electronic discovery system.

- Does it require integration with other court systems?
 - *Example:* E-filing is more complex if it needs to integrate with existing case management, accounting, and archiving systems.
- Using a prioritization matrix (as in the original paper) helps visualize this.
- v. **Validate and rationalize the results:** Before finalizing the implementation plan, it's essential to:
 - Seek feedback from court users (lawyers, litigants, etc.) and staff.
 - Ensure that the plan aligns with the overall goals of the judiciary.
 - Consider resource availability (budget, IT expertise).

4.3 Services Prioritisation Summary

What Digital Tools Should Be Considered First?

Step	Focus	Key Actions	Examples / Tools
1	Compile Services	Inventory all judicial services	Case filing, hearing schedules, legal aid, etc.
2	Gather Data	Collect usage & impact statistics	Case volumes, in-person visits, satisfaction rates
3	Identify High-Value Services	Assess based on value to citizens & judiciary	E-filing, case tracking, court scheduling
4	Prioritize Implementation	Use visibility and complexity metrics	Prioritization matrix: High-visibility, low-complexity first
5	Validate Plan	Feedback + resource alignment	Stakeholder engagement, IT readiness

5. Ethical Considerations and Challenges:

- i. **Digital Divide and Equitable Access:** Ensuring that marginalized communities have equal access to digital legal services is crucial to prevent the exacerbation of existing inequalities (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024; Okello, 2023; Parker, 2000).
- ii. **Data Privacy and Security:** Protecting sensitive legal data from unauthorized access and misuse is paramount, requiring robust cybersecurity measures and transparent policies (Djuraev et al., 2025; Gul & El Nofely, 2021; Khan, Sharif, & Shahid, 2024; NITDA, 2024).

- iii. **Algorithmic Bias and Fairness:** Addressing potential bias in AI-powered legal tools and ensuring fairness in automated decision-making is essential to uphold the principles of justice (Khan, 2023; Ulenaers, 2020).
- iv. **Maintaining Human Element in Justice Delivery:** Balancing the benefits of technology with the need for human interaction and empathy in legal proceedings is important to preserve the integrity of the legal process (Muigua, 2020).
- v. **Cybersecurity Threats:** Protecting judicial systems from cyberattacks and ensuring the integrity of digital legal data is crucial for maintaining trust and reliability (Djuraev et al., 2025; Pasha et al., 2022; NITDA, 2024).

6. Case Studies and Best Practices:

- i. **Pakistan:** The transformative role of technology, including AI and Blockchain, in enhancing access to justice, overcoming geographical barriers, and promoting digital literacy (Khan, 2023; Khan & Ali, 2021; Khan, Sharif, & Shahid, 2024; Qazi, 2023). The integration of AI and blockchain is reshaping legal accessibility and efficiency.
- ii. **Developing Countries:** The impact of digitization on legal systems, highlighting the use of blockchain and smart contracts to improve transparency and efficiency (Djuraev et al., 2025; Hasan & Rupa, 2021; Muigua, 2020). Digitization is driving significant changes in legal practices and institutions.
- iii. **Rwanda:** The Irembo Platform as a model for legal digitization, demonstrating the effectiveness of mobile platforms and e-government services in expanding legal access (Djuraev et al., 2025). This platform showcases the potential of technology to streamline legal processes and enhance citizen engagement.
- iv. **United States:** Digital technology and legal empowerment of underserved communities, focusing on online legal aid, AI-driven assistance, and virtual courtrooms (Akpobome et al., 2018; Ogunsan & Godwill, 2025; Pruitt & Showman, 2014). Digital innovations are crucial for facilitating legal accessibility and addressing structural inequalities in rural areas.
- v. **Nigeria (Proposed):** The proposed Justice Information Management System (JIMS) in Nigeria is envisioned as a transformative initiative to revolutionize information management within the criminal justice sector.
 - i. JIMS aims to address challenges in data generation, sharing, and storage by creating a robust, interconnected platform for seamless collaboration and information exchange among various justice institutions (Ota-Okojie, 2024; SGF/PS, 2024).

- ii. The system's key objectives include enhancing transparency, accelerating case processing, and promoting equitable access to justice (Ayoola-Daniels, 2024).
- iii. A phased implementation approach, incorporating key components such as case management modules, data analytics tools, and secure data sharing mechanisms, is recommended for successful deployment (NITDA, 2024).
- iv. The Nigerian case highlights the importance of a comprehensive and integrated approach to JMIS, ensuring that it meets the specific needs of the local justice ecosystem.
- v. The strategic session on JIMS emphasized the need for collaboration among agencies like the police, correctional services, courts, and the Federal Ministry of Justice (NITDA, 2024).
- vi. The integration of existing databases and the development of new platforms for biometric data, case tracking, and legal information sharing are key aspects of the proposed system (NITDA, 2024).
- vii. Addressing challenges such as infrastructure limitations, digital literacy gaps, and data security concerns is crucial for the successful implementation of JIMS in Nigeria (NITDA, 2024).

7. Recommendations and Conclusion:

- i. Prioritize the development of a national digital justice strategy, ensuring a clear roadmap for technology integration and legal reform (Djuraev et al., 2025).
- ii. Invest in infrastructure and capacity building, addressing the digital divide and providing training for legal professionals and citizens (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024).
- iii. Foster collaboration and partnerships between government, technology providers, and civil society to leverage expertise and resources effectively (Djuraev et al., 2025).
- iv. Address ethical considerations and ensure equitable access, safeguarding data privacy and promoting inclusivity in digital legal services (Djuraev et al., 2025; Khan, Sharif, & Shahid, 2024; NITDA, 2024).
- v. Promote continuous innovation and evaluation, adapting to emerging technologies and refining digital solutions based on user feedback and performance data (Djuraev et al., 2025).

The digital evolution of judicial systems presents a transformative opportunity to enhance public access to justice in Nigeria. Strategically leveraging digital tools, addressing ethical considerations, and promoting inclusivity can support in empowering citizens with technology-driven legal services, fostering a more accessible, transparent, and efficient judicial system for all.

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