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Enhancing Democratic Processes: Leveraging Digital Public Infrastructure for Transparent Elections in Africa

A Digital Rights and Incusion Learning Lab Report

A Digital Rights and Inclusion Learning Lab Report (2023)

The Digital Rights and Inclusion Learning Lab Report (2023) is a compilation of policy briefs on digital rights and inclusion and presents recommendations for achieving a rights-respecting and inclusive digital environment. The Reports are written by Paradigm Initiative's 2023 Digital Rights and Inclusion Learning Lab Fellows. This edition was written by Wahome Wilson from Kenya.

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Enhancing Democratic Processes: Leveraging Digital Public Infrastructure for Transparent Elections in Africa

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Enhancing Democratic Processes: Leveraging Digital Public Infrastructure for Transparent Elections in Africa

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Introduction

Digital Public Infrastructure (DPI) encompasses the widespread digital capabilities crucial for citizen, entrepreneur, and consumer participation in society and markets within the digital era. It includes digital platforms, networks, data infrastructure, and services that facilitate economic and social activities in the digital age. It is imperative that DPI exhibits inclusivity, serves as a foundational framework, is interoperable, and maintains public accountability, given its deployment across various countries globally, including many across the African continent. In Africa, DPI presents a transformative opportunity with the potential to reshape the socio-economic landscape, primarily due to the underdevelopment of digital public infrastructure on the continent.

Notably, World Bank statistics from 2022 reveal that only 36% of Africa had access to broadband internet, significantly lagging behind the global average of 62.5%.[1] The impact of this underdevelopment became starkly evident during the COVID-19 pandemic, which compelled the world to transition to digital platforms for various activities, including education, work, and even social interactions. Another area that the continent needs to catch up on is in its electoral processes. Democracy has been greatly undermined as a result of incongruent and adulterated processes that are behind the making of many leaders on the continent. The electoral results witnessed in many parts of Africa underscore the tangible consequences of underdevelopment and underutilization of DPI in electoral processes. Therefore, the adoption of DPI can potentially revolutionize elections in Africa, ensuring transparency, accessibility, and inclusivity.

This policy brief outlines key recommendations for integrating DPI into election systems across the continent.

DPI in African Elections: Challenges and Progress

Digital Public Infrastructure (DPI) encompasses the use of digital technologies to strengthen public services. In the context of elections, DPI can play a pivotal role in ensuring fair, secure, and efficient electoral processes. The African continent as a whole needs to catch up in embracing the use of technology, and by extension, DPI to conduct elections. However, in recent times, several countries have incorporated technology in their elections on a broad scale across various activities in the African continent, including voter registry, candidate nomination information, and partial result transmissions.[2] Despite the improvement in the use of technology, the region still faces challenges associated with inadequate physical infrastructure, particularly in areas with limited mobile network coverage or internet access. Countries such as Equatorial Guinea, Cameroon, and Ethiopia have some of the lowest broadband and fiber speeds, making the adoption of technology for elections difficult.[3] Digital literacy has also been a concern for countries like Nigeria, where a significant portion of the voting population faces challenges due to the lack of means required to access information online.[4]

Achieving successful implementation of a DPI for electoral processes necessitates the active inclusion of citizens in the policymaking process. This inclusive approach becomes crucial in addressing the perceived mistrust in the electoral bodies, which has consistently posed challenges, particularly in the transmission of election results. Several countries including Nigeria, Kenya, and Ghana are making efforts to enhance the credibility of voter registration through continuous technological advancements, such as the integration of facial recognition technology, aimed at making the electoral process more secure and trustworthy.

The formidable challenges presented by internet shutdowns and inadequate physical infrastructure pose substantial impediments to the smooth functioning of governance and democratic processes. Internet shutdowns not only curtail the free flow of information but also restrict the ability of citizens to engage in open discourse, hindering the democratic ideals of transparency and informed decision-making.[5] Furthermore, the limitations in

1.   White & Case 'Africa's Digital Infrastructure Transformation' (2022) https://www.whitecase.com/insight-our-thinking/africas-digital-infrastructure-transformation (accessed 5 December 2023)

2.   Open Knowledge ' Debriefing the 3rd round table for a Digital Public Infrastructure for Electoral Processes [Anglophone Africa]' (2023) https://blog.okfn.org/2023/11/21/debriefing-the-3rd-round-table-for-a-digital-public-infrastructure-for-electoral-processes-anglophone-africa/ (accessed on 11 January 2024)

3.   Technext 'Africa has the slowest internet speed globally despite emergence of 5G and Starlink- Cable Report' (2023) https://technext24.com/2023/08/01/africa-internet-speed-globally-cable/ (accessed 11 January 2024)

4.   Open Knowledge ' Debriefing the 3rd round table for a Digital Public Infrastructure for Electoral Processes [Anglophone Africa]' (2023) https://blog.okfn.org/2023/11/21/debriefing-the-3rd-round-table-for-a-digital-public-infrastructure-for-electoral-processes-anglophone-africa/ (accessed on 11 January 2024)

5.   Democracy in Africa 'Behind the scenes: Weaponising Throttling' (2023) https://democracyinafrica.org/behind-the-scenes-weaponising-throttling/ (accessed 11 January 2024)

physical infrastructure, particularly in remote areas of states such as Niger and the Central Africa Republic, create barriers to access and participation in democratic processes. These challenges are especially pronounced during critical events such as elections, where reliable and real-time communication is paramount. Addressing these issues is crucial for fostering an inclusive democratic environment, ensuring that citizens from all regions have equitable access to information, can freely express their views, and actively participate in shaping the future of their nation. Overcoming these obstacles is essential for promoting a robust democratic framework that upholds the principles of accessibility, transparency, and citizen engagement.
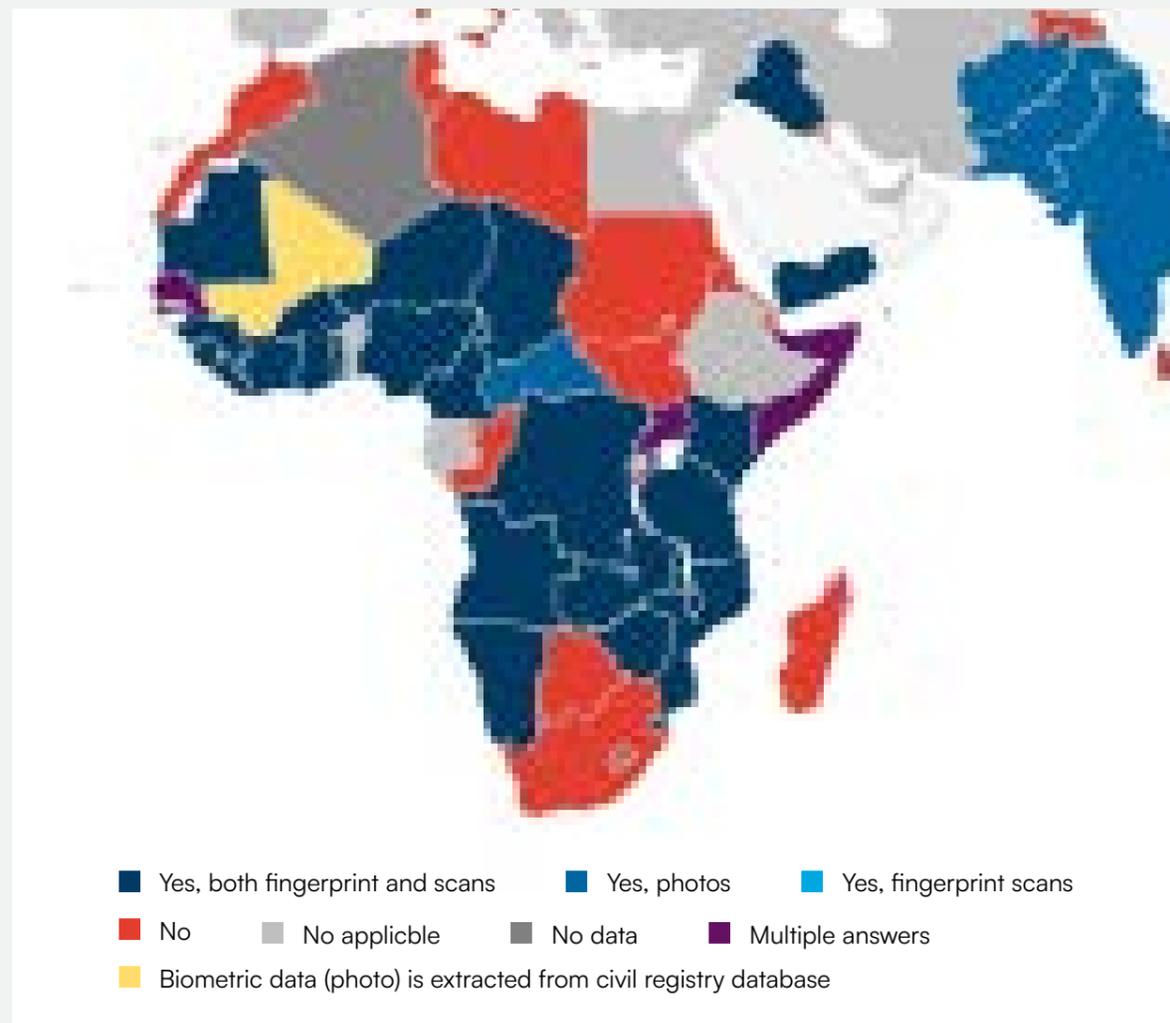

Yes, both fingerprint and scans   Yes, photos   Yes, fingerprint scans
No   No applicble   No data   Multiple answers
Biometric data (photo) is extracted from civil registry database

Fig 1: Electoral Bodies in Africa Using Biometric Data During Elections
Source: International Institute for Democracy and Electoral Assistance Database,

Digital Public Infrastructure and Elections: A View From African Instruments

The importance of technology, and by extension, digital public infrastructure (DPI) has been acknowledged and enshrined in different continental instruments. For instance, The African Charter on Democracy, Elections, and Governance adopted by the African Union in 2007 advocates for the use of technology as a means to amplify citizen voices and foster collaborative spaces. Article 2(13) speaks to the Charter's objective of adopting best practices in the management of elections to promote stability and good governance. Further, Article 27(7) compels member states to develop and use ICT to advance political governance. African Union's (AU) Agenda 2063 is a forward-looking framework that outlines the continent's aspirations for the next forty years. One of its key pillars spoken of at Aspiration 1 is the strategic use of technology to drive sustainable development. Specifically, within the context of elections, Agenda 2063 recognizes the transformative power of technology in ensuring transparent, inclusive, and efficient electoral processes. These provisions point towards an understanding of just how important it is to incorporate the use of DPI in elections on the continent.

DPI to the Rescue?

Conducting elections has been a challenge for many African countries. However, embracing the use of digital public infrastructure (DPI) has emerged as a promising solution. Many states increasingly rely on technological solutions to manage and administer elections, from voter and candidate registration processes to transmission and declaration of election results. Biometric technology, which uses individuals' unique physical or behavioral characteristics to verify and identify them, has become very popular in African elections and has been applied in voter registration, authentication, and identification. Despite lagging behind in the technological revolution, over 25 Sub-Saharan African countries have employed biometric technology in their elections.[6] Some of these countries include the Democratic Republic of Congo (as far back as 2005), Burkina Faso, Gabon, Kenya, Ma-

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6. GEN KEY ' Ghana uses biometric voter verification for third election running' (2016) https://www.genkey.com/ghana-uses-biometric-voter-verification-for-third-election-running/ (accessed 11 January 2024)

lawi, Mozambique, Nigeria, Rwanda, Senegal, and Zambia among others. Some of these countries have employed the technology across multiple elections.

The integration of DPI in electoral processes extends beyond technological advancements and encompasses a multifaceted approach to revolutionize voter services and uphold democratic principles. The utilization of DPI, including but not limited to technology, offers numerous advantages in elections. By leveraging digital tools, electoral bodies can not only ensure the principle of 'one man, one vote' but also enhance election dispute adjudication through comprehensive voting reports and audits. The broader scope of DPI goes beyond facilitating secure and efficient elections; it acts as a catalyst for transparency, accountability, and accessibility in the electoral process. Additionally, DPI plays a pivotal role in curbing fraudulent behavior, such as multiple voting, thus fostering a more robust and trustworthy democratic system.

Recommendations

Historically, elections in Africa have been controversial for numerous reasons. Topping this list is a lack of transparency, credibility, and fairness. The proper deployment and use of digital public infrastructure (DPI) in conducting elections would transform elections and the electioneering process into one that is more credible and whose results can be trusted by the people. Some of the areas which DPI can be critical in the election process include:

- Digital Voter Registration: Governments should implement a comprehensive digital voter registration system to enhance accuracy, eliminate duplication, and improve the efficiency of the voter registration process. This can be achieved by integrating cutting-edge biometric technologies, secure online portals, and user-friendly mobile applications to ensure a seamless and inclusive registration experience for all eligible voters.
- Secure Information Dissemination: DPI can also be utilized to establish secure channels for disseminating election-related information, including real-time results, ensuring accurate and timely communication with the public. Incorporating end-to-end encryption, blockchain technology, and user authentication protocols will further enhance the security and integrity of information shared during the electoral process.
- Transparent Election Monitoring: The integration of DPI into election monitoring processes can help enhance transparency, traceability, and public trust. This can be achieved by implementing technologies that allow real-time monitoring of voting processes and results. Leveraging data analytics and secure communication channels will further strengthen the capacity for comprehensive oversight, ensuring that electoral

activities are conducted transparently and instilling confidence in the electoral process among the public.

- Cybersecurity Measures: It would also be beneficial to embed robust cybersecurity measures in election systems to protect against potential cyber threats. Ensuring the resilience of DPI against attacks that may compromise the integrity of elections is key to fostering trust in the election process. Implementing advanced threat detection, encryption protocols, and regular security audits will contribute to a secure and tamper-resistant digital environment for electoral activities.
- Interoperability and Standardization: African states should also pursue harmonization of standards and protocols for using digital public infrastructure in elections across the continent. Such standardization will promote interoperability to enable seamless data exchange and authentication processes, which can then be used as benchmarks by different countries. Establishing a shared framework will not only enhance the efficiency of digital electoral systems but also facilitate cross-border collaboration, fostering a unified and standardized approach to leveraging digital technologies in the electoral process across Africa.

Conclusion

In conclusion, the integration of Digital Public Infrastructure (DPI) into electoral processes holds immense potential for reshaping and fortifying democratic practices across the African continent. Recognizing the transformative opportunity that DPI presents, particularly in the context of underdeveloped digital public infrastructure, becomes imperative for advancing socio-economic growth and ensuring inclusive governance. DPI should be adopted in critical areas such as digital voter registration, secure information dissemination, transparent election monitoring, cybersecurity measures, and interoperability that set the foundation for a more reliable, inclusive, and accountable electoral process.

Moreover, there is a pivotal role of citizens' active inclusion in policymaking processes, emphasizing the importance of addressing issues like internet shutdowns and inadequate physical infrastructure that hinder the principles of transparency and informed decision-making in democratic processes. Overcoming these challenges will not only enhance the efficiency of digital electoral systems but also promote cross-border collaboration and standardization, fostering a unified and standardized approach to leveraging digital technologies in the electoral process across Africa.

Ultimately, the successful adoption of DPI in elections can lead to transparent, accessible, and inclusive electoral processes, aligning with the broader goals of strengthening democracy and governance in Africa. By overcoming the formidable challenges of internet shutdowns and infrastructure limitations, the continent can pave the way for a more resilient and participatory democratic framework that empowers citizens and ensures the integrity of electoral outcomes.