THE
CARTER CENTER

PRELIMINARY REPORT

THE CARTER CENTER ELECTION EXPERT MISSION

Presidential Election, Kenya

Sept. 8, 2022

At the invitation of the Independent Electoral and Boundaries Commission (IEBC) of Kenya, The Carter Center deployed to Nairobi a small election expert mission that commenced work on Aug. 1. The mission, which focused primarily on the role of technology in the Aug. 9 presidential election, built upon several months of prior engagement and assessment by The Carter Center, including a preelection assessment team deployed to Kenya during June and July. The mission also benefitted from a collaboration with Privacy International to incorporate an assessment of issues around data protection. Given its limited scope, the mission did not conduct a formal assessment of the voting, counting, and tabulation processes, nor did it provide an assessment of the electoral process as a whole.

During the election, the Carter Center expert mission examined the role of technology in biometric voter registration, voter verification, candidate registration, IEBC personnel recruitment, election observer registration, voter education provider registration, results transmission, and the appeals process. The mission spoke with more than 200 interlocutors in Nairobi, Mombasa, Nakuru, Eldoret, Kisumu, Nyeri and elsewhere.

Following the conclusion of the results transmission and verification process on Aug. 15, IEBC Chairperson Wafula Chebukati announced the results of the vote: William Ruto – 7,176,141 votes, Raila Odinga – 6,942,930 votes, George Wajackoyah – 61,969 votes, and David Mwaure – 31,987 votes. Chairperson Wafula Chebukati declared William Ruto the winner. This declaration was accepted by three of the four candidates. On Aug. 22, Azimio La Umoja, the alliance of candidate Raila Odinga, filed an appeal challenging the results with the Supreme Court of Kenya. On Sept. 5, the Supreme Court of Kenya unanimously rejected this appeal, confirming the victory of President-elect William Ruto.

KEY FINDINGS

- *IEBC communications on the role of technology in the elections.* Technology played an important role at every stage of the election process. Crucially, greater preparedness around communications would have bolstered overall public confidence in the technologies used. For most of the process, several factors impeded the IEBC's overall ability to communicate how technology was used in the election. These included the Kenyatta administration's delay in nominating replacement IEBC members, parliament's failure to approve funding in a timely manner, the late onset of preparations, the lack of an IEBC commissioner with a background in information technology, and legal challenges that changed key processes at late stages. These issues should be addressed before future elections, given that public trust in, and the effectiveness of, election technologies depend to a significant degree on the clarity and timeliness with which they are communicated.

Despite these challenges, the IEBC showed responsiveness to Kenyans' concerns by improving its communications around election technologies in the final weeks before election day, including by establishing a call center equipped to respond to queries about technology, launching an online portal to display digitally transmitted polling station results forms, disseminating explanatory content online, and responding to queries on election technologies at press briefings. Kenya's legal framework concerning access to information is in conformity with international standards.

- *Late procedural changes in polling administration.* Procedural changes implemented long after most voter education and training efforts had ended caused confusion about election day processes. For example, to prevent votes from being cast fraudulently in the name of voters who had not in fact voted, the IEBC had instructed polling stations and informed the public that paper copies of the voter register would be used to identify voters only in the event of the total failure of the biometric machines. However, on Aug. 4, just five days before the election, the High Court ruled that the paper voter register should instead be distributed and used in all polling stations. This was then reversed the day before the election, when the Court of Appeal suspended the High Court's judgment.

- *Biometric voter registry.* The biometric voter register underwent major changes after the 2017 vote, including its transfer into a database provided by a new vendor. The IEBC conducted a comprehensive program of voter verification, during which numerous interlocutors reported learning their registrations had been moved to other parts of Kenya without their consent through this process. The register was later updated and reviewed by an external auditor; consequently, 246,465 deceased voters, 481,711 duplicate records, and 226,143 voters registered with IDs and passport numbers that did not belong to them were identified and, to a significant extent, removed.[1] The register is subject to the newly adopted Data Protection Act of 2019, which creates a foundational protection mechanism for individuals to exercise their right to privacy. Several cybersecurity vulnerabilities[2] were identified, but no evidence emerged to indicate that any vulnerability was successfully exploited to affect the election outcome or diminished the overall integrity of the process.

- *Results transmission and verification.* The transmission of official legally binding election results is based on the physical transport and tabulation of the polling station 34A results forms. In parallel, for the purpose of results verification, the IEBC uses an electronic system referred to as the "results transmission system." Results on the physical forms were checked against electronic scans of results forms at constituency and national tallying centers. Scans were also posted to a searchable online portal. This system was an important measure aimed at improving the transparency and verifiability of the election process and was positively received by civil society organizations in Kenya and the wider region. Less than 24 hours following the closure of polls, scans of 97.71% polling station results forms had already been posted on the public portal.[3]

- *Testing of election systems*. Two preelection simulations of the electronic transmission system were conducted on June 9 and July 19, 2022, involving a limited number of polling stations. The results were mixed and were insufficient to bolster public confidence. During the actual

[1] KPMG audit report: Independent audit of registers of voters, final audit report, June 16, 2022.
[2] See KPMG report dated June 16, 2022, which reports on password settings that were inconsistent with IEBC policies, accounts belonging to ungazetted users, and excessive rights granted to database users.
[3] As of 2:40 p.m. on Aug. 10.

transmission of election results images, however, there was a constant flow of incoming results forms, which were published on the IEBC online results portal. Other systems, including the voter educator and observer registration portal, would have benefited from a greater effort to undertake well-publicized testing following stakeholder consultation.

- *Intimidation of IEBC officials.* Several incidents of violence, including against officials serving the democratic process, tainted the election. One presiding officer in Wajir was shot on election day. Separately, during tabulation, some individuals disrupted proceedings at the National Tallying Center; IEBC officials were injured during a physical altercation. The National Cohesion and Integration Commission identified hate speech during the campaign from both major political forces. On occasion, language that raised tensions was directed at IEBC officials. After election day, prominent political figures from the campaign of Raila Odinga directed personal attacks at the IEBC chairperson.[4] On Aug. 26, IEBC staff marched through Nairobi carrying the message "Returning officers' lives matter".

  At least one IEBC official, the returning officer for Embakasi East, Daniel Musyoka, died because of violence. Musyoka disappeared on Aug. 11, two days after the vote. The IEBC has indicated that Musyoka was abducted and tortured. The Carter Center calls on the authorities to ensure that the perpetrators of all acts of election violence are held accountable for their actions.

- *Election technology in the appeals process*. For the first time, Kenya implemented an e-filing system to allow for petitions to be submitted electronically. This was a positive step which can be further improved by ensuring key documents are readily visible through the portal. Members of the judiciary received extensive training on election technology in advance of the vote. On Aug. 22, presidential candidate Raila Odinga and his Azimio La Umoja coalition filed a petition with the Supreme Court challenging the results. The petition made various diverse allegations, with the alleged manipulation of technology in the process a central component of the claims made. The court rejected the petition on all counts. The Carter Center deplores the use of falsified documents in court in support of the petitioners' allegations that the process had been compromised.

[4] On Aug. 16, Odinga called the IEBC chairperson a "dictator" and "threat"; Azimio la Umoja Chief Agent Saitabao Ole Kanchory termed the official a "scumbag" on Aug. 24. These proclamations were broadcast online to thousands of viewers.

INTRODUCTION

While Kenya conducted six levels of elections simultaneously on Aug. 9, the main focus of the Carter Center expert mission was on the role of election technology in the presidential election. In particular, the team assessed how authorities communicated about matters of technology; the functionality of key technologies, including the electronic results form transmission system; and the degree to which technologies enabled or enhanced transparency.

The mission conducted the analysis based on international obligations and standards on the role of technology in elections, the Kenyan Constitution and domestic legislation, and recognized best practices. Owing to its limited size and focused scope, the expert mission did not conduct a formal assessment of the voting, counting, and tabulation processes surrounding the election, nor did it seek to provide an overall assessment of the electoral process.

The mission comprises four analysts, led by Ben Graham Jones, advisor to The Carter Center. The mission collaborated with Privacy International, a nonprofit organization that works globally to defend the right to privacy, to incorporate an analysis of issues around data protection. The expert mission met with a wide range of stakeholders, including representatives from the government, the judiciary, the IEBC, political parties, civil society organizations, independent analysts, national observer groups, journalists, international observation missions, and others in the international community.

The Carter Center conducts its election observation work in accordance with the 2005 *Declaration of Principles for International Election Observation* and welcomes the close cooperation between signatory organizations over the course of this election, including the African Union, the Commonwealth, the European Union, the International Republican Institute, the National Democratic Institute, and the Westminster Foundation for Democracy.

Several months after election day, the Center will produce a final report summarizing the mission's findings and analysis and offering recommendations to key stakeholders. These findings also will contribute to the Carter Center's upcoming handbook, *Safeguarding Election Technologies,* which will serve as a resource to facilitate effective scrutiny of technology in democratic processes across the globe.

Background to Election Technology in the Aug. 9 Vote

On Aug. 9, 2022, Kenyans went to the polls to elect candidates at presidential, parliamentary, senatorial, gubernatorial, and county assembly levels. These were Kenya's seventh national multiparty elections and the third under the country's 2010 constitution. The election law provides that in the event no presidential candidate receives more than 50% of the vote, a runoff must take place within 30 days. Should an election be annulled, the law allows 60 days for the conduct of a new poll.[5]

Kenya is a regional leader in the use of technology. Biometric identification technologies such as fingerprint scanners are a common way of authenticating people in the public and private sectors. Mobile data coverage is pervasive. Electronic banking is commonplace and includes M-pesa, a system developed in Kenya in 2007 and now used by millions of people across Africa. It is seen as the model for many mobile payment systems around the world.

Kenya's expansive use of technology in elections grew in part from the 2007 Kriegler report, written in the aftermath of electoral violence that claimed more than 1,000 lives. The report indicated that the use of technologies in elections could strengthen public confidence in the

[5] Constitution of Kenya 2010, Article 138.

election outcome. Technologies were used accordingly in the elections in 2013 and in 2017, when the Supreme Court annulled the election citing irregularities in the IEBC's results transmission and tallying process.

In the 2022 election, technology was used for IEBC recruitment, biometric voter registration, voter verification, candidate registration, observer registration, voter education provider registration, results transmission, and the appeals process. Much of the technology used in the 2022 elections, including most of the voter identification machines, was also in use in 2017.[6]

PRELIMINARY FINDINGS

Legal Framework around Election Technologies

Kenya has a comprehensive legal and regulatory framework for the conduct of democratic elections and the utilization of a range of electoral technologies. The constitution protects specific political rights, including rights of suffrage and participation.[7] The constitution clearly sets out detailed provisions and timelines for the announcement of results and challenge mechanisms through electoral petitions, at the High Court level for parliamentary elections and the Supreme Court for presidential elections.[8] These core provisions conform with international standards.[9]

Article 44 of the Elections Act explicitly allows for the use of technology in three areas: biometric voter registration, electronic voter identification, and the electronic transmission of results. According to Kenyan law, election technology must be simple, accurate, verifiable, secure, accountable, and transparent.[10] These requirements create thresholds that the IEBC must uphold which conform with international standards.[11]

In their preparations for election day, the IEBC decided that polling stations would primarily use the digital voter register contained in the Kenya Integrated Election Management System (KIEMS). KIEMS is an electronic device used for voter registration, verification, and transmission of a digital scan of the results form from the polling station. On Aug. 4, the High Court ruled in favor of a petition requesting that the hard copy of the voter register take precedence. However, on Aug. 8 the High Court decision was suspended by the Court of Appeal pending hearing. As a result, the original procedures were reinstated with the manual register supplied under seal and used only if both the KIEMS kits and their backups failed.

Procurement of Election Technologies

The procurement of election technologies in Kenya is subject to the 2017 Elections (Technology) Regulations Article 4 and National Ethics and Anti-Corruption Policy 2018, which set out the requirements for procurement of technology. This overarching framework largely aligns with international standards, which require procurement to adhere to principles of

[6] While roughly 41,000 of the Kenya Integrated Election Management System (KIEMS) kits reused hardware from 2017, 14,100 new KIEMS kits were purchased, which meant that on election day, each ward had approximately five replacement KIEMS kits to fall back on.
[7] Constitution of Kenya 2010 articles 32 to 38.
[8] Constitution of Kenya Article 87, Article 105, Article 140.
[9] The International Covenant on Civil and Political Rights (ICCPR), articles 19 and 25.
[10] Elections Act 2011 articles 44 and 44A.
[11] U.N. Guiding Principles of Business and Human Rights, Principle 5. International Covenant on civil and Political Rights (ICCPR) articles 19 and 25.

transparency, efficiency, public participation and the capacity for legal recourse.[12] The IEBC is also bound by the Public Procurement and Asset Disposal Act 2015, which expressly allows for aspects of the tender process to remain confidential.[13] Nonetheless, civil society leaders told the Carter Center mission that greater transparency around the implementation of IEBC tender processes could raise confidence in the institution.

Having previously contracted French company OT Morpho, the IEBC opened a tender and Smartmatic won the bid to provide the technology solutions mandated in the law: biometric voter registration, electronic voter identification, and electronic transmission of results.[14] The process was challenged at the Public Procurement Administrative Review Board (PPARB) over an alleged lack of consultation and transparency. The High Court quashed the decision on the basis that the appellant had not placed a complete bid to the tender and as such was not a party and so could not challenge the process.[15] This was confirmed by the Court of Appeal, with the Smartmatic contract being reinstated in its original form.[16]

The KIEMS software for the 2022 election was developed and provided by Smartmatic. Separate from the results verification system, a new online system was used at the constituency and national tallying centers to create the 34B and 34C forms. This system was developed by the same vendor and was deployed in 2022 for the first time.

During court proceedings, the Supreme Court granted the petitioners' request to scrutinize parts of the system used. Claims were made that Smartmatic refused scrutiny of the system in order to protect its proprietary software, though the Court indicated that it was fully satisfied with the level of scrutiny facilitated, rejecting the petitioner's claims that the IEBC had refused to 'open the server'. The IEBC also indicated that facilitating parts of the petitioners' requests risked rendering the servers unusable for subsequent elections. Both events nonetheless raise important questions for consideration over the coming electoral cycle regarding the ownership of data produced by electronic information gathering systems, particularly as it relates to both the use of proprietary software and the processing of data.

Candidate Registration

The right to stand for election is codified in international standards.[17] Kenya used an online candidate nomination and ballot design tool in the 2022 election for the first time, which simplified the process and facilitated adherence to these standards.[18] Citizens must be registered in IEBC's voter register to be eligible to endorse candidates, and they can only endorse at most one candidate for each race.

Political parties brought forward court cases against and for the nomination of various candidates, citing allegations of cybersecurity vulnerabilities of the online platform, inconsistently applied rules for voter identification, and other concerns. This in turn created delays in the official publication of the final candidate list and consequent delays in printing

[12] U.N.: United Nations Convention against Corruption, Article 13(1)(a).
[13] Public Procurement and Asset Disposal Act 2015 Article 54.
[14] Tender No. IEBC/OIT/001/2020/2021.
[15] Misc C.A Judicial Review No. E134 of 2021.
[16] Risk Africa Innovatis Limited v Smartmatic International Holdings B.V.A & 3 others (Civil Appeal (Application) E008 of 2022) [2022] KECA 427 (KLR) (4 March 2022) (Ruling).
[17] ICCPR Article 25.
[18] 16,100 candidates were registered using the online nomination system, including four presidential candidates, 266 gubernatorial candidates, 341 candidates for senator, 360 candidates for Woman Members of National Assembly, 2,132 candidates for Members of National Assembly, and 12,997 candidates for MCA.

ballot papers. The IEBC's decision to print ballot papers ahead of the official confirmation of candidates on the ballot highlighted systemic problems in the candidate registration process.

Voter Registration

As per Part II of the Elections Act, the IEBC conducted two rounds of voter registration, a process that formally concluded on May 4, 2022.[19] The IEBC registered 22,120,463 voters, just over 2.5 million more than in 2017. Citizens could verify their registration between May 4 to June 2, 2022, by physically visiting the original registration center, visiting the local IEBC constituency office, or by SMS.[20]

An external audit of the voter register, conducted by KPMG, identified 246,465 deceased voters, 481,711 duplicate records, 226,143 voters registered with IDs that did not belong to them, and 169,026 other invalid records.[21] The IEBC removed more than 55% of the records after the audit. The audit raised questions about vulnerabilities in the biometric voter register that should be addressed over the coming electoral cycle.[22] A nationwide voter verification activity indicated a trend of "abnormal" voter transfers between the 2017 general election and May 2022.[23] Several of the mission's interlocutors reported that voters had discovered that they had been transferred to a different polling station, often outside their ward, without their knowledge or consent.

The Elections Act of 2011 states that only a registered voter can transfer their own registration to a different electoral area.[24] The IEBC later announced that three IEBC officials had been arrested for involvement in "illegal transfer of votes."[25] On July 7, the chair of the IEBC announced that these officials were suspended and referred to the director of public prosecutions.[26] On Aug. 4, the courts ruled that the printed register needed to be distributed to every polling station, with each registered voter to be crossed out from the manual register upon voting. This decision was controversial, owing to the concerns about potential misuse of the manual register to cast fraudulent votes on behalf of voters who did not turn out.[27] The decision was suspended on appeal to the Court of Appeal, and the original order was reinstated on Aug. 8. The court decision contradicted the IEBC's earlier decision to rely solely on the biometric voter register stored on the KIEMS devices for the identification of voters.

Election Day

Election day was preceded by a relatively calm and measured campaign. On Aug. 5, The Carter Center joined with six other international election missions to call for a continuation of the calm pre-electoral environment.[28] Aside from several isolated incidents, a peaceful atmosphere continued through the election, which took place on Aug. 9. Owing to its limited size and scope, the Center's expert mission did not conduct a comprehensive assessment of election day

[19] https://www.iebc.or.ke/uploads/resources/cWyBL8fhHH.pdf.
[20] IEBC media release May 5, Update on General Election Preparedness
[21] See KPMG audit report: Independent Audit of the Registers of Voters, Final Audit Report, 16 June 16, 2022.
[22] KPMG report dated June 16, 2022, identified password settings that were inconsistent with IEBC policies, accounts belonging to ungazetted users, and excessive rights granted to database users.
[23] https://www.iebc.or.ke/uploads/resources/cWyBL8fhHH.pdf.
[24] Article 7, Elections Act of 2011.
[25] https://www.iebc.or.ke/uploads/resources/cWyBL8fhHH.pdf.
[26] https://www.youtube.com/watch?v=hMdoJimxpd0 (at 5 mins 40 seconds).
[27] See also National Crime Research Centre of Kenya, "Election Crimes and Offences" (2016) p. 25.
[28] https://www.eeas.europa.eu/eom-kenya-2022/joint-pre-election-statement-9-august-2022-elections-kenya_en?s=410199.

proceedings. However, the mission did analyze several issues related to the use of election technology around the election process.

Nationwide, the IEBC reported that KIEMS kits failures necessitated resort to the manual register in 238 polling stations (of more than 46,000 in total) on election day.[29] Of these, 84 were caused by a faulty removable memory card that stores the relevant parts of the voter register and other configuration and log files; the remaining 154 were due to logistical problems. By Aug. 12, more than 99% of all 34A forms had been received by the public portal.[30] Reports by larger election observation missions identified some problems with the KIEMS kits on election day, such as delays in identifying fingerprints, but found that most challenges could be addressed by backup measures built into the KIEMS system, such as via alpha-numeric lookup and facial scanning with comparison against the national ID card. [31]

Results Transmission

According to the Elections Act, the determination and declaration of results is the sole responsibility of the IEBC.[32] While the KIEMS kits send digital copies of the results forms to the National Tallying Center for the purpose of preliminary verification, the official results rely on paper-based systems. Votes were cast on paper ballots. The results from each of the 46,229 stations were recorded on paper 34A forms. Subject to the approval of party agents, these results were tabulated at the 290 constituency tallying centers on paper 34B forms and for the diaspora on one additional paper 34B form. These results were verified against the digital images at the national level then added to a single paper 34C form.

However, only the 34A polling station-level results forms are legally binding.[33] The system's integrity thereby depends on the reliability of the presiding officers responsible for overseeing polling station processes and the party agents responsible for scrutinizing it.

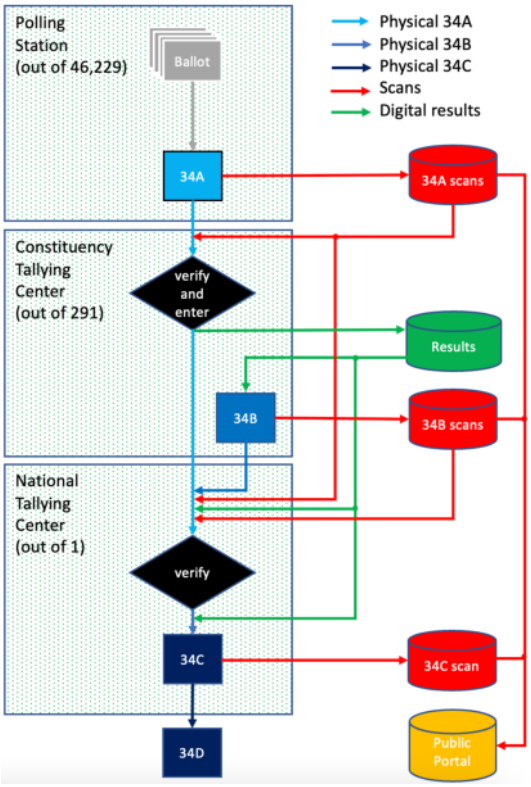
The polling station results recorded on paper 34A forms are reviewed and entered into a central IEBC database at the constituency tallying center using software provided by the vendor. This generates consolidated constituency-level results on a 34B form. This database, separate from the database of digital images of the forms, was a new technology for this election and a key part of the system to verify overall results.

The verification process, detailed below, dictates that prior to generating the 34C form, which tallies the overall results, the digital copies of all 34A and 34B forms must be checked at the National Tallying Center against the corresponding physical copies.

[29] IEBC Status Update on Polling Day — Aug. 9, 2022; IEBC Status Update on General Election 2022 – Aug. 11, 2022
[30] As reported on forms.iebc.or.ke.
[31] EU EOM Preliminary Statement, and NDI Preliminary Statement of Initial Findings Aug. 11. The fingerprint delay also was directly observed by Carter Center mission analysts on limited visits to a small number of polling stations on election day.
[32] Elections Act 2011, Article 39.
[33] See Independent Electoral & Boundaries Commission v Maina Kiai & 5 Others [2017] eKLR interpreting both constitutional and Elections Act provisions.

Results Verification

The results verification process was facilitated by an electronic system called the "Results Transmission System." This generated confusion as interlocutors were sometimes under the impression that the digital images constituted the basis for compiling the official results. The results transmission system receives, stores, and shares digital versions of completed and signed results forms. These were submitted electronically and displayed on an online portal.[34] The aim of the process was to permit detection of any mismatch between the physical and digital forms. The online portal contributed significantly to the transparency of the verification process, though the system relies on the reliability of party representatives.



International best practice recommends that election technologies should be subjected to rigorous third-party reviews.[35] Prior to election day, no documents had been made public that described design documents, source code reviews, test coverage reports, reports of penetration tests, reviews of the implementation of cryptographic methods, or load testing reviews of the results verification system.

Good cybersecurity practice requires a rigorous description of threats, risks, and mitigation measures, precise requirements for how the results transmission system should function as well as expected security, verifiability, and accountability properties, a communicable system design, and a carefully developed and reviewed system implementation. Such measures maximize the likelihood that the results transmission system works as expected while minimizing the likelihood that cyberattacks will succeed.

No evidence was presented to indicate that cyberattacks were successfully executed to affect the presidential election outcome. However, there are ways the IEBC results transmission system can better safeguard confidentiality, integrity, and availability. These include measures to reduce any risk of IEBC employees or contractors misusing access rights to IEBC databases to access or modify privileged information or prevent the system from working properly. Such threats include supply-chain attacks, whereby malicious code is introduced into an application by security updates through third-party components. An open-source software release of the results transmission system may enhance transparency, while modern digital signature schemes and other cryptographic methods could more readily establish the authenticity of log files, software, results forms, and other IEBC documents. These measures can also be considered for voter and candidate registration systems.

[34] See forms.iebc.co.ke.
[35] OSCE (ODIHR): Handbook for the Observation of New Voting Technologies, p. 41.

An initial preelection demonstration of the results verification system was conducted on June 9 in 2,900 polling stations from 1,450 wards using the KIEMS kits to send in mock results. There was a failure rate of 59%, which weakened public confidence that the system would work on election day. A second preelection demonstration on July 19, involving only 580 polling stations, was more successful, with only 33 polling stations not reporting (a failure rate of 3%). While more successful than the initial trial, it took three to four minutes to process one digital copy of a 34A form, triggering concerns that the capacity of the system might be insufficient to guarantee a reliable and scalable process during the election.

The online portal providing public access to the scanned version of the polling station results forms went live only days before the election. Kenyans could access the system to view and inspect incoming forms. While the Carter Center mission did not itself compare these images with the physical copies, the system made it possible for others to verify that the original paper copies at the National Tallying Center matched those scanned in polling stations. The transparency of the results verification process could have been further strengthened by posting the numeric tallies contained within the various result forms on the public portal, which would allow the media and interested parties to verify the accuracy of the tabulated results.

An independent investigation, subsequently supported by the Supreme Court's own inquiries, did not support claims by candidate Odinga's team that forms published on the portal differed from those sent from the polling stations.[36] Through its daily media briefings, the IEBC provided clear explanations for why some forms arrived later than anticipated. To ensure that tabulation and results verification processes were completed within the constitutionally mandated timeframe, the IEBC increased the number of tabulation tables on Aug. 14.

The results verification process concluded with IEBC Chairperson Wafula Chebukati's announcement of the presidential election results on Aug. 15. On the same day, four IEBC commissioners conducted a brief press conference denouncing what they termed the "opaque nature" of parts of the tabulation process. The commissioners, who had themselves participated in approving constituency tally forms over the preceding days, gave a more detailed statement on Aug. 16. In that statement and in court they alleged an anomaly in the announced result percentages and claimed an absence of consultation in the verification process. Chebukati rejected these allegations.[37]

After election day, citizen observer organization the Elections Observation Group concluded that the "quick uploading of form 34As to its online portal ... helped to enhance transparency around the results management process."[38] The verification process might be further strengthened in line with international best practice by using alternative verification methods, such as postelection audits that inspect paper ballots in ballot boxes to check a preliminary election result.[39] When executed correctly, postelection audits of the physical ballot papers can identify any overall discrepancy between announced results and ballots cast with high probability.[40] Carter Center calculations show that a risk-limiting audit for the Aug. 9, 2022, election would require drawing and inspecting a sample of 909 ballots to be 99.9% certain that the result announced reflected ballots cast. As recommended by The Carter Center in 2017, the adoption of audits may help increase public confidence in the result.[41]

[36] https://www.bbc.com/news/62724762
[37] https://www.iebc.or.ke/uploads/resources/qWGJXy8s9t.pdf.
[38] https://elog.or.ke/elogs-statement-on-the-official-2022-presidential-results/.
[39] See VVSG 2.0. https://www.nist.gov/itl/voting/vvsg-introduction
[40] See Voluntary Voting System Guidelines 2.0, Feb. 29, 2020.
[41] Final Report of The Carter Center Election Observation Mission to Kenya 2017, pp.110-1.

Another positive move would be to release the tabulation software used to verify the computer code used to tally the presidential results for each constituency on form 34B and for Kenya as a whole on form 34C.

Election Technologies and the Appeals Process

For the first time, Kenya implemented an e-filing system to allow for petitions to be submitted electronically. The system was accessed by the public through an online portal, and comprehensive instructions on the petitions process were provided. The portal opened on Aug. 18. The law allowed a seven-day submission period from the day the results were announced. During this period, nine petitions pertaining to the presidential election were filed. For at least part of the post-electoral period, the portal was not functional. The portal could better facilitate transparency by readily displaying key documents submitted as part of presidential appeals, including petitions and affidavits. This would help factcheckers and journalists verify claims made about the legal process.

Every Kenyan presidential election since 2007 has been rejected by the losing candidate. Consequently, throughout this election cycle, interlocutors spoken to by the mission presumed that the candidate who finished second would appeal the result. This widespread assumption generated a permanent incentive for political figures to call into question the potential integrity of the process.

Preelection polls indicated that Kenya's judicial system enjoys a high degree of confidence from a majority of the population.[42] Judges assigned to the petitions process have received comprehensive training in international standards, electoral investigation techniques, and a review of the technicalities of the electoral process, in order to better equip them to investigate and rule on allegations.

On Aug. 22, presidential candidate Raila Odinga and his Azimio La Umoja coalition filed a petition with the Supreme Court challenging the results.[43] While technology was at the heart of the petitioners' claims, they made a diverse range of allegations, including that the announcement of the results in the absence of four commissioners was illegal, that there was an "elaborate and fraudulent premeditated scheme to interfere with and undermine and defeat the integrity, credibility and security of the Presidential election,"[44] that the election results be invalidated because of the purported "fraudulent intent" of the IEBC chairperson; and that IEBC decisions were subject to inadequate consultation. They requested that a forensic audit of the results be conducted; that access to the logs of all servers and technical equipment be granted; that spoiled and rejected ballots be scrutinized; and that the results be nullified.[45] Eight other petitions also were filed at the Supreme Court.

The standards of evidence that technology needs to adhere to in law and the electoral process is high. Any technology used has to be secure, verifiable, and transparent, leaving the system open to allegations of unconstitutionality should it fail to reach any of these standards. In 2017, The Carter Center recommended that a future legal amendment might be[46] to clarify that election

[42] https://www.afrobarometer.org/articles/kenyans-trust-justice-system-decry-unequal-treatment-under-law-including-impunity-officials/.
[43] Supreme Court Petition E005 of 2022.
[44] Pages 13-16.
[45] Pages 13-16.
[46] The Carter Center: Final Report Kenya 2017 General and Presidential Elections, p.57.

results should only be annulled when irregularities are shown to be of sufficient magnitude to affect the outcome. While no such amendment was passed, the Supreme Court explicitly accounted for this in their consideration of the case.

The court rejected the petition on all counts, noting that some of the logs provided by the petitioners to support their allegations originated "either from logs arising from the 2017 presidential election or were outright forgeries." The chief justice commented in the ruling that "affidavits filed in court must deal only with facts," noting, "We must remind counsel who appear before this court or indeed before any other court or tribunal of the provisions of sections 113 and 114 of the Penal Code, that swearing to falsehoods is a criminal offense and (2) that it is an offense to present misleading or fabricated evidence in any judicial proceeding."

Raila Odinga's team responded to the decision by criticizing the Supreme Court and its judges. The head of Odinga's legal team, James Orengo, said "courts make political decisions," while Odinga's official statement, released shortly after the ruling, said they "respect the opinion of the court" but found the decision "incredible" and accused the judges of using "exaggerated language." Running mate Martha Karua tweeted that she respected the ruling but that this "is not same as conceding." Nonetheless, Kenya remained peaceful after the ruling, and Odinga did not call his supporters to the streets.

Data Protection

The 2022 election took place under an unprecedented Kenyan legal framework around data protection. The Data Protection Act (2019) imposed new legal obligations on political parties and public authorities involved in the election process, including the IEBC, to protect personal data processed during key moments of the election cycle, including during the campaign and in the voter register. The act is enforced by the Office of the Data Protection Commissioner. The effort by the government of Kenya to specify the right to privacy aligns the legal framework with Kenya's constitutional and international obligations.[47] Kenya has not yet signed or ratified the African Convention on Cyber Security and Protecting Personal Data; doing so would further strengthen the overarching framework around data protection.[48]

According to the Elections Act, presidential candidates can be either nominated by a political party or put themselves forward as independent candidates.[49] If the latter, their application must be supported by 2,000 individual voter signatures, and they must present a clearance certificate from the Registrar of Political Parties certifying that the person was not a member of any political party for the last 3 months before the elections.[50] The year prior to the election, over 200 complaints were made to the Office of the Data Protection Commissioner by individuals who learned their signatures had been registered as members of political parties without their knowledge or consent.

These complaints were acted on in consultation with the Office of the Registrar of Political Parties and led to safeguards, including additional consent mechanisms being built into the portal for endorsing candidates. The corresponding amendment to the Political Parties Act, passed into law on Jan. 27, 2022, made it illegal for parties to enlist members without consent,[51]

[47] ICCPR, Article 17.
[48] https://au.int/en/treaties/african-union-convention-cyber-security-and-personal-data-protection.
[49] Elections Act 2011, articles 23 and 24 .
[50] IEBC, Public Notice: qualifications and requirements for nomination of candidates for the different elective positions, https://www.iebc.or.ke/uploads/resources/hwSoLCx7JH.pdf
[51] Political Parties (Amendment) Bill 2021, Article 24(1)(a).

creating a complementary avenue to hold political parties accountable for data misuse.

In July 2022, the IEBC announced that the voter register would be "available to stakeholders for a minimal fee."[52] The legal basis for this distribution, as well as the extent to which the voter register was to be modified, if at all, to limit the disclosure of data, was unclear.

IEBC Communications on Election Technologies

The constitution guarantees all citizens the right to access the information necessary to participate in the political process, in accordance with international standards.[53] IEBC communications went some way toward guaranteeing this right over the final weeks of the election but could have done more at earlier stages of the process. In a context of growing concerns around misinformation, the IEBC entered the electoral cycle with a need to immediately initiate preparations for communicating clearly and strategically around election technologies, which was a central recommendation by election observers in prior elections.[54]

Interlocutors regularly raised concerns with the Carter Center expert mission that political forces obstructed the IEBC's capacity to deliver strategic communications on election technology. The Kenyatta administration's delay in nominating replacement IEBC members ensured the institution lacked a fully staffed commission until March 2022. This was compounded by delays in parliament approving funding for the IEBC, which made strategic planning difficult. Political actors leveled attacks against the IEBC throughout the process and were often accused of doing so to seek material for potential post-electoral appeals. The IEBC noted in an open letter that political interference "plagues our electoral management."[55] This created challenges to building an effective communications operation.

In addition to these political challenges, internal issues prevented the IEBC from communicating key information. At no point did the IEBC benefit from a commissioner with a background in technology. Several local offices reported that the IEBC failed to provide provisional timelines extending more than a week beyond election day. Regional IEBC officers were often unaware of or had inaccurate information about key elements of the process, including the date of a rerun of the results transmission system test, the nature of the satellite backup for polling stations lacking data connectivity, and dates of the expected arrival of critical equipment. In addition, the IEBC failed to use the opportunity of the public broadcast of results transmission simulations to secure public confidence in the process.

Despite these internal failures, the IEBC made commendable efforts over the final weeks of the campaign to communicate the role of election technologies. The setup of a media monitoring unit six days before election day also helped improve communications and counter disinformation around election technologies.[56] The IEBC sent text messages to 22.2 million phone numbers explaining how to contact toll-free helplines. Operational from Aug. 1, the IEBC helplines responded to over 40,000 queries, reinforcing Kenyans' constitutional right of access to information. Call handlers were trained on issues relating to technology, including the KIEMS

[52] https://www.iebc.or.ke/uploads/resources/6KLXraSE7u.pdf.

[53] Constitution of Kenya 2010, art. 35; Universal Declaration of Human Rights, Article 19.

[54] Recommendation 13 of The Carter Center's report on the 2017 election recommended the IEBC "strengthen public outreach capacity and transparency in decision-making." The African Union's 2017 report identified concerns over a "weak communication strategy." Recommendation 10 of the EU's 2017 report recommended the IEBC "strengthen transparency, communication and public outreach."

[55] An Open Letter to the People of Kenya. IEBC. Nov. 18, 2020.

[56] As of the evening of election day, the unit had conducted sentiment analysis on 28,872 tweets.

kits. Earlier rollout of these initiatives would have raised awareness of the significance, procurement, and functioning of technologies throughout the process.

Civil society organizations deemed the IEBC's creation of a results portal a step forward for transparency.[57] Some 99.5% of the results forms were posted in the first four days following the vote, though Kenyans had to wait longer for the verification and tabulation of the legally binding physical copies. Early delivery of a communications strategy would have helped to manage popular expectations on the length of time it would take to tabulate official results.

Voter Education on Election Technologies

Voter education can bolster participation in the political process, a right all Kenyans enjoy in line with international standards subscribed to by the Kenyan Republic.[58] The IEBC is constitutionally mandated to conduct voter education.[59] The IEBC depends on parliament and donors to finance voter education and on the judicial process to resolve disputes about required content. Legal decisions often changed the process only after voter education materials had already been delivered. These dependencies compounded challenges rooted in the late onset of preparations by the IEBC, with consequent impacts on adherence to Kenya's constitutional and international obligations around access to information.

The IEBC was responsible for accrediting election observers and voter educators.[60] For the first time, the IEBC set up an online portal to facilitate these tasks.[61] This was an important step in modernizing IEBC processes and delivering more effectively on the institution's legal mandate. However, technical glitches and the late provision of accreditation badges presented a mixed image of IEBC preparedness to organizations whose trust it was important for the IEBC to secure. These challenges could have been avoided had the IEBC been able to initiate preparations, including comprehensive testing, at an earlier stage.[62]

The years prior to the 2022 election required significant voter education around technology due to popular concerns regarding the role of technology in 2017 and the central role of technologies in procurement, voter registration and voter verification processes. Civil society organizations interviewed by the Carter Center mission typically reported having seen no voter education at all on the role of technology and estimated that half of their own total funding for voter education 2017-22 came in the final six months of the process.[63] The IEBC delivered voter education, including on election technologies, but these efforts were too often concentrated toward the final weeks of the election.[64]

The capacity of the IEBC and civil society groups to effectively inform voters was also impeded by changes to the election process that were made long after they could be effectively communicated, including regarding use of the paper register. This was facilitated by political

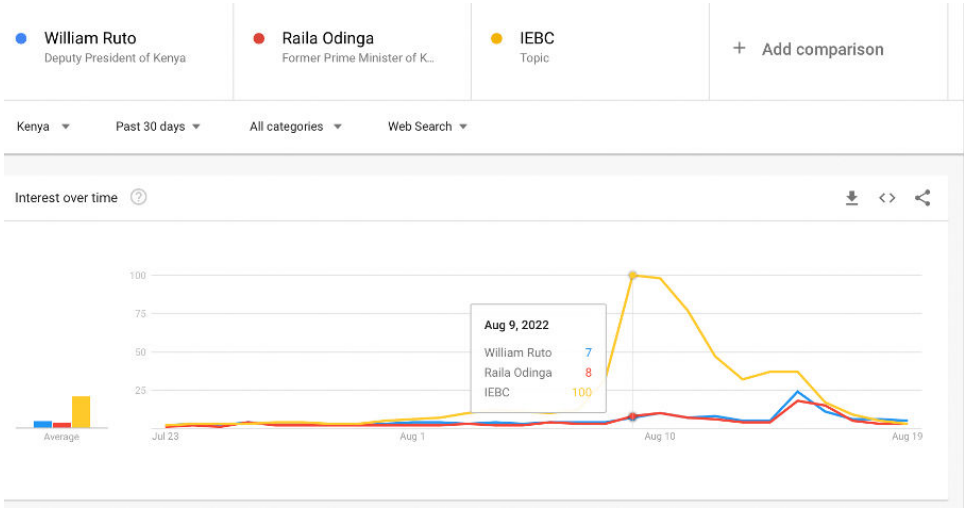
[57] Angaza Movement Statement on the 2022 General Elections, Aug. 10.
[58] ICCPR, Article 25.
[59] Constitution of Kenya, Article 88 (4) (g).
[60] Elections Act 2011 articles 42 and 40.
[61] Elections Act 2011, Article 42.
[62] For example, Muslims for Human Rights reported that the system had not worked for them when they submitted details in March 2022. They later had to resubmit the same information.
[63] Estimate provided by umbrella organization of CSOs and verified with a separate voter education provider.
[64] On July 12, the IEBC launched 14 trucks to conduct voter education in Nairobi, Kisumu, Nakuru, Mombasa, and towns along 13 regional roads across the nation. Also in July, the IEBC circulated effective infographics explaining how the results transmission process would work.

parties' diverse objections that should have been resolved months earlier, as well as by the initiation of key processes of election administration at too late a stage.

The Carter Center's expert team noted several IEBC actions that improved its provision of voter education around election technologies over the final weeks of the election. For example, the IEBC set up a WhatsApp voter education chatbot that offered key information on technologies such as a list of polling stations without data connectivity, video-based voter education, and explainers on key parts of the process. IEBC commissioners, including Chairperson Wafula Chebukati, were also proactive in providing information about election technologies in press briefings during the late stages of the process.

Digital Communications and Social Media Content around Election Technologies

International standards stipulate that all rights offline, including the right of access to information, are similarly guaranteed online.[65] Kenya is one of Africa's most digitally connected countries, rendering online communications integral to effectively guaranteeing this right. The IEBC operated social accounts on Facebook, Twitter, YouTube, Instagram, and WhatsApp, and disseminated fact-based information about election technologies through these platforms, particularly over the weeks surrounding the election.[66]

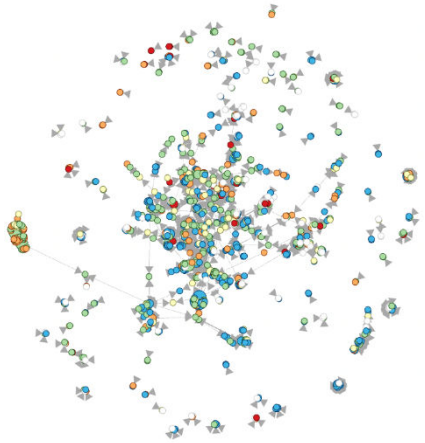


Over the two weeks surrounding election day, Kenyan internet users consistently sought out more information about the IEBC than about the candidates. This underscores the need for the IEBC to ensure that when Kenyans do so, they are presented with clear, fact-based information. Source: Google Trends

The IEBC's increased use of social media elevated Kenyans' access to information over the electoral period. The IEBC increased its Facebook followers by as much in the 20 days surrounding the vote than over the previous five years combined.[67] However, the IEBC could have done more to spread fact-based information on election technologies at earlier stages of the election. Misinformation about technology, including claims which had first circulated in 2017, emerged throughout the process, including during voter registration and verification.

[65] UN General Assembly Resolution 68/167, Dec. 18, 2013.
[66] Carter Center analysis using Crowdtangle showed that the IEBC posted an average of 21 times a week on Facebook in the month leading up to the election, compared with an average of 10 times a week over the course of the preceding year.
[67] The IEBC's official Facebook page had 347,313 followers on Aug 20, 2022, an increase of 65,373 from July 30, 2022. The IEBC had 281,740 followers on July 30, 2022, an increase of 60,313 from Aug 30, 2017.

While misinformation is a serious challenge in Kenya, the country's criminalization of the spread of false information[68] is at odds with international standards[69] and risks stifling freedom of expression.[70] Misinformation related to election technologies was reported by AFP Fact Check and Democracy in Africa during results transmission.[71] The sharing of messages about the election process by automated accounts underscored a level of risk around how information spreads in Kenya, and the need to bolster fact-based messages.



Election technologies are often targets of misinformation, which is sometimes spread on bot-like accounts. Twitter accounts showing high levels of bot-like characteristics (in red and orange) shared election-related tweets during the process. The Carter Center used a machine-learning algorithm trained on datasets of automated accounts to map accounts that mentioned "IEBC" in a 24-hour period Aug. 22-23.[72] The sharing of election content by likely automated accounts shows the need for a strong IEBC online communications operation.

Positively, social networks rolled out important initiatives to combat misinformation in advance of the vote. For example, Meta rejected 36,000 ads targeted at Kenya in the six months before April 2022 for not undertaking account verification, established a center to specifically target election-related misinformation, and deleted over 79,000 items of content for violating policies on hate speech and incitement to violence.[73] Nevertheless, prominent individuals used allegations about results transmission to spread content that created tensions.[74] Tweets that spread such content, as well as imposter accounts that spread misinformation about election technologies, were often taken down belatedly, or not at all.[75]

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[68] Computer Misuse and Cybercrimes Act No.5 of 2018 Article 22.

[69] A/HRC/47/L.22 July 7, 2021. This is the fifth such resolution, starting with A/HRC/20/8 July 5, 2012.

[70] A/HRC/47/L.22 July 7, 2021. OPT 1; Joint Declaration on Freedom of Expression and the Internet, 2021.

[71] Democracy in Africa, Aug. 12, "Fact Checking Claims of Rigging in Kenya's 2022 Presidential Election"; AFP, Aug. 12, "Fake Election Results Flood Social Media in Kenya."

[72] For methodology, see Chengcheng Shao, Pik-Mai Hui, Lei Wang, Xinwen Jiang, Alessandro Flammini, Filippo Menczer, Giovanni Luca Ciampaglia (2018). Anatomy of an online misinformation network. PLOS ONE, e0196087; Chengcheng Shao, Giovanni Luca Ciampaglia, Onur Varol, Kaicheng Yang, Alessandro Flammini, and Filippo Menczer (2018). The spread of low-credibility content by social bots. Nature Communications, 9:4787; Chengcheng Shao, Giovanni Luca Ciampaglia, Alessandro Flammini, and Filippo Menczer (2016). Hoaxy: A Platform for Tracking Online Misinformation. In Proceedings of the 25th International Conference Companion on World Wide Web (WWW '16 Companion), pp. 745-750.

[73] https://about.fb.com/news/2022/07/how-metas-preparing-for-kenyas-2022-general-election/

[74] On Sept. 2, Azimio la Umoja's Chief Agent Saitabao Kanchory tweeted a photo of a 34A form, stating "The blood trail & smoking gun fresh on the hands of (Chebukati and Ruto)". Within an hour, tweets in response included "the hand full of blood shall pay. @WChebukati."

[75] For example, the mission identified a network of inauthentic pages purporting to be IEBC Vice-Commissioner Juliana Cherera. Created immediately following the four commissioners' rejection of results, some of these pages produced misinformation about technology in the process. These included the Facebook blog "Juliana Cherera IEBC" and the pages "Juliana Cherera – IEBC," "Juliana Cherera IEBC," "Juliana cherera IEBC," "Juliana Cherera IEBC vice chairperson," and "Juliana Cherera Vice chairperson IEBC." Each of these accounts was created between Aug. 15, the date Cherera led the four commissioners in rejecting the results, and Aug. 19, and most spread similar narratives, sometimes using identical language.

Meta's fact-checking partnerships with three members of the International Fact-Checking Network active in Kenya — Africa Check, Pesa Check, and AFP — helped to reduce the visibility of disinformation identified by partners during the election. The Access to Information Law 2016 was used by one fact-checker to verify claims. However, popular awareness on how to make freedom of information requests is limited, constraining the degree to which citizens exercised their right to access information,[76] including in ways that could have clarified uncertainties about election technologies.

Election Technologies and the Media

The Kenyan media had considerable though underutilized potential to communicate election technologies to the public consistent with their responsibility to broadcast accurate and unbiased messaging around the election.[77] In general, most interlocutors with whom the Carter Center expert mission met expressed confidence in the competence of traditional media, including in the increasing professionalization of vernacular radio relied upon by many rural Kenyans. The Kenya Editors' Guild, the United Nations Development Program and the IEBC played an important role in facilitating this professionalization in the leadup to the election, delivering trainings to more than 650 journalists during 2022.

Nevertheless, the lack of political consensus over aspects of the election system, late changes to the process, and the IEBC's lagging preparedness all impeded the media's ability to clearly educate the public on the role of technology in the election. Commendably, the IEBC consulted reporters in a timely manner over the design of the accreditation portal, though many only received their accreditation badges the week of the vote. Kenyan journalists told the Carter Center mission that they hope to assess the implementation of election observers' recommendations over the coming years.

Over the weeks immediately preceding the election, the IEBC renewed efforts to engage the media. This improved access to information. Daily press conferences were held from Aug. 1 and were sometimes used to provide explanations and updates on election technology. In addition, a media center providing computers, refreshments, and office space was set up at the National Tallying Center, helping reporters broadcast and scrutinize IEBC messaging.

Election Technologies and Participatory Rights

International standards stipulate that persons with disabilities are entitled to access information required for them to exercise their rights.[78] Interlocutors reported that the IEBC's consultation about voter education with groups representing persons with disabilities took place too late to fully accommodate their diverse needs. Leading disability rights figures reported to the Carter Center expert mission that they were first contacted regarding the issue in early July. Voter education on election technologies for minority language groups was lacking, putting these already disadvantaged groups at higher risk of disenfranchisement and disinformation. Civil society organizations partly filled these gaps,[79] though their ability to scrutinize election technologies on election day was impeded by fears around spending time in polling stations given the history of violence in Kenyan elections.

[76] As guaranteed by ICCPR, Article 19.

[77] Elections Act 2011 Article 108; Electoral Code of Conduct, Section 14

[78] U.N. Convention on the Rights of Persons with Disabilities, Article 21.

[79] For example, Uraia conducted voter education covering a wide breadth of the process including aspects involving technology specifically for blind people.

Positively, the IEBC facilitated the rollout of an app, assistALL, to help voters with disabilities. Available on the Google Play Store, the app includes a helpline for the hearing impaired, a database of sign language interpreters, subtitled video content, and targeted voter education. Effective intervention to increase the participation of persons with disabilities is impeded by questions about the reliability of statistical estimates of the portion of the population with disabilities.[80]

Priority Recommendation of the Carter Center Election Expert Mission

The Carter Center's analysis suggests that various challenges, particularly those relating to the communications of election technology, could have been addressed had preparations commenced earlier. The Carter Center hereby presents its priority recommendation:

The IEBC should swiftly launch its review of the successes and challenges of this election. The findings of this review should inform a strategic plan for the preparation for and conduct of elections in 2027 that incorporates planning around election technologies.

This is a preliminary report. The election expert mission will continue its work until the conclusion of the electoral process, after which The Carter Center will publish a final report with a full set of recommendations related to election technology for future elections.

[80] For example, the National Bureau of Statistics claimed 2.2% of Kenyans live with a disability, the ADPK Nairobi disability advocacy group claimed to The Carter Center that 8.6% of Kenyans live with a disability, while the IEBC itself recently put the figure as high as 7.7%.