



ELECTION TECHNOLOGY AND ELECTORAL JUSTICE IN KENYA

Developed by MOSES OWOUR

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Acknowledgement

The Kenyan Section of the International Commission of Jurists (ICJ Kenya) is profoundly grateful to all the individuals who contributed to the successful production of this publication.

In particular, we thank Mr Moses Owuor for developing the Technical Brief on Election Technology and providing expert analysis and editorial input. Further, we sincerely thank Mr Wafula Wakoko for his research and editorial support in developing the publication.

Special thanks go to His Lordship, Hon. Justice Daniel Musinga- President of the Court of Appeal and Vice-Chairperson Judiciary Committee on Elections, for his invaluable insights, encouragement and technical support towards conceptualising and completing the text.

ICJ Kenya also remains grateful to the stakeholders who took part in the validation workshop in October 2022 for their insightful feedback on the initial draft of the text.

ICJ Kenya acknowledges the hard work of the entire ICJ Kenya secretariat under the leadership of Ms Elsy C. Sainna – Executive Director, and particularly, the Democracy, Governance and Rule of Law Programme Team comprised of Ms Julie Wayua Matheka – Programme Manager, Mr Thuku Mburu – Programme Officer and Mr Vincent Muthaura – Programme Officer for their critical role in conceptualising the Technical Brief on Election Technology and for coordinating this project and ensuring its completion. This Brief is richer because of the team's dedication, sacrifice and input.

Finally, this publication is made possible by the generous financial and technical support of Privacy International-, based in the UK, for which ICJ Kenya is most grateful.

Protas Saende

Chairman

ICJ Kenya



Forward

In recent elections across the continent and particularly in Kenya, technology has become integral part of Elections Administration. This presents a challenge and need to increase the capacity of Judges and Magistrates to be fully aware and consider technical and operational elements of election administration. Election Administration has become more sophisticated in scope, complexity of the legal framework and investment in technology. Consideration by Judges and Judicial Officers is further made more important by the principle-based approach of the Constitution of Kenya 2010.

Judges have often stated in their decisions that constitutional principles are not cosmetic and are justiciable, substantive, and enforceable elements of the Constitution. consideration of the validity of elections is therefore an inquiry into both the process and outcome. The values set out under foundational elements of the constitution including declaration of sovereignty (Article 1), supremacy of the Constitution (Article 1(2), definition of the Republic (Article 4), constitutional principles and values (Article 10), political rights (Article 38) and the specific principles and object of the electoral system (Articles 81-87) therefore form the necessary guide for detailed judicial consideration of questions relating to electoral management.

Judges are called upon to called upon to consider, review, and determine issues as to validity of election process and outcomes within a framework that is dynamic and increasingly technical. The Technical Brief on Election Technology and Jurisprudence is thus a useful tool for Judges and Practitioners in appreciating the context of technology integration, scope and key operational elements as currently used in Kenya's elections, the underlying purposes, progress and drawbacks, and appreciate the key jurisprudential issues which arise on a case-by-case basis. This tool will enable a more considered and purposeful approach to judicial consideration of election process. It will enhance judicial awareness of the technical questions and hopefully contribute to enhance consistency in application.

This material is timely and will be useful to both the Judiciary and Practitioners. It comes at the conclusion of the third election cycle following the adoption of the Constitution 2010. It therefore draws on the lessons over the last two election cycles, appreciate the progress and steps at consolidation of lessons during the 2022 General Election Cycle, and highlights useful areas of debate for long term initiatives to strengthen election administration.

On the part of the Judiciary, we are glad to note that the Judiciary through the Judiciary Committee on Elections (JCE), we have integrated many lessons during the comprehensive training of Judges, Magistrates and staff of the Judiciary on EDR for the 2022 Cycle. We are also in step in technology integration having launched the Judiciary E-Based Case Management System. The system has been fully employed to manage and track the progress of all EDR cases in the pre-election and post-election phases. We are learning from this experience with a view to making necessary improvements for future elections. The Judiciary is committed to playing its part in achieving its overall mission of social transformation through access to justice. We consider EDR and the overall objective of enhanced substantive electoral justice as essential elements in improving our democracy. EDR is therefore an integral part of the Judiciary vision.

Justice Daniel Musinga President of the Court of Appeal Deputy Chairperson, Judiciary Committee on Elections



Overview and Summary

This technical brief is developed with the support of the International Commission of Jurists, Kenya Chapter. The brief considers the steps taken in the integration of election technology. It also assesses the context of integration of election technology and the impetus provided by the standards provided under the Constitution of Kenya 2010. The brief notes the historical uncertainty in the management of free and fair elections, the high constitutional standards, and essence and substance of technology in election management. This technical brief recognizes the opportunities presented by technology in achieving the principles and objects set in the constitution. It proposes a principle and value-based approach by IEBC and the courts called upon to apply and interpret the legal framework. This brief note that, in the past, there has been an attitude of election managers to attain bare minimalist compliance with the law. This brief note that the minimalist and full deference to the IEBC in explaining technology failure in 2013 was followed by a more substantive and principle-based consideration in 2017. There are instances where there has been targeted litigation which are clearly intended to curtail the transformative focus of the Constitution in election management and reinforce the minimalist approach.

Chapter 1 considers the Constitutional and theoretical background in the integration of election technology. It notes proceeds on the basis that the constitution is rightly considered as transformative both in its emphasis on values, and principles, its awareness of historical context. The chapter notes the essential nature of technology in election management, the need for meaningful stakeholder engagement and enhanced transparency.

Chapter 2 notes the increased investment in technology integration, the need for deliberate planning of the technology integration cycle. Chapter 2 recognizes that significant weaknesses in technology integration have been directly linked to institutional dysfunction and unaccountable decision making and poor planning. These influences the basic elements of the ideal integration cycle including testing, stakeholder engagement, training, auditing certification and progressive improvement. The recurring "accident" of poor planning predates the current constitution and is extensively documented in the Kreigler Report. Increased investment and a better resourced IEBC with highly qualified technical staff are better placed to surmount the basic problems of decision making and efficiency.

Chapter 3 outlines the current state of technology integration in the election cycle. The chapter states the technology employed in the critical phases of election management including boundaries delimitation, voter registration, voter identification and management of election results. The brief provides the current components of the Kenya Integrated Elections Management System provided under Section 44 of the Elections Act, 2011.

Chapter 4 discusses the main cases and jurisprudence emerging from integration of technology.



This report recognizes that there have been crucial steps that have been undertaken by the Commission, relevant stakeholders and the Courts that have promoted the integration of technology in elections. These have had the effect of setting critical questions of law, advancing electoral justice and promoting the constitutional standards. Major improvements include:

- a) Settled interpretation of Result Management and Transmission framework and finality of polling station results (*Maina KIAI, Raila Odinga Vs IEBC 2017 and Harun Mwau vs IEBC 2017*). Of essence is that polling station results are final, and results however transmitted should be verifiable. The old language of provisional/preliminary results are no longer of any legal relevance. The results can be partial and cumulative. Upon submission the results by physical forms should reflect the electronically transmitted data.
- b) Settled interpretation on voter register and complimentary mechanism provided under Section 44A of the Elections Act, 2011- NASA VS IEBC Civil Appeal No 258 of 2017
- c) Efficiency in candidate registration and publication of lists using the Candidate Registration System.
- d) Efficiency in ballot production and result declaration forms. Ballots and Result Declaration Forms are pre-printed with candidate names, photos and contain security specifications.
- e) More experienced technical staff: Experienced cadre of experienced officials at the National Level, ROs and ICT staff mainly appointed from the ranks of permanent staff.
- f) Government investment in technology; the Commission has invested in Procurement of the second generation of KIEMS kits with improvements to the 2017 version.
- g) Agreement to allow media access to electoral information and publication of results. And open and transparent

However, this Report also recognizes that there are still numerous challenges that have been encountered in the integration of technology in elections. Some of these challenges are either policy related and administrative. They include:

- a) Procurement: late procurement, litigation, tender wars and allegations in relation to transparency and conflict of interest in procurement of election technology.
- b) Indifference in effecting improvement in the second generation of KIEMS.
- c) Mixed signals in transmission of tabulated results and scanned images of FORM 34A. the Commission has made late policy decision that has not been followed with clear written directive to stakeholders and its officials that it will only transmit images of Forms 34A to a public portal. The downside with this is that there is no plan to tally and collate electronically transmitted forms. Tallying and collation are legal requirements.
- d) Weak stakeholders' engagement: late consultations with political parties on critical elements including production of ballots and statutory forms. For instance, it is still unclear whether reports will have similar serial number.
- e) The litigation in *Dr. Kenneth Otieno v Attorney General & another [2017] eKLR* that declared section 44(8) of the Elections Act, 2011unconstitutional was a drawback to enhanced transparency and structured engagement in the integration of technology. Information is shared in discretionary terms, in untimely and often unhelpful manner. This causes uncertainty and risk to the election management.

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- f) Accident of lateness: late procurement owing to planning and litigation.
- g) Deployment- training: late procurement will necessarily affect deployment including training, testing, and effecting contingency measures.
- h) Lack of clarity in administrative procedures: commission needs to provide written directives to ROs and its officials on agreement reached with political parties.
- i) Timely proactive communication and education: the Commission needs to proactively communicate preparedness including its decisions relating to the electoral process. It is imperative that continuous voter education is undertaken to ensure that the public understands the role of technology in elections and steps taken to ensure accountability and transparency in elections.
- j) Uncertainty in RTS functionalities: the RTS functionalities including operations at polling station, data entry or capture should be clearly communicated to parties and all stakeholders.
- k) Tallying Centre module: the constituency tallying centre module of the RTS should be consistently and uniformly applied. Training and deployment should not leave room for inconsistent application. In the past, ROs have abandoned data entry through the secure RTS environment and resorted to excel spreadsheet which are vulnerable to manipulation.
- I) Tallying Centre management protocols: detailed protocols for management of constituency, county and National Tallying should be developed and clearly communicated
- m) Lack of clarity on the position of Section 39 following the judgment of Katiba Institute Vs AG 2017
- n) Late amendments to the law. In this year alone, key amendments have been made to the Elections Act and the Political Parties Act. This creates uncertainty in the implementation of some of the amended clauses by the Commission and the uncertainty in the Judiciary in decision making.

Chapter 1: Constitutional and theoretical context

1.1 Introduction

ENYAN SECTION

The Constitution of Kenya 2010 is considered among the category of transformative constitutions. It gives prominence to a transformation agenda that is alive to Kenya's historical context and a contributes to the agenda of democratic change. The events of the 2007-08 post-election violence accelerated the final stages of Constitution making. Elections thus marked the critical moment to constitutional making, a clear recognition of the drastic effect of a contentious, thus unpredictable political transition, and systemic or wilful failure by constitutional agencies. The constitutional transformation places particular prominence in the design of the electoral system and management. There is a clear foundation on sovereignty, constitutional supremacy, the Bill of Rights, expressed values and clarity in principles which are to govern the electoral framework.

The constitution creates a democratic plan-based awareness of the necessary influence of agency, public trust, continuous public participation, and demarcation of public interest through objects and principle. The constitution recognizes the practical limitation of a simple agency relationship in public administration and creates a framework of institutional checks, internal values, objects and principles set out in significant detail in almost all the chapters of the Constitution. The values and principles provided in the constitution are seen as the vectors of insulation against the overwhelming effects of an overbearing elite that may be minded maximising on a legacy of unaccountability.

The enactment of the Constitution in 2010 resolved the fundamental question of sovereignty in favour of clearer limitation on state power but did not extinguish agency problem which has been entrenched in favour of the elite that wields the state power for the time being. The institutions created, while structurally strong in script, may on occasion be run by persons who may lack the independence to assert their real authority. This is perhaps what KPMG implies in their recommendations to the Voter Registration Audit report that the Commission must *"employ persons of ability and character"* to assert its independence. This explains why even with conscious categorization of institutions as independent; the institutions sometimes lack the operational character that reflect full autonomy in public interest. Agency independence therefore becomes an inexact, unstable, and variegated concept. The Kenyan governance structure is first constitutional before it is democratic. The constitution provides the supreme source and check to authority before the internal measures of control and balance. The core set of substantive values implicitly underlies structural procedural theories of democracy.

Michael Yard in his work *Open Democracy – Progress and Pitfalls (IFES)* lays a strong foundation for Election Technology based on the values of participation and transparency. The paper appreciates the inevitable risk of technology of shifting the electoral system which is intended to be an open and simple process to disproportionate control by a few tech-elite. Elections are based on core but simple principle that can be reduced to full genuine understanding and participation by the people. The basis for democracy is established in the proposition that the politike techne, the understanding of

justice, mutual respect, and civic responsibility are shared equally by all. This basic principle should be preserved in all electoral processes. For elections to have credibility, it is important that the process be understood by all. An inherent risk in any marriage of elections and technology is that control may pass from the many to the few who have the special knowledge required to understand and evaluate whether there are adequate safeguards to ensure fairness and accuracy.

> Any approach that passes control from the many to an elite few – whether their elitism is by virtue of political power, social class, wealth or specialized knowledge – violates the very essence of democratic elections.we cannot understand the essential issues surrounding technology by focusing only on technology: The essence of technology is by no means anything technological . . .Thus we shall never experience our relationship to the essence of technology so long as we merely conceive and push forward the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it.

This context must also be placed with the environment of public agency in which the EMB is placed. The EMB is to be understood as exercising constitutional and public agency. Its independence is purposeful to protect sovereignty and full compliance with the constitutional principles (Article 249). It is therefore within the purview of constitutional checks, institutional accountability, rule of law and judicial decision making. The agency and trust bestowed on constitutional agents presumes qualified consent and reliance to account for actual and apparent authority. This is important since the agent exercises decisive power, more knowledge, and resources compared to the principal.

A value-based approach to application of election constitutional and legal standards. Such an approach separates the EMB technical and managerial role from the political arena or influence. The EMB works at higher standards of managing an election that is fully accepted by stakeholders. Separating the political from the technical is a difficult task and at the forefront of making an election trustworthy. If elections are one mode of "institutionalizing uncertainty", i.e., enhancing uncertainty on who gets elected (vulnerability), this substantive uncertainty has to be coupled with procedural and administrative legitimacy and certainty in order to have a free and fair election. This "defines the central task of electoral governance: organizing electoral uncertainty by providing institutional certainty." Independent EMBs are less needed in countries where the administration is trusted, neutral and efficient. In established democracies, elections tend to be routine events, usually producing well accepted results, even if there is only a narrow margin. *(Joseph Kwaku Asamoah - The Concept of Agency Theory in Electoral Democracy)*

1.2 Higher responsibility of the EMB and Technology Elite

Understood in this context, an EMB that seeks to replace the simple steps of democratic expression with a highly technology-driven process that is only fully understood and controlled by a few technology-elite or insider technocrats thus has a higher responsibility for proactive transparency. To serve the core essence of democracy, an election technology can only be judged good or bad in direct correlation to how well it advances or detracts from the essence of democracy, i.e., whether it evenly



distributes kratos, control or rule, among all demos, the people, or concentrates that control in a select few. The election administrator, who is faithful to the core constitutional and democratic values of participation would then perceive technology in its essence to reveal as opposed to obscuring or manipulating the truth.

Mike Yard draws on Heidegger and ancient Greek to drive this point. According to Heidegger, in order to analyse the nature of different approaches to technology.

The Greek root techne is applied to any skill or craft, whether manufacturing of shoes, houses and machines, creation of art, music and poetry, or management of elections. For Heidegger, this skill or craftsmanship can be applied either for manipulation of our environment or for opening up and revealing of reality. The distinction is reflected in two fundamentally different approaches to technology. For Heidegger, "what is decisive in techne does not lie at all in making and manipulating nor in the using of means, but rather in the revealing." This is in contrast to a misuse of techne, "which puts to nature the unreasonable demand that it supply energy which can be extracted and stored as such." To illustrate, he contrasts the example of a windmill that reveals, but does not extract and store the energy of the wind and a hydroelectric dam that transforms the meaning of a river into that which can provide energy. All other meanings of the river then become secondary and are obscured by this primary redefinition.

The essence of this analysis and its connection to the values expressed in the Constitution, points to the thrust of responsibility of the EMB. It points out an important distinction between two approaches, to technology, which are not necessarily opposed, that is important when evaluating technologies for use in democratic elections. One approach leans toward transparency, seeking to reveal the inner workings of the electoral process. For instance, the full application and operation of Articles 86 and 138 would lead to directing the EMB to the value the constitution places on immediate, efficient, transparency to reveal the results declared in polling stations in order to cut unnecessary informational asymmetry and suspense.

This approach uses technology tools to allow greater scrutiny, inviting broader participation, and increasing the democratic-ness of elections. Another approach views electoral process as a stream of resources (time, money, information) and seeks to maximize the efficient use of those resources. This creates a fundamental dichotomy opposing *transparency vs. efficiency* that often comes into play when determining whether a technology is appropriate for elections. This is not to say the efficiency in elections is, in itself, a bad thing; on the contrary, it is only when efficiency comes into conflict with transparency that it becomes undemocratic. Technology is necessarily at the centre of the tension between these two objectives of electoral administration. It is however expected to reinforce both objects.

The 'best case" scenario for election technology is to achieve a system that facilitates and freely reveals the expression of the sovereign will of the people through a transparent, predictable, and

efficient manner. In this sense, technology must first and foremost used to operationalize power that is placed in the hands of the people by the Constitutional System. The process for technology integration should therefore be built to inherently maximize the possibility of access, stakeholder inclusion, and opportunity for verification or audits.

1.3 The Legal Framework

1.3.1 The Constitution of Kenya, 2010

The Constitution defines the general principles of the electoral system, scope of legislations on election, registration of voters, the need for an electoral code of conduct to guide the conduct of parties and candidates, eligibility of independent candidates, voting processes and electoral dispute resolution. The constitution also provides for the composition, mandate, and functions of the Commission in the electoral process and timeline within which to conduct the elections.

1.3.2 The Independent Electoral and Boundaries Commission Act, 2011

The Act provides for the structure, roles, responsibilities and functions of the Commission in discharging its Constitutional mandate. In addition, the Act also governs delimitation of boundaries.

1.3.3 The Elections Act, 2011

This Act provides for the election of the President, Senators, County Governors, Members of the National Assembly, County Woman Member to the National Assembly, and Members of County Assemblies. It also spells out the qualifications for nomination of candidates, sponsorship of candidates by political parties and organizations, facilitation of candidates, campaign period, polling procedure, counting, tallying and declaration of results and handling of petitions, among others. The Act stipulates the procedures to be followed during elections including registration of voters, nomination of candidates for elections, referendum processes and election dispute resolution.

1.3.4 Election Offences Act, 2016

The Act identifies common election offences and prescribes penalties to be meted upon offenders found culpable for the said offences.

1.3.5 The Political Parties Act, 2011

The Act Provides for the formation of Political parties, requirements of political parties, registration, deregistration, membership and organization, rights and privileges of political parties, funding of political parties, and offences, prescription of their code of conduct and the establishment of the National Consultative Forum. It also establishes the Office of the Registrar of Political Parties (ORPP) as a state office responsible for registration, regulation, monitoring, investigation and supervision of political parties to ensure compliance with this Act.



1.3.6 Elections (Technology) Regulations, 2017

These were developed to provide further guidance on technology setting out rules and requirements regarding the technical aspects of election technology.

1.3.7 Election (Voter Registration) Regulations, 2017

The statutory instrument provides for continuous registration of citizens in Kenyan prisons and Kenyan Citizens living outside the country. viii. Election (General) Regulations, 2017 This addresses the procedure for the general conduct of election which includes among others submission of party membership lists, submission of names of persons nominated to contest in elections, employment of complementary mechanism in identification of voters and transmission of results.

1.3.8 Election (Voter Education) Regulations, 2017

It provides all information whose purpose is to educate members of the public on their rights and responsibilities in the electoral process. It also creates efficient coordination of voter education, monitoring and evaluation, and effective use of resources for voter education.

1.3.9 Elections (Party Primaries and Party Lists) Regulations, 2017

Provides for the procedures through which political parties nominate candidates for elections. These include the conduct of party primaries and preparation of party lists by political parties, preparation of party nomination rules and procedures and nomination code of conduct. It also provides for composition and functions of political party Election Boards.

1.3.10 Rules of Procedure on Settlement of Disputes, 2012

The Rules and procedures provided for the settlement of disputes arising out of nomination of candidates, registration of voters and violation of the electoral code of conduct.

1.3.11 Elections (Parliamentary and County Elections) Petition Rules, 2013

The Petition rules provided for legal framework to manage election disputes arising from declaration of results in respect of Parliamentary and County elections.

1.3.12 Supreme Court (Presidential Election) Petition Rules, 2017

These rules apply in respect of Presidential election including petitions arising upon declaration by the Commission of the President-elect. They provide for filing grounds and other matters up to the determination of a presidential election.

1.3.13 Public/Stakeholder participation in the Electoral Process

Transparency is a fundamental and pervasive value in elections management.



1.4 Stakeholder Participation in the Election Technology Integration

As this brief demonstrates, integration of technology by design and chance tends to exclude effective meaningful stakeholder participation which is essential to the safeguards of election integrity and transparency. It should therefore be a deliberate policy of technology integration framework to make provision for effective participation of key stakeholders based on full information of the scope of technology, the justification, the elements of elections to be automated, controls, opportunity for verifiability and audits. Seen in this manner, technology should not extinguish the opportunities for active participation but should be an essential vector in revealing the interplay of elections as an essentially a democratic process.

Stakeholder	Mandate/Role
IEBC	Election Management Body (Established under Article 88 of the Constitu- tion). Is the lead institution in election management and directs integration of technology (Section 44 of the Elections Act, 2011).
Political Parties	Main channels of political organisation and recruitment of leadership (Article 6, 38, 91 and 92 of the Constitution).
Candidates	Active political players and channels of democratic leadership
Parliament	Exercise constitutional legislative, oversight and representation authority
County Govern- ments	Channels of self-governance and democratic leadership at regional level
Security Agencies	Core element of peaceful democratic governance - elections presumes an en- vironment of peaceful transfer of power.
Executive National Treasury	Policy formulation and execution within constitutional authority, limits and responsibility Public financial management
Telkom Providers ICT Authority	Core contractors in the electoral process ICT policy and security
Contractors	Heavy investments in electoral technology necessitates involvement of private contractors in critical phases of elections.

Communication	
Authority of Kenya	Regulator of Communication and telecommunication.
Media	access to information and media - Article 34 and 35)
Private Sector	Drivers of economic governance, employment and growth.

1.5 Kenya's Technological Environment

Kenya has made significant improvement to the Telkom infrastructure development. The legal framework for technology development include: the of Constitution of Kenya 2010, Kenya Information and Communication Act 2013, Media Act 2013, policy development and restructuring of Government functions. Kenya is implementing the ICT Policy and Broadband Strategy 2019 – 2023. The ICT strategy states that the Government has achieved tremendous in internet connectivity infrastructure that has enabled access by 99.9% of Kenya and purposes to reach 100% by 2023. The key policy objectives in relation to broadband infrastructure are to:

- Create the infrastructure conditions that enable the use of always-on, high speed, wireless, internet across the country.
- Facilitate the creation of infrastructure and frameworks that support the growth of data centres, pervasive instrumentation (Internet of Things), machine learning and local manufacturing while fostering a secure, innovation ecosystem.
- Provision of trusted security and certification infrastructure for all electronic communication and transactions.
- Form the basis for the regulation of converged industry; the rules that we set up will provide an enabling environment that is secure, open and transparent.
- Ubiquitous Communications: Internet access is available everywhere, all the time to everybody and everything via mobile phone, Wi-Fi, cable and other means. The internet protocol has become the de-facto means of communication. This trend will intensify and increase as available speeds improve.
- Adaptive Security Architecture: The complexities of digital business and the algorithmic economy, combined with an emerging "hacker industry," significantly increase the threat surface for our nation.



1.6 The early steps in election technology integration

The Electoral Commission of Kenya attempted to introduce limited technology before the 2002 and 2007 General Elections. Prior to 2002, the District Offices of ECK and the Returning Officers were inaccessible. They could access the National Office physically or through unreliable landline telephone mostly in the provincial administration offices or, in case of emergency, through the police radio communication. This had direct consequence on required level of transparency in elections administration and was inadequate in achieving the required efficiency. This was most conspicuous in the processes of transmission of election results. The country essentially goes into total suspense and speculation after close of polls to the moment when the Returning Officers turn up at the national tallying centres and their returns tallied, collated and declared. Given the essence of elections in facilitating democratic, peaceful political transition, the moment of prolonged suspense ranks, perhaps, as the most vulnerable point for the state.

1.6.1 2002 General Elections

In 2002, the ECK through assistance from the IFES accepted support to ensure full connection of their landlines in the District Offices, purchase of desktop computers for all their district offices and fax machines for the 210 Constituencies. This equipment was expected to support transparent and efficient administration of election processes. During the election day, the equipment was expected to support transparent communication, and timely communication of election results. The ECK was generally indifferent and slow in accepting the use of technology. It took little steps in undertaking a recommended Communication Infrastructure study, ensuring connection of reliable landlines, and training of its staff in using the technology as a mandatory step in result management process. Technology made remarkable success in achieving improved direct efficient communication between the Headquarters and the field offices but only partial impact in result management.

During tallying of presidential election results, about 50% of the Returning Officers had faxed their Results Forms to the Headquarters. Therefore, the Commission only had partial results in the face of a prolonged period of suspense, suspicion and pressure from the opposition that had declared landslide victory. The media houses had undertaken a parallel running tally of the election results and had published their results which projected a landslide win by the opposition. The elections were held on 27th December 2002 and by 29th December 2002, it had become clear that Hon. Kibaki representing the NARC coalition had taken an unassailable lead of about 61% compared to the ruling KANU candidate Uhuru Kenyatta at about 39% of the vote. On the morning of 30th December 2002, Uhuru Kenyatta held a press conference conceding defeat to Hon. Kibaki.

In the afternoon of 30th December 2002, the Chairman of the Commission made a declaration of Kibaki as duly elected based on what the Chairman of the ECK termed as preliminary results and based on faxed results and reliable reports from communication with its field offices. The justification was that the partial results obtained by the Commission showed that it was mathematically impossible for the runners up to catch up and therefore

the preliminary results could be used to declare the winner. The results were declared by normal operation of access to and publication of information (polling station/constituency results) by the media. While the results were not disputed, they provided indication the necessity of an efficient result management framework when the results have been published in the polling stations or at the constituency tallying centres. Polling stations are more numerous and remote to the national centres compared to the previous practice of count at constituency tallying centres.

1.6.2 2007 General Elections

By 2002 it seemed inevitable that integration of some level of technology was necessary to improve efficiency and transparency in election administration. With hindsight, had the Commission taken the lessons learned in 2002, improved its systems, implemented a clear strategy for technology integration, ensured some level of statutory and regulatory backing, and engaged more deliberately with its stakeholders and clarity in training its staff, the challenges in election administration could have been avoided. The ECK made significant improvements in election administration including training. This was demonstrated in the 2005 Constitutional Referendum. However, The ECK spectacularly failed to consolidate the gains in the 2007 general elections and set the stage for a wider crisis that had been percussed by the stalemate in constitutional reforms, intransigent executive, and systemic institutional failures.

The ECK seemed to appreciate the need to bridge the informational asymmetry, which was evident in the 2002 General Elections, apparent suspense in official communication from the ECK when the media had projected the leading candidate. 2007 provided an opportunity to build on the lessons of 2002. It was the second elections after the country implemented the change in Regulations to count votes in polling stations. This change should have been refined through prompt publication of the results declarations, transparency in obtaining a running polling station-based tally, finality of such results and a clear channel for tallying and collation of polling station results at the Constituency. To undertake this, the Commission needed modifications to the Regulations which permitted review, adjudication of certain votes and variation of declared polling station results by the Constituency Returning Officer.

Kenya struggled with getting agreement on the most effective way to communicate results from 2002 to 2007, a period which saw two presidential and general elections, and a referendum on adoption of a new constitution. The system and procedures are reasonably well-defined but fear about the political reactions or indifference by the Commission, particularly during the December 2007 Presidential and General Election, obstructed full implementation of the system. The failure to report preliminary results was one factor that contributed to widespread suspicion that the EMB was hiding something and possibly manipulating the results.

ECK showed consistent growth in many of these areas from 2001 to 2007, a fact that was reflected in the relatively smooth conduct of voting. There were few incidents of violence or





unrest from the time the polls opened until the closing of the polls and beginning of results reporting. The vast majority of voters appeared at the polling station, found their names on the voter register, received a ballot, voted, and went home without incident. The vote reporting method reflected similar advances over systems deployed in previous elections; a majority of reporting periodic results flowed from polling station through constituency offices to the Media Election Results Centre without incident.

1.7 Review of Reporting System 2007

1.7.1 Outsourced System

With a goal of streamlining the vote reporting system, the ECK outsourced development of an integrated system less than 16 weeks before the election to allow data entry at the constituency level, and direct communication with headquarters via a wireless general packet radio service (GPRS) connection to laptop computers in constituency offices. This system as specified was designed to streamline reporting by providing near-instantaneous access by the media centre to results once they were entered at the constituency office.

The system specified the ability to:

- Enter data for all levels of elections (presidential, parliamentary, civic)
- Validate data both by comparing to number of registered voters and by ensuring that total votes for all parties do not exceed number of votes cast at the polling station
- Track valid votes, spoilt ballots and disputed ballots
- Output data in a variety of tables and graphs for reporting purposes
- Allow data entry at HQ for any constituency that encounters a problem either with their system or with data transmission

Although the ECK did use this system, it ignored many of the recommendations of both IFES and the UNDP concerning when the results should be reported, as well as the recommendation to report disaggregated results from the polling stations, thereby allowing a degree of auditability.

1.7.2 Weaknesses of the Reporting Process

The human element is always the main weakest link in deployment of technology. A lot turns on basic preparedness, training, logistics and contingency measures. As is often the case in the failure of systems, the greatest weakness in the vote reporting process hinged not on any problem with the technology but with policy and procedures. The ECK did not have policy clarity, thus did not prepare adequately, or train its officials in good time. Therefore, even when it gave indication to development partners of its intent to integrate technology it did not follow up with decisive action. In this case on an overly rigid interpretation of a law that provides for a chain of reporting from presiding officer (polling station) to returning officer (constituency) to ECK Headquarters and a conservative view of its "verification" role.

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The ECK did not take its role as based on value to achieve essential transparency. It was caught up on the structures on what the law or the regulations allowed them to do. Casual belief that the media would not be allowed to announce results or if they did it was subject to final declarations by the Commission. The ECK repeatedly cited this legal requirement in turning down proposals to overhaul counting, thereby abdicating its responsibility to improve the speed and accountability of the process. While the law appropriately gave responsibility to the Returning Officer to review polling station results, adjudicate any counting disputes and correct any obvious errors, the Kenyan EMB should have been authorized to implement systems that prevented the returning officer from amending polling station results and tabulations without regard for accountability.

The ECK did not see its primary mandate to create procedures that ensure elections are conducted in a transparent manner, and all election workers at every level are held accountable for the accuracy, impartiality, and integrity of their actions. Further, the ECK had a responsibility to the people of Kenya to report results in a manner that would allay suspicions and provide a strong counterargument to accusations of electoral fraud. The best way to fulfil this responsibility would have been to create a system that provides full transparency and accountability as described below.

1.8 Report of the Independent Review Commission on the 2007 General Elections (The Kreigler Report 2008)

Integration of technology took a decisive turn following the recommendations of the Kreigler Report in 2008. The Kreigler report made a detailed attempt to assess and explain the decision-making failures in the integration of technology between 2002 and 2007. IREC noted that the ECK had opportunity to build on the progress in 2002 and the 2005 referendum but failed to take necessary operational measures. In its submission to the IREC the ECK explained its failure mainly based on the lack of the legal framework, and decision making at the leadership level.

IREC noted The ECK had long since been aware of the need to improve the results transmission framework fundamentally by introducing readily available information and communications technology. According to IREC, the failure by ECK to deal with this at operational level was *"grossly remiss and contributed to the climate of tension, suspicion and rumour in which the violence erupted"*. The Commission accepted support to undertake and update Communication Infrastructure Study, Election Infrastructure Study, Develop draft Information Technology Strategy. These steps were intended to inform integration of technology, development of suitable systems for results transmission and procurement. The Kreigler Report found that there was clear indifference and reluctance to match these steps with decisive action.

The Kreigler Report documented the efforts made in the period intervening the 2002 and 2007 General Elections. There was clear recognition from the events of the 2002 General Elections and 2005 Referendum that introduction of election technology in results management was inevitable.



The ECK recognised that it needed to consolidate the incremental gains through a policy and clear strategy for technology integration. The problems of counting and tallying had already been identified in the 2005 Referendum. The evaluation Report of the ECK on the National Referendum Evaluation Workshop (held in March 2006) stated:

"To speed up the tallying process, the Commission should consider procuring computers for this purpose. Those to do the tallying must be computer literate ... There should be a mechanism for verification during counting and tallying of votes ... [A] advance planning for communication protocol to be utilized in the 2007 general elections [should] commence immediately" (p. 26). 'The plenary stressed that the plans to decentralize the computerization process ... should be aggressively pursued. In addition, the plan to procure/hire 210 computers for the constituency level should commence immediately in readiness for the 2007 general elections. ... It was suggested that there is need to brief the commissioners on ICT activities regularly to enable them [to] understand the technological advancements and make informed decisions" (p. 36).

The Kreigler Report noted that while the Commission had post 2002 noted the inevitability of technology integration to improve transparency and efficiency in publication of election results, it did little to implement its own evaluation reports. The Commission accepted procurement of computers without a clear intention or policy direction to use them to improve election management. there was no clear purpose to match improved efficiency with enhanced transparency. Nothing much seems to have been done in the succeeding few months, and the topic of computer use for tallying at constituency level re-emerged only in the second meeting of the steering committee on assistance to the 2007 general elections, held on 25 October 2006.

"The Committee approved the use of assistance funds to procure computers and requested the ECK to submit a list of the required equipment. (An additional use was mentioned in a later ECK funding proposal to UNDP – "voter registration education".) Seventy-two days after the October approval, on 5 January 2007, the ECK chairman sent the United Nations Development Programme (UNDP) the specifications for 210 laptops and 210 high-capacity printers, without any description or justification for the proposed use of the equipment. Within the next ten days, UNDP prepared the Invitation to Bid and other arrangements and the Invitation was published on 15 January 2007, calling for proposals to be submitted by 6 February 2007. In late May, the ECK IT manager, proposed a revised solution that "eliminates the PO [presiding officer] from the communication of results to ECK HQs and only leaves it to the RO [returning officer]."

The Commission proceeded with late procurement of technology and contracted Next Technologies (a Kenyan ICT company to develop the system). The system was based on electronic data entry and transmission at Constituency level. The system was expected to have the following functionalities:



- The RO, with his/her staff, shall enter these data from the Result Declaration Forms obtained from Presiding Officers into the computer provided to them by ECK.
- Each election's results are captured individually for each polling station.
- The RO to collate tally the results as has been traditionally done. The emerging totals for each candidate in each election. The system to have inbuild collation based on election area.
- Computations e.g., number of cast votes per station, number of spoilt ballots, rejected ballots etc, to be computed by the computer system and comparisons made to manual tallies. Differences should be resolved by the RO (the data is then transmitted to ECK HQs through a secure telecommunication link). (Wireless links using GPRS - Safaricom and Celtel or CDMA - Telkom Wireless preferred)
- The computers servers at ECK HQs will receive these data, accept it into the database and re-transmit a copy of it (for each polling station) back to the RO. This is a handshaking process through which ECK HQs is acknowledging the receipt of the data.
- These results can then be made public.
- In case of failure of the system in any constituency the RO would be permitted to resort to voice telephony and physical results to be sent and confirmed. A Call Centre was established for this purpose.
- The Commission committed to employ least one ICT competent staff member (among the RO's clerks/staff in each constituency). And to improve infrastructure by procuring power generators.

The proposed software was not particularly complex. Furthermore, IFES had offered to develop it within the framework of the support provided to the ECK. Similarly, since the assistant returning officers (AROs) and clerks had not yet been recruited, it would have been possible to recruit persons with a basic knowledge of computers and, in that case, their training in the use of user-friendly software would not have taken more than a day or so. The proposal was submitted to the ECK Plenary by the Chairman of the Research and Technical Committee in June 2007 and adopted without amendment. It should be noted that the laptops had been delivered to the ECK three days earlier.

The ECK IT manager, and Deputy Secretary, testified that they learned of the decision of the Plenary only by 8 August 2007. According to the Manager's written statement, *"the tender for elections results tallying software was finalized on 23rd October 2007 and a purchase order raised". As to "the General Packet Radio Service (GPRS) and the Virtual Private Network (VPN), it was necessary to wait until 30th November".* It seems that the requirement of some computer literacy for the recruitment of Ros, AROs and/or clerks, as well as the eventual addition of one or two days so that they could be trained in software use, were not included by the ECK units in charge of recruitment. In the event, the computers and printers were stored in the ECK warehouse until mid-December 2007, when they began to be distributed to the constituency offices. In some cases, they arrived only a few days before election day.



The returning officers gathered in Nairobi on 22 December 2007 for, they complained about the problems they would have in using the computers, and the decision of 14 June 2007 to use the system was revoked in circumstances that are unclear. Since the ECK consistently failed to provide IREC with minutes of its Plenary meetings, IREC could not establish the status of this decision. This analysis, although far from complete, provides some glimpses into the internal functioning of the ECK. In any organisation, when a decision is made by the top decision-making organ, it is supposed to be implemented without further ado by the rest of the organisation. Clearly, this was not the case with the computerisation of the results transmission and tallying process.

The need to integrate technology had been documented in 2002 evaluation report and after the 2005 referendum, but nothing seems to have been done for several months, in spite of the approaching 2007 elections. The advice of external experts was not taken into account. However, an adequate solution was developed internally and approved in time.

When the proposal was adopted by the Plenary on 14 June 2007, enough time remained to ensure that computers could be used for tallying results at constituency level in the December elections: this required only the full support of all the relevant units in the organisation – procurement, personnel, training, etc. But nothing seems to have worked efficiently. There were delays in informing the officials concerned that the proposal had been approved, and all the necessary processes seem to have proceeded at a snail's pace. If the proposal had been implemented, it would have been possible to issue partial results for all constituencies in an adequately programmed sequence, which would probably have eliminated most of the tension build-up created by the use of a slow, error-prone and old-fashioned approach to the tallying and relay of election results.

Chapter 2: Institutional Governance and Technology Planning

2.1 Introduction

ENYAN SECTION

The fundamental change in the integration of technology lies in the extent of the improvement of the IEBC as an institution from the lessons learned from the failures of the ECK. The IEBC has strong constitutional foundation, the IEBC Act makes is tailored to safeguard the institutional and operational independence. At institution level, the IEBC is a far more sophisticated organisation to respond to expanded mandate and complex electoral framework. Far from making specific finding on the choice of technology to be adopted to support the electoral process, the Kreigler Commission placed the main challenge as one of institutional and decision-making failure. In its conclusion, the analysis did not project an efficient organisation which plans in advance and implements crucial decisions expeditiously and transparently. The image is the opposite: a traditional organisation, with inadequate flows of information, averse to even minimal risks and to the use of technology, functioning in a compartmentalised fashion. Whatever the decisions to be made concerning the electoral system and other aspects of the electoral process, one thing is sure: the ECK's internal management processes deserve a thorough overhaul.

IEBC was established after the overhaul of the ECK. An assessment of the progress made must therefore take account of the decision making and draw findings of whether there is improvement in institutional learning, accountable decision making, and whether decisions are made expeditiously and transparently. The improvement in the Constitution and the election law gives more clarity in terms of the standards required for election administration, internal organisation of the Commission, integration of technology in the electoral processes and increased investment.

The IEBC Act is the primary legislation in concerning the institutional governance of the Commission. The Act sets out the objects and purposes of the Commission (Section 3), restates the functions of the Commission under Article 88(1) of the Constitution, composition of the Commission, quorum and the office of the Secretary to the Commission. As an institution, the Commission is adequately empowered to create a suitable institutional establishment to discharge its functions. Part III of the Act makes provisions for the financing of the Commission. Section 18 provides for the establishment of the Independent Electoral and Boundaries Commission Fund. Under Section 21,

(1) Before the commencement of each financial year, the secretary with the approval of the Commission, shall cause to be prepared estimates of the revenue and expenditure of the Commission for that year. (2) The Cabinet Secretary responsible for finance shall present the estimates approved by the Commission for consideration and approval by the National Assembly.





In its strategic plan, 2015 – 2020, the IEBC recognize lurking institutional weaknesses. IEBC, as an institution, is still in transition despite the fact that it was able to run a referendum in 2010 and elections in 2013. Organizations that remain institutionally weak because of unresponsive operational systems, weak structures, and staffing challenges are unlikely to be effective and efficient in the way they deliver their respective mandates. The legitimacy of the electoral process and its outcome must be anchored in high levels of trust in the institution managing elections and the process itself. This calls for proactive collaboration, awareness creation and greater openness by the Commission.

The Commission purposed to build stronger institutions to respond to its mandate and meet expectations. It also committed to pay attention to internally driven institutional reforms including innovation in business processes, staff capacity, financial management and change management with emphasis on performance management culture. The aim is to build a respectable and sustainable institutional brand in elections management. among its strategic objectives, the Commission sought to: Empower Kenyans to effectively participate in the electoral process, and to empower political parties and independent candidates to effectively participate in the electoral process.

In respect to ICT, the IEBC sought to:

- Undertake a technical audit to establish the adequacy, availability and appropriateness of the technologies to IEBC's operations and electoral processes.
- Apply appropriate ICT solutions to internal operations and electoral processes.
- Establish a comprehensive and integrated ICT system for managing elections.
- Simulate the efficacy of existing technologies in the electoral processes.
- Establish an ICT laboratory for testing and certification of ICTs in elections.

2.2 Technology and Electoral Cycle Planning

The problems noted in technology integration in the ECK shows a stark view of institutional indifference and inaction. The various elements of the electoral cycle combine to build what can be referred to as the election infrastructure. This is the approach that the Kenyan Electoral law takes by proposing an "integrated" system of election technology. The system design is intended to provide a platform for managing large amounts of information and data in order to efficiently deliver the electoral process. The information on boundaries delimitation, political parties and candidates, party or candidate symbols, voter registration data, polling station information, election materials distribution and reconciliation, election officials training, and deployment are interlinked. At the end of the electoral cycle, the process for results management is necessarily correlated to voter registration data, process for identification, information on turnout, and ballot paper reconciliation information. It is important to appreciate the full scope of the electoral system, understand the phases in which technology may be employed, and the interrelation between the various electoral cycle elements. Such a process ensures that technology employed is useful in supporting the targeted component of the electoral operation and is adoptable in facilitating the interrelated components. It is therefore important that technology employed in the various elements takes account of the necessary interfaces of the different correlated elements of the election cycle. In understanding the scope of Understanding the electoral cycle, the key activities involved in planning and executing the electoral system is important in designing sustainable technology integration framework.

2.4 Technology Policy and Lifecycle

The IEBC has developed a Technology Integration Policy contemplated under Section 44(2) of the Elections Act. The policy is not largely disseminated with stakeholders. The policy is intended to give clearer considerations on integration of technology, the scope of integration to implement specific elements of the electoral cycle, the choice of suitable technology, the scope of stakeholder engagement, feasibility, procurement, testing and deployment. A clear policy for integration would also clarify the steps required for training, logistics, storage, repair, security and replacement.

The Elections Act is the principal elections and referendum legislation envisioned under Chapter VII of the Constitution. The Act provides the framework for implementation of the standards, principals and objects set out under the Constitution. The Elections (Technology) Regulations implements Section 44 of the Elections Act, and it is therefore the principal reference guide for integration of technology. The Regulations provides for among others:

- a) Acquisition, storage and deployment of technology: the Commission is required to regularly conduct a requirements analysis to determine specific requirements to upgrade existing technology or acquire new technology with the purpose of enhancing the integrity, efficiency and transparency of the election process; prepare a solution design and feasibility report for any required upgrades or acquisitions; and undertake transparent procurement.
- b) **Testing and Certification** transparently entails timely end-to-end testing of election technology before deployment for election process; prepare a report to certify that the technology meets the user requirements and specifications prepared; assurance by a professional reputable firm to certify that the election technology meets user requirements and specifications.
- c) **Audit of Technology:** Undertake annual audit of the election technology or as may be required, to guarantee data integrity; ensure that the technology functions effectively as specified; and ensure that the internal controls of the technology are effective.



- d) **Independent Audit of Technology:** The Commission shall engage a professional reputable firm to conduct annual systems audit of the technology. The scope of the audit includes security access to the system, vulnerability of the system configurations; the accuracy and completeness of the data; and any mechanisms determined by the Commission.
- e) **Information security and data storage:** put in place mechanisms to ensure data availability, accuracy, integrity, and confidentiality. The Commission shall adopt tools to detect, prevent and prevent against attacks and compromise the election technology.
- f) Access to software source codes: the Commission to ensure access to open-source codes in accordance with the procedure set by the Commission. Proprietary software is in accordance with the Industrial Property Act, 2001.
- g) **Telecommunication network:** the Commission to publish details of telecommunication network service providers to be used during an election. The Commission to identify and communicate in a timely manner to all stakeholders the network service available at different polling stations. In areas where there is no telecommunication network, the Commission is required to inform the stakeholders and publish such information. In collaboration with a telecommunication network service provider or providers shall put in place the appropriate telecommunication network infrastructure to facilitate the use of election technology for voter validation and results transmission and shall publish the network coverage at least forty-five days before the date of a general election.
- h) telecommunication network service providers shall ensure the security, traceability and availability of the network during the election period or during any other period as may be required by the Commission.

2.5 Technology integration cycle

The Elections (Technology) Regulations envisage that integration of technology will be an inclusive, transparent and process that appreciates and responds to the risks of the competitive political environment. Technology Lifecycle Management (TLM) takes a broad planning view over the design, procurement, deployment, management, and disposal of all elements in the organization's technology infrastructure, including security of data throughout the lifecycle. TLM can provide a realistic estimate of total cost of ownership, training needs, and deployment schedules – and can assist election administrators with the difficult task of coordinating introduction of technology within the election timeline. Equally important, TLM provides a tool for anticipating budgeting requirements necessary to ensure sustainability of the new technology. The different stages involved in Technology Lifecycle Management include:

• Assessment and identification of organizational mission, objectives, and policies for determination of appropriate technology



• Procurement of technology, including feasibility studies, pilot projects, specifications, and vendor evaluations

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- Deployment of systems and training of end users
- Maintenance, repair, and necessary upgrades, including ongoing helpdesk services and technical support
- Plan for proper disposal
- Security for all systems throughout the lifecycle, including provision of security for all data stored on any media at time of disposal

Mike Yard's work "Direct Democracy – Progress and Pitfalls" proposes the following steps for integration of technology.

Task	Scope
Identify the problem	Before ECK embarked on the purchase of technology, IFES assisted the Commission to undertake a communication and election infra- structure study. The study was intended to appreciate the infrastruc- ture, the nature of the problem and suitability of available options. An inclusive process for problem identification, scope and specific challenges to be addressed should be conducted through surveys, interviews and inclusive engagement with stakeholders. This sounds like such an obvious first step, but countless projects have begun with a solution in mind before the problem is fully identified. One example illustrates the extent to which this happens. Many countries have at least considered introducing a biometric system as part of voter registration, and in many countries this type of technology can be a valuable election management tool.
Meaningful broad based stakeholder engagement	invite discussion from political parties, civil society, and electoral staff who will be responsible for implementing the solution. Often these discussions can provide valuable additional information about the scope of the problem and direction to effective implementation. Meaningful engagement will ensure comprehensive information is shared and real discussions and recommendations obtained. This may be able to broaden acceptance of the final approach. Where the EMB does not openly and meaningfully engage with stakeholders or provide selective information, there is a strong probability that the problem has not been adequately understood, and an even stronger probability that the solution will not be accepted.



Consider necessary legal	Technology may require refinements in the law to enable implemen-
and regulatory reforms	tation. For instance, the often-used justification by ECK was the lack
	of appropriate legal framework to regulate electronic transmission
	of results. A thorough "requirements analysis" process will address
	not only the tools needed, but also the systems and processes that
	must be reengineered in order to shape an effective solution.
Administrative changes and	It is important that during identification of the problem, feasibility
staffing	and planning to project necessary administrative and staffing chang-
	es required to successfully implement the solutions considered. It is
	important to project, recruit and retain good, qualified technology
	staff. The structure of the IEBC proposes a robust ICT department
	with different units to allow for continuous research, development,
	implementation, and security. Increased sophistication of the elec-
	toral process necessitates growth of this section. This should be
	$complemented \ with \ adequate \ technology \ knowledge able \ field \ staff.$
	The failures of the EVID system in 2013 were mainly logistical and
	lack of adequate training in the short time of deployment.
Pilot testing	Good practice requires that systems should be adequately tested
	through pilots. The IIEC tested the BVR system in 2010 before the
	referendum. This provided strong justification in discarding the old
	OMR register and replacing it for the 2013 General Election. Pilot
	testing helps in appreciating the operational processed required,
	training, deployment challenges, security and contingency.

2.6 Criteria for determining appropriate technology

Every justification of technology integration in elections refers to the phrase "appropriate technology". However, care should be taken not to fall in the trap of vendor driven push to what is considered appropriate technology or a rush to assume that all electoral challenges are suited to a technology solution. In Kenya, it is safe to say that the extent of technology integration has been based on a full consideration of documented past challenges in the documented lessons from the *ECK, Kreigler Report, Report of the Joint Senate Committee, Post-Election Evaluation Reports by the IEBC, Technical Reports (manly by IFES) and ELGIA.* The reports documented the risks to the electoral process posed by an unreliable voters register, risks in the identification and authentication of voters in the polling station and lack of transparency in the management of results after close of poll and counting of results at the polling stations. Nearly every discussion of technology and elections at some point includes reference to the concept of appropriate technology, often as a way of justifying application of a particular tool. Through overuse, the concept has been stretched nearly beyond recognition and used to support



almost every imaginable approach to addressing election related issues. It seems that the concept of "appropriate technology" has become bendable enough that it can serve whatever purpose the user wants.

For the purposes of the first elections after the introduction amendments to the Act, Section 44 makes specific choice of what is considered appropriate technology. Section 44(7) provides that –

The technology used for the purpose of the first general elections upon the commencement of this section shall - (a) be restricted to the process of voter registration, identification of voters and results transmission; and (b) be procured at least one hundred and twenty days before the general election.

The Elections (Technology) Regulations 2017 requires the Commission to undertake regular requirements analysis based on policy framework established in accordance with Section 44. Such a process includes the standard phases of TLM. The process established under the Act and the Regulations reflect the basic principles that should be applied to all election processes; A good starting list of standards for helping to determine "appropriateness" might include:

- **Accessibility** Process should enfranchise all eligible voters and be able to be operated and maintained without long-term outside assistance
- **Secure** Should provide protection from unauthorized access and from excessive loss due to natural disaster or malice
- **Accountable** Must ensure all recording and modification of data is done according to legal guidelines, with a clear record of who did what
- **Auditable** Must include capability to independently verify that the output of the process is logically consistent with the input
- **Transparent** Must provide for a clear understanding by stakeholders of how the technology works and implications for the election process
- Sustainable can be repeated without depleting available resources

2.7 Procurement of Technology

There is a strong case to be made in favour of IEBC having enhanced independence and latitude in respect to its autonomy to budget and to procure technology. The constitution and the Independent Electoral and Boundaries Commission Act 2011 provides a strong foundation for financial autonomy. However, questions raised in respect to financial accountability have undermined the push for greater financial autonomy.

In 2019 the Public Accounts Committee in its examination report made adverse findings and recommended dismissal of Commissioners and senior management of the Commission. The evidence received depicts a Commission running on autopilot. The Commissioners, individually and collectively, failed to exercise oversight as envisioned under section 11A(a) of the Independent Electoral Boundaries Commission Act, 2011 thereby plunging the Institution into a crisis. The Commissioners



were unable to make urgent and decisive policy directions on procurement matters, compelling the Secretariat to undertake direct procurement of all goods and services in a manner that was contrary to Article 227(1) of the Constitution of the insofar as it did not embody a process that was fair, equitable, transparent, competitive and cost-effective. As a result, the Commissioners failed to take charge of the entire electoral process in the 2017 electoral cycle.

According to the public accounts committee, this displays an inexcusable level of incompetence given the importance of their role in the electoral processes in the country as expressed in Article 88 of the Constitution. In a clear case of incompetence, the Commissioners demonstrated lack of understanding of their role as relates to the principles of good governance and separation of roles between the Commission and the Secretariat, integrity, transparency and accountability contrary to the provisions of Article 10(2)(d) of the Constitution. Conflict of interest and glaring instances of gross misconduct were manifest during the procurement of the KIEMS Kits. The Commissioners opted to vote in favour of their preferred suppliers as evidenced in MINUTE 12-15/03/2017 of the Special Plenary Meeting held on 31st March 2017.

The Commission commissioned an external audit into its processes and procurement of the KIEMS technology. The conclusion of the Commission was adverse and necessitated suspension of the Commission's CEO. The IEBC has dealt with cases and investigations into its procurement of election technology in the past three cycle of elections. The sourcing of the Ksh.3.8 billion Kenya Integrated Elections Management System (KIEMS kit) in 2016/17 was controversial with claims of political influence and corruption in the award of the tender for the 2017 elections to French firm OT Morpho.

2.8 Special Audit by the Auditor General following the 2013 General Elections

IEBC is subject to the procurement laws in respect to the procurement of election materials. The Public Procurement and Asset Disposal Act, 2015 sets out procedures for efficient public procurement and for assets disposal by public entities. It sets out various roles of the institutions in public procurement such as the National Treasury, Public Procurement Regulatory Authority, Public Procurement Administrative Review Board, the roles and responsibilities of the County Governments, the role of the accounting officer in public organizations among others.

Pursuant to a request by Clerk of the National Assembly, on 3rd June 2013 the Auditor-General conducted an audit on the procurement of Biometric Voter Registration (BVR) kits for the March 2013 General Elections by the IEBC. This request was made on the basis that the kits had failed during the elections and it was therefore felt that this was a waste of taxpayers' funds.

The Terms of Reference for the report by the Auditor-General were as follows-

- To establish what triggered the requirement for these devices for the General Election in Kenya.
- 2) To establish the amount of money spent and the financing arrangements on each item.
- 3) To carry out a comprehensive review of the procurement processes used in acquiring the above devices and establish if these processes were in compliance with the Government's procurement requirements and legislation.



4) To establish whether the procured devices were delivered in the right specifications, quantity, timely and to the intended recipients.

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- 5) To establish if there was value for money to the public on each of the item.
- 6) To identify irregularities and persons responsible for these irregularities; and
- 7) To issue a report including recommendations.

Some of the main findings of the Auditor-General's report were as follows-

- a) Following the 2007/2008 General Elections, the Independent Review Commission on the General Elections recommended the use of technology in the management of the electoral process.
- b) The Independent Electoral and Boundaries Commission failed to obtain value for public funds spent in the procurement of Biometric Voter Registration (BVR) Kits and the Electronic Voter Identification Devices (EVID) used for the March 2013 elections.
- c) The report identified irregularities and the mismanagement of the tender processes and assigned responsibility and culpability with regard to the procurement process by the Independent Electoral and Boundaries Commission on other election technology employed in the 2013 general elections.
- d) The report also looked into the procurement processes of other elections devices procured by the Commission including Electronic Result Transmission System (ERTS), Electronic Voter Registration (EVR), Strategic Materials and Optical Mark Recognition (OMR) Scanners, Universal Polling Kits (UPK).
- e) Identified procurement irregularities contrary Procurement Regulations, 2006 and made wide ranging recommendations on the procurement processes of the Commission.

2.9 Report of the Joint Committee on the Conduct of the 2013 General Elections

2.10 Submissions Received by the Committee

From the submissions received, there was general consensus that the use of information, communication technology in the election processes was crucial and critical. On specific matters, the following issues were raised-

2.10.1 Prior Testing of Election Technology before the General Elections

Stakeholders submitted that reasonable time should be allowed for the testing and piloting of all electronic systems and equipment to be used for voter registration, voter identification, voting and for the transmission of results to avoid cases of failed technology during general election.

2.10.2 Training of the Independent Electoral and Boundaries Commission Staff on Election Technology

The Independent Electoral and Boundaries Commission should recruit competent staff to handle the relevant technology and train its existing staff on the use of the technology at both the constituency and national level. The field staff should be aware of technology





used in elections, understand the policy and administrative procedures and deployment timeframes. Further, that there is reasonable time for training of its staff to ensure that they are competent in handling the election technology to be employed.

2.10.3 Timely and Transparent Procurement of Election Technology

There should be early and transparent procurement of elections technology to ensure that testing of the technology and training of staff before the elections and with the involvement of stakeholders in the choice of technology. The Independent Electoral and Boundaries Commission should undertake comparative study to consult countries that deploy electronic voting and results transmission system to secure tamper proof system for Kenya.

2.10.4 Transparent and accountable process of procurement

IEBC has had persistent accountability question in the procurement of technology. The Ethics and Anti-Corruption Commission made submissions to the parliamentary committee that the Independent Electoral and Boundaries Commission should streamline its procurement processes. The EACC submitted that this was demonstrated in Public Procurement Administrative Review Board Review N°59 of 2012 (consolidated with the Reviews N°61 and 62 of 2012). Avante International Technology Inc. & Others Vs IEBC. The review was instituted at the Public Procurement Administrative Review Board and in relation to the supply, delivery, installation, configuration, training, testing and commissioning of Electronic Voter Identification Devices (EVID). The Board analysed the way the particular tender was handled and concluded that it was fatally flawed. Bearing that the elections were only two months away; the Board upheld the award but expressed serious reservations.

2.10.5 Public Awareness on Election Technology to be Employed

IEBC should undertake timely, comprehensive, and meaningful voter education focusing on election technology and engage effectively with stakeholders. Voters should be made aware of what to expect when ICT systems and applications are used to implement elections. In case of any contingency measures including resort to the manual system, IEBC should ensure voters are adequately informed of such processes.

2.10.6 Integrate Electoral Management Systems

Stakeholders recommended that electoral technology should be integrated to ensure accountability. Integration efforts should also align with the technology employed by other government agencies. The National Registration Bureau submitted that the Independent Electoral and Boundaries Commission Automated Fingerprint Identification Systems (AFIS) should be used to verify and crossmatch the fingerprints of voters during the voting process. They submitted that they supported an integrated system. The Bureau further submitted that post-2017 elections the Government intends to introduce a multi-purpose, chip based, electronic identity card which will support e-Government and e-Commerce functions and that the Independent Electoral and Boundaries Commission should use the same card for registration and e-voting.

3.1 Introduction

ENYAN SECTION

Technology integration has become a key and essential element in election management. Kenyan elections have developed in sophistication, scope, legal framework, and operations. The IEBC runs 6 elections on the same day, manages more than 10,000 candidates and over 400,000 staff. Technology is therefore a key management tool to ensure efficiency in management of the key elements of the election cycle. This section considers integration of technology in the operational aspects of elections managed including boundaries delimitation, candidates' registration, voter registration, voter verification and identification and results management. The Commission also employs technology in institutional management aspects including human resource systems and financial management. The Registrar of Political Parties is expected to develop and maintain a political parties membership management system.

3.2 Electoral Boundaries Delimitation

In Boundaries Delimitation, integration of technology serves both efficiency elements and a "revealing" objectives of ensuring that the outcome of delimitation is timely and effectively communicated to the people. Boundaries Delimitation process employs technology in managing immense population and demographic data, segments of the lower units of population in geographic units, and GIS technology in production of data, and data storage and management, and manipulation to serve other elements of the electoral infrastructure. Electoral Boundaries Delimitation refers to the process of drawing electoral district boundaries. It can also be used to denote the process of drawing voting areas or establishing the electoral infrastructure (constituencies, wards and polling stations) for the purposes of assigning voters to polling places. The periodic delimitation of electoral boundaries is necessary in any representative system where single-member districts or uniformly small multi-member districts are used. If electoral boundaries are not periodically adjusted, population inequities develop across districts.

3.3 The legal framework

The legal framework for boundaries delimitation is set out under Article 89 of the Constitution. The IEBC is mandated to undertake boundaries delimitation. The first boundaries delimitation under the Constitution was undertaken in 2012. Transitional Provisions under Section 27 of Schedule 5 of the Constitutional provisions applied in the first review. The effect of the transitional provisions was to postpone strict application of Article 89 criteria, protect constituencies which did not outrightly meet the criteria and recognize the processes for boundaries delimitation which had been initiated under the former Constitution by the Interim Independent Boundaries Review Commission. The statutory and regulator provisions governing the boundaries delimitation were provided in the IEBC Act, Section 34 and Schedule 5.



3.4 Process of Boundaries Delimitation

The Constitution envisages that the Commission shall work towards ensuring that the number of inhabitants in each constituency and ward is, as nearly as possible, equal to the population quota. This is stipulation anticipates that the Commission shall not make fine justifications to keep any area furthest to the population quota. The Commission must take positive steps to keep each constituency and election ward as close as possible to the quota.

3.5 Steps in application of delimitation methodology

Computation of the Population quota for constituencies wards

- a. Development of guidelines including a clear criteria and methodology
- b. Undertaking initial civic education and stakeholder consultations.
- c. Step I: Establish the population quota: By dividing the national population by the number of Constituency (Article 89(12)
- d. Step II: Classification of areas in terms of Cities; Sparsely populated areas and "other".
- e. Step III: Determining the range-based article 89 (6)
- f. Step IV: Apply Objective guidelines for apportioning constituencies within the range.
- g. **Step V:** Development of preliminary data on allocation and preliminary digital maps to facilitate public participation.
- h. Extensive public participation (John Kimanti Maingi v. Andrew Ligali and Others, High Court Petition Nº 72 of 2010)
- i. Resolution of any administrative complaints and issues raised.
- j. Development of revised/final delimitation reports based on findings.

3.6 Integration of Technology in Boundaries Delimitation

The adoption of GIS technology for delimitation involves a complex interplay of technical and socio-political factors. Boundaries delimitation involves capture, storage and management of extensive population, demographic and geographic data. Technology is integral in efficient management of the boundary's delimitation process, publication of proposed electoral boundaries, facilitating public participation based on accurate data and communicating the outcome of the delimitation process. Technology provides effective tool for conducting electoral boundary delimitation, or redistributions of electoral boundaries based on demographic and geographic data. Even before the enactment of the 2010 Constitution, the ECK has established a unit where commission cartographers and those seconded from the Department of Survey employed GIS technologies in data collection, storage and production of electoral maps.

The report of the IIBRC recommended the establishment of a GIS Lab to facilitate boundaries delimitation. The IEBC employs technologies including geographical information systems (GISs), as well as database software, to assist with the boundary delimitation process. The electoral boundary delimitation process can essentially be divided into two categories: determination of political boundaries
(such as boundaries of parliamentary constituencies and wards) and determination of operational units (polling divisions). The data generated in the process of boundaries delimitation and establishment of the operational units form a core part of the electoral infrastructure. It can also provide opportunity collect critical information on electoral infrastructure including the geographical features of electoral and operational units, communication and telecom reach, proposed mode of transport and logistical arrangements in order to support the operational unit.

In employing technology, the IEBC is able to apply the criteria set out under Articles 89 (1), (5) and (6) and (12) in an efficient manner using both the population data obtained from the National Census Data and Geographic Information. The information maintained by the Department of Survey is used to confirm the demographic distribution of census population to the lowest geographic unit. Technology can be used for this process by keeping track of the number of people residing in each parcel of land (lowest segment of population), and to allocate numbers of people to proposed districts which are made up of aggregates of parcels of land. "Point and click" boundary delimitation systems can allow EMB users to draw boundaries on computerised maps, which will then automatically calculate the numbers of people contained in each proposed district. This facility saves a great deal of manual calculation compared to "pencil and paper" systems of the past, thereby allowing EMBs to explore many more options than was feasible previously.

Technology can also be used to calculate population projections where distributions are required to take account of population growth rates. The commission uses software that allows calculation of population data, determining that the constitutional criteria have been met and to draw boundaries within the range of possible rearrangement of demographic data. This process involves public and stakeholder consultations through the entire process of delimitation. Some examples of technology used for boundary delimitation purposes include:

- obtaining relevant data, such as demographic, political and geographic data.
- defining and manipulating census tracts, or defined geographical areas used for census purposes.
- producing maps.
- publishing results of boundary delimitation and results of elections following boundary changes
- using GIS to draw constituency boundaries
- using GIS to evaluate constituency and ward plans
- integrate public participation and stakeholder reviews based on accurate data and the range of possible options of demarcation.

Technology supports the final processes of confirmation and drawing of the final maps for publication. Maps are essential in the redistricting process but obtaining adequate maps can be one of the most challenging obstacles facing redistricters. While standard maps, such as road maps, identify geographic features and the boundaries of administrative areas such as counties, cities and towns, they may not provide sufficient detail for drawing electoral districts.





In the 2012 delimitation was based on the Census Report. This made it necessary to generate maps which takes account of and represents the census geographic units for which population statistics are available. If redistricting is based on the number of registered voters, then the maps must show the boundaries of the voting areas for which voter registration statistics are available. The boundaries of the existing electoral districts are usually needed as well as a beginning point for drawing new district lines. In order to use GIS, software maps must be digitised and available in electronic form. Digitised maps may be confirmed using sources obtained from the Department of Survey, or other sources where lowest geographic data is maintained.

In employing boundaries technology, GIS software is to be used for boundaries delimitation, the Commission maintains a delimitation database must be prepared once the necessary information has been collected. In an electronic redistricting database, spatial data is related to non-spatial information, such as population and demographic data. The spatial data must include the boundaries of the lowest geographic units to be used as the basic building blocks for creating the districts. Population data must be related to each geographic unit.

The main considerations for the use geographical information systems (GIS) software for redistricting can be divided into the following three categories:

- Commitment to use information technology and procurement or development computer systems and software (GIS Package).
- Management of spatial and other data (population and demographic)
- Well trained personnel in. demography, technology, political data and law.
- Allocation of adequate time to allow for deployment and stakeholder consultation through the process of boundaries delimitation.
- Procurement of equipment and installing, implementing and testing it,
- The adoption of GIS technology for delimitation involves a complex interplay of technical and socio-political factors. Therefore, it is important to plan the implementation process carefully in order to ensure that the resources needed for the successful transition from the current to the new redistricting system are in place, that redistricting deadlines are met and that the redistricting plans produced are as accurate as possible.

3.7 Components of Election Technology in Kenya (Kenya Integrated Elections Management System)

The key policy documents on the conduct of elections in Kenya have been consistent in their recommendations to employ technology to enhance transparency in elections. Technology has been considered to facilitate and not to eliminate human agency in the conduct of elections. Over the last three elections, Kenya has employed elections to facilitate the core elements of elections. Kenyan election management framework has grown in sophistication in the last three cycles. The IEBC employs technology in essential elements of elections management and internal operations. However critical aspects of elections including casting of ballots and counting are conducted manually.



3.8 The Legal Framework

Articles 38, 81 and 86 provide the foundation for the standards for the conduct of elections in Kenya. Article 138 contains additional standards for the conduct of the presidential elections. The utilization of technology in Kenya's electoral processes is guided by Sections 44 of the Elections Act of 2011. Section 39 provides specific provisions for the transmission of election results. In order to comply with Section 44 (1) of the act, the EMB in Kenya, the Independent Electoral and Boundaries Commission (IEBC) acquired an integrated electronic electoral system referred to as the Kenya Integrated Elections Management System (KIEMS).

Previously, Section 44 of the Elections Act, contained a general provision which empowered the Commission to use technology as it considered appropriate in the electoral process. However, the provisions under the Elections Laws (Amendment) Act N° 36 of 2016 amended this provision expanding the Commission's use of election technology. Subsequently, the Election Law (Amendment) Act N° 1 of 2017 further amended the said section by obligating the Commission to provide for a complimentary mechanism for identification of voters and transmission of election results. The Act and Regulations provided a channel for participation by key stakeholders in the integration of technology through the establishment of a Technical Committee to oversee the processes under Section 44(8) and the Elections (Technology) Regulations. The Court in Dr. Kenneth Otieno v Attorney General & another [2017] eKLR declared section 44(8) of the Elections Act, 2011 which provided for the establishment of a technical committee to oversee the adoption and implementation of technology unconstitutional for being in contravention with Articles 88 and 249(2) of the Constitution. The evaluation pointed out that regarding the use of ICT in registration and transmission of results, the Commission has limited control over user rights of the technology which is managed by contractors.

3.9 Section 44 as Amended in 2016

The process for integration of technology in Kenyan election is provided in the law in considerable detail. Section 44 of the Elections Act provides that

- "(1) Subject to this section, there is established an integrated electronic electoral system that enables biometric voter registration, electronic voter identification and electronic transmission of results.
- (2) The Commission shall, for purposes of subsection (1), develop a policy on the progressive use of technology in the electoral process.
- (3) The Commission shall ensure that the technology in use under subsection (1) is simple, accurate, verifiable, secure, accountable and transparent.
- (5) The Commission shall, for purposes of this section and in consultation with relevant agencies, institutions and stakeholders, including political parties, make regulations for the implementation of this section and in particular, regulations providing for
 - (a) the transparent acquisition and disposal of information and communication technology assets and systems.
 - (b) testing and certification of the system.
 - (c) mechanisms for the conduct of a system audit.
 - (d) data storage and information security.



- (e) data retention and disposal.
- (f) access to electoral system software source codes.
- (g) capacity building of staff of the Commission and relevant stakeholders on the use of technology in the electoral process.
- (h) telecommunication network for voter validation and result transmission.
- (i) development, publication and implementation of a disaster recovery and operations continuity plan; and
- (j) the operations of the technical committee established under subsection (7).

3.10 Components of the KIEMS Technology

KIEMS was designed to integrate the biometric voter registration (BVR); the biometric voter identification (EVI); the electronic results transmission (RTS); and the candidate registration systems (CRMS). The three sub-systems (CRMS, EVI and RTS) were employed to some extent in previous elections prior to 2017 General Elections as stand-alone systems. The Biometric Voter Registration was employed in some constituencies as pilot before the 2010 Constitutional Referendum and fully implemented in the 2012 prior to the 2013 General Elections, the first elections under the 2010 Constitution. Based on the Kreigler Report, the Commission discarded the old voter register based on the OMR technology, which was considered inaccurate, unreliable and obsolete.

Kenya's EMB, IEBC has in the past adopted an approach of combining manual processes and electronic technology into a suitable hybrid system that entails manual procedures for voting and counting with ICTs being used in areas of voter registration and identification on voting day as well as results transmission. Used in this policy, the ICT used in the elections is used widely to mean all technology used in electoral administration in Kenyan scenario, including, but not limited to, both computer hardware and software; communications technology such as mobile phones and SMS applications; Telkom network and internet applications; and sensors capable of enrolling biometric data of citizens.

The essential elements of KIEMS contemplated under Section 44 are expected to be integrated. In order to integrate the elements, biometric data information of all the registered voters are loaded onto the integrated system, with biometric details of specific voters restricted to polling stations in which they are registered. The identification component of the electronic voter identification is used for authentication of voters on the day elections are conducted at polling stations by searching for the voter record using the biometric and alphanumeric data. Additionally, during the authentication process on Election Day, the EVI does, at regular intervals of about 80 minutes, transmit statistics to the central system. The electronic results transmission (RTS) being part of KIEMS is a module that is used to capture and transmit election results from the various polling stations. At the close of the vote casting process, the tabulated election results are transmitted together with an image of the polling station tally sheet through the KIEMS to the central database at the head office of the EMB. The RTS has a feature that is used for tallying the results, validating the results and displaying them in all constituencies tally centres and at the national tally centre.



3.11 Technical elements and specifications of the KIEMS System

In 2012, the Commission procured the Biometric Voter Registration (BVR) system that has been in use for registration of voters and generation of the register of voters. Later in 2017 the Kenya Integrated Elections Management System (KIEMS) was implemented pursuant to the enactment of the Elections Laws (amendment) act 2016. The Commission acquired a total of 46,500 tablets for the KIEMS that were used during the 8th August 2017 General Election and Fresh Presidential election.

The KIEMS system consists of both the Software and Hardware components mainly at the front end (client application) and the back end (Server applications). The software component consists of application software for the Electronic Voter Identification (EVI), the Candidate Registration Management and the Results Transmission.

The KIEMS back-end consists of the infrastructure that hosts the application and database servers at the data center while the front-end hardware consists of a tablet, rubber casing, SD Card, adapter charger, cable, power bank, protective carton box and a carrying case (backpack).

The above technologies have been used during General Elections and by-elections and the Commission desires to put in place a new technology with a view of addressing the emerging issues and experiences of 2017 general Elections as well as put in place support and maintenance contract in order to ensure the serviceability, reliability and availability of the election technology.

KIEMS ensures delivering secure, accessible and transparent technology to automate and safeguard the integrity of the critical stages of stage of an election especially where lack of transparency can lead to error and manipulation.





	MODULE	FUNCTION	Function Description
1	THE BIOMETRIC VOT- ER REGISTRATION MODULE	a) Voter Registra- tion (Front–End Client)	Recording of the particulars of the voters. Identification information, biometric informa- tion.
		b) Voter regis- tration central system (back- end)	 a) Biometric central system b) Automatic Biometric Identification System (ABIS)
2	ELECTRONIC VOTER IDENTIFICATION (EVI) AND VERIFICATION (EVV)	EVI – Front End Application	 a) Authenticate and securely identify voters biometrically on the polling day using either fingerprint, facial or iris recognition.
			b) Allow an alternative search other than fingerprint, facial image, iris or another unique identifier. Provide an option for assisted search for voter data if neces- sary.
		EVI – Back End System	 a) Configure the KIEMS kits with voter's data for purposes of identification for polling day for By-elections, gener- al elections, referendum and external elections
3	RESULTS TRANSMIS- SION MODULE	RTS Front-End Application	 a) Electronically transmit election results in the prescribed form (image) from polling stations to tallying centres for all candidates per elective position
			 b) Electronically transmit elections result (text) from polling stations to the tally- ing centres for all candidates per elec- tive position



Detuning a officer/	2)	Conturing of regults Forms A from the
Returning officer/	a)	Capturing of results Form, A from the
Tallying center		polling station at the constituency tal-
module		lying center, tabulation and display of
		collated results as declared by the re-
		turning officer
	b)	Uploading / transmission of the de-
	-	clared results on form B in pdf and csv
		format to the RTS backend
	c)	Generation of collated text results
	0)	(form B) from polling stations at con-
		stituency level. The forms should be ex
		stituency level. The forms should be ex-
		ported in par and CSV formats
	d)	Generation of collated text results form
		(form C) from constituency level at the
		county and national tallying center. The
		forms should be exported in pdf and
		csv formats



RTS Backend Ap- plication	 a) The system should integrate with the Candidate Registration Management System module and the Biometric reg- ister of voters
	b) The backend system should be able to process at least 53,000 concurrent sessions. This is server-side system ap- plication that be used to receive the transmitted results.
	c) The system should have the ability to remotely configure, update, monitor, disable, wipe the RTS application soft- ware or settings on the tablet
	 d) The systems shall be able to display the transmitted results from approximately 53,000 polling stations
	e) The system should have a user-friendly import and export functionality
	 f) The system should allow scalability to accommodate increase in number of voters and/or polling stations
	 g) The system should have ability for con- figuring different types of elections including external elections for other institutions
	 h) The system should have an interface for verification of results by candidate agents and independent auditors at the constituency tallying centres before publication



3.12 Candidate Registration Management (CRMS)

The Candidates' registration application software is used to register nominated candidates from the respective political parties as well as independent candidates. The details of the candidates' biodata, portrait, elective position and electoral area are captured in the CRMS by political parties through an online interface provided by the Commission.

At the end of the Political Party primaries, the party-sponsored and independent candidates present their nomination documents to the returning officer in their respective electoral areas. The CRMS application enables the returning officer to verify and clear candidates based on the presented documentation. The system is integrated with the biometric register of voters to verify the voter registration status of the candidates by the returning officer. The system also produces the ballot proof that is used for the production of the ballot paper for the candidates who have been cleared. The ballot templates are designed and generated in collaboration with relevant ballot printing press. The Commission requires that the CRMS be integrated with the biometric voter registration software and the results transmission software for seamless data exchange across the platforms.

The Candidate registration system gives aspiring candidates a channel to register their candidature for elections. The candidates submit their data. This system interfaces with the Voter Registration to ensure that the candidates and their supporters comply with the registration requirement set out in law.

Once candidates are cleared on the system – the system generates of Secure Ballot Paper Artwork (with all security features) that is counterchecked and sent to the printers for printing.

- Been in place since 2013 but with improvements after each election.
- This system has been used to generate ballots for the 1,882 electoral contests since 2013.
- About 12,000 candidates in 2013 to 16,100 candidates in 2022.

3.13 Voter Registration

Voter registration is an essential element of the electoral process. The Register of Voters is critical. The Constitution provides that every adult citizen has the right to be registered as a voter without unreasonable restrictions. It further provides that a person qualifies for registration as a voter at elections or referenda if the person:- is an adult citizen; is of sound mind; and has not been convicted of an election offence during the preceding five years.

The Elections Act makes further provisions in relation to Voter Registration. Elections (Voter Registration) 2012 contains specific provisions to regulate the processes including establishment of registration centres, continuous voter registration, applications, processing of applications, transfers, verification, certification of the voters' registers and other processes in relation to the management of VR information. The constitutional right to be registered as a voter is also recognized in the Elections Act which provides that – 'any citizen of Kenya who has attained the age of eighteen years as evidenced by either a national identity card or a Kenyan passport and whose name is not in the register



of voters shall be registered as a voter upon application in the prescribed manner to the Commission.' This right to be registered as a voter also extends to a person who has registered for an identification card and has an acknowledgement of registration certificate as proof of such registration.

3.14 Application process

A person who qualifies to be registered under section 5 of the Elections Act shall make an application in the prescribed manner to the Commission. All applicants for registration shall be registered in the appropriate register by the registration officer who shall transmit the information relating to the registration of the voter to the Commission for inclusion in the Principal Register of voters. The Constitution states that a citizen who qualifies for registration as a voter shall be registered at only one registration center.

3.15 Transfer of registration process (where a person is already registered as a voter).

A voter who wishes to transfer his registration from the area he registered into another electoral area, the voter shall notify the Commission in the prescribed manner in not less than ninety days preceding an election. Upon receipt of the notification above, the Commission shall transfer the voter's registration particulars to the register of the preferred Constituency in not later than sixty days preceding the election.

3.16 Inspection of register of voters

The Act mandates the Commission to open the Principal Register of Voters for inspection for a period of at least fourteen days or such period as the Commission may consider necessary within sixty days from the date of the notice for a general election.

3.17 Compilation process

It is the duty of the Commission to compile and maintain the Principal Register of Voters referred to above. This register shall comprise of: – a poll registers in respect of every polling station; a ward register in respect of every ward; a constituency register in respect of every constituency; a county register in respect of every county; and a register of voters residing outside Kenya. The compilation done by the Commission includes the amendments to the register of voters done after the inspection of the register.

The Constitution provides that administrative arrangements for the registration of voters and the conduct of elections shall be designed to facilitate, and shall not deny, an eligible citizen the right to vote or stand for election. To effectuate the above constitutional provision, the Elections Act provides that where a person has applied to be registered as a voter, but his name has not been included in the register of voters, he may submit a claim to the registration officer in the prescribed form, manner and time for his name to be included in the register.

3.19 Voter Registration Technology

The level of required proof of identity varies considerably between jurisdictions. Some jurisdictions simply require voters to sign a declaration stating their eligibility when registering to vote. Others require voters to provide documentary proof of identity. Some jurisdictions record evidence of identity such as fingerprints or portrait photographs for use during the voting process.

The following topics examine issues associated with voter identification during voter registration:

- identity checks for fraud control
- electronic proof of identity
- technology to verify and record identities of voters

EMBs may issue identity documents or proof of registration documents to registered voters. Technology can be used to automate this process.

Voter register databases can be used to generate the data to be printed on an electoral identity document. Where photographs, signatures or finger/thumb prints have been digitised and stored in a database, they can also be printed on identity documents generated by the voter register database.

Identity documents containing photographs, signatures or finger/thumb prints can also be generated using specialised systems designed to produce identity cards while the subject is present. In these cases, textual information is printed on hardcopy (using data either provided on the spot or data extracted from a database). The voter usually signs this hardcopy record, and/or makes a fingerprint or thumbprint. The operator places the hardcopy printout, including the signature and/or finger/thumb print in the device, and takes a photograph of the person. The device then prints an identity card including a copy of the printed data, the signature and/or finger/thumb print and the photograph. The card is usually laminated and can include tamper-evident security devices such as holograms or embedded print to make it difficult to forge or alter the card.

Computer software can be used to perform a range of tasks that can assist an EMB in reducing instances of fraudulent registration or voting and to identify and delete instances of duplicated voter registration records.



There are various types of techniques and technologies to verify and record identities of voters, namely:

- matching techniques and comparison routines
- signature recognition techniques
- digitized photographs
- bio-identification systems
- identity documents produced by election management bodies
- electronic proof of identity

3.20 Biometric Voter Registration Module - KIEMS

Since 2012, the IEBC employed Biometric Voter Registration that replaced the former system based on Optical Marker Readable system. The Kreigler Report recommended that the voter register developed in 1997 had become unreliable, inaccurate, and lacked the expected comprehensiveness. The Biometric System was expected to meet the principles set out under the Constitution (Article 39 and 83) in respect to comprehensiveness (universality of franchise) and accuracy. Biometric System is also considered to efficiently integrate ability for verification, transfer, and audit. Some of the main specifications of the Voter Registration Technology are stated below.

Voter Registration – Front End Specifications				
The Contractor to provide technical	Voter particulars in required formats and standards.			
design document or methodology				
showing capacity of Voter Registra-				
tion (Front-End).				
	Storage of captured data on the kit.			
	Transmission of encrypted registration data to a central serv-			
	er and provide logs and reports for transmitted data.			
	Role based access control for the front-end application and			
	data entry validation.			
	Access to system controlled by passwords or biometrics.			
	Passwords uniquely assigned and usernames pre-configured			
	uniformly in all kits to individual users' passwords.			
	Password management capability for administration.			
	Comprehensive auditing and audit trail features including fa-			
	cility to monitory system usage with an export functionality.			
	Ability to generate reports and voter registration statistics.			
	Ability to store captured records on the system and on an ex-			
	ternal media. The captured voter registration data should be			
	transmitted and uploaded to the Central Database securely			
	in real time.			



	Functionality for validation of registration records against physical forms by the registration officer and transmit the same at constituency. Ability to update electoral mapping of counties, constituen- cies, wards and registration centres. User interface for effecting transfers.
VR Central System (Back End)	The Contractor is required to provide technical design doc- ument or methodology detailing the capacity of the VR Central System. The VR Central System must have the capa- bilities voided in the Technical Specifications of the Tender Document.
	Validation of data encryptions and digital certificate for all enrolment records.
	Generating unique digital certificate for each registration kit deployed. Ability to authenticate each registration record re- ceived at the back end.
	Transmission of enrolment requests and logs from the kits to the Central System shall be done both online and offline in a secure manner.
	The ABIS system to allow for the performance of matching and quality controls on enrolments in order to facilitate de- duplication or detect exceptions: image quality control; al- phanumeric data verification; finger print investigation; al- phanumeric investigation; update and validation of records (system to allow RO to amend and validate records in the constituency); extraction of data from database in various formats; extraction of electoral area mapping; generation of registers of voters; generation of data to the SD Cards for verification; and QR Bar Codes generation.

3.21 Courts interpretation of the obligation to maintain a Voters Register

Registration of voters and obligation of the IEBC to update and maintain a voters' register was a central issue in Raila Odinga & 5 Others vs IEBC and 3 Others. The petitioners in *Raila Odinga & 5 Others v Independent Electoral and Boundaries commission & 3 others[2013] eKLR* based their petition on among other grounds, that "the true number of registered voters is unknown and, therefore, the IEBC did not have an accurate voters' register. They assert that the 1st and 2nd respondents repeatedly changed the official number of registered voters. The Petitioners further assert that the absence of a credible Principal Voter Register vitiates the validity of the Presidential elections.

This ground was restated in Petition Nº 5 in the following terms -

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The Petitioner avers that the first and second Respondents did not carry out a valid voter registration, in contravention of Article 83 of the Constitution, and Section 3(2) of the Elections Act, 2011 because their official tally of registered voters changed several times. This resulted in the final total number of registered voters differing materially from what was in the Principal Register.

The Petitioner avers that the first and second Respondents did not carry out a valid voter registration, in contravention of Article 83 of the Constitution, and Section 3(2) of the Elections Act, 2011 because their official tally of registered voters changed several times. This resulted in the final total number of registered voters differing materially from what was in the Principal Register.

In support to the argument for publication and finality of the certified voters register, the Petitioners provided two Indian cases in support. *In the Indian case of NP Ponnuswami v Returning Officer Nammakal Constituency (1952) SCR 218, the Baharul Islam J* held in a dissenting judgment [at 529 C] that:

" the basis of a free and fair election is the voters list prepared in accordance with the Representation of People Act of 1950 and the Registration of Voters Rules of 1960. If this is not so done, the electoral rolls will have no sanctity and consequently election will also not inspire the confidence of the people."

Oraro also invoked the Indian Supreme Court case of Narendra Madivalapa Kheni v. Manikarao Patil and Others, Supreme Court of India Civil Appeal No. 1114 of 1976, where the Court had to deal with alterations made to the electors' roll after the roll became final. The Court found and held that: " there is a blanket ban in Section 23 (3) on any amendment, transposition or deletion of any [name] or the issuance of any direction for the inclusion of a name in the electoral roll of a constituency [after] the last date for making nominations for an election in that constituency. This prohibition is based on public policy and serves a public purpose. Any violations of such mandatory provision conceived to pre-empt scrambles to thrust into the rolls, after the appointed time, fancied voters by anxious candidates or parties' spells invalidity and is in flagrant violation of section 23(3); names have been included in the electoral roll, the bonus of such illegitimate votes shall not accrue, since the vice of voidance must attach to such names. Such void votes cannot help a candidate win the contest."

In response to the allegations made by the Petitioners, the IEBC through an affidavit sworn by the Chairperson, stated that the first Respondent, in exercise of its mandate under Articles 86 and 88(4) of the Constitution, and Section 4(m) of the Independent Electoral and Boundaries Commission Act, had deployed appropriate technology in the performance of its functions. One of the areas where technology was employed was the registration of voters by use of the Biometric Voter Register (BVR). [58] At paragraph 12 of this affidavit, it is deponed that the Biometric Voter Registration technology was not meant to replace the legally required manual system of voter registration but was meant to provide an additional layer of efficiency and integrity in the electoral processes.



The same position was restated in the affidavit of two Directors of the Commission. The Director, Information and Technology of the first Respondent. He described the BVR as a system that was used to register a voter's ten fingers and capture the face image. The biometrics are captured using this device of registration, comprising a software, a laptop computer, a digital camera and a device to capture fingerprints. The voter's details as required to be captured in law, were taken, and a record of the voter with biometrics was created. The information captured was used in the compilation of the Principal Register of Voters. This explanation was reiterated in the first and second Respondents' written submissions.

According to the IEBC submissions, over and above the biometric and special registers, the primary data entry point, which was done by hand, was the Green Book, otherwise known as the Primary Reference Book. He elaborated that upon the completion of the voter registration exercise, there emerged a need to clean up the register to eliminate persons who had registered more than once, and persons who had not used the requisite documents for registration, namely, a valid passport, or a personal identity card. This clean-up exercise created the duplicate register and the exceptional register. The persons in these two registers were not allowed to vote.

The first Respondent in its submissions, stated that the figure of 14,337,399 registered voters was a provisional figure which did not include the persons without biometrics, duplicates, exceptional; and data not yet collected from BVR kits around the country. The special register contained a list of 36,236 individuals. There was also a further correction of 30,000 voters who were excluded from the main register due to operator-errors to do with double entry, and 13,237 of these were added to the main register. In Soi, twelve people were excluded from the main register, as they had been added onto the system through a test account but were later transferred to the main register. The total number of registered voters across the country was, therefore, 14,352,545. In certain polling stations, such as NCC and Ngong, there was voter movement occurring before the polling date, due to operator-error. The total number of registered voters in this register was, therefore, 14,352,284.

The net effect of the IEBC statements was to urge the Courts to accept at least three materials as forming part of the Principal Voters Register. These included, the Green Gook, the Certified Register as published and the Special Registers. The special register, which the Commission's witnesses and lawyers explained as intended to promote universality provided for under Articles 38(3), 54 and 83(3) of the Constitution (para 65). According to the IEBC, under Article 88 of the Constitution, enjoys the unfettered mandate to organise the conduct of elections and referenda in Kenya and, specifically, to conduct the registration of voters; the first Respondent has a free hand in the registration of voters, as provided by Article 88. In effect, *"over and above the biometric and special registers, the primary data entry point, which was done by hand, was the Green Book, otherwise known as the Primary Reference Book. He elaborated that upon the completion of the voter registration exercise, there emerged a need to clean up the register to eliminate persons who had registered more than once, and persons who had not used the requisite documents for registration, namely, a valid passport, or a personal identity card. This clean-up exercise created the duplicate register and the exceptional register. The persons in these two registers were not allowed to vote."*



According to the IEBC the published register containing the figure of 14,337,399 registered voters was a provisional figure which did not include the persons without biometrics, duplicates, exceptional; and data not yet collected from BVR kits around the country. The special register contained a list of 36,236 individuals. There was also a further correction of 30,000 voters who were excluded from the main register due to operator-errors to do with double entry, and 13,237 of these were added to the main register. In Soi, twelve people were excluded from the main register, as they had been added onto the system through a test account but were later transferred to the main register. The total number of registered voters across the country was, therefore, 14,352,545. In certain polling stations, such as NCC and Ngong, there was voter movement occurring before the polling date, due to operator-error. The total number of registered voters in this register was, therefore, 14,352,284.

The net effect of these arguments was to urge the courts to define the voter's register to mean at least five reference materials: the Green Book; the Special Register; the Biometric Register; the Duplicate Register and the Exceptional Register. The IEBC justified its arguments to excuse apparent indeterminacy of the voters roll on the footing of the need for universality or completeness of franchise.

The Respondents relied on the Ugandan case of *V.K. Bategana v. E. L. Mushemeza, Election Petition No. 1 of* **1996 (HCU) (unreported),** in which non-compliance with certain provisions of the Parliamentary Election (Interim Provisions) Statute, 1996 was held not to affect the results of the election. The non-compliance in that election included failure to display the Voters' Register and voting by persons not registered.

3.22 EVV (Electronic Voter Verification)

EVV is used for verification of biometric data and inspection of the Voters' Register. The KIEMS framework undertakes a technology verification of the voters. Since the registration is undertaken locally in the field, the data and information captured is verified before production of the voters register. Section 6A of the Elections Act requires the Commission to open the Register of Voters for verification of biometric data by members of the public at their respective polling stations. This is done not later than 60 days before the date of the General Election and undertaken for a period of 30 days. Section 6(2) of the Elections Act requires the Commission to maintain a public portal for inspection of the register by members of the public

3.23 Electronic Voter Identification (EVI)

Electronic Voter Identification during polling is a critical element of accuracy, transparency, and integrity of the electoral process. The process is intended to ensure that only those registered to vote participate in the elections. it provides the element of predictability by giving a connection of accountability between actual turnout and election results. It is intended to limit or eliminate opportunity for manipulation through ballot stuffing or padding turnout which were considered as the main schemes of manipulation. The Commission uses the electronic voter verification software during the



inspection of the register of voters and electronic voter identification software during the polling day. A voter who turns out to vote is required to produce an Identification document, being that used at the time of registration as a voter, in order to be eligible to vote.

The EVI is installed in the tablet and the biometric data (Fingerprint and Photo), and alpha-numeric data of voters are loaded on Secure Digital Card (SD Cards). The voter verification software and biometric data are also loaded onto the tablet for purposes of verification of biometric data by members of the public during the register inspection period. The electronic polling station register is uploaded in each KIEMS kit. Using their biometric data, alphanumeric data and face impression. The KIEMS Kits are used to authenticate voters in the polling stations before allowing the voter to continue with the voting process. If a voter is not found using the Biometric Data, the alphanumeric data (passport number of ID number) is keyed in the kit to extract the voter information.



Summary of the Voter Identification Workflow

3.24 Results Transmission (RTS)

The Constitution of Kenya 2010 and the Elections Act, 2011 provide the principles and standards by which election technology must comply in order to guarantee free, fair and credible elections. Article 81 of the Constitution which stipulates the general principles for our electoral system is categorical that the Kenyan electoral system should comply with inter alia the principle of free and fair elections which are transparent and administered in an efficient, accurate and accountable manner. Article 86 further provides that at every election, the Commission should ensure that whatever voting method is used, the system is simple, accurate, verifiable, secure, accountable and transparent. Section 44 of the Elections Act provides for the use of technology and outlines the statutory framework. Section 39 makes specific provision for transmission of electronic results. Section 44 restates the standards set out in Article 86 that the Commission shall ensure that the election technology in use is simple, accurate, verifiable and transparent.





The Result Transmission system is intended to protect the integrity of the polling station result. The results management implements Article 81, 86 and 138 of the Constitution. The process and flow of the RTS operates in accordance with the provisions of Section 39 of the Elections Act the Elections (General Regulations) 2012 as amended in 2017. The provisions of these Regulations have been subject to debate and litigation. The history of the provisions can be found in the recommendations of the Kregler Report and the Report of the Joint Parliamentary Committee on the Conduct of the 2013 General Elections. The recommendations recognised the antecedent efforts by the ECK in 2007 and the consequence of informational asymmetry after close of polls which was considered to give room for speculation and manipulation of results declared in the polling stations and the constituency tallying centres.

In 2002, the first time Kenya employed counting at polling stations, the ECK did not have sufficient infrastructure to enable efficient and transparent declaration and collation of polling station results. The results were therefore announced based on partial and preliminary data by the ECK based and announcements obtained from the media. In 2007, Kreigler Commission concluded that the record maintained by the ECK were so unreliable as to make any attempt at audit of the results meaningless.

The risk posed by result transmission was thus a central issue in enhanced constitutional provisions on the standards for elections management and the consideration made by the Kregler Commission and the Joint Parliamentary Committee in 2016. The import and objectives of these reports recommend enhanced transparency in the declaration, announcement, transmission, and publication of election reports. The reports also recommend opportunity for verification and accountability of the election results as an assurance to integrity. A transparent and efficient process for declaration, collation, tallying and publication of election results obtained at the lowest unit of counting. Electronic transmission and publication are intended to limit human agency, error and protect the integrity of the results. It is intended to improve integrity of result by facilitating immediate publication of polling station results and clear process for collation that reflects results obtained in the lowest unit.

The RTS was conceptualized from the need to have efficient and timely transmission of results from the polling stations to the tallying centres. This is in accordance with the section 39(1) C of the Elections Act N°24 of 2011 revised 2016. The RTS software is installed on the tablet for transmission of the scanned image of the results forms as well as the keyed in text results in favour of each candidate. Section 39(1)(c) of the Elections Act requires the Commission to:

- Electronically transmit, in the prescribed form, the tabulated results of an election for the President from a polling station to the constituency tallying centre and to the national tallying centre.
- Tally and verify the results received at the national tallying centre; and
- Publish the polling result forms on an online public portal maintained by the Commission
- The Elections (Technology) Regulations place an obligation on the Commission to collaborate with a telecommunication network service provider or providers to put in place the appropriate telecommunication network infrastructure to facilitate the use of election technology.



POLLING STATION



RTS Application Workflow



Orient the KIEMS Tablet with the form to make sure the Picture is properly taken.

Take the photo of the Form by taping the **Capture** button. Make sure that the picture is clear and the whole Form seen in the picture.

NB: Use flash light for clear capture





3.25 Electronic Transmission of Result – Interpretation

Result Transmission has been a central issue in the three presidential election petitions under the Constitutional Framework (Raila Odinga and 5 others vs IEBC and 4 others 2013 [eKLR] and Raila Odinga and another vs IEBC and 2 others 2017 [eKLR]). In 2013 the failure of the RTS system was considered not to affect the legitimacy of the results declared. The Court took the view that the electronic system was complimentary to the manual system. In 2017, the Supreme Court noted that the failure of the electronic system coupled with the fact that the Commission did not confirm that it had received all polling station result declaration materials at the time of making the declaration brought into question the results declared. The scrutiny of the physical result declaration forms also demonstrated inconsistency in the forms used and the results. The Court placed significance in an earlier case that had declared polling station results to be final - *IEBC vs Maina Kiai Civil Appeal 105 of 2017*

A central ground of challenge in the 2013 and 2017 Presidential Elections concerned the flow and technology employed for the transmission of election results. The central claim in 2013 revolved around the transmission of results, where both Petitioners claim that Section 39 of the Elections Act 2011 (N° 24 of 2011) as read with Regulation 82 of the Elections (General) Regulations, 2012 create a mandatory obligation for the electronic transmission of results.

Section 39 of the Elections Act provides that:

- "(1) The Commission shall determine, declare and publish the results of an election immediately after close of polling.
- (2) Before determining and declaring the final results of an election under subsection (1), the Commission may announce the provisional results of an election.
- (3) The Commission shall announce the provisional and final results in the order in which the tallying of the results is completed".

Rule 82, Elections (General) Rules, 2012 provided for the obligation to transmit provisional results electronically:

"(1) The presiding officer shall, before ferrying the actual results of the election to the returning officer at the tallying venue, submit to the returning officer the results in electronic form, in such manner as the Commission may direct.

(2) The results submitted under sub-regulation (1) shall be provisional and subject to confirmation after the procedure described in regulation 73".

The main contention of the Petitioners in 2013 and 2017 was that, without electronic transmission, there can be no basis for verification as contemplated under Article 86 of the Constitution. The argument was that since verification involves comparing the provisional results with the final tallies. They contend that the susceptibility of the electoral process, as conducted, to manipulation and corruption was all by design, calculated to ensure the 3rd and 4th Respondents triumphed in the Presidential Election.

The Supreme Court narrowed the issue as primarily a determination of whether technology was discretionary or mandatory. The supreme court posed the question whether electronic facilitation for the election mandatory, or discretionary? The Indian case of *A.C. Jose vs Sivan Pillai & Others* **1984***AIR* **921**, cited by both the Petitioners and the IEBC, is a case in point. The Supreme Court of India defined the concept of "plenary power" (administrative measures in Article 83): powers available to a body to create operational rules where none existed. However, whereas body of law already regulated the subject, it was not up to the discretion of the public entity to create any additional measures that derogated from the law. An objective reading of the Regulations cited, does not reveal a contemplation of elections conducted solely by electronic means. The elections of 4th March 2013 were not envisaged to be conducted on a purely electronic basis. Regulation 60 of the Elections (General) Regulations, 2012 illustrates that if the elections are to be facilitated by electronic means only, the relevant guidelines shall be availed to the public. Regulation 59 provides that voting is done by marking the ballot paper, or electronically.

The Supreme Court concluded that the voting system envisioned in Kenya appears to be manual. Regulation 82, and Section 39 of the Elections Act, which deal with electronic transmission, operate on the basis that electronically transmitted results are only provisional. Can there, therefore, bean invalidation of final results, because of the non-transmission of provisional results? The Petitioners



asserted that this was so. Provisional results, for them, were the basis of verification of results. The Respondents, by contrast, asserted that this was not so. Verification, for them, meant comparing the final results on Form 34 from a polling centre with Form 36 at the National Tallying Centre. Their contention appeared to be supported by Article 86(c) of the Constitution, describing the procedure of verification as the collation and announcement of results by the Returning Officer (Chair of IEBC), based on results from polling stations.

3.26 KIEMs Standard/Specifications

For the purposes of the 2022 General Elections the IEBC uses a variety of devices to conduct registration and identification of voters. For registration, it sourced the 2012 Biometric Registration Kits from Safran Morpho (Now IDEMIA) and for Voter Verification – the commission uses technology from 2 providers.

- 45,000 older devices sourced from IDEMIA
- 14,000 new devices sourced from Smartmatic

3.26.1 Components

- Mobile/Tablet Module
 - Installed on devices deployed in all the polling stations
 - Ability to send results data as well as other types of data
 - Activated through QR codes printed on the Voters' Rolls
 - Uses SD card data for a polling station
 - The tablets are configured to work over a Virtual Private Network provided by the local telecommunication network operators within the existing mobile network
- Connectivity Component
 - Multiple channels to transmit results (tabulated results, scanned image, and RO/ constituency system.
- RTS Backend Module
 - Ability to manage the devices remotely
 - Ability to collate and consolidate all results
 - Reporting and Publication Module
 - Data available at both aggregated and disaggregated formats
 - Display data and images transmitted

While some of the hardware is inherited from the earlier vendor – all these devices run a custom Operating System that is developed by the new vendor. This Operating System works with both old and new devices and is a break away from the earlier vendor. The software (apps) that are used in both types of devices are newly developed and are maintained and supported by the new vendor.

The Software running the server is also newly developed. Each device has Device Management Software Installed to assist in managing devices remotely i.e., pushing of new software updates or deac-

tivation on cases of reported theft. Each device has Two SIM cards in order to provide redundancy in case the main telecommunication service provider is unavailable.

While biometrics stored in the voter's register is stored in a standard format – the vendor encodes it for efficient identification using their proprietary software to be used on the device. This is a one-way encoding i.e., that one cannot engineer the standard format (the base) from the vendor format. This prevents misuse if a device falls into unauthorized hands. The data is also encrypted prior to storing on the SD Card to prevent unauthorized access if the SD card falls into wrong hands.

3.26.2 Operation

- The KIEMs Kit devices deployed on Election Day are activated through QR codes printed on the certified Voters' Rolls. This means in order to localize the device to the polling station in question.
- The stack of technology uses State-of-the-Art Cryptography (Encryption and Signing) of data and channel of communication to ensure integrity of data transmitted. While the device can transmit both data and images the current software by the new vendor is used to transmit digitally signed Images. The signatures on these Images can be verified in order to ascertain that they originated from the devices in question and that no "man-in-the-middle" attack took place.
- While the devices have capacity to capture GPS coordinates this feature is computational resource expensive and thus the IEBC have deprioritized the collection of this data as a trade-off to battery longevity.
- The software has inbuilt features that use security features on the Form 34A forms to identify IEBC issued forms before transmission. This means the software will not transmit forms that do not meet this criterion.
- The Images transmitted cannot be retransmitted multiple times the server conducts an idempotent operation on results. I.e., Multiple transmissions do not multiply the results.

3.26.3 Connectivity Component

- In order to function appropriately, the device can transmit results data using multiple channels as the Devices have 2 sim-cards – Safaricom and another. The choice of the other provider will be made on case-by-case basis depending on strength of telecommunication signals in the area the device is to be deployed for use.
- The commission uses Specially Provisioned Sim-cards that utilize secure and dedicated channels of communication between device and tally centre. This channel is not the public channel used by regularly issued sim-cards.
- There are 1,111 polling centres that do not fall within 3G coverage areas, and the commission will use Thuraya Satellite Technology to transmit results from stations within these centres.



3.27 System Security and Controls

Announcement

3.27.1 Introduction

 Elections Results Management is a highly regulated process. Among the standards provided under Article 86 of the Constitution, the system employed by the Commission must be secure. Section 39 and 44 of the Elections Act, 2011 set out guidelines for the determination and declaration of results, while giving visibility to transmission of Presidential results from the polling station to the Constituency tallying centre and National tallying centre.

Tallying

 The Elections (General) Regulations, 2012 provides for the administrative procedures regarding the election results process within a legislative framework, specifically in counting, announcement, packaging and transmission of results from polling stations to tallying centres as well as tallying, announcing and declaration of results at tallying centres.

3.27.2 Security Measures

- The RO will take and transmit the collated Presidential results in the prescribed form to the NTC.
- Security of election results at all levels of election results processing is achieved by a collaborative effort with the National Police service (NPS).
- Security measures must be ensured during casting of ballots, counting/ tallying, transmission, and transportation to various levels for processing, announcement, declaration, and storage of election results.



- The Commission has put in place the following measures to ensure the security of results:
- Candidates and agents are allowed to witness the result processing at all levels
- Tamperproof envelops are used for packaging of election result forms
- Serialized seals are used for sealing the ballot boxes and the record of seals is taken by election officials and agents present
- Secure virtual private network (VPN) a secure network only accessible internally by the Commission
- Data encryptions ensures transmitted data is a format that can decoded by Commission technology devices only
- Passwords for restricted access ensures that the user can only access what s/he is entitled to
- Redundancy and fail over ensures availability in case there is failure of the system
- Whitelisting of all KIEMS ensures that only devices registered with the Commission can access the network

3.27.3 Security Risks

- Some of the risks include but are not limited to:
- Risk of compromise e.g., unauthorized access and modification due to compromised passwords, emails etc.
- Loss/theft of data due to malicious attacks, viruses/malware, spyware and hackers
- Costly legal requirements e.g., failure to follow constitutional security guidelines and data protection laws
- Denial of service/disruption caused by threats and vulnerabilities that could worsen due to lack of backups, weak disaster incident response mechanisms, weak access control management etc.

3.27.4 The Elections (Technology) Regulations, 2017,

- Part V of the Regulations provides information security and data storage. Under Regulation 14.(1) "the Commission shall put in place mechanisms to ensure data availability, accuracy, integrity, and confidentiality as set out in the First Schedule." The measures the Commission has put in place are provided in the specifications to the KIEMS document. These include:
- Kenya Election Technology Systems (KIEMS) design contains controls specifications for verifiability and auditability
- Designated networks with appropriate security measures to ensure availability, accuracy, integrity and confidentiality. E.g.
- To ensure availability Various backup mechanisms are in place.
- Systems/applications deployed are also tested for accuracy.
- To ensure integrity Completeness, consistency and safety of data is done by putting in place reliable KIEMS systems that can manage election data. Firewalls, access controls have been put in place to control unauthorized modification.
- The ballot papers have 8 security features to prevent forgery.



- The KIEMS tablets and voters' data therein are encrypted and have Mobile device management to control usability functions e.g., versions, access limitation etc.
- To ensure confidentially Access to information is restricted per user roles(least privilege and need to know basis). There is an NDA sign off requirement for vendors and oath of secrecy is taken by staff/contracted staff.
- (2) For the purpose of sub regulation (1), the Commission shall adopt tools to detect, prevent and protect against attacks and compromise of the election technology.
- The commission has put in place systems to detect, prevent and protect against attacks i.e., firewall. Setup of a Security Operations Center (SOC), Network Access Control (NAC), Security Information and Event Management (SIEM) and vulnerability assessment tool
- The commission has an enterprise anti-virus software that should be running on all commission computers. Ensure your computer has an updated anti-virus software.
- 15.(1) The Commission shall store and classify data in accordance with the principles set out in the Access to Information Act, 2016. The commission has a data classification policy which classifies data into unclassified public, proprietary, third party confidential, commission confidential data e.g., voters register. Further details are found in the ICT policy, page 14 under information and records management.

3.27.5 Access Control Management

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- Access to systems is given per user role in the commission. Any unauthorized access is not allowed.
- Ensure you fill in an access request form for all types of system/services access.
- Do not connect commission devices to unknown/non-commission networks or install unauthorized software.
- When accessing or sharing commission portals/website links, ensure you get the right link; reviewable ICT administrator rights to confirm link details. ICT administrators must ensure systems are patched, up-to date, have issued least privileged access to users, default/generic usernames are removed, SSL certificates are applied, correct TLS versions applied, best applicable security profiles on firewall are applied e.g., application threat prevention, Web Application Firewall etc.
- Access logs are maintained by systems. Ensure there are access logs/physical visitors sign off book for key areas e.g., warehouse, server rooms, data centres etc. Biometric access controls are preferable.
- Removable devices should be scanned before use, to prevent spread of malicious software. To prevent data leakages, avoid copying data in portable/removable devices, unless advised otherwise.
- Ensure clear desk policy by safeguarding confidential documents.
- Devices with confidential data must be cleaned before disposal.

3.27.6 Disaster Management and Recovery

- For all ICT systems security incidents, send them to your CIT/ICT helpdesk who will forward to ICT security/ICT director.
- Report any system anomaly; immediately e.g., threat/vulnerability to sensitive data, threat to computer systems, disruption of services, system abuse and any form of malware/virus/spyware.
- Research suggests that human error is involved in more than 90% of security breaches. Ensure systems are patched, up-to date always. Be aware of insider threats, e.g., employee stealing information for other persons/purposes. This can come from compromised users, malicious users and careless users. Report such users.
- Human life is the 1st security rule, request for physical security in insecure areas.

3.27.7 Change Management

• All key system changes must follow the change management process. I.e., fill change management, form, get approval, etc.

3.27.8 Scrutiny of Technology

- Scrutiny is undertaken in accordance with the orders of the Court as to the scope, access and method. Scrutiny is a court supervised process in accordance with the Court Order.
- A court of law may issue orders for access to the server upon application by any party or members of the public. The process below shall be used in granting access to the Commission server.
- The parties allowed access shall submit to the Commission the names of the nominated persons/experts to be provided access to the server together with a copy of the court order.
- The names shall be submitted to the Chairperson of the Commission who shall approve and forward the names to the Commission Secretary and the Director ICT.
- The persons nominated above shall be issued with server access authorization forms which shall be dated and signed.
- On submission of the signed authorization forms, the Director ICT together with any of the Court appointed ICT experts shall supervise the creation of the unique user accounts and passwords for the nominated persons.
- The Nominated persons shall be provided with the access link to the server.
- The Commission shall set up dedicated workstations for access to the results server.
- The dedicated workstations shall have the following: Sitting space for at least ten (10) persons; Desktop computers or laptops; Internet Connection; Printer.
- The Commission shall establish a result management registry where result forms shall be duly processed for storage by qualified Document Management personnel. These records shall be stored in a form that facilitates easy retrieval both physically and electronically.



4.1 Introduction

 In 2007, following the contentious presidential polls, violence erupted in Kenya leading to massive loss of lives, destruction of property and internal displacement of persons. The Independent Review Commission was established to review the 2007 elections with emphasis on the presidential elections. The Commission was headed by retired South African Justice Johann Kriegler hence the moniker that is used to refer to it- 'the Kriegler Commission.'

ENYAN SECTION

- 2. The Kriegler Commission presented a Report (*'the Kriegler Report'*) in which it reviewed the 2007 polls and made recommendations for electoral reforms. ¹One of the recommendations was the adoption of technology in the elections processes. The Commission singled out delays in the transmission of presidential election results as one of the causes of post-election violence.
- 3. The reason for recommending the adoption of technology was the need for efficient, credible, transparent and accountable election results. The Kriegler Commission recommended the adoption of an integrated and secure electoral management system that allowed computerized data entry & tallying at constituency level, simultaneous transmission of results from the polling stations and integration of a results handling system.
- Election Observer missions had similarly recommended legislative and constitutional reform. The European Union, in its Report² recommended the development of a computerized voter registration database to avoid double and multiple voter registration.
- 5. The Report of the Joint Parliamentary Select Committee on the Matters Relating to the IEBC³ ('christened the Kiraitu/Orengo Report'), on its part, singled out the following problems from the 2013 Elections:

"There were challenges experienced with the electronic transmission of the results including that only 17,000 of the 33,000 polling stations managed to transmit results before it was overwhelmed by some technical hitches. This alternative method of getting results had to be discontinued when it became too slow and although the problem was identified and fixed,

3 Report of the Joint Parliamentary Select Committee on the Matters Relating to the IEBC, 16th August 2016

¹ Tostensen A, Electoral Mismanagement and Post-Election Violence in Kenya- the Kriegler and Waki Commissions of Inquiry, Nordisk Tidsskrift for Menneskerettigheter, VOL. 27, NR 4, S. 427–451. ISSN 1503-6480, (C) Universitetsforlaget 2009

² The European Union Election Observation Mission, Kenya Final Report, 3rd April 2008. Available at: http:// www.eods.eu/library/final_report_kenya_2007.pdf



a number of officials had abandoned the transmission as they took hard copies of the same to tallying centres. There were also network failures and suspicions of system hacking which necessitated a reversion to physical submission of the results."

4.2 Legal framework for technology integration in elections

- 6. Articles 81 and 86 of the Constitution set out the constitutional principles that govern election processes.
- 7. Registration of voters is a crucial step in the election process as without an accurate Register of Voters, the election cannot be credible. Section 6 of the Elections Act permits the public to inspect the voters' register. The IEBC is thus under a duty to open the register for inspection within 90 days of the date of a general election, for the Public to inspect the register. The period reserved for inspection cannot be less than 30 days.
- 8. By dint of section 6A of the Elections Act, the same period of inspection applies to the biometric register. Voters are free to verify their biometric data at their polling station; following which the IEBC has to revise the Register taking into account such changes that may have been availed by the voters.
- 9. Independent of the above requirements, the IEBC is obligated to maintain an updated Register of Voters, regularly revise the register, conduct a fresh voter registration, if necessary, at intervals of not more than 8 years. In order to ensure its veracity, the IEBC may, at least 6 months to the General elections, engage a reputable firm to conduct an audit of the Register of Voters. ⁴
- 10. At the point of the enactment of the Elections Act, 2011, the IEBC had inherited a series of Voters Registers from the ECK which it sought to compile into one 'Principal Register of Voters.' However, when the IEBC compiled the Voters Register in 2013, it did so with certain components; including the Biometric Voter Register, the Special Register and the 'Green Book.' The Biometric Voter Register captured the details of voters with their biometric data (fingerprints) while the Special Register was used to capture the details of persons with disabilities or people whose fingerprints could not be captured on the BVR fingerprint scanners. The Green Book, on the other hand, was the 'Primary Reference Book.'
- 11. The Supreme Court in, Odinga & 5 others v Independent Electoral and boundaries Commission & 4 others (Petition 5, 3 & 4 of 2013 (Consolidated)) [2013] KESC 6 (KLR) (16 April 2013) (Judgment), Supreme Court Petitions 3, 4 & 5 of 2013, had the following to say on the various components of the Voters Register:

"To guarantee the credibility of the voter register, the agency entrusted with responsibility (IEBC) for voter registration must ensure as follows:

- (a) all those who turn out to register are qualified to be registered, in accordance with the constitutional and legal requirements.
- (b) all those who turn out to register are actually registered and their particulars accurately captured.
- (c) the administrative arrangements put in place to facilitate the registration process are simple, transparent and accessible.
- (d) the public and political actors are kept informed of the various steps in the registerpreparation process.
- (e) the resultant register is verifiable."
- 12. The Supreme Court then faulted the IEBC for failing to have a backup for the Green Bookthe 'Primary Reference Book.' The Court called for reform; *viz*:

"We note from the evidence that the said manual system, though it did serve as a vital fallback position, has itself a major weakness which IEBC has a public duty to set right. The ultimate safeguard for the voter registration process, namely "the Green Book", has data that is not backed-up, just in case of a fire, or other like calamity. We signal this as an urgent item of the agenda of the IEBC and recommend appropriate redressive action."

13. The above finding, coupled with other findings on the failure of the result transmission technology, was one of the core motivations for legislative reforms on election technology.

4.3 Legislative reforms: Evolution of sections 39 and 44 of the Elections Act

14. Section 39 of the Elections Act was enacted, vide the Elections Act, 2011, as follows:

- "(1) The Commission shall determine, declare and publish the results of an election immediately after close of polling.
- (2) Before determining and declaring the final results of an election under subsection (1), the Commission may announce the provisional results of an election.
- (3) The Commission shall announce the provisional and final results in the order in which the tallying of the results is completed."
- 15. Section 44 of the Elections Act, on the other hand initially read: "the Commission may use such technology as it considers appropriate in the electoral process."



4.4 Elections Laws (Amendment) Act, 2016 [Act Nº 36 of 2016]

- 16. As part of the legislative reform called for by the Supreme Court and the Report of the Joint Parliamentary Select Committee on the Matters Relating to the IEBC,⁵ National Assembly Act N^o 36 of 2016 was enacted. Section 39 of the Elections Act was amended to incorporate the following sub-section on presidential elections:
 - "(1C) For purposes of a presidential election the Commission shall-
 - (a) electronically transmit, in the prescribed form, the tabulated results of an election for the President from a polling station to the constituency tallying centre and to the national tallying centre.
 - (b) tally and verify the results received at the national tallying centre; and
 - (c) publish the polling result forms on an online public portal maintained by the Commission."
- 17. The entire section 44 of the Elections Act was deleted, and the following provision enacted in its place:
 - "44 (1) Subject to this section, there is established an integrated electronic electoral system that enables biometric voter registration, electronic voter identification and electronic transmission of results.
 - (2) The Commission shall, for purposes of subsection (1), develop a policy on the progressive use of technology in the electoral process.
 - (3) The Commission shall ensure that the technology in use under subsection (1) is simple, accurate, verifiable, secure, accountable and transparent.
 - (4) The Commission shall, in an open and transparent manner-
 - (a) procure and put in place the technology necessary for the conduct of a general election at least eight months before such elections; and
 - (b) test, verify and deploy such technology at least sixty days before a general election...

(8) For the purpose of giving effect to this section, the Commission shall establish a technical committee of the Commission consisting of such members and officers of the Commission and such other relevant agencies, institutions or stakeholders as the Commission may consider necessary to oversee the adoption of technology in the electoral process and implement the use of such technology."

18. Section 44 (1) of the Elections Act, 2011 cemented the place of technology in elections. It established an integrated electronic electoral system with three functions- biometric voter registration (BVR), electronic Voter Identification (EVID) and electronic transmission of results (RTS).



- 19. Section 44 (8) of the Elections Act was challenged in the High Court; vide Petition 127 of 2017-Kenneth Otieno Vs Attorney General & Another.⁶ The Petitioner had challenged several amendments that had been enacted through the *Elections (Amendment) Act, 2016* ⁷ including section 44⁸. The basis for the constitutional challenge to this provision was founded on the independence of the IEBC. The Petitioner claimed that by enacting a provision calling upon the IEBC to include stakeholders, agencies and institutions in its technical committee, parliament had infringed upon the independence of the IEBC as guaranteed by Articles 88 and 249 of the Constitution.
- 20. The Court, in agreeing with the Petitioner and declaring the provision as unconstitutional, held as follows:

"In our view, the use of general words such as "relevant agencies, institutions or stakeholders" leaves room for inclusion of people expressly excluded by Article 88(2) of the Constitution from running the affairs of IEBC, and the composition of the committee and the functions given to it threatens the structural independence of IEBC that is guaranteed by the Constitution.

It is also our view that section 44(8) may be used to involve governmental, political or other partisan influences in the implementation of the electronic electoral processes contrary to Article 249(2) of the Constitution. Our finding therefore is that the effect of section 44(8)contravenes Articles 88 and 249(2) of the Constitution with respect to the independence of IEBC and is therefore unconstitutional."

4.5 Election Laws (Amendment) Act, Act Nº 1 of 2017

21. Section 44A of the Elections Act was enacted via the Election Laws (Amendment Act), 2017. It provided:

"Notwithstanding the provisions of section 39 and section 44 of the Act, the Commission shall put in place a complementary mechanism for identification of voters and transmission of elections results that is simple, accurate, verifiable, secure, accountable and transparent to ensure that the Commission complies with the provisions of Article 38 of the Constitution."

22. The rationale for the establishment of a complimentary mechanism arose from the problems IEBC faced in 2013; failure of the Voter Identification Devices (EVID) and failure in the result transmission system (RTS).

High Court Petition No. 127 of 2017. 6

⁷ 8 Act No. 36 of 2016

Act No.1 of 2017

- 23. The complementary mechanism was met with stiff resistance from some of the political factions; leading to the filing of *Petition 328 of 2017- National Super Alliance (NASA) Vs Independent Electoral and Boundaries Commission & 2 others.*⁹ NASA contended that the IEBC had failed to put in place the complimentary mechanism within 60 days from the date of the General Election, failed to consult with the relevant stakeholders or to make public details on the complementary system. NASA sought orders declaring that the IEBC ought to have put in place the complimentary system within the prescribed period of 60 days. To this end, NASA sought an order that the 2017 General Elections be conducted solely on the basis of the election technology without the complimentary system.
- 24. The IEBC opposed the Petition; claiming that the complimentary mechanism had been put in place a while back, through the enactment of Regulations 69 and 83 of the Elections (General) Regulations 2012 (as amended by Legal Notice 72 of 2017).
- 25. The High Court, described what amounted to a 'complimentary system,' via the following dictum:

"It follows therefore that the complementary mechanism in section 44A need not be similar, same, akin or parallel to the one set out in section 44 of the Act. All that is required for that mechanism is that it should add to or improve the electronic mechanism in section 44 of the Act. But at the same time, be simple, accurate, verifiable, secure, accountable and transparent. It should allow the citizens to fully exercise their political rights under Article 38 of the Constitution. This complementary mechanism only sets in when the integrated electronic system fails.

It was the petitioner's contention that the mechanism envisaged under section 44A is akin to the one in section 44 of the Act; that the debate in Parliament did not indicate that the complementary mechanism was to be manual. With greatest respect, we do not think that there is any ambiguity in the language used in section 44A to resort to the Hansard of Parliament in order to decipher the true intention of the legislature in this case. The language and meaning in that section is plain and clear. To our mind, what was required of the respondent was to put in place a mechanism that would complement the one set out in section 44 of the Act. The particulars of the mechanism, whether electronic, manual, or any other mode was not expressly provided in section 44A. If that were the intention of Parliament, nothing would have been easier than to specify so."

26. The Court proceeded to dismiss the Petition; holding that Regulations 69 and 83 of the Elections (General) Regulations, 2012 (as amended in 2017) provided the complimentary system of identification of voters and result transmission.

⁹ Nairobi High Court Petition No. 328 of 2017. Heard and determined by Kimondo, Mabeya & Ong'udi JJ. Accessible at http://kenyalaw.org/caselaw/cases/view/138778/



27. On appeal, ¹⁰ NASA sought the reversal of the High Court decision, on the same grounds it had made before the High Court. The Court of Appeal similarly disallowed the Appeal but endorsed a consent by which the parties agreed to have an internal memo issued by the IEBC to its Returning Officers (on how to administer the complementary system) applied in the General Elections.

4.6 The Election Laws (Amendment) Act, 2017- Act 34 of 2017

- 28. Fresh from the annulment of the Presidential election by the Supreme Court,¹¹ a Bill was tabled and passed through Parliament in record time, leading to the enactment of the Election Laws (Amendment) Act, 2017- Act 34 of 2017.
- 29. The Act made changes on the law relating to the procurement of election technology. It reduced the IEBC's quorum from 5 members to 3 members¹², reintroduced the concept of *'provisional results,'* ¹³ made radical changes on how technology would be deployed in the presidential elections,¹⁴ and changed the section 83-test from a disjunctive test to a conjunctive one.¹⁵ The Changes made by the Amendment Act included the entire deletion of Section 39 (1C) of the Elections Act, and the enactment of the following provision in its place:
 - "(1C) for purposes of a presidential election, the Commission shall-
 - (a) Electronically transmit and physically deliver the tabulated results of an election for the President from a Polling Station to the constituency tallying centre and to the national tallying centre.
 - (b) Tally and verify the results received at the constituency tallying centre and the national tallying centre; and
 - (c) Publish the polling result forms on an online platform maintained by the Commission
 - (1D) The Commission shall verify that the results transmitted under this section are an accurate record of the results tallied, verified and declared at the respective polling stations.

(1E) Where there is a discrepancy between the electronically transmitted and the physically delivered results, the Commission shall verify the results and the result which is an accurate record of the results tallied, verified and declared at the respective polling station shall prevail. (1F) Any failure to transmit or publish the election results in an electronic format shall not invalidate the result as announced and declared by the respective presiding and returning

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¹⁰ Nairobi Court of Appeal Civil Appeal No. 258 of 2017. Heard and determined by Nambuye, Koome & Musinga JJA.

II Raila Odinga & Another Vs IEBC & Others [2017] eKLR

¹² Section 4 of the Election Laws (Amendment) Act, No 34 of 2017

¹³ Section 6 (e) of the Election Laws (Amendment) Act, No 34 of 2017

¹⁴ Section 6 of the Election Laws (Amendment) Act, No 34 of 2017

¹⁵ Section 9 of the Election Laws (Amendment) Act, No 34 of 2017



officers at the polling station and constituency tallying centre, respectively. (2) The Chairperson may declare a candidate elected as the President before all the constituencies have transmitted their results if the Commission is satisfied the results that have not been received will not affect the result of the election."

- 30. Act 34 of 2017 amended section 39 in the following way:
 - a. Requiring both electronic transmission and physical delivery of presidential results from the polling stations to the constituency tallying centre, and then to the national tallying centre.
 - b. Tallying and verifying the results received at both the constituency tallying centre and the national tallying centre.
 - c. Requiring the IEBC to verify that the transmitted results are an accurate record of the results tallied, verified and declared at the respective polling stations.
 - d. In cases of discrepancies between the transmitted and physical results, the IEBC would verify the results and that which was an accurate record of the results at the polling stations would prevail.
 - e. Any failure to transmit or publish the results in an electronic format would not invalidate the results as declared by the presiding and returning officers at polling station and constituency tallying centres respectively.
 - f. IEBC was to establish, for purposes of public information only, a system of live streaming of results as announced at polling stations.
 - g. Sub-section 2 of the Act (as it initially existed) was deleted and substituted with a provision permitting the IEBC Chair to announce the results of the presidential election before all constituency results had been transmitted if the Chair was satisfied that the results that had not been received would not affect the result of the election.
 - h. Provisional results were done away with, and the IEBC obligated to announce final the results in the order in which they were tallied.
- 31. Section 44A of the Elections Act was not spared. Act N° 34 of 2017 deleted section 44A in its entirety and enacting the following provision in its place:

"Notwithstanding the provisions of section 44. the Commission shall put in place a complementary mechanism for identification of voters that is simple, accurate, verifiable, secure. accountable and transparent to ensure that the Commission complies with the provisions of Article 38 of the Constitution."



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- LINE TRANSPORT
- 32. By this amendment the scope of the complementary system was narrowed to the identification of voters only; and not both identification and result transmission as had been previously enacted.
- 33. As for section 83 of the Elections Act, it was deleted and substituted with the following provisions:
 - "(I) A Court shall not declare an election void for non-compliance with any written law relating to that election if it appears that-
 - (a) the election was conducted in accordance with the principles laid down in the Constitution and in that written law; and
 - (b) the non-compliance did not substantially affect the result of the election.
 - (2) Pursuant to section 12 of the Interpretation and General Provisions Act, a form prescribed by this Act, or the regulations made thereunder shall not be void by reason of a deviation from the requirements of that form, as long as the deviation is not calculated to mislead."
- 34. The import of this amendment was to do away with the 'disjunctive test' for nullification of a declared election result in favour of a conjunctive test; thus, making an election result tougher to challenge.
- 35. On the other hand, the amendment to section *39 (IC)* of the Elections Act did away with the requirement for result transmission, to the constituency and national tallying centres, in the <u>required form</u>. In addition, the amendment required the verification of the electronically transmitted results as against the physical result declarations and in the event of a contradiction the result reflecting the accurate result of the election at the polling station would prevail.
- 36. Predictably, these Amendments were challenged in court, by *Katiba Institute*¹⁶. The Petitioner challenged the enactment of, *inter alia*, the amendments to sections 39, 44, 44A and section 83 of the Elections Act. The grounds for the challenge were unconstitutionality, vagueness and lack of public participation. Parliament and the Attorney General defended the impugned Statute and submitted that the intention to amend the Elections Act had arisen from the judgement of the Supreme Court in *Raila Odinga & Another Vs IEBC & others [2017] eKLR*.
- 37. In allowing the Petition, the High Court declared certain provisions as unconstitutional. They were all the amendments made to the IEBC Act (on Quorum and the definition of IEBC 'Chairperson'), sections 39 (1)(c)(a), 39 (1D), 39 (1E), 39 (1F), 39 (1G) and section 83 of the Elections Act.


4.7 Elections (Amendment) Bill, Nº 3 of 2022

- 38. Subsequent to the 2017 presidential election petition, there have been other attempts at legislative reform on election technology. The first notable one was the Election Laws *(Amendment) Act, 2017- Act 34 of 2017,* which as previously highlighted above, was challenged at the High Court in the Katiba Institute Case ¹⁷ and several enacted amendments declared unconstitutional.
- 39. The Elections (Amendment) Bill, N° 3 of 2022 was tabled before the National Assembly by the Majority Leader on 28th January 2022. The Bill sought to, inter alia, distinguish 'nominations' and 'registration of candidates' by defining nominations to be the process undertaken by political parties to 'select; their candidates and defining 'registration' as the process by which IEBC clears candidates to take part in the elections. This amendment was necessitated by the confusion on the roles of political parties and the IEBC on nomination of political party candidates.
- 40. Other crucial reforms proposed by the *Elections (Amendment) Bill, No. 3 of 2022* were amendments to sections 39 (1C) and 44 of the Elections Act. The Amendments sought to amend section 39 (1C) to show the 'election result transmission path' for presidential elections in the following way:
 - a. Presiding Officers to transmit the image of the results, in the prescribed form, to the National Tallying Centre.
 - b. POs to deliver the results in person to the Constituency RO at the Constituency Tallying Centre.
 - c. Constituency ROs to collate the results in the prescribed form and deliver the results from the polling stations, in person together with the collation form, to the National Tallying Centre.
 - d. Constituency RO to electronically transmit, in the prescribed form, the tabulated presidential election results, and deliver the tabulated results in person from the Constituency Tallying Centre to the national tallying centre.
 - e. IEBC to tally, verify and declare the results of the presidential election from the polling station results.
- 41. Section 44A of the Elections Act, on the other hand, was amended to include the transmission of results as one of the components of the complimentary system; a component that had been done away with by Act N° 34 of 2017.



- ¹⁸The JLAC also took notice that despite the annulment of section 83 (as it had amended by the Election Laws (Amendment) Act, 2017- Act 34 of 2017) in the Katiba Institute case, the Amendment Bill did not propose to enact a provision to replace it.
- 43. The JLAC report was adopted, and the National Assembly passed the Bill; after which it was submitted to the Senate for consideration. However, the Senate failed to pass the Bill and adjourned sine die. The 12th Parliament having been adjourned sine die, the Bill will be deemed to have lapsed on the Commencement of the 13th Parliament.
- 44. The IEBC currently deploys technology systems in its administration of elections and referenda in seven ways. They are:
 - a. Biometric Voter Registration (BVR)
 - b. Electronic Voter Identification (EVI)
 - c. Results Transmission System (RTS)
 - d. Kenya Integrated Elections Management System (KIEMS)
 - e. Candidates Registration System (CRS)¹⁹
 - f. Online publication of the Register of Voters
 - g. Publishing polling result forms of presidential elections in a public access online portal
- 45. Each of the above systems are used at different stages of the election process. BVR precedes the voting day as it is used when registering voters. CRS is equally used prior to the voting day to register candidates cleared to contest in elections.
- 46. EVI is deployed on the voting day to identify voters. RTS is used after the results have tallied and declared at the polling stations, to transmit the results. KIEMS is the device that integrates EVI, BVR and RTS technology. ²⁰
- 47. Section 44 (5) of the Elections Act empowers the IEBC to make Regulations on management of election technology, in consultation with relevant agencies, institutions and stakeholders.
- 48. Subsidiary legislations (Regulations) have over time been enacted to address the specifics on how the elections are administered and the election technology deployed.
- 4.8 The Elections (Voter Registration) Regulations, 2012

¹⁸ Nairobi Constitutional Petition No. 548 of 2017

¹⁹ https://www.iebc.or.ke/election/technology/?Candidates_Registration_System_(CRS)

²⁰ Hon Justice (Prof) Otieno Odek Esq, Election Technology Law and the concept of "Did the irregularity Affect the result of the Election?



- 49. The Elections (Voter Registration) Regulations, 2012, Elections (Technology) Regulations, 2017 and the Elections (General) Regulations, 2012 govern the deployment of technology at different stages of the election process.
- 50. Regulation 13 and 13A of the Elections (Voter Registration) Regulations, 2012 obligate the IEBC's voter registration officers to collect biometric data of persons applying for registration as voters; and upon collection, enter the voters' details in the biometric voter registration system and the Voters Record Book.

4.9 The Elections (General) Regulations, 2012

- 51. Although Regulation 60 of the Elections (General) Regulations recognizes electronic voting, the IEBC has never administered voting electronically.
- 52. Regulations 69 87 of the Elections (General) Regulations, 2012 regulate the election process from polling/voting to result declaration. It was held by the High Court that Regulations 69 and 83 constitute the 'Complimentary System' provided to in section 44A of the Elections Act. ²¹
- 53. On arrival at the polling station, a voter presents their identification document and places his/her fingers on the fingerprint scanner of the EVID²² for identification. In the event that the voter cannot be identified electronically, the presiding officer calls agents and candidates at the station to witness that the voter cannot be identified, fills out a statutory form- Form 32A in their presence; and then proceeds to identify the voter through the printed register.²³
- 54. After counting of votes has been finalized, and the results declared in the statutory forms, the electronic transmission of results, via RTS²⁴ follows. ²⁵ By dint of Regulation 83, the Constituency Returning Officer, after tallying the presidential votes from every polling station, is required to complete form 34 and deliver it to the IEBC Chair (the RO for presidential elections) at the national tallying centre.

4.10 Overview of the Elections (Technology) Regulations, 2017

55. The Elections (Technology) Regulations, 2017, on the other hand, regulate how the IEBC procures, deploys and maintains election technology. Regulation 3 of the Technology Regulations requires the IEBC to regularly conduct a *requirements analysis* to determine

²¹ Petition 328 of 2017- National Super Alliance (NASA) Vs Independent Electoral and Boundaries Commission & 2 others

²² Electronic Voter Identification Device.

²³ Regulation 69 of the Elections (General) Regulations, 2012

²⁴ Results Transmission System.

²⁵ Regulation 82 of the Elections (General) Regulations, 2012





the specific requirements to upgrade or supplement existing election technology, or to acquire new election technology with the purpose of enhancing the integrity, efficiency and transparency of the election process. This requirements analysis will be followed with a *solution design and feasibility report* for any upgrades or acquisitions.

56. The justification for conducting regular requirements analyses is to ensure that technology in use by the commission does not go obsolete/get outdated; thus, compromising the accuracy, efficiency, accountability and verifiability thereof.

4.11 Procurement of election technology

- 57. Following the requirements analysis and the publication of the solution design and feasibility report, the IEBC is obligated to develop specifications for the procurement of new or updated election technology; in compliance with the Public Procurement and Asset Disposal Act, 2015 ('the PPADA') The specifications developed by the IEBC must ensure that the technology is assessable to and inclusive of all citizens, including the disabled and those with special needs; so as to enable their participation in elections.²⁶
- 58. The procurement of election technology has frequently been met with distrust from political players and the general public.
- 59. After the 2013 presidential elections, elections petitions were filed at the supreme court challenging the declared result. One of the issues was cantered on the procurement of election technology. As some of the systems had failed, the Petitioners blamed the IEBC for procuring deficient technological systems which failed and compromised the elections. The Supreme Court held as follows:

"We take judicial notice that, as with all technologies, so it is with electoral technology: it is rarely perfect, and those employing it must remain open to the coming of new and improved technologies. Analogy may be drawn with the traditional refereeing methods in football which, as their defects became apparent, were not altogether abandoned, but were complemented with television-monitoring, which enabled watchers to detect errors in the pitch which had occurred too fast for the referees and linesmen and lineswomen to notice.

In the instant case, there is evidence that the EVID and RTS technologies were used in the electoral process at the beginning, but they later stalled and crashed. Different reasons explain this failure but, by the depositions of Dismus Ong'ondi, the failure mainly arose from the misunderstandings and squabbles among IEBC members during the procurement process – squabbles which occasioned the failure to assess the integrity of the technologies in good time. It is, indeed, likely that the acquisition process was marked by competing.

26 Regulation 3 of the Elections (Technology) Regulations, 2017.



interests involving impropriety, or even criminality: and we recommend that this matter be entrusted to the relevant State agency, for further investigation and possible prosecution of suspects." ²⁷

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- 60. An audit done by the Office of the Auditor General, on the procurement of the electronic voting devises used in the 2013 general elections revealed serious issues ranging from inflated prices, the single sourcing of the Canadian Government and the opacity by which Morpho Canada was contracted. ²⁸
- 61. Other irregularities in the IEBC's procurement of BVR Kits included IEBC's choice to borrow commercially while Treasury had already budgeted funds for the procurement.²⁹
- 62. In 2013, the IEBC's failure to procure the election technology led it to ceding the procurement to the Kenyan executive, in manifest contravention of the constitutional principles safeguarding its independence. This act resulted in the 'government to government' deal between Kenya and Canada to purchase the election materials through a Canadian company- Safran Morpho.³⁰
- 63. Despite the several indictments against the IEBC, on how it procured election materials in 2013, the procurement done by IEBC in 2017 was challenged on several similar grounds e.g., lack of transparency. ³¹
- 64. ELGIA noted that the procurement of several materials was irregular, improper, not supported by the budgetary demands and as at the time of the elections not completed. ³²

31 Republic v Independent Electoral and Boundaries Commission & another Ex Parte Coalition for Reform and Democracy & 2 others [2017] eKLR, Misc App 637 of 2016, Republic v Independent Electoral and Boundaries Commission (I.E.B.C.) Ex parte National Super Alliance (NASA) Kenya & 6 others [2017] eKLR, Misc App 378 of 2017, Al Ghurair Printing and Publishing LLC v Coalition for Reforms and Democracy & 2 others [2017] eKLR, Civil Appeal No. 63 of 2017, Independent Electoral and Boundaries Commission (IEBC) v National Super Alliance(NASA) Kenya & 6 others [2017] eKLR, Civil Appeal No.224 of 2017

²⁷ Odinga & 5 others v Independent Electoral and boundaries Commission & 4 others (Petition 5, 3 & 4 of 2013 (Consolidated)) [2013] KESC 6 (KLR) (16 April 2013) (Judgment), Supreme Court Petitions 3, 4 & 5 of 2013; at paragraphs 233 and 234

²⁸ Government of Kenya, Special Audit on Procurement of Electronic Voting Devices for 2013 General Elections by the Independent Electoral and Boundaries Commission. (Office of the Auditor General, 6th June 2014)

²⁹ The Decline and fall of Electoral Integrity: How and Why Elections seem to frustrate the Popular Will in Kenya, Electoral Law and Governance Institute of Africa (ELGIA), July 2020; at paragraph 90.

³⁰ Electoral Law and Governance Institute of Africa (ELGIA), July 2020; at paragraph 90. Rethinking Electoral Management in Kenya: An Emerging Agenda for the 2017 Elections, African Centre for Open Governance (AFRICOG),

³² Ibid, at 7; paragraph 98-99



4.12 Deployment of election technology

- 65. One of the highlighted failures in the 2013 elections was unequal and non-transparent distribution of voter registration kits in the run-up to the polls.³³ This led to some counties/ regions being disadvantaged; as voter registration kits had to be shared between more than one voter registration centre.
- 66. During and after the polls, all the systems failed leading the IEBC to revert to the manual system. ³⁴
- 67. Regulation 5 of the Elections (Technology) Regulations 2017 provides that the IEBC will only initiate the deployment and implementation of election technology according to the specifications and an approved deployment plan to be developed by the IEBC.
- 68. Before deployment of technology, the IEBC has to conduct testing and certification of the technology. The testing has to be done transparently with a public notice being issued informing the public and stakeholders of the date, time and place of the testing. ³⁵
- 69. Once the testing has been conducted, the IEBC prepares a report to certify that the election technology meets the user requirements and specifications it developed, and that the technology is accessible.

4.13 Election technology audits

- 70. Annual audits of the election technology must be undertaken by the IEBC so as to
 - a. Guarantee data integrity.
 - b. Ensure the technology functions effectively as specified; and
 - c. Ensure that the internal controls of the technology are effective. ³⁶
- 71. Once the audit has been done by a professional firm, the IEBC prepares an audit report that shows that integrity and availability of the system by assessing the security access to the system, vulnerability of the system configurations, accuracy and completeness of the data; and any other mechanisms as determined by the IEBC. ³⁷

³³ Ibid, at 8, page 3.

³⁴ Odinga & 5 others v Independent Electoral and boundaries Commission & 4 others (Petition 5, 3 & 4 of 2013 (Consolidated)) [2013] KESC 6 (KLR) (16 April 2013) (Judgment), Supreme Court Petitions 3, 4 & 5 of 2013

Regulations 8 and 9 of the Elections (Technology) Regulations, 2017.
Regulation 11 of the Elections (Technology) Regulations, 2017.

³⁷ Regulations 12 and 13 of the Elections (Technology) Regulations, 2017.



4.14 Information security

72. The IEBC is obligated to put in place mechanisms to ensure data availability, accuracy, integrity and confidentiality. It is further required to adopt tools to detect, prevent and protect against attacks and compromises on the election technology and to store and classify data in accordance with the principles set out in the Access to Information Act, 2016.³⁸

4.15 Data retention and archive

73. The IEBC is required to retain in safe custody all electronic data relating to an election for a period of 3 years from the date of result declaration; and to archive it in accordance with procedures prescribed by the IEBC subject to the Public Archives and Documentation Service Act and the Kenya Information and Communications Act.³⁹

4.16 Telecommunication network

- 74. Regulation 19 of the Elections (Technology) Regulations, 2017 stipulates that the IEBC shall publish on its official website details of the telecommunication network service providers to be used during an election. Telecommunication network service providers who intend to provide services to the IEBC must disclose to the IEBC any existing agreements with political parties, agents, or candidates before engagement for telecommunication services in an election. ⁴⁰
- 75. The IEBC is also required to identify and communicate, in a timely manner, to all stakeholders the network service available at different polling stations. In collaboration with telecommunication network service providers, the IEBC should put in place the telecommunication network infrastructure to facilitate the use of election technology for voter validation and results transmission and publish the network coverage at least 45 days before the date of a general election. ⁴¹

4.17 Data recovery and Operations Continuity plan

76. Regulation 24 of the Elections (Technology) Regulations, 2017 requires the IEBC to have an Operations Continuity Plan with mitigation and contingency measures which include preparedness, prevention, response and recovery measures for any potential failures of technology.

³⁸ Regulations 14 & 15 of the Elections (Technology) Regulations, 2017.

³⁹ Regulation 17 of the Elections (Technology) Regulations, 2017.

⁴⁰ Regulation 19 (2) of the Elections (Technology) Regulations, 2017.

⁴¹ Regulation 21 & 22 of the Elections (Technology) Regulations, 2017.

- 77. As for Data Recovery, the IEBC shall:
 - maintain an external data recovery site for all electoral information systems. a.
 - b. establish such data recovery processes as may be necessary to ensure quick and efficient systems and data recovery in the event of election technology malfunctions.

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- c. maintain such physical documentation records to enable reconstruction of the information in the event of data loss during transmission.
- d. ensure that such other failover technologies or procedures are in place to ensure operations continuity; and
- e. communicate failover technologies or procedures to stakeholders. ⁴²
- 78. During the course of an election process, the IEBC may suspend or terminate the use of election technology only if the reliability of a system cannot be assured according to the requirements of the elections act and regulations. In all instances where election technology is sought to be suspended, the Returning Officer must, with consultation from the IEBC ICT Director(s), give authority and inform the public and stakeholders. ⁴³

4.18 Emerging Jurisprudence on integration of technology in elections

- 79. The substance of our election laws has not only been reformed by legislation; but it has also been invaluably enriched by judicial interpretations.
- 80. One of the first instances where the Court's had to interrogate matters touching on election technology was the 2013 presidential election petition⁴⁴. The Supreme Court grappled with the contentions by the Petitioner that the mass technological failure affected the elections and the declared results; thus, credibly impugning the outcome. The Supreme Court rendered itself as follows:

"Is electronic facilitation for the election mandatory, or discretionary? The Indian case of A.C. Jose vs Sivan Pillai & Others 1984 AIR 921, cited by both the Petitioners and the IEBC, is a case in point. The Supreme Court of India defined the concept of "plenary power" (administrative measures in Article 83): powers available to a body to create operational rules where none existed. However, where a body of law already regulated the subject, it was not up to the discretion of the public entity to create any additional measures that derogated from the law.

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Regulation 25 of the Elections (Technology) Regulations, 2017. 42

Regulation 26 of the Elections (Technology) Regulations, 2017. Odinga & 5 others v Independent Electoral and boundaries Commission & 4 others (Petition 5, 3 & 4 of 2013 44 (Consolidated)) [2013] KESC 6 (KLR) (16 April 2013) (Judgment), Supreme Court Petitions 3, 4 & 5 of 2013

131. An objective reading of the Regulations cited, does not reveal a contemplation of elections conducted solely by electronic means. The elections of 4th March 2013 were not envisaged to be conducted on a purely electronic basis. Regulation 60 of the Elections (General) Regulations, 2012 illustrates that if the elections are to be facilitated by electronic means only, the relevant guidelines shall be availed to the public. Regulation 59 provides that voting is done by marking the ballot paper, or electronically. Thus, the voting system envisioned in Kenya appears to be manual. Regulation 82, and Section 39 of the Elections Act, which deal with electronic transmission, operate on the basis that electronically transmitted results are only provisional. Can there, therefore, be an invalidation of final results, because of the non-transmission of provisional results?

The Petitioners assert that this is so. Provisional results, for them, are the basis of verification of results. The Respondents, by contrast, assert that this is not so. Verification, for them, means comparing the final results on Form 34 from a polling centre with Form 36 at the National Tallying Centre. Their contention appears to be supported by Article 86(c) of the Constitution, describing the procedure of verification as the collation and announcement of results by the Returning Officer (Chair of IEBC), based on results from polling stations.

133 It is rightly argued by the Respondents, in our opinion, that the Court must be alive to the fact that most polling stations are in the rural areas, where the primary-school polling stations are dilapidated, and the supply of electricity, to-date, is a distant dream. Yet voters still go to such polling stations to exercise their right to vote, and to discharge their civic duty. <u>Of this fact, the Court will take judicial notice, in deciding whether Presidential elections can be invalidated due to non-compliance with regulations requiring electronic transmission.</u>

[231] The main Petition before this Court is founded, significantly, on the contention that the Petitioner was prejudiced by an inconsistent application of electronic devices and, in particular, by IEBC's abandonment of such technology and resort to the manual electoral procedure. While there is sufficient evidence to guide the Court in this matter, it is apposite to set out relevant principles on the application of electronic technology in elections.

[232] Failure of technology is relied upon by the Petitioners, on the footing that it disrupted the transmission of election results, and so, these results ceased to be in keeping with the secure standards required by law. The Petitioners contend that section 39 of the Elections Act, 2011 as read with Regulation 82 of the Elections (General) Regulations, 2012 creates a mandatory obligation to provide for the electronic transmission of the results.

[233] We take judicial notice that, as with all technologies, so it is with electoral technology: it is rarely perfect, and those employing it must remain open to the coming of new and improved technologies. Analogy may be drawn with the traditional refereeing methods in football which, as their defects became apparent, were not altogether abandoned, but were complemented with television-monitoring, which enabled watchers to detect errors in the pitch which had occurred too fast for the referees and linesmen and lineswomen to notice.



[234] In the instant case, there is evidence that the EVID and RTS technologies were used in the electoral process at the beginning, but they later stalled and crashed. Different reasons explain this failure but, by the depositions of Dismus Ong'ondi, the failure mainly arose from the misunderstandings and squabbles among IEBC members during the procurement process – squabbles which occasioned the failure to assess the integrity of the technologies in good time. It is, indeed, likely that the acquisition process was marked by competing interests involving impropriety, or even criminality: and we recommend that this matter be entrusted to the relevant State agency, for further investigation and possible prosecution of suspects.

[235] But as regards the integrity of the election itself, what lawful course could IEBC have taken after the transmission technology failed? There was no option, in our opinion, but to revert to the manual electoral system, as was done. (Emphasis supplied).

[236] We note from the evidence that the said manual system, though it did serve as a vital fall-back position, has itself a major weakness which IEBC has a public duty to set right. The ultimate safeguard for the voter registration process, namely "the Green Book", has data that is not backed-up, just in case of a fire, or other like calamity. We signal this as an urgent item of the agenda of the IEBC and recommend appropriate redressive action.

[237] From case law, and from Kenya's electoral history, it is apparent that electronic technology has not provided perfect solutions. Such technology has been inherently undependable, and its adoption and application has been only incremental, over time. It is not surprising that the applicable law has entrusted a discretion to IEBC, on the application of such technology as may be found appropriate. Since such technology has not yet achieved a level of reliability, it cannot as yet be considered a permanent or irreversible foundation for the conduct of the electoral process.

This negates the Petitioner's contention that, in the instant case, injustice, or illegality in the conduct of election would result, if IEBC did not consistently employ electronic technology. It follows that the Petitioner's case, insofar as it attributes nullity to the Presidential election on grounds of failed technological devices, is not sustainable."

- 81. It must be recalled that, at the time, the 2013 presidential election petition was decided, the IEBC was still vested with discretionary powers on adoption of technology in polling processes. This changed in 2016, when the Elections Laws (Amendment) Act, 2016 [Act N° 36 of 2016] was enacted establishing the integrated electronic electoral system. Following the enactment, the IEBC had a mandatory duty to transmit declared results and publish result declaration forms on a public portal maintained by the IEBC.
- 82. The mandatory nature of the provisions notwithstanding, they have often been the subject of contentious litigation. *The Maina Kiai & 2 others v Independent Electoral and Boundaries*

*Commission & 2 others [2017]*⁴⁵ concerned a challenge as to the constitutionality of provisions of the Elections (General) Regulations. The Petitioners had challenged sections 39 (2) and (3) of the Elections Act Regulations 83 (2), 84 (1) and 87 (2)(c) of the Elections (General) Regulations. The fulcrum of the Petition was the principle of finality of declared election results. In so far as the impugned sections of the Elections Act and the regulations termed [presidential] results at the polling stations and Constituency Tallying Centres as *'provisional results'* that are *'subject to confirmation,'* they were assailed on the grounds of being contrary to Articles 81, 86 & 138 of the Constitution.

- 83. The Court affirmed the principle of finality of declared election results at the polling stations and declared all the impugned provisions as unconstitutional and void provisions. In so doing the High Court held that the Constituency ROs, and County ROs and the Commission had no authority to alter/vary or 'verify' presidential results transmitted to them from polling stations.
- 84. The IEBC preferred an Appeal to the Court of Appeal; seeking to reverse the finding of the High Court in *Maina Kiai.* ⁴⁶ *Vide IEBC Vs Maina Kiai & 5 Others [2017] eKLR*⁴⁷ the IEBC faulted the High Court for having misapprehended the law on presidential elections and declaring the impugned provisions unconstitutional. The Court of Appeal, while considering the Appeal, took into consideration Kenya's dark past of electoral violence, the recommendations of various institutions⁴⁸ and the Hansard records of parliamentary debates on the impugned provisions in a bid to purposively interpret the Constitution and the Elections Act. The Court of Appeal held as follows (on electronic transmission):

"We are satisfied that with this elaborate system, the electronic transmission of the already tabulated results from the polling stations, contained in the prescribed forms, is a critical way of safeguarding the accuracy of the outcome of elections, and do not see how the appellant or any of its officers can vary or even purport to verify those results, particularly when it is clear that, by Article 86 (d), section 2 of the Act and regulation 93(1), all election materials, including ballot boxes, ballot papers, counterfoils, information technology equipment for voting, seals and other materials, are to be retained in safe custody by the returning officers for a period of three years after the results of the elections have been declared, unless required in proceedings in court. Under section 13 of the Election Offences Act, it is a criminal offence punishable, on conviction, by a fine not exceeding Kshs 500,000 or to imprisonment for a term not exceeding 5 years or both, to interfere with election material by destroying, concealing or mutilating it...

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⁴⁵ Nairobi Petition No. 207 of 2016. Heard and determined by Muchelule, Korir and Mwita JJ.

Nairobi Court of Appeal Civil Appeal No. 105 of 2017. Heard and determined by Makhandia, Ouko, Kiage, M'inoti & Murgor JJA.

⁴⁸ The Kriegler Commission and the Joint Parliamentary Select Committee on the Matters Relating to the IEBC



... We bear in mind that presidential election, where two or more candidates are nominated, are held in each constituency and the foregoing process is undertaken at the constituency, the details of which are recorded at the end of the exercise in Form 34. It is inconceivable that those details, arrived at after such an elaborate process can be viewed as provisional, temporary or interim. The inescapable conclusion is that it is final and can only be disturbed by the election court. It is clear beyond peradventure that the polling station is the true locus for the free exercise of the voters' will. The counting of the votes as elaborately set out in the Act and the Regulations, with its open, transparent and participatory character using the ballot as the primary material, means, as it must, that the count there is clothed with a *finality not to be exposed to any risk of variation or subversion.* It sounds ill that a contrary argument that is so anathema and antithetical to integrity and accuracy should fall from the appellant's mouth...

... It is, in our view fallacious and flies in the face of the clear principles and values of the Constitution to claim that the chairperson of the appellant can alone, at the national tallying centre or wherever, purport to confirm, vary or verify the results arrived at through an open, transparent and participatory process as we have already set out."

- 85. With the above holding, the Court of Appeal dismissed the Appeal in its entirety; laying to rest any doubt the IEBC may have had on the ambits of its role.
- 86. The 2017 General Election was one of its kind. It was the first conducted under an 'elaborate regime of electoral laws including amendments to the Elections Act made to introduce the Kenya Integrated Electoral Management System (KIEMS) which was a new devise intended to be used in the biometric voter registration, and, on the election day, for voter identification as well as the transmission of election results from polling stations simultaneously to the Constituency Tallying Centre (CTC) and the National Tallying Centre (NTC).' ⁴⁹
- 87. Upon the declaration of the election result announcing H.E Uhuru Kenyatta as the President-Elect, Hon. Raila Odinga and his running- mate Hon. Kalonzo Musyoka filed Presidential Election Petition No. 1 ⁵⁰ disputing the outcome. The Petitioners alleged, inter alia, varying results forms in the IEBC public portal and the collation Form 34B availed by the Commission and the compromising of the electronic system of result transmission.
- 88. In defence to these allegations, the Commission stated that the relay and transmission of results from the polling station to the Constituency & National Tallying Centre and from the Constituency to the National Tallying Centre was above board. It also claimed that the transmission was depended on access to 3G or 4G network coverage; and that for areas without network coverage it had deployed alternative ways to transmit the result forms.

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Raila Amolo Odinga & another v Independent Electoral and Boundaries Commission & 4 others & Attorney 49 General & another, Supreme Court Presidential Petition 1 of 2017 Ibid



89. In its submissions, the IEBC (perhaps drawing inspiration from the Raila Odinga, 2013 case⁵¹) submitted that an election should not be nullified on the basis of flaws in the transmission of the results. The following paragraph of the 2017 Judgement captures the IEBC's submissions, and the Supreme Court's views thereof:

"[223] In conclusion, the respondents urged that the flaws in election transmission of results, if any, cannot be the basis of voiding a presidential election with such a large margin of difference of numbers between the two leading contestants. Counsel for the respondents, the 2nd interested party as well as the 1st amicus curiae, the Attorney-General, submitted that in an election petition, the paramount consideration is to ensure that the will of the majority of the voters carry the day. In their view, flaws in election results transmission cannot be the basis of voiding a presidential election with such a large margin in votes as the one in this case.

[224] On our part, having considered the opposing positions, we are of the view that, the contentions by the 1st and 2nd respondents ignore two important factors. One, that elections are not only about numbers as many, surprisingly even prominent lawyers, would like the country to believe. Even in numbers, we used to be told in school that to arrive at a mathematical solution, there is always a computational path one has to take, as proof that the process indeed gives rise to the stated solution. Elections are not events but processes. As Likoti, J.F. opines [e]lections are not isolated events but are part of a holistic process of democratic transition and good governance.... Incidentally, IEBC's own **Election Manual** (Source Book) recognizes that an election is indeed a process."

- 90. The Petitioners had also faulted the IEBC for declaring the result without having received all the Forms 34A and 34B from the Polling stations and the Constituency Tallying Centres. In answer to this allegation, the IEBC claimed that the results had been tallied and computed on the basis of forms 34B, the requirement for tallying from Form 34A having been done away with by the Court of Appeal in the IEBC Vs Maina Kiai case.
- 91. The Supreme Court, after considering this line of submissions, held as follows:

"[265] Given this very clear elucidation of the law regarding the imperative for electronic transmission of results from the polling station to the NTC, <u>how could the Court of Appeals</u>? decision in Maina Kiai have provided a justification for declaring the results of the election of the president without reference to Forms 34A" How was it a basis for the reconfiguration of Form 34C so as to render Forms 34A irrelevant in the final computation of the results" But most critically, how did the Court of Appeal's decision relieve the 1st respondent from its statutory responsibility of electronically transmitting in the prescribed form, the tabulated results of an election for the president from a polling station to the CTC and to the NTC in accordance with Section 39(1C) of the Elections Act"

⁵¹ Odinga & 5 others v Independent Electoral and boundaries Commission & 4 others (Petition 5, 3 & 4 of 2013 (Consolidated)) [2013] KESC 6 (KLR) (16 April 2013) (Judgment), Supreme Court Petitions 3, 4 & 5 of 2013



[266] At the end of the day, neither the 1st nor the 2nd respondent had offered any plausible response to the question as to whether all Forms 34A had been electronically transmitted to the NTC as required by Section 39 (1C) of the Elections Act. <u>What remained uncontroverted however, was the admission by Ezra Chiloba, that as of 14th August 2017, three days after the declaration of results, the 1st respondent was not in a position to supply the petitioner with all Forms 34A. Counsel for the 1st and 2nd respondents, by insisting that the presidential results were declared on the basis of Forms 34B, all of which were available, also implicitly admitted that not all Forms 34A were available by the time the 2nd respondent declared the <u>"final results" for the election of the presidenti.</u></u>

[267] In addition to the above and relevant to this aspect of the petition, pursuant to an application by the petitioners, the Court issued an order requiring the 1st respondent to supply the petitioners and the 3rd respondent with all the scanned and transmitted Forms 34A and 34B from all the 40, 883 polling stations on a read only basis with the option to copy in soft version. Had the Court's Order been complied with, it would have unraveled the mysterious puzzle surrounding Forms 34A. Regrettably, according to the information made available to Court, by its appointed experts, the 1st respondent only allowed read-only access to this information without the option to copy in soft version only two hours to the closure of Court proceedings which never fully happened anyway. By this time however, the puzzle had been unraveled in the mind of the Court and we shall shortly explain why...

... [275] What was IEBC's answer to the above contention" In his submissions before us, Mr. Nyamodi, learned counsel for IEBC outlined to the Court the mode of the transmission process of the results and submitted that after the manual filling in of the Form 34A, the POs then keyed in the results into the KIEMS kit, took the image of the Form 34A and then simultaneously transmitted the same to the Constituency and National Tallying Centres. Our understanding of this process is that the figures keyed into the KIEMS corresponded with those on the scanned images of Forms 34A. In the circumstances, we do not understand why those figures, which learned counsel referred to as mere statistics that did not go into the determination of the outcome of the results, differed.

[276] In these circumstances, bearing in mind that IEBC had the custody of the record of elections, the burden of proof shifted to it to prove that it had complied with the law in the conduct of the presidential election especially on the transmission of the presidential election results and it failed to discharge that burden..."

92. The Apex Court then took note of the Scrutiny Orders it had made directing the IEBC to avail the result declaration forms and allow the parties read-only access to its election technology systems. After finding that the IEBC had not complied with the Court orders and failed to discharge the shifted evidential burden of proof, the Court held:



"[280] Where does this leave us" <u>It is trite law that failure to comply with a lawful demand,</u> <u>leave alone a specific Court Order, leaves the Court with no option but to draw an adverse</u> <u>inference against the party refusing to comply.</u> In this case, IEBC's contumacious disobedience of this Court's Order of 28th August, 2017 in critical areas leaves us with no option but to accept the petitioners' claims that either IEBC's IT system was infiltrated and compromised and the data therein interfered with or IEBC's officials themselves interfered with the data or simply refused to accept that it had bungled the whole transmission system and were unable to verify the data."

- 93. The sum of the above findings was the nullification of the presidential results, by Majority. It should be noted that the Apex Court agreed that the process of voter registration, voter identification, manual voting and vote counting had not been challenged; but only the process that followed (transmission, tallying and verification) had been credibly impugned.
- 94. The Supreme Court decision, in the Raila Odinga, 2017 case cemented the place of result transmission in presidential elections.



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