

Electoral Commission of Namibia

Use of ICT in Electoral Processes Introduction of Electronic Voting In Namibia

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• 1

Presentation Outline

1. Background
2. Electronic Voting in the Namibian context
3. Primary Motivation for introducing EVM's
4. Stakeholder Consultation – *'The Decision Making Process'*
5. Overall Impact of EVM on Electoral Integrity
6. The Voter Verified Paper Audit Trail Challenge
7. Cost and Sustainability
8. Lessons from the Namibian EV Experience
9. Voter Education & Training
10. Conclusion
11. Q&A

• 2

Background

- In 2014, Namibia became the first country in Southern Africa to conduct a national election using electronic voting.
- The introduction of EV into the Namibian elections first started being **discussed in 2004.**
- The ECN and **other relevant state institutions** started working on draft legislation paving way for the EVM implementation. The use of EVMs was first introduced in the Electoral Act of 24 of 1992 in 2009 to pave the way for the introduction of the EVMs in Namibia.
- This effort gained momentum following challenges faced in the counting and **tabulation processes in the 2009 elections**, which led to a delay in the announcement of the election results.
- The EVMs were first put to use in four local elections in August 2014 and in one by-election in November the same year, before being rolled out in the General Elections of 28 November 2014.

3

Electronic Voting in the Namibian Context

- Electronic voting (EV) refers to the use of electronic systems to cast and count votes. It includes punched cards, optical scan systems, direct-recording electronic systems (DREs) and electronic voting machines (EVMs). It also applies to the transmission of votes via telephones, private computer networks, or the internet. In general, two main types of electronic voting can be described:
 - Supervised electronic voting:** in the presence of representatives of electoral authorities (e.g. electronic voting machines located at polling stations);
 - Remote electronic voting:** takes place within the voter's own privacy without direct supervision by representatives of electoral authorities (e.g. voting from personal computers, or mobile phones).

4

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- In the Namibian case, the EVMs comprise a set of two devices, customized to Namibian legal requirements.
- **Firstly**, the voter uses one device, the **Ballot Unit**, and an Presiding/Electoral Officer operates the other device called the **Control Unit**.
- The Ballot Unit has a button for every candidate, and can hold up to 15 candidates, but up to 4 Units can be interconnected which accommodates altogether up to 60 candidates.
- A cable connects the two units.

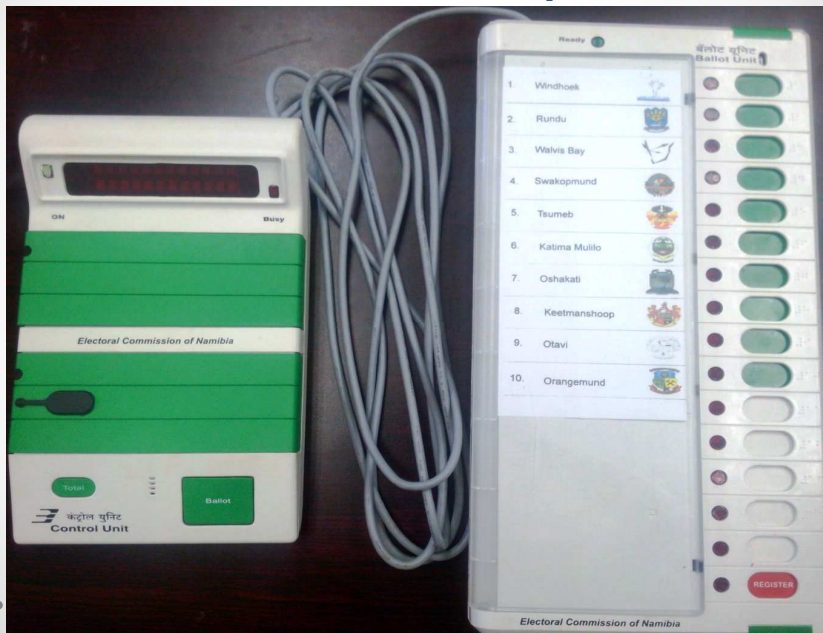
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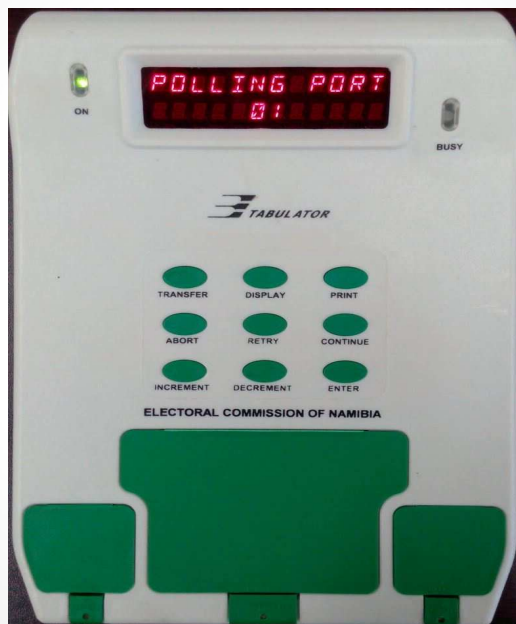
- The Control Unit (CU) has six buttons;
 - **candidate set button**, to set the number of candidates/political parties contesting the election
 - **close button**: to close the poll after voting
 - **result button**: to release the results after voting
 - **print button**: to print the results of the control unit at the polling station, all located in the inner compartment of the CU
 - **total button**: for displaying total of votes anytime during voting process
 - **ballot button**: for issuance of ballots for each voter.
- EVMs are **stand-alone machines** and are **not** connected to any computer network. They **do not transmit or receive any signal**, therefore cannot be intercepted. EVMs are also powered by batteries, thus possible to operate in areas with no electricity for the entire duration of the voting and counting process

• 6

Main EVM Components



Tabulator



Primary Motivation for Introducing EVM's

The negative experiences with the national elections of 2000, 2004 and 2009 compelled Namibia to make the ultimate transition from manual to electronic voting

The introduction of the EVM's in Namibia enhanced the polling process with respect to;

- Faster vote count and tabulation.
- Accurate results (human error is excluded)
- Efficient handling of complicated electoral systems formula that require laborious counting procedures.
- Increased convenience for voters.
- Increased participation and turnout.
- Prevention of fraud in polling stations and during the transmission and tabulation of results by reducing human intervention.

•9

Stakeholder Consultation 'The Decision Making Process'

- The introduction of EVMs has been a topic in the discourse around Namibia's electoral reform since 2004, and in 2006, the Electoral Commission of Namibia began consultations on the prospects of acquiring and using EVMs in the Namibian electoral process.(10 year consultation process)
- With the challenges to 2009 election outcome, and the calls by the High Court for a revised electoral law, talk of the use of EVMs intensified, with proponents of the EVM citing benefits such as **increasing the speed of the count** (especially given the six day delay in announcing the result of the 2009 election); **decreasing the amount of time for voting**; **eliminating any irregularities in the election process** and significantly **increasing the level of transparency** and **accountability**.

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- The ECN formally adopted the decision to introduce electronic voting
- Undertook several familiarization visits to Bharat Electronics in India to discuss amongst others specifications, customization etc.
- Also invited senior leaders of registered political parties on a on an **all-expense paid** trip to observe Indian elections
- The Namibia Cabinet in principle approved the introduction of the EVM's in elections
- The ECN embarked on a multi-pronged, all-encompassing popularization campaign to sensitize all sectors of society on the benefits of the EVM.
- Outreach programs specifically targeted political parties, traditional leaders, civil society organizations, churches, regional and local authorities, schools and tertiary institutions the youth and the Namibian public at large.
- The ECN forged strong partnerships with all influential players within the media fraternity

• 11

Overall Impact of EVM on Electoral Integrity

In the Namibian case, the test of Integrity hinged on four 4 critical factors;

- **Accuracy:** Given that Namibian EVMs so far have no VVPAT capability, the only assurance that EVMs record and aggregate votes accurately is the pre-poll test conducted immediately before the beginning of vote. Since the EVMs do not transmit or receive any signal and are therefore **immune from hacking**, it is fair to assume that, following a successful pre-poll test, they will continue to record and aggregate votes accurately.
- **Breakdowns and Technical Support:** Virtually no breakdowns or technical defects were reported with the exception of minor damages during handling of EVMs. These were swiftly replaced. Service provider presence was ensured through Service Level Agreements (SLA)

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- **Voter - Friendliness:** With the exception of voters who had voted in the few local or by-elections prior to the general elections, this was the first time the overwhelming majority of voters used an EVM. On average voters took less than 30 seconds with each EVM to make their choice and cast their vote.
- **Results Acceptance:** Despite the absence of a manual count that all present can visualize, follow and monitor, which was the norm under manual voting, party agents at the polling stations did not challenge the results

• 13

The VVPAT Challenge – Expectations for The Future

- The 2014 Namibian Electoral Act allowed the use of electronic voting, but introduced the requirement that the use of voting machines be subject to the simultaneous utilization of a verifiable paper trail for every vote cast by a voter, and any vote cast is verified by a count of the paper trail.
- The Voter-Verified Paper Audit Trail (VVPAT) is intended as a verification system designed to allow voters to verify that their vote was cast correctly, to detect possible election fraud, and to provide a means to votes auditing, should that be required.

• 14

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- The Electoral Act provides for a transitional provision that states that different dates may be determined in respect to the coming into operation of different provisions of the Act, and deferred the use of VVPAT to future elections.
- **The ECN is currently consulting with key stakeholders and also studying the most viable options i.r.o the VVPAT and a final decision will be taken in due course**

Challenges i.r.o VVPAT:

- **Transfer of ballot (data)** from a laptop to a special device and then to CU. Might raise suspicion of possible hacking, since two additional devices, especially a computer is used.
- **Print error** – includes eight other technical errors that could occur during use of VVPAT. Amongst others, paper jam and when a ballot paper is not released from the printer. Only remedy is replacement of VVPAT.
- Additional **huge financial implications**. At least two VVPATs for each polling station

• 15

Cost and Sustainability

- In the long term, the ECN will experience some cost savings in the electoral process, as the same machines can be used in all subsequent elections for the foreseeable future.
- The most important advantage is that the **printing of millions of ballot papers can be dispensed with**, as only one ballot paper is required for fixing on the Balloting Unit at each polling station instead of one ballot paper for each individual elector.
 - **For example:** *“The estimated saving on the switchover to EVMs in India in 2009 was approximately USD 10,5 million, while 8,000 tons of paper was saved because no ballot papers had to be printed.*
- Potential long-term cost savings through savings in poll worker time, and reduced costs for the production and distribution of ballot papers.

• 16

Lessons from the Namibia EVM experience:

- The roll-out of new technologies should not be done without proper **consultation, pilot/testing and simulation** exercises where necessary.
- **Adequate time** must be provided for the **training** of operators handling the new devices.
- Service Providers must make provision for adequate time to rectify unforeseen technical problems and system failure.
- It is very important to have **Plan B** in place in case the new technology fails.
- Adequate time is needed before elections to fully **operationalize and publicise** (including through voter and civic education) any new legal provisions among stakeholders in particular the electorate, including the use of electronic and technological devices.

• 17

Voter Education & Training

- Voter education is critical in any election, and when transitioning to a new method, it is even more important, as voters need to be clear on how to “cast ballots that are legally valid” and to participate meaningfully in the voting process.
- Importantly, and especially given the current absence of a mechanism for generating a paper trail, voters should be educated comprehensively on the use of the EVM, its functionality, its features, how it is resistant to fraud or tampering, and so forth.
- Voter trust in the voting system is the most important key to credible elections, and voters should be fully aware of all the strengths, weaknesses, and vulnerabilities of the EVM.

• 18

Conclusion

- Introduce a VVPAT component to the EVMs in order to improve transparency and increase public trust in the system;
- Create opportunities for regular interaction between stakeholders and the system, through presentations and simulations, to increase their familiarity with electronic voting and improve their trust in it;
- Allow space for stakeholders to present suggestions for improvements to the system in order to strengthen their sense of ownership;
- Provide continuous voter education about electronic voting and the mechanics of using the EVM to make a choice and cast a vote in order to make them familiar and comfortable with both the concept and the practice;

• 19

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- Strengthen the knowledge of polling station staff about preparatory procedures, pre-testing and how to assist voters without violating secrecy of voting;
- This is necessary in order ensure consistency in the application of procedures for future elections.

• 20

Thank You
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•21