



# Using ICT in Election Management

Case Study of Namibia

ID4Africa 2019: ID & Democracy

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# From UN Mandate to Self-Managed Registration

## Case Study of Namibia Electoral Management

- Purpose:
  - Assessing end-to-end trust in the electoral process using Namibia's experience since Independence through 2014
- Agenda
  - Challenges in the early days after independence.
  - Modernizing the electoral process and systems in 2014
  - Evaluation of Trust in Current Electoral Systems



# Challenges in the early days after Namibia Independence

# History of Elections in Namibia

- 1989
  - First Parliamentary Elections
  - United Nations managed process
  - Paper Ballot used
  - 701,483 Registered Voters
- 1994 to 2009
  - Namibian Managed – Electoral Commission of Namibia
  - Paper Ballot Used
  - 2009: 1,181,802 Voters



# Note of Importance: Challenges

- Members to be elected by the registered voters by general, direct and secret ballot
- Members of the National Assembly shall be elected in accordance with procedures to be determined by Act of Parliament
- Electoral Act No. 24 of 1992 replaced by Electoral Act No. 5 of 2014
- ***General Registration of Voters must take place every 10 years under supervision of the Electoral Commission of Namibia***



# Problems Experienced

- Ballots count disputed
- Delays in counting
- Parties did not trust Voters Register
  
- 2004 – Ballots recounted under court order
  
- 2009
  - Voters Register was restated with 361,530 voters removed shortly before voting
  - 6 days for counting
  - Criticism of the ECN processes by High Court including a cost order against the ECN



# The issues faced by ECN (1)

- Eligibility:
  - Some voters only had old SWA/Namibia Identity Documents
  - Birth Certificates could be used (with sworn statements)
  - Voters could use Sworn Statements made by two registered voters
  - Political Parties did not have the resources to interrogate the VR
- One Voter per One Identity
  - Voters appeared more than once on the VR
  - Voters who passed away since Registration remained on the VR



# The issues faced by ECN (2)

- Credentials of Voters
  - Paper issued - Could be tampered with
- Authentication of Voters
  - Paper-based VR could only have the VR of that specific Constituency
  - Voters were allowed to vote in any Constituency – but counted for the constituency they registered (Tendered Ballots)
  - Proof of Identity was difficult
  - Multiple Voting (by one voter) could not be detected





# The issues faced by ECN (3)

- Tallying and Transmission of Results
  - Accusations of Vote Tally Tampering
  - Results must be posted at Polling Station, then tallied at Constituency Collation Centres before transmission to HQ
  - Human Error, Fatigue, etc. led to tally discrepancies
- Lack of Trust by voters, political parties, etc. in:
  - Voters Register
  - Identifying voters at polling
  - Tallying of Results
  - Results Transmission



Modernizing the electoral  
process and systems in 2014

# Systems procured by ECN for 2014 (1)

- Voters Registration System
  - Biometric Registration (Face, fingerprints, signature)
  - Duplicate Removals (AFIS) through fingerprint matching
  - Deaths register regularly updated via Home Affairs
    - Presently in paper-based format Deaths Register
    - In the process of MOU for electronic access
  - Colour printed VR including facial photograph



# Systems procured by ECN (2)

- Voter Verification System
  - Complete VR on handheld devices at polling stations – card and fingerprints matched with voter
  - Voters voting twice are identified after polling (through fingerprints)
  - Statistical Analysis possible of age, gender, etc per polling station



# Centralised Database Management of Registration and Voting

- The Biometric Voters Database is held at HQ with an AFIS (Advanced Fingerprint Identification System)
- Registration kits are not connected during registration, data only uploaded weekly via USB sticks at HQ
- Voter cards are not checked real-time, only on that specific device
- Data networks not available at all polling stations
- Neither registration nor voter verification uses online communication systems
- Post-Mortem Management only





# Systems procured by ECN (3)

- Electronic Voting Machines (EVMs)
  - Indian procured EVMs
  - Programmed for Namibia Electoral System
  - Voter confirms electoral choice (2-button verification)
  - Printouts of results immediately after polling closes
  - Printout displayed at Polling Station
  - Electronic Collation of Results from Multiple EVMs (Tabulation) at Constituency Collation Centres
  - Printouts of Collation Centre matched with paper-based Results Forms signed by political parties



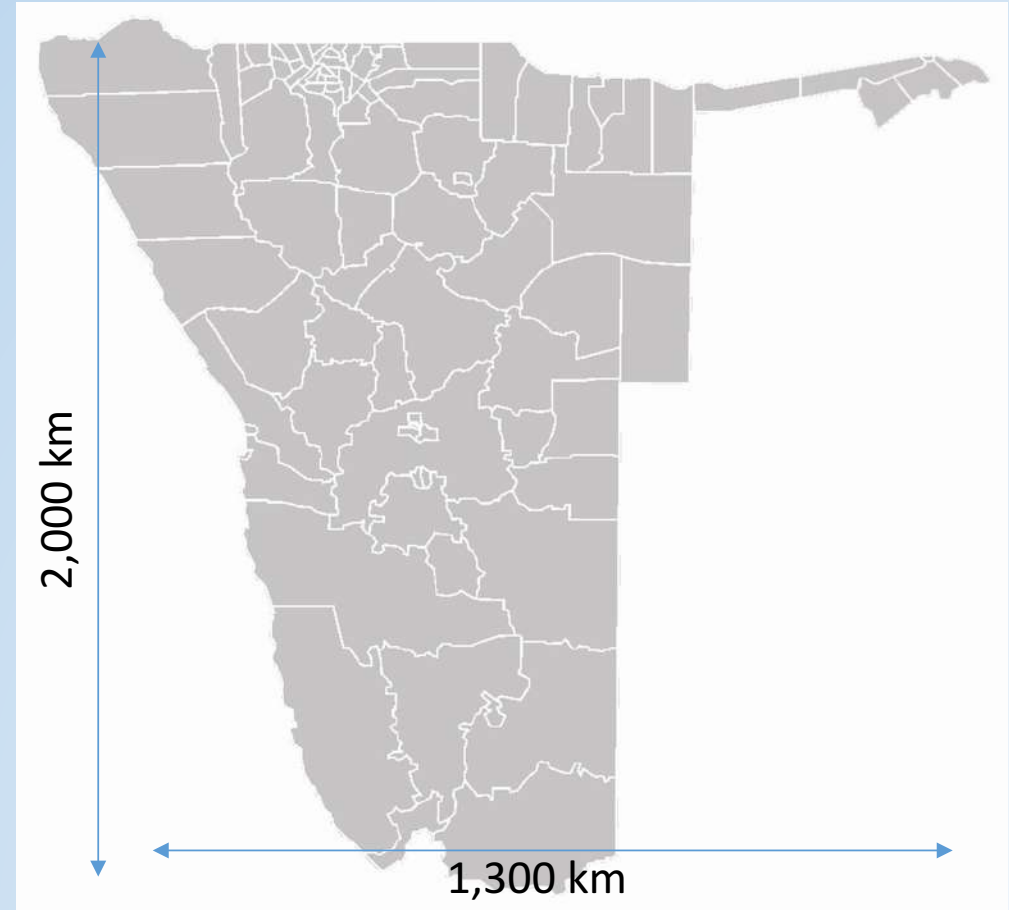
# Issues with EVMs

- Indian manufactured and can be coupled to Voter Verified Printed Audit (VVPAT)
- However, not yet needed by law – Minister must gazette implementation
- Namibian EVMs have two extra processes:
  - Two button voting allows for correction of vote before casting
  - Printout available in order of voting can be checked by order of the court



# Systems procured by ECN (3)

- Results Transmission System
  - EVMs Tabulated Results forms sent electronically (Internet)
  - Paper-based Results Forms sent via Facsimile
  - Central Election Results Centre (CERC) for national collation
  - Parliamentary seats allocation done centrally (formula)







# Evaluation of Systems

Is there now trust in ECN?

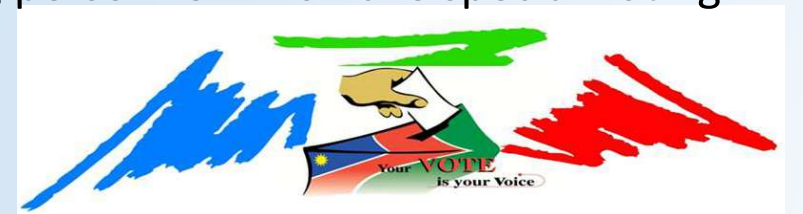
# Results of Implementation

- Voter Registration System

- Registered 1,241,194 Voters in General Registration of Voters
- 97.30% of eligible voters
- Duplicates and Deaths Removed 36,384 (Duplicates for errors made)
- Trusted Voters Register with no court challenge
  - 2004 & 2009 challenged voters register and results
  - 2014 – No challenge by political parties
  - <https://www.namibiansun.com/news/ecn-bemoans-election-court-cases>

- Voter Verification Systems

- Experienced Technical and Training Issues on polling day
- Around 15% of VVDs were not actually used – printed voters register was able to manage verification
- No Tendered Ballots were measured (Vote Anywhere principle)
- Double voting was measured (Less than 30 – mostly seafaring personnel who have special voting day on another date)



# Download full report on Website

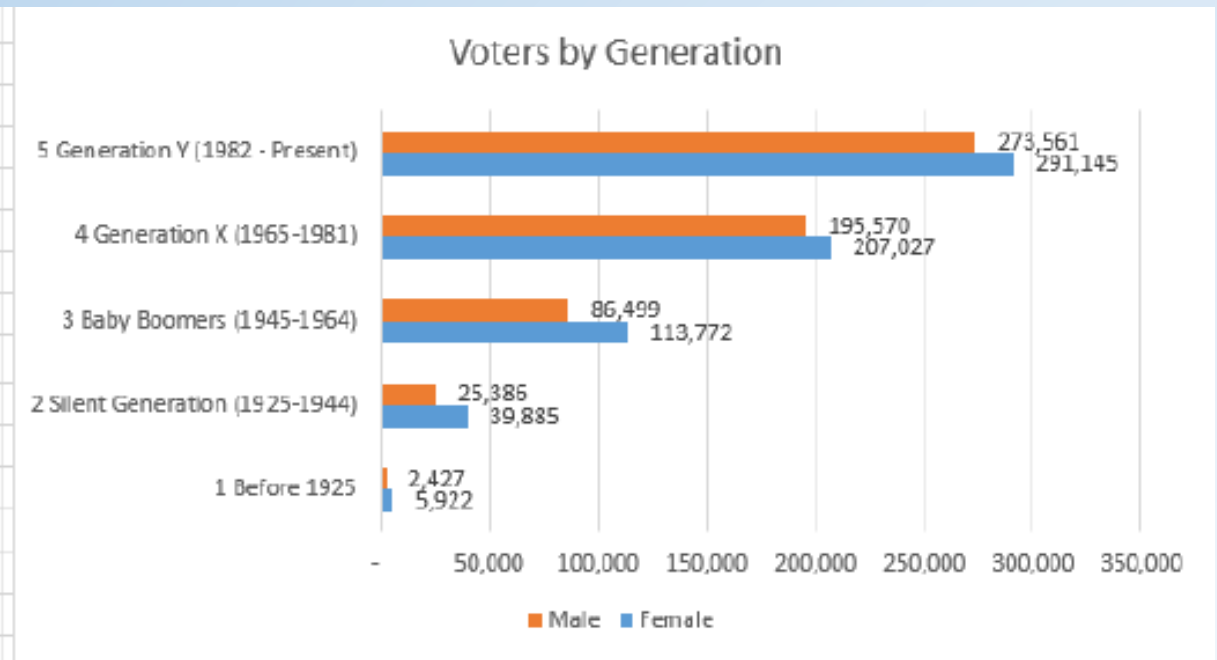
- 2014 Post Election Report
- <http://www.ecn.na/documents/27857/180253/Post+Election+Report+2014/2d34cdf9-4a1c-4856-ac99-7baf790e9243>
- 2015 Post Election Report
- <http://www.ecn.na/documents/27857/193258/ECN+Elections+Report.pdf/be9c1c04-7e37-4bf9-9cb8-c6d1a29ec988>



# Statistical Analysis of Voters

- Technical Data available to political parties, etc. to provide trust
- Research can be done (Academia, Media, etc.)

Description	Female	Male	Grand Total	
1 Before 1925	5,922	2,427	8,349	0.67%
2 Silent Generation (1925-1944)	39,885	25,386	65,271	5.26%
3 Baby Boomers (1945-1964)	113,772	86,499	200,271	16.14%
4 Generation X (1965-1981)	207,027	195,570	402,597	32.44%
5 Generation Y (1982 - Present)	291,145	273,561	564,706	45.50%
<b>Grand Total</b>	<b>657,751</b>	<b>583,443</b>	<b>1,241,194</b>	
<b>Born Free's</b>				
<b>GENDER</b>	<b>Number</b>			
Female	136,822			
Male	128,160			
<b>TOTAL</b>	<b>264,982</b>		<b>21.35%</b>	



# Implementation of EVMs

- EVMs used successfully
- No mechanical breakdowns at all
- Printed results made available at each polling station within one hour of closing of that polling station
- Collation Centres Processing was speeded up
- Geographical obstacles still a big problem – distances, road conditions, etc.)
- Trusted Voting Process among population, political parties, observers. etc.





# Results Transmission System



- Law places some restrictions on transmission and what type (paper-based with party observers signatures)
- Problems faced were administrative not technical
- RTS was coupled with powerful information database providing drill-down capabilities for staff, media and voters

# Conclusion

- High Upfront Implementation Cost
- Biometric implementation  
+/- N\$300 per voter
  
- BUT
  - Biometric Voters Register inspires trust
  - Voters Register regularly updated
  - EVMs reduces time of vote tallying
  - EVMs eliminate humane error
  - Transmission times were cut
  - Results were accepted by ALL

