

# WHAT IS E-VOTING? VARIOUS TYPES OF E-VOTING, USA TO VENEZUELA - ISSUES TO CONSIDER

PRESENTED BY  
ALHAJI MOHAMMED SALISU BABA  
ICT CONSULTANT – KOLDIA UNIQUE



# Objectives

- To outline effect of Information and Communication technology (ICT) on election processes all over the world.
- Develop understanding of these technological developments among the stakeholders in election administration
- To give the implication of these developments to election administration
- Make necessary Recommendation and open discussion on how to handle the issue of the application of ICT to election.

# Introduction

E-Voting is the application ICT to election processes. Generally speaking, election administration can be divided in two main steps namely: creation of credible voters register and; the conduct of actual election by the registered voters. For the sake of this presentation it is broken into two but they are, in reality, organically related.

# Registration

The problems associated with credible voters register in Ghana include:

- Duplicate registrations, either by accident, ignorance or by fraudulent intent
- Deceased persons still on electoral roll
- Persons on the roll who are not legally eligible due identification of the person registering
- Voters assigned to wrong Electoral Area or wrong Polling Station
- Under or over registration of segments of the population, usually women, young voters, and the minority
- Misspelled names
- Incorrect details including address, gender, and age

# Registration cont.

- Voters assigned to wrong Electoral Area or wrong Polling Station
- Under or over registration of segments of the population, usually women, young voters, and the minority
- Misspelled names
- Incorrect details including address, gender, and age

# Problems Associated with Conduct of Elections

- **Electorate manipulation:** Most electoral frauds take place during or immediately after election campaigns, by interfering with the voting process or the counting of votes.
- **Gerrymandering:** Gerrymandering is the drawing of electoral boundaries in order to produce a particular result.

# Problems Associated with Conduct of Elections

- **Manipulation of demography:** In many cases it is possible for authorities to artificially control the composition of a constituency in order to produce a foregone result.
- **Disenfranchisement:** The composition of a constituency may also be altered by disenfranchising some types of people, rendering them unable to vote.

# Problems Associated with Conduct of Elections

- **Intimidation**
- **Attacks on polling places:**

# Problems Associated with Conduct of Elections

- **Misleading or confusing ballot papers:** Ballot papers may be used to discourage votes for a particular party or candidate.
- **Ballot stuffing:** Ballot stuffing occurs when a person casts more votes than they are entitled to.

# Problems Associated with Conduct of Elections

- **Impersonation :**
- **Misrecording of votes: .**
- **Misuse of proxy votes:**
- **Destruction or invalidation of ballots:**

# The Main Steps in Voting Operation

- **Managing of logistics before voting operations**
- **Recording votes**
- **Counting votes**
- **Consolidating results regionally and nationally**

# Technologies for managing of logistics before voting operations

- Procurement systems to facilitate and control procurement of equipment and supplies to be used in the voting boots
- Inventory systems to control the storage of voting equipment and supplies
- Logistic systems to assist the planning of the transportation of all voting supplies to final destination
- Biometric database systems to store and manage information related to polling officers and the voters' lists

# Technologies for managing of logistics before voting operations Cont..

- GIS and database systems to facilitate the identification of voting places and respective listing

# Recording votes, counting votes & consolidating results regionally and nationally

The main types of electronic voting systems include:

- **Punch card voting/tabulation systems**
- **Optical scanning systems**
- **Direct recording electronic systems (DRE)**
- **Internet**

# **Recording votes, counting votes & consolidating results regionally and nationally**

- **Electronic voting systems have been in use since the 1960s, before the introduction in the market of the punch card systems, followed much later by the optical scanning systems, the DRE and the Internet.**
- **Electronic voting machines are used on a large scale in Belgium, Brazil, India, Venezuela and the United States among others. Although there is a trend for adopting this technology there are still many countries that prefer hand-marked and manually counted paper ballots.**

# Recording votes, counting votes & consolidating results regionally and nationally

- Use of DRE systems is expanding and in Belgium, Brazil, India and Venezuela most if not all voters use a DRE device to vote while in the United States and other countries the percentage of voters using DRE devices to vote is increasing.
- Once any DRE is used for counting and consolidation is done automatically. That calls for designers to work toward ensuring high level of security and transparency.

# Indian Technology & Experience

- **Electronic Voting Machine (EVM) retains all the characteristics of voting by ballot papers, while making polling a lot more expedient. Being fast and absolutely reliable, the EVM saves considerable time, money and manpower. And, of course, helps maintain total voting secrecy without the use of ballot papers. The EVM is 100 per cent tamper proof. And, at the end of the polling, just press a button and there you have the results. There need for rigorous verification before adopted.**

# Indian Technology & Experience

## How To Cast Vote Through Electronic Voting Machine

- **Voter will have his\her name checked as usual. Electoral Officer will put special ink on his finger as usual.**
- **Electoral Officer will hand over a slip containing voter's serial number as shown in the Voter Register.**

# Indian Technology & Experience

- **After all these formalities, voter will be asked to reach at Electronic Voting Machine kept in a corner covered from sides to maintain secrecy of the vote.**
- **Voting Machine will contain candidates name and symbol against each name. There will be a red light and a blue button. Voter shall have to press the blue button against the candidate of the choice. Red light will appear on the pressing of blue button and sound like whistle will also be heard which will indicate that the ballot has been cast. If red light does not appear voter can press the blue button again.**

# USA Experience

- In USA punch card systems are used. Voters punch holes in cards using a supplied punch device, to indicate votes for their chosen candidates. After voting, the voter may feed the card directly into a computer vote tabulating device at the polling place, or the voter may place the card in a ballot box, which is later transported to a central location for tabulation.

# USA Experience

- **Two common types of punch cards used in the United States are the "Votomatic" card and the "Datavote" card. With the Votomatic card, the locations at which holes may be punched to indicate votes are each assigned numbers. The number of the hole is the only information printed on the card. The list of candidates and directions for punching the holes are printed in a separate booklet. With the Datavote card, the name of the candidate is printed on the ballot next to the location of the hole to be punched.**

# USA Experience

- **Punch cards and computer tally machines were first used in the U.S. for the 1964 Presidential primary election in two counties in the State of Georgia. Although many U.S. punch card systems are being replaced by more advanced systems, many voters still use them. Punch card systems were used by 37.3% of voters in the U.S. Presidential election.**

# VENEZUELAN EXPERIENCE

- Smartmatic Automated Election System (SAES). SAES is a device-networking platform that
- Allows a large-scale connection of devices and
- Counts, tabulates, awards, and communicates election results. It uses phone lines or cellular or satellite communication to transmit data to tabulating servers located in a distributed network or in a central location.

# VENEZUELAN EXPERIENCE

- The SAES3000 supports the use of an electronic voting pad or a touch-sensitive screen. Venezuela used the latter. According to Smartmatic, the DRE's other features include
- Results tabulation without human intervention,
- Multiple auditing tools,

# VENEZUELAN EXPERIENCE

- Vote encryption and storage in seven different locations, and
- A voter-verified paper trail.

# **Application of Appropriate Technology in Electoral Processes**

**We seen the potential of using ICT in election operations to ensure sufficiently accurate and timely conduct of elections. But this application of ICT in election operations should not be taken for granted since most ICT project has failed to deliver the objectives for which it has been planned for.**

# Application of Appropriate Technology in Electoral Processes

**This is because of:**

- **Poor communication.**
- **Inadequate resource planning.**
- **Unrealistic schedule.**
- **Poor project requirements definitions.**
- **Lack of stakeholder buy-in/support.**

# Application of Appropriate Technology in Electoral Processes

These failures can be prevent or reduced by:

- **Understanding the Electoral Commission's mission and setting which is critical**
- **Inclusion of stakeholders and comprehensively addressing resources, costs, and compatibility of current systems in the short and long-term planning**
- **Anticipating timeframe accurately**
- **Maintaining accountability with well-designed requests for proposals (rfps) from vendors**
- **Starting simply, with appropriate technologies**

# Application of Appropriate Technology in Electoral Processes

- **Clear Definition of Mission :**The most important prerequisite for implementing technology in a way that will further an organization's objectives is that the planners have a clear understanding of the mission of the organization
- **Clear Goals for the Project:** There are many possible goals a new technology project might achieve: saving money, boosting efficiency, increasing accuracy, aiding transparency and timeliness.

# Application of Appropriate Technology in Electoral Processes

- **Realistic Expectations:** New technologies are often introduced with blind faith that the technology will (in and out of itself) provide a major benefit, or solve a significant problem.
- **Openness to Re-engineering:** Introduction of a new technology often requires extensive re-engineering of regulations and procedures in order to be effective.

# Application of Appropriate Technology in Electoral Processes

- **Appropriate Technology:** The concept of “appropriate technology” was introduced over 30 years ago by economist E.F. Schumacher, who expressed concern about the start-up and maintenance costs of new technologies, as well as the environmental, social and cultural impact of those technologies



**THANK YOU FOR YOUR TIME !**