



Presentation

Appropriate Technology Debate

Key Point and Challenges

Should and Should NOT

Areas of Implementation

Focus and Activities

Technology and Market Forces Drives History?

Best Practises and the Future



Appropriate Technology

- ❑ The term *appropriate technology* came into some prominence during the 1973 energy crisis and the environmental movement of the 1970s.
- ❑ The term is typically used in two ways:
 - ❑ utilizing the most effective technology to address the needs of developing areas,
 - ❑ and using socially and environmentally acceptable technologies in industrialized nations



Appropriate Technology

- ❑ In practice, appropriate technology is often something described as using the simplest level of technology that can effectively achieve the intended purpose in a particular location.
- ❑ the term *appropriate technology* can also take a different meaning, often referring to engineering that takes special consideration of its social and environmental ramifications.



Elections and Technology - Key Point

While the principles of elections largely remain the same

**Information
Communication
Technology**

has in the past 25 years dramatically changed the operational methodology for elections

Appropriate Technology?



- ☐ Continuous and increasingly fast developments in ICTs applications available for electoral purposes
- ☐ EC/UNDP are receiving many request from Governments and EMBs for support to civil and voter registration and digitalization of results aggregation processes
- ☐ Factors to be reckoned with by all EMBs, donors, practioners and electoral assistance providers
- ☐ ICTs has already dramatically changed the way elections are conducted in the western world.
- ☐ Unrealistic not to accept that this process will go on and affect more and more emerging democracies and post conflict countries in a leapfrog manner
- ☐ We need to do our job and equip ourselves better...

Technology and Market forces drive History?



- ☐ Luddist Approach versus Advertisement Approach
- ☐ Joint Study on ICTs Civil/Voter Registration and Data Base Transmissions within the Global Training Platform
- ☐ EC, UNDP, IDEA, CIDA, IOM, OAS and...ACE
- ☐ Focus on civil/voter registration and transmission of electoral data
- ☐ Comparative assessment
- ☐ Auditing procedure
- ☐ Conduct an analysis of most appropriate manner of procuring these technologies and the related specialized services



Approach

□ Any effort to make electoral assistance more effective must tackle the issue of the increasing use of technology in the electoral process.

□ Cross Issue

Cutting





Challenge

What kind of technology is suitable for a particular electoral process?

❑ Challenge: how to ensure a sustainable, appropriate, cost effective and transparent use of technology in post-conflict elections and in fragile or emerging democracies?

❑ No fixed solution that can be applicable everywhere, but different ones for every context. General rule:

❑ The level of technological upgrades suitable for a given country should always be directly related to the trust and independence enjoyed by the EMB, as this is the element that will in the end determine their acceptance by the public opinion.





“Should”

Technology should be:

- ☐ **implemented in time before an electoral event**
- ☐ **legally supported**
- ☐ **operationally appropriate**
- ☐ **cost effective**
- ☐ **transparent and add to integrity**
- ☐ **sustainable**



“Not”

Technology should NOT be:

- ☐ driven by vendor or donor interests
- ☐ considered a proof of “development”
- ☐ suppress more important needs



Technological Innovation and Effective Electoral Assistance Focus

- ☐ **Quality and appropriateness of the methodological, operational and technological choices to be adopted for implementation on an electoral cycle**
- ☐ **Perceived not any longer as isolated event but as a process.**
- ☐ **Past imperfections and limited results should be seen as an additional motive to support electoral processes investing more in the institutions that administer the elections in a good governance perspective**
- ☐ **Importance of international/domestic observation missions, evaluations, post election seminar and peer review mechanisms.**
- ☐ **Importance of the synergies between election observation and electoral assistance**



Areas of Implementation

Geographic Information Systems (GIS)

- ☐ **Boundary delimitation**
- ☐ **Operational planning**
- ☐ **Public information**
- ☐ **Results analysis by public & contestants**
- ☐ **Integration with other institutions**



Areas of Implementation

Regulation of Parties and Candidates

- ☐ Registration of parties
- ☐ Campaign finance controls and information
- ☐ Candidate nomination and verification
 - ☐ Better and more precise ballots
- ☐ Voter education about contestants



Areas of Implementation

- ☐ **Public Outreach**
- ☐ **Web sites**
- ☐ **Mass emailing**
- ☐ **Mass SMS**
- ☐ **Call Centers of EMBs**
- ☐ **Better TV spots through animation**



Areas of Implementation

Results Aggregation

- ☐ Results are data entered manually, or through OMR, locally and then electronically transferred and tabulated centrally
- ☐ Faster, more precise & more auditable results
- ☐ Cost effective modernisation



Areas of Implementation

Internal Administration

- ☐ **Organisational modernisation**
- ☐ **Budget/finance, human resource systems**
- ☐ **Procurement, inventory, transport**
- ☐ **Internal communication**
 - ☐ **Distributed email**
 - ☐ **Secure intranets**
- ☐ **Customisation & training, training, training**



Areas of Implementation Electronic Voting





Areas of Implementation

Electronic Voting

Opportunities:

- ☐ Longer term cost reduction
- ☐ Results faster and more reliable
- ☐ Better access for disabled
- ☐ Mobility of voters
- ☐ Facilitate out-of-country voting
- ☐ Higher turn-out through ease of voting



Areas of Implementation

Electronic Voting

- ☐ Risks:
- ☐ Sustainability
 - ☐ Training
- ☐ “Vendor dictatorship”
- ☐ Lack of trust, ease of central manipulation
 - ☐ Transparency is key



Areas of Implementation Voter Registration

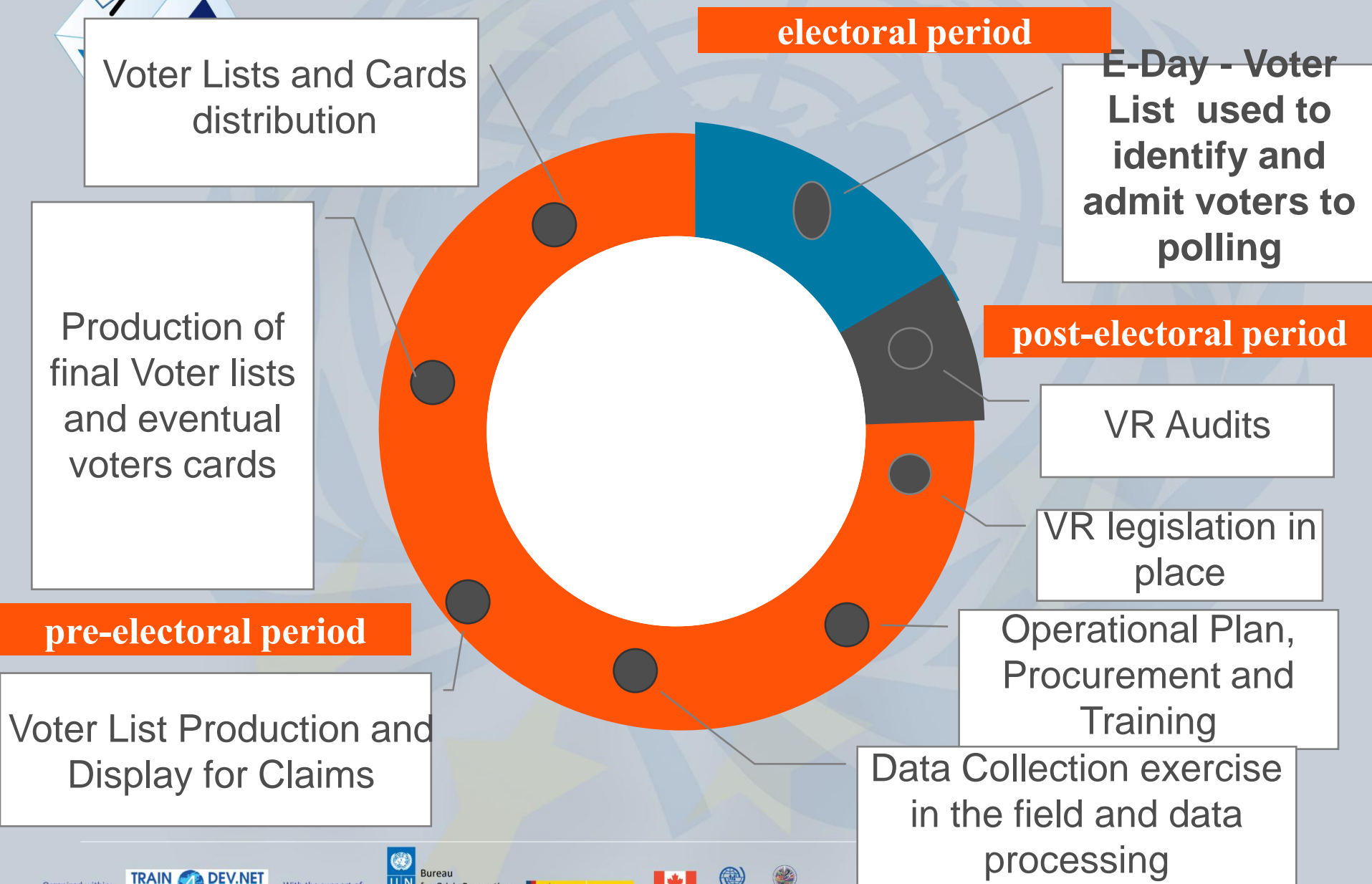




VR: a cornerstone of credible elections

- ☐ Always the most controversial aspect of an electoral process
- ☐ An accurate and accepted voter registry is pivotal to a credible electoral process
- ☐ For most countries it is the largest, most complex, costly and time consuming component of the electoral process
- ☐ Crucial display and test of the EMBs operational capacity and credibility

VR Process





VR Systems

Three conceptual systems:

1. Stand-alone “ad hoc” / periodic voter registration (active)
2. Stand-alone continuous / permanent voter registration (active)
3. Civil registration-based voter register (passive)



VR Methodologies

Three levels of technological methodologies:

☐ **Low-Tech**

- Data on paper - locally based - Timor 1996, OCV Afghanistan 2004

☐ **Medium-Tech**

- Paper into database - centrally based - West-Bank/Gaza 2004

☐ **High-Tech**

- Direct to computer - centrally based - DRC 2006

-> Endless variations of VR methodology



Low - Tech Approaches





Mid Tech Approach

**Optical Mark
Recognition
(OMR)
First used in large
scale
Electoral
Assistance Mission
Bosnia and
Herzegovina 1997**

OSCE BOSNA I HERCEGOVINA
PRIVREMENA IZBORNA KOMISIJA (PIK)
PRIVREMENO IZBORNO POVJERENSTVO (PIP)
OBRAZAC ZA REGISTRACIJU BIRAČA IZVAN ZEMLJE

Ime
Prezime

Adresa (mjesto boga)
Datumi/nadmetanja
Datumi iz 1991. god.

Spol
Rođena godina
Kategorija stanovništva
Rođena mjesta
Centar za registraciju

UPUTE
 Označite ovako:
 MEMORITE UPOTREBLJIVATI CRVENU TINTU

OSCE
BOSNA I HERCEGOVINA
PIK
IDENTIFIKACIJSKI BROJ BIRAČA
0001403999

[illegible]

The collage features several documents:

- Top Left:** A small passport or ID card with a photo and text.
- Top Center:** A form titled "JAMHURIYA YA MLINCANO WA TANZANIA" (United Republic of Tanzania) with a header in Swahili and English: "KATIKA MAFANZIWA KUNA MAFANZIWA" (In the passport, there is a passport).
- Top Right:** A circular logo or seal, possibly a national emblem.
- Middle:** A large, detailed form with multiple columns and rows, likely a passport application or a form for a passport office. It includes fields for personal information, dates, and signatures.
- Bottom Left:** A form titled "KATIKA MAFANZIWA KUNA MAFANZIWA" (In the passport, there is a passport) with a header in Swahili and English.
- Bottom Center:** A form titled "KATIKA MAFANZIWA KUNA MAFANZIWA" (In the passport, there is a passport) with a header in Swahili and English.
- Bottom Right:** A form titled "KATIKA MAFANZIWA KUNA MAFANZIWA" (In the passport, there is a passport) with a header in Swahili and English.

A stack of clear plastic bags and a California Department of Corrections and Rehabilitation form. The form includes a logo, a title, and several sections for information.

[illegible][illegible]

Organized within:

Hi-Tech Approach



Biometric Voter Registrations Kits: DRC, Togo, Nigeria, Conakry, Haiti, Senegal, Angola, Mozambique...



- ☐ The “Automated Fingerprint Identification System” automatically checks one or many unknown fingerprints against a national database of known prints.
- ☐ The intended purpose is to prevent multiple enrolment in an election
- ☐ Long Time required for aggregation of data and double entry control in DRC, Togo, Nigeria, Haiti and Angola via AFIS
- ☐ Postponement of elections in Haiti, DRC, Angola and Togo
- ☐ Funded by State Budgets or Cofunded



The Future ?

Digital Camera

The digital camera is embedded onto the unit's Official Panel and may be used to capture a voter's digital photograph during registration.

Local Capture of Information

The application contained can capture data manually inserted in the Vanguard. This data can be, voters information, as well as Voting results.

Transmission of Data

The kit is capable of transmitting all data and results from distributed locations to a central site.

Color Touch-screen

A touch-sensitive, full-color LCD screen displays easy-to-use controls for PenCom officials to use to incorporate or edit data

Printer

The attached printer can be used to print a voter registration card

Signature Pad

The signature capture device may be used to capture a user's signature in electronic format during registration or authentication

Fingerprint Reader

The main fingerprint capture device may be used to capture a fingerprint in digital form during registration or authentication.





The Future of Electoral Technology?

- ☐ Synergies between civil and voter registration?
- ☐ Digital identities with biometric identification, digital certificates?
- ☐ Polling stations disappear replaced by internet voting and/or voting via mobile phone?
- ☐ Individualised voter education via internet?
- ☐ Direct/digital democracy



The Future of Voter Registration

- ❑ Western countries have moved to computerized and permanent voter registration systems
- ❑ Increasing demand from EU partner countries to use EC Development Funds for digital voter registration
- ❑ Lack of adequate feasibility studies. Possible synergies with civil registration are not explored before planning
- ❑ Open debate between models: independent voter registration versus the civil registration based voters register



TA to Voter Registration

- ☐ Increasing demand for high-tech VR systems
- ☐ Feasibility studies and design, global as well as local
- ☐ Pilot projects
- ☐ Procurement of new technology
- ☐ Operational planning & procedures
- ☐ Training and voter education
- ☐ Implementation



Type and Timing of TA

- ☐ Support to EMB to design and introduce a new model or system of voter registration
- ☐ To begin at the end of the previous electoral cycle
- ☐ In any event not later than 18 months before elections.



Type and Timing of TA

- ☐ Support to EMB to conduct a specific voter registration process which requires the introduction of a new technology or system upgrades
- ☐ Assistance to provided between two years and one year before the elections
- ☐ In any case, not later than one year



Type and Timing of TA

- ❑ Simple procurement of voter registration material
- ❑ Between one year and six months before the elections
- ❑ technical support to groups observing voter registration (between 1 year and six months before elections).



Biometrics. an Appropriate Technology?

- ☐ Political Factors, Sept 11 2001, Fight Against Terrorism, interests in population databases
- ☐ Nature of Vendors and Service Providers being large conglomerate working also with defense sector
- ☐ End of Production of Polaroid 35 mm Camera
- ☐ Technological Developments
- ☐ Business Opportunities
- ☐ Accuracy and/or Perception of Accuracy of Biometrics...
- ☐ Easy Concept of Biometrics and AFIS
- ☐ Inclusion in Legal Frameworks, DRC and Togo
- ☐ Changing funding scenarios, Angola, Nigeria, Mozambique...
- ☐ Vendor Driven? Supply Driven?



Technology and Market forces do not drive History alone...

change is induced by social needs expressed in new political demands, affected by new technical possibilities and by development in S&T exerted by changes in the political panorama in a given moment.

Hence advances in technology and market forces are not to be conceived as the mayor forces of change in the election sector in the past decades, somewhat they shaped new situations for competing political and economic forces.



Sustainability Issues

- ☐ Technology might reduce costs and improve sustainability
- ☐ It opens up risks for governments, donors and assistance providers to become hostages of the vendors
- ☐ Cost-effectiveness depends on the re-usability of the hardware for other elections or public administration purposes
- ☐ Technological changes are not accompanied by adequate training and voter education efforts



Best Practises

- ☐ Feasibility Studies
- ☐ Study Tours
- ☐ Technical Specifications drafted considering comparative experiences adapted to the country's needs
- ☐ Software and Hardware to be adapted to the country's electoral laws and practices
- ☐ Gradual Introduction at least 16-12 months prior to Election Day
- ☐ Divide the country on different operational areas in view of rationalizing the resources
- ☐ Accent on human resources, training, on site assistance from services providers
- ☐ Cost Effectiveness and Sustainability
- ☐ Pilot Tests, Validation Tests, Mock Registration
- ☐ Civic Voter Education aimed at increasing all stakeholders' trust in the technology
- ☐ Plan synergies with civil registry and voter registration, ID for police etc..
- ☐ Consider to extend the length of the operations

