

Implementing and Overseeing
Electronic Voting and Counting Technologies

Key Considerations for Implementing Bodies

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KEY CONSIDERATIONS:
DECISION IN PRINCIPLE

FOR IMPLEMENTING BODIES

- ✓ To what extent have key electoral stakeholders been consulted openly and widely in the decision making process on the adoption of electronic voting or counting technologies?
- ✓ Is the decision making process based on the research into available technologies and judged against clearly identified objectives?
- ✓ Does the implementing body have the necessary authority to consider the use of voting and counting technologies?
- ✓ Is the decision making process based on a needs assessment that identifies whether there are problems with the current voting or counting process?
- ✓ Do products which meet the requirements set out for the chosen technology exist and if such products do exist, has an assessment of their financial feasibility and sustainability of been conducted?

KEY CONSIDERATIONS:
PILOT PROJECTS

FOR IMPLEMENTING BODIES

- ✓ Has it been made clear which institution is responsible for implementing the pilot projects?
- ✓ Are sufficient financial and human resources available to implement the pilot project?
- ✓ Does the mandate of the pilot project define the technologies to be piloted, the scale and locations of the pilot, the kind of pilot to be conducted (i.e. in an actual election, or in parallel to an actual election, or for a mock election), and the issues to be addressed and evaluative criteria to be utilized?
- ✓ Is the timeline for the pilot realistic?
- ✓ Has a detailed specification for the procurement of the technology been made for use in the pilot projects?
- ✓ Does the legal framework permit piloting of electronic voting and counting technologies, or are legislative amendments needed to enable the conduct of pilot projects?

- ✓ Does the pilot project test and challenge the assumptions about the operation challenges of implementing electronic voting or counting technologies, the expected benefits or costs, and the way in which voters, election administrators, political parties and observers interact with and experience the new system?
- ✓ Has an evaluation plan been developed for the pilot projects, and are the outputs of the pilot project clearly defined?

KEY CONSIDERATIONS:

DECISION ON ADOPTION

FOR IMPLEMENTING BODIES

- ✓ Is the decision to adopt counting or voting technologies based on the successful conduct of a series of pilots in different locations or over a period of time?
- ✓ Have lessons learned from pilots been acknowledged in the decision?
- ✓ Are the reasons for recommending adoption, additional piloting or non-adoption of technologies well-documented and made public?
- ✓ Where adoption has been recommended, has detailed guidance been provided as to the kinds of technology that should be used, technical specifications, implementation steps and a timeline for adoption?

KEY CONSIDERATIONS:

STANDARDS FOR IMPLEMENTATION

FOR IMPLEMENTING BODIES

- ✓ How broad is participation by recognized technical institutions in the process for defining national standards for implementation of electronic and voting technologies?
- ✓ Has an expert committee been established to help define the national standards?
- ✓ To what extent have international/regional standards been considered in the development of national standards?
- ✓ Do the national standards consider technical features that must be complied with?
- ✓ Has consensus been achieved among experts on the defined standards?
- ✓ Have the experiences of other countries been considered in the development of national standards?

KEY CONSIDERATIONS:

LEGAL AND PROCEDURAL FRAMEWORK

FOR IMPLEMENTING BODIES

- ✓ Are the electronic voting and counting technologies in compliance with the constitution and/or electoral legislation?
- ✓ Are suggested electronic voting and counting technology solutions in line with international and emerging standards?
- ✓ Is the timeline for preparation of voting and counting systems clearly outlined in the legal framework?
- ✓ Are requirements included for the testing of voting and counting technologies prior to their use in the elections?
- ✓ Is an audit trail legally mandated, and if so, is the nature of the audit mechanism specified and is the type of audit, timeframe and scale of audit clearly identified?
- ✓ Have conditions under which audits and recounts are to take place been identified?
- ✓ Are there specifications for dealing with a situation in which the audit produces a different result than by an electronic voting or counting machine?
- ✓ Does the legal framework include specifications for how electoral data will be stored, and the timeframe and procedures for deletion of electronic data in accordance with existing data protection legislation?
- ✓ Does the legislation address identification/authentication issues if they are being incorporated into the electronic voting process?

KEY CONSIDERATIONS:

DESIGN REQUIREMENTS

FOR IMPLEMENTING BODIES

- ✓ Do the general requirements set out for an electronic voting and/or counting system address issues of secrecy, transparency, accountability, usability/accessibility and security?
- ✓ Is there a process to ensure consultation and solicit feedback on the general requirements for an electronic voting or counting system?
- ✓ Do existing products meet the requirements or will a new system need to be

designed?

- ✓ Does the system maximize the ability for all voters to cast their ballots in an accurate, effective and efficient manner?
- ✓ Does the system meet existing standards on usability and accessibility?
- ✓ Are external factors such as the environmental conditions in which the equipment will be required to function and the reliability of the power supply throughout the country been considered for the design requirements?
- ✓ How will equipment be transported and stored and do these considerations impact the design of the equipment?

KEY CONSIDERATIONS:

PROCUREMENT, PRODUCTION AND DELIVERY

FOR IMPLEMENTING BODIES

- ✓ Do the procurement documents for e-voting or e-counting hardware include technical specifications that detail key issues required of vendors including types of technology, security and authentication mechanisms, environmental conditions, accessibility requirements, software and source code requirements?
- ✓ Does the Request for Proposals outline expectations regarding intellectual property rights agreements; division of responsibilities between vendor and EMB; specifics of electoral system that equipment has to address; specifics for security of voting or counting equipment; hardware and software requirements for results production and dissemination systems; and maintenance and storage requirements.
- ✓ Is the evaluation criteria detailed in the Request for Proposals?
- ✓ Does the procurement process put in place mechanisms to ensure that all steps of the process are transparent and engage electoral stakeholders at appropriate steps in the process?
- ✓ Is sufficient time allocated for the procurement process to meet transparency and inclusiveness goals?
- ✓ Is there sufficient time allocated for the EMB to come to terms on a contract with the selected vendor?
- ✓ Does the contract vehicle contain specific benchmarks for timely delivery of equipment and services from the selected vendor, as well as clearly defined penalties for failure to meet benchmarks?
- ✓ Are contractual agreements made publicly available?

KEY CONSIDERATIONS:
SECURITY MECHANISMS

FOR IMPLEMENTING BODIES

- Have the advantages and disadvantages of open source code versus proprietary code been fully considered in the design process?
- Is a mechanism in place to control access to voting or counting machines? Does the control mechanism include recording and reporting of access to the machines that is outside of standard operating procedures?
- Is the data held on electronic voting or counting machines protected through encryption?
- Are procedures in place to ensure the security of decryption keys and to establish when and how the decryption of data takes place?
- Is the encryption of voting data maintained when it is transmitted or transported from individual electronic voting or counting machines to the tabulation system for generation of results?

KEY CONSIDERATIONS:
RECRUITMENT AND TRAINING OF PERSONNEL

FOR IMPLEMENTING BODIES

- Has an analysis of the staffing needs associated with the project been conducted at both national as well as the regional, local, and polling station levels for staffing needs?
- Are levels of access to systems appropriately defined for external technicians that may be hired to assist in the process?
- Is training for personnel at all levels based on cooperation with the equipment supplier in order to develop in-house capacity to conduct trainings?
- Does the process include a training of trainers to build internal capacity?

KEY CONSIDERATIONS:
PROJECT AND RISK MANAGEMENT

FOR IMPLEMENTING BODIES

- ✓ Has a project management body been established?
- ✓ Are measures in place to ensure that project staff time can be sufficiently devoted to the project in the presence of other responsibilities?
- ✓ Has a detailed plan and timeline that sets out each stage of the project as well as the deadlines to be met been drafted? Is there some flexibility built into the plan in case some activities take longer than anticipated?
- ✓ Has a full management plan been developed?
- ✓ Will the plan be reviewed on a regular basis by the project management body to ensure that targets are being met?
- ✓ Is a broader consultation group with a wide range of interests and organizations represented also involved in the process of implementing the project?

KEY CONSIDERATIONS:
VOTER EDUCATION AND INFORMATION

FOR IMPLEMENTING BODIES

- ✓ Has a comprehensive plan for educating and informing voters about the new technologies been developed and have sufficient resources been allocated to conduct voter education and information activities?
- ✓ Does the public outreach strategy include detailed information about how to vote as well as how the overall system works?
- ✓ Have strategies been developed for how to react to stakeholder comments or media stories about the voting and counting technology?
- ✓ Is a set of Frequently Asked Questions (FAQ) available for reference to election commissioners, senior managers and public relations personnel that include responses to common and often-repeated criticisms of electronic voting machines?
- ✓ Are opportunities available for the public to engage with the new voting equipment in person in the pre-election period?
- ✓ Are targeted efforts in place to address voter education for specific populations

- such as the elderly, minority ethnic/language groups, and youth?
- ✓ Is voter information available at polling stations?
 - ✓ Are polling officials sufficiently prepared to answer any questions about the voting machines?

KEY CONSIDERATIONS:

SOFTWARE/HARDWARE MAINTENANCE,
STORAGE AND UPDATE

FOR IMPLEMENTING BODIES

- ✓ Is the EMB aware of the environmental conditions that should be addressed when storing the electronic voting or counting equipment?
- ✓ Are suitable storage locations available, and are these storage locations guarded and do they have appropriate and clearly identified access control systems?
- ✓ Is a maintenance schedule for the equipment established and implemented?
- ✓ Is all access to the storage location logged and explained?
- ✓ Are the electronic voting and counting machines configured before the elections so that they are programmed for the type of elections being conducted and the political entities on the ballots?

KEY CONSIDERATIONS:

TESTING SOURCE CODE REVIEW AND CERTIFICATION

FOR IMPLEMENTING BODIES

- ✓ Are necessary levels of testing of the electronic voting and counting systems going to take place, including, as recommended, acceptance testing, performance testing, stress testing, security testing, usability testing and source code review?
- ✓ Are any external independent actors involved in the review process?
- ✓ Is there a plan in place to conduct full system testing sufficiently in advance of the elections?
- ✓ Is access to the source code also made available to independent experts and stakeholders to check for errors or malicious code?
- ✓ Will a certification process be conducted by an authority independent of the EMB

to provide independent assurance that the electronic voting or counting solutions meet a certain set of standards?

- ✓ Have sufficient time and resources been allocated for the testing and certification process to address any issues that are identified during these processes?

KEY CONSIDERATIONS:

ELECTION DAY

(SET-UP, TESTING, SECURITY, TROUBLESHOOTING)

FOR IMPLEMENTING BODIES

- ✓ Are a sufficient number of technicians available to provide assistance, either on the premises, on call or via telephone hotlines should officials have any problems with the set-up, initialization and function of voting and counting equipment?
- ✓ Are specific procedures and contingency plans in place for the possibility that a voting or counting machine does not work and cannot be fixed?
- ✓ Is it clear who has access to machines in any given situation, and is there a process for properly documenting any access in the polling station protocol?
- ✓ Will safeguards such as authentication codes and tamper proof seals be used on any external ports?
- ✓ Are closing procedures to be carried out by polling officials clearly defined with the relevant command to close voting or counting on each machine?
- ✓ If individual tally sheets are produced, will the results be aggregated into a polling station results protocol?

KEY CONSIDERATIONS:

TABULATION

FOR IMPLEMENTING BODIES

- ✓ Is results transmission simultaneously conducted through more than one channel?
- ✓ Is the path of results transmission clearly defined?
- ✓ Is the tabulation process designed to be transparent for party representatives and observers, and is the tabulation publicly available in a verifiable format?

KEY CONSIDERATIONS:
CHALLENGES AND RECOUNTS

FOR IMPLEMENTING BODIES

- Does the legal framework clearly define who can lodge a challenge against the results, to which body the challenge should be lodged, in what circumstances an investigation will be conducted and in what situation a recount of the results will occur?
- Do deadlines for responding to challenges reflect the fact that counting and tabulation processes are likely to be much faster using electronic voting and counting equipment?
- Does a voter verified audit trail exist as the basis for a recount?
- Is there a process in place for adjudicating blank ballots or ballots that cannot be read by scanners?
- Are clear legal guidelines in place for what steps should be taken if the original and recounted results do not match or are not within a certain margin of error?

KEY CONSIDERATIONS:
POST-ELECTION AUDITS

FOR IMPLEMENTING BODIES

- Does the legal framework make clear how the audit process takes place, the number of locations, the ways in which the locations are selected and informed, when the audit takes place, the people who may be present during the audit, how the results of the audit are reported, and the consequences of any difference between electronic and paper records?
- Is a randomly selected sample of locations chosen for audits, and only informed after the close of polling or counting?
- Will audits take place as soon as possible after the election?

KEY CONSIDERATIONS:
EVALUATION OF SYSTEM

FOR IMPLEMENTING BODIES

- ✓ Is a comprehensive post-election system of evaluation in place, and are the responsibilities for this evaluation clearly defined (for example, between project management committee, another oversight body, or independent consultants)?
- ✓ Are resources available to commission post-election surveys and focus groups to collect information about voters' experiences using the technology?
- ✓ Does the evaluation focus on the original objectives of the project, and to what extent they have been achieved with the adoption of the electronic voting or counting system?
- ✓ Are issues such as efficiency, usability, accessibility, accuracy, security, and cost among others considered in the evaluation?
- ✓ Are the number of complaints received about the electronic voting or counting system and the nature of these complaints also evaluated?
- ✓ Will interviews be conducted with voters, election officials at various levels, candidate and party representatives, election observers and journalists?
- ✓ Will post election evaluation reports serve as the basis for post-election roundtable discussions among stakeholders about the project?
- ✓ How will the findings from the evaluation be used to improve the process in the future, in time for the next election cycle?

KEY CONSIDERATIONS:
INTERNET VOTING

FOR IMPLEMENTING BODIES

- ✓ What measures have been taken to build trust among stakeholders and especially voters in the development of the internet voting system?
- ✓ What technical solutions have been put in place to respect the secrecy of the vote?
- ✓ As an important goal of electronic voting technology, what efforts were made to ensure and enhance accessibility across all voter groups?
- ✓ How have traditional and new stakeholders been included throughout the design

and implementation process of internet voting?

- Is there proactive engagement with those opposed to internet voting in order to address their concerns?