

## 2005 ELECTRONIC VOTING PILOT PROJECT

*This document sets out the phases of the Strategic Plan for Electronic Voting (2004-2007) of the City of Buenos Aires. It explains in detail Phase 2 of this Plan, that is, the implementation of an e-voting pilot scheme at the 2005 Elections. More information (in Spanish) can be found at the website ([www.buenosaires.gov.ar/dgelec](http://www.buenosaires.gov.ar/dgelec)).*

### 1. The Strategic Plan for Electronic Voting (2004 - 2007)

It is the intention of the **Government of the City of Buenos Aires** to modernize the different components of the electoral administration by introducing new Information and Communication Technologies (ICTs) to the different stages of the electoral process. In 2004, the Office of Electoral Affairs of the City of Buenos Aires launched its **Strategic Plan for Electronic Voting**. The Plan, organized in six phases, seeks to introduce electronic voting at the elections conducted by the City of Buenos Aires. The phases of the Strategic Plan are summarized below.

#### **Phase 1: Developing our Own Voting Software (modular, open and flexible) and Functional Prototypes of E-Voting Machines (July - December, 2004)**

The Strategic Plan began with some thorough research on the technological alternatives available in the e-voting marketplace, analyzing the feasibility of their implementation in the City of Buenos Aires. This analysis also included an assessment of the socio-economic, technical, and legal impact different electronic voting methods may have on the electoral process. The technical requirements of any electronic voting system were also explored with the purpose of developing a modular software capable of operating in diverse hardware devices. Taking these requirements into account, four functional prototypes of e-voting machines were designed (two DRE and two optical scanning systems), connecting the modular software and the hardware components of the system.

#### **Phase 2: Planning an E-voting Pilot and Building Prototypes (2005)**

At the moment, we are working in the implementation of an **E-Voting Pilot** at the 2005 Legislative Elections that aims to assess the different functional prototypes of electronic voting machines. To do so, several agreements with universities, specialized institutions and

providers were signed in order to receive technical assistance and hardware devices. The E-Voting Pilot is explained in detail in a separate section below.

### **Phase 3: Evaluating the Results of the E-Voting Pilot (2005)**

The **E-Voting Pilot** will be implemented at the 2005 Legislative Elections (due to take place on October, 23<sup>rd</sup>). The Pilot will test four different technical options of electronic voting in order to assess their impact in institutional, technological, economic and cultural terms. The evaluation will combine quantitative and qualitative methods. On the one hand, a survey to all the users and an indicators' system of the interaction with the machines will be conducted. The qualitative part will consist of an ethnographic observation by a team of researchers in a sample of polling stations. A panel of experts, a mission of non governmental organizations and political parties will participate in an external evaluation of the Pilot.

### **Phase 4: Setting Technical and Functional Requirements of an E-Voting System (2006)**

Taking the results of the evaluation of the Pilot scheme into account, during the fourth phase the aim is to succeed in the following objectives:

1. Reaching consensus on the best voting method system for the City of Buenos Aires
2. Defining a detailed outline of the technical and functional requirements necessary for the procurement of the hardware chosen to implement electronic voting at the 2007 Elections
3. Developing a standard system for the service provision and an accreditation scheme

### **Phase 5: Procurement of the E-Voting System (2006)**

The following activities will take place during this phase:

1. Defining hardware components and the procurement model
2. Procurement process (hardware devices)
3. Integrating the software developed by the Office of Electoral Affairs of the City of Buenos Aires with the hardware's components
4. Defining the logistics system and implementing an e-voting system for the City of Buenos Aires

## Phase 6: Complete (or partial) Roll-Out of E-Voting at 2007 Local and Federal Elections

The final objective of the Strategic Plan is the roll-out of the electronic voting system that best suits the social and demographic context of the City of Buenos Aires at the Local and Federal Elections in 2007.

## 2. The Second Phase of the Strategy: the 2005 Pilot Scheme

We are currently launching the second phase of the Strategic Plan, an **Electronic Voting Pilot** which will be conducted at the 2005 Local and Federal Elections. The main objective of this Pilot is to build several tools in order to evaluate and devise the technological option that best suits the social, demographic and institutional characteristics of the City of Buenos Aires.

This Pilot sets out the following **specific objectives**:

1. Developing different functional prototypes of electronic voting machines; building a comparative framework for their evaluation, identifying their strengths and weaknesses.
2. Developing an own voting software that is modular, open, and flexible. This software will be used for the evaluation of the different technological options of electronic voting.
3. Evaluating citizens' attitudes and opinions regarding the introduction of new technologies in the electoral process, specifically when casting a vote.
4. Assessing the potential consequences of replacing traditional manual voting by electronic means. Electronic voting methods may impact on social, cultural, and political practices; and also on electoral rules and procedures.

### Overall Characteristics of the E-Voting Pilot

The **E-Voting Pilot** will be **non-compulsory**. It will take place in a random sample of 52 **polling stations** officially chosen for the local elections. In most cases, there will be 4 (four) voting machines -one of each functional prototype- in each polling station. All in all, 202 **voting machines** will be used for the Pilot. It is estimated that 10 to 30 percent of the

registered voters at the polling stations selected for the Pilot will participate in it. This means that an average of **27,000 people** will cast their vote through an electronic machine.

Once the elector has voted (manually, as usual) in the official Legislative Election, she will be invited to participate in the e-voting experience. She will have to show her identification card to the chairperson in a special table set up for the Pilot. Each voter will be assigned a different prototype to test. Before voting, the elector will receive some **training** on how to use the voting machine. Once the elector has cast her vote through the voting machine, she will be asked to answer a **short survey** that aims to get information about her interaction with the voting machine.

### Partners of the Project

It is expected that the Project will benefit from the participation of different political, social and institutional partners that will contribute to the evaluation process and the definitions of technological consensus.

The different actors that will participate in the Project are the following:

- Political parties that will audit and control the different phases of the electoral process
- Panel of Experts (professionals and academics with expertise in the subject)
- A Mission of Non Governmental Organizations that will observe the different phases of the electoral process
- Local and International Observers´ Delegation

### Technical Assumptions

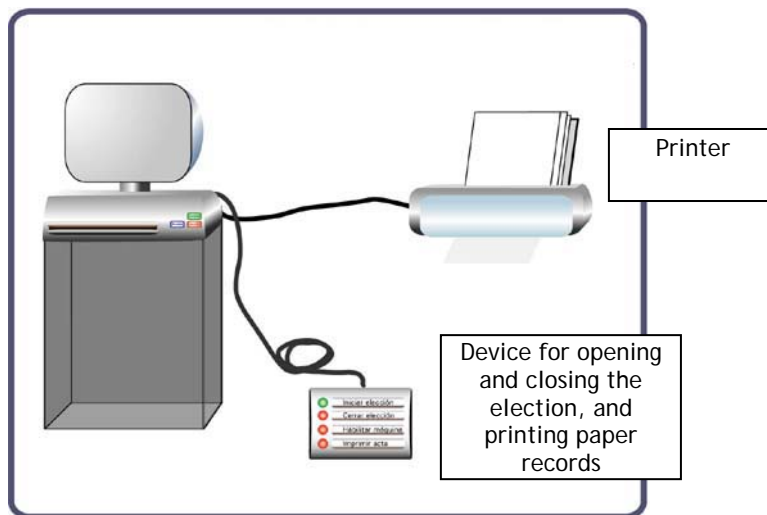
During the **E-Voting Pilot**, several technological aspects and devices will be tested. However, there are certain key conditions that, according to our knowledge and understanding, ensure the accuracy and reliability of the electoral process, regardless of the voting method used. Hence, these conditions are not going to be tested or altered:

- ✓ **Use of standard hardware devices.** All hardware devices of each voting machine prototype must be standard. This means there should be more than one supplier of each device in the market, there should be technical assistance available, and the devices should have been tested more than once.
- ✓ **Voter-verified audit trail.** All prototype voting machines will produce some kind of voter-verified audit trails.

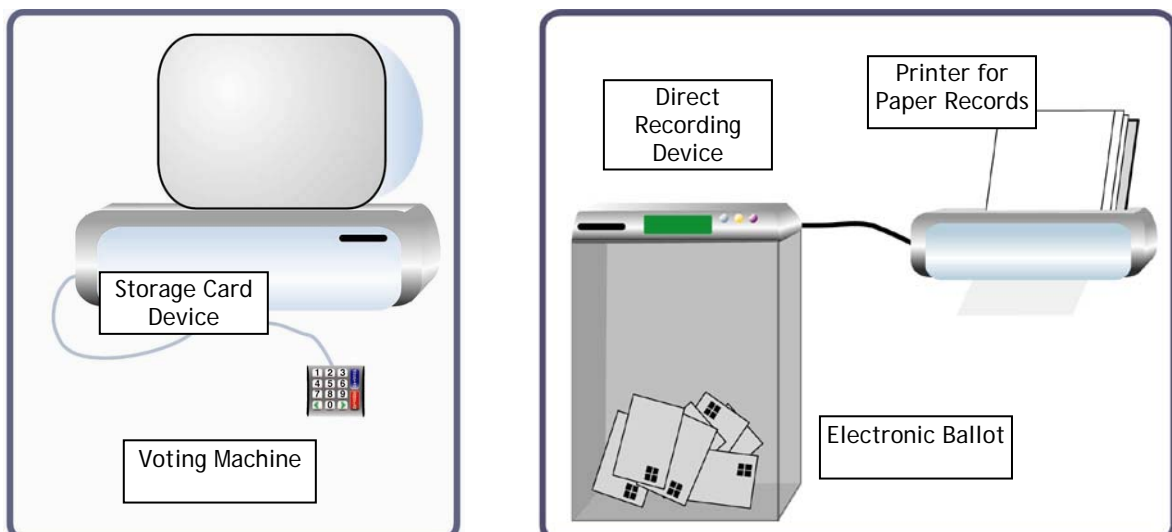
- ✓ The software will be developed by the technical staff of the Office of Electoral Affairs and will be **open-source**. A full code review will be allowed to political parties and NGOs.
- ✓ Voting will continue taking place **in polling stations**. No method of remote voting will be tested due to security concerns.
- ✓ The voting system must produce a **paper record** which should be available as an **official record** for purposes of a recount.

#### ANNEX: Voting Machines to be Tested

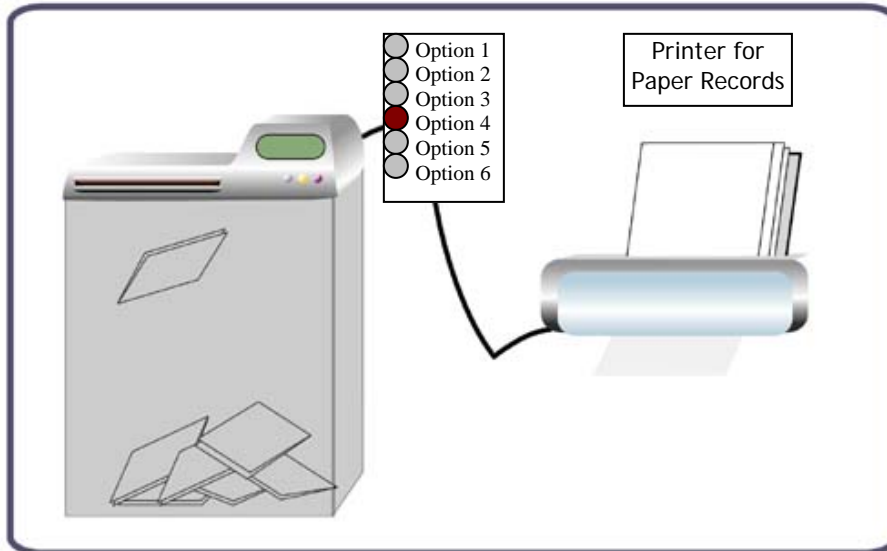
##### Voting Machine 1: Optical Scanning System (one ballot-paper per category)



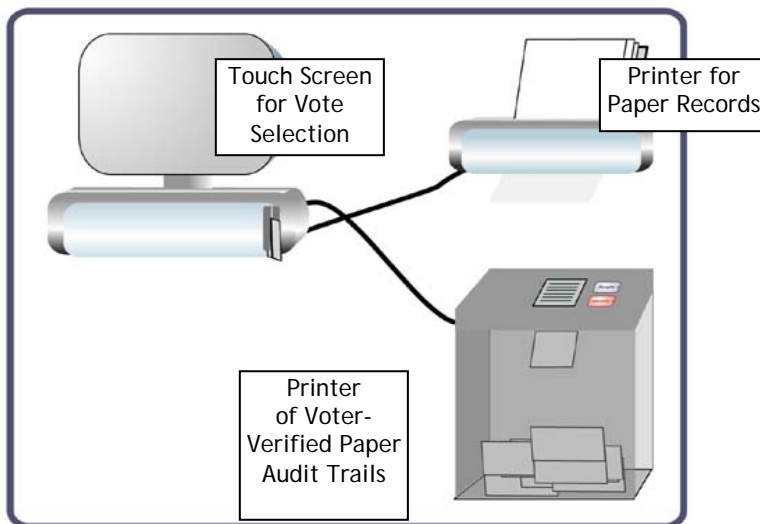
##### Voting Machine 2: Direct Recording Electronic System (DRE) with use of smart-card (with buttons)



Voting Machine 3: Optical Scanning System (one ballot for all the categories)



Voting Machine 4: Direct Recording Electronic Machines (DRE) with Voter-Verified Audit Trail (touch-screen)



CONTACT DETAILS

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