Elections

Robust Data Collection and Analysis to Document Political Processes
Developed by NDI and TimbaObjects

Elections Powers Data-Driven Citizen Monitoring

Elections are an essential component of a vibrant democracy, but to be credible they must legitimately represent the will of the voters. Citizen observation groups or political parties can provide an important, independent validation on the electoral process. Doing so effectively, however, requires rapidly collecting and managing large amounts of information from hundreds or thousands of observers and being able to determine what the data means in a timely way.

As a data management platform, the Elections DemTool aggregates, manages and analyzes structured data collected through text messaging, smartphone app or phone calls from trained observers across a country. With built-in data analysis, election experts can quickly spot trends and flag potential problems while maintaining direct communication with their network of observers in the field.

While built for election monitoring, the same problems of structured data collection and analysis occur in many important areas of international development.

Why Would You Use Elections?

NDI's approach to election-related programs seeks to maximize the opportunities presented by elections to help advance democratic progress. Such programs promote the integrity of electoral and political processes based on international human-rights precepts and the practicalities of mobilizing citizen participation. NDI's election-related activities are tailored to the broader political process in each country to promote citizen action as voters, monitors and candidates to achieve democratic governance, mitigate potentials for political violence and improve the lives of the populace.

During elections, time is of the essence. The data from an election observation effort needs to be quickly collected, verified, managed and analyzed so that the observer group can release their assessment in a timely manner. The Elections DemTool greatly reduces the complexity of this process and facilitates the rapid collection and analysis of the data. This allows observer groups to quickly provide key findings so that citizens know whether to have confidence in the process. The key findings also alert citizens if there have been serious problems.

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The Elections DemTool is versatile, accepting submissions via SMS; ODK, a smartphone application; or manual entry via web form. Through the use of multiple-choice or numeric answers, these forms are easy for observers to employ, and submissions are saved in a comprehensive message log. As the database collects the records, designated data clerks can actively edit and review them. Polling stations can be verified by multiple observers reporting simultaneously, and the Elections tool keeps a log of all of their messages. As the data from observers flows in, this tool also conducts logical checks to ensure consistency and validity using automatic, SMS-based messages sent to observers that prompt them to correct errors.

When applied to election day observation or a long-term observation, the Elections tool should be deployed as part of a comprehensive observation strategy that includes a data reporting and management plan as well as a strategic communication plan. Combining the Elections tool with an observation strategy, in this context, ensures rigorous standards for data collection and analysis. This type of programming should always include specialized consultation from NDI experts on election observation methodology. If not used appropriately, incomplete or incorrect data and/or flawed analysis could lead to misleading assessments of electoral processes—information that can help legitimize fraudulent elections or undermine public confidence in credible elections.

Past Use Cases

The Elections DemTool has been successfully deployed in many observation efforts. In 2014-15 alone, the Elections tool was used to support the elections processes and strengthen civil society in Nigeria, Malawi, Zambia, Tunisia, Tanzania, Uganda and Cote d'Ivoire.

Technical Requirements

All observers must have access to a simple cell phone for calling in reports to a data center or texting them into the Elections system directly. If using a smartphone-based app for data collection, observers must have access to smartphones. Observers will need to be identified by a globally unique ID number.

If using text messages for observer data collection, the observers need a place to send their SMSs. Generally, that destination would be defined by a short code (eg, 52011), but short codes can be expensive and may require setup months in advance. The destination could instead be an international number from a vendor like Clickatell, Nexmo or InfoBip; these work well, but they include longer numbers that are difficult to memorize and may require more expensive international text message costs. Telerivet, a powerful but inexpensive SMS gateway run off of Android smartphones, is another option. As SMS gateways are different in every country, they will require some customized setup to connect to the Elections DemTool; be sure to keep in mind that there will be some time or expense involved in forming that critical connection.

For election day observations, which typically involve hundreds or thousands of observers reporting in a very short window of time, a data center is needed. In this center, data clerks will manage the flow of incoming reports, look for missing and/or potentially incorrect information, and communicate with the observers to collect and verify data. The number of clerks required depends on how many reports you expect and how much technical automation is involved. For instance, if you are using text messages or smartphone forms, data clerks only need to call people who are having problems or haven't submitted data, rather than phoning observers for every report. The data center should have robust and redundant connections to the internet. If the internet connection stops, so does your observation effort.

When configuring the system, organizations will need a minimum of three sets of information, including:
1. The geopolitical hierarchy of the country at the levels to be monitored:
   eg, Nation->State->County->Ward->Polling Station
2. A list of all locations, such as polling stations, where the organization may observe
3. A list of all observers and supervisors, with unique IDs and phone numbers, who will be participating in the monitoring effort and the polling station to which they are assigned.

Accurate lists of observers and supervisors containing their locations and phone numbers are required, along with the list of polling stations. Alterations of these lists after establishing the system should be avoided as much as possible; when changes to the structure occur significant work is required.

Partners using the DemCloud hosted version of Elections can employ NDI's software-as-a-service platform to handle the tool's setup and management. If an organization wishes to host the Elections DemTool themselves, they will need systems administrators comfortable with Docker, Python and MongoDB.

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User Considerations

Elections is a data management tool designed to meet the needs of anyone looking to engage in an election-oriented, rigorous collection of data. Typically, a local civil society organization plays this role, but Election's design and function can also serve political parties interested in monitoring elections or other organizations concerned with collecting and managing data to evaluate political processes.

The end users for the Elections DemTool comprise the core team typically housed in a data center; this team includes the election observation managers, system administrators, data clerks and analysts. The role of observers deployed in the field is to conduct an observation, fill out structured forms and then report the data to the data center. These observers will need significant training to successfully collect and report the information powering the Elections DemTool. Regardless of whether observers report data by phone, SMS or smartphone-based app, time for thorough training and practice is required.

Data clerks will need to be trained on using the system as well. While relatively intuitive, it will take time for the users to get up to speed. It is possible, however, to expedite the training by selecting data clerks who have some basic familiarity using web applications (even as basic as Facebook).

Data clerks will need skills for basic computer operation and internet navigation, while analysts and managers will need a deep understanding of the country's electoral and political context. Analysts and managers should also have experience with statistical analysis as well as advanced comfort using computers, the internet and the features of the Elections tool.

When considering using the Elections tool, the group should be able to engage in rigorous data collection and strive to adhere to best practices and standards of data collection to ensure the integrity of the monitoring process. Adoptees ought to consult with experts in observation methodology and should be sure they're operating in an environment safe and conducive for conducting a thorough observation. In addition, the group should have an organizational structure and network in place to effectively recruit, train and manage reliable election observers.

Security Considerations

The content of the Elections DemTool system can be highly sensitive, and to protect this information, participating observer groups must develop a data security protocol. For example, a critical security consideration involves restricting access to the analysis pages to only trusted, trained leaders and data experts.

In a hostile environment, the Elections server could face direct hacking attacks, DDOS attempts or online censorship. If hosted on DemClould, NDI will mitigate those threats as much as possible. Data collection flows can also be blocked in several ways. For example, SMS short codes or even entire networks can be shut down, and mobile data used by smartphones could be cut. It is theoretically possible for bogus data to be inserted into the system. In any case, the web server must follow all standard systems administration best practices. These considerations are only some of the possible dangers; if your program is in a sensitive security context, please engage in a holistic risk assessment process to determine the types of threats that your participants may face.

Considerations for Women & Marginalized Populations

Access to the Elections tool may be difficult for persons with visual disabilities. Observers must be literate and have access to phones. Data clerks must be literate as well, and they need to be comfortable working with computers. Areas of the country with limited mobile data access and phone service will be more difficult to report from. In these locations, observers may need to move to a location with better service and/or a landline at the end of the day to submit their reports, or supervisors may collect the observer's paper forms and report them from better-connected locations.

Translations

Elections is currently available in Arabic, French, Russian, Azeri and Spanish; training documents and user manuals are available in English. All components of the tool can be translated into additional languages as needed with modest funding support. The tool will undergo continual maintenance and further development, and customization is available based on new feature requests or unusual country contexts.

Funding Considerations

When using the Elections DemTool itself, you should budget staff time for the technical implementation, training and consultation as well as the time required for election management. If you need to customize your version, translate it, or make it available to partners beyond the length of the program, there are additional costs.

Design and Deployment
- New language translations, if necessary
- Development of any new features required
- Training on use of the system for all relevant organizational staff
- Advanced training on managing and maintaining the system
- Connection to an SMS provider
- Data collection costs including text messaging fees
- Creation and uploading of location information (geographies, polling stations, and such)

Ongoing Support
- Staff time for ongoing data management
- Creation and uploading of participant lists
- Creation and updating of checklist and incident forms

What Support Does NDItech Offer?

NDI has created user manuals to assist organizations in deploying and using the Elections DemTool. NDI's Elections team are the premier experts on the field of systematic political process monitoring, and should be consulted in advance of using the system. The NDItech team can provide pragmatic advice on the data collection mechanisms, internet connectivity, connecting to SMS, and such. NDItech can provide hosting, technical support and security for organizations through the DemCloud software-as-a-service platform.

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