Ushahidi

Election Toolkit

How-to-*Uchaguzi* Independently

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Introduction

About The Ushahidi Election Toolkit

The purpose of this document is to guide individuals and organizations on accessing and using the Ushahidi Platform for election monitoring. Ushahidi allows for the rapid collection, analysis, and visualization of crowdsourced citizen-generated data from communities. The goal is to amplify citizen voices, inform decisions, and drive change.

Ushahidi functions as a tool rather than a strategy. While it can play a crucial role in accomplishing organizational objectives, it is imperative for the organization to initially define its goals. This toolkit is designed to lead you through the process of formulating the strategy and crafting the design of your campaign to effectively attain your desired outcomes.

Drawing upon our extensive 16-year history, we have crafted this election toolkit to empower individuals and organizations to leverage the full potential of the Ushahidi Platform fo reffective election monitoring.

Glossary of Terms

Open source software	Software for which the original source code is made freely available and may be inspected, modified, enhanced and redistributed.
Crowd sourcing	The process of obtaining input, data or reports by soliciting contributions from a large group of people, especially from an online community. It leverages the collective intelligence of people
Ushahidi Platform	An open-source, crowd-sourcing platform or software with tools that collect data and overlay it on maps
Ushahidi Deployment	An instance set upon the Ushahidi Platform configured for specific use cases,and where data inputs from the public is managed and mapped
Ushahidi.io deployment	An instance set up and using the Ushahidi Platform on Ushahidi's hosted cloud service. Also called hosted deployment
Self hosted deployment	An instance set up and running on the Ushahidi's open-source code on their own servers rather than using Ushahidi's cloud-based service
Survey	A way of organizing incoming information to give meaning to unstructured information coming from the public through posts, making it easier to transform the datai nto actionable information.
Post	An input or response to a given survey
Filters	Tools that help users refine and manage the data displayed on their maps or reports thus allow users to view only the information that is relevant to their specific needs or interests
Saved search	A feature that allows users to save the criteria they use to filter and search for reports for easy access of specific sets of data
Situation room	A physical or virtual room where information coming in from citizens is structured, translated, geolocated and verified is disseminated to the public in the form of reports or is escalated to duty bearers through partners
Work flow	A sequence of processes and actions that manage howthe raw data collected is processed, verified before it is published or actioned upon
Structured data	Data that adheres to the structure of surveys created on the deployment e.g. incoming posts from the web platform, mobile apps, WhatsApp
Unstructured data	Data that comes in its raw form; does not adhere to the structure of the deployment surveys created e.g. SMS, X (or Twitter messages)
Collection	A feature that allows users to group and organize related reports, data points, or media into a cohesive set based on common attributes or themes
Triage	A systematic process of evaluating, categorizing, and prioritizing incoming data to assess severity, urgency, and determine the appropriate response or action
Systematic level change	Broader impact where citizens feel more included, partners deliver more effective higher quality support to communities, and policies are more inclusive in addressing community needs
HDX integration	Ability to connect and interact with the Humanitarian Data Exchange, a platform managed by the United Nations (OCHA), allowing users to export from Ushahidi to HDX account.
General Data Protection Regulation (GDPR)	A comprehensive set of regulations that protects EU citizens data.

WHAT?

This toolkit is segmented into **three main sections:**

HOW?

WHY?

WHAT?

This section covers a comprehensive overview of Ushahidi and its election monitoring initiative, Uchaguzi. It begins with an introduction to Ushahidi as an organization, detailing its mission and history. It then explains Uchaguzi, the specific election monitoring initiative developed for Kenya, and the rationale behind its creation. The section also delves into how Uchaguzi works, providing insights into its operational mechanisms. Following this, it describes the Ushahidi Platform itself, highlighting its capabilities in data collection, management, and visualization. Additionally, it identifies the intended users of the Election Toolkit and successful election monitoring initiatives using the Ushahidi Platform, globally. By the end of this section, readers will have a clear understanding of Ushahidi's role in election monitoring, how the Uchaguzi initiative operates, and the various tools and capabilities offered by the Ushahidi Platform to support transparent and inclusive elections globally.

What is Ushahidi, the organization

Ushahidi was born in a crisis in 2008, following the post-election violence in Kenya. A local blogger wrote, 'Any techies out there willing to do a mashup of where the violence and destruction is occurring and put it on a map?' Within days, four technologists had built a web-based platform to crowdsource first-hand reports from Kenyans via SMS and the web, which were then geolocated and timestamped. This allowed citizens to understand what was happening and how to stay safe as well as let people globally know what was happening in Kenya. Over 40,000 reports were submitted, verified, and triaged. The four founders called the platform Ushahidi, which means testimony or witness in Swahili. An analysis by Harvard's Kennedy School of Government found that Ushahidi reports documented a critical number of violent events that were not reported by the mainstream media and citizen journalists. Thus, citizen witnesses became empowered to document violence in their communities, share information globally, and – where possible – feed data to domestic or international investigators and prosecutors working toward accountability for crimes.

Since then, Ushahidi has grown into a global not-for-profit organization that empowers communities to thrive as a result of access to data and technology, ensuring disenfranchised communities are equally heard and served. Our flagship product is the Ushahidi Platform, an integrated data crowdsourcing and mapping tool that allows people to rapidly collect, manage and analyze crowdsourced information from their communities. To date, it has been used more than 200,000 times in over 160 countries, crowdsourcing more than 50 million reports from citizens worldwide.

Ushahidi raises under represented voices and improves outcomes for communities globally in three impact areas: Good Governance, Humanitarian and Disaster Relief, Human Rights Protection and Climate Action. Under good governance, we enable election-monitoring by raising citizen voices to hold governments accountable to strong governance practices,including fair and free elections. The Ushahidi Platform has been used to monitor elections globally, from the USA, Nigeria, India, etc. In Kenya, we have been at the core of monitoring the past 5 elections, with the latest being the 2022 General Elections in an initiative dubbed "Uchaguzi".

What is Ushahidi, the Platform

- Ushahidi Platform is an open-source software originally developed to map reports of violence in Kenya after the post-election fallout in 2008.
- Ushahidi is a tool for collecting, managing, and visualizing and mapping data.Hence,the platform aggregates data and presents it visually on a map, making it easier to analyze geographical patterns and trends.
- It is a crowd sourcing tool that enables data to be collected from anyone, anytime, anywhere, from a large group of people, usually via webforms, SMS, USSD, WhatsApp and the Ushahidi mobile apps (on both Android and iOS).
- Posts can be managed and triaged with filters and workflows.
- Data can be viewed in through maps and report lists.

What is Uchaguzi

Uchaguzi is Ushahidi for Elections. It is a customized deployment of the Ushahidi Platform used to crowdsource and monitor citizen-generated information during elections. Uchaguzi is a joint initiative spearheaded by Ushahidi in cooperation with mission-aligned partners including citizens, the civil society, election observers, law enforcement agencies and humanitarian response agencies to monitor election incidents of significance using any technology at their disposal.

Note:"Uchaguzi" is the name designated for the election monitoring initiative specific to Kenya. However, for election monitoring deployments outside of Kenya,you are free to choose any other name that suits your initiative.

Why Uchaguzi

Electoral processes are in most cases a permanent and recurrent cycle, in which every stage not just Election Day, counts. "Uchaguzi's" mobilize citizens to bedirectly involved in protecting their votes and the electoral process. It increases transparency and accountability through active citizen participation in the electoral cycle hence enabling information-based, people-led decisions.

How Uchaguzi works

Implementing an Uchaguzi deployment is done through coordinating with a broad network of partners around the Uchaguzi deployment as the national citizen-centered electoralobservation platform that responds to citizen observations. Uchaguzi is coordinated through uchaguzi.or.ke which enables citizens to report, with any technology available to them, any incidences significant to the election.

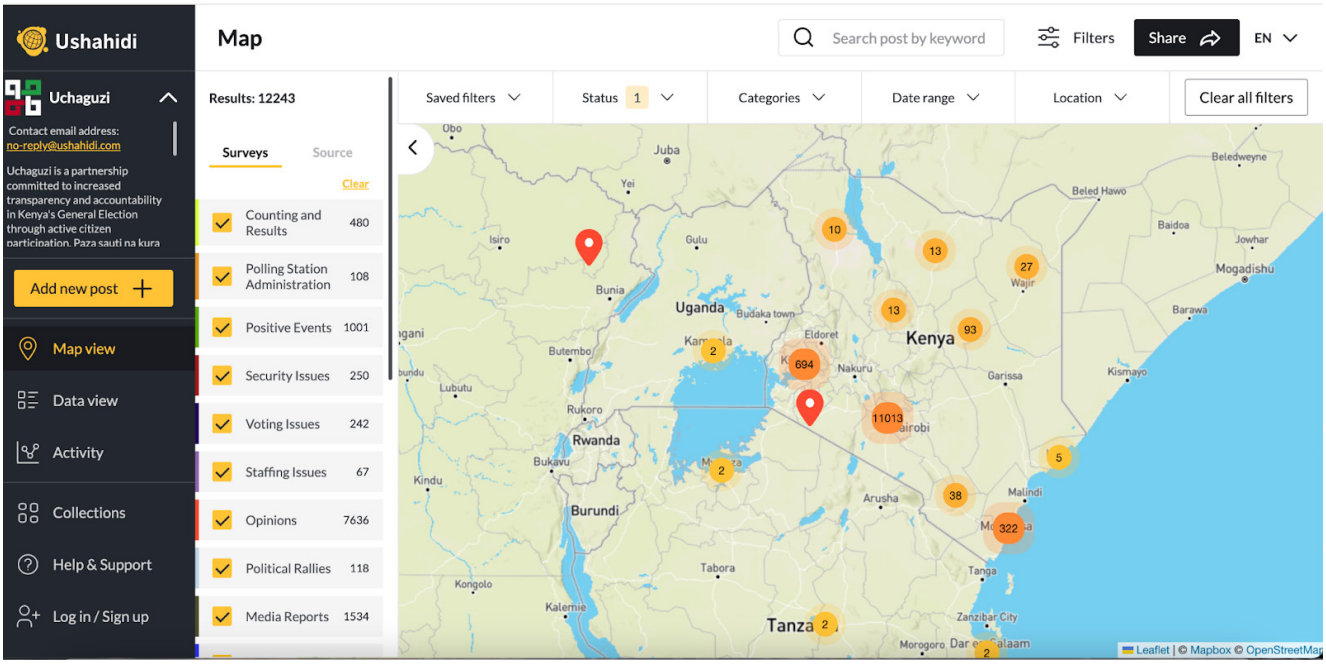


Figure: A picture of Uchaguzi map

Who will use the Election Toolkit?

The Election Toolkit is intended for use by deployers or data managers such as civil society organizations, election monitors, media organizations. It is designed for groups interested in running an election initiative and seeking to crowdsource near real-time reports from citizens, manage and analyze the data for insights.

Overview of Ushahidi Capabilities:

How Ushahidi Platform Works

Gather

Crowd source information and reports from citizens anywhere. To begin one must first **install the platform through one of the two ways below:**

a **Setting up a deployment:**
Create a deployment online on Ushahidi's hosting service at https:/ushahidi.io/create. This doesn't require technical knowledge on your side.

b **Installing it yourself (self-hosting service):**
This assumes that you have a suitable server in capacity or a networked computer and timeto go through our published instructions. Some technical familiarity with your computing environment is needed. To install you use Ushahidi's code of Github and put it in your server.

Configuring your deployment. As the admin of your new deployment, one customizes certain settings based on the project you're working on. This section describes how to change your general and map settings, as well as how to configure Data Sources, manage Surveys and Categories.

Collect data via available data sources below:

- Web
- Mobile Application. iOS and Android-compatible:
  - iOS
  - Android
- USSD*
- SMS*i.e through aggregators and gateways such as:
  - Africa'sTalking
  - InfoBip(SMS coverage)
  - Mteja
- X formerly known as Twitter*

*Have integration costs

Manage

There are two aspects of management. One is data management and user management. Data is collected and managed in the form of posts added to a survey.

Review and organize surveys to inform your work through:

- Filters and saved search
  Retrieve the right data with filters and save your search to pick up where you left off. This will save you time and provide a starting point for your search, which will be particularly useful when dealing with a large dataset or numerous filter categories.
- Workflows
  Build tasks and flows for data to approve and respond more effectively
- Collections
  Group submissions and data sets to stay organized
- Team Collaboration
  Work together to manage data with multiple user roles and permissions
- Alerts
  Configure email and SMS notifications for data submissions, and deployment updates.

Users

Fundamentally, there are two types of users:

1. ***Guest/anonymous/Not signed-in/Non-registered users or viewers-*** permissions are limited to adding post on a deployment and-can only access three view modes i.e. Map, Data and Activity views. (login required, limited privileges)
2. ***Signed-in/Registered users-*** have access to more permissions depending on their role i.e. Admin or Member and can access all four view modes, including the Settings view.

Managing Roles

When working with large groups of people managing data on Ushahidi deployments, it's important to set up and manage default and custom roles and permissions for different signed-in users on your deployment.

Each deployment has a default Admin and Member role, which cannot be deleted.

- **Admin role:** user with the highest level of access and control over the deployment. The "Admin" is responsible for managing the overall platform, including its configuration, user permissions, data management, and customization.
- **Member role:** only grants access to edit their own posts. The "Member" role can be edited to update the permissions (login required, limited privileges).
- **Everyone:** These are non registered users. Can only add posts on a deployment and view published posts (login required, all access).[1]

Analyze

The Ushahidi Platform provides you with different view modes to visualize and manage your data.

1. **Map view**
   The map view gives you the ability to visualize data with location information on a map. Your Ushahidi deployment defaults to the map mode for anyone who visits your homepage.

   Posts adjacent to each other on the map will cluster together, displaying a number denoting the number of posts combined.

[1] Details on 'Manage' and 'Analyze' are in the Deployment Setup chapter - designing the Uchaguzi Deployment.

2. **Data view**

View, triage, and manage posts coming into your deployment as a chronological list of vents over time.

Managing posts from the data view one edit the postor:

- Add posts to collections (public)
- Edit posts (setting visibility to only members of your team/limited by role)
- Share posts (public) via Facebook, X (formerly known as Twitter), embed them on another website or export them to a CSV file.
- Publish posts (limited by role)
- Put posts under review (limited by role)
- Archive posts (limited by role)
- Delete posts (limited by role)

3. **Settings view**

Only signed-in users (with the necessary permissions) can access this mode/view.

Filters

Filters come in handy to narrow down a large amount of data.

You can filter posts by many types of parameters, such as: Surveys, Sources,- Categories, Status, Date Ranges, and Location.

Filters are additive, so you can apply as many as you would like. This search filter is available on all pages.

You can also sort posts by Date of creation, Postdate i.e. date when it was assigned to a survey, date updated.

Act

Utilize Platform features to respond, inform decisions, and act.

Exports via CSV for further analysis. Incorporate exported data into other analys is tools.

- HDX integration
- HDX is an open platform for sharing data across crises and organisations. Its goal is to make humanitarian data easy to find and use for analysis. Assimilation into open data to benefit others.

Use Cases of successful election monitoring deployments

Below are use cases of how the Ushahidi Platform has been used: USA elections, India elections, Nigeria elections, Mozambique elections, Reclaim Naija.

WHY?

The WHY section focuses on the strategic planning necessary to clearly understand and articulate the goals and objectives of your election monitoring initiative.This includes identifying the key outcomes you aim to achieve, such as enhancing transparency, ensuring fair elections, or documenting human rights violations. Organizations using the toolkit will be guided through critical questions to define their aims: Who are they monitoring for? What specific data do they need? How will this data be collected and used? By addressing these considerations, you will develop a focused and effective strategy for your election monitoring efforts, ensuring that your objectives align with your broader mission and the needs of your stakeholders.

Strategic Planning

Strategic planning process includes the identification of long-term objectives and the tactics for achieving them. It will cover how the project goals were aligned with broader organizational or community objectives, the stakeholder analysis that was conducted, and how priorities were set for the phases of the project.

To effectively achieve your group's or organization's goals on election monitoring, it's important to understand them first. This will help you outline your specific activities and determine how the Ushahidi Platform can assist in achieving them. A goal is a desired result you want to achieve and is typically broad and long-term. An objective, on the other hand, defines the specific, measurable actions to be taken to achieve the overall goal.

Stating your goal

Articulating your goal outside of the technology is a good exercise. You should try to complete the following sentence: We are working with (who) to do (what) so that we can (why)? The 'Who' is your target participants. The 'What' is one or more key objectives. The 'Why' is one or more goals.

Building your objectives

Break down the goal into phases so that you can state these objectives to your team. For example:

Goal: To implement a hybrid (online and in-person) Situation Room to aid election-related information sharing among civil society working groups, media, and relevant authorities to enhance collaboration, advocacy, and rapid response to any electoral issues.

Objective: Produce digital content to aid training of partners and digital volunteer communities on Uchaguzi platform workflows.

Key Considerations

Before deciding to use Ushahidi for elections, asking a series of questions, as below about what you aim to accomplish is pertinent.

Who are you?
Are you a non-governmental organization focused on promoting democratic values? Are you a civic tech group providing tools for transparent election monitoring? Are you an advocacy group aiming to ensure voter rights and participation?

Who will you partner with?
Which local civil society organizations can enhance the credibility and reach of your monitoring efforts? Are there international election observation missions that align with your goals? What community groups can provide valuable local insights and resources? How can media outlets be engaged to amplify the impact of your monitoring initiative? Are there governmental bodies willing to collaborate for a more comprehensive understanding of the electoral landscape? How can leveraging the strengths and networks of various partners ensure a more effective and impactful deployment?

What type of deployment are you planning to run?
In this instance, you are running an election deployment and elections generally have fixed end dates.

What information do you want to collect?
Is it human rights violations, e.g., access to polling stations, information on online harms/

Who will submit the information?
Is it the general citizenry or a specific target group e.g. women, youth, persons with disabilities, etc.

How will it be submitted?
Deciding on the suitable mode for data collection depends on access to most respondents, e.g., SMS, Web.

Who will assist to monitor, manage data, verify and approve incoming reports?
Several internal users will require to be given permissions by the deployment Admin to verify reports based on on-ground observers or expert verified information. These are sometimes known as digital volunteers or data champions, or election observers.

Who will use the data?
This informs the types of surveys to create in order to collect suitable data for your users such as decision makers, duty bearers, citizens in form of situational reports.

Are there any security concerns regarding the collection and presentation of the data?
Privacy of data must be ensured when collecting sensitive data, and caution taken before publishing posts to the public.

How will the data be used to accomplish what your goals?
How will the collected data help in identifying and addressing election-related issues, such as voter intimidation or irregularities? In what ways will the data contribute to increasing transparency and accountability in the electoral process? How can the insights derived from the data be used to inform and influence decision-makers and stakeholders? What actionable steps will be taken based on the trends and patterns observed in the data? How will the data be utilized to engage and empower citizens in the democratic process? What methods will you use to ensure that the data collected translates into tangible improvements and outcomes for future elections?

What trends, patterns and insights are you seeking to derive from the data
Are you looking to detect patterns of voter intimidation, fraud, or other irregularities?

How will you analyze data to uncover regional or demographic differences in election experiences?
Are you interested in tracking the dissemination and impact of misinformation or disinformation during the election period? How will you use data to understand and address barriers to voter participation, particularly for marginalized groups? What are the key indicators you will monitor to assess the overall fairness and transparency of the electoral process?

Who is your target audience?
Are you targeting government officials and election authorities for actionable insights? Will civil society organizations and advocacy groups be key users of the data? Are you focusing on engaging the general public, including voters and community members? Is there a particular demographic, such as women, youth, or marginalized communities, that you are aiming to support? How will media organizations use the data to inform their reporting and coverage of the elections? Are academic researchers and analysts part of your intended audience for detailed analysis and studies?

How is mapping going to contribute to your project?
What specific role does mapping play in enhancing the effectiveness of your election monitoring initiative? How does the use of spatial data visualization help stakeholders better understand and interpret election-related information? In what ways does mapping facilitate the identification of geographical patterns or trends in election-related incidents? How will mapping support decision-making processes and strategic planning for election monitoring activities? How do you plan to leverage mapping to communicate key findings and insights to relevant stakeholders and the broader public?

WHO?

In this section, you will learn how to identify and collaborate with partners for your election monitoring initiative. You'll gain insights on selecting partners aligned with your goals, understanding their operational environments, and building trust-based relationships. Additionally, you'll explore strategies for engaging and managing digital volunteers and learn about effective communication practices within the election monitoring team. By the end, you'll be equipped to identify, select, and collaborate with partners, build a reliable volunteer base, and establish efficient communication channels to support your election monitoring efforts.

Identifying Potential Partners

Various partners, including Civil Society Organizations (CSOs), government agencies, and international NGOs, provide access to data, volunteers, local knowledge, and both technical and financial resources. Running an election monitoring initiative involves multiple institutions, thus, it is important to identify areas where other organizations can contribute to your efforts. Thus Partnerships are key when running an election monitoring initiative. Identify mission-aligned partners in civil society organizations, government bodies, the media that help to amplify and escalate citizen voices and provide resources.

Guide To Choosing Partners

In this project, build partnerships with civil society organizations, NGOs, government bodies, and election observation groups. When choosing partners, consider several factors:

- **What is the area of focus for your partners/Is the organization undertaking work in a similar context?**

  In election context, this may be election observer groups, security agencies, communication authorities, NGOs in good governance, transparency, inclusivity e.g. those representing disenfranchised groups such as women, youth, persons with disabilities, etc.

- **How trusted is the organization in the communities that you would like reach?**

  Consider organizations that have a demonstrated track record of reliability, integrity, and transparency. Community members are likely to trust an organization that has established strong relationships with local leaders, influencers, and stakeholders.

- **What contextual knowledge would the partner provide?**

  Partnerships with local organizations, civil society groups, and community leaders provide crucial insights into the social, political, and cultural dynamics of the

election context. This includes understanding historical election-related challenges, prevailing political tensions, socio-economic disparities, and the unique needs and concerns of various population segments. Moreover, local partners possess firsthand knowledge of the electoral landscape, including key stakeholders, electoral laws and regulations, voting processes, and potential areas of vulnerability or risk.

- **Can the partner share its resources, including workspaces and local relationships?**

  E.g., access to shared workspaces facilitates seamless coordination and communication among team members, fostering a conducive environment for collaboration and knowledge exchange. Additionally, leveraging the local relationships and networks of partners enhances outreach and engagement efforts within the community. These relationships provide valuable access to key stakeholders, including government officials, community leaders, and grassroots organizations, facilitating data collection, verification, and advocacy efforts.

- **How open is the partner to working in new ways and facing the challenges of learning in a collaborative dynamic?**

  Navigating the shifting landscape of election monitoring demands partners who are not only adaptable but also eager to explore new avenues and confront the evolving challenges with creativity and resilience. Thus, embracing innovation and flexibility becomes paramount.

Here are groups of people that will be part of the information system:

- **Crowd or public community:** people who freely give information from an open community and are unknown to the project e.g. citizens during an election.
- **A trusted/bounded community:** pre-identified individuals or groups that are part of the community reporting into the deployment from the ground e.g. election observers, digital volunteers, etc.
- **Partners:** organizations involved in the project e.g. an election observers body or organizations that wish to receive analyzed information such as media or journalists.
- **The Ushahidi Platform:** this is where information from the groups above will come into and where the processed and analyzed information may come from.

Understanding your partner's working environment

If you have a partnership with a civil society organization (CSO), community-based organization (CBO), or partner in a limited digital environment plan ahead with both resources and time to ensure that they are able to join meetings and conference calls. If possible, consider arranging a meeting in their location, especially if they are linked to communities that you intend to crowd-source information from.

Getting to know each other and building trust

Discovering and shaping how your partners are working together takes time. During the 2022 Kenyan election, the project drew together 19 major partners. It was essential to bring them together for face-to-face meeting not only for planning, but to help each of the partners to recognize each others' roles and how their organizations might complement one other.

Face-to-face meetings were ways that partners worked out their expectations of each other and defined (and honed) their respective roles and responsibilities.

The partner list in Kenya's Uchaguzi 2022 initiative included:

Partner	Area of Expertise
National Council for Persons with Disability (NCPWD)	Handling issues pertaining to accessibility during the election process
Baraza Media Lab/ Fumbua Initiative	Handling issues pertaining to fact-checking, verification and escalating fake news reports on social media
Electoral Law and Governance Institute for Africa (ELGIA)	Handling issues around constitutional democracy, good governance, human rights, and electoral process issues resolution
Transparency International Kenya	Handling issues around integrity, transparency, and accountability in electoral processes
URAIA Trust	Handling gender-responsive education about citizen's constitutional rights and responsibilities in the election
Kenya Correspondents Association	Verification, gathering and disseminating news about major events in the country
Protection International-Kenya	Vulnerability assessment, protection management, and creation of a safe and enabling environment for Uchaguzi partners
Kenya Editors Guild	Monitoring verification and ethical journalism during Uchaguzi
Mathare (MSJC) Social Justice Centre	Verification of issues pertaining to human rights and social justice in informal settlements during the election
Map Kibera	Verification of issues pertaining to human rights and social justice in informal settlements during the election
Mzalendo Trust	Information sharing and monitoring public participation in the elections
ACT! (Act Change Transform)	Handling peace building and monitoring/countering violent extremism during the elections
Centre for Multiparty Democracy, CMD-Kenya	Handling issues relating to political parties and political reconciliation
The Sentinel Project	Research on misinformation and fake news
Constitution and Reform Education Consortium (CRECO)	Election monitoring, and escalation on issues relating to human rights, governance, and democracy
Independent Medico Legal Unit	Response and escalation for medical emergencies
Elections Observation Group (ELOG)	Verification and escalation of observer reports during elections
Communications Authorityof Kenya	Escalation of issues pertaining to hate speech and ethical journalism on media
iHub Kenya	Hosting election situation room

Digital Volunteers

Digital volunteers are individuals who contribute their time and skills to assist in the collection, verification, and dissemination of information, often during crises or significant events. They operate remotely, leveraging digital tools and platforms to support various tasks.
Election monitoring requires a large number of onsite and virtual volunteers and this must be factored into your plans. Being able to recruit and coordinate adequate numbers of volunteers is essential to the success of your planned activities.

Ushahidi provides the platform for collecting and processing data. However, it is essential to effectively organize and manage staff and volunteers to successfully carry out the necessary tasks. Digital volunteers play a crucial role in collecting and managing data through workflows such as media monitoring, translation, geolocation, verification, analysis, and visualization of data from a Ushahidi deployment.

The most efficient way to build a network is to identify credible civil society groups in each region that might be interested in taking part in your monitoring effort as a coalition partner. Taking on partners in regions will offer opportunities for coordinating activities and recruiting volunteers. At the same time, it will be important to manage these new relationships carefully and ensure that partners share in the decision-making process of the network.

Communication among digital volunteers is coordinated through digital platforms such as Slack, a cloud-based team communication platform. Tasks are grouped into categories teams are formed and different Slack channels created. The purpose of different channels is to focus conversations within the area of focus. **Team communication platforms have benefits such as;**

1. **Centralized Communication:** All communication happens in one place, making it easier to manage and track conversations e.g. General channel
2. **Focused Discussions:** Dedicated channels help keep discussions organized and relevant to specific tasks or areas of focus e.g. Structuring team , translation team channel
3. **Real-Time Collaboration:** Volunteers can communicate in real-time, which is crucial for timely data collection and response during crises.
4. **Flexibility and Integration:** Slack integrates with many other tools and platforms, enhancing overall efficiency and productivity.

A summerized roles guideline table

			Staff/Volunteers		
Role	**Description**	**To-dos**	**Lead**	**Support**	**External Help**
Project Management	Lead on partnership/ relationship building + management. Point of contact for any external queries	"Keep track of all crowdsourcing efforts happening and reach out to coordinate Map out potential partners to bring on board and their role Map out additional potential opportunities"			
Deployment Planning	Deployment set up i.e adjusting surveys, categories etc	"Identify all data gaps around the elections or crisis and keep track of which ones you're filling at the moment. Create and adjust surveys/categories to meet data gaps "			
Data Management	Structuring and publishing reports	"Recruit, manage and provide guidance to any volunteers working on the deployment Follow uchaguzi workflow "			
Communications	Press releases, social media, blog posts	"Develop Comms plan around the emerging issues			
Research and Analysis	Review deployment data and share regular reports of findings.	Review reports on platform and share reports			
Engineering support	Pulling in tweets, managing use of dataminr models, fixing bugs	Bug fixing -Manage volunteer developers			
Product support	"Gathering UX feedback and feeding it into the roadmap Support on prioritization of internal and external requests to engineering"	"Gather feedback from external engagements through project managers Develop mechanism to channel feedback"			

◎ Volunteers Team Communication Guidelines

Global collaboration on teams in real-time require some guidelines:

- Access to permissions in the deployment is ONLY granted to those who have been trained. These are the team workspaces to collaborate.
- Media, untrained individuals,or observers are not allowed on the slack channels.
- Always check in with your teams/channels at start of shift and end of shift.
- An Uchaguzi Code of Conduct is necessary due to the nature ofc ollaborating with people from various timezones and places.
- Review Uchaguzi Roles and Responsibilities and Uchaguzi Privacy and Security Guidelines only the Key Master (user role with the highest level of access and administrative control over a deployment) will be able to add people to slack teams.
- Text is tone deaf. You may need to clarify your thoughts and questions. It doesn't always pick up on the human.
- Don't call the whole general slack channel as it is confusing and disruptive.
- Don't add large attachments. Send these via dropbox or email
- Bring on the happy, but don't overload it with too much chatter or tangents. You may need to take it over to the fun place - the GENERAL chat :)

HOW?

This section provides a comprehensive guide on how to plan and execute your election monitoring deployment. It includes detailed instructions on developing a schedule and timeline, allocating resources effectively, and setting up the technical aspects of your deployment. Additionally, you will learn how to design the structure of your Uchaguzi deployment, ensuring it is organized and efficient.

By the end of this section, you will have a clear roadmap for scheduling, resource management, technical setup, and structural design to successfully run your election monitoring initiative.

Schedule and Timeline Development

An effective schedule is vital to ensure that project milestones are met and deliverables are completed on time. This involves establising clear timelines, volunteer schedules, technical development work plans, and terms of reference. Effective scheduling of shifts and staff time is a critical path to success. Providing structure for volunteers and consistent data handling are crucial aspects of this process.

1. **Make Timelines**
   The timeline should be discussed in a meeting by key stakeholders or partners so that everyone shares in the decision-making process.

   Remember to include the following information in your timeline:

   a. **Election Calendar**
   When is the Election Day(s)? These dates should form the basis for your timeline, as the election situation room includes events before, during and after the election date.

   b. **Fundraising Deadlines**
   Find out what the deadlines are for funding proposals from major donors/funders in your country. If deadlines are not fixed, set internal deadlines for proposal submissions to allow enough time for activities.

   c. **Training Dates**
   Working backwards from Election Day, determine when you must train volunteers (remote and in-person). If you are using a cascade training plan, you will need to train the trainers, who will train observers.

   d. **Reporting Schedule**
   Consider the timing of submitting monitoring reports to the public e.g. daily situation room updates.

e **Evaluation**
Evaluations should be conducted as soon as possible following the completion of the project, to collect useful and valid information. Additionally, consider incorporating smaller, quick assessments, for instance, daily check-ins with the coordinating group.

Resource Allocation

Resource allocation is essential for ensuring that all aspects of the project are adequately supported, time, personnel, or financial. No project proceeds without people, funding, and the technical resources to achieve your goals. What resources do you need to make your project a success?

1 **Obtain Funding**
When running an election monitoring initiative, careful financial planning and vigorous fundraising are crucial. Consider available funding from domestic or international sources. If funding is scarce, prioritize fewer activities or fewer days to maintain your efforts, success, and group credibility.

2 **Draft a Budget**
Draft a detailed budget for the full period of your project as outlined in the timeline, including all planned activities. Although the initial budget will largely be based on estimates, be realistic about the various costs. Commonly, the bulk of costs are related to running an Election Situation Room such as training volunteers, materials, transport allowance and meals. For this reason, the budget will be an important factor when considering how many volunteers to recruit.

3 **Identify Potential Donors**
Groups should consider submitting funding proposals to potential domestic or international funding sources aligned with their mission. It's important to ensure that these funding sources are free from partisan influence.

4 **Meet with Potential Donors**
After creating a budget and a list of planned activities, schedule meetings with potential donors to communicate your plans and funding requirements. Most donors will ask you to write a proposal detailing your planned activities and how they will be carried out. During the meeting, inquire about available funding opportunities, application deadlines, and the preferred proposal format. It's also a good idea to consider organizing a joint meeting with multiple potential donors. Fundraising efforts should begin at least a year before the Election Day.

5 **Be Creative**
Although it may be difficult to raise funds locally, it might not be impossible. Consider whether there are any opportunities for in-kind contributions of goods or services especially from partner organizations. Could a media partner donate airtime for volunteer recruitment drives and other publicity? Or you partner with an organization that will offer space, furniture and office equipment to host the Election Situation Room.

Deployment Setup

Technical Setup

There are two methods of hosting Ushahidi deployments: Self-hosted deployment and Hosted deployment.

1 Self-hosted Ushahidi Deployment

A self-hosted Ushahidi deployment involves setting up and running the Ushahidi Platform on your own servers rather than using Ushahidi's cloud-based service. This approach provides more control over the deployment, including customization, data management, and integration with other systems.

Steps for Self-Hosted Ushahidi Deployment

Minimum System Requirements

- System supporting Docker Engine running Linux containers
- 2GB of RAM
- 10GB of disk space

Domain setup Requirements

Access to configure DNS records in a publicly accessible domain or subdomain:

- A single host entry pointing at the IP address of the server where you are installing Platform

If you wish to use this same domain for sending outgoing e-mail:

- E-mail service provider supporting SMTP
- SPF, DMARC and DKIM setup instructions as given by the provider

Installation

Obtain the latest Ushahidi release from Ushahidi's GitHub repository. Follow instructions here:
https:/github.com/ushahidi/platform-release?tab=readme-ov-file#run-with-docker Make sure that you follow the SSL/TLS setup instructions.

2 Hosted Ushahidi Deployment

A hosted Ushahidi deployment refers to using the Ushahidi platform through Ushahidi's managed cloud service, rather than setting it up on your own servers. This approach leverages Ushahidi's infrastructure to provide a ready-to-use, managed instance of the platform, allowing users to focus on data collection and analysis rather than the technical aspects of deployment and maintenance.

Steps for Hosted Ushahidi Deployment

- Sign up on https:/ushahidi.io/create for a step-by-step guide to help you createy our hosted deployment
- Create a New Deployment
- Customize the Deployment in appearance i.e logo, colour and surveys
- Launch and share with target audience to begin collecting data
- Monitor and manage incoming data
- Respond and act on insights from data collected

Benefits and Considerations

Benefits:

- **Convenience:** No need for technical expertise or managing servers.
- **Support:** Access to Ushahidi's support team for help and trouble shooting.
- **Security and Updates:** Regular maintenance and security updates are handled by Ushahidi.
- **Scalability:** The hosted solution can scale with your needs.

Considerations:

- **Cost:** support fees may be higher than self-hosting, although it eliminates technical staff and infrastructure costs.
- **Customization Limits:** Less flexibility for deep customization compared to self-hosting.
- **Data Control:** While data is secure, it is stored on Ushahidi's servers, which may be a consideration for sensitive information.

Designing the Uchaguzi Deployment Structure

After setting up your deployment the next step is to create a survey.

Surveys

A survey defines critical aspects of a post's structure and permissions. For example, a post's "survey" defines which fields are available for respondents to complete, and who can see it when it is published. Creating a survey is a way of organizing incoming information to give meaning to unstructured data coming from the public (or posts), making it easier to transform the data into actionable information.

The Admin (user with highest level of control) should be logged into create a survey. To create:

Example:
Survey Name: Be as specific as possible so that users will understand what they are selecting when adding new posts for example Voting Issues

Description: Provide a brief description of what kind of data you'll be collecting with this survey e.g.Reports on voting issues at polling stations

Fields

Fields are specific data entry points with in a survey in Ushahidi. Each field corresponds to a specific questions or data points that you collect from users when they submit are port. Fields can be of various types depending on the kind of data you want to gather. A pop-up box with a list of different field types will appear on your screen. These include:

- Shorttext
- Longtext
- Number (decimal)
- Number (integer)
- Location
- Date
- Date & time
- Select
- Radio
- Checkbox

Choose whichever one will work best for the type of data you are trying to capture.
Note: Phone numbers fall under short text rather than number (this is because if you're capturing phone numbers starting with 0, the zero is automatically removed thus affecting this field) ; checkboxes for many choices available, etc.

Tasks

Tasks are activities or actions assigned to users, often linked to the data collected through surveys and reports. Tasks help in managing workflow and ensuring that data is reviewed, verified, and acted upon appropriately.

Click on Add Task on your survey creation/edit page. A small pop up box will appear, prompting you to give your task a name. If you'd like to make this task required before post submission, switch on the ***Require this task be completed before a post can be visible to the public*** toggle. This means that, a post will not be published until this task is marked as complete. Click on ***Add.***

Set the following op ons

- **Required:** When set to yes, this task must be set as complete for successful post submission.
- **Task is only for internal use:** This limits visibility of this task during submission only to teams with permissions to manage posts on your deployment i.e only internal team members will be able to submit responses to this task.
- **Show this task to everyone when published:** This limits visibility of task responses when viewing submitted posts if not enabled i.e it limits visibility of responses to tasks to internal teams only.

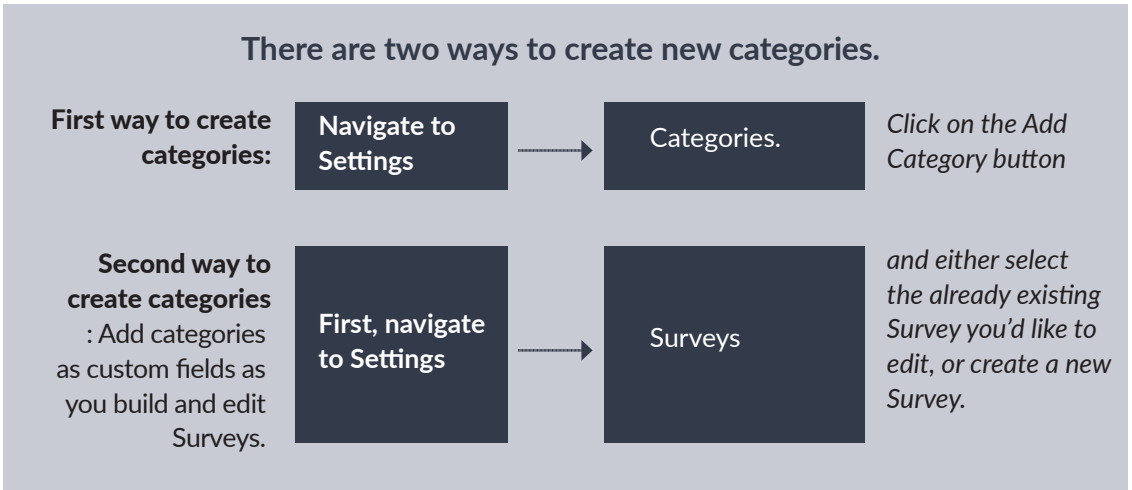
Categories

Creating a category is a way of grouping incoming posts based on their content within a Survey. Categories are labels or tags used to classify and organize reports based on predefined criteria. They help in filtering and sorting reports for analysis.

When building a survey and categories:

- Provide easy terminology for people submitting posts (as well as to volunteers who are processing the posts) to understand, enabling quick classification of data without specific knowledge and expertise in the field of election monitoring.
- Provide categorization that reflects the needs and systems of responders in order to provide them with data that can be useful for their operations.

The deployment DOES NOT come with pre installed/set-up categories. You will need to create this on your Ushahidi deployment. Categories are now treated as custom fields within a Survey. This gives you the flexibility to add certain categories to some surveys, but not others.



In election monitoring context surveys can be built topically with different scenarios or different nature of incidents observed as below:

Survey	Survey Options with Descriptions/ Nature of incident
Counting and Results	• Failure to announce results by electoral commission official • Irregularities with transportation of ballot boxes • No Transport to Deliver Ballot Boxes/Ballot Boxes not Transported to *Tallying Centre* • Ballot Boxes Destroyed After Announcing Final Results • Protest over declared results; Violence, demonstration Counting Irregularities • Ballot Papers not Being Counted in a Transparent Manner • Observers or Party Agents not Allowed In The Hall During Vote *Counting* • Spoilt Ballot Papers not Properly Preserved For Review • Intimidation of Counting Officials & Observers • Error or Omission In Computing or Completing Tally Sheets • Unusually Many Rejected/Spoilt Ballot Papers • Officials Tallying Wrong/Tampered Results • Officials not Reporting Results At Prescribed Time *Party Agent Irregularities* • Party agents fail to Agree On Disputed Ballot Papers • Agents Failure to Sign Final Results From Ballot • Agents Decline to Sign Tally Sheet & Decline to Give Reason • Provisional Citizen Result
Positive Events	• Civilian Peace Efforts • Citizen led initiatives to promote peace Everything Fine • Police Peace Efforts • The police sometimes have community outreach events to promote peace and security during the polls.

Polling Station Administration	Polling station logistical issues Polling Station Access Blocked Polling Station not Opened/Closed On Time / not Numbered Properly Design of Polling Station Compromising Secrecy of Ballot Polling Station not Adequately Lit Polling Station Closed Before Voting concluded Due to Violence Due to darkness Due to lack of material Missing/In adequate Voting Materials Reports of absent or fewer-than-needed ballot boxes, ballots, stations, volunteers,etc. Ballot Box Irregularities Ballot Boxes not Sealed at Start of Voting Process Sealed Ballot Box Tampered With Non-Voting Materials Placed In Ballot Box Campaign material in polling station Any materials (flyers, banners, buttons, clothing, etc.) pertaining to the promotion of a certain candidate or party. BVR issues

Voting Issues	Voter registration irregularities Register of voters missing Voters Names Missing From registry Voters Issued Invalid Ballot Papers Voter Integrity Irregularities Importation of voters Voter Impersonation VoterIntimidation Bribing of Voters Voters Voting More Than Once Voter Identification Kit not Working Voter Assistance irregularities Issues with proper identification Illiterate Voters not Assisted Unusually Many Assisted Voters/Voter Assister notT aking Oath of Secrecy Voting Irregularities Eligible Voters Turned Away/not allowed to Vote Ineligible Voters Allowed to Vote Purchasing of Voters Cards

Security Issues	Abductions/kidnapping including hostage taking. Bombings including vehicle attacks. Violent Attacks Attacks without weapons (e.g.,brawls), knives,or few small arms (e.g., one or two handguns) Armed Clashes Attacks with multiple firearms, automatic weapons, or heavy weaponry (mortars, shelling, etc.) Riots Civil or political unrest explicitly characterized as riots, as well as behavior presented as tumultuous or mob-like. Includes looting, prison uprisings, crowds setting things on fire, general fighting with police (typically by protestors), lynch mob assemblies, ransacking,, and stampedes. Vandalism and Physical Attacks on Property Sexual and Gender Based Violence Demonstrations including rallies and marches Eviction/Population displacement Dangerous Speech Threat of Violence Rumors Presence of a credible perceived threat: unverified reports of violence, corruption, intimidation, looting, etc. Something not personally witnessed, but widespread knowledge or notable 'hearsay.' Please specify source and context. Mobilisation towards violence Where concrete step have been taken and violence appears imminent. Ambush Presence of weapons Purchase of weapons

Staffing Issues	Absence or insufficient number of electoral Officials/Staff At Polling Station Opening Absence or insufficient number of law enforcement officials at Polling Station Observers/Media Blocked From Entering Polling Station Electoral Officials not ActingIn Accordance to Set Rules
Other	This is for posts that do not fit into any other survey. Theseposts should be monitored regularly to inform addition of new posts or reassignment of the posts into existing surveys.

Workflows

Workflows refer to the structured processes and sequences of tasks that guide how data is collected, verified, managed, and acted upon during an election monitoring effort. These workflows ensure that the election data is systematically handled, from the time an unstructure post or survey is filled to final analysis and response.There are eight basic workflows conducted through digital teams within Uchaguzi, broken down into three tiers:

1. **Tier 1:** Consists of the Media monitoring and Structuring teams. These are the first teams tosee and review posts received within the platform.

   - **Media Monitoring:** Responsible for monitoring citizen posts via different social media streams, extract useful and relevant information for the election. For example, X (formerly known as Twitter), news articles and blogs.
   - **Structuring:** Responsible for converting posts from SMS and X (formerly known as Twitter) into the structure of existing surveys; for example opinions, voting issues, and security issues. Also responsible for assigning tasks to other teams, for example, the translation team in case a post needs translation, and also flagging posts that need immediate attention to the escalation team.

2. **Tier 2:** Consists of the translation and the geolocation team. These teams ensured that posts within the platform are understandable and one can identify locations where posts are coming from.

   - **Translation:** Responsible for the translation of posts from local languages to English, ensuring the reports from native speakers are included in the workflows.
   - **Geolocation:** Responsible for reviewing all posts for location information, and mapping posts that require geolocation.

3. **Tier 3:** Involves the verification and the publishing teams. These teams help publish and ascertain the accuracy or correctness of the information received.

   - **Verification:** Responsible for verification of posts. Work closely with verification partners on the ground and in the situation room to ascertain the authenticity of the information received and flag off misinformation.
   - **Publishing team:** Responsible for reviewing (ensuring correct structure and categorization) and publishing posts. Act as the first quality control step in the workflow process by working closely with all Uchaguzi digital response teams to ensure posts are fit and safe to publicly appear on the map.

To bolster the three tiers of the workflows, the technology and analysis/research team are fully engaged to provide critical supporting functions:

- **Analysis and Research:** Responsible for analyzing data within the platform, and providing situation room reports in the form of narratives, data analysis, and visualizations. These are disseminated on social media and published on the blog to keep the public regularly informed.
- **Technology:** The Ushahidi technology team is responsible for ensuring the stability of the platform during the election monitoring period for hosted deployments. If the initiative is self-hosted, it is the responsibility of the organization's own technology team to maintain the platform's stability and make necessary modifications.

Uchaguzi.co.ke

Data Management and Quality Assurance

Data Privacy and Protection Guidelines

What is the General Data Protection Regulation (GDPR)
The General Data Protection Regulation (GDPR), it is a comprehensive set of regulations that protects EU citizens data. It specifies how personal data can be processed and monitored. The law is in effect as of May 25, 2018. See the full regulation for more detail.

Should GDPR concern me?
Even if you are not based in the EU, GDPR rules may still apply to you. If you are using Ushahidi to collect data from EU citizens, you need to be GDPR compliant. If you are not based in the EU it is still good practice to comply with these rules to provide necessary protections for the personal data you collect.

How Ushahidi Prepared for GDPR

We clarified your rights in our privacy policy
Our Privacy Policy includes the rights you have over your data including right to access, modify, delete or restrict your data.

We confirmed our vendors comply with GDPR
Since we use third party tools like Google Analytics to improve our services and Intercom to provide support, we made sure that all our vendors are GDPR compliant. We have reviewed all of our vendors privacy policies and Data Protection Agreements. In addition, we've provided more information about what vendors we use within our Privacy Policy.

We updated our Data Processing Agreements
The GDPR regulations require data protection commitments between all customers, contractors and vendors. Our updated Data Processing Agreement describes the terms of our commitments. Our Data Processing Agreement is available to any customer to sign upon request.

We've completed an internal data audit
To document our compliance with the GDPR we've audited all the personal data we hold, and the legal basis we have for holding it. We plan to complete data audits at least once a year.

We've documented our security practices
We've added a Data Security section to our support pages to explain how we keep data secure, and published our security contacts.

We've updated our data access and portability features

We updated Ushahidi's data mode with bulk actions, so you candeleteandchangethestatusof reports. We've also made improvements CSV exports so that you can retrieve all or any slice of data from your deployments and import it into other tools of your choice.

We're providing a new line of support for data requests

We want to make sure that you are able to access all of your data rights either within the Ushahidi platform or by contacting us directly. If you need to access, modify, delete or restrict your data, you can write us at data@ushahidi.com.

Continuing to improve our privacy and security

- We want to continue to improve our privacy and security practices, and make it easier for our users to maintain the privacy of their data. We're currently working on or planning:
- Self service tools for data controllers
- Infrastructure migration and security hardening
- EU-US Privacy Shield membership

Data Security

Protecting your data

Ushahidi uses a variety of industry-standard technologies and services to secure your data from unauthorized access, disclosure, use, and loss. This includes but is not limited to:

- encrypting all data in transit using SSL
- standardised server configurations including sensible security defaults, such as hardened SSL configuration and restricting open ports
- where possible, we limit internal communication between services to internal private networks

We take reasonable administrative, physical and electronic measures designed to protect the information that we collect from or about you (including your PII) from unauthorized access, use or disclosure.

Note: ***Please be aware, however, that no method of transmitting information over the Internet or storing information is completely secure. Accordingly, we cannot guarantee the absolute security of any information.***

Security Breaches

We are committed to protecting your personal information once we have it. We implement physical, business and technical security measures. Despite our efforts, if we learn of a security breach, we'll notify you so that you can take appropriate protective steps.

Publishing Of Personal Data

To maintain the privacy of users, you should not publish their personal data publicly. Any field that includes personal information should be marked as private, so that only logged-in deployers with access can access this information. Instructions on making fields private are available on our survey support documentation.

Secure and Non-secure Data Sources

Not all the data sources that can feed data into a Platform deployment have the same security characteristics. Even if your surveys and your server are well protected, your adversaries may be tapping on your data while it's being sent to you. Here are a few words about the different data sources:

Web and mobile application

These are the data sources with the highest potential to safeguard the secrecy of your data while in transit. If correctly configured, a deployment may require all its incoming Internet traffic to use a recent version of a data security protocol such as TLS . The version matters too, as time goes, vulnerabilities are found on older versions and fixed in newer ones.

Make sure to consult with your hosting and systems person, to ensure things are properly setup, and maintained. In case you chose to keep your deployment at https:/ushahidi.io, Ushahidi will be taking care of this for you.

WhatsApp

WhatsApp has several security features that make it more advantageous than SMS for collecting data in the Ushahidi Platform:

1. **End-to-End Encryption:** WhatsApp ensures that only the sender and recipient can read messages due to its end-to-end encryption. Unlike SMS, which lacks encryption, WhatsApp messages are safe from interception and cannot be read by third parties.
2. **User Authentication:** WhatsApp links user accounts to mobile phone numbers and verifies these numbers, adding a layer of user authenticity. SMS does not typically verify the sender's
3. **Data Integrity:** WhatsApp maintains the integrity of messages with encryption, preventing data manipulation during transmission. SMS, lacking encryption, is prone to data spoofing and manipulation.

In essence, WhatsApp's robust encryption, advanced user verification, and versatile communication options make it a superior choice for Ushahidi's secure and effective data collection needs compared to SMS.

GSM protocols: SMS or USSD
These protocols don't make much of an effort to apply encryption to the information sent over them. The barrier to be able to collect GSM data has always been laid down in terms of access: being able to access the GSM network management hubs, or having the sophisticated equipment to gather data "from the air" locally.

Many governments will most definitely be able to leverage their power in order to obtain access. And, unfortunately, individuals may nowadays acquire relatively affordable equipment to capture this data "from the air". The consensus is that these are not data sources that can be relied on for keeping secrecy, and thus, shouldn't be used in high-stakes risky situations.

Social media
Recently, X (or Twitter) has switched to a paid subscription model for accessing their API. This change impacts deployers who want to utilize the API for data gathering or integrating Twitter features into their applications, as there will now be a cost involved.
Users of the Ushahidi Platform can capture posts from the X platform (formerly known as Twitter) by setting up a developer account with X and opting in to a suitable paid plan https://developer.x.com/en/products/twitter-api.

E-mail
The kind of secrecy that you may get with e-mail is in most cases, hard to predict. There are protocols that allow e-mail information exchange to happen inside the same security protocols that protect media traffic (i.e. TLS), but there is generally no way for you or reporters to be sure that every email is going to be encrypted from end to end. For this reason, we wouldn't openly recommend e-mail if security is of concern.

Read in the team
For election monitoring initiatives, you will have a team working with you, it is wise to let them know about your risk assessment and the measures you have decided to take.
A team's security is only as strong as its weakest link, and keeping someone in the dark about the security situation is the easiest way to create that weak link.

Security as an Admin

As an administrator for an Ushahidi Platform deployment, there are a few basic things to keep in mind, in order to reduce the possibility of your deployment putting members of your community at risk.

Understand the risks
Each Ushahidi Platform deployment is fairly unique in the sense that it is created for a specific problem in the context of a specific community. These circumstances may (or may not) make the
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exposure of information a risk for members of the community that you are receiving reports from, your team, or both.
Take for instance a deployment collecting information about post-election violence. If somehow the organized gangs got information that allowed them to identify who has reported their activities, those persons would be in danger. If on top of that, your team attempts to take some action like approaching the area to verify the reports, gangs may be on the know and put your team in danger, additionally.
In any case, we encourage you to go through the mental exercise of asking yourself at least these simple questions:

- Are all the data I'm collecting safe to show in public? Which data items are not?
- Could any of the data I'm collecting and displaying be used (in isolation, or when
- aggregated and analysed) to identify the individuals that reported it? Who could be
- Am I knowledgeable of the risks that affect the data while it's in transit through different data sources I intend to configure?

Privacy settings in the surveys

Please do keep in mind that the survey configuration in Ushahidi Platform allows fairly fine-grained configuration, regarding which survey questions have their answers available publicly, and which others are only available to your team (and within your team, specific roles).
Make sure to configure your surveys accordingly, and that you review this periodically.

Personally Identifiable Information (PII)

Personally Identifiable Information (or PII) is information that if analysed, could be used to mount or assist a process leading to knowing the identity of the person submitting the report. Some very direct examples of PII items are telephone numbers and e-mail addresses. Having access to those and some additional database, could easily lead to identities of persons being identified. One other example is the combination of location data and date of the report. In an urban setting with surveillance, someone with access to the surveillance and both data items could identify who issued a report. In general, the more data items an attacker may collect that bear relationship with a person's traits, possessions or circumstances, the more likely the attacker is to successfully break anonymity. The Ushahidi Platform offers settings to protect some of these information items, without completely hiding them. This is important for data that is valuable to show aggregated (i.e. incidents in a geographic area), and thus is not desired to make completely private.

Security for Self-hosted Deployers

The purpose of this guide is not so much providing complete cyber-security training, but highlighting some of the system setup aspects that are most important and/or specific to Platform security.

Essential check-list

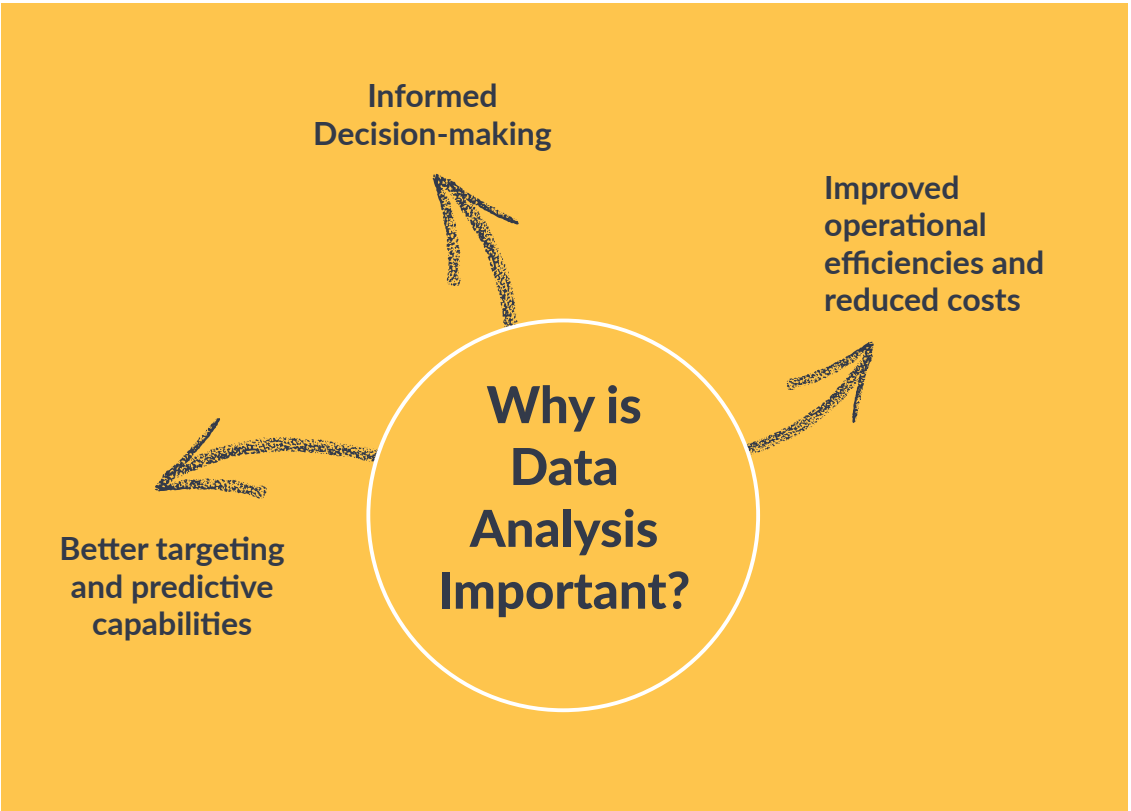
- The server is hosted in a provider and geography/legislation that doesn't put the mission of the deployment at risk.
- HTTPS protocol (TLS) is enabled and securely configured for both API and client end-points.

- There is some sort of effective log rotation mechanism, preferably together with a low-level wiping mechanism.
- On the Ushahidi Platform API installation folder under storage/logs
- For the web server, PHP and MySQL logs as well
- If hosting in a cloud or VPS provider, disk encryption with a specific ephemeral key is used.
- Backups are scheduled, monitored, encrypted and regularly tested.
- Latest updates are installed regularly for:
- Operating system and core libraries
- PHP, Web server and MySQL services
- Ushahidi Platform

Analysis and Visualization

Tools and techniques for data analysis

Data analysis is collecting, cleansing, analyzing, presenting, and interpreting data to derive insights. This process aids decision-making by providing helpful insights and statistics.



Types of Data Analysis Methods

1 Quantitative Data Analysis

As the name suggests, quantitative analysis involves looking at complex data, the actual numbers, or the rows and columns. Let's understand this with the help of a scenario. Your Uchaguzi project wants to assess the election incidents in the just concluded elections. You will gather quantitative data on the various issues raised. The issues may include:

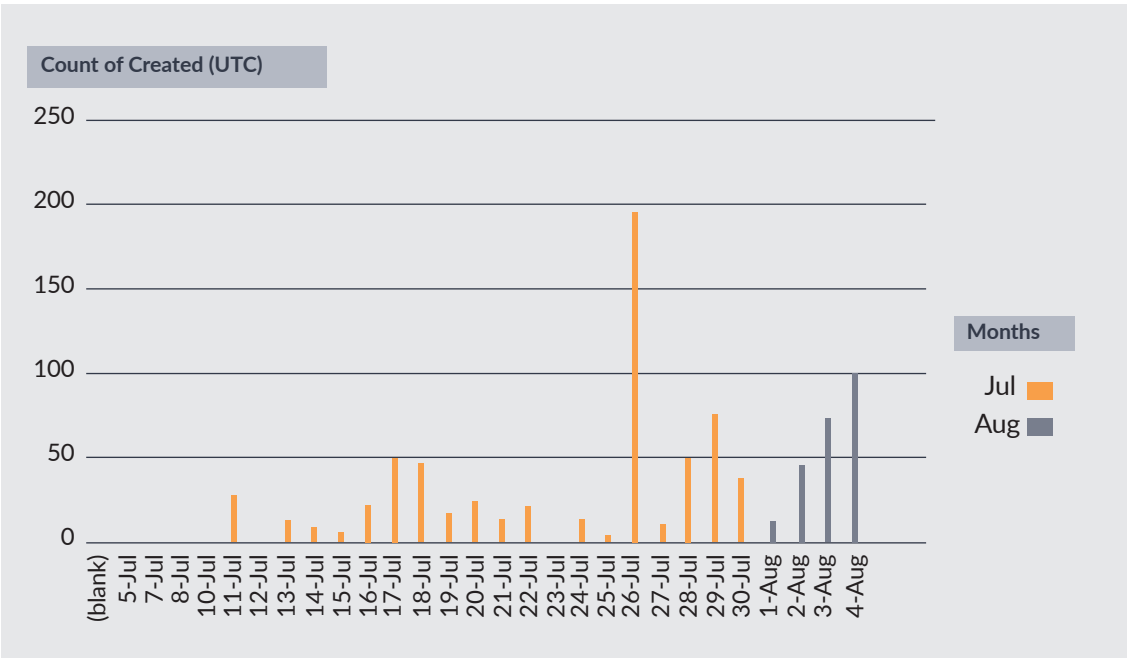
- Security issues
- Voting issues
- Staffing issues

By analyzing these numeric data points, you can calculate:

- Top performing incidents
- Growth/decline of the issues from the past election
- Time distribution of incidences

One of the many tools to perform quantitative analysis is Excel. Excel allows you to create a Pivot table that will help you manipulate your data for analysis. Before beginning any kind of analysis, the first step is to download the data from Ushahidi. **Go to Settings —> Export and Tag data—> Export all data or select fields (if you are only interested in specific fields).** The data takes a few minutes to download and ends up in your download file folder.

Open the data with Excel and make sure to highlight it, then go to **Insert—-> Pivot Tables.**This video will help you. It is important to analyze the time distribution of the issue to have an understanding of the trend.



In the graph above, we observe a peak from 26th July to 30th July, then a slight decline, and a continuous increase since 1st August.

Something that may help you quickly get an understanding of your data is the count of incidents type within your survey. For example, within the security issues survey, it may be prudent to add a field of "Nature of incidents." The nature of incidents can be any security-related issues, for example, dangerous speech, rumors, etc. **NB: Coding your data by adding a field with options, such as the table below, is very helpful in analyzing your data.**

Security Issues	Count of Nature of this incident	Percentage
["Rumors"]	33	45.83%
["Dangerous Speech"]	25	34.72%
["Demonstrations"]	6	8.33%
["Heavy police presence"]	4	5.56%
["Violent Attacks"]	2	2.78%
["Sexual and Gender Based Violence"]	2	2.78%
Grand Total	72	100.00%

How does it help?
The quantitative analysis can help you identify e.g.:

- Which issues need more attention
- Performance of the election body in the general election. Low staffing issues, for example, mean that they performed well with staffing

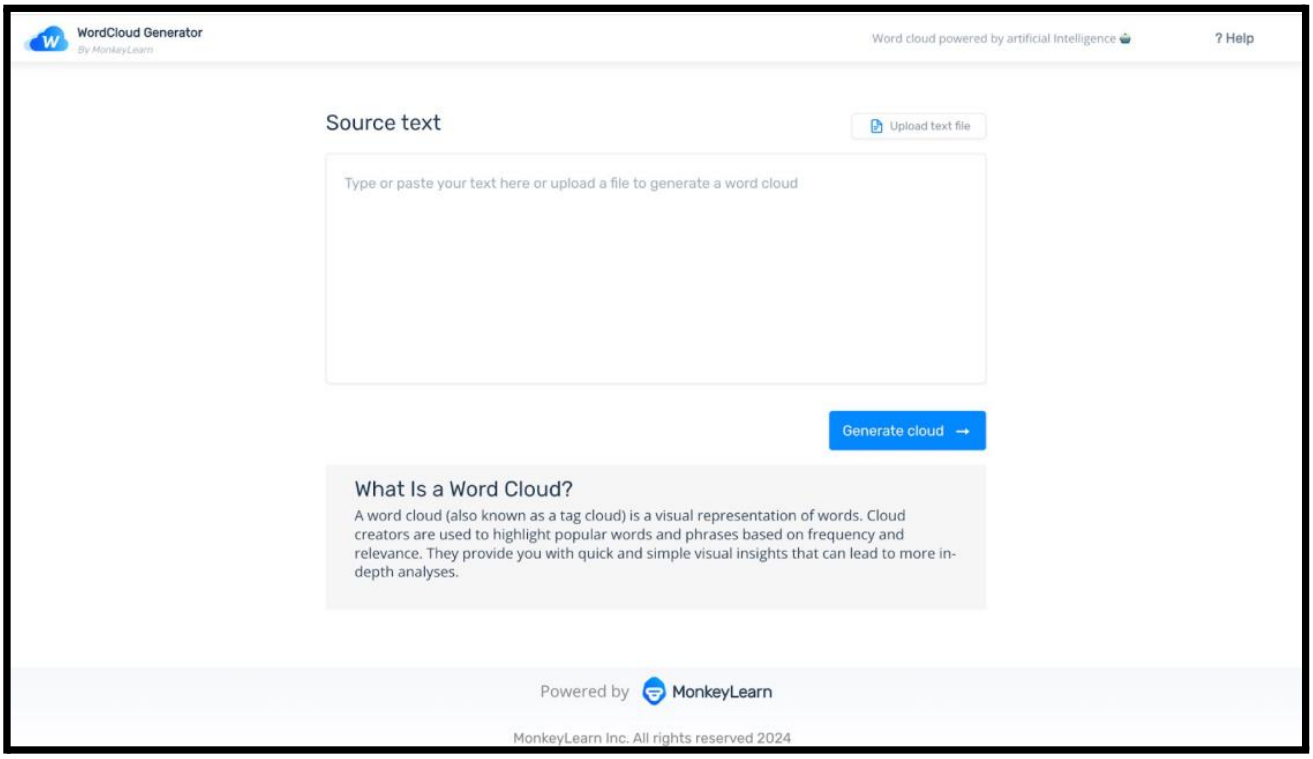
◎ Qualitative Data Analysis

There are situations where quantifying reports numerically is impossible. This is where qualitative data analysis can help you understand the data's underlying factors, patterns, and meanings via non-numerical means. Let's take an example to understand this.

Imagine your Uchaguzi project wants to get citizens' opinions on the just concluded elections. You have quantitative data that tells you what's going on but not why. Here's what to do: Arrange/summarize the opinions according to issues or sentiments.

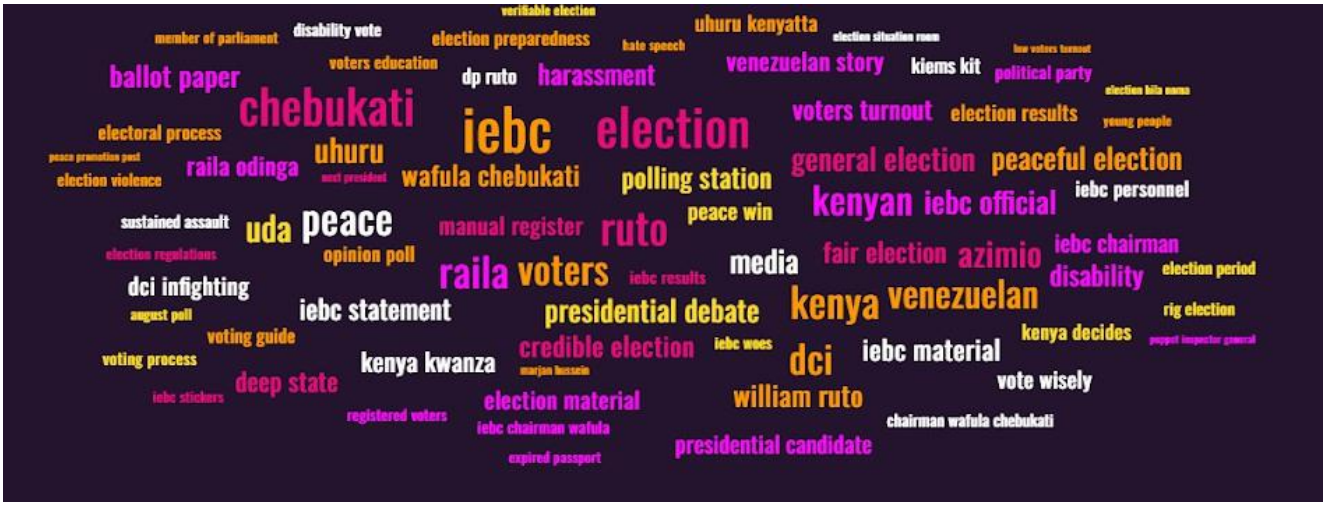
Opinions		
Positive opinions	**Negative opinions**	**Neutral opinions**
I believe the electoral body conducted free and fair elections	I strongly believe that the elections were rigged	Despite the outcome, let's maintain law and order

You can also perform word cloud analysis that identifies words that frequently appear in a text. There are many free word cloud analysis software available online. Here is one that you may use https:/monkeylearn.com/word-cloud/. All you need to do is paste the text on the space provided "Source Text," then click on "Generate Cloud". Once you generated the word cloud, click on "Download," located at the top right.



Here is an example of an opinions word cloud analysis from Kenya's 2022 general elections

Word Cloud Analysis



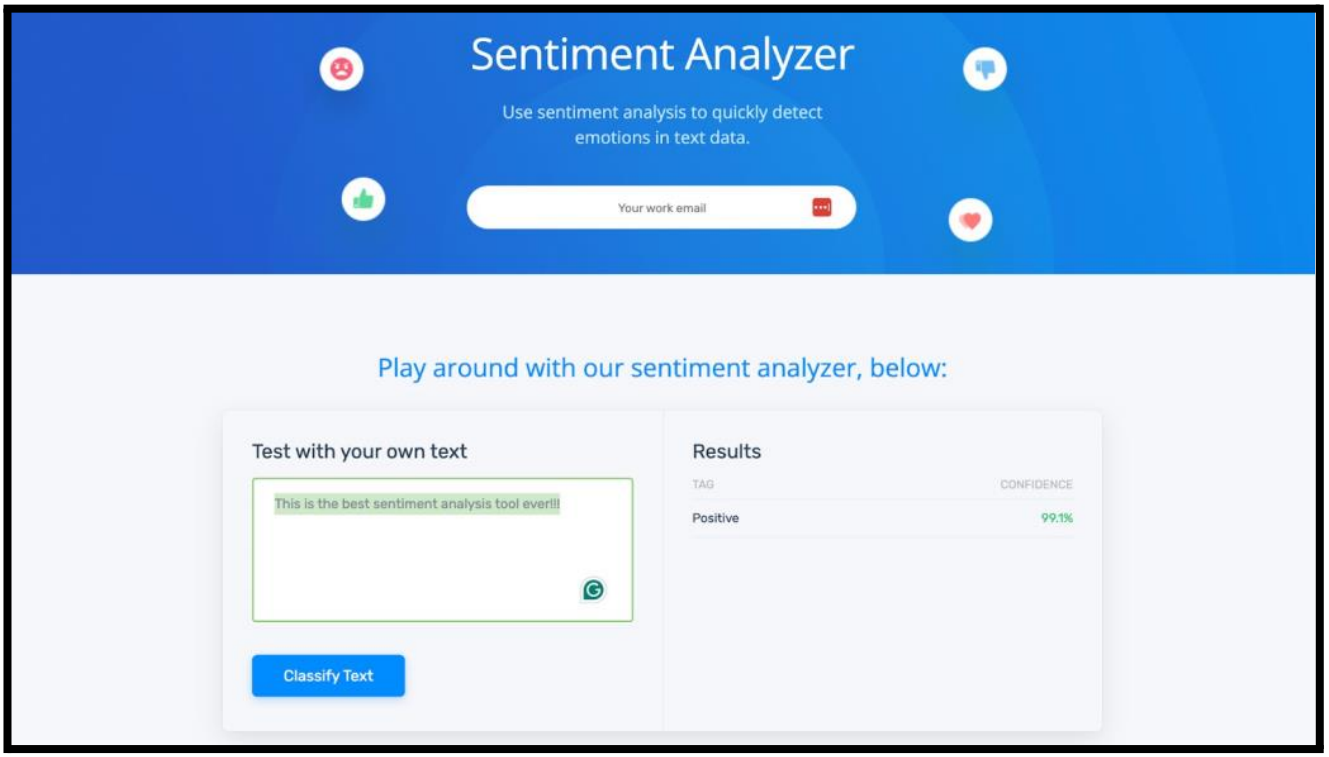
Here is an example of an opinions word cloud analysis from Kenya's 2022 general elections

The word cloud contains the different parties and candidates, plus shows the many opinions of the IEBC and its head Chebukati. Other controversial issues around the IEBC, such as the Venezuelan sticker importing and manual register are seen. Peace, fair elections, and peaceful elections are common in the word cloud.

Sentiment Analysis

Sentiment analysis is the process of analyzing digital text to determine if the emotional tone of the message is positive, negative, or neutral. There are many free word cloud analysis software available online. Here is one that you may use; https:/monkeylearn.com/sentiment-analysis-online/

A sentiment analysis performed on opinions in Kenya's 2022 General elections detected 93.4% positive sentiments within the data. This metric already gives a bird's eye view of the opinions before getting into deeper analysis. All you need to do is paste all the opinions on the space provided, "test with your own text" and click on "Classify Text". You will get the results of the sentiment analysis on the right side, "Results"



How does it help?
By reading and summarizing the comments, you can identify issues, sentiments, and areas that have come up many times and those that need action.

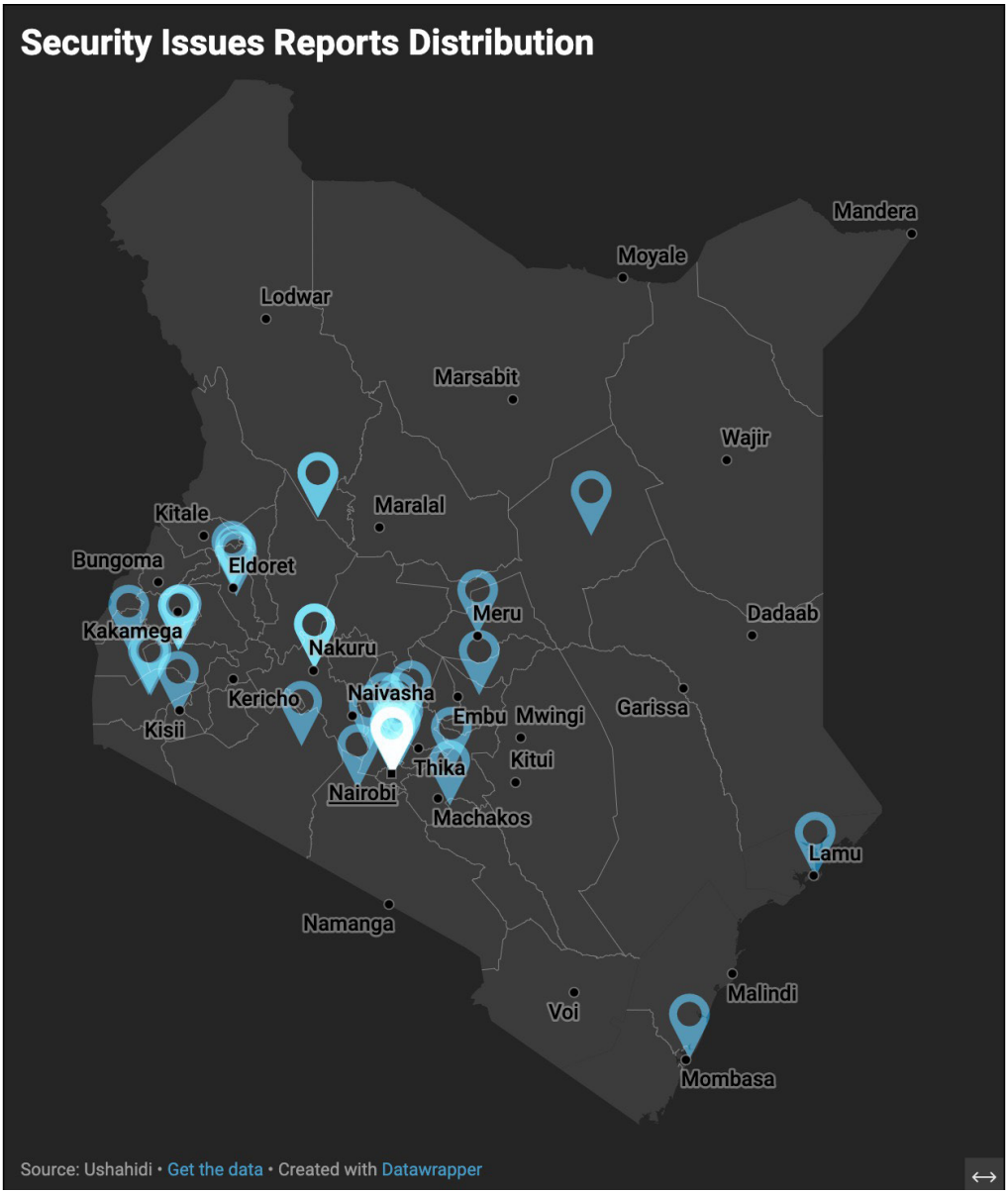
You can learn more about word clouds and sentiment analysis here:
https:/monkeylearn.com/word-clouds/

◎ Creating maps and visualizations

By visualizing the data on a map, we can easily identify regions with highly affected with the issue at hand. This spatial context empowers organizations to make data-driven decisions, such as aid distribution, remedial interventions, planning resource allocation. The Ushahidi Platform provides a Map View of your data however you may choose to visualize the data separately in a report or a case - study.

Data Wrapper and Flourish may be a good option to consider for creating maps and visualizations for your data. Assuming that your data downloaded from the Ushahidi Platform has geographical coordinates then data wrapper may help you create separate maps based on different issues for reporting purposes. Please see the example below.

We observe many security issues around Nairobi and in major towns within Kenya. Majorly all the reports are coming from the lower part of Kenya. Such maps and visualizations can help you have while writing a report from the data that you have collected on the Ushahidi Platform.
This article gives a step by step guide on how to create such maps on Data Wrapper.



Reporting and Advocacy

Generating reports and insights

Finally, you need to put together your data insights and visualizations into a coherent and persuasive report. Data reporting is the process of presenting your data findings and recommendations to your stakeholders, such as clients, managers, or peers. Data reporting can help you to inform, educate, or persuade your audience about your data story, and to elicit feedback or action from them. You can use different formats and platforms for data reporting, depending on your audience and purpose, such as slides, documents, videos, or web pages.

An example is Ushahidi's case study and engagement report on the 2022 Kenya general elections.

Leveraging data for advocacy and decision-making

Leveraging data for advocacy and decision-making involves a strategic approach to collecting, analyzing, and presenting information to influence policy, shape public opinion, and guide organizational actions. Here are key steps and strategies to effectively use data for these purposes:

Issue: Increasing Voter Turnout in Underrepresented Communities

Objective: Increase voter turnout by 10% in underrepresented communities for the upcoming election.

Data Collection

- **Voter Demographics:** Data from the electoral commission and census reports.
- **Historical Turnout:** Previous election turnout data from official records.
- **Polling Data:** Survey data from reputable polling organizations.
- **Socioeconomic Data:** Reports from government and non-governmental organizations.
- **Geographic Data:** GIS data identifying low-turnout areas.

Data Quality

- **Accuracy:** Cross-verify data from multiple sources.
- **Timeliness:** Ensure data is from the most recent electoral cycle and relevant surveys.
- **Relevance:** Focus on data that provides insights into voter behavior and turnout.

Data Analysis

- **Trend Analysis:** Analyze voter turnout trends over the past few elections to identify patterns and changes.
- **Segmentation:** Break down the voter data by demographics such as age, gender, ethnicity, and income level to identify which groups have lower turnout rates.
- **Correlation Analysis:** Examine the relationship between socioeconomic factors (e.g., education level, income) and voter turnout.

Data Visualization

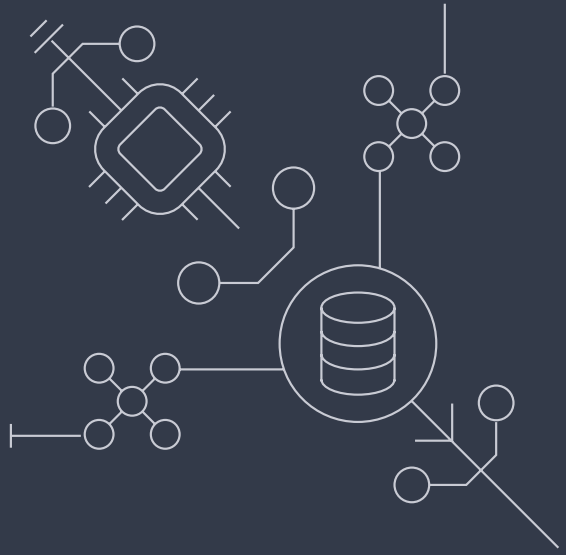
- **Heat Maps:** Create heat maps to show geographic areas with low voter turnout, highlighting underrepresented communities.
- **Bar Graphs:** Use bar graphs to depict voter turnout rates across different demographic groups.
- **Infographics:** Develop infographics that combine key data points with visuals to make the information easy to understand and compelling.

Communication of Findings

- **Tailored Messaging**: Customize communication strategies for different audiences, such as policymakers, community leaders, and the general public. For example, focus on the economic and social benefits of increased voter turnout when addressing policymakers.
- **Storytelling:** Use data to tell a compelling story about the importance of voting and how low turnout affects community representation and resources.
- **Accessibility:** Present data in a clear and concise manner, avoiding complex terminology, to ensure it is understandable for all audiences.

Influence Policy and Practice

- **Policy Briefs:** Develop concise policy briefs that summarize key findings and provide recommendations for increasing voter turnout, such as implementing early voting or mobile voting centers.
- **Public Campaigns:** Use data to create targeted public awareness campaigns, including social media campaigns, community workshops, and public service announcements.
- **Stakeholder Engagement:** Hold meetings and workshops with community leaders, activists, and organizations to present data findings and collaborate on voter mobilization strategies.
- **Decision-Making Frameworks:** Incorporate data into decision-making processes for planning and executing voter outreach initiatives, ensuring efforts are directed where they are most needed.



Conclusion

Congratulations! You've reached the end of the toolkit, but remember, the real work begins now. This toolkit is just the starting point for your journey towards fostering transparent and inclusive elections worldwide. Let's roll up our sleeves, empower citizens, and together, let's make a meaningful impact on democracy. This toolkit is not just a static resource but an iterative process, shaped by your valuable input and insights. If you have any questions, have insights to enhance this toolkit or need support along the way, don't hesitate to reach out to us at *elections@ushahidi.com*.