

# Volcano Observer Heuristic Evaluation

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## From Our Own Presentation (UI/UX Consultants)

### Evaluation

The Volcano Tracker application should be a web application accessible from many mobile and desktop devices. It should allow users to submit photos of the Volcan De Fuego volcano in Guatemala, and these photos should later be made available to the public, and our scientists alike. This will allow users to track the conditions of the volcano, and witness its evolution over time.

Our development team has already met up with the scientists, and have developed a plan using their cognitive walkthrough. The developers plan to implement many different tools ( databases, content filters, QR codes at the volcano, and a frontend interface for multiple different devices) to complete the project, and provide usability across multiple devices. Their cognitive walkthrough presents to us an overview on how the user will interact with the website. Features included in their outline include a page to upload images, display images, provide a timeline, and an administrator panel for the purpose of displaying quarantined images (uploads flagged by the content filter).

### Heuristic Usability Principles

- **Responsive Consistency:** The ability to provide to the user a proper interface on both a landscape and portrait display (desktop and mobile devices)
- **Cultural Accessibility:** Translate the website and ensure that it's usable by both the locals and the scientists alike (That being said, add support for both English and spanish).
- **Permissions handling:** (ensure the user knows why camera & location permissions may be needed)
- **Data Integrity:** The ability to flag images based on their validity towards the scientists. Some images will be considered as "Bad data" by the scientists, rendering them unusable. Keep it separate from the correct data provided by other users.
- **Role-Based Clarity:** The ability to allow the user to understand the website for their intended purpose. For example, some users may use the website to submit their photos to the database, and others will use it to analyze the submitted data.

## Potential Usability Problems

- Don't show the admin panel to every user on the main page. Make subdomain or subdirectory to be more subtle about it. **(Role-Based Clarity)**
- Safeguarding against downloading the entire database. Double-check popup? **(Permissions handling)**
- You may need to add a limit to the number of uploads if the scope of the application becomes higher than expected. **(Data Integrity)**
- The Spanish language should be a main focus of the interface design. This is due to the location of the volcano taking place in a country that primarily speaks the language. **(Cultural Accessibility)**
- Mobile and desktop will both be very important to focus on for application support, as they serve different purposes for what they may be primarily used for **(Responsive Consistency)**
- Hide the admin panel button from general users. This should not be a well known feature since the scope of the application is not as large as a major corporation (like google). **(Data Integrity)**
- The button responsible for downloading the entire database should have a confirmation button to prevent the user from accidentally copying all the data. **(Data Integrity)**
- Image detection for image submission (quality and appropriateness) needs to be a focus due to the needs of the scientists (they need consistency when it comes to data location). **(Data Integrity)**
- Tech literacy concern, automatically put the website in spanish? -> primarily spanish with english translation. This could be a feature where the language/location of the device is detected, causing the website to adjust accordingly. **(Cultural Accessibility)**
- Limit pictures upload, have a cookie that indicates whether someone has already uploaded (but ideally have some protections server side) **(Data Integrity)**

### Critical usability concerns

- **Concern 1: Admin Access Exposure.** Don't show the admin panel to every user on the main page. Make subdomain or subdirectory to be more subtle about it. Doug Dimadome is a hacker looking for potential entryways straight from the website. If he is able to see an entrypoint for the admin panel, our website is now a target for a potential attack
- **Concern 2: Poor Cross-Platform support.** Many aspects of the UI are placed on the left of the screen by default. Without a focus on both desktop and mobile platforms, Penn is unable to easily navigate through the website on his phone. Placements for each button which are visible on the left side of the screen on a desktop are obscured due to improper sizing for a mobile phone.
- **Concern 3: OOTB language support.** Language support features are lacking in the initial design: There is no ability to switch between languages on the website, making it difficult to understand for users in the event that the default chosen language does not properly display. Juan from Guatemala might be unable to read the website using English, and MaryJo from Kentucky might not be able to read the site in Spanish.

### For Team 3: The Video Recorder Crew

- What data is being stored on the server?
- ~~— How will users learn to use the application?~~
- ~~— Will there be the ability to speed up/slow down the video?~~
- ~~— Could the video just be hashed on the client side?~~
- Filters for inappropriate content?
- How will the application handle excessively short videos?
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