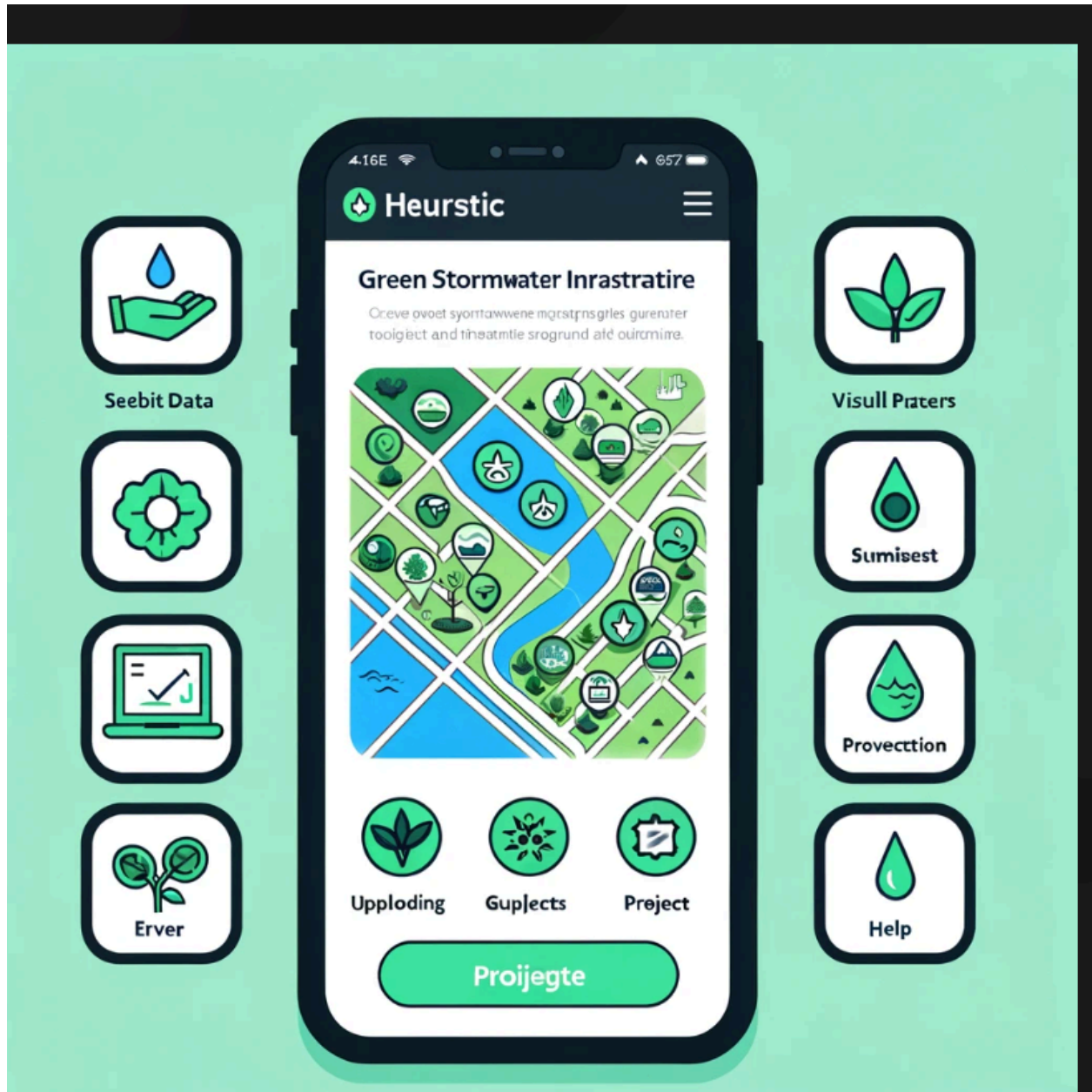# Heuristic Evaluation

Green Storm Water

Undergraduate Design

The app aims to educate users on Green Stormwater Infrastructure (GSI) in Southeast Michigan, focusing on urban stormwater management amid changing weather patterns. It features educational content and an interactive map for different user types, including high school students, teachers, and the general public. The app seeks to raise awareness about GSI's role in managing stormwater, encouraging community contributions to data and urban planning efforts. It targets educational and research objectives, facilitating learning and fieldwork contributions from students and teachers, while offering the general public insights into green infrastructure.

UI Domain

The UI domain for the app is focused on educational and interactive mapping, specifically designed for learning and engagement with Green Stormwater Infrastructure (GSI). It targets a diverse audience including students, educators, and the general public, with features that promote understanding, participation, and awareness of sustainable environmental practices through interactive maps and educational content.

Heuristic Usability Principles for UI Domain

Clarity in Feedback Presentation: Is the feedback provided to users on their actions or contributions regarding Green Stormwater Infrastructure (GSI) clear, concise, and easily understandable to facilitate learning and correct navigation?

Consistency in Interface Design: Does the app maintain consistency in its navigation, terminology, and visual design across all features to help users learn the system quickly and reduce confusion?

Progress Tracking and Visibility: Can users easily see and understand their progress in learning about Green Stormwater Infrastructure (GSI) or their contributions to the app, thereby feeling a sense of achievement and motivation to continue engaging with the app?

Readability: Is the text within the app (including descriptions, instructions, and feedback on Green Stormwater Infrastructure or GSI) presented in a manner that is easily readable and understandable by the target audience, including varying age groups and educational backgrounds?

User Engagement and Motivation: Does the app effectively engage users by providing interactive, compelling content and challenges that motivate continued learning and interaction with Green Stormwater Infrastructure (GSI) topics?

Error Prevention and Correction: Does the app incorporate mechanisms to prevent user errors during data entry or interaction with the map and provide clear, accessible ways for users to correct errors if they occur, ensuring a smooth and frustration-free experience?

Support and Documentation: Is there comprehensive and easily accessible support and documentation available within the app to help users understand how to effectively use the app's features and contribute to the Green Stormwater Infrastructure (GSI) content, especially for new users or complex tasks?

Potential Usability Problems

- If users attempt to contribute stormwater data in formats the app does not support, they might end up frustrated, highlighting the need for clear communication on supported formats.

- Without a help section or tutorials, new users might struggle to understand how to use the app and interpret data on GSI, pointing to a gap in support and documentation.

- How will the app adapt to different screen sizes, especially when comparing past contributions? Ensuring readability across devices is crucial.

Critical Usability Concerns

The app does not clearly specify which data formats are supported for user contributions related to Green Stormwater Infrastructure (GSI). There is also no guidance on the consequences of uploading unsupported or empty files, violating readability and error prevention principles. Furthermore, users might find it challenging to differentiate between multiple submissions made on the same day due to unclear naming conventions, which undermines progress tracking and visibility.

Critical Usability Concerns (Example)

Users lack clear information on acceptable data formats for contributions and are not guided on actions to take with unsupported or incorrect submissions, challenging both readability and error prevention. Additionally, distinguishing between multiple contributions made on the same day is cumbersome due to unclear naming or versioning, complicating progress tracking and diminishing the user experience.