

1. Introduction

1.1. PROBLEM STATEMENT

What problem is your project trying to solve? This section should be written in paragraph form and tell the story of your design problem. Describe the broader user/societal/global context in which you're designing. What issues exist in that context? Why are they important? How are you attempting to address those issues?

This section should be written for a non-engineering audience, so be engaging and use non-technical jargon as much as possible.

The Reiman Gardens and other facilities with butterfly enclosures need to be able to quickly and reliably store and access butterfly tagging data electronically. Butterflies within enclosures are currently being tagged; each facility needs a standardized way to enter and store butterfly sightings relative to their facility's tagging system. Facilities need a web application that allows guests and volunteers to quickly enter a butterfly tag sighting, as well as gives facility administrators a fast and reliable way to view database information. Reporting data is essential for facilities to make educated decisions on enclosure environments and derive conclusions based on certain butterfly species' lifespans.

A web application is in development to address the needs of any facility with a tagged butterfly enclosure. The web application needs to be easy to use for any user and easily accessible from any device to provide the highest level of sighting entries from any type of user. The web application will then be used to report on all sightings for administration purposes dynamically.

1.2. INTENDED USERS

Who will use the product you create? Who benefits from or will be affected by the results of your project? List as many users or user groups as are relevant to your project (at least three). For each user or user group, (1) describe the user and their key characteristics (e.g., a persona), (2) identify their need(s) related to the project (e.g., a needs statement), and (3) discuss how they might benefit or derive value from the product you create. Justify how these benefits/this value connects to your overarching problem statement.

Please include any user research documentation, empathy maps, or other artifacts as appendices.

Butterfly Enclosure Guests: A guest is a person who is visiting the butterfly enclosure for educational or entertainment purposes. A guest visitor could be a person of any age and background. Guests need an easy to use web application that they can enter a butterfly sighting in while visiting a butterfly enclosure. Since guests will be using a mobile device to enter butterfly sightings, they need a web application that can be used on any type of device. Guests also need a rewarding or valuable experience so they have the intent and reason to use the web app.

Guest users should be able to derive a sense of help or entertainment from using the web app while visiting the enclosure. We need to market the web application to guests so they can understand how they are helping the enclosure facility on a high level.

Docent / Volunteers: A docent or volunteer is a facility member who regularly spends time within the butterfly enclosure. A docent can also be a person of any age and background. Since a docent will use the web app much more frequently, they need a fast and easy way to continuously enter sightings. Docents will

also benefit from an individual login so their sightings can be entered with more reputability than a guest visitor. Since docents are more reputable and garner more priority, docent accounts may also need to be configured with higher levels of privilege to database information based on administrative needs.

Docent users should derive a sense of help for the facilities enclosure more than just a guest visitor. Docents will be able to see the impact of the entered sightings and have a higher priority and sense of belonging within the web app.

Administrators: Administrators will be the person or people in charge of the butterfly enclosure at their given facility. An administrator will be a person with a higher level of knowledge of butterfly species as well as their given enclosure and tagging system. Facility administrators will need to configure the web app for their facility and its tagging system as well as configure user accounts for docent and guest users. Administrators also will need full access to the database of butterfly sightings and need to be able to report on the data dynamically to benefit the facility.

Administrators will be the primary users of gathered and stored information as they can make more educated decisions for the future of their butterfly enclosures. Administrators can also be providers of data for other facilities and researchers to become more educated on environment variables and year-round habitat conditions for different butterfly species.