

Boy Scouts of America

Drone Registration System

Case Study - Extended Version



Project Overview

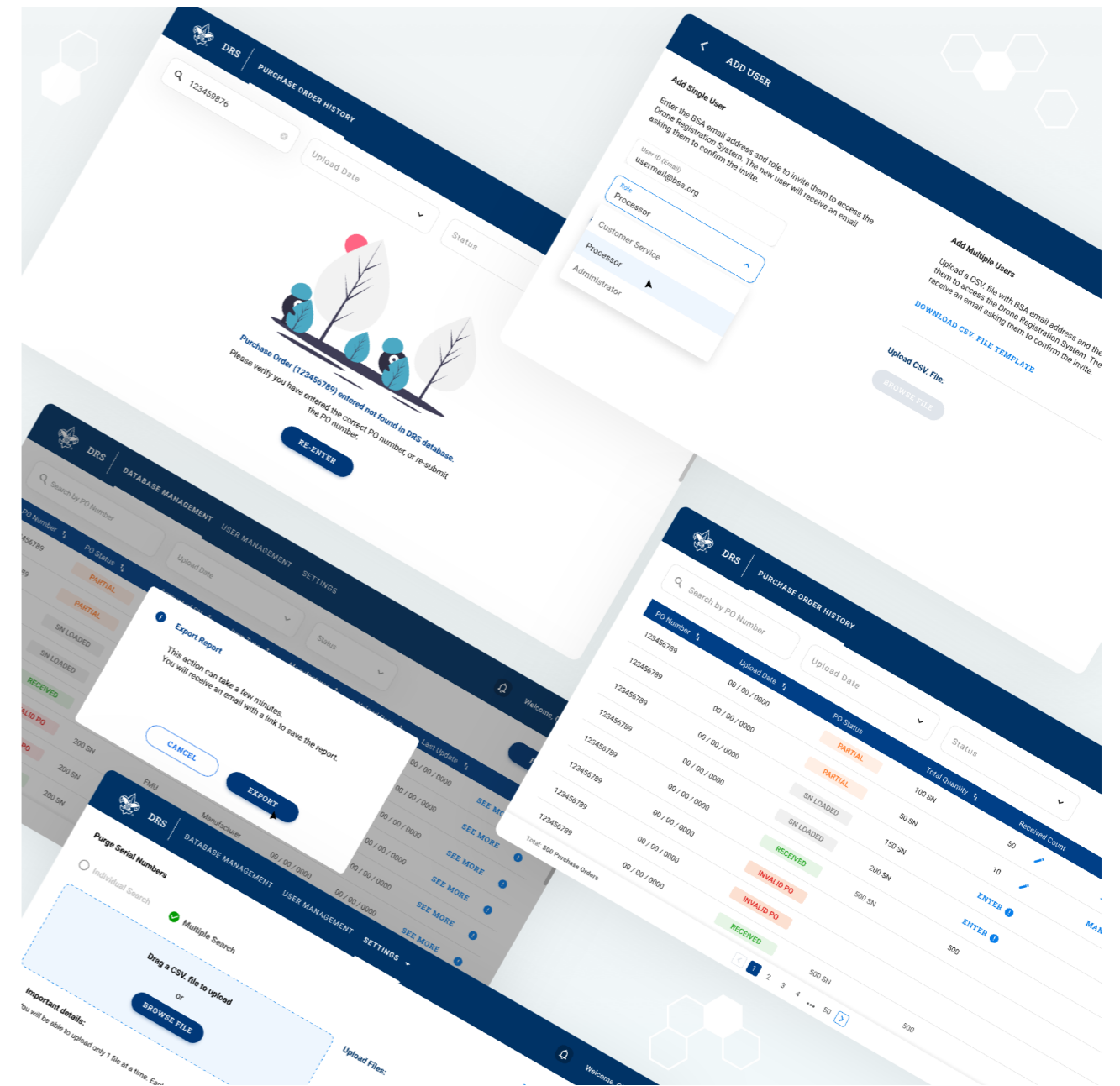
The product

Drone Registration System (DRS) is a web app focused on tracking Drone Kits that belong to the Boy Scouts of America (BSA).

Project Duration

The design team began working in October 2021 and delivered the final high-fidelity mockups on December 2021.

Total design phase duration: 6 weeks



Project Overview

The problem

For the Boy Scouts of America, it was important to keep track of the drones that were delivered to members of the organization and, in this way prevent them from being duplicated or sold without their consent.

The goal

Design a web app in which users can visualize and update information about existing drones in the Boy Scouts of America's database.

Project Overview

Our Role

To achieve our goal, we worked with the Double Dimond methodology and lots of tools, such as Service Blueprint, User Personas, Information Architecture, and User Flows. In the end, all of these tools helped us to understand the client and users' needs, and we were able to create lo-fi mockups, which later became hi-fi mockups.

Responsibilities

- Research to understand the requirements, business objectives, and user needs
- User Journeys and User Personas
- Wireframes
- Low fidelity mock-ups
- High fidelity mock-ups
- Validation with client
- Delivery to the development area

Understanding the User

- User Research
- Personas
- User Journey Map

User Research

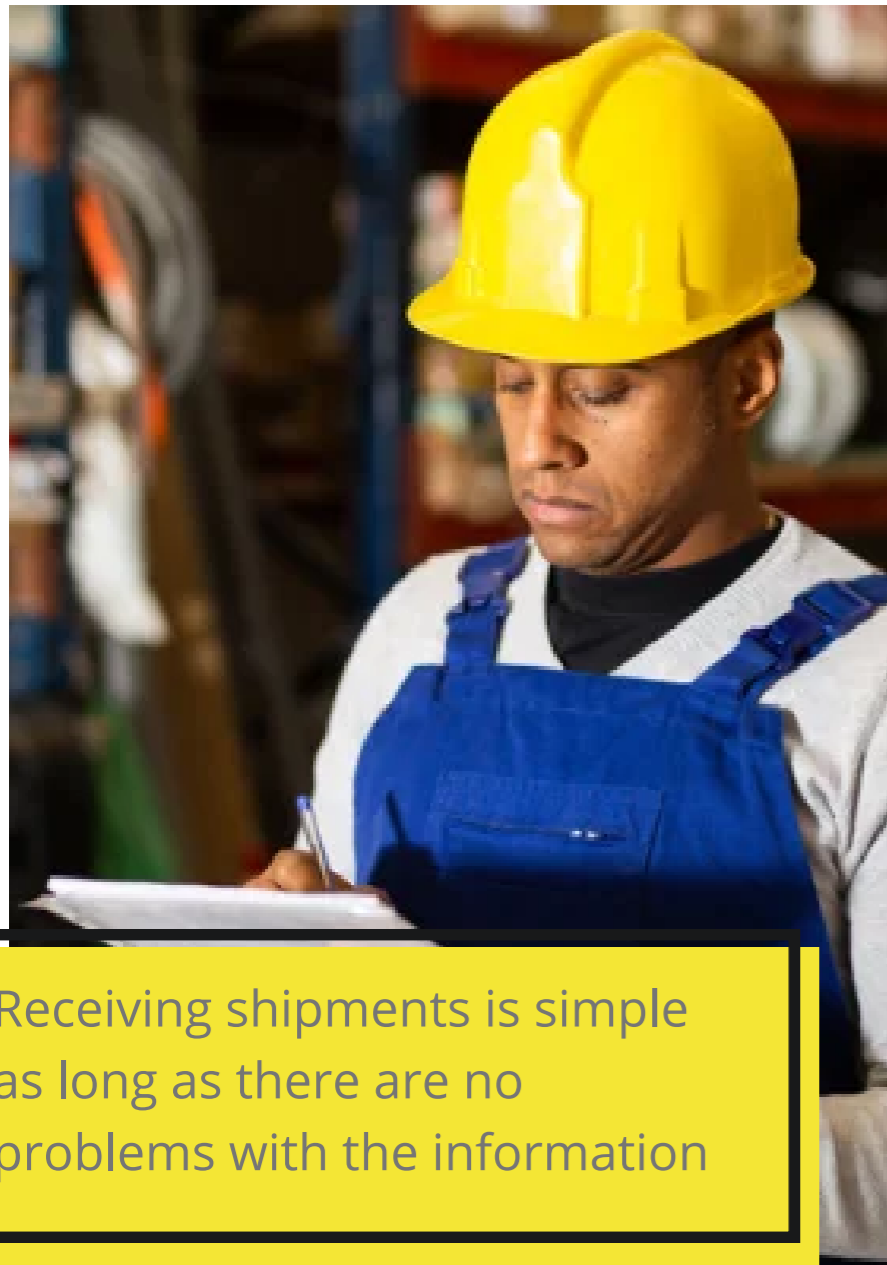
Summary

By working collaboratively with the client, we discovered that the needs and functions that the web app had to cover were very different from those that had been proposed at the beginning.

For example, at the beginning of the project, it was suggested that there would only be a single type of user. However, when performing the Service Blueprint, both the client and the design team realized that throughout the process there were users who had functions and activities very different from each other. In the end, instead of having one user, 3 were discovered, and flows corresponding to their needs were created. The users found were as follows:

- Processor: user that is in the warehouse and receives the shipments drones.
- Customer Service: user that provides customer guidance to the drone owner.
- Administrator: user that manages the data and the roles inside the web-app.

Persona



Receiving shipments is simple as long as there are no problems with the information

James

- 👤 35 years old
- 📍 Charlotte
- 👷 Factory floor worker

Goals & Motivations

- Does his work quickly and precisely.
- Tracks and classifies the shipments that arrive at the warehouse.
- Reports when there is a mismatch.
- Uploads new files with the purchase order's serial numbers.

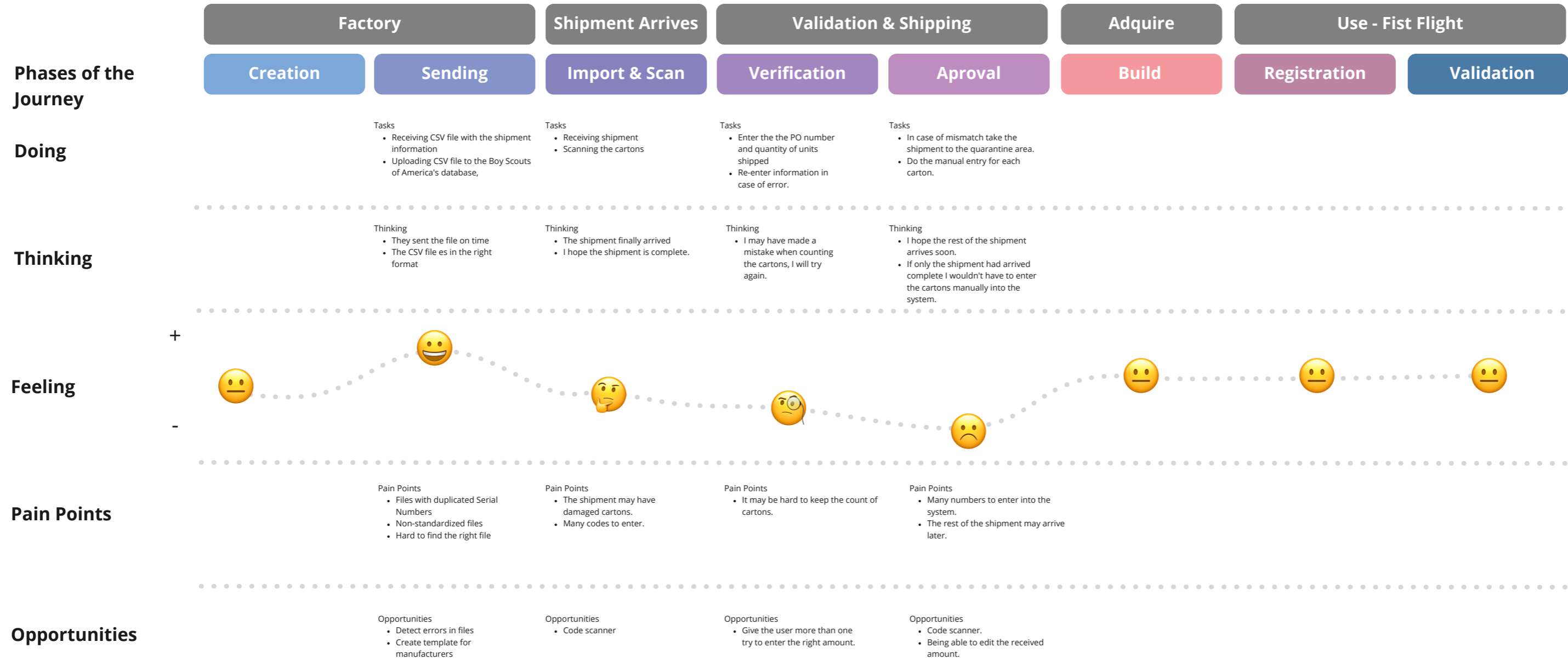
Bio

James works receiving and processing the shipments that arrive. When a shipment arrives, James has to make sure that the number of drones matches with the purchase order, and in case it doesn't, quarantine the shipment and notify the manufacturer, buyer, and material analyst.

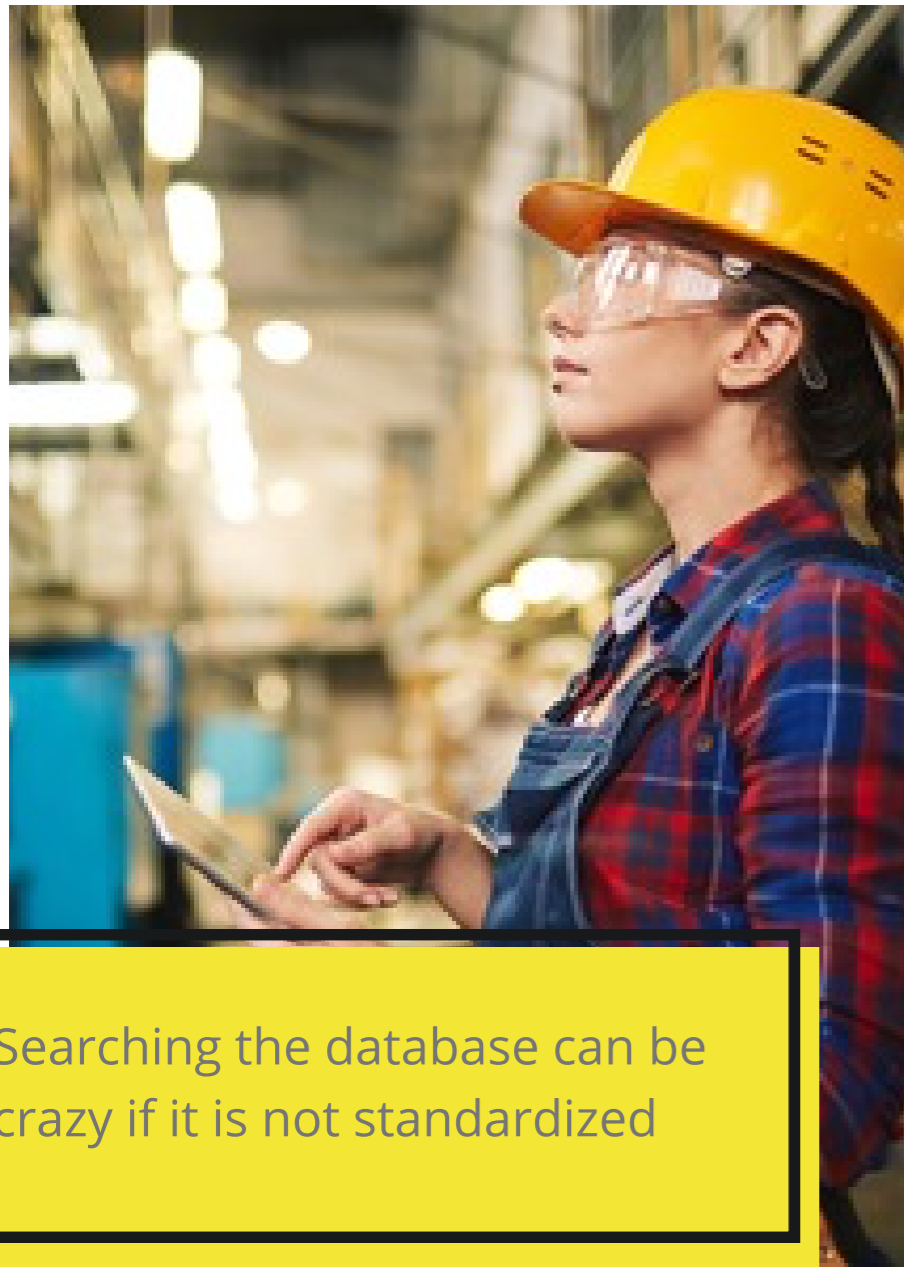
Frustrations

- Not being able to change information once it is entered.
- Sometimes the files with the purchase order have errors and he doesn't know which ones.

User Journey Map



Persona



Searching the database can be crazy if it is not standardized

Emma

- 👤 30 years old
- 📍 Charlotte
- 👷 Factory floor worker

Goals & Motivations

- Provides customer service fast and efficiently.
- Finds the serial number of the requested drone as fast as possible.
- Sets every serial number correctly.

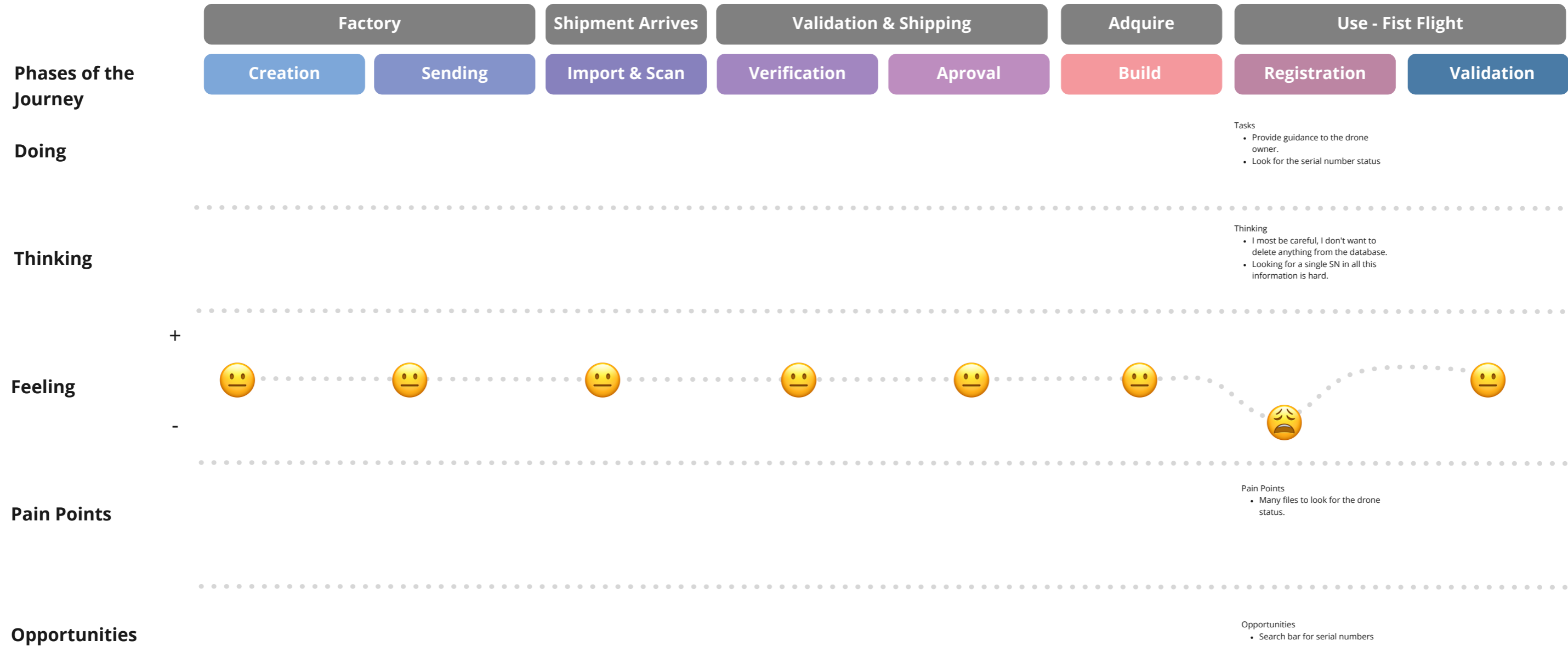
Bio

Emma works providing information and guidance to drone owners. This is done by searching the serial numbers in the database, which indicates the status of the drone.

Frustrations

- Not being able to find the drone information.
- There are many databases in which to look for the serial numbers.
- Accidentally editing the databases.

User Journey Map



Persona



Organizing the information
makes everyone work better

Mason

- 👤 30 years old
- 📍 Charlotte
- 👔 Administrator

Goals & Motivations

- Controls all the people who have access to the databases.
- Being able to contact those involved in the manufacture and sale of drones.
- Manages the drones that are in the database.

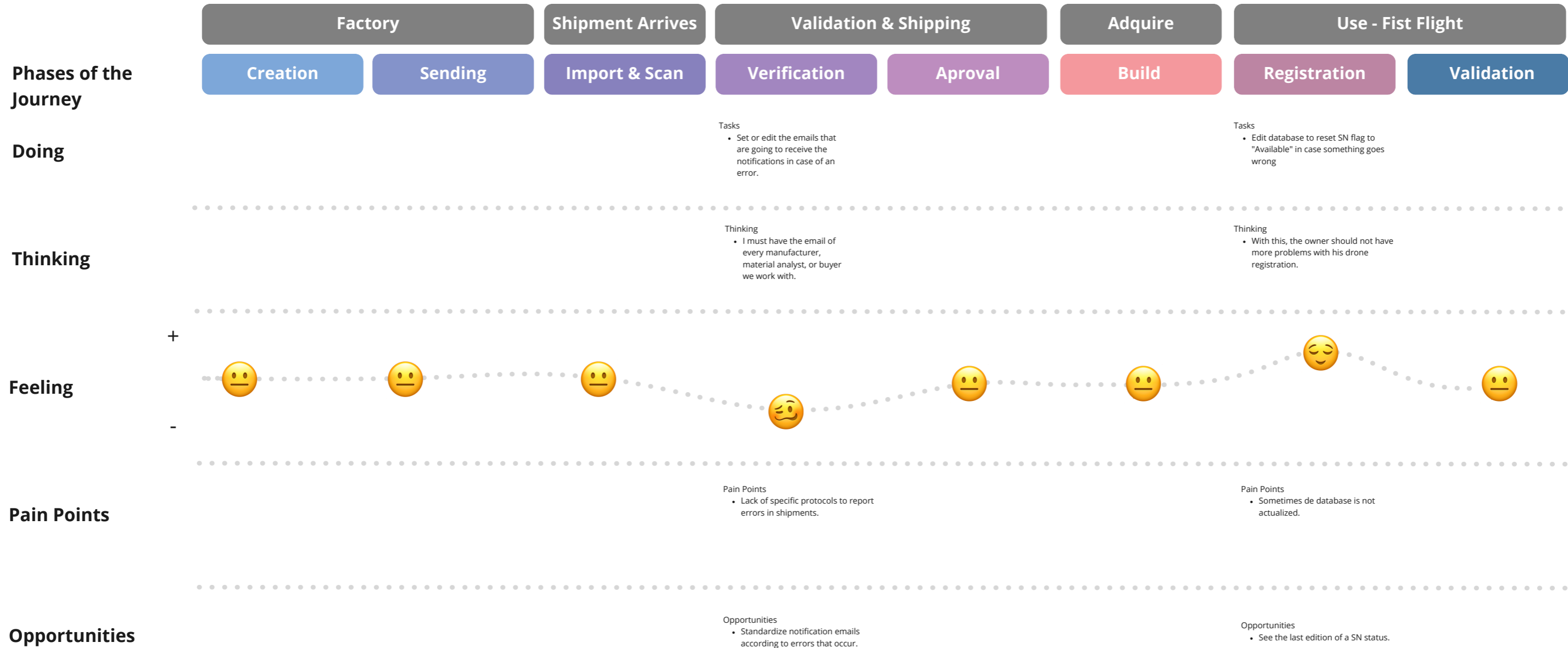
Bio

Mason works managing the roles and information in the system, from who has access to the platform to the contact emails for the manufacturer, the materials analyst, and the buyer.

Frustrations

- When there are problems with drones, not being able to contact the manufacturers.
- Not having a database that can be constantly updated.

User Journey Map



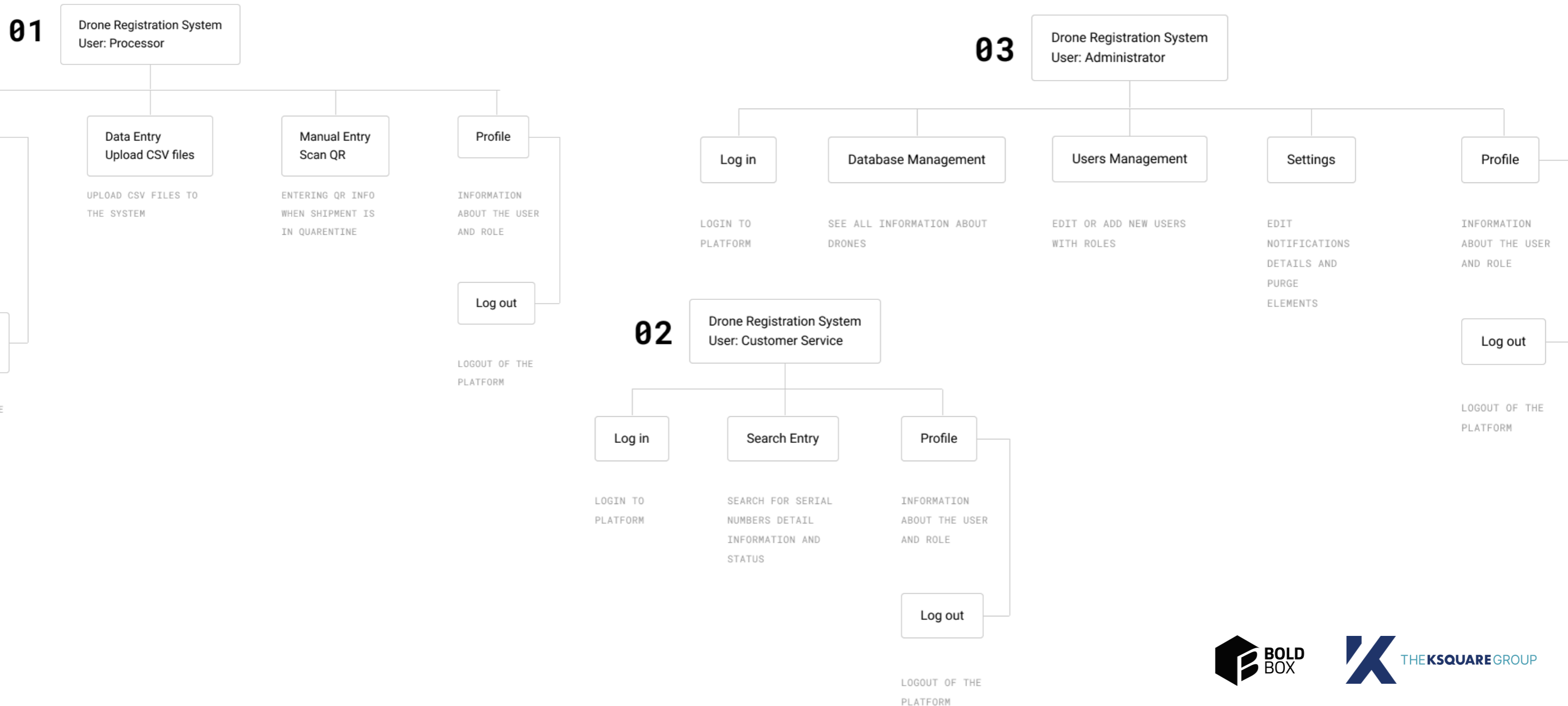
Starting the Design

- Site Map
- User Flow
- Digital Wireframes
- Design Considerations

Site Map

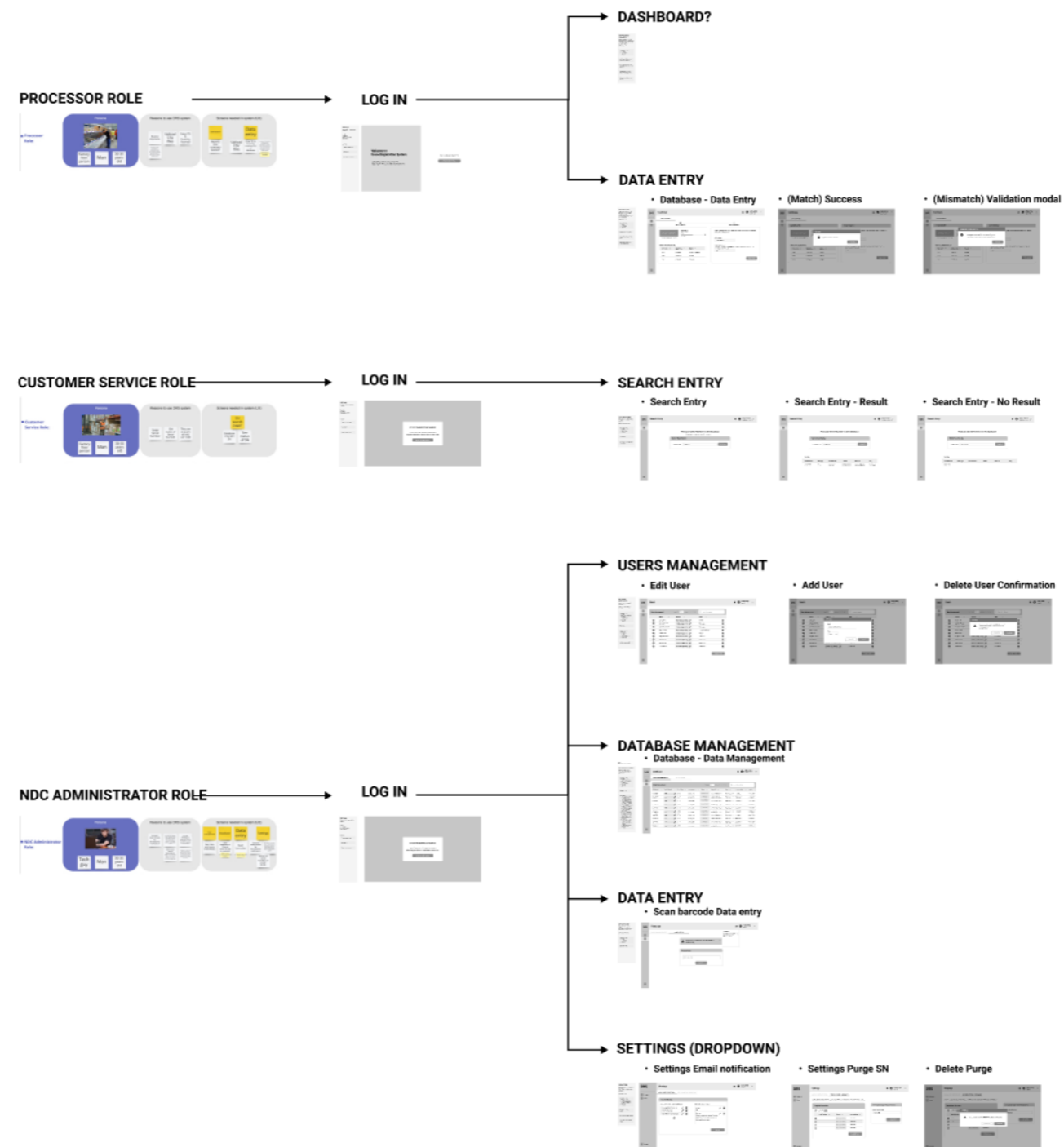
Process

As three users with differing needs were detected, it was decided that each one of them should have their own version of the app. To have an idea of how these versions would be organized, sitemaps were created.



User Flow

This is the last iteration of the user flow. Here we map the steps each user should follow to achieve their main task.



By creating the user flow with low-fidelity mockups, it was easier for the team to picture each of the users' tasks.

Low Fidelity Mockups

Process

Once we knew how the web app would be structured and the paths each user would follow, we made an inventory of features each profile should have so the users could achieve their goals. Then, it was time to start exploring how those features would look.

	PO	S/N	FMU	Description	Availability	Email	Group	Start Date	End Date
<input type="checkbox"/>	123456789	xxx1	FMU	Lorem ipsum	Available	priscila@theksqua.com	True (Group)	10/27/2021	10/27/2021
<input type="checkbox"/>	123456789	xxx1	FMU	Lorem ipsum	Owned	priscila@theksqua.com	True (Group)	10/27/2021	10/27/2021
<input type="checkbox"/>	123456789	xxx1	FMU	Lorem ipsum	Blocked	priscila@theksqua.com	True (Group)	10/27/2021	10/27/2021

Design Considerations

Simple interface

As two out of the three main users are not tech-savvy, we were asked to design an interface that is as simple as possible.

Bulk Actions

As a lot of information will be managed through the web app, the users should be able to perform tasks in bulk, such as upload files or purge information.

Many attempts to complete a task

Sometimes there will be mismatches in the system, so the user should have two attempts to double-check that they are entering the right information, and in case there is an error, report it.

Include Instructions

For some features that may confuse the users, instructions were suggested.

Refining the Design

- Mockups

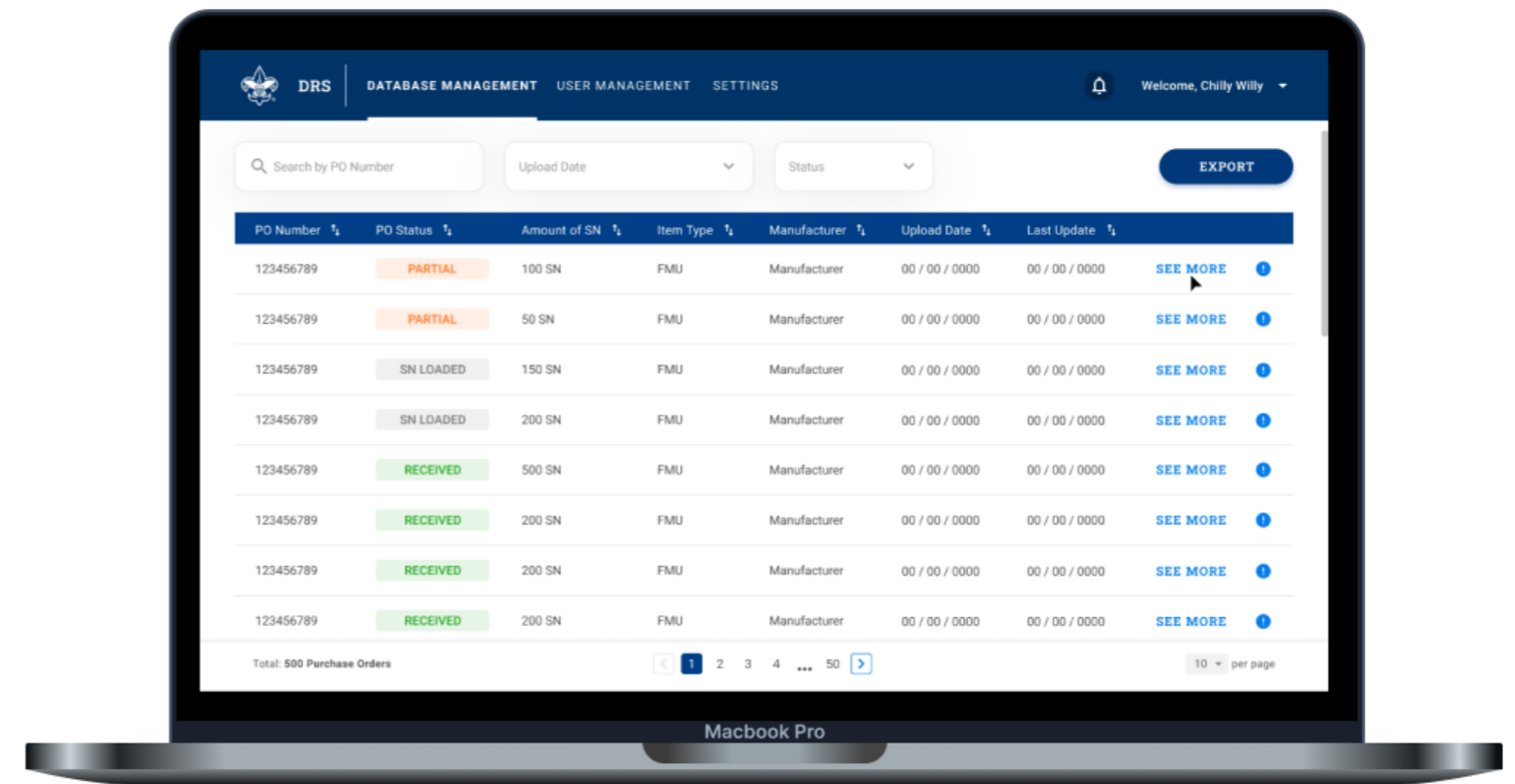
Mockups

Process

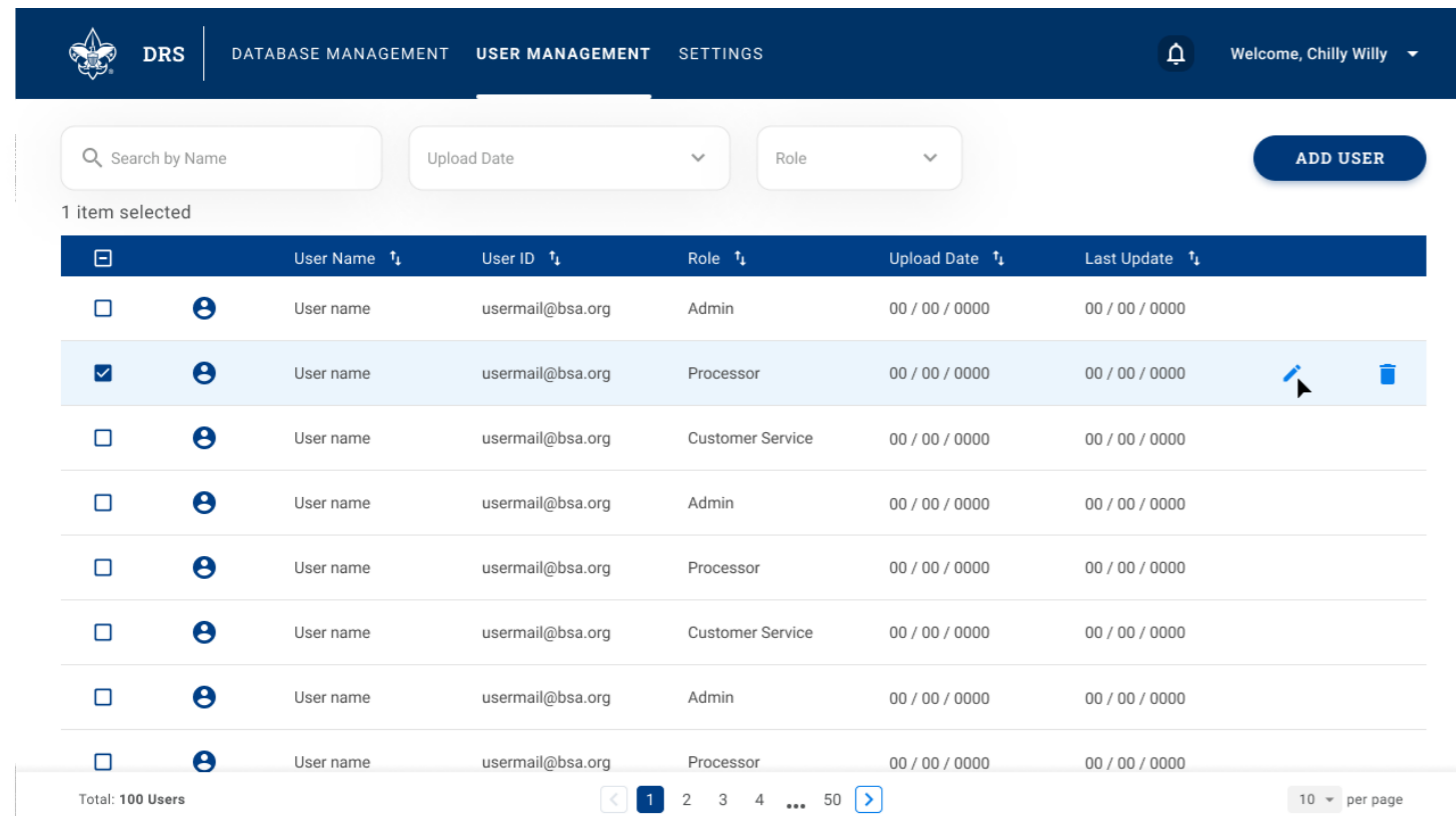
Thanks to the low-fidelity mockups, we were better able to define how the functions were going to be organized and distributed for each of the users.

Once these aspects were defined, we designed the high-fidelity mockups and aligned them to the Design System that Boy Scouts of America had already established.

The mockups were reviewed again by the client and after a few small changes, the final versions were delivered.



Mockups

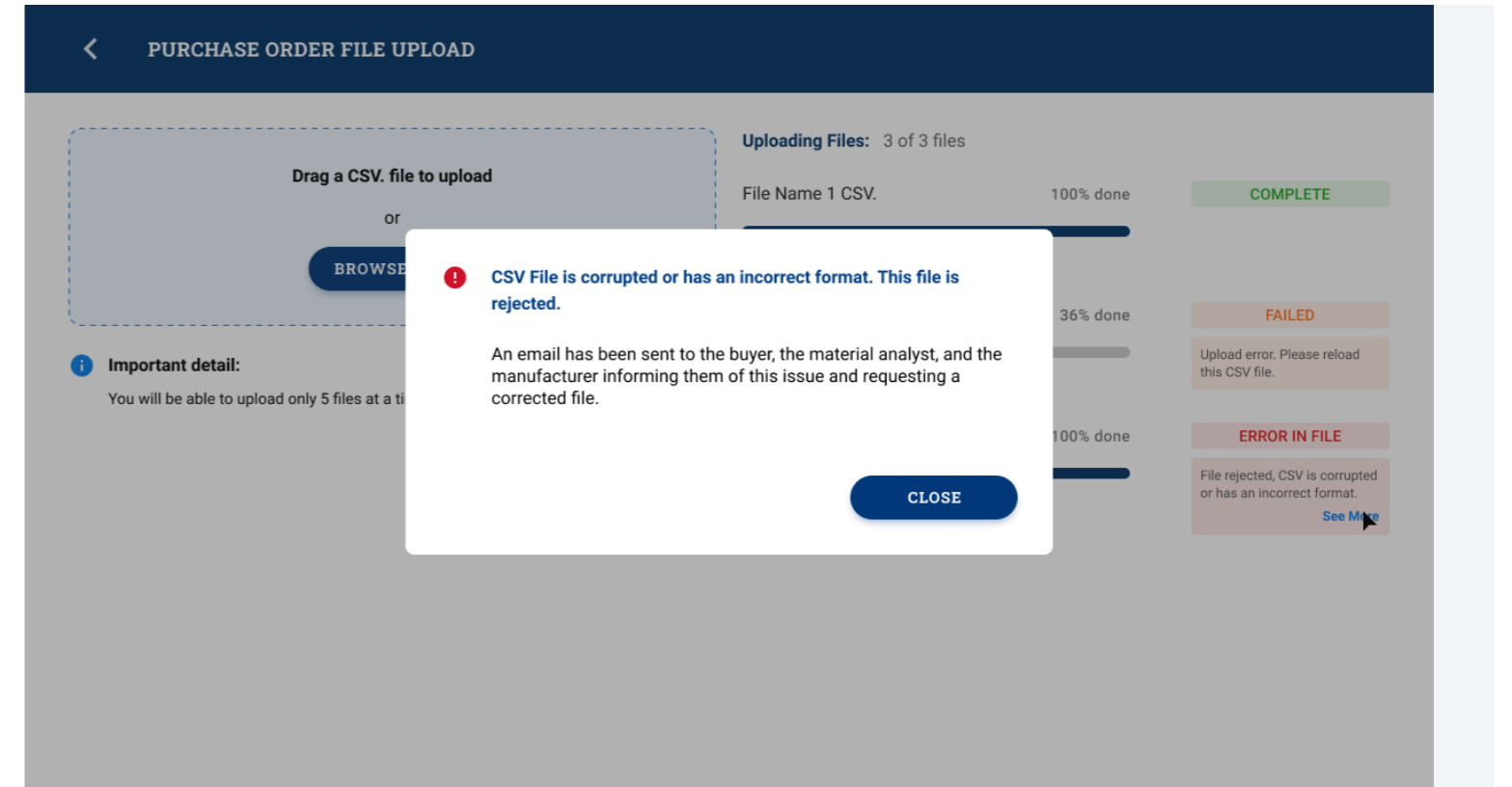


The mockup shows a user management interface. At the top, there is a navigation bar with 'DRS', 'DATABASE MANAGEMENT', 'USER MANAGEMENT', and 'SETTINGS'. A search bar and filters for 'Upload Date' and 'Role' are present. A table lists users with columns for selection, user name, user ID, role, upload date, and last update. A '1 item selected' indicator is shown. A 'Total: 100 Users' summary is at the bottom left, and a pagination control shows page 1 of 50 with 10 items per page.

<input type="checkbox"/>	User Name ↑	User ID ↑	Role ↑	Upload Date ↑	Last Update ↑
<input type="checkbox"/>	User name	usermail@bsa.org	Admin	00 / 00 / 0000	00 / 00 / 0000
<input checked="" type="checkbox"/>	User name	usermail@bsa.org	Processor	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Customer Service	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Admin	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Processor	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Customer Service	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Admin	00 / 00 / 0000	00 / 00 / 0000
<input type="checkbox"/>	User name	usermail@bsa.org	Processor	00 / 00 / 0000	00 / 00 / 0000

User Management Edition

To avoid editing or deleting users by mistake, this feature only appears while hovering over one of the rows.



The mockup shows a 'PURCHASE ORDER FILE UPLOAD' interface. A modal alert is displayed over the upload area. The alert has a red exclamation mark icon and the text: 'CSV File is corrupted or has an incorrect format. This file is rejected. An email has been sent to the buyer, the material analyst, and the manufacturer informing them of this issue and requesting a corrected file.' A 'CLOSE' button is at the bottom right of the modal. In the background, a file upload progress bar shows 'Uploading Files: 3 of 3 files'. One file, 'File Name 1 CSV.', is 100% done and marked 'COMPLETE'. Another file is 36% done and marked 'FAILED' with the message 'Upload error. Please reload this CSV file.' A third file is 100% done and marked 'ERROR IN FILE' with the message 'File rejected, CSV is corrupted or has an incorrect format.' and a 'See More' link.

Alert Modal

Modals were used to send alerts to users and make sure they didn't miss any critical information.

Going Forward

- Takeaways
- Next Steps



Takeaways

Learnings

- Collaborative methods, like the Service Blue Print, are useful to understand client requirements.
- Getting to know the role of each team member and communicating everything is key for the success of a project.
- Fail fast (and a lot) in order to reach a viable solution. Iteration is everything!
- Good Design Systems save a lot of time when creating new web services.

Next Steps

What's next?

The development team will begin to create the application following the mockups provided, while the design team works on providing support, clarifying doubts about the application features, and checking that the implementation of the platform adheres to the established design.



**Thanks for
tuning in! 🙌**

