‘Ceres’ Plant Health Database

P1: Usability Test - July 2020

Code for Canada + OMAFRA

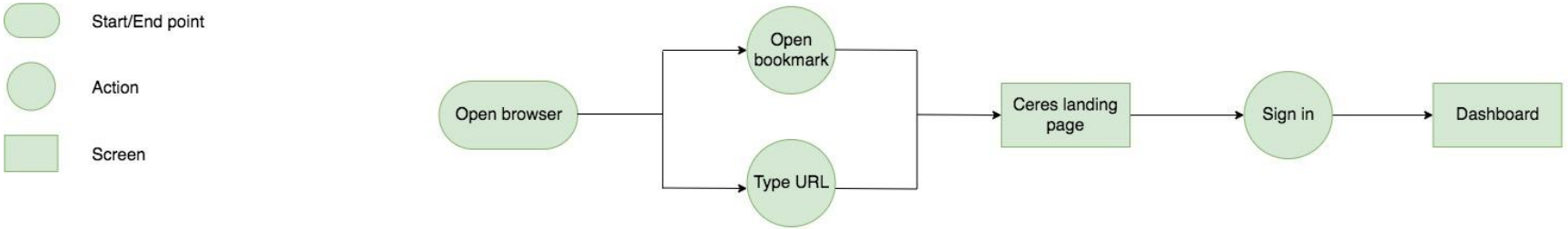
Background

We heard from crop protection Specialists that collecting, processing and analysing data takes too long. Mainly, because data is unstandardised and scattered across lots of data sources. This causes data errors that require Specialists to manually enter, clean, and reformat the data before analysing it. As a result, this makes it hard on Specialists to deliver timely insights to growers to save their crop from any damage or loss.

We started developing a flexible and extensible data management system called Ceres. It allows specialists to choose how data is structured in a centralised database. Ceres's vision is to also allow Specialists to enter data, import bulk data, generate forms, and connect to other applications via APIs.

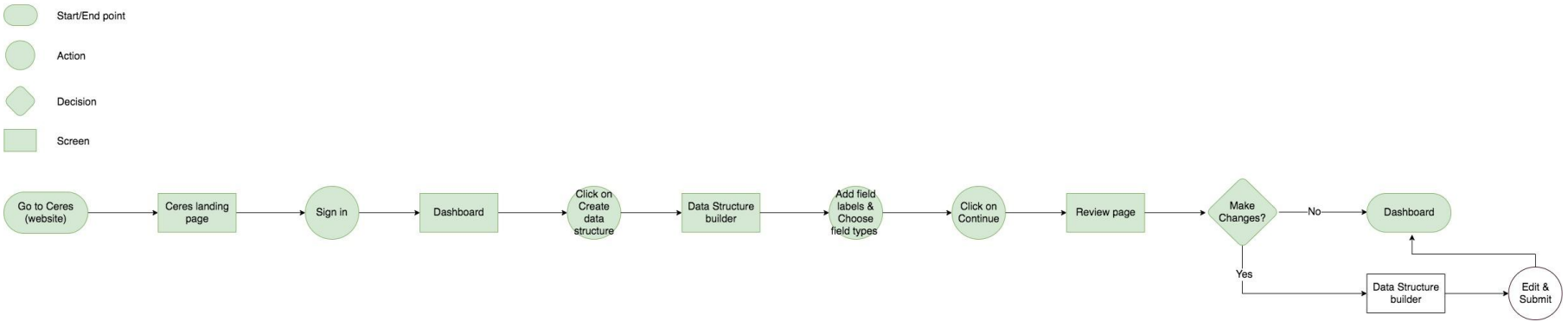
Tasks

1- Sign in to an existing account



Tasks

2- Create new dataset to an existing account



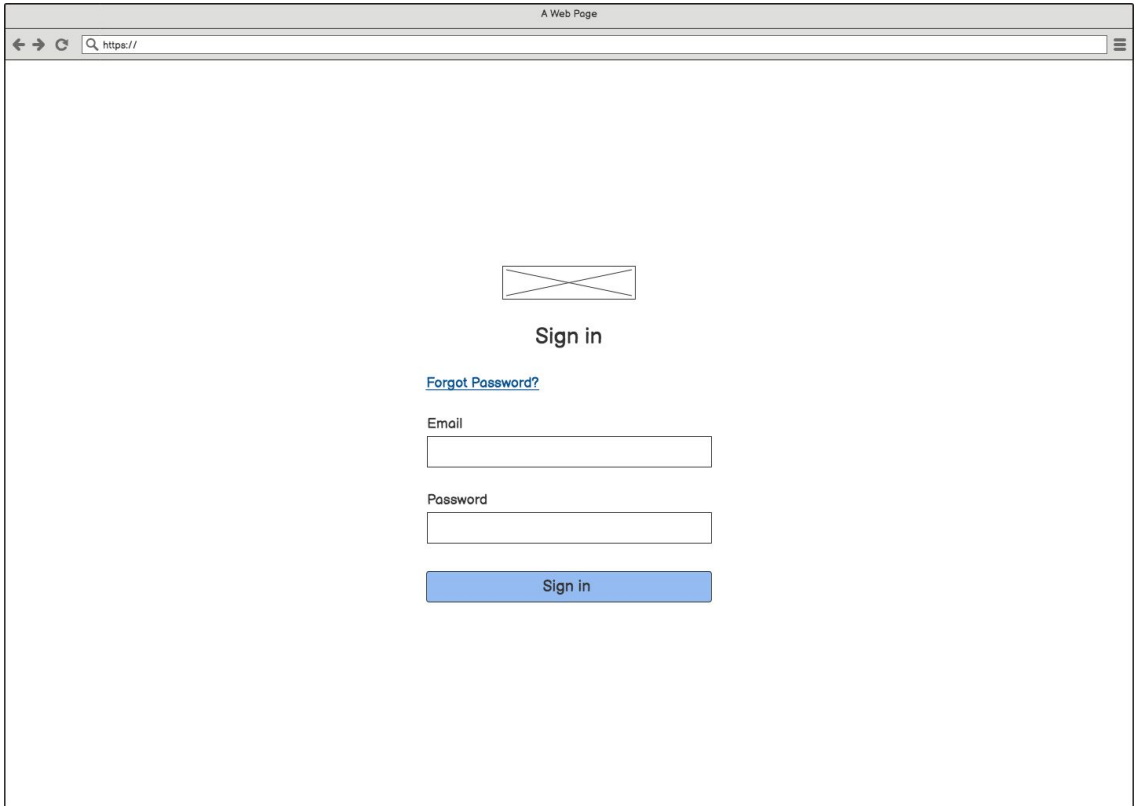
Approach

Tasks were shared with OMAFRA Specialists via 1:1 remote interviews.

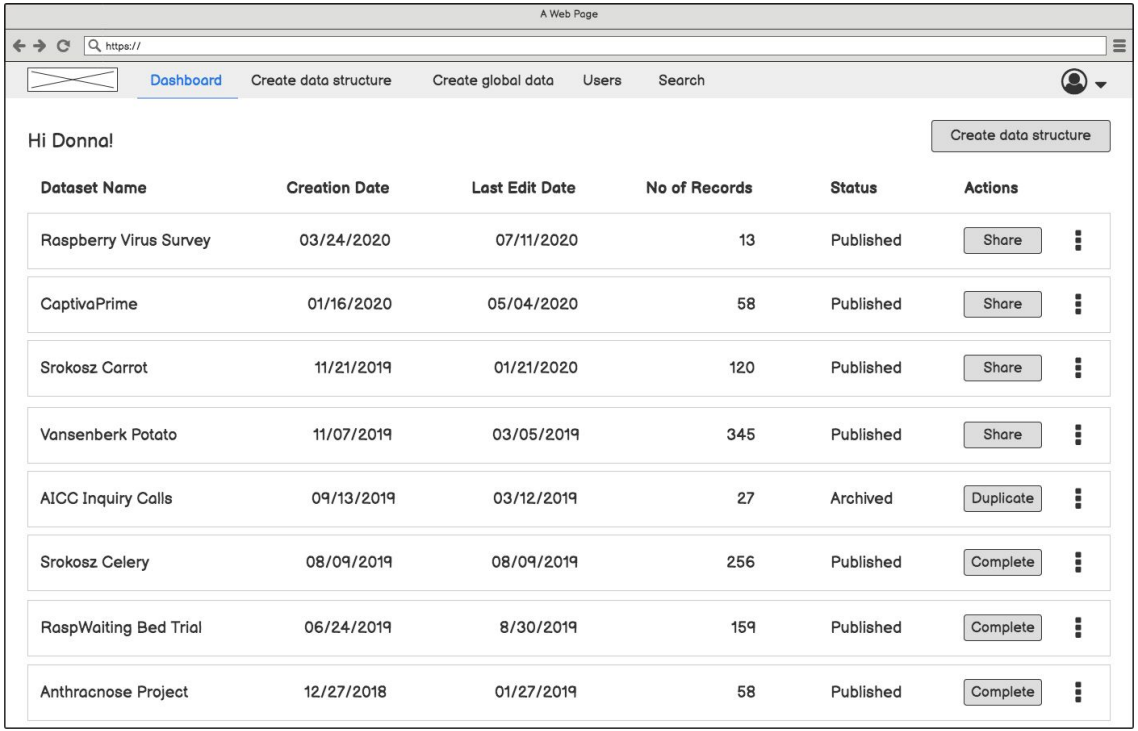
For Alpha, we focused on testing for Desktop since all specialists confirmed that they prefer to structure their datasets using desktops or laptops. Specialists also like to use mobile or tablet to enter data in the field. However, using screens could be challenging on rainy or sunny days. Also, lots of rural areas have slow to no internet connection.

Note: Currently, Specialists carry Blackberries or iPhones, but they are not provided with Tablets.

Sign in Page


A Web Page
https://
Sign in
Forgot Password?
Email
Password
Sign in

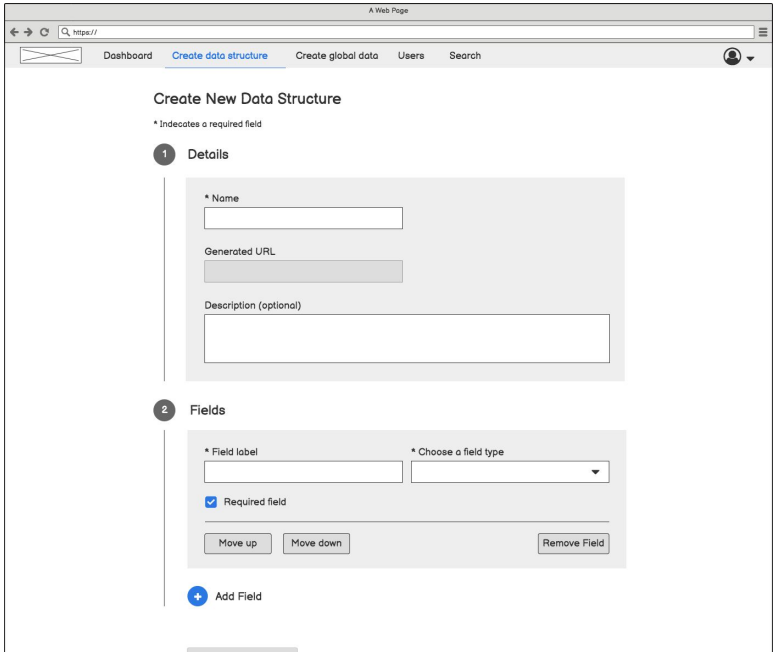
Dashboard Page



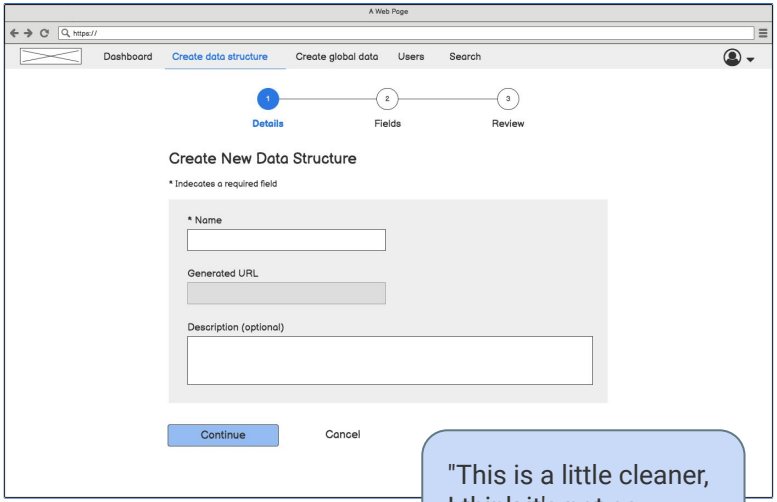
Create data structure

We tested two versions of a design to see which performs the best.

A) One page Design

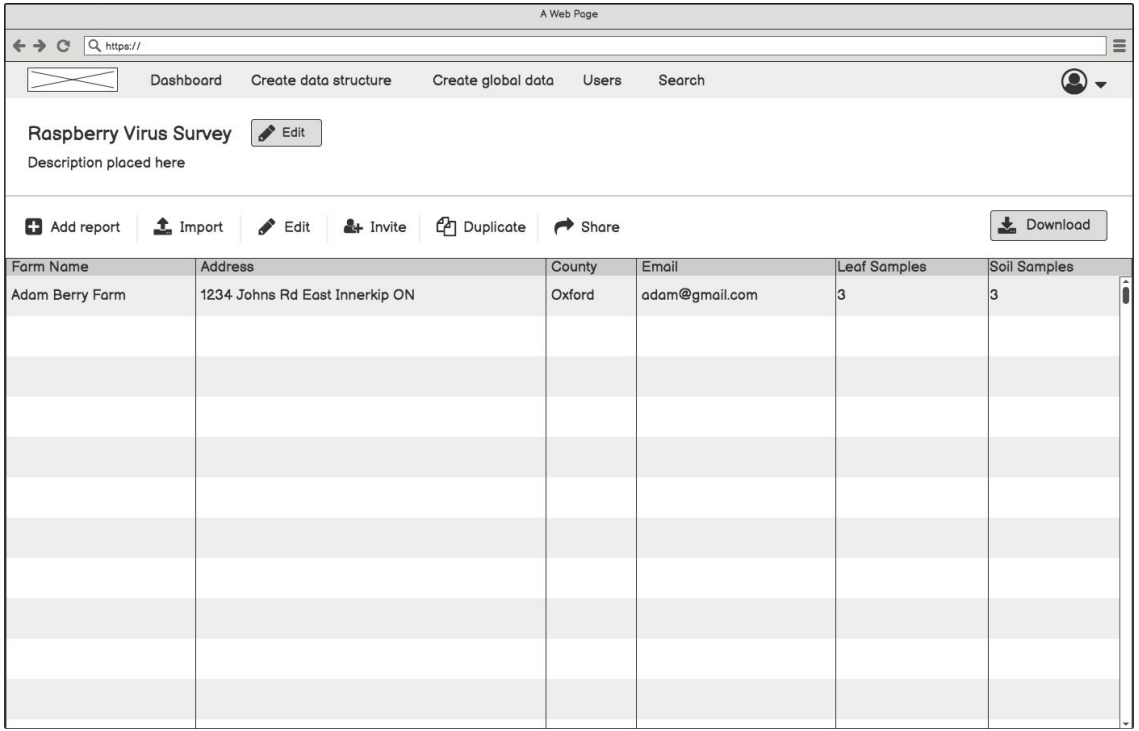


B) Stepper Design (3 pages)



"This is a little cleaner, I think it's not as intimidating.

Dataset Page



User Feedback

Some terms given to features and user interface elements were either difficult for users to understand or had different meanings in agriculture. For example, ‘field’ in computing speaks to a data entry field, and in agriculture, it speaks to a piece of land. Plus, users validated the importance of having or not having some features on certain pages.

"When I think of a **field**, I think of a corn field, that's why I am struggling here"

"Does **Create data structure** means that I already have data that I want to put somewhere? I don't really understand."

"What's the difference between **archived and publish?** I don't really know."

"**Number of data points** is individual to the data set and that's not necessary at dashboard level"

"To me, **adding a report** means adding more data to Adam Berry Farm. Create report means I'm creating a new farm report."

"I assume if I was creating a space to upload data, the **next step** would be to **add the data**"

Moving Forward

- Replace the term ‘Add Field’ with ‘Add Column’
- Replace the term ‘Add Report’ with ‘Add Row’
- Replace the term ‘Create data structure’ with ‘Create new dataset’
- Removed dataset status from the dashboard
- Removed number of records from the dashboard
- After creating a new dataset, users the dataset page instead of going back to the dashboard

Future Opportunities to consider

- Ability to view collaborators in the Dashboard
- Add time of day to ‘last edited’
- Add tags to datasets, such as trial or survey
- Ability to ‘Save Draft’ while creating a new dataset
- Ability to merge datasets