

‘Ceres’ Plant Health Database

P1: Usability Test - July 2020

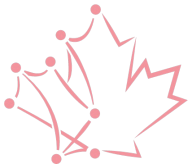
Code for Canada + OMAFRA



Background

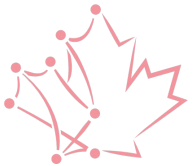
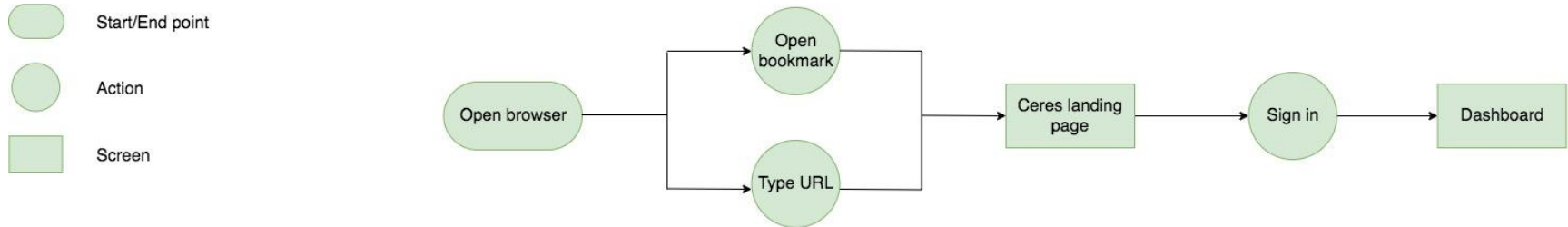
We heard from crop protection Specialists that collecting, processing and analysing data takes too long. Mainly, because data is unstandardised and scattered across lots of data sources. This causes data errors that require Specialists to manually enter, clean, and reformat the data before analysing 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.



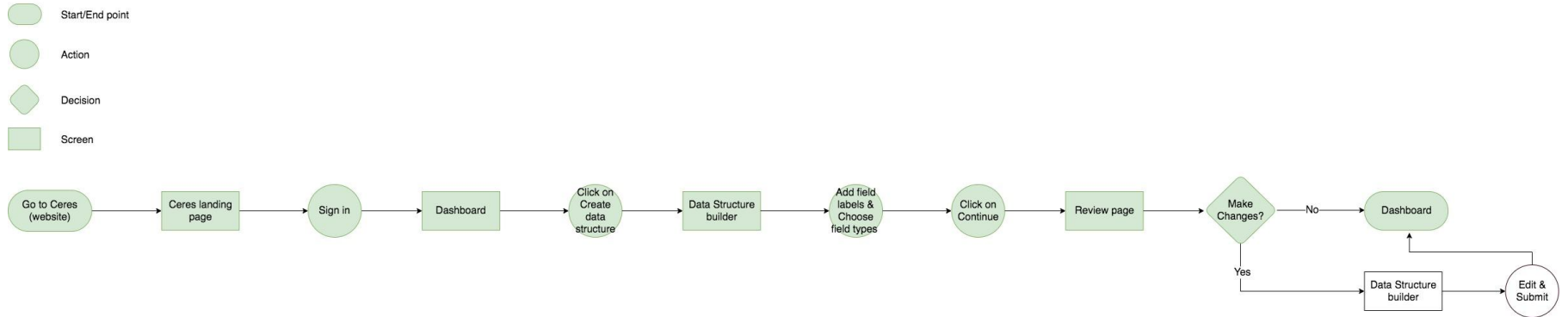
Tasks

1- Sign in to an existing account



Tasks

2- Create new dataset to an existing account



Approach

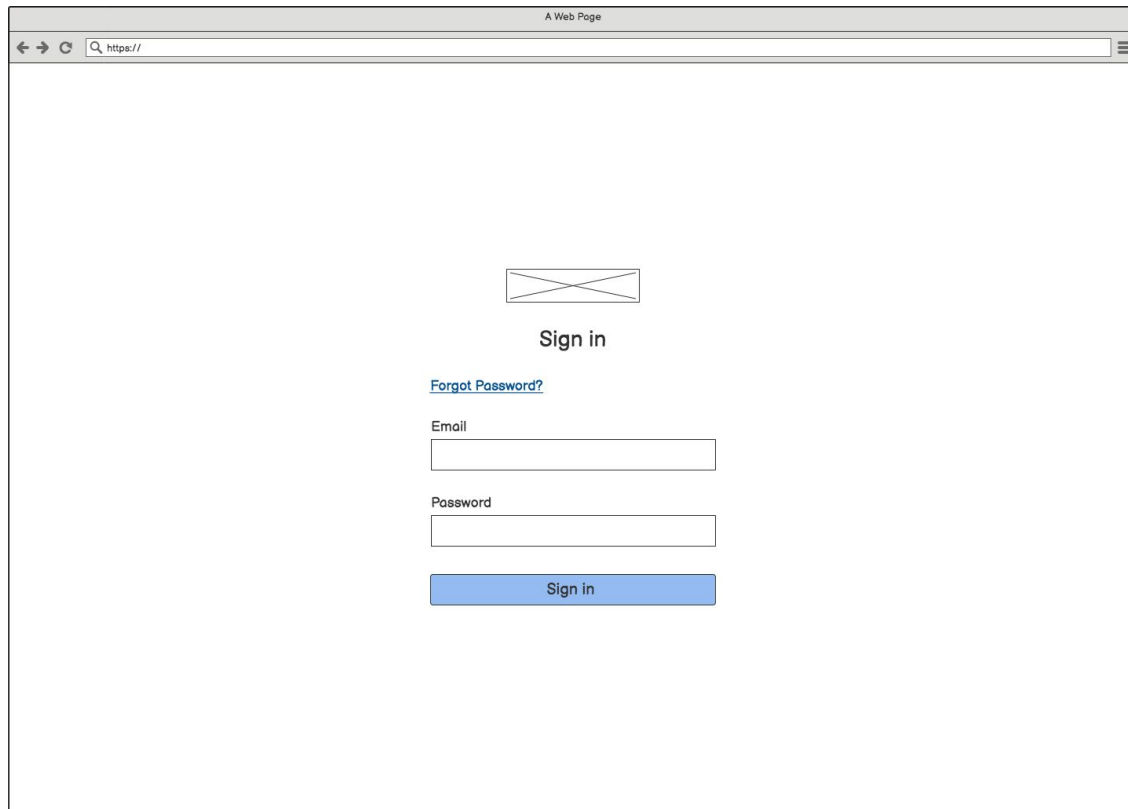
Tasks were shared with OMAFRA Specialists via 1:1 remote interviews.

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 wireframe of a sign-in page displayed within a web browser window. The browser's address bar shows "https://". The page content is centered and includes a placeholder image (a rectangle with an 'X'), the text "Sign in", a link for "Forgot Password?", and input fields for "Email" and "Password". A blue "Sign in" button is positioned at the bottom of the form.

A Web Page

https://



Sign in

[Forgot Password?](#)

Email

Password


Sign in

Dashboard Page

A Web Page

← → ↻ 🔍 https://

Dashboard Create data structure Create global data Users Search



Hi Donna!

Create data structure

Dataset Name	Creation Date	Last Edit Date	No of Records	Status	Actions
Raspberry Virus Survey	03/24/2020	07/11/2020	13	Published	<div>Share</div> <div></div>
CaptivaPrime	01/16/2020	05/04/2020	58	Published	<div>Share</div> <div></div>
Srokosz Carrot	11/21/2019	01/21/2020	120	Published	<div>Share</div> <div></div>
Vansenberk Potato	11/07/2019	03/05/2019	345	Published	<div>Share</div> <div></div>
AICC Inquiry Calls	09/13/2019	03/12/2019	27	Archived	<div>Duplicate</div> <div></div>
Srokosz Celery	08/09/2019	08/09/2019	256	Published	<div>Complete</div> <div></div>
RaspWaiting Bed Trial	06/24/2019	8/30/2019	159	Published	<div>Complete</div> <div></div>
Anthracoese Project	12/27/2018	01/27/2019	58	Published	<div>Complete</div> <div></div>

Create data structure

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

A) One page Design

The screenshot shows a web browser window with a navigation bar containing 'Dashboard', 'Create data structure' (active), 'Create global data', 'Users', and 'Search'. The main content area is titled 'Create New Data Structure' with a note '* Indicates a required field'. It features two sections: '1 Details' and '2 Fields'. The 'Details' section includes a required 'Name' text input, a 'Generated URL' text input, and an optional 'Description' text area. The 'Fields' section includes a required 'Field label' text input, a 'Choose a field type' dropdown menu, a checked 'Required field' checkbox, and 'Move up', 'Move down', and 'Remove Field' buttons. An 'Add Field' button with a plus icon is at the bottom.

B) Stepper Design (3 pages)

The screenshot shows a web browser window with a navigation bar identical to the one-page design. The main content area is titled 'Create New Data Structure' with a note '* Indicates a required field'. At the top, a progress indicator shows three steps: '1 Details' (active), '2 Fields', and '3 Review'. Below the progress indicator is a form with a required 'Name' text input, a 'Generated URL' text input, and an optional 'Description' text area. At the bottom of the form are 'Continue' and 'Cancel' buttons. A blue speech bubble on the right contains the text: "This is a little cleaner, I think it's not as intimidating."

Dataset Page

[illegible]

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

