

# 'Ceres' Plant Health Database

P3: Usability Test - September 2020

Code for Canada + OMAFRA



# Background

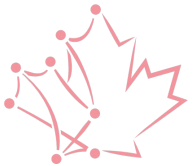
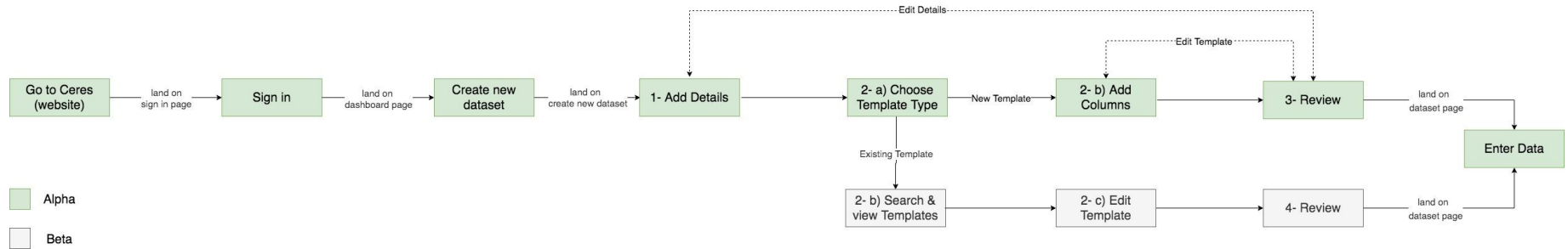
We heard from crop protection Specialists that collecting, processing and analysing data takes too long. Mainly, because data is unstandardised and scattered across lots of data sources. This causes data errors that require Specialists to manually enter, clean, and reformat the data before analysing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



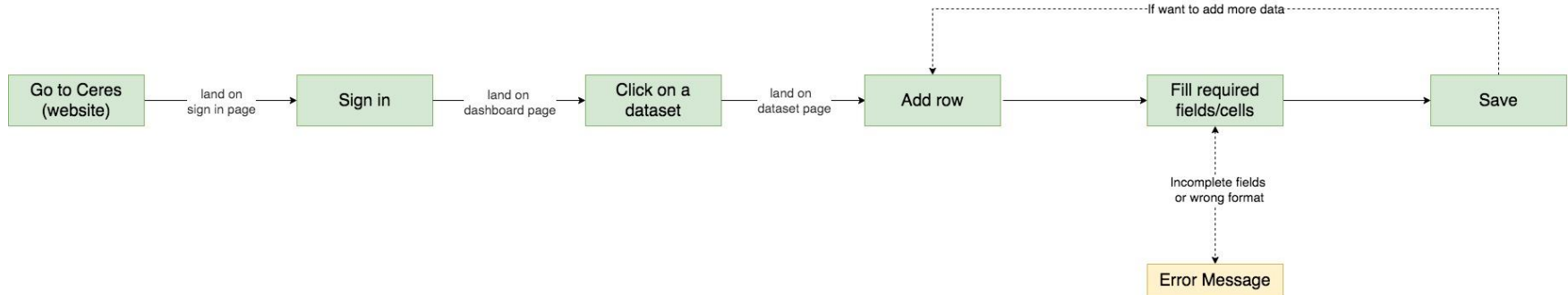
# Tasks

## 1- Create new dataset to an existing account



# Tasks

## 2- Enter data to my dataset



# 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.



# Dashboard Page

ALPHA

This is a prototype. This site will change as we test ideas.

Ceres

Dashboard

Create new dataset

Logout

UN

User Name

username@ontario.ca

My Datasets

My Drafts

Other Datasets

Global Datasets

Trash

My Datasets

+ Create new dataset

Filter

Dataset Name	Last Edited	Creation Date	
▼ <a href="#">Raspberry Virus Survey</a>	07/11/2020	03/24/2020	Download

# Add Columns Page

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

## A) Horizontal Design

ALPHA This is a prototype. This site will change as we test ideas.

Ceres Dashboard Create new dataset Logout

< Back

Create New Dataset

Details Template Review

Template Columns

\* Indicates a required field

Import existing template

+ Add Column

Add Column Heading

\* Column heading

\* Choose data type

\* Is this column a required field?

Reorder columns

Move left Move right

Save Cancel

Continue Save draft Cancel

"I prefer this because if I was creating it in Excel, that's what I would be doing. I think it would be more intuitive."

## B) Vertical Design

ALPHA This is a prototype. This site will change as we test ideas.

Ceres Dashboard Create new dataset Logout

< Back

Create New Dataset

Details Template Review

Column Headings

\* Indicates a required field

Import existing template

* Column Headings	* Data Type	* Is this column a required field?	
* Type Column Heading	* Choose Data Type	* Is this column a required field?	

+ Add Column

Continue Save draft Cancel

< Back

"I like being able to put in the data across the row on this page. Plus, you don't have all the clutter in the background."

# Review Page

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

## A) Horizontal Design

ALPHA This is a prototype. This site will change as we test ideas.

Ceres Dashboard Create new dataset Logout

< Back

Create New Dataset

Details Template Review

Review

Raspberry Virus Survey

Description and dataset details can be added here

Edit details

Column Headings	Form Name	Address	County	Email	Leaf Sample
Data Type	Text box	Location	County	Email	Number
Required	Yes	Yes	No	Yes	Yes

Edit template

Save & Create Save draft Discard

< Back

"It's already restructuring it closer to what the template will be"

## B) Vertical Design

ALPHA This is a prototype. This site will change as we test ideas.

Ceres Dashboard Create new dataset Logout

< Back

Create New Dataset

Details Template Review

Review

Raspberry Virus Survey

Description and dataset details can be added here

Edit details

	Column Headings	Data Type	Required?
1	Form Name	Text	Yes
2	Address	Location	Yes
3	County	County	No
4	Email	Email	Yes
5	Leaf Sample	Number	Yes

Edit Template

Save & Create Save draft Discard

< Back



# Dataset Page - Entering data

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

## A) Right slider Design

This screenshot shows a web interface for entering data. On the left is a table with columns: Farm Name, Address, County, and Email. Below the table is a blue button labeled '+ Add Row'. On the right is a 'Add Row' sidebar containing form fields for Farm Name, Address, County (a dropdown menu), Email, and Leaf Samples (a spinner control). The sidebar also includes 'Save' and 'Cancel' buttons. The top navigation bar includes 'ALPHA', a prototype notice, 'Ceres', 'Dashboard', 'Create new dataset', and a 'Logout' link.

## B) Inline Design

This screenshot shows an alternative web interface for data entry. The table on the left has columns: Farm Name, Address, County, Email, and Leaf Samples. The first row is populated with data: 'Adam Berry Farm', '1234 Johns Rd East Innerkip', 'Oxford', 'adam@gmail.com', and '3'. To the right of the table is a blue '+ Add Column' button. Below the table is a blue '+ Add Row' button. The right sidebar contains form fields for Farm Name, Address, County (dropdown), Email, and Leaf Samples (spinner), along with 'Save' and 'Cancel' buttons. The top navigation bar is identical to the first design, but includes a 'Download' button.

"This one is more intuitive to what people already do, so it might be easier transition to do"

# User Feedback

Overall feedback was positive, with some suggestions to provide the Specialists with the ability to add rows as headings when creating a dataset and to enter data by columns to cover different use cases. Also, it wasn't clear to all users that their work was automatically being saved.

"How do I also **create rows**? Because a lot of times I have, I may have a row heading, that span runs across rather than a column heading."

"I think it [**enter data** by adding rows] works well for survey work, but for doing like 500 points on harvest trial, it's going to be difficult."

"The purpose with the keyboards and entering actual numeric numbers, sometimes it's **easier to just keep going down a row**"

"I would probably have **saved every step** that I would go through."

"Once the data is entered, **Where do I save this?**"

# Moving Forward

- Add the ability to add rows as headings when creating a new dataset
- Add the ability to enter data by column
- Assure the users that their work is being saved automatically while creating new dataset and entering data
- Replace 'Save Draft' with 'Save & Quit'. Followed up with a message informing the user that their dataset is saved under 'My Drafts'



# Future Opportunities to consider

Ability to

- View collaborators from 'My Datasets' page
- Add and view final analysis (not just row data)
- Add help, settings, and user profile
- Print a dataset directly from the dataset page
- Style a dataset

