

# Code for Canada Fellows at OMAFRA

APRIL 2020



## Project Panel Meeting

# Agenda

1. Introduction to Code for Canada
2. How we work (4-Day Sprint review)
3. Sprint Zero Outcomes & Output
4. Research Findings
5. Challenges (and potential solutions)
6. Outcome Goals
7. Q & A



# Introductions

Who We Are

# About Code for Canada

“...a national nonprofit that **connects government innovators** with **the tech and design community**. Our programs enable governments to deliver better digital public services and empower communities **to solve civic challenges using technology and design.**”



**CODE** for  
**CANADA**

**Who We Are**

# Our Team

**Seyi Taylor** Product Manager  
*Responsible for the “What”*

**Rola Kuidir** UX Designer  
*Responsible for the “Why”*

**Zola McAdie** Software Developer  
*Responsible for the “How”*





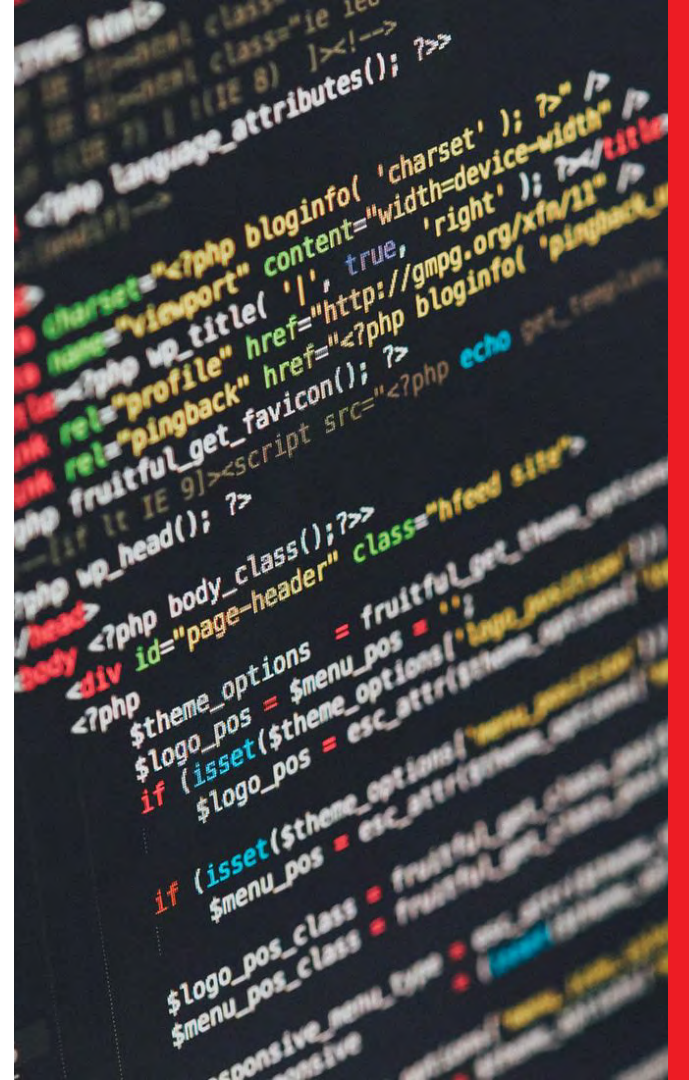
## What We're Doing

# Our Challenge

Pest, weather and crop protection data is **unstructured and scattered** across various sources and sources.

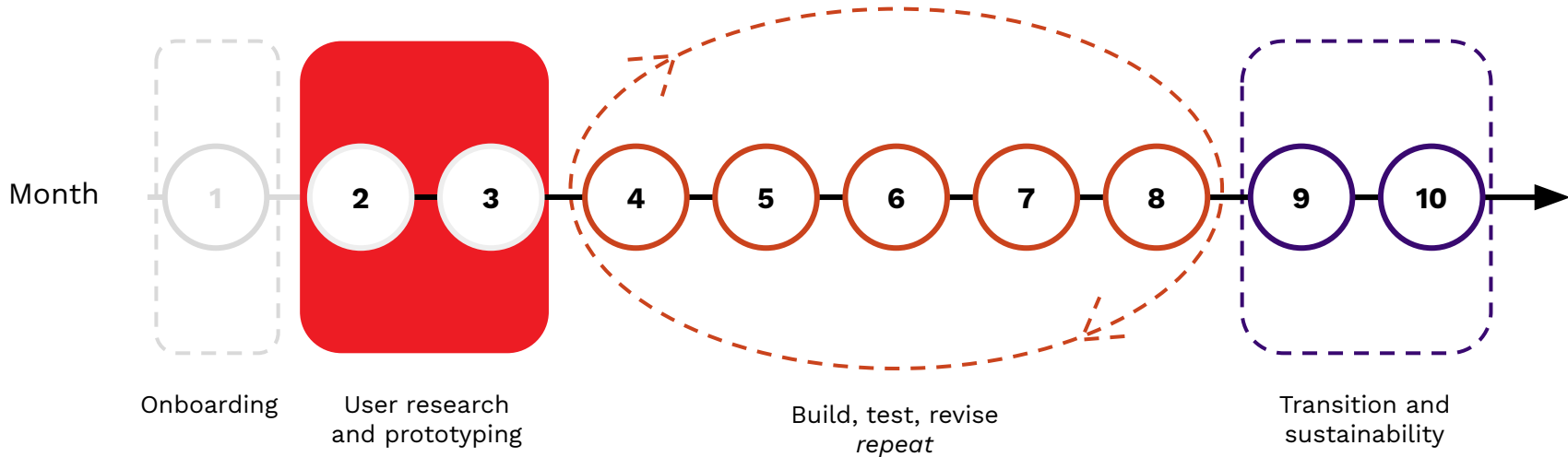
As a result, **OMAFRA staff have difficulty accessing all the data they need** in delivering insights to growers in a timely manner.

**Our challenge is to develop a solution that will help OMAFRA staff deliver accurate, real-time insights to growers.**



What We're Doing

# Fellowship Timeline Overview



# How We Work



## How We Work

# Working in the Open

1. Reduces **risk**
2. Is **easier** and **faster**
3. Amplifies **impact**
4. Builds **trust**
5. Makes **better** products

**“Promising something concrete in the future, rather than showing work in progress, sets us up to fail.”**

UK Government Digital Service

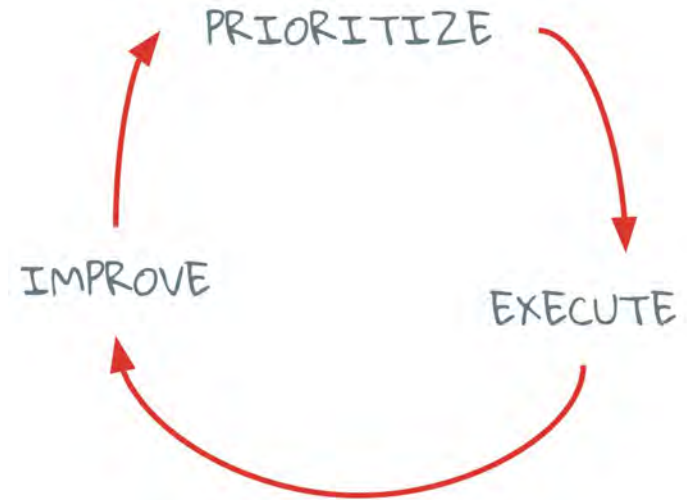
## How We Work

# Working with Agile

The cornerstone of our approach is the concept of agile work. Our interpretation of agile allows teams to respond to challenges faster and adapt their work to a rapidly changing environment.

Plan the Thing, Do the Thing, Make it Better. Or more simply:

**Prioritize, Execute, Improve.**



4 Days Sprint

# Sprint Challenge

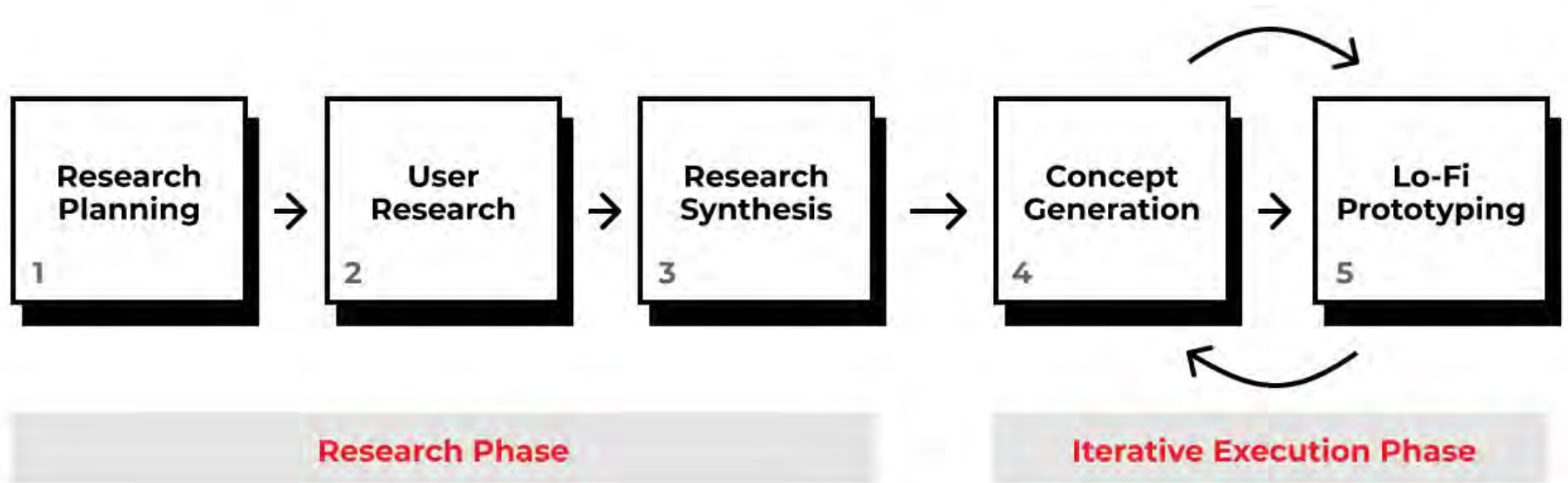
The Crop protection unit tracks data about pests across Ontario and other regions. That data must be analysed quickly to give growers the actionable intelligence they need to protect yields.

Unfortunately, that data is delivered with errors and in inconsistent formats - cleaning and arranging it takes a lot of time, thus insights and analysis are delayed.

**Challenge was to deliver a solution to this problem in 4 days.**

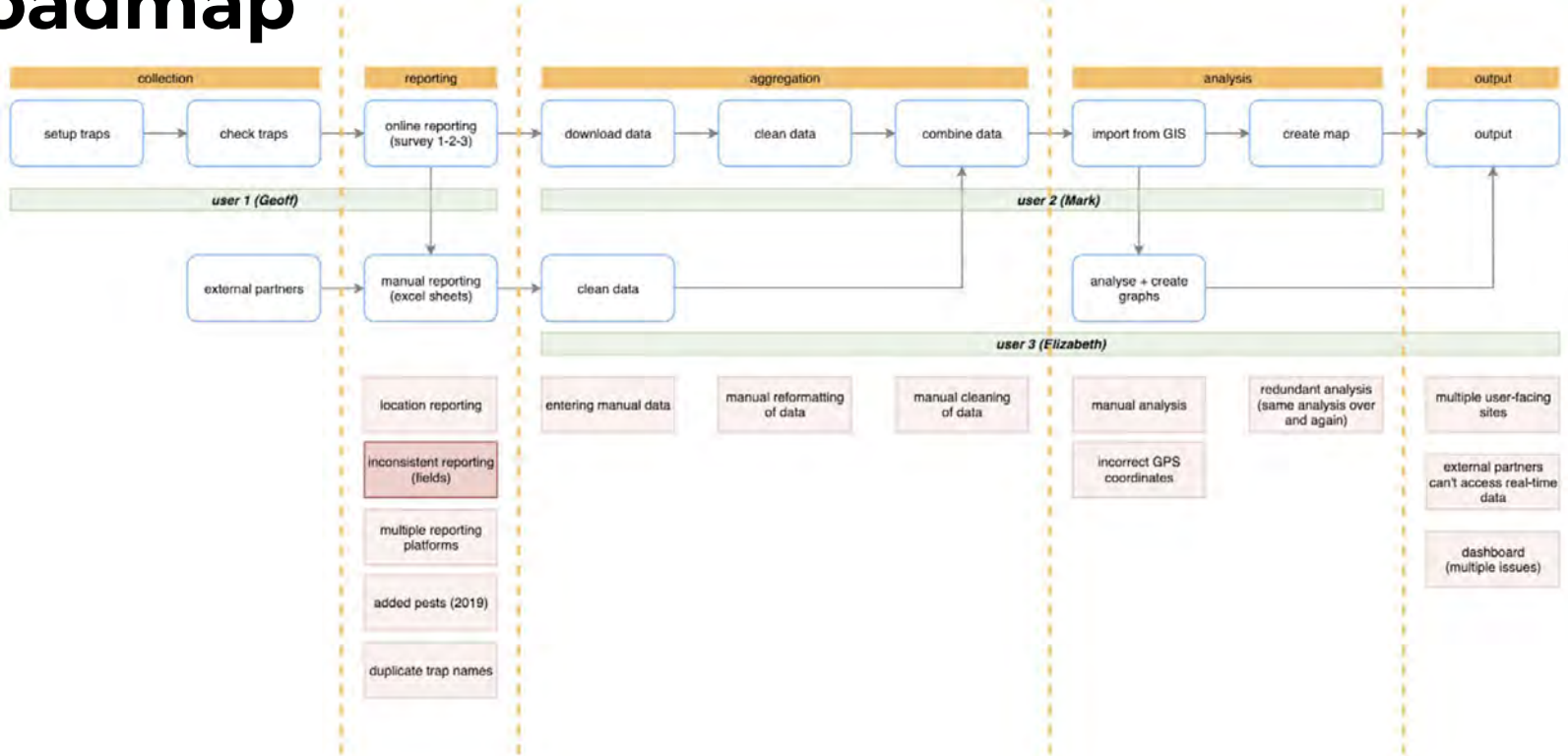
4 Days Sprint

# The Process



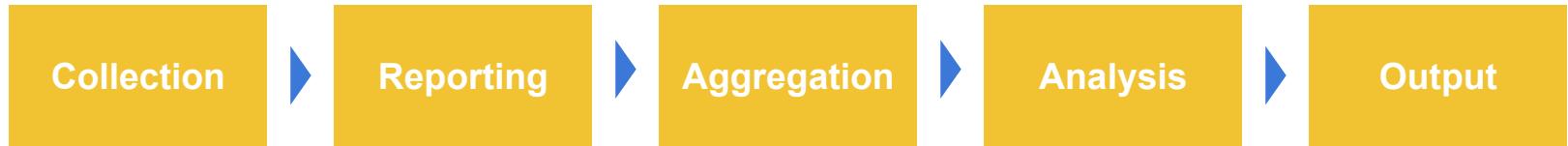
## 4 Days Sprint

# Discover the Data Roadmap



4 Days Sprint

# Discover the Data Roadmap



## 4 Days Sprint

# Identify User Personas



**Elizabeth**  
Entomologist

### Role

She is a veteran government employee in charge of coordinating data collection and analysis for crop protection

### Pain Points

- Inconsistent reporting (fields)
- Manual data cleaning
- Manual data analysis



**Mark**  
GIS Expert

### Role

He creates maps and analyses from compiled field data

### Pain Points

- Inconsistent reporting (fields)
- Manual data cleaning
- Manual data analysis
- Incorrect location reporting/incorrect GPS coordinates



**Geoff**  
Trapper

### Role

Farmer who traps pests on their land and reports collected data to OMAFRA

### Pain Points

- Location reporting
- Redundant data entry
- Multiple user-facing sites



4 Days Sprint

# Product Prototype



4 Days Sprint

# Product Prototype

**My Traps**



**New Trap**



**Added!**



**Add report**



**Done!**



**What we're  
currently doing**

# **Sprint Zero**



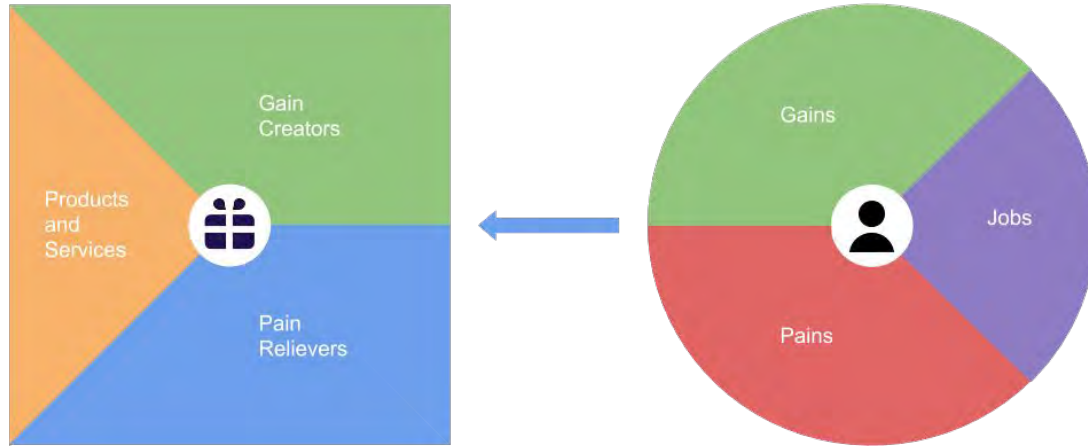
## Research Questions

# Why Sprint Zero?

Our version of Sprint Zero is used to define success, identify obstacles, and align the expectations of our team and stakeholders.



# Value Proposition Canvas



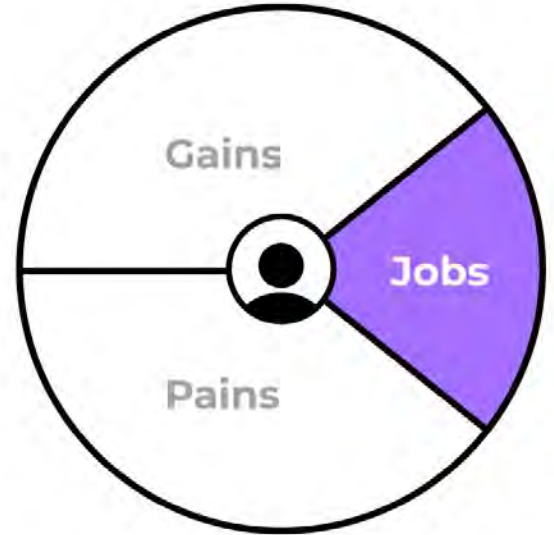
*The Value Proposition Canvas is a tool which can help ensure that a product or service is positioned around what the customer values and needs.*

## Value Proposition Canvas

# What do the Users need to do? (Jobs)

The vast majority of jobs performed by our users involve the collection, documentation, analysis, and sharing of data:

- Data Collection
- Weather Data
- Data Sharing
- Data-Based Decision Making





## Value Proposition Canvas

# Why are those Jobs important? (Gains)

Our users' motivations revolve around being able to do work efficiently and to a high standard of quality, ultimately prioritizing the value they add to taxpayers and the growers they work with.

- Efficiency
- Data Sharing
- Data-based Decision Making
- Taxpayer Value



## Value Proposition Canvas

# What makes doing this hard? (Pains)

Users' pains revolve around a lack of resources and organizational support as well as unclear internal communication.

- Lack of Support
- Lack of Resources
- Unclear Communications



## Sprint Zero

# Success Spectrum

### What Success Looks Like

#### Failure

What can cause us to fail?

#### Minimum


What is minimum viable success?

#### Target

What are we aiming for?

#### Epic

What are our moonshot ideas?



A Success Spectrum helps teams align expectations for the project and define success and failure in a concrete way on a spectrum instead of a binary pass/fail.

## Success Spectrum

# What is Failure & what might Cause it?

Key failure scenarios identified across all three groups centered around

- lack of sustainability for a product solution
- a product solution that failed to address underlying challenges
- lack of buy-in for the project from stakeholders and internal organizations



## Success Spectrum

# What is Minimum Viable Success?

Key criteria for minimum viable success were largely centered around a database solution that allowed for easy standardization and management of data. Specifically:

- simple and effective means of data management
- engagement from staff in the planning, building and usage of the product solution



## Success Spectrum

# What can we achieve without Roadblocks?

Target success criteria identified a database product solution that filled the following requirements:

- provides centralised data
- introduces some basic public facing components
- automates some simple workflows
- easily extendable to adapt to future needs



## Success Spectrum

# What's the perfect world Outcome?

Epic success for the project was defined broadly as an extension of the database product features and scope. Key features included:

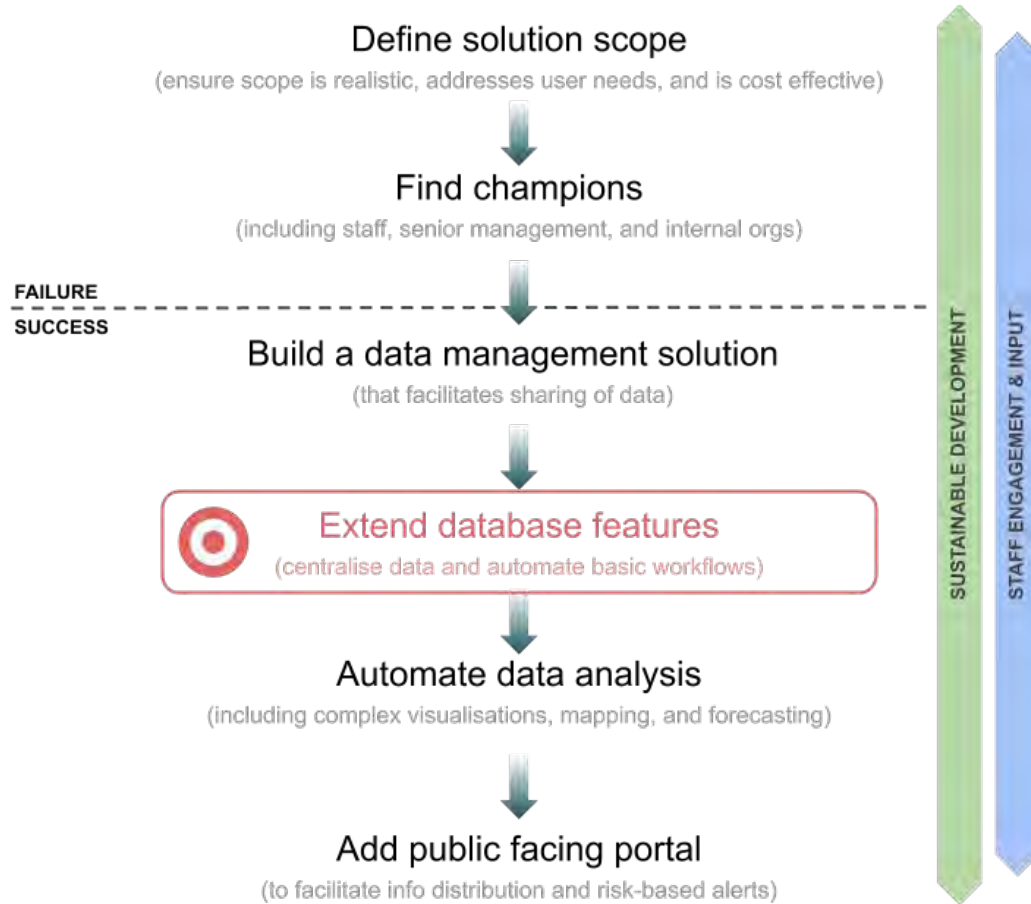
- automated analysis and visualisation workflows
- public-facing dashboard
- real-time prediction capacity
- internal capacity for software development





## Success Spectrum

# Roadmap



# User Research



## User Research

# Stakeholder Interviews

We're holding research interviews with stakeholders contributing to various points in the data roadmap including:

- **11 specialists**
- **3 - 4 growers** from predetermined groups (data generators and consumers)
- **3 - 4 crop consultants**
- **3 grower organisations**



## Research Goals

# Understand the Data Lifecycle

How is data generated, sourced,  
processed, managed, stored,  
analysed, and used by OMAFRA?

## Research Goals

# Uncover the Tools our Users Use

What are the different tools and resources that participants use to predict and respond to plant health threats? And How do they work?

## Research Goals

# Identify Pain Points and Barriers

What are the blockers to achieving the goal of delivering real-time insights to growers?

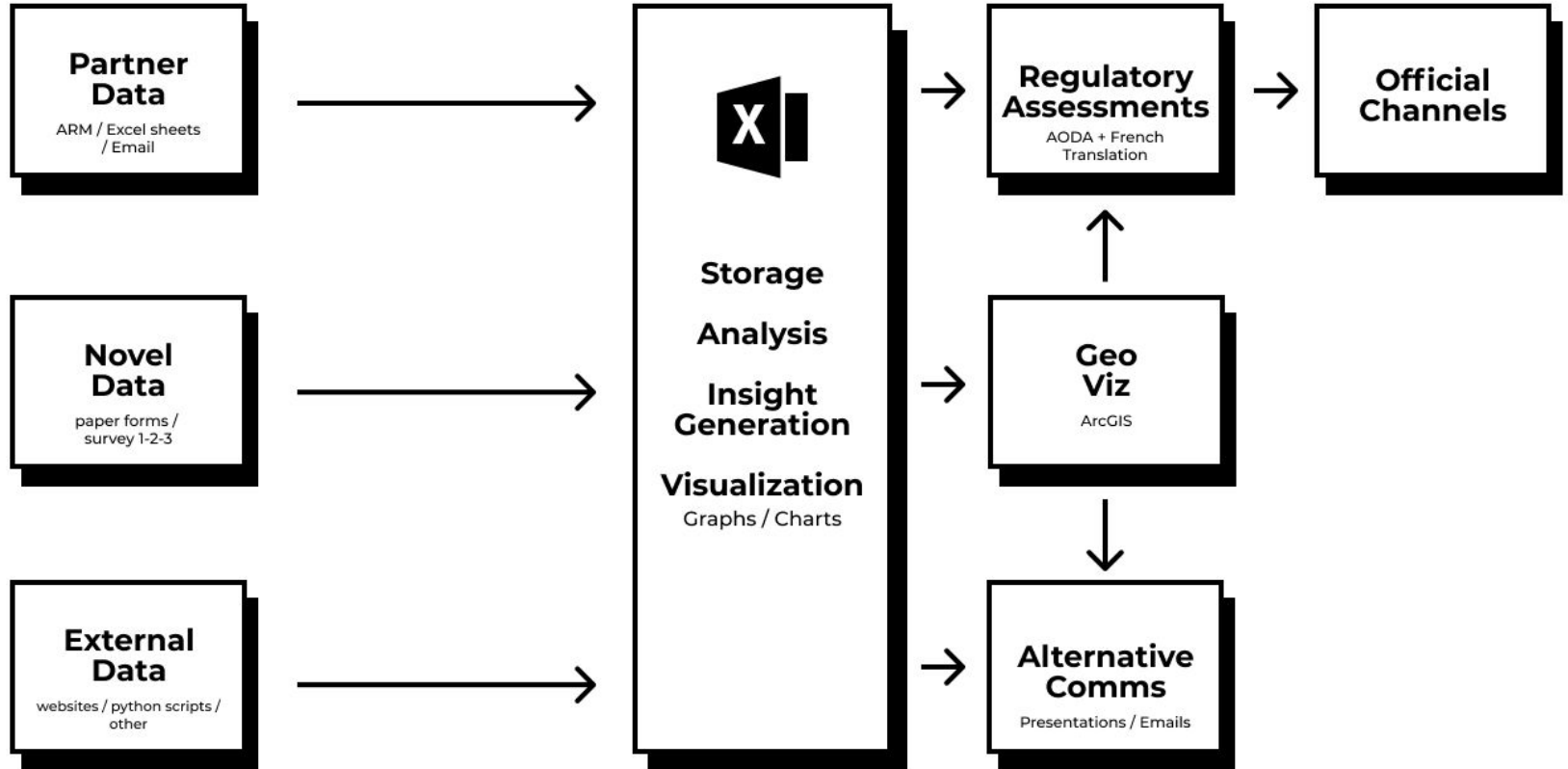
## Research Goals

# Learn more about our Users

What are the stakeholders  
behaviours, needs, motivations, and  
preferences?

## Research Results

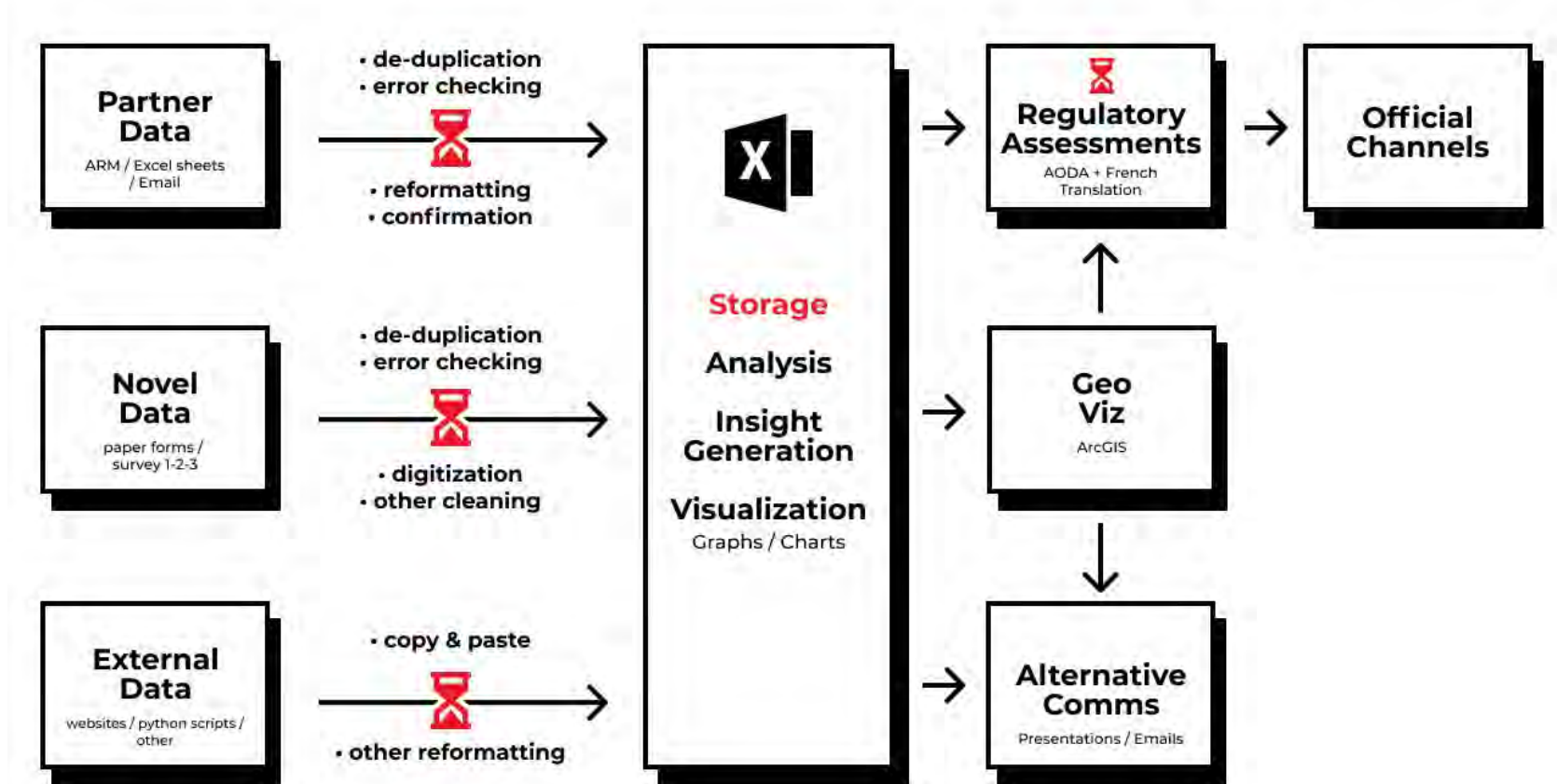
# Data Roadmap





## Research Results

# Challenges & Opportunities



## Research Findings

# Pain Points and Opportunities

## Pain Points

1. Data quality
2. Data standardisation
3. Access to external data  
(esp. weather data)
4. Time to comply with  
publishing regulations

## Opportunities

1. Improve data storage
2. Automate insights and  
visualisations
3. Make online publishing  
mobile-friendly

# **Vision**

**To deliver the best services to growers, thereby protecting and enhancing the agriculture industry and providing the best value to taxpayers.**



## Project Outcomes

# Outcome Goals

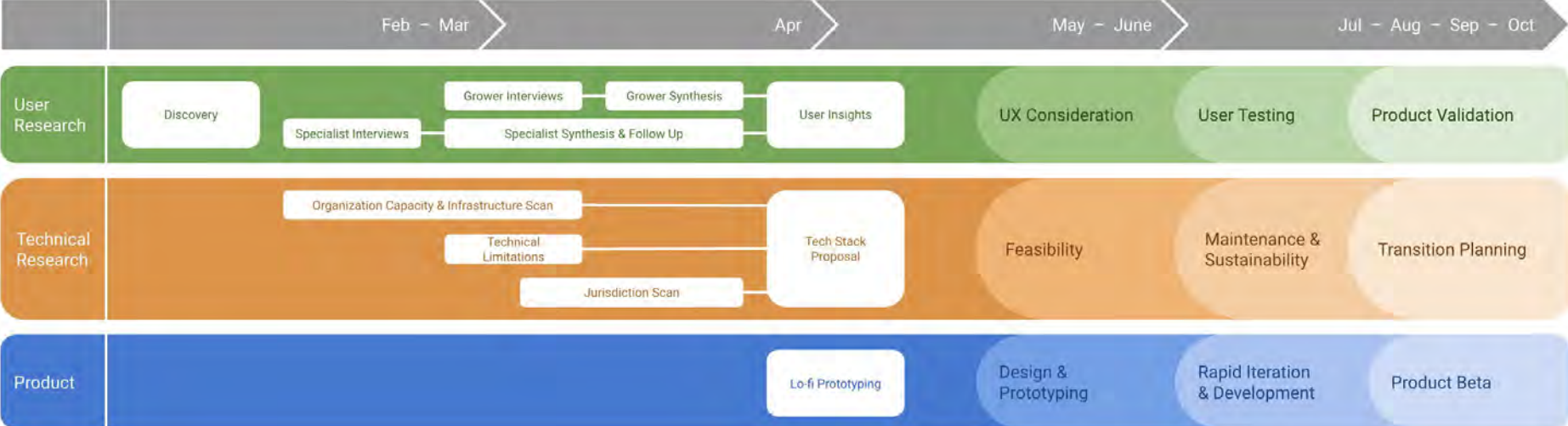
In support of this vision we have outlined the outcome goals of this fellowship project.

We aim to:

1. Support our partners ability to manage and analyse data
2. Facilitate the shift to agile practices within OMAFRA
3. Improve software development capacity within the ADB



# Next Steps



Q + A

## Question for the Panel

Are there any blockers that you can see? eg. policies, constraints, legalities, or technical parameters?



**Thank you**