Introducing AMIGO

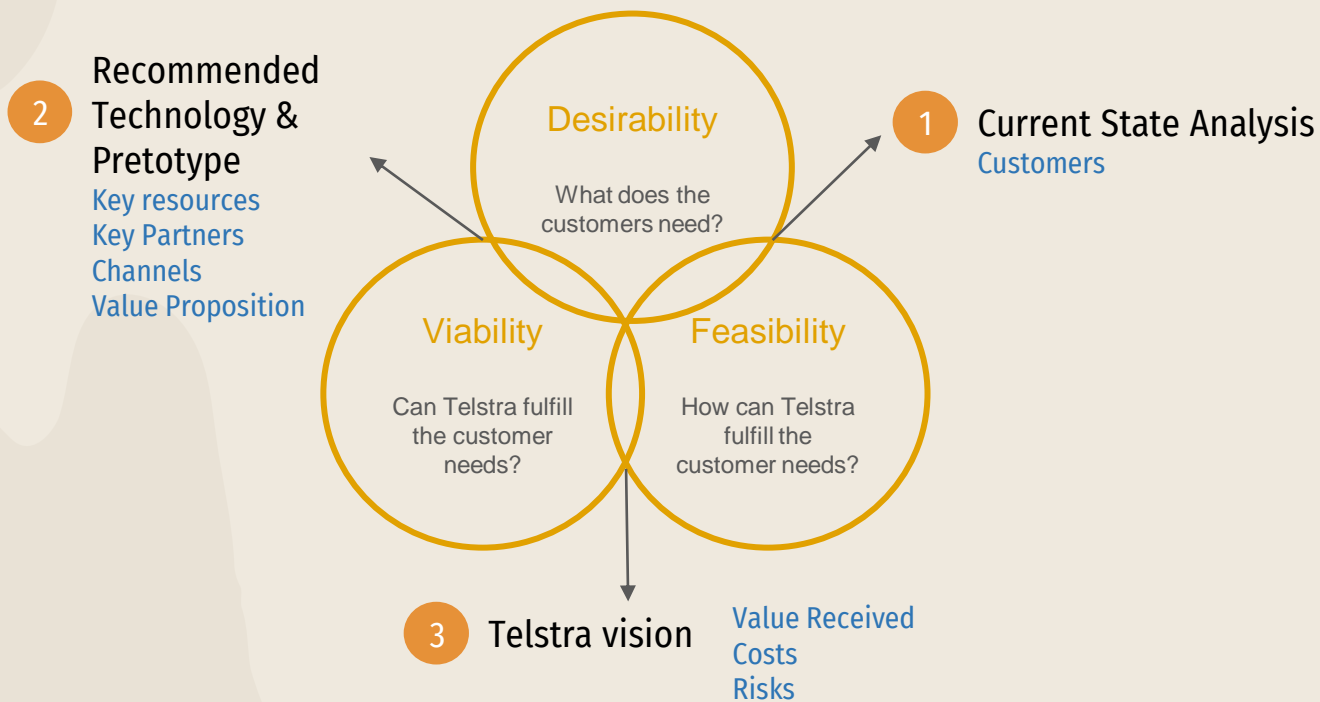"The Farmer's Friend"

TELSTRA CAN HELP, MORE

You know how *improving agriculture efficiency* can help solve the problem of *food waste* in Australia?

What we did is to provide **AMIGO** with 5G & AI Technology, to help the Australian farmers *minimise crop waste*.

Our Approach

An innovation-focused framework with the three dimensions of DVF was used to inform our analysis from multiple perspectives and construct an action plan.

2 Recommended Technology & Pretotype
Key resources
Key Partners
Channels
Value Proposition

Desirability
What does the customers need?

1 Current State Analysis
Customers

Viability
Can Telstra fulfill the customer needs?

Feasibility
How can Telstra fulfill the customer needs?

3 Telstra vision
Value Received
Costs
Risks

01

Current State Analysis

Who is our target customer?
What are the current solutions?

Customer Needs: Persona

Profile

- Name: Kyle Anderson
- Age: 58
- Occupation: Owner of a cornfield
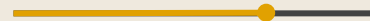- Location: Bathurst, Australia

Bio

I am the owner of a cornfield in Bathurst. As also a representative of National Farmers' Federation, I feel that currently we need help to monitor and report the condition of the land - growing crops is harder than ever.

Attitudes

Learning new Technology
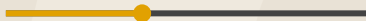
Collaborative

Goals

- Improve the work efficiency for all Australian farmers
- Maximising profit
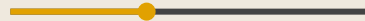- Minimising crop wastage

Concerns

- Production costs (water, labour)
- Pest & Natural Diseases
- Accidental climate change
- Reduced water allocation
- Too many wasted crops
- Lack of access to telecom

"Why my crops get spoilt and I am making a loss due to it?"
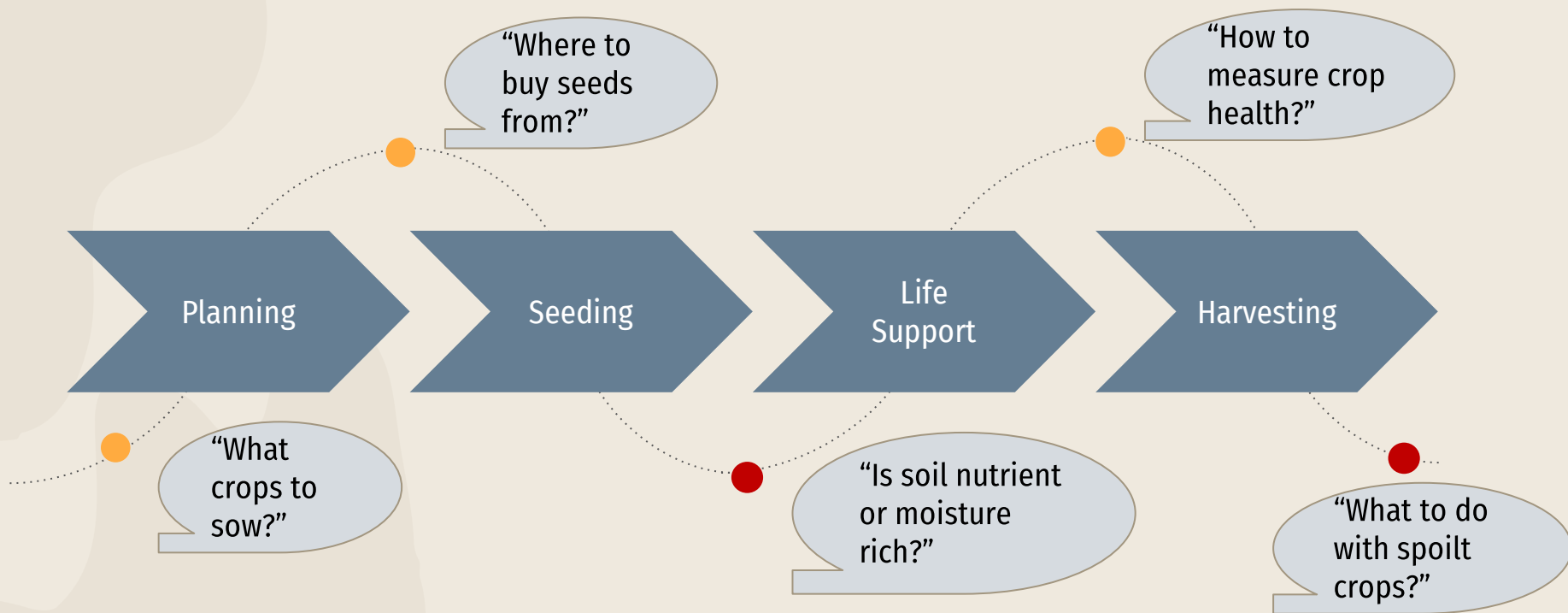

Experience & Skills

IT Knowledge

English

Farming Expertise

Customer Needs: Customer Journey Map

Kyle goes on a journey of the agricultural farming lifecycle.

"Where to buy seeds from?"

"How to measure crop health?"

Planning

Seeding

Life Support

Harvesting

"What crops to sow?"

"Is soil nutrient or moisture rich?"

"What to do with spoilt crops?"

02

Recommended IT & Pretotype

What is our recommended technology from Telstra?

What are the key resources, partners and channels of implementing this solution?

Are there any foreseeable risks?

Recommended Technology: Telstra's solutions

We recommend Telstra to leverage the power of the current 5G roadmap to facilitate AI application production and fulfill Kyle's needs.

Low Band 5G - 850 MHz spectrum

Overview

This technology will power:

- **Artificial Intelligence**
- **Computer Vision**
- **Robotics**
- **Machine to Machine Connectivity**

How can it help?

1. To enable large transmit distance, bringing 5G to a larger coverage area
2. To quickly identify pest & natural Diseases in the farm.
3. To enable our robot to navigate through the farm and censors to activate equipments.

Control pests & diseases

AWS/Azure/GCP

Partners, Resources, Channels

Telstra can deliver AMIGO with the help of its strategic partners, existings resources and variable distribution channels.

Partners

- **Microsoft Azure** (2020): use the cloud to facilitate data-driven solutions to sustainability and climate commitments
- **Ericsson** (2021): provide businesses with 5G wireless platforms
- **National Farmer Federation** (2018): a legal partner ensuring Telstra fulfills regulatory & social responsibilities

Resources

- **Human**: developers, testers, business analysts, project managers
- **Financial**: approved budget
- **Technology**:
  - Telstra's existing 5G, AI and Cloud solutions
  - Censors, Robots
  - Mobile devices

Channels

- **Direct Offer:** Download the app / log in via webpage on the Telstra website (Just as the mobile data plans!)
- **Retailer Offer**: Download the app on application stores on your mobile device

Pretotype: Meet AMIGO!
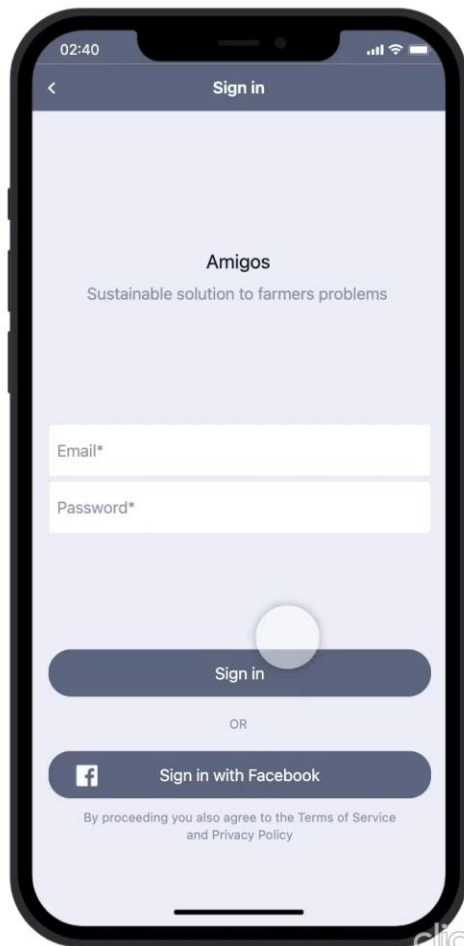
Pretotype: Rough Pricing for AMIGO

$40

BASIC

- Soil Health
- 24hr chat support

+

$50

PRO

- Crop Health
- Soil Health
- Market Place
- 24hr chat support

+

03

Telstra Vision

What can AMIGO bring to Telstra?

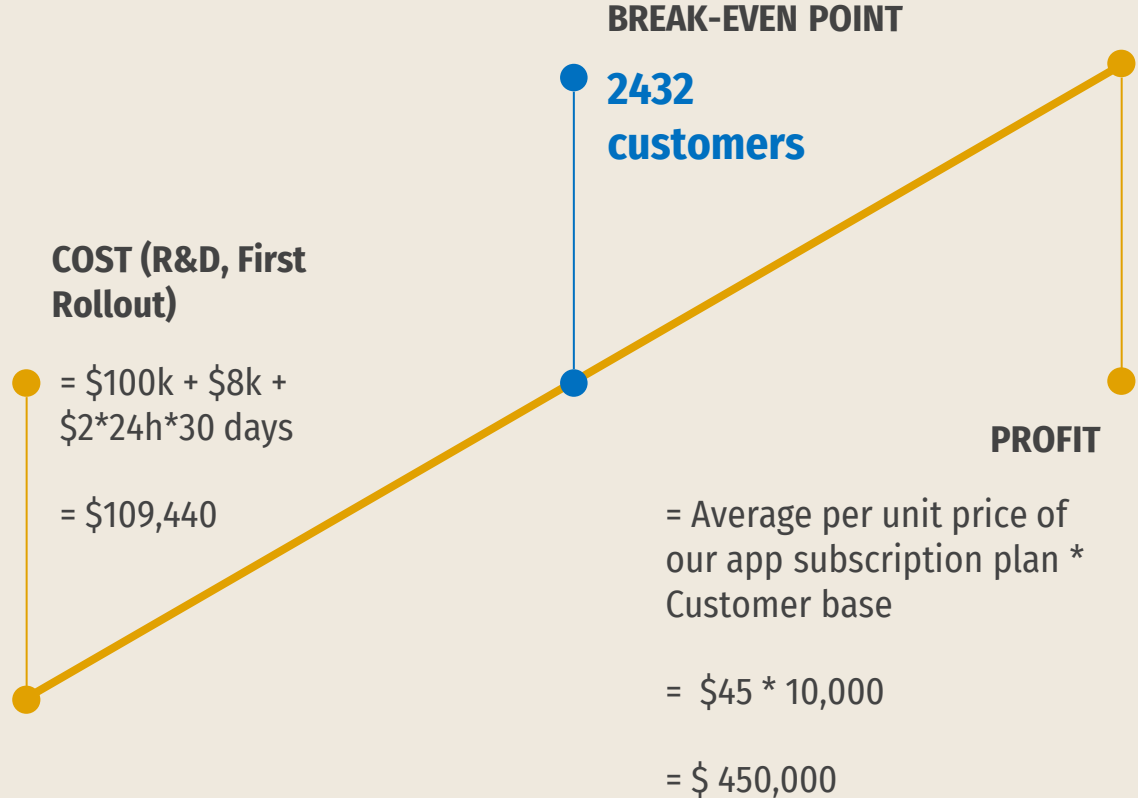How much approximately will it cost for Telstra to implement AMIGO?

Are there any foreseeable risks?

Financial Benefits

Assumptions

→ **Customer base**: Assume that 9% of the 90,000 Australian agricultural businesses will use Telstra's new service

→ **Costs of implementation** are mainly from:
- ◆ Production of AI robots: $8k/robot
- ◆ Development of the application: $75k-125k
- ◆ AI training fee: $2/hour, a month training

BREAK-EVEN POINT

2432 customers

COST (R&D, First Rollout)

= $100k + $8k + $2*24h*30 days

= $109,440

PROFIT

= Average per unit price of our app subscription plan * Customer base

= $45 * 10,000

= $ 450,000

Non-financial Benefits

2018

2019

2021

Global IoT Capability: Partnered with Ericsson to allow global tracking of customers' IoT devices

Talking 2030: Collaborated with National Farmers' Federation to blueprint the future for Australian farmers

World Record 5G Long Distance Call: Partnered with Ericsson to be the leader of 5G

Risk & Mitigation

Risk Matrix

Likelihood

Impact
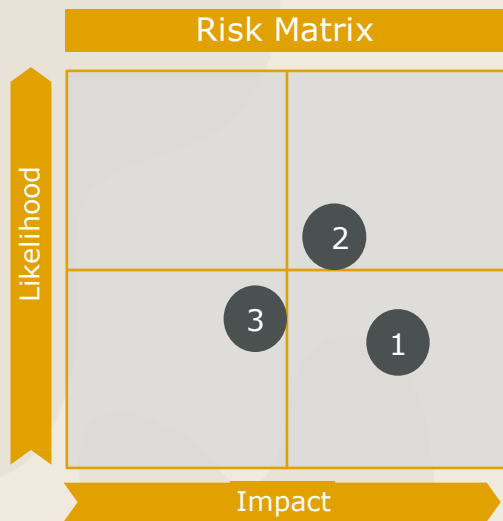
Type of Risk	Potential Risk	Mitigation
1 **Change Management**	Farmers might be resistant to use this application due to limited IT capability.	Leverage the power of *Telstra Foundation*, expand its scope to empower farmers to use the technology.
2 **AI robot maintenance**	Field robots might have problems in producing accurate data in the long term.	Establish an access for customers to obtain timely technical support. E.g. 24/7 hotline, Website inquiry
3 **Implementation**	Difficult to finalise a "one size fits all" platform	Generate user feedbacks on a regular basis. Set up a committee to govern the post-launch activities and improve the application.

Thank you!

Special thanks to
Our great mentor Paul Sporton
Without your help we would not be able to deliver this solution.

Appendices

Lean Canvas

PROBLEM STATEMENT(S)

"Why my crops get spoilt and I am making a loss due to it?"

EXISTING ALTERNATIVES

- Waiting for federal government's next step and IT suppliers' reaching out to solve crop waste issues

SOLUTION

Develop an mobile application called "Amigo" to address the customer needs

KEY RESOURCES

- **Human**: developers, testers, business analysts, project managers
- **Financial**: approved budget
- **Technology**:
  - Telstra's existing 5G, AI and Cloud solutions
  - Censors, Robots
  - Mobile devices

VALUE PROPOSITION

- Maximising Australian farmers' profitability and work efficiency

- Minimising the crop waste

KEY PARTNERS

- National Farmer Federation (2018)
- Ericsson (2021)
- Microsoft Azure (2020)

CHANNELS

- **Direct Offer:** Download the app / log in via webpage on the Telstra website
- **Retailer Offer**: Download the app on application stores on your mobile device

CUSTOMERS

- Australian farmers in general, aged around 60

- Committee members of National Farmers' Federation

EARLY ADOPTERS

- Australian farmers who suffer from crop waste due to outdated technology

COSTS

Costs of implementation are assumed to be mainly from:
- Production of AI robots
- Development of the application
- AI training fee

VALUE RECEIVED

- Financial value: Can make profit by correct pricing methodologies.
- Alignment to Telstra's Technology Roadmap: This app leverages the power of Telstra's technology solutions and facilitates it with 5G.
- Brand Awareness: Partnering with NFF and continue Telstra Foundation.

Reference List

https://www.environment.gov.au/protection/waste/food-waste

https://www.abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/2018-19

https://www.zdnet.com/article/telstra-to-add-low-band-spectrum-to-commercial-5g-network/

https://aithority.com/it-and-devops/cloud/telstra-microsoft-partnership-signals-new-generation-digital-foundations-for-australian-businesses/

https://www.ericsson.com/en/press-releases/7/2021/ericsson-and-telstra-partner-to-enable-enterprises-with-an-on-premise-5g-industrial-wireless-platform

https://www.talking2030.com/discussion-paper

https://www.agriculture.gov.au/abares/products/insights/snapshot-of-australian-agriculture-2021#the-farm-population-is-diverse-and-constantly-changing

https://dreamwalk.com.au/app-development-questions/how-much-does-it-cost-to-develop-an-app
https://www.webfx.com/internet-marketing/ai-pricing.html

https://cloud.google.com/ai-platform/training/pricing#asia-pacific

https://thenewstack.io/add-it-up-how-long-does-a-machine-learning-deployment-take/#:~:text=On%20average%2C%2040%25%20of%20companies,in%20seven%20days%20or%20less

https://www.telstra.com.au/aboutus/media/media-releases/Telstra_Ericsson_launch_Global_IoT_capability

https://www.mobilecorp.com.au/blog/telstra-and-ericsson-make-world-record-5g-long-distance-call

https://exchange.telstra.com.au/telstra-news/telstra-foundation/