Project Title: IoT Based Smart Crop System for Agriculture

Project Design Phase-I - Solution Fit Template

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?

Farmers who want to protect their crops.

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions?

Birds and animals, Natural disaster, Climatic changes, Pest and crop infection.

5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?

- Involving more labour which increase cost.
- Usage of new fertilizer who's the results are unknown.

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- Continuous monitoring of the temperature and humidity of the field and crop.
- To avoid excess amount of water supply.
- Taking respective medical action to prevent crop infection.
- Proper removal of weed.
- Protection from birds and animals.

9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists? What is the backstory behind the need to do this job?

Most of the problems arise due to improper monitoring because 24/7 monitoring is impossible, it involve labour and labour charges.

7. BEHAVIOUR — BE

What does your customer do to address the problem and get the job done?

i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- Adding right amount of water to the crops.
- Planning a proper budget which include cost for fertilizer, medicine, transportation and labour charges .
- Frequent monitoring.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS — TR

What triggers customers to act?

They put a lot of effort into growing the crops. The profit earned from the harvest is the only source of income.

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?

Before: Loss, Pain, Pressure and frustration.

After: Confident, Happy and Reassured.

10. YOUR SOLUTION — SL

The proposed system is an integration of multiple functions and operations. It involves fire detection using smoke sensor, weather monitor, pest and weed detection, crop infection detection and damage estimation is done using various factors which happened due to natural disaster or climatic changes.

8. CHANNELS of BEHAVIOR — CH

8.1 ONLINE

What kind of actions do customers take online?

- Surfing through websites to learn new farming techniques.
- Watching youtube videos.
- Using IoT.

8.2 OFFLINE

What kind of actions do customers take offline?

- Consulting a doctor when needed.
- Frequent monitoring.

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