

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

- Cultivators
- Gardeners
- Plant pathologists
- Farmers

6. CUSTOMER CONSTRAINTS

CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

The farmers may not be aware of the infections or diseases that affected their plants.
Even if they did, the nutrients required to cure may not be known.
Identification of the right fertilizers and the quantity to be used may be difficult.

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? i.e. pen and paper is an alternative to digital notetaking

Image acquisition is followed by pre processing and segmentation.
Leaves are classified using Support Vector Machines algorithm.
Fertilizers for affected leaves is recommended based on severity level.

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.

Lack of expertise or knowledge lead to inability of the farmers and cultivators to identify the infections or disease that affect their plants.
Exact nutrients that are required to cure the problem may be unknown.
To handle nutrients deficiency,the farmersay use incorrect fertilizers.
Excessive fertilizers damages the plants and it will reduce soil fertility.
Some amount of the fertilizers may penetrate into water bodies causing eutrophication.

9. PROBLEM ROOT CAUSE

RC

What is the real reason that this problem exists?
What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

Abnormalities in plants leads to their death.
Large scale disease spread will reduce crop yield.
Improper diagnosis may guide farmers toward the supply of incorrect fertilizers which will not rectify the problem.
Even excessive use of required fertilizers may lead to leaching and eutrophication.

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)

The user uploads the images as input.
The affected leaves images are separated from the unaffected leaves.
Based on deep learning,the diseases is predicted.
Necessary nutrients are recognised and fertilizers rich in those nutrients are recommended.

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

Identify strong TR & EM

3. TRIGGERS

TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Fertilizers contain specific nutrients that are required for the proper development of the plant body.Some fertilizers benefit plants indirectly by increasing water retention capacity of land, improving soil

4. EMOTIONS: BEFORE / AFTER

EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

Soil may not have adequate quantities of all nutrients.Rate of replenish of soil nutrients is much slower than the rate pf consumption.Hence fertilizers are required to balance these rates by providing enough nutrients to the soil and plants directly thereby allowing the soil to replenish at its pwn rate

10. YOUR SOLUTION

SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

An system that takes the image of leaves as input and identifies the different symptoms to decide on the disease that affects plant.
This will be done usinf Doop learning techniques.
Based on which the fertilizers rich in required nutrients are suggested.

8.CHANNELS of BEHAVIOUR

CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Online portal is for accepting the input image and displaying the recommended fertilizers.

While offline, the image pre processing, segmentation, disease prediction,etc are done

Identify strong TR & EM