Project Title: Estimate the Crop Yield using Data Analytics

Project Design Phase-I - Solution Fit Template

Team ID : PNT2022TMID38310

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

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

1. Farmers
2: Customers
3. Traders

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.

1. Lack of Clarity
2. Poor Guidance
3. Network Issues
4. Less Knowledge

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

There are methods such as interviewing farmers and field surveys which are time consuming and costly. There are some crop yield prediction models which are not too accurate.

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.

Accurate analysis in order to minimize the crop damage and to create user understandable dashboard.

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.

1. Unpredictable variation in climate
2. Various Regions
3. Past Issues
4. Soil Fertility
5. Availability of Water

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)

Develop a model that has a good prediction of crop yield in accordance with season and region.

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.

An intention to get more crop production and to reduce the crop wastage, Analysts will be helpful.

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.

Before, farmers did not get the clear idea about the yield of crop and wastage of crops will be high. After, they get valuable insights through the analysis thus they have high yield which will increase the revenue.

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.

By creating an interactive dashboards, reports, stories using IBM Cognos Analytics the estimation of crop yield can be done with most accuracy so that, the famer will gain more revenue.

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 : Through the insights from the dashboard correct decisions can be made.

Offline : Execute the decision which is taken from the insights.

Identify strong TR & EM