Project Design Phase-I - Solution Fit Template

Project Title: SmartFarmer - IoT Enabled   Smart Farming Application   Team ID: PNT2022TMID48172

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

Farmers who wants to understand the important factors such as water, topography, aspect, vegetation and soil types.
Farmers who wants to determine the best uses of scarce resources within their production environment and manage these in an environmentally and economically

6. CUSTOMER CONSTRAINTS

- Poor Internet Connectivity in Farms.
- High Hardware Costs.
- Disrupted Connectivity to the Cloud.

5. AVAILABLE

Smart Farming solutions provide an integrated IoT platform in agriculture that allows farmers to leverage sensors, smart gateways and monitoring systems to collect information, control various parameters on their farms and analyse real-time data in order to make informed decisions.

Explore AS, differential

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

2. JOBS-TO-BE-DONE / PROBLEMS

Maintenance of your hardware is a challenge that is of primary importance for IoT products in agriculture, as the sensors are typically used in the field and can be easily damaged.

The need to transmit data between many agricultural facilities still poses a challenge for the adoption of smart farming. Needless to say, the connection between these facilities should be reliable enough to withstand bad weather conditions and to ensure non-disruptive operations.

9. PROBLEM ROOT CAUSE RC

The effects of climate change affect farmers' ability to grow the food we all need. Increasingly volatile weather and more extreme events – like floods and droughts – change growing seasons, limit the availability of water, allow weeds, pests and fungi to thrive, and can reduce crop productivity.

Soil erosion is reducing the amount of land available for agriculture, and declining biodiversity affects the pollination of crops. At the same time, farmers are under pressure to conserve water and use fewer agricultural inputs.

7. BEHAVIOUR BE

IoT smart farming solutions is a system that is built for monitoring the crop field with the help of sensors (light, humidity, temperature, soil moisture, crop health, etc.) and automating the irrigation system. The farmers can monitor the field conditions from anywhere.

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

3. TRIGGERS TR

helps farmers to better understand the important factors such as water, topography, aspect, vegetation and soil types. This allows farmers to determine the best uses of scarce resources within their production environment and manage these in an environmentally and economically sustainable manner.

10. YOUR SOLUTION SL

The focus on smarter, better, and more efficient crop growing methodologies is required in order to meet the growing food demand of the increasing world population . Additional features like create an awareness about where to get agricultural loans, government agriculture schemes and get the feedback of every farmers on every month end and if its related to government, then make it to reach the government.

8. CHANNELS of BEHAVIOUR CH

8.1 ONLINE
Using advanced technology like big data, the cloud, and the internet of things for tracking, monitoring, automating and analyzing operations.

8.2 OFFLINE
IoT-based smart farming is also beneficial in terms of environment issues. It can help the farmers to efficiently use water, optimize the inputs and treatments.

4. EMOTIONS: BEFORE / AFTER EM

Before

Less protection,lack of information and communication technologies,lack of analysation of environment.

After
- Crop protection
- Real time analysis
- Soil Testing and its quality
- Modern information and communication technologies