**Project Title: Plant Disease Prediction And Fertilizer Recommendation** **Project Design Phase-I - Solution Fit Template** **Team ID: PNT2022TMID47415**

Define CS, fit into CC

### 1. CUSTOMER SEGMENT(S) CS

- Farmers
- Agricultural Scientists
- Agricultural Researchers
- Gardeners

### 6. CUSTOMER CONSTRAINTS CC

Constraints preventing customers from taking action

- Non availability of strong network connection in rural areas.
- Less availability of devices to upload the plant images.
- Regular power cuts.
- Insufficient knowledge about the use of devices and applications.

### 5. AVAILABLE SOLUTIONS AS

- Farmers manually observe plant diseases and make a rough guess based on their experience, sometimes the fertilizer chosen might not be appropriate
- Other schemes for fertilizer recommendation may not be accurate for a specific disease.

Explore AS, differentiate

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

### 2. JOBS-TO-BE-DONE / PROBLEMS J&P

- Prediction of plant disease
- Recommendation of appropriate fertilizers
- Improvement of model using feedback

### 9. PROBLEM ROOT CAUSE RC

- Incorrect usage of fertilizers in the past.
- Low soil quality due to excess use of fertilizers.
- Usage of infected seeds.
- Delay in the observation of disease leading to its spread
- Improper maintenance.

### 7. BEHAVIOUR BE

Directly related: Farmer can easily identify the disease by the application and they don't need any extra knowledge on the disease prediction

Indirectly related: Farmer can be able to get result through online immediately.

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

Identify strong TR & EM

### 3. TRIGGERS TR

- Observing fields and the crop yield
- Learning about alternate solutions on the internet
- Seeing their crops are being infected by disease and facing huge loss in quantity and quality

### 4. EMOTIONS: EM

When the crop gets affected by the disease the farmer feels
Before: losing self-confidence, distress
After: gaining self-confidence, relief

**Confused > Clarified**
**Distressed > Satisfied**

### 10. YOUR SOLUTION SL

Our Application use the image of the infected plant by identifying the disease and suggest the good fertilizer for the disease By training the model numerous times to make it accurate enough to predict various new diseases in less time.

### 8. CHANNELS of BEHAVIOUR CH

#### 8.1 ONLINE

- Reading articles online to improve knowledge about various plant diseases and appropriate fertilizers.
- Gathering information online about various fertilizer recommendation sources.

#### 8.2 OFFLINE

- Manual observation of other fields and the fertilizers used by other farmers
- Talking to agricultural researchers in person about plant diseases.

Identify strong TR & EM