Project Title: IoT based smart crop protection system for agriculture **Project Design Phase-I - Solution Fit** **Team ID: PNT2022TMID54441**

Define CS, fit into CL

1. CUSTOMER SEGMENT(S) CS

- Farmers to protect crops from various problem.
- Crop importers

6. CUSTOMER CONSTRAINTS CC

- Lack of manpower.
- Limited financial constraints.
- Limited supervision.

5. AVAILABLE SOLUTIONS

- CCTV cameras for monitoring and supervision of crops.
- Using scarecrows to prevent birds from attacking crops.
- Certain practices to reduce pest attacks.
- Monitor mobile applications to monitor fields.
- Alarm systems to give alerts when animals attacks.

Explore AS, differentiate

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

2. PROBLEMS J&P

- Requires protection of crops from pests, birds and animal attacks.
- Lack of knowledge among farmers.
- Poor maintenance of crops.
- Farmers would not be able to stay in the field and monitor .crops all the time.

9. PROBLEM ROOT CAUSE RC

- Birds and wild animals entering the agricultural fields.
- If temperature, PH level, humidity & light intensity makes the serious cause for the environment

7. BEHAVIOUR BE

- Consumes more time in agricultural fields.
- Looking for an alternative solution for an existing solution.
- Solution to prevent problems faced due to wild animal attacks.
- Located in rural areas with good and fast transmission speeds

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

Identify strong TR & EM

3. TRIGGERS TR

- Create opportunities to uplift people in poverty.
- Knowing about effective solutions.
- To Create innovative technologies.

4. EMOTIONS: BEFORE / AFTER EM

Before:
Reduction of crop yields by wild animals leads to damage of crops and makes farmers life miserable.

After:Feeling of satisfaction among farmers due to increased crop yield production

10. YOUR SOLUTION SL

The key research objectives are as follows: The proposed system detects the movement of animals and birds which destroy crops and animals, A hardware prototype that uses Wireless sensor network (WSN) to detect intruders (i.e., animals and birds) in a field of crops called Agriculture Intrusion Detection System (AID).
2]Moisture sensor interfaced with Arduino microcontroller is used to measure the moisture level in soil.

8. CHANNELS of BEHAVIOUR CH

ONLINE: The Data send through application for the farmers to know about the farms.

OFFLINE: The control action is taken by the farmers to monitor the farms.

Extract online & offline CH of BE

		3}IoT enabled motor pump, farmers can operate the motor pump from anywhere through mobile apps 4] Temperature sensor connected to microcontroller is used to monitor the temperature in the farm.		