Project Title: smart farmer - IoT Enabled Smart Farming Application Project Design Phase-I - Solution Fit Team ID: PNT2022TMID35924

Financial constraints, poor network availability and connectivity, lack of knowledge in using high end technologies.

Farmers, people who are interested in doing farming activity in a smart way by using current technologies.

Crop field conditions are monitored regularly with the help of sensors physically( Temperature , moisture, humidity sensors are some examples);

Automated irrigation system;

Flame detecting sensors which will just indicate that the field has caught fire but will not extinguish it.



The unpredictable change in weather affects the growth of crops and maximum yield. It is always require a man-power to monitor the crops.

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| **Directly:**  Monitoring the fields manually - causes fatigue;  Pumping of water from nearby well or ground water;  Putting off flame in case of fire with water - causes a lot of stress and damage;  **Indirectly :**  Watching out the weather conditions regularly  Routine checkup of the soil conditions by taking sample tests in labs to know it's nutrient content |  |

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| To overcome problems related to farming such as loss of crops due to fire accidents, improper growth of crops due to nutrition deficiency in soil, drying up of plants due to lack of moisture in agriculture field, over usage of fertilizers, low income of farmer. |  |



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|  | **3. TRIGGERS TR**  To get high crop yield in short time, demonstrating the results and benefits through practical application of the developed product. | **10. YOUR SOLUTION SL**  Monitoring of details such as moisture content and nutrient content of the soil present in the farm land using sensors, detection of fire accidents in the field and if the field catches fire, extinguishing the fire through the water sprinkler which is powered by servo motors. Also, regular updates about the field are sent to the farmer through the app in periodical manner. | 1. **CHANNELS of BEHAVIOUR CH**   **Online:**  Crops in the field can be monitored online.  Fire can be controlled through online by turning on the fire control system.  Water pumping can also be controlled through online  **Offline:**  Testing the samples should be done physical mode .  Required materials should be brought from the stores. |  |
| **4. EMOTIONS: BEFORE / AFTER EM**  **Before:** Insecure, skeptical about outcomes, worrying, close monitoring of crops through physical presence which causes fatigue.  **After:** Secured, relieved, hopeful, relaxed, saving time and energy due to remote monitoring of crops , increased profit. |