### Project Design Phase-I - Solution Fit Template

### Project Title: IOT based smart crop protection system for agriculture Team ID:PNT2022TMID34153

**Explore AS, differentiate**

**Deﬁne CS, ﬁt into CC**

Idea / Solution description

• As is the case of precision

Agriculture Smart Farming

Technique Enables Farmers better to

monitor the fields and maintain the

humidity level accordingly.

• The Data collected by sensors, In

terms of humidity, temperature,

moisture, and dew detections help in

determining the weather pattern in

Farms. So cultivation is done for

suitable crops.

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

**AS**

1. **AVAILABLE SOLUTIONS**

**ALERT MESSAGE** – IoT sensor nodes

collect information from the farming

environment, such as soil moisture, air

humidity, temperature, nutrient ingredients

of soil, pest images, and water quality, then transmit collected data to IoT backhaul

devices.

**REMOTE ACCESS –** It helps the farmer

to operate the motor from anywhere.

**CC**

1. **CUSTOMER CONSTRAINTS**

Problem Statement (Problem to be

solved)

• Watering the field is a difficult

process, Farmers have to wait in the

field until the water covers the

whole farm field.

• Power Supply is also one of the

problems. In Village Side, the power

supply may vary.

• The Biggest Challenges Faced by

IoT in the Agricultural Sector are

Lack of Information, High

Adoption, Cost and Security

Concerns, etc

**CS**

**.**

**Explore AS, differentiate**

**Define CS, fit into CC**

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

• Reduces the wages for labors who

work in the agricultural field.

• It saves a lot of time.

• IoT can help improve customer

relationships by enhancing the

customer's overall experience.

• Easily identify maintenance needs,

build better products, send

personalized communications, and

more.

• IoT can also help e-commerce

businesses thrive and increase sales.

• It make a wealthy society

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)

**BE**

1. **BEHAVIOUR**

**RC**

1. **PROBLEM ROOT CAUSE**

Scalability in smart farming refers to the

adaptability of a system to increase the

capacity, for example, the number of

technology devices such as sensors and

actuators, while enabling timely analysis.

**J&P**

1. **JOBS-TO-BE-DONE / PROBLEMS**

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**Identify strong TR & EM**

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| --- | --- | --- | --- | --- |
| **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.  This System uses a motion sensor to detect wild animals approaching near the field and smoke sensor to detect the fire.In such a case the sensor signal the microcontroller to take action .so here we purpose automatic crop protection system from animals and fire. | **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.  IOT solution to enable the farmers to know real time weather conditions.The sensors placed in the agricultural fields collect data from the environment that is used by farmers to choose a crop that can grow in particular climatic conditions. | 1. **CHANNELS of BEHAVIOUR CH**     1. **ONLINE**   What kind of actions do customers take online? Extract online channels from #7   * 1. **OFFLINE**   What kind of actions do customers take ofﬂine? Extract ofﬂine channels from #7 and use them for customer development. |  |
| **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. IOT enabled growers and farmers to reduce Waste and enhance productivity ranging from the quantity of fertilizer utilized to amount of water used for irrigating of a field.In further ensures that farm produce is transported in the most optimal and manner. |