

**Project Title:** Smart Farming-IOT Enabled smart farming application  
**Team ID:** PNT2022TIMD16877

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

## 1. CUSTOMER SEGMENT(S)

Farmers can be sub-segmented under three categories.

- ☐ Micro, small, or marginal
  - ☐ Emerging and large
  - ☐ Commercial Farmer
- Based on farm:
- ☐ Surplus
  - ☐ Gross revenue
  - ☐ Land under cultivation

## 6. CUSTOMER CONSTRAINTS

The country's sustainable agricultural development has many obstacles. These includes

- ☐ Agricultural water-use shortage
- ☐ Cultivated land loss
- ☐ Inappropriate usage of fertilizers and pesticides
- ☐ Environmental degradation

## 5. AVAILABLE SOLUTIONS

IoT in agriculture uses robots, drones, remote sensors, and computer imaging combined with continuously progressing machine learning and analytical tools for monitoring crops, surveying, and mapping the fields, and providing data to farmers for rational farm management plans to save both time and money

## 2. JOBS-TO-BE-DONE / PROBLEMS

J&P

1. Monitoring of climate conditions
2. Greenhouse automation

## 9. PROBLEM ROOT CAUSE

RC

1. Connectivity in rural areas
2. Cope with climate change, soil erosion and biodiversity

## 7. BEHAVIOUR

BE

Online: farmers can monitor all the sensor parameters by using web or mobile is not near his field application even if the farmer



- 3. Crop management
- 4. Cattle monitoring and management
- 5. Precision farming
- 6. Agricultural drones
- 7. Predictive analytics for smart farming
- 8. End-to-end farm management systems

loss

- 3. Satisfy customer's changing tastes and expectations
- 4. Meet rising demand for more food of higher quality
- 5. High adaptive cost
- 6. Lack of information

Agriculture has been mainly of an economic nature but the quite different social approach has grown more recently.

	<p><b>3. TRIGGERS</b> <span>TR</span></p> <p>Optical information, virtual fence</p> <p>technologies allow cattle herd management based remote-sensing signals and sensors or actuators attached to the livestock</p>	<p><b>10. YOUR SOLUTION</b> <span>SL</span></p> <p>Sensor: Visual sensor and biosensors</p> <p>constitute a significant part of the solution to automate the monitoring process of farm animals. Sensors and biosensors in this context refer to devices that ensure data about a specific physical, chemical.</p>	<p><b>8. CHANNELS of BEHAVIOUR</b> <span>CH</span></p> <p><b>8.1 ONLINE</b></p> <p>Digitalization innovation as a means to increase agricultural sustainability</p>	
	<p><b>4. EMOTIONS: BEFORE / AFTER</b> <span>EM</span></p> <p>Increased production: the optimization of all the processes related to agriculture and livestockrearing increases production rates.</p> <p>Water saving: weather forecasts and sensors that measure soil moisture and for the right length of time.</p> <p>BEFORE: Farmers are feeling helpless ,frustrated in order to be always present to manage end to end farming</p> <p>AFTER: Farmers will feel much relaxed as well a encouraged ,if production output increases</p>	<p>The global positioning system(GPS): is satellite based standard sensing technology used for tracking farm animal's location.</p> <p>we use iot enabled products to provide knowledge as well as guidelines, help ,amount of usage of modern tools ,sensors to detect problems ,iot devices provides reminder incase of emergencies , better product network with iot connection .</p>	<p><b>8.2 OFFLINE</b></p> <p>Well-informed, technology-interested young crop farmers in Germany rate SFT environmental performance with caution.</p> <p>AKIS stakeholders agree that most barriers to adoption are linked to technologies' and infrastructures' deficits</p> <p>Innovation targeted communication between farmers and technology developers or providers is not well developed.</p> <p>Multi-actor approaches can be substantial to link various stakeholders although no</p>	

		direct impact may be observed.	
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