

## Project Title: Smart Farmer - IoT Enabled Smart Farming Application

### Project Design Phase-I - Solution Fit

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Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> Based on scale: Small, micro, Marginal Base on farm: Surplus Gross revenue Land under cultivation Base on service: Commercial product Small scale supplyment.	<b>6. CUSTOMER CONSTRAINTS</b>  The country's sustainable agricultural development has many obstacles Agricultural water-use shortage Cultivated land loss usage of fertilizers and pesticides Environmental degradation Poor soil nutrient	<b>5. AVAILABLE SOLUTIONS</b>  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	Explore AS, differentiate

Focus on J&P, tap into BE, understand RC	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> 1. Monitoring of climate conditions and weather 2. handling of Greenhouse automation 3. Crop management and measurement 4. Cattle monitoring and management 5. Precision farming with efficiency 6. Agricultural drones and sprayers 7. Predictive analytics for smart farming 8. End-to-end farm management systems	<b>9. PROBLEM ROOT CAUSE</b> 1. Connectivity in rural areas and remote access 2. Cope with climate change, soil erosion and biodiversity loss 3. customer's changing tastes and expectations 4. Meet rising demand for more food of higher quality 5. High adaptive cost 6. Lack of information 7. Social impacts and customer satisfaction 8.	<b>7. BEHAVIOUR</b>  Online: farmers can monitor all the sensor parameters by using web or mobile application even if the farmer is not near his field Agriculture has been mainly of an economic nature but the quite different social approach has grown more recently.	Focus on J&P, tap into BE, understand RC

<p><b>3. TRIGGERS</b> <span>TR</span></p> <p>Optical information, virtual fence 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 : Interact with physically environment and measure the physical parameter sends the data top IOT platform. Where IOT platform analysis the given data. 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> Configuration of device with IOT platform gathering information and processing the information with previous values. Sending back the message to motor or other device on the field Remote access availability.</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 livestock- rearing increases production rates. Water saving: weather forecasts and sensors that measure soil moisture and for the right length of time. BEFORE: Farmers are feeling helpless ,frustrated in order to be always present to manage end to end farming AFTER: Farmers will feel much relaxed as well as encouraged ,if production output increases</p>		

The global positioning system(GPS): is satellite based standard sensing technology used for tracking farm animal's location.  
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 .

**8.2 OFFLINE**  
The fixing of sensor in the right place with proper protection of sensors. The sensitivity of sensors may be affect by external things.  
Fixing of movable motors and irrigation system in the center places which covers maximum area with minimum wastage of water .